



CLIMATE RESILIENCE IN  
CONTRA COSTA COUNTY  
:  
**Implementing the ART  
Study**

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# EXECUTIVE SUMMARY

**BACKGROUND:** This report analyzes the challenge of implementing best practices and governance around adapting to rising tides in Contra Costa County (“the County”), specifically along the San Joaquin River Delta. Recommendations are based on the findings of the 2017 Adapting to Rising Tides (ART) study conducted by the San Francisco Bay Conservation and Development Commission (BCDC). The first phase of this study, which extends from Richmond to Baypoint, is complete (referred to as “ART Study West”). The second phase, which extends through East County, is ongoing as of May 2019 (referred to as “ART Study East”; see map.)



Figure 1: ART Study West Boundaries

**KEY CHALLENGES:** The County’s shoreline is at risk of permanent and temporary flooding. The ART Study West estimates that sea levels in the County may rise 2-12 inches by 2030, 5-24 inches by 2050, and 17-66 inches by 2100. As a result, the following vulnerabilities have been identified:

-  **1. Water Dependent Industries:** Damage to transportation and utility connections that could impair or halt service to the County’s water-dependent industries.
-  **2. Creekside Communities:** Flooding of residential areas, specifically impacting vulnerable populations such as low-income, elderly, and mobility-challenged communities.
-  **3. Access to Services:** Damage to transportation routes and flooding of facilities impacts access to law enforcement, fire districts, health services, schools, water, and waste services.
-  **4. Ad-hoc Flood Protection:** Harm to and decreased utility of assets currently providing ad-hoc flood protection, such as railways, shoreline parks, and tidal wetlands.
-  **5. Jobs & Employment Sites:** Flooding of shoreline employment sites or damage to transportation infrastructure critical for commuting.
-  **6. Parks & Open Space:** Damage to parks and open spaces, which often provide ad-hoc flood protection as well as recreational and therefore public health services that are difficult to replace.

**KEY FINDINGS:** The potential damage posed by rising tides requires county-wide action. According to a study by the National Institute of Building Sciences, “each \$1 spent on mitigation saves an average of \$6 in future disaster costs.”<sup>1</sup> Currently, there is not one entity that has the jurisdiction to coordinate, let alone implement, the needed adaptations. Therefore, this paper outlines three governance structures (Working Group, Memorandum of Understanding, Joint Powers Agreement) that could help the County address the vulnerabilities caused by rising tides. The governance structures vary in their ease of establishment, ability to leverage funding, legal authority, and ability to expand.



This report also identifies potential funding sources at the local, state, and federal level that the County can use to fund this work (Appendix A). The analysis of funding sources recognizes that different types and levels of funding are appropriate for different governance structures.



**KEY RECOMMENDATIONS:** The County should create a cross-sector working group to review vulnerabilities, share information, coordinate policies, and develop a long-term vision regarding adapting to rising tides. **Section B** of the report details the key steps in launching a working group around adapting to rising tides in the County.

While we believe creating the working group is the key recommendation, the other governance structures should also be considered. Other structures may become more politically feasible and useful as collaboration around climate resilience deepens across the County. **Section A** of the report provides an overview of possible governance structures to coordinate a response to rising tides.

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<sup>1</sup> “Resilient San Mateo.” San Mateo Flood and Sea Level Rise Resiliency Agency. <https://resilientsanmateo.org/>.



# SECTION A: GOVERNANCE STRUCTURES

## 1. IDENTIFYING THE PROBLEM

### A. THE THREAT OF RISING TIDES IN CONTRA COSTA COUNTY

Communities, businesses, natural areas, and services near Contra Costa County's shoreline are at risk of flooding due to rising tides. While information on sea level rise and potential flooding has previously been available through sources such as the National Research Council, the Adapting to Rising Tides (ART) studies seek to detail the local and regional impacts of flooding so that communities can address those vulnerabilities.

The ART assessment of Contra Costa County (the County) is divided into two studies. The first phase, which extends from Richmond to Baypoint, is complete and published (referred to as "ART Study West"). The second phase, which extends through East County, is ongoing as of May 2019 and is conducted in partnership with the Delta Stewardship Council, the Bay Conservation and Development Commission ("BCDC"), and the Contra Costa County Office of Sustainability (referred to as "ART Study East"; see map.).

While the report does not cover the entire county, the ART West report does cover a significant portion of the county and projects many of the county-wide risks at hand. Furthermore, while the exact amount of flooding depends on various weather and climate factors, numerous studies and datasets all show that there will be increased flooding across the county's shorelines. The range of sea level rise predicted by the ART studies account for different climate scenarios and sources of flooding.

The [ART Study West](#) estimates that sea levels may rise 2-12 inches by 2030, 5-24 inches by 2050, and 17-66 inches by 2100 in Contra Costa County.<sup>2</sup> Using these estimates combined with National Research Council Data, the ART Study West quantifies the damage posed by sea-level rise across Contra Costa County, with particular emphasis on what is at risk across sectors and for the most vulnerable communities in the county.

The [ART Study East](#) will use updated guidance based on newly available data from the Ocean Protection Council. The assessment is using updated modeling techniques to better understand the consequence of rising tides from the Bay as well as freshwater rivers. The model will assess potential flooding at 12", 36", and 83" of water level rise , thereby accounting for a variety of scenarios.<sup>3</sup>

The predicted damages faced by the entire County will primarily be incurred through temporary and permanent flooding. Even temporary flooding – which will likely become more frequent, longer-lasting, and more wide-spread – can cause irreversible damage. The ART Study West categorized these risks by the estimated amount of flooding in a given area using BCDC models, and the ART Study East will use a similar format. Table 1 summarizes the assets at risk of damage, categorized by sector.

**Table 1: ASSETS AT RISK OF DAMAGE, BY SECTOR (from ART Study West)**

SECTORS		TYPES OF ASSETS	# AT-RISK ASSETS <sup>4</sup>
	<b>BUSINESS &amp; INDUSTRY</b>	Commercial	<b>277</b>
		Industrial land use	<b>482</b>
		Hazardous Material Sites	<b>1,287</b>
	<b>CONTAMINATED LANDS</b>	Landfills	<b>188-acres</b>
		Brownfields	<b>62</b>

<sup>2</sup> [Adapting to Rising Tides: Contra Costa County Assessment and Adaption Project](#). Adapting to Rising Tides. March 2017. [http://www.adaptingtorisingtides.org/wp-content/uploads/2017/03/Contra-Costa-ART-Project-Report\\_Final.pdf](http://www.adaptingtorisingtides.org/wp-content/uploads/2017/03/Contra-Costa-ART-Project-Report_Final.pdf).

<sup>3</sup> Eastern Contra Costa and Solano Counties Adapting to Rising Tides." Adapting to Rising Tides. June 2018.

<http://www.adaptingtorisingtides.org/wp-content/uploads/2018/06/ECCARTModelingAndMappingExplainer06.05.2018.pdf>.

<sup>4</sup> These statistics only include the areas in the assessment area from the ART Study West. However, these figures provide a broad overview of the scope of the problem.

SECTORS		TYPES OF ASSETS	# AT-RISK ASSETS <sup>4</sup>
	ENERGY	Refineries	4
		Pipelines	55
		Power Generation	1
		Power Distribution Stations	11
	TRANSPORTATION	Freight and Passenger Rail	14 miles
		Roadways	27.5 miles
	HOUSING	Single	507
		Multifamily	607
		Mobile homes	2
	PARKS & RECREATION	Regional Parks	7
		City Parks	7
		Marinas	8
	PUBLIC SERVICES	K-12 Schools	46
		Public Healthcare Facilities	13
		Emergency Facilities	28
	SEAPORT TERMINALS	Port of Richmond	<i>Limiting access from seaport</i>
		Marine Oil Terminals	<i>Tidal, wind &amp; wave erosion</i>
	WATER MANAGEMENT	Water Supply	477,212 residents
		Waste Water Services	8
		Storm Water Systems	86% of system

Damage caused by flooding across the shoreline could have severe economic impacts. The County's economy, which relies on transportation and warehousing, construction and manufacturing,<sup>5</sup> would likely suffer as a result of damage to the water-dependent industries, transportation infrastructure, and the 750+ business assets along the shoreline. Damage to

<sup>5</sup> Data USA Contra Costa County, CA

infrastructure and services that span the County – such as energy, water supply, and highways – could prevent or slow commutes and the transport of goods. These damages are likely to have a regional impact, as the County provides jobs, goods, services, and recreational activities for people throughout the Bay Area.

Furthermore, flooding damage can impact the health, safety, and quality of life of the County's residents. Over 1,000 households are directly at risk of flooding or damage, as well as nearly 80 of the county's hospitals, schools, and services. The communities most at risk from rising tides are those that are the least mobile in the face of crisis – such as those who cannot afford to relocate, do not speak English as their first language, or have limited physical mobility. These include low-income communities, communities of color, and senior citizens. Additionally, sudden flooding can release hazardous material into the water supply, leading to public health crises and destruction of wildlife habitats.

## B. A COORDINATED RESPONSE IS NEEDED

In the face of these threats, the ART report details actions that stakeholders across all sectors can take to respond and adapt to sea-level rise. The recommendations are primarily focused on preventing future disasters, reducing harm from flooding, and adapting to make the County more resilient and prosperous. According to a study by the National Institute of Building Sciences, "each \$1 spent on mitigation saves an average of \$6 in future disaster costs."<sup>6</sup> Acting before more flooding occurs is key to preventing irreversible and costly damage.

All entities with ownership of coastal lands play an important role, including business, industry, homeowners, and the public sector. However, acting alone is insufficient. Given that rising tides are a regional issue, piecemeal changes will fall short of securing all of the County's shoreline against flood-related threats.

While conversations and initiatives around rising tides are taking place throughout the County, there is no collaboration that is county-wide and unites both the public and private sector. Furthermore, there is not one entity with a clear source of funding or regulatory authority to implement the ART findings county-wide.

Greater collaboration is therefore needed. Depending on the goal of the collaboration, different governance structures can be employed. While county-wide regulation or planning is one way of achieving a more resilient shoreline, there are other actions that stakeholders can undertake

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<sup>6</sup> "Resilient San Mateo." San Mateo Flood and Sea Level Rise Resiliency Agency. <https://resilientsanmateo.org/>.

collaboratively. For example, information sharing or conducting smaller-scale projects would also vastly improve the county's ability to minimize its vulnerability to flooding. The below scenarios account for a variety of goals and actions.

## 2. METHODOLOGY

Our primary methodology for completing this project was cross-sector stakeholder interviews and a review of relevant case studies of similar regional planning projects. Our team spoke with members of the Contra Costa Office of Sustainability (our primary client); the Contra Costa County supervisors who have jurisdiction over the waterfront of the Delta; and the Bay Conservation and Development Commission who has jurisdiction over the area of the first ART Study West.

In meetings with these stakeholders, they have mentioned various regional planning projects that are illustrative of challenges and successes that inform best practices relevant to this project. An overview of the potential governance structures for implementation of the ART Study West findings is outlined, along with potential priorities, advantages and disadvantages.

## 3. RECOMMENDATIONS

After conducting interviews and case studies, we believe that creating a working group to coordinate a response to rising tides is the most politically feasible and will lay the needed groundwork for future collaboration around climate resilience.

In addition to detailing the County's vulnerabilities in the face of rising tides, the ART Study West outline specific actions that could help reduce these vulnerabilities. However, implementing these findings requires coordination between the many stakeholders who may be impacted by rising tides, especially those with jurisdiction over the shoreline. In the absence of an existing agency that has sole jurisdiction over shoreline planning and regulation, our report recommends various governance structures and funding opportunities to encourage collaboration both in the short and long-term.

