

Adapting to Rising Tides Bay Area



Adapting to Rising Tides, East Contra Costa County

DRAFT Key Planning Issues

September 25, 2019

Instructions:

Key Planning Issues synthesize the major challenges across asset sectors that require the collective focus of the project team, working group, and other stakeholders to take action. They also organize and summarize assessment findings across sectors and assets. Adaptation responses are created to respond to each Key Planning Issue.

1. First, review Key Planning Issues adapted from ART's West Contra Costa County project. In the space below each Key Planning Issue, provide comments or edits. *Are these Key Planning Issues relevant to East County? How should they be changed to be more relevant to East County?*
2. Next, review new Key Planning Issues or topics relevant to East Contra Costa. In the space below each key planning issue, provide comments or edits.
3. For both existing and new Key Planning Issues, determine if you think these cover the biggest vulnerabilities and consequences East County faces across asset categories. If not, provide additional issues or themes that should be captured.

West Contra Costa Key Planning Issues:

1. Water-Dependent Industries
2. Employment Sites
3. Creek-Side Communities
4. Access to Services
5. Ad-Hoc Flood Protection
6. Parks and Open Space

New Planning Issues:

7. Agriculture, Subsidence, and Levees
8. Worsening Water Quality
9. Development Pressure

Other?

1. Water-Dependent Industries

The County's ~~seaport, marine oil terminals, and shoreline refineries~~ [industrial shoreline] is at risk from current and future flooding, additionally these assets rely on transportation and utility networks that are vulnerable to sea level rise and storm events. Flooding of critical roads, rail lines, or pipelines both within the county and beyond could hinder critical goods export and import, negatively impacting the local and regional economy.

3. Creek-Side Communities

Shoreline communities in the project area located in or near the floodplain of a tidal creek or channel are likely to experience flooding as sea levels rise. Members of creek-side communities have limited control over the maintenance and management of the creeks and channels they rely on, and those that are linguistically or socially isolated, elderly, very young, disabled or mobility-challenged, are less able to prepare for, respond to or recover from flood events. Community members with these specific characteristics can face difficulties evacuating and finding temporary shelter during a flood event as they depend on others for mobility, personal care and support, rely on universally accessible transportation and shelter-in-place facilities, and may require special care or equipment.

4. Access to Services

A lack of redundant transportation options and the limited number of public facilities in this part of the County may result in shoreline communities becoming isolated from emergency services, public and private healthcare providers, jobs, schools, and other critical services during flood events. This could have significant consequences on public health and safety, local economies, and community function, and will be a particular challenge for communities with characteristics that place them at greater risk of flooding.

5. Ad-Hoc Flood Protection

Some communities are protected from coastal flooding by rail lines, shoreline parks, and tidal wetlands. While these built and natural areas reduce the flood risks of adjacent communities, assets and infrastructure, they have not been specifically designed or maintained for this function and therefore provide only “ad-hoc” flood protection. Increased wind, wave and tidal energy, higher extreme high tides, and more frequent exposure to the tides as sea levels rise can decrease the ability of these ad-hoc systems to maintain the flood protection benefits they currently provide.

New Key Planning Issues

7. Agriculture, Subsidence, and Levees

Agricultural practices and land reclamation on the Delta Islands have caused significant land subsidence, causing communities to rely on levees and pumps to stay dry. Sea level rise could worsen flood risks by increasing hydrostatic pressure on levees, by increasing the liquefaction potential during seismic events due to rising groundwater, and by increasing reliance on pumps, which are sensitive to flooding and power outages.

8. Worsening Water Quality

Sea level rise is likely to cause a worsening of water quality due to salinity increases from the tidally-influenced Bay. This would affect small, local communities in the Delta, as well as East Bay residents and users of the Central Valley Project and State Water Project (millions of users in total). Both surface water and groundwater could experience increasing salinity, effecting not just water supplies from surface water intakes and groundwater wells, but also habitats. Additionally, increasingly saline water could cause corrosion of infrastructure that was not originally protected against saltwater.

9. Development Pressure

Development pressure in East Contra Costa County could create conditions that exacerbate affordable housing issues and incite displacement. Across the region, in cases where displacement occurs, marginalized populations are often at the greatest risk. Similarly, coastal development that is not sensitive to shoreline dynamics may limit the options communities have for protecting housing and critical services from flooding. Where possible, development should consider both issues and seek to ameliorate, rather than deepen, preexisting social and economic vulnerabilities as well as flooding.

Are there any other major themes or differences between East and West County that you would like to point out or you think are missing? Are there any other Key Planning Issues you'd like to see included?

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