

6. Regional Connections



Photo: Karl Nielsen

The Bay Area DACTI Program, in collaboration with Disadvantaged Community and Tribal Partners, used a community and Tribal-specific strategy to develop tailored needs assessment surveys for each focus area. Despite the differences in survey design and methodology, the results showed consistently similar priorities for water management across every location. At the local level, the problems experienced by Disadvantaged Communities and Tribes could be seen as isolated incidents but when reviewed holistically, they present a powerful picture of the systemic effects of decades of racist disinvestment in these communities.

The needs assessments identified these top priorities across all of the Disadvantaged Communities and Tribes surveyed:

- **Drinking Water:** including water quality, affordability, and related infrastructure
- **Flooding:** including flooding as a result of storms and resulting overflowing of creeks and storm drains, as well as sea level rise and groundwater rise
- **Trash and Litter:** including dumping sites and general litter
- **Contamination and Pollution:** including from industrial sites and other point sources as well as nonpoint sources impacting both land and waterways.
- **Green Space:** including quantity, accessibility, and quality of recreational green spaces

-

0

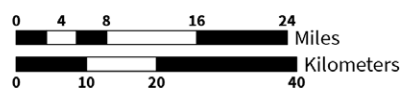
5

Source: TomTom North America (2019)

California Department of Water Resources (2021)

Metropolitan Transportation Commission (2021)

Map Author: MDS, August 2022



Needs Assessments Top Priorities



These categories interrelate with one another. Contamination and pollution can impact drinking water quality as well as exacerbate flooding issues if community members must wade through contaminated water. Flooding can also exacerbate contamination issues. For example, many toxic sites are at risk of being exposed by sea level and groundwater rise. Trash and illegal dumping can clog storm drains and exacerbate flooding, and can also contribute to green spaces feeling inaccessible if they are not well maintained.

Furthermore, these priorities are intersecting as the result of decades of systemic inequity and injustice. Low-income, African American, Latino, Asian, and Indigenous communities are more likely to live in areas that have been the last to receive funding and upgrades and are more likely to have older tap water infrastructure. Renters with lower incomes are the most likely to have their tap water turned off due to lack of payment, and some fear retaliation if they complain about water quality or other plumbing issues that would cost the owner money to fix. Pollution and hazardous waste from industrial areas, such as refineries and oil wells, highways and warehouses—often located near Black and Brown economically disadvantaged homes and workplaces—can leach into and contaminate drinking water supplies. Trash and illegal dumping often proliferate in economically struggling areas where there is a lack of trash cans, enforcement, and adequate refuse pickup services, though landfills are often located in or near low-income Black and Brown communities. Additionally, even when available, trash service can be unaffordable for low-income communities and encampments of people experiencing homelessness, and high tipping fees at landfills can cause people to dump illegally nearby. Trash and illegal dumping that gets into streets and storm drains can exacerbate flooding issues by clogging drainage. Standing water and flooding due to inadequate and clogged drains systems can carry pollutants from runoff. Green space and green infrastructure can mitigate flooding hazards, but these projects are sorely missing in many Disadvantaged Communities and Tribal locations in the Bay Area.