Currently, creating an organization with centralized authority does not appear to be politically feasible. Furthermore, not all of the relevant stakeholders agree that adapting to rising tides is an immediate priority. Therefore, we expect that collaboration must start on a smaller and more informal scale, which we envision as a working group. As trust and joint vision are developed, larger-scale projects might take root. To implement these larger projects, more formal and

centralized governance will be required, as well as larger funding sources. We outline two governance tools (MOUs and JPAs) that could help achieve these larger initiatives. While it may not be currently politically feasible, other counties have created independent agencies to coordinate climate resilience initiatives, and a case study depicting this fourth option is included.

The governance structures provide a potential trajectory for long-term collaboration, and our case studies have shown that regional collaborations have often follow similar patterns. However, these structures are not prescriptive. For example, a working group does not need to exist for a Memorandum of Understanding to be implemented or a Joint Powers Agreement to be formed. However, the order of these governance structures does illustrate that initiating smaller projects across the county will increase the likelihood of taking on larger-scale programs due to the development of shared trust, vision, and resources.

Because our primary recommendation is to launch a working group, we have included specific steps for visioning and launching this group in Section B. Funding sources are included in Appendix A.

## CRITERIA FOR EVALUATING GOVERNANCE STRUCTURES

The below governance structures are evaluated using the following criteria:<sup>7</sup>

- **Ease of establishment:** A governance structure that is easy to establish will be low on financial costs, time investments, legal and reporting requirements.
- **Ability to leverage funding:** Funding can leveraged either by applying to grants and loans or by creating a financing mechanism within the governance structure itself.
- **Legal authority:** Legal authority entails not only jurisdiction to act, but also liability. Legal authority allows for larger and more coordinated action, but also is more bureaucratic to establish and maintain.
- **Ability to expand:** Given the nature of rising tides, a useful governance structure should be able to gradually expand in size or scope as the issue becomes more pressing and more stakeholders are brought onboard.

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<sup>7</sup> The criteria used here are based off of the evaluation criteria used by San Mateo County in a report appendix: "San Mateo County – New Agency Proposal: Governance Matrix Technical Memorandum." Resilient San Mateo. October 2018. [https://resilientsanmateo.org/wp-content/uploads/2019/01/Governance-Matrix-TM\\_102918\\_FinalV2.pdf](https://resilientsanmateo.org/wp-content/uploads/2019/01/Governance-Matrix-TM_102918_FinalV2.pdf)

## A. WORKING GROUP

### DEFINITION AND PURPOSE

A working group is a committee of stakeholders gathering regularly to share, discuss, study, and plan around a particular issue or question. The County's working group would bring public, private, and community stakeholders together around the topic of adapting to rising tides. A list of city assets listed in **Appendix B** can serve as a good starting point for outreach and engagement.

The initial purpose of the working group is to share information on the vulnerabilities identified in the ART report, review suggested actions, and develop a shared understanding of what is at stake. Afterwards, more information sharing can take place, such as sharing existing activities related to improving climate resilience and identifying joint goals.

In addition to information sharing, the working group could serve as a platform for coordinating around shared priorities. For example, city, county, and regional governments could develop a set of planning priorities related to flood prevention and agree to separately implement those policies in their own jurisdictions.

While it may require time, the working group could also serve as a platform for developing shared projects. These projects could range from education campaigns, improving emergency plans, conducting vulnerability studies, or restoring habitats and wetlands. However, conducting shared projects requires funding, and as detailed below, the working group cannot generate independent funding. [Creating an MOU](#) could provide more formality to these shared projects.

### EFFECTIVENESS CRITERIA

- **Ease of establishment:** Easier to establish financially and legally. However, recruiting all relevant key stakeholders across sectors and maintaining interest is time-intensive and requires high-touch engagement.
- **Ability to leverage funding:** Limited. The working group is not a legal entity and cannot generate independent financing mechanisms. An operating budget must be identified, and funding for projects must come from grants or be shouldered by one or multiple stakeholders.
- **Legal authority:** None. This is a non-legally binding structure.
- **Ability to expand:** High. Once stakeholders are identified and recruited, there is great ability to expand a working group in scope and membership.

## ADVANTAGES AND DISADVANTAGES

We believe that a working group is a necessary, preliminary governance mechanism to spur county-wide action across sectors. The group can serve as a platform to identify the common goals, abilities, and needs of individual stakeholders. Because it is informal and not a legal entity, the working group presents lower barriers to entry for stakeholders who are hesitant about committing to adaptation projects. Furthermore, community organizations and the private sector can participate as equal members of the working group, as membership is not barred to just government entities.

Disadvantages to a working group include the time-intensive process of identifying and recruiting a representative group of stakeholders, especially given the limited resources currently available for this effort and ambiguity on where to house the initiative. Furthermore, while the informality creates lower barriers to entry, this informality also hinders collaboration on large-scale projects. Larger, county-wide projects will require more resources than may be readily available within a working group, and stakeholders will likely want more clearly defined enforcement mechanisms than what a working group can provide. Should this issue surface, it may indicate the need for a new governance structure.

For more detailed information on launching a working group in the County, see **Section B: Launching a Working Group**.

## B. MEMORANDUM OF UNDERSTANDING

### DEFINITION AND PURPOSE

A memorandum of understanding (MOU) is an agreement between two or more parties that identifies shared goals to be jointly pursued. MOUs can be designed as legal contracts, but are often created to express a shared commitment. MOUs can outline shared goals or policies, enforcement mechanisms, expectations, roles, responsibilities, or funding agreements.<sup>8</sup>

Within the County, MOUs could be used to formalize commitment to shared goals that emerges from the working group. An MOU could also create governance structures for projects that require more precisely defined roles and responsibilities.

For example, an MOU could be symbolic, such as an agreement that all stakeholders will strive to meet particular resiliency-related goals or will implement particular policies in their general plans. An MOU could also be signed by a variety of stakeholders as an agreement to share a particular type of data, such as monitoring stormwater usage. An MOU could also be used to document the roles and responsibilities, including funding agreements, between multiple stakeholders in the implementation of a joint project.

### EFFECTIVENESS CRITERIA

- **Ease of establishment:** Moderately time-intensive to establish, but depends largely on complexity of project and number of stakeholders involved.
- **Ability to leverage funding:** Limited, because it is not a formal entity and cannot generate independent funds, such as levying taxes, issuing bonds, creating special assessment districts. However, it can outline resource commitments by signatories and outline plans for specific projects that can then receive grant funding (although one organization would have to take point on managing grant funding).
- **Legal authority:** Can but does not have to be legally binding, depending on the language. Does not create any new legal regulatory authority.

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<sup>8</sup> "Contracts and MOUs: Understanding Key Terms." ChangeLab Solutions. 2013.  
[https://changelabsolutions.org/sites/default/files/MOU-vs-Contracts\\_FINAL\\_20120117.pdf](https://changelabsolutions.org/sites/default/files/MOU-vs-Contracts_FINAL_20120117.pdf).

- **Ability to expand:** An MOU can be used to lay the groundwork for more legal, formal collaborations. Additional MOU can serve as amendments if goals or responsibilities change during implementation.

## ADVANTAGES AND DISADVANTAGES

An MOU is a flexible tool that can be adapted to the type of goal at hand. It adds more formality to activities such as those that might emerge from the working group and can incorporate private and community partners as equal signatories. Because the signatories develop the MOU collaboratively, stakeholders may be more willing to put resources on the line when it is on their terms. Furthermore, outlining roles and resource requirements decreases the risk of one stakeholder shirking and can identify methods of resolving conflict.

Because the MOU does not create a legal entity, the types of funding, and therefore projects, that can be generated are still limited. Furthermore, an MOU may not lead to actionable results if the MOU does not include detailed responsibilities or consequences for not completing the agreed-upon terms. Finally, creating an MOU requires collaboration that may be time-consuming depending on the complexity of the agreement and the number of signatories.



### CASE-STUDIES OF MOUs

<p style="text-align: center;"><b>The Long-Term Restoration Planning for Baylands MOU</b></p> <p style="text-align: center;"><a href="#">Source</a></p>	
<p><i><u>Purpose:</u></i> The MOU details the structure of collaboration, program timeline, and amount of funding each signatory will contribute towards long-term restoration and planning for Baylands.</p>	
<p><i><u>Signatories:</u></i> U. S. Fish and Wildlife Service, the California Department of Fish and Game, and the Coastal Conservancy</p>	
<p><i><u>Relevance:</u></i> The MOU outlines governance structures to implement programming around bayland restoration, which could be applied to the County’s efforts around adapting to rising tides. For example, the MOU develops an executive (leadership) team, a committee to conduct public outreach, and several teams with subject-matter or technical expertise. The MOU also creates a general work plan for achieving the broader goal of restoration, such as conducting needs assessments, environmental reviews, monitoring plans, and strategies.</p>	

## The Coastal Sage Scrub MOU

[Source](#)



**Purpose:** To “implement a policy of coordination and cooperation by and between the [parties] regarding the development of conservation strategies for effective, long term protection of the Coastal Sage Scrub natural community and its associated sensitive species in Southern California.”

**Signatories:** U. S. Fish and Wildlife Service, the California Department of Fish and Game

**Relevance:** Coordinated the necessary participation of two different levels of government that share jurisdiction over a key resource. Specifically, it leaves the responsibility for developing and monitoring the conservation strategy with the state-level agency, but requires strong information sharing and coordination with the federal-level agency. The County could use similar structures for coordinating agreement between city, county, state, regional, and federal governments.

## Sierra Forest Fire MOU

[Source](#)



**Purpose:** “To advance the use of fire for ecological benefit and improved fire management.” Specifically, the activities in need of coordination include, “minimizing barriers to implementing fire use by improving smoke management coordination and engaging in public education and outreach, to help increase capacity to use wildland fire through expanded training opportunities and resource sharing.”

**Signatories:** State and federal land/resource management agencies, environmental groups, and regional fire councils

**Relevance:** Coordinated a large number of stakeholders. The MOU began with 12 parties and currently has 37. This shows that large-scale coordination of departments and agencies across multiple levels of government is possible when the goal is clear and perceived as urgent.

## The Under 2

[Source](#)



**Purpose:** To reduce greenhouse gas emissions to limit global warming to less than 2 degrees Celsius by 2050. This means that signatories of this MOU will “pursue emission reductions consistent with a trajectory of 80 to 95 percent below 1990 levels, by 2050 and/or achieving a per capita annual emission goal of less than 2 metric tons by 2050.”

**Signatories:** Signed by over 220 governments across 43 countries (including California)

**Relevance:** The MOU shows that it is possible to use an MOU to decrease the harmful impacts of climate change even when said harms are not yet fully actualized disasters. The County could similarly use an MOU to state the overall goal that a variety of stakeholders work towards, but remain independently responsible for implementing.

## Project to Eradicate Northern Pike from Lake Davis



[Source](#)

Purpose: To “establish an agreement to coordinate and minimize duplication of effort as the Forest Service complies with the National Environmental Policy Act (NEPA) and CDFG complies with the California Environmental Quality Act (CEQA) with respect to the proposed project, the project proposal submitted to the Forest Service with a request for a special use permit and any other connected actions, such as forest closures. In order to facilitate the - Parties compliance with their respective laws, the Parties have agreed to do a joint EIR/EIS.”

Signatories: California Department of Fish and Game and the Plumas National Forest.

Relevance: Illustrates how an MOU can facilitate a specific project (EIR/EIS) necessary to bring a larger policy change (eradicating northern pike from Lake Davis).

## C. JOINT POWERS AUTHORITY

### DEFINITION AND PURPOSE

A Joint Powers Authority (JPA) is a legal entity that “is established when two or more public agencies by agreement jointly exercise any power common to the contracting agencies.”<sup>9</sup> Member agencies do not need to have authority in the same geographic areas, and can either function as two or more separate entities in agreement (and referred to as a Joint Powers Agreement), or as a new, separate public legal entity that can enter into contracts, sue and be sued and hold property (Joint Powers Authority or Agency).<sup>10</sup>

A JPA could be created between the city, county, and other public agencies in the County to develop joint programming around rising tides, as well as allow for monitoring, sanctioning and conflict resolution for and between stakeholders. JPAs are best applied to policy challenges that span jurisdictions and require coordinated efforts to address, such as environmental policy, insurance pooling, and transportation or infrastructure planning. The coordination allows for greater cost-savings and efficiency compared to each jurisdiction implementing independent programming. In the context of the County and rising tides, the JPA’s purpose would likely be planning, regulation, or service provision.

### B. EFFECTIVENESS CRITERIA

- **Ease of establishment:** Difficult to establish and maintain, but depends largely on number of stakeholders involved.
- **Ability to leverage funding:** Expansive, including issuing bonds (depending on the jurisdiction of member agencies). More likely to have the capacity to apply for and implement larger grants than a MOU or working group.
- **Legal authority:** Depending on the language, can create legal entity that can sue and be sued, hold property, enter into contracts.
- **Ability to expand:** The flexibility of JPA content and legal authority allows for expansion of projects and initiatives.

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<sup>9</sup> <http://www.cacities.org/getattachment/5768b027-71a7-4bc5-8d82-d2009f304297/LR-Cassman,-Savaree.aspx>

<sup>10</sup> “Governments Working Together: A Citizen’s Guide to Joint Powers Agreements.” California State Legislature, August 2007. <https://sgf.senate.ca.gov/sites/sgf.senate.ca.gov/files/GWTFinalversion2.pdf>

## C. ADVANTAGES AND DISADVANTAGES

Because adapting to rising tides is a regional challenge that requires steady financing and the cooperation of a variety of government entities, a JPA would be an effective way of coordinating services among a wide variety of stakeholders. The biggest advantage of a JPA is that it can create new revenue streams and issue bonds, dependent on their member's authorities. Furthermore, JPAs can issue revenue bonds without voter approval, although each member must adopt a local ordinance allowing it, which includes a 30-day period for voters to petition the ordinance.<sup>11</sup>

JPAs are also extremely flexible and do not prescribe a particular decision-making or governance structure. Although the membership is primarily public agencies, state law allows non governmental organizations to also enter in these agreements, and the private sector can serve on the decision-making board.

JPAs require a high degree of trust and agreement among the parties involved. Because collaborating around rising tides is still relatively new among the County's governments, it may not be politically feasible at this point in time. Furthermore, creating a legal entity requires that it conduct annual reporting and other time-intensive bureaucratic requirements.



### CASE-STUDIES OF JPAS

<b>The San Francisquito Creek Joint Powers Authority</b> <a href="#">Source</a> 
<i><u>Purpose:</u></i> The SFCJPA is "leading four main projects to stabilize, restore, and maintain the channel of the San Francisquito Creek" as well as "design and plan capital projects to increase flood protection that benefit the natural environment."
<i><u>Signatories:</u></i> City of East Palo Alto, City of Menlo Park, City of Palo Alto, San Mateo County Flood Control District, Santa Clara Valley Water District.
<i><u>Relevance:</u></i> The four capital improvements projects are examples of initiatives that a County-based JPA could undertake. Initiatives include an engineering feasibility study, creek restoration, environmental impact studies, real-time creek monitoring, and issuing Request for Proposals for flood warning systems.

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<sup>11</sup> Ibid.

## Sonoma County Regional Climate Protection Authority (RCPA)



[Source](#)

**Purpose:** Coordinates initiatives to improve climate protection and reduce greenhouse gas emissions within Sonoma County. The RCPA focuses on applying to grant funding and implementing projects related to reducing greenhouse gas emissions, including data collection efforts and public education campaigns.

**Signatories:** Sonoma County, City of Santa Rosa, City of Cotati, Town of Windsor, City of Petaluma, City of Healdsburg, City of Sonoma, City of Cloverdale, City of Rohnert Park, City of Sebastopol

**Relevance:** The County could use a JPA to conduct a similar approach to coordinated projects, particularly collecting data around rising tides or creating public awareness campaigns around the threat posed by rising tides. Public awareness initiatives include hosting events and forums or creating communities of practice.

## The Santa Monica Mountains Conservancy (SMMC)



[Source](#)

**Purpose:** To “strategically buy back, preserve, protect, restore, and enhance...urban, rural and river parks, open space, trails, and wildlife habitats.” The SMMC has 9 voting members and a 26 person advisory council as a means to ensure broad representation of local, regional, and state interests.

**Signatories:** Baldwin Hills Regional Conservation Authority, Desert and Mountain Conservation Authority, Eastern Ventura County Conservation Authority, Moorpark Watershed, Mountains Recreation & Conservation Authority, Newhall Ranch High Country Recreation and Conservation Authority, Santa Clarita Watershed Recreation & Conservation Authority, Whittier-Puente Hills Conservation Authority, Wildlife Corridor Conservation Authority

**Relevance:** Within a JPA, the County could implement a similar voting and governance structure to ensure a mixture of local, regional, and state representation.

## The Wildlife Corridor Conservation Authority



[Source](#)

**Purpose:** The JPA was created to ensure “the proper planning, conservation, environmental protection and maintenance of the habitat and wildlife corridor between the Whittier-Puente Hills and the Cleveland National Forest in the Santa Ana Mountains.”

**Signatories:** City of Whittier, City of Brea, City of La Habra Heights, City of Diamond Bar, Los Angeles County and the Santa Monica Mountains Conservancy.

*Relevance:* Demonstrates how a JPA can coordinate funding for joint activities from member parties.

## The Association of Bay Area Governments (ABAG)



[Source](#)

*Purpose:* ABAG was formed by a JPA in 1961 and has voluntary membership and limited statutory authority. ABAG has a general assembly, executive board and four committees: administrative, finance, regional planning and legislation. ABAG is funded by membership dues, fees for service programs, and grants from federal, state and local governments.

*Signatories:* 9 counties and 101 cities in the Bay Area.

*Relevance:* This case study shows that a larger network, including the key stakeholders for Contra Costa County climate resilience, already exists, and has been working together on regional issues for decades. Furthermore, if the County creates a JPA with a membership, a similar general assembly and committee structure could help foster decision-making.

## 4. OTHER CONSIDERATIONS

San Mateo County, while economically and demographically different from Contra Costa County, has had similar conversations around creating governance structures to coordinate adaption to rising tides.

The trajectory of collaboration in San Mateo County could serve as an interesting case study and resource for Contra Costa County. Although San Mateo County is currently undergoing efforts to expand an existing agency to cover climate resiliency efforts, it has previously used working groups, JPAs, and MOUs to collaborate on this topic.

The following resources help provide context to resiliency efforts in San Mateo County and the different phases of collaboration that county stakeholders engaged in:

- [Resilient San Mateo](#): Website for resiliency efforts in San Mateo County. They have used state and federal representatives to make the case for why an agency is needed and have created accessible language to inform the public about why action is needed.
- [Governance Matrix](#): An extensive, technical report outlining different governance and funding strategies that San Mateo County considered before deciding on creating a new agency.

- [Background on Collaboration and Governance Proposal](#): Details the history of collaboration within San Mateo County and makes the case for creating an county agency focused on resiliency.

Additionally, as work on climate resiliency expands, multiple of these governance structures could be used to target action within particular sectors or planning issues. However, a county-wide initiative to at least coordinate and share information will remain necessary.

# SECTION B. WORKING GROUP STRATEGY

Creating a working group to coordinate a response to rising tides is a natural first step for the County. Currently, it does not appear there is enough political agreement to create a regulatory or planning agency that will implement the needed changes. Additionally, a working group can serve as a low-stakes platform by which collaborative projects are identified and planned, allowing political will to build gradually.

Building an effective working group will require up-front planning to set the context, define broad goals, and ensure that all the relevant stakeholders are at the table. After our interviews, we believe that key stakeholders must first be engaged to build support for the working group. The following steps can begin immediately and are expected to take 3-6 months, depending on the amount of staff time available for coordination:

- 1. Create a Planning Committee**
- 2. Identify Working Group Participants**
  - a) Government and Private Sector Participants**
  - b) Community Organizations**
  - c) Private Sector Engagement**
- 3. Develop a Cohesive Messaging Strategy**
  - a) City Assets and Barriers**
  - b) Sample Communications Language**
- 4. Identify Resource Needs and Secure Funding**
- 5. Set Launch Date and Plan First Meeting**
- 6. Develop Operating Procedures**
- 7. Plan Meaningful Action**
- 8. Relevance to Other Governance Structures**

## 1. CREATE A PLANNING COMMITTEE

Convene a small planning committee to serve as both the face of the working group in the initial start-up period and to provide coordination and technical support. The [Community Resilience Building Workshop Guide \(p4\)](#) recommends convening the planning committee 2-6 months before the intended launch of the larger working group. Furthermore, the planning committee

should identify a work plan for the launch and set specific goals for the initial working group meetings.

The recommended planning team for the County consists of representatives from the following offices/teams:

- **County Supervisor:** A supervisor could provide the political leadership to get stakeholders to the table and communicate the need for collaboration.
- **County Administrator:** The County Administrator's Office has high visibility, political clout, and could unite city and county entities.
- **County DCD:** Provides technical and subject-matter knowledge, including coordinating with BCDC and the ART Reports.

In the lead-up to the working group launch, the planning team will need to conduct outreach to amplify the need for the working group. As a result of time and resource constraints, as well as ideological differences, it is evident that adapting to rising tides is not currently a priority for all stakeholders. Therefore, the planning team must engage in one-on-one meetings with key stakeholders to make the case for why action is needed. Furthermore, the planning team must identify stakeholders that are hesitant to participate and conduct more targeted outreach to communicate both the value of the working group and the threat posed by inaction. In particular, using collaboration as a tool to secure new funding may resonate with cities.

The planning team should develop a preliminary mission statement for the working group, with the understanding that it will change. Draft language is included below to serve as a starting point.

**SAMPLE MISSION STATEMENT:**

*"Permanent and temporary flooding is predicted across Contra Costa County's shoreline, threatening damage to our communities and livelihoods. While cities, the County, community organizations, and businesses have taken individual action to protect against rising tides, greater collaboration is needed. The working group aims to create a space for conversation around how we can better secure our shoreline, as well as obtain the resources we need to turn these visions into action."*

## 2. IDENTIFY WORKING GROUP PARTICIPANTS

The ideal working group participants include all stakeholders in the County with jurisdiction over shoreline land or who are projected to be impacted by rising tides. In addition to government entities, community organizations and the private sector are key to providing a holistic and diverse perspective on shoreline planning.

### A. GOVERNMENT AND PRIVATE-SECTOR PARTICIPANTS

The below table captures recommendations on stakeholders to be included within the working group. The membership of the ART Working Group can also be used to inform invitees. The following questions can be used to consider who else may need to be at the table:

- What communities and organizations are most affected by projected flooding? Which of these may not traditionally have a seat at the table?
- What stakeholders hold the most influence in this policy area and are key to have on board?
- What expertise needs to be included in the working group? Expertise is not only technical or professional, but also includes lived experience.

TYPE	INCLUDES <sup>12</sup>
COMMUNITY	<i>See community engagement section below</i>
CITY	Antioch, Bay Point, Brentwood, Clayton, Concord, Town of Danville, El Cerrito, Hercules*, Lafayette, Pleasant Hill, Port Costa, Rodeo, Martinez*, Richmond*, Town of Moraga, San Pablo*, Oakley, San Ramon, Pittsburg, Orinda, Walnut Creek, Pinole*
COUNTY	Department of Conservation and Development*, Health Services*, Water Agency*, Flood Control and Water Conservation*, Office of Emergency Services*, Mosquito and Vector Control*
DISTRICTS, AUTHORITIES, COMMITTEES	Contra Costa Water District*, West County Wastewater*, Central Contra Costa Sanitary District*, East Bay Municipal Utility District*, East Bay Regional Parks District*, Mt View Sanitary District*, Contra Costa Resource Conservation District, Contra Costa Transportation Authority*, West Contra Costa County Transportation Advisory

<sup>12</sup>This is not an inclusive list. The full list of stakeholders should be determined by initial working group or planning committee. Entities with a \* participated in the ART Study West process.

	Committee*, Capitol Corridor Joint Powers Authority*, Bay Conservation and Development Commission*
PRIVATE SECTOR	East Bay Leadership Council, Chevron Richmond Refinery, Philipps 66 Richmond, Pacific Gas and Electric, Point Blue Conservation Science, Tesoro Martinez Refinery*, Plains All American Pipelines*, Southern Counties Oil Co.
OTHER ART WEST WORKING GROUP MEMBERS	<u>Regional, State And Federal Agencies:</u> Association of Bay Area Governments, Metropolitan Transportation Commission, Bay Area Resilience Collaborative, California Department of Transportation District 4, San Francisco Estuary Partnership, San Francisco Bay Trail, State Coastal Conservancy, Federal Emergency Management Agency, NOAA Office for Coastal Management, Office of Assemblymember Tony Thurmond, Office of Representative Mike Thompson <u>Other Private and Non-Profit Organizations:</u> Republic Services, Pacific Gas and Electric, Point Blue Conservation Science, Tesoro Martinez Refinery, Plains All American Pipelines, ESA Associates, Chabot Space and Science Center, Communities for a Better Environment, Environmental Justice Coalition for Water, Breakthrough Communities, East Bay Economic, Development Alliance, Tom Leader Studio, UC Berkeley Office of Environment, Health & Safety

## B. COMMUNITY ORGANIZATIONS

Meaningful community engagement is a necessary component of implementing the ART recommendations. In particular, frontline communities must be part of the working group membership. The [Our Communities, Our Power](#) report defines frontline communities as “groups of people who are directly affected by climate change and inequality in society at higher rates than people who have more power in society...People who experience oppression because of race, income, gender, sexual orientation, disability, gender identity, age, etc. are more likely to have less resources and protections in our society in general and even less access to resources and protections not only to adapt to our changing climate but also to pass policies and legislation that are fair and culturally significant.”

Frontline communities not only need to lead in defining the problem and informing solutions, but they are also key to informing the public at large about the threat of rising tides in the County. Suggested community organizations to reach out to include:

- [Contra Costa Interfaith Housing](#): CCIH heals the effects of poverty and homelessness by providing permanent housing solutions and vital support services to highly vulnerable families and individuals.

- [Village Community Resource Center](#): VCRC began in response to the fatal shooting of a 15 year old boy on Village Drive. After being incorporated in 2002, VCRC responded to the need for additional services by expanding its programs to include food distribution, homework assistance, translation and referral services.
- [The Bedford Center](#): The Center's mission is to promote dignity and independence of people with disabilities and special needs.
- [Independent Living Resource of Solano & Contra Costa Counties](#): Independent Living Resources (ILR) is a non-profit organization dedicated to helping people with any type of disability live normal, independent lives. Through education empowerment and advocacy, ILR strives to fully incorporate those with disabilities into the community and eliminate institutional, social and attitudinal barriers that hinder progress.
- [STAND! For Families Free of Violence](#) is a catalyst for breaking the multi-generational cycle of violence, promoting safe and strong relationships, and rebuilding lives
- [Transgender Law Center](#). Transgender Law Center advocates for self-determination for all people.
- [CCC MEDS Coalition](#): CCC MEDS Coalition is a community-based coalition that serves to prevent prescription drug related addiction and overdose deaths through community education, policy change, and advocacy.
- [Rise Up Contra Costa County](#): is a union geared to the needs of highly trained professional and technical employees dedicated to improving governmental services and operations in the San Francisco Bay Area.
- [One Day At A Time](#): ODAT's goal is to provide youth with a supportive network of peers, opportunities for academic and personal growth and exposure to positive transformative experiences.
- [Rotary Club of Antioch](#): the RCA's mission is to local business and professional leaders have been coming together to serve their community and youth since 1947.
- [Environmental Science Academies at High Schools](#): the mission of ESAHS is to empower and build student leaders who are prepared and excited to change the world around them through collaboration, problem-solving and becoming stewards of our environment.
- [Asian Pacific Environmental Network](#): APEN brings together a collective voice to develop an alternative agenda for environmental, social, and economic justice in Asian and Pacific Islander communities. APEN works in West County.
- [Urban Tilth](#): Urban Tilth hires and trains local residents to cultivate agriculture in west Contra Costa County to help our community build a more sustainable, healthy, and just food system.

- [Interfaith Council of Contra Costa County](#). ICCC is a collection of 110 congregations, monasteries and retreat centers that join to make Contra Costa County a better place. Sustainability issues are among the topics on which ICCC works.

The following resources provide more information on how to center frontline communities within resilience strategies:

- [Our Communities, Our Power](#): The NAACP provides an in-depth guide on how to convene communities and action around environmental issues that center people of color and frontline communities.
- [Community Resilience Building](#): “is a unique, ‘anywhere at any scale’, community-driven process, rich with information, experience, and dialogue, where participants identify top hazards, current challenges, strengths, and priority actions to improve community resilience to all natural and climate-related hazards today, and in the future.”

## C. STRATEGIZE PRIVATE SECTOR ENGAGEMENT

Potential private sector partners include:

- Tesoro Golden Eagle Martinez Refinery (owned by Andeavor)
- Martinez IT Vine Hill Complex and Acme Landfills
- Tesoro Martinez and Shell Martinez refineries
- Chevron Richmond Refinery
- Republic Services
- Pacific Gas and Electric
- Plains All American Pipelines
- East Bay Economic Development Alliance
- Agriculture/farms

Resources for private sector engagement include:

- [Holistic Toolbox for Private Sector Engagement in Development Co-Operation](#): Outlines key principles for engaging with the private sector around development outcomes.
- [Businesses Acting on Rising Seas](#): A report meant to inform businesses about how rising tides may affect them, and how businesses around the country are contributing to resiliency efforts. Case studies and sample language could be found in this report.
- [Guide to Public-Private Collaboration on Climate Resiliency Planning](#): Report outlines messages that resonate with business around the importance of climate resilience planning as well as outlines key considerations in engaging with the private sector.

### 3. DEVELOP A COHESIVE MESSAGING STRATEGY

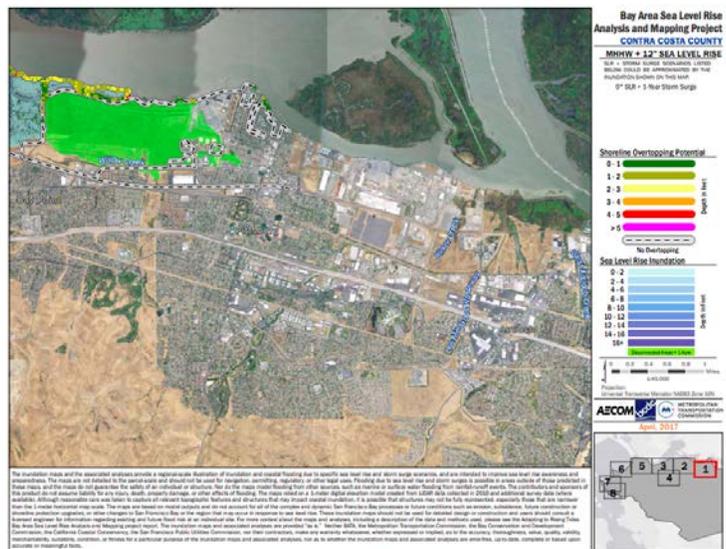


In addition to articulating a working group mission, a communications strategy is needed to bring stakeholders to the table and align expectations. In particular, targeted outreach to stakeholders who may be hesitant to join the working group must be conducted by the planning team.

A successful communications strategy describes the threat of rising tides using non-technical terms and uses local examples to illustrate what rising tides means for the County’s future. Communication should both frame what is at stake but also highlight the opportunity to build on existing successes. Each stakeholder should be able to understand how participation will benefit them, as well as also see their role in achieving a broader goal.

#### A. CITY ASSETS AND BARRIERS TABLE

In **Appendix B** there is an assets and barriers map was created to help the planning team consider why each city might be motivated to participate in a rising tides working group. Understanding each city’s unique constraints – as well as what assets may be affected by rising tides – can help the planning team conduct targeted communication regarding the importance of a working group. The ART Study West also has a resource called [“Shoreline and Inundation Mapbook,”](#) which breaks down sea level rise predictions for individual cities (see image). This can also be used as a resource when engaging cities with the goal of getting them to participate in a working group.



The inundation maps and the associated analysis provide a regional-scale illustration of inundation and coastal flooding due to sea level rise and storm surge scenarios, and are intended to illustrate how the inundation and overtopping maps are not intended for the purpose of determining the safety of an individual structure. For the regional-scale flooding maps, the inundation maps are not intended to be used for determining the safety of an individual structure. For the regional-scale flooding maps, the inundation maps are not intended to be used for determining the safety of an individual structure. For the regional-scale flooding maps, the inundation maps are not intended to be used for determining the safety of an individual structure.

## B. SAMPLE COMMUNICATIONS LANGUAGE

There are two primary messaging needs: 1) that **rising tides are a prevalent threat** and 2) **action is needed that must be initiated** through a working group. Below is a sample of some of the language the ART West Study outlines as the impacts and opportunities for different sectors. These can serve as a starting point for communicating the impact of rising tides and the opportunities that a working group can provide. Economic impacts might resonate most with cities that are more resource-constrained or may not have a prominent focus on sustainability or climate resilience. Environmental impacts might be useful when reaching out to community based advocacy organizations, elected officials with a climate justice focus, and other non-governmental organizations.

 <b>E C O N O M I C</b>	
<b>IMPACTS</b>	<b>OPPORTUNITIES</b>
<p><b>Industry:</b> "Industrial land uses provides...jobs for residents, goods and products needed in other parts of the region, and tax revenue to the cities and the county. Damage or disruption ... could result in high costs due to lost productivity, as well as the replacement or repair of buildings, specialized equipment, and goods stored onsite. Temporary or permanent closures of industrial operations of all kinds could have broad economic impacts throughout the region, particularly if heavy industrial facilities such as the refineries are damaged or their connections to goods movement infrastructure is disrupted."</p> <p><b>Transportation:</b> "Interstates in the project area are critical to both the flow of goods and the ability of commuters to access local and regional jobs... In particular, workers who rely on vulnerable public transit assets or roads may be unable to get to work, affecting not only their wages but the economy of the region as a whole."<sup>13</sup></p>	<p><b>Industry:</b> "Commercial and industrial facilities provide jobs, goods, critical services, and opportunities for economic development and growth. Commercial businesses are an important part of community function as community members tend to shop and access services, including medical and dental services, near where they live and work. In addition, community members with limited mobility and those that rely on public transit typically have limited options for travelling outside of their neighborhood to access jobs, necessary services and critical goods."<sup>15</sup></p> <p><b>Goals:</b> "Maintain and improve local economic vitality and access to diverse employment opportunities by preserving the function of major employment centers, infrastructure and utilities. Recognizing Contra Costa County's regional refining and goods movement role, ensure the energy and transportation</p>

<sup>13</sup> ART, pg. 139

<sup>15</sup> ART, pg. 27

<p><b>Services:</b> "... disruption of power, access to goods, services and jobs; can strain local disaster response and recovery resources; and, result in economic losses if job sites, government services, and businesses are disrupted by a loss in communications, utilities, or goods or commuter access."<sup>14</sup></p>	<p>sectors and the interconnected networks and systems they rely on are resilient."<sup>16</sup></p> <p><b>Questions related to potential Economic Benefits:</b> Will the action promote or retain jobs? Will the action maintain commuter movement? Will the action maintain goods movement? Will the action reduce service or network disruptions?<sup>17</sup></p>
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 <p><b>E N V I R O N M E N T A L</b></p>	
<b>IMPACTS</b>	<b>OPPORTUNITIES</b>
<p><b>Hazardous Materials:</b> "The release of persistent and mobile hazardous materials can have long-lasting and far-reaching consequences on wildlife and habitats, and can affect water quality."<sup>18</sup></p> <p><b>Marinas:</b> "Marinas create, store, and transport hazardous materials like fuel and motor oil. If these facilities are flooded, hazardous materials may be mobilized and lead to impaired water quality and environmental habitat degradation."<sup>19</sup></p> <p><b>Transportation:</b> "Disruption of local streets and roads that public transit relies on could cause more individuals to drive, which could affect air quality. In addition, the loss of a portion of the transportation network may increase congestion, potentially resulting in greater emissions and lower fuel</p>	<p><b>Open Spaces:</b> "Bay Trail segments provide nature viewing and environmental education opportunities that may be lost if the trail is flooded or damaged. Damage of the trail can also increase erosion and result in impacts to the natural areas surrounding the damaged trails segments."<sup>22</sup></p> <p><b>Economic:</b> "A solid understanding of the risk that water management systems face will help lay the foundation for developing, evaluating, and implementing strategies that balance protecting public safety, growing the economy, and providing community and environmental benefits to ensure a vibrant and resilient future."<sup>23</sup></p> <p><b>Goals:</b> "Protect and improve the environment by preserving and restoring habitat, continuing to</p>

<sup>14</sup> ART, pg. 15  
<sup>16</sup> ART, pg. 20  
<sup>17</sup> ART, pg. 179  
<sup>18</sup> ART, pg. 42  
<sup>19</sup> ART, pg. 88  
<sup>22</sup> ART, pg. 90  
<sup>23</sup> ART, pg. 140

efficiency. Lastly, prolonged flooding of segments of an interstate, such as I-680, that are adjacent to natural areas and marshes could cause trash and pollutants to mobilize and stress habitat.”<sup>20</sup>

**Flood Protection:** “If the creeks and channels cannot provide adequate flood protection, there could be disruptions to local roads, damage to energy services, shutdowns to treatment plants serving residents and businesses, and lack of railroad service. This loss of goods, services and jobs will have a significant impact on the regional economy.”<sup>21</sup>

improve air and water quality, and safely addressing contaminated lands. Promote the use of natural and nature-based approaches where possible and appropriate to improve community and economic resilience.”<sup>24</sup>

**Questions related to Environmental Improvement:** Will the action create or maintain appropriate habitat and biodiversity? Water quality: Will the action maintain or improve water quality? Nature based: Will the action promote grey to green, nature-based solutions?<sup>25</sup>



IMPACTS	OPPORTUNITIES
<p><b>Workplace Consequences:</b> “The disruption or closure of industrial land uses can have significant consequences for employees as loss of access to the workplace can cause lost wages. Loss of these facilities may also have consequences on the people within the county and the region, as the industrial land uses within the county produce and provide a number of critical goods and products used in many other sectors. Unexpected flooding of facilities that store hazardous materials can also result in public health impacts in nearby communities.”<sup>26</sup></p>	<p><b>Building Relationships:</b> “By increasing knowledge sharing between first responders and community members, not only will the planning be stronger, but also relationships between those that may be in need and those that are responding to those needs will be improved. For example, inclusion of community members and leaders in planning can ensure the use of culturally and ethnically appropriate communication methods during an emergency.”<sup>30</sup></p>

<sup>20</sup> ART, pg. 139  
<sup>21</sup> ART, pg. 157  
<sup>24</sup> ART, pg. 20  
<sup>25</sup> ART, pg. 179  
<sup>26</sup> ART, pg. 37  
<sup>30</sup> ART, pg. 168

**Information:** "Social networks strength and community capacity can be limited if community members have limited information about the specific characteristics and/or needs of individuals and households in their community, and/or surrounding neighborhoods."<sup>27</sup>

**Cost to Community:** "The broader community of taxpayers and ratepayers may also bear some of the expense of rebuilding areas even if they do not themselves live in affected areas."<sup>28</sup>

**People:** "People are the workers, students, clients, customers, neighbors, volunteers and members that make up our cities, communities and region. People are responsible for creating the social and personal support networks, the culture and values, and the local economies that contribute to the resilience of communities. It is critical, therefore, to understand the unique needs, challenges and strengths of the people within each community when evaluating the potential risks faced from hazards such as flooding, sea level rise, and storm events."<sup>29</sup>

**Sustainability:** "Effects on communities and services on which they rely, with specific attention to disproportionate impacts due to inequalities."<sup>31</sup>

**Society and Equity:** "Goals support communities, and in particular those with characteristics that could make them more vulnerable, in accessing affordable, safe and healthy housing, utilities and services, recreational opportunities, transportation and transit, and information about risk. Protect the health, safety and welfare of all who live, work and recreate in Contra Costa County."<sup>32</sup>

**Facilities:** "Community facilities that could potentially serve as gathering locations or places for emergency information centers include the public schools, [and] large churches."<sup>33</sup>

**Questions related to social benefits:** Will the action protect public health and safety? Will the action protect especially vulnerable community members? Will the action preserve community function, and/or advance other community objectives? Will the action maintain recreational or educational opportunities?

## C. OTHER COMMUNICATIONS RESOURCES

There are many frameworks that can be used to create an effective communication strategy. Below are several resources that the planning team could use when developing communications and conducting outreach campaigns:

- [Climate Action Business Association](#): Provides guidance and support down a pathway of increasing engagement in climate work through three program areas: sustainability, political advocacy, and community.

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<sup>27</sup> ART, pg. 104

<sup>28</sup> ART, pg. 71

<sup>29</sup> ART, pg. 90

<sup>31</sup> ART, pg. 7

<sup>32</sup> ART, pg. 20

<sup>33</sup> ART, pg. 100

- [Opportunity Agenda](#): The Opportunity Agenda synthesizes and translates research on barriers to opportunity and corresponding solutions; uses communications and media to understand and influence public opinion; and identifies and advocates for policies that improve people's lives.
- [Story-based Strategies](#): links movement building with an analysis of narrative power and places storytelling at the center of social change.
- [The Spitfire Strategies SmartChart 3.0](#): An exercise that helps you evaluate your audience and what type of messaging strategies will resonate with their interests and constraints.

## 4. IDENTIFY RESOURCES NEEDS AND SECURE BASIC FUNDING

While the working group is not as resource-intensive as other governance strategies, it still requires staffing and an operational budget.

### A. STAFFING

We recommend hiring one person part-time or intern to coordinate working group activities. However, these responsibilities might be wrapped into an existing job, depending on where the working group is housed.

Specific responsibilities include:

- Coordinate time and location of meetings
- Issue meeting invitations and track attendance
- Develop and disseminate agenda items
- Take notes during working group meetings
- Provide follow-up support to action items that result from working group plans
- Apply for grants, depending on the types of activities the working group decides to take on

### B. OPERATIONAL BUDGET

Funding for general operating expenses of the working group may depend on where the initiative is housed. Costs might include:

- 1 part-time staff member
- Copying and printing
- Reserving rooms

- Independent facilitator

## C. PROJECT-SPECIFIC FUNDING

See the funding section in **APPENDIX A** for information on project-specific funding sources.

# 5. SET LAUNCH DATE AND PLAN FIRST MEETING

The Community Visioning Handbook ([page 16](#)) discusses important questions and agenda items for the first planning meeting, such as thinking about the goals of a working group launch. The agenda items around logistics ([pages 18-22](#)) may also be useful in thinking through logistics, agenda items, facilitators, and recruitment strategies.

The Community Resilience Building Workshop Guide ([page 5](#)) recommends two formats for the initial working group launch:

- One, 6-8 hour meeting
- Two, 4-6 hour meetings held about two weeks apart

The launch meeting should open and close in a large group plenary with all of the attending stakeholders. However, breakout discussions will allow for more open communication than is possible within large-group format. Breakout discussions could be sector-specific, regional specific, or randomly assigned. Because part of the working group goal is to encourage collaboration between different parts of the county, we recommend randomly assigning breakout groups.

Other resources that may help with deciding on how to launch and facilitate the working group:

- [Section B-F of the Community Resilience Building Workshop Guide](#): In-depth recommendations on how to format large-group discussions around climate resilience that speak to both each stakeholder's interests and a broader community vision.
- [Community Visioning Handbook, page 23-28](#): Sample agendas, breakout group discussion questions, and suggestions for framing opening statements.
- [Facilitating Large Group Meetings That Get Results Every Time](#): Guidelines for facilitating meetings that have a large number and diversity of participants.
- [Introduction to Planning and Facilitating Effective Meetings](#): Contains questions to consider when creating an agenda, deciding on a facilitator, and tools for facilitating large group decision-making.

## 6. DEVELOP A MISSION STATEMENT & OPERATING PROCEDURES

At the outset, the working group should agree on how it will collaborate with one another, and what the expected roles and responsibilities look like. The following questions, discussed by either the planning committee or the working group as a whole, can help set those expectations:

- What time commitment is expected from stakeholder? How often will the working group meet, and how long are meetings?
- Are other resources, besides time, expected from participants?
- What are the ground rules for discourse and conversation?
- How will agendas items be added and decided upon?
- How will discussions be facilitated? How can input be collected to ensure that all have a say in activities that move forward?
- How will big decisions be made? When and how might voting play a role?
- Who will be charged with facilitating meetings, ie: moving through agenda items at a timely pace?
- How will notes and action items be distributed, and to who?
- How will relevant information be communicated, such as through an email listserv?

The working group should work collaboratively to determine its goals and agree on shared values that will guide its work. After initial brainstorming, the working group could review the goals set out by the ART Working Group to compare and edit. The process of creating a mission statement should be collaborative. There are many ways to structure this process, which the below links cover:

- [Our Communities, Our Power p 47](#): Hosting community forums and then compiling ideas into a draft that is then available for public comment before finalizing.
- [Community Visioning Handbook](#): Sample agendas and questions for convening large group discussions and developing a community vision.
- [Community-Driven Climate Resilience Framework](#)
- [Ten Principles for Building Resilience](#)

## 7. PLAN MEANINGFUL ACTIONS

We strongly recommend that the working group planning committee and/or the working group itself review the [ART West Adaption Response Sheets](#) for potential projects that the working group

could take on. However, to start with, the working group should simply undertake information sharing and reviewing what rising tides mean for the County's future. Below are suggested agenda items or projects that the working group could take on at different stages of collaboration.

## A. Initial Agenda Items/Areas for Collaboration

*Note: it would be useful to have a representative from BCDC be a part of these sessions to help answer technical questions.*

- Learn how to use the [Adapting to Rising Tides Explorer](#) and understand what sea level rise predictions mean. What are the different scenarios that could alter sea level rise predictions?
- Use ART report to review assets within each stakeholder's jurisdiction that are prone to flooding. Focusing on assets that are county-wide, such as transportation, may be good ways of building initial buy-in.
- Review project-specific maps so that stakeholders understand what areas are most at risk:
  - [Shoreline and Open Space](#)
  - [Transportation and Energy](#)
  - [Business](#)
  - [Housing and Public Services](#)
  - [Industry](#)
  - [People](#)
- Review flood predictions from various studies outside of the ART projects as a way of showing that various data sources predict similar outcomes, such as:
  - [FEMA Flood Maps](#)
  - [NOAA Coastal Flood Exposure Mapper](#)
- Share information on what stakeholders are doing around adapting to rising tides and what their biggest priorities are.
- Share information on what each stakeholder views as the biggest barrier in seeing the desired work around adapting to rising tides.
- After reviewing areas of vulnerability, discuss which geographic, sectoral, or planning vulnerabilities are most important to each stakeholder.

## B. Public Education Campaigns

Public education is critical to successfully acting on rising tides. Understanding sea level rise predictions can be difficult, especially because the predictions often range widely. If citizens do not view adaptation as a priority, then elected representatives will be less likely to spearhead

action. Furthermore, communities may be able to implement smaller-scale changes at the household level that mitigate potential damage from flooding. Therefore, the working group could take on public education campaigns that help communities understand the threats and opportunities of climate resilience and how they can contribute to adaptation work.

One example, drawn from the [ART West Adaptation Strategies Appendix](#), is:

- **People - FUNC6:** Non-English speakers, people with disabilities, such as vision and hearing impairment, and socially isolated individuals and households may face communication difficulties in responding to and preparing for flooding
  - Develop trainings and educational materials, including CERT, in the languages that community members speak, including sign language and braille
  - Disseminate best available flood and climate risk information, in multiple languages and formats, through community-based organizations

### C. Larger Projects/Initiatives

*Note: The below are a sample the actions published in the [ART West Adaptation Response Sheets](#). The title indicates which spreadsheet and section the action was pulled from.*

- **Water Management (INFO1):** Develop new or improve existing watershed-specific hydraulic models to evaluate the capacity of the stormwater system to store and drain rainfall runoff as sea levels, groundwater and precipitation patterns change
- **Water Management (INFO2):** Incentivize or require critical stormwater system information to be collected and made available in a geo-referenced or GIS format
- **Water Management (INFO2):** Adopt data management and sharing agreements among public and private stormwater infrastructure owners and managers to ensure complete, high quality, and accessible asset information is available for system vulnerability and risk assessments
- **Public Services Responses (GOV):** Review and update health care facility emergency plans to address current and future coastal and riverine flooding including contingencies and secondary impacts that are broad-scale (e.g., county or Bay Area-wide) and/or severe (e.g., long-lasting and/or deep inundation)
- **Public Services Responses (FUNC1):** Evaluate the continued siting of healthcare facilities in areas at risk from current and future flooding, in particular those areas that are difficult or expensive to protect, evacuate, or rebuild in a manner ensuring public health, safety and welfare
- **Public Services Responses:** Develop Plans and Procedures To...

- obtain or distribute specialized equipment needed to either shelter-in-place or evacuate at-risk, less mobile, or medically dependent populations
  - address the need for short-term sheltering and long-term housing of mobility and medically dependent community members
- **Transportation (FUNC4):** There are very limited alternatives to re-route goods movement if I-580 was disrupted, especially because this segment in the project area supports truck traffic to/from the Ports of Oakland and Richmond, and re-routing truck traffic can be challenging due to road-use restrictions.
  - Review and improve understanding of critical partners, timelines, and pathways for goods movement to/from the Port of Oakland and the Port of Richmond
  - Conduct an economic analysis of the consequences of goods not being delivered to/from the Ports of Oakland and Richmond to inform understanding of the economic consequences that could occur if I-580 was disrupted
  - Develop contingency plans for re-routing goods from I-580, including developing secondary markets and alternative transportation options
- **People - FUNC6:** Non-English speakers, people with disabilities, such as vision and hearing impairment, and socially isolated individuals and households may face communication difficulties in responding to and preparing for flooding
  - Develop and maintain a centralized database of nonprofit, community, and faith-based organizations, equipment and service providers, and others that can communicate with communities at risk in the languages they speak
- **Contaminated Lands - GOV1:** Most Brownfield sites are privately owned, and cleanup depends in part on being able to locate the responsible party and on these parties having the necessary funds to undertake the cleanup. Where responsible parties cannot be found or do not have sufficient funds, the cleanup process may be delayed or public funds must be used.
  - Establish lead agency and develop agreements among institutions that regulate or manage Brownfield sites to collect, manage, and share the data necessary to understand Brownfield site vulnerability to sea level rise using consistent methods

## 8. RELEVANCE TO OTHER GOVERNANCE STRUCTURES

The working group can share information or take on coordinated campaigns. It can also serve as a planning and visioning team for larger initiatives that require other governance structures listed in Section A. For example, the larger initiatives described in Section B – 7 may require that stakeholders outline roles, responsibilities, and resource sharing using a Memorandum of Understanding. Particularly large initiatives that are broadly supported may be better managed under a JPA or under an existing agency’s jurisdiction. The working group can serve as a launching pad and place to plan those other governance structures.

# APPENDIX A: FUNDING SOURCES

The below funding sources represent a variety of funding opportunity types. While they are below divided them by local, state, and federal-level sources, they also vary in aspects such as grants vs. loans and funding sources vs mechanisms.

## 1. LOCAL FUNDING MECHANISMS

### A. COMMUNITY BENEFIT ASSESSMENT DISTRICT

(Below text from [San Mateo County](#))

"[A] special assessment, sometimes described as a local assessment, is a charge imposed on particular real property for a local public improvement of direct benefit to that property, as for example a street improvement, lighting improvement, irrigation improvement, sewer connection, drainage improvement, or flood control improvement. Pursuant to Proposition 218, formation of an assessment requires a weighted vote based on the proposed assessment of each parcel of 50+%).

**Advantages** (San Mateo County): An assessment is tailored to benefits received by each parcel within an assessment district, and where collected through a county property tax bill, it is a relatively reliable source of revenue for a public agency.

**Disadvantages** (San Mateo County): The primary disadvantage of an assessment district is the cost of the process associated with preparing an assessment and the associated voting process. An agency must prepare a detailed engineers report in support of an assessment, and run a ballot proceeding, typically with an informational campaign where an assessment covers a large area. In addition, assessments must be squared with property tax rolls annually to ensure that they reflect changes in parcels occurring through each year, and may be perceived in competition with other financial needs."<sup>34</sup>

### B. COMMUNITY FACILITIES DISTRICT TAX

(Below text from [San Mateo County](#))

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<sup>34</sup> "San Mateo County – New Agency Proposal: Governance Matrix Technical Memorandum." Resilient San Mateo. October 2018. [https://resilientsanmateo.org/wp-content/uploads/2019/01/Governance-Matrix-TM\\_102918\\_FinalV2.pdf](https://resilientsanmateo.org/wp-content/uploads/2019/01/Governance-Matrix-TM_102918_FinalV2.pdf)

“Special taxes in the context of a financing district are imposed through a Community Facilities District (CFD). A CFD special tax is levied on parcels within the district, similar to a special assessment; however, there is no need to distinguish special from general benefit. CFDs provide the most flexible tool for channeling benefits that accrue to private landowners and their tenants into funding resilient infrastructure (NHA, 2018).

If the CFD has 12 or more registered voters, then two-thirds of voters must authorize the special tax on a one-person, one-vote basis. An advantage of CFDs compared to special assessment districts is that parcels can annex into an existing CFD as long as the annexed parcels follow the same approval requirements.

**Advantage:** The jurisdiction forming the district has as wide discretion to create the special tax formula to maximize both revenue and landowner support, so long as the formula does not mimic an ad valorem approach (percent of assessed value). To fund resilient infrastructure, the CFD can levy special taxes on the basis of exposure to rising sea levels and amount of property protected (e.g. building square footage). Furthermore, the special tax formula can subsidize lower income households or senior citizens. This great flexibility makes CFDs an attractive compared to special assessment districts, in spite of the higher approval hurdle (two-thirds versus simple majority) (NHA, 2018).

**Disadvantage:** CFDs are typically formed by jurisdictions in cooperation with developers seeking to finance infrastructure to support development of undeveloped property. For resilient infrastructure this makes CFDs highly applicable to finance and maintain flood control projects for vacant lands undergoing development (NHA, 2018). This may not be applicable for wide stretches of San Mateo County coastline.”<sup>35</sup>

## 2. COUNTY FUNDING

“[Contra Costa County’s Capital Improvement budget] includes a recommended budget for Minor Capital Improvements of \$1.5 million, which is available for minor improvements and deferred maintenance when there is no other funding available; \$12.55 million for Facilities Lifecycle Improvements, which reflects the amount allocated to deferred facilities maintenance (\$2.55 million) and capital renewal from the County’s Tax Losses Reserve (\$10.0 million); and also includes funding for the Plant Acquisition cost center, an allocation of general purpose revenue in the amount of \$5 million, intended as an on-going resource for construction and repair of County facilities. The monies are intended for capital projects and/or debt service on the borrowing for

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<sup>35</sup> Ibid.

the new Administration Building and new Emergency Operations Center (EOC)/Public Safety building program.

The County is currently in contract for the development of a comprehensive Capital Improvement Plan (CIP). As work is performed on the CIP and the multi-year capital plan is established, the County will develop a more sophisticated/improved method to implement and monitor the capital budget.”<sup>36</sup>

### 3. STATE FUNDING

#### A. CALIFORNIA WATER BOARD: STORM WATER GRANT PROGRAM (PROPOSITION 1)

The Storm Water Grant Program can fund development of Storm Water Resource plans and project-specific planning. The grant can also be applied to [multi-benefit storm water projects](#) such as “green infrastructure, rainwater and stormwater capture projects and stormwater treatment facilities.”

There is not a regular open window for applications, although the next round will begin in Summer 2019. \$90 million total is still available and grants range from \$45,837 to \$10,000,000.

- [Program overview](#)
- [Program guidelines and eligibility](#)
- [Funded projects list](#)

#### B. CALIFORNIA STATE WATER REVOLVING FUND

The CWSRF program aims to provide “low-cost financing to protect California’s waters from pollution” by providing below-market interest rate on loans for a variety of projects.<sup>37</sup> Eligible projects broadly include construction of public treatment facilities, projects that address water pollution, and estuary conservation and management.

The County could use the CWSRF to fund point and nonpoint source projects such as:

- Measures identified in Total Maximum Daily Loads;

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<sup>36</sup> Contra Costa County, Fiscal Year 2019-2020 Recommended Budget

<sup>37</sup> “Clean Water State Revolving Fund Forms and Instructions.” [California Environmental Protection Agency](https://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/srf_forms.shtml). <[https://www.waterboards.ca.gov/water\\_issues/programs/grants\\_loans/srf/srf\\_forms.shtml](https://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/srf_forms.shtml)>

- Stormwater and dry weather runoff reduction from Municipal Separate Storm Sewer Systems;
- Conservation measures to reduce sediment and non-point discharges;
- Ammonia discharge reduction from publicly-owned treatment works (POTWs);
- Urban and agricultural water use efficiency to reduce demands on the Delta and reduce runoff of pesticides to the Delta;
- Implementation of non-point source projects under the state's Section 319 program;
- Implementation of watershed projects;
- Implementation of measures under the San Francisco Estuary Blueprint; and
- Measures to promote water conservation, efficiency, or reuse that can decrease demands on the Delta.<sup>38</sup>

*Applications are accepted on a continuous basis. The yearly average for the [CWSRF program](#) as a whole is \$450 million, and individual projects can range from under \$1 million to over \$100 million. More information on the application process can be found on the [State Water Control Board](#).*

San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta) Staff from the State Water Board and the Central Valley and San Francisco Bay Regional Water Boards coordinate the Water Boards' activities in the San Francisco Bay and Sacramento-San Joaquin River Delta (Bay-Delta). The Bay-Delta Team is charged with developing the Water Boards' short and long-term efforts for addressing impacts to the beneficial uses of water in the Bay-Delta. In December 2018, the State Water Board adopted a Bay-Delta Water Quality Control Plan for the lower San Joaquin River and Southern Delta. The State Water Board is in the process of developing and implementing updates to the Bay-Delta Water Quality Control Plan for the Sacramento River and tributaries, and the Central Valley and San Francisco Bay Regional Water Boards continue with their efforts to protect beneficial uses in the Bay-Delta watershed.

## C. COASTAL CONSERVANCY GENERAL GRANTS

The State of California Coastal Conservancy issues grants on a continuing basis for "property acquisition and project planning, design, and/or construction" that also meet objectives stated in the Conservancy's [Strategic Plan](#). On-the-ground projects are preferred over "regional planning,

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<sup>38</sup> California Clean Water State Revolving Fund, Proposition 1, and Proposition 68 Intended Use Plan 2019-2020

research, monitoring, and assessments.”<sup>39</sup> Sea-level rise vulnerability is a key criteria for funding and therefore can be of particular benefit for the County.

*There are no minimum or maximum grant amounts and applications are accepted on a continuous basis.*

- [Application requirements](#)
- [Selection criteria and Program Guidelines](#)
- [Strategic Plan](#)

## D. COASTAL CONSERVANCY: PROPOSITION 1 GRANTS

The State of California Coastal Conservancy receives funds from Proposition 1 and issues grants three times a year. The grants are for “multi-benefit ecosystem and watershed protection and restoration projects.”<sup>40</sup> They also specifically provide local assistance under the Delta levee maintenance subventions program, special flood protection projects, levee improvement projects that increase the resiliency of levees within the Delta to withstand earthquake, flooding, or sea level rise, and emergency response and repair projects. Furthermore, current priority programs are “water sustainability improvements, anadromous fish habitat enhancement, wetland restoration and urban greening.”<sup>41</sup>

*Applications open three times a year. There is no maximum or minimum funding requirement, and previously awarded grants range from \$33,645 to \$2,000,00.*

The County has previously used Proposition 1 grants to fund the [Horse Valley Creek and Wetland Restoration](#). The County could take advantage of the water sustainability and wetland restoration priority areas to fund projects along the shoreline.

- [Program and application overview](#)
- [Overall guidance on selection criteria](#)
- [Master list of Proposition 1 awardees](#)

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<sup>39</sup> “Grant Application.” Coastal Conservancy. <http://scc.ca.gov/grants/grant-application/>

<sup>40</sup> <http://scc.ca.gov/grants/proposition-1-grants/>

<sup>41</sup> <http://scc.ca.gov/grants/proposition-1-grants/>

## E. CALIFORNIA COASTAL CONSERVANCY: PROPOSITION 68

[Proposition 68](#) provides funding for “creating parks, enhancing river parkways, and protecting coastal forests and wetlands, as well as “funding for outdoor access, lower cost coastal accommodations and climate adaptation.”

Funding is divided into regional and general categories. The categories most relevant to the County include:

- San Francisco Bay Restoration Authority projects (\$20 million)
- Lower Cost Coastal Accommodations (\$30 million)
- All Coastal Conservancy Purposes (\$85 million)
- Coastal Forest Watersheds (\$20 million)
- Acquisition of parcels to protect and restore habitat associated with estuarine lagoons and designated wildlife areas (\$5 million)
- San Francisco Bay Area Conservancy – Climate Adaptation (\$14 million)

Furthermore, 15-20% of the funding in each category must go towards severely disadvantaged communities, defined as communities where the median household income is less than 60% of the state average. Oakley, Antioch, Pittsburg, Martinez, Richmond, and San Pablo have shoreline communities that are [categorized as severely disadvantaged](#).

*Pre-proposals are accepted on an ongoing basis. There is no specified minimum or maximum grant amount.*

- [Program Guidelines and criteria for selection](#)
- [Map and search tool of severely disadvantaged communities](#)

## F. COASTAL CONSERVANCY: EXPLORE THE COAST GRANT

The State of California Coastal Conservancy issues Explore the Coast Grants for a “wide range of programs that bring people to the coast.” While many of its programs are aimed at helping underserved communities visit and learn about California’s coast, the program also funds programs around stewardship of coastal resources, public education programs, or coastal-related programs that focus on low-income communities and schools.

*The maximum grant award is \$50,000 and applications are open once a year, with applications usually due around April.*

The County might be able to use this grant to fund education campaigns around the impact of rising tides, especially within low-income communities. It could also be used as a way to bring citizens from central Costa County to parks on the shoreline as part of an education initiative around the impact of coastal lands.

- [Application Process Overview](#)
- [Previously funded projects](#)

## G. CALIFORNIA COASTAL COMMISSION: WHALE TAIL GRANTS

The California Coastal Commission issues [Whale Tail grants](#) annually to “teach California's children and the general public to value and take action to improve the health of the state's marine and coastal resources.”

In particular, grants can be directed towards:

- shoreline cleanup and enhancement programs (such as Adopt-A-Beach);
- youth education programs;
- programs for educating the general public

Grants are also directed towards two specific subcategories of programs:

- projects addressing climate change as it relates to the ocean or coastline; and
- grants for organizations with annual operating budgets of \$500,000 or less, that are working with underserved communities

The Whale Tale grant is focused on [coastal projects](#), and specifies that “...if a project will take place in an inland area or on a bay, the proposal should address how the project includes coastal and marine educational content, including a description of how the connections between bays or inland areas and the coast and ocean will be emphasized.”

*Whale Tail Grants are issued once a year with maximum awards of \$50,000, although 25-50% will be grants under \$12,000. Applications typically open around Labor Day.*

The County might be able to use the grant to fund education campaigns around the impact of rising tides, especially if the proposal speaks specifically to the sub-category of addressing climate change.

- [Program Eligibility Requirements](#)
- [Overview of previous winners](#)

## 4. FEDERAL FUNDING

The below descriptions are drawn from the federal agency websites.<sup>42</sup> Grants.gov also has a list of the most updated grant and loan opportunities available from the federal government.

### A. FEMA: THE HAZARD MITIGATION GRANT PROGRAM

"FMA is authorized by the National Flood Insurance Act of 1968, as amended (NFIA), with the goal of reducing or eliminating claims under the National Flood Insurance Program (NFIP). FMA funding is available through the National Flood Insurance Fund (NFIF) for flood hazard mitigation projects as well as plan development and is appropriated by Congress.

States, territories, and federally-recognized tribes are eligible to apply for FMA funds. Local governments are considered sub-applicants and must apply to their Applicant State, territory, or federally-recognized tribe."<sup>43</sup>

### B. U.S. DEPARTMENT OF AGRICULTURE (USDA) ACQUISITION OF FLOODPLAIN EASEMENTS AND GRANTS FOR FLOOD RISK REDUCTION PROJECTS

"The Environmental Quality Incentives Program (EQIP) provides financial and technical assistance to agricultural producers to address natural resource concerns and deliver environmental benefits such as improved water and air quality, conserved ground and surface water, reduced soil erosion and sedimentation, and improved or created wildlife habitat.

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<sup>42</sup> Flood Resilience and Risk Reduction: Federal Assistance and Programs, Congressional Research Service, July 25, 2018

<sup>43</sup> Hazard Mitigation Assistance Guidance Hazard Mitigation Grant Program, Pre-Disaster Mitigation Program, and Flood Mitigation Assistance Program. February 27, 2015

This voluntary conservation programs helps producers make conservation work for them. Together, NRCS and producers invest in solutions that conserve natural resources for the future while also improving agricultural operations.

Through EQIP, NRCS provides agricultural producers with financial resources and one-on-one help to plan and implement improvements, or what NRCS calls conservation practices. Using these practices can lead to cleaner water and air, healthier soil and better wildlife habitat, all while improving agricultural operations. Through EQIP, you can voluntarily implement conservation practices, and NRCS co-invests in these practices with you.”<sup>44</sup>

### C. THE NATIONAL COASTAL WETLANDS CONSERVATION GRANT PROGRAM (United States Fish and Wildlife Financial Assistance)

“Annually provides grants of up to \$1 million to coastal and Great Lakes states, as well as U.S. territories to protect, restore and enhance coastal wetland ecosystems and associated uplands. The grants are funded through the Sport Fish Restoration and Boating Trust Fund, which is supported by excise taxes on fishing equipment and motorboat fuel”.<sup>45</sup>

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<sup>44</sup> “United States Department of Agriculture, Environmental Quality Incentives Program.” Natural Resources Conservation Service. <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/>.

<sup>45</sup> “The National Coastal Wetlands Conservation Grant Program.” US Fish and Wildlife Assistance. <https://www.fws.gov/coastal/coastalgrants/>.

## APPENDIX B: ASSET MAP BY CITY

Cities noted with an asterisk (\*) were included in the ART Study West. Remaining cities will be assessed in the ART Study East, so assets listed for these cities are similar to what was included in the completed ART Study West. The below chart can help the working group planning committee assess the incentives and constraints faced by each of the participating cities, and to develop a messaging and engagement strategy.

City	Geography & Pop	Assets & Notes	Financial	Potential Support
<b>Antioch</b>	<b>Pop:</b> 102,372 <b>Area</b> (sq mi) City: 30.12 Land: 29.35 Water: 2.52%	Antioch Unified School District Transportation - Antioch Bridge, Amtrak station, and BART National Register of Historical Places: Black Diamond Mines, Butler Hard House, Riverview Union High School Building and Shannon-Williamson Ranch Hospitals - 10	<i>Capital Projects Funds</i> <a href="#">17-18</a> \$4,263,325  <i>Total Revenue</i> \$124,738,686	<u>Government</u> - Mayor Sean Wright - CA Sen. Steve Glazer - Asm. Jim Frazier - US Congress Jerry McNerney and Mark DeSaulnier
<b>Brentwood</b>	<b>Pop:</b> 51,481 <b>Area</b> (sq mi) Total: 14.86 Land: 14.85 Water: 0.13%	Liberty Union High and Brentwood Union School Districts and Brentwood Los Medanos College Campus Delta Patrol Station (DPS) Agriculture remains central to economy, and wineries are growing in popularity; no heavy industry Los Vaqueros Reservoir	<i>Capital Funds (2018 Fund Balance Reserve)</i> \$30,548,568  <i>Total Fund</i> \$449,766,729	<u>Government</u> - Mayor Robert Taylor - CA Sen. Steve Glazer - Asm. Jim Frazier - U. S. Congress Jerry McNerney
<b>Clayton</b>	<b>Pop:</b> 10,897 <b>Area</b> (sq mi) Total: 3.84 Land: 3.84 Water: 0.00	Does not directly touch the Delta.	<i>Capital Improvement</i> \$2,746,513  <i>Total Budget</i> \$13,447,028	<u>Government</u> - Mayor Jim Diaz - CA Sen. Steve Glazer - Asm. Tim Grayson - U. S. Congress Mark DeSaulnier
<b>Concord</b>	<b>Pop:</b> 122,068 <b>Area</b> (sq mi) Total: 30.54 Land: 30.54 Water: 0.00	Does not directly touch the Delta.  Pop. exposed to flooding - 44 <sup>46</sup> Mt. Diablo USD Buchanan Field Airport, Concord Army Air Base	<i>Capital Grants</i> \$14.1 million  <i>Total Revenues</i> \$130.9 million	<u>Government</u> - Type City Council/City Manager - Mayor Carlyn Obringer - CA Sen. Steve Glazer - Asm. Tim Grayson - U.S. Congress Mark DeSaulnier
<b>Town of Danville</b>	<b>Pop:</b> 42,039 <b>Area</b> (sq mi)	Does not directly touch the Delta.	<i>Capital Appropriations</i> 18-19	<u>Government</u> - Mayor Robert Storer

<sup>46</sup> ART, pg. 93

City	Geography & Pop	Assets & Notes	Financial	Potential Support
	Total: 18.08 Land: 18.08 Water: 0.00	San Ramon Valley Unified	\$10,388,808.  <u>18-19, Total Revenues</u> \$137,847,199	- CA Sen. Steve Glazer - Asm. Rebecca Bauer-Kahan - U.S. Congress Mark DeSaulnier and Eric Swalwell
<b>El Cerrito</b>	<b>Pop:</b> 23,549 <b>Area</b> (sq mi) Total: 3.66 Land: 3.66 Water: 0.00	Does not directly touch the Delta.	<u>Capital Projects Funds</u> \$1,327,149  <u>Total Funds</u> \$44,489,747	<u>Government</u> - Mayor Pardue-Okimoto - CA Sen. Nancy Skinner - Asm. Buffy Wicks - U. S. Congress Mark DeSaulnier - County Board District 1: John Gioia
<b>Hercules*</b>	<b>Pop:</b> 24,060 <b>Area</b> (sq mi) Total: 19.98 Land: 6.41 Water: 65.87%	Neighborhood-Scale Area - Northern part of Chelsea Bay Neighborhood <sup>47</sup>	<u>City Capital Projects</u> N/A  <u>17-18 Balance</u> \$36,562,317	<u>Government</u> - Mayor Chris Kelley - CA Sen. Nancy Skinner - Asm. Buffy Wicks - U. S. Congress Mike Thompson
<b>Lafayette</b>	<b>Pop:</b> 23,893 <b>Area</b> (sq mi) Total: 15.21 Land: 15.05 Water: 0.17, 1.08%	Lafayette Unified School District	<u>Capital Improvement Projects</u> \$3,005,500  <u>Total</u> \$31,143,197	<u>Government</u> - Mayor Cameron Burks - CA Sen. Steve Glazer - Asm. Rebecca Bauer-Kahan - U. S. Congress Mark DeSaulnier
<b>Pleasant Hill</b>	<b>Pop:</b> 33,152 <b>Area</b> (sq mi) Total: 7.08 Land: 7.08 Water: 0.00	Does not directly touch the Delta.  Acalanes Union High School District and Diablo Valley College	<u>Capital Projects Fund</u> \$118,713  <u>Total</u> \$26,223	<u>Government</u> - Mayor Ken Carlson - Asm. Tim Grayson - U. S. Congress Mark DeSaulnier
<b>Martinez*</b>	<b>Pop:</b> 35,824 <b>Area</b> (sq mi) Total: 13.63 Land: 12.63 Water: 7.64%	Commercial- 164 parcels <sup>48</sup> Industrial - 68 <sup>49</sup> IT Vine Hill Complex/Acme Landfills <sup>50</sup> Tesoro and Shell refineries <sup>51</sup> Power Distribution Substation - 5 <sup>52</sup> Neighborhood-Scale Area - 3 <sup>53</sup> Marina - 1 <sup>54</sup> Pop. exposed to flooding - 3,028 <sup>55</sup>	<u>Capital Grants</u> \$6,205,765  <u>Total</u> \$37,646,556	<u>Government</u> - Mayor Rob Schroder - CA Sen. Bill Dodd - Asm. Tim Grayson - U.S. Congress Mike Thompson and Mark DeSaulnier

<sup>47</sup> ART, pg. 66

<sup>48</sup> ART, pg. 28

<sup>49</sup> ART, pg. 36

<sup>50</sup> ART, pg. 44 and 45

<sup>51</sup> ART, pg. 52

<sup>52</sup> ART, pg. 58

<sup>53</sup> ART, pg. 66

<sup>54</sup> ART, pg. 86

<sup>55</sup> ART, pg. 93

City	Geography & Pop	Assets & Notes	Financial	Potential Support
		Regional Medical Center and Martinez Convalescent Hospital <sup>56</sup> Fire Stations - 3 <sup>57</sup> Martinez USD		
<b>Richmond*</b>	<b>Pop:</b> 103,701 <b>Area</b> (sq mi) City: 52.51 Land: 30.05 Water: 42.71%	Commercial - 58 parcels <sup>58</sup> Industrial - 187 <sup>59</sup> WCC Sanitary Landfill <sup>60</sup> Chevron Richmond Refinery <sup>61</sup> Power Distribution Substation - 5 <sup>62</sup> Neighborhood-Scale Area - 3 <sup>63</sup> Marina - 5 <sup>64</sup> Pop. exposed to flooding - 2,598 <sup>65</sup> West Contra Costa USD	<i>Capital Improvement</i> \$25.1M  <i>Total <u>2019 Expenditure Budget</u></i> \$372.3 million	<u>Government</u> - Mayor Tom Butt - Supervisor District 1: John Gioia - CA Sen. Nancy Skinner - Asm. Buffy Wicks - U. S. Congress Mark DeSaulnier
<b>Town of Moraga</b>	<b>Pop:</b> 16,016 <b>Area</b> (sq mi) Total: 9.47 Land: 9.46 Water: 0.09%	Saint Mary's College of California Moraga School District	<i>Capital Improvement Program Budget</i> \$6.37 million  <i>Total <u>Budget</u></i> \$15.82 million	<u>Government</u> - Mayor Dave Trotter - CA Sen. Steve Glazer - Asm. Rebecca Bauer-Kahan - U. S. Congress Mark DeSaulnier
<b>San Pablo*</b>	<b>Pop:</b> 29,139 <b>Area</b> (sq mi) Total: 2.63 Land: 2.63 Water: 0.00 0%	Does not directly touch the Delta.  Industrial - 4 <sup>66</sup> Power Distribution Substation - 1 <sup>67</sup>	<i>Total Capital Funds</i> \$1,300,280  <i>Total <u>General Fund</u></i> \$92,197,665	<u>Government</u> - Mayor Cecilia Valdez - County Board District 1: John Gioia - CA Sen. Nancy Skinner - Asm. Buffy Wicks - U. S. Congress Mark DeSaulnier

<sup>56</sup> ART, pg. 108

<sup>57</sup> ART, pg. 110

<sup>58</sup> ART, pg. 28

<sup>59</sup> ART, pg. 35

<sup>60</sup> ART, pg. 44

<sup>61</sup> ART, pg. 52

<sup>62</sup> ART, pg. 58

<sup>63</sup> ART, pg. 64

<sup>64</sup> ART, pg. 86

<sup>65</sup> ART, pg. 93

<sup>66</sup> ART, pg. 35

<sup>67</sup> ART, pg. 58

City	Geography & Pop	Assets & Notes	Financial	Potential Support
<b>Oakley</b>	<b>Pop:</b> 35,432 <b>Area</b> (sq mi) Total: 16.17 Land: 15.88 Water: 1.87%	Oakley Union Elementary School District	<i>General Capital Fund</i> \$900,000  <i>Total</i> \$9,750,000	<u>Government</u> - Mayor Claire Alaura - CA Sen. Steve Glazer - Asm. Jim Frazier - U. S. Congress Jerry McNerney
<b>San Ramon</b>	<b>Pop:</b> 72,148 <b>Area</b> (sq mi) Total: 18.64 Land: 18.63 Water: 0.09%	San Ramon Valley USD	<i>Capital Projects</i> \$11,523,405  <u>Total</u> \$103,092,786	<u>Government</u> - Mayor Bill Clarkson - CA Sen. Steve Glazer - Asm. Rebecca Bauer-Kahan - U.S Congress Mark DeSaulnier and Eric Swalwell
<b>Pittsburg</b>	<b>Pop:</b> 63,264 <b>Area</b> (sq mi) Total: 19.15 Land: 17.19 Water: 10.11%	Industrial (in Bay Point) - 5 <sup>68</sup> Marina (in Bay Point) - 1 <sup>69</sup> Pop. exposed to flooding - 304 <sup>70</sup> Pittsburg USD, Los Medanos College	<i>Capital Projects Budget</i> \$12 million <u>General Fund Total</u> (excluding capital funds) \$13,182,997	<u>Government</u> - Mayor Juan Banales - CA Sen. Steve Glazer - Asm. Jim Frazier and Tim Grayson - U. S. Congress Mark DeSaulnier
<b>Orinda</b>	<b>Pop:</b> 17,643 <b>Area</b> (sq mi) Total: 12.87 Land: 12.85 Water: 0.12%	Orinda USD	<i>Capital Improvement Funds</i> \$2,000,000 <u>General Fund Ending Balance</u> \$5,925,627	<u>Government</u> - Mayor Inga Miller - CA Sen. Steve Glazer - Asm. Rebecca Bauer-Kahan - U. S. Congress Mark DeSaulnier
<b>Walnut Creek</b>	<b>Pop:</b> 64,173 <b>Area</b> (sq mi) Total: 19.77 Land: 19.76 Water: 0.06%	Walnut Creek USD	<i>Capital Budget</i> \$19.5 million  <u>Total Revenue</u> \$183.2 million	<u>Government</u> - Mayor Cindy Silva - CA Sen. Steve Glazer - Asm. Tim Grayson and Rebecca Bauer-Kahan - U. S. Congress Mark DeSaulnier
<b>Pinole*</b>	<b>Pop:</b> 18,390 <b>Area</b> (sq mi) Total: 11.76 Land: 5.15 Water: 60.79%	Pop. exposed to flooding - 118 <sup>71</sup>	<i>Capital Outlay</i> \$56,900 <u>General Fund Revenue</u> \$12,222,628	<u>Government</u> - Mayor Timothy Banuelos - CA Sen. Nancy Skinner - Asm. Buffy Wicks - U. S. Congress Mike Thompson

<sup>68</sup> ART, pg. 36

<sup>69</sup> ART, pg. 86

<sup>70</sup> ART, pg. 93

<sup>71</sup> ART, pg. 93