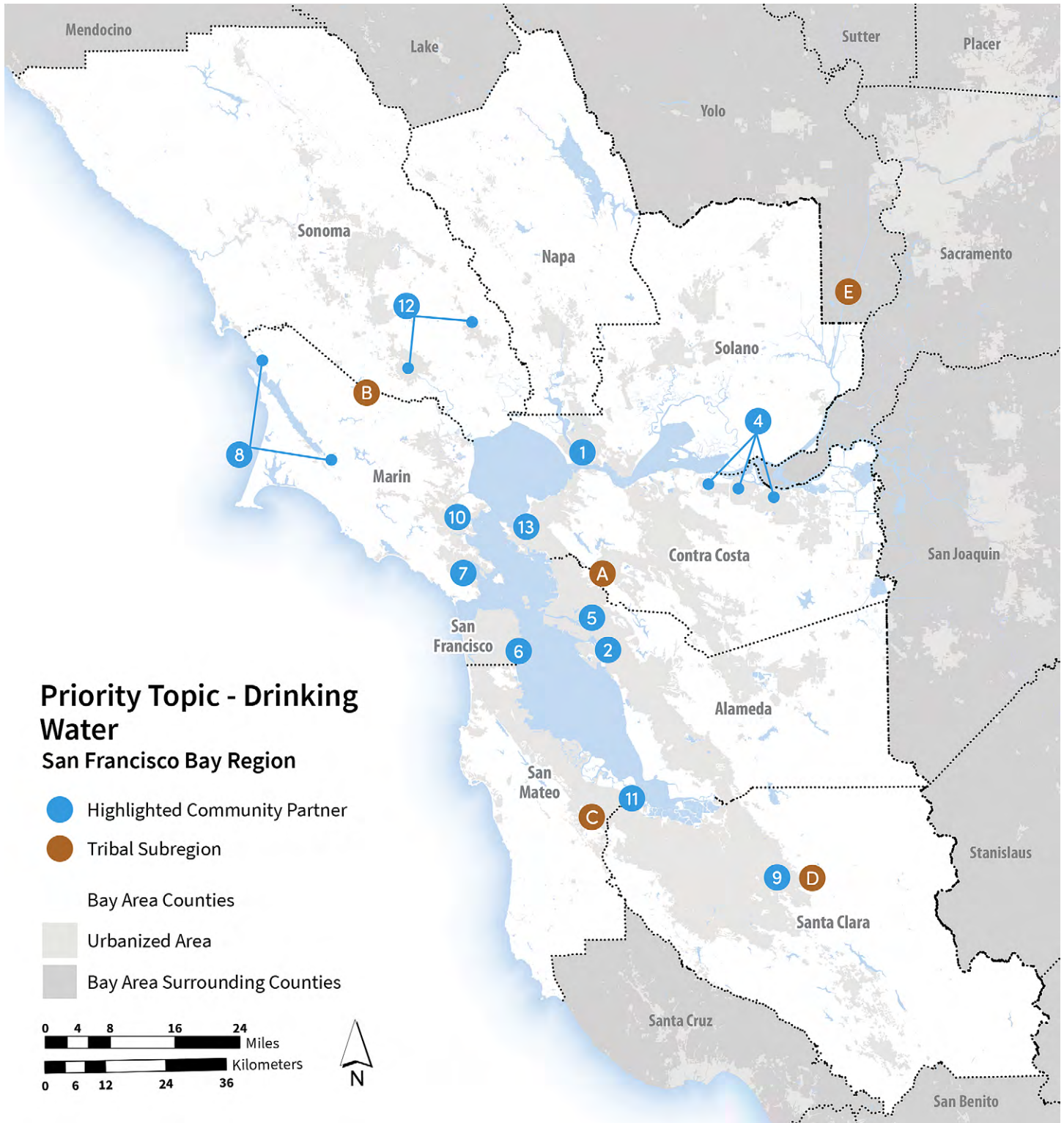
Most importantly, all of these issues identified by Disadvantaged Communities and Tribes in the Bay are intimately connected to health. Poor tap water quality can cause a variety of negative health effects. Flooding can carry pollution in runoff and contributes to mold and mildew, which can cause negative respiratory impacts. Industrial pollution and hazardous contamination contribute to disproportionately high chronic disease rates. Ultimately, these issues of water pollution and lack of access to clean water and green space accumulate and are manifested in the body. The water issues identified by the participating partners intersect with overarching issues imposed by systemic inequity and injustice including unemployment, underemployment, housing insecurity, public health, and safety. Due to this intersectionality, funding agencies should coordinate to address water-related issues holistically, because water is intimately connected to housing, jobs, and, most importantly, public health.



DRINKING WATER

Many Disadvantaged Communities and Tribes in the Bay Area reported concerns about the safety and quality of drinking water from the tap. Some expressed concern about the role that aging infrastructure plays in water quality, and concern about the lack of agency renters have to address infrastructure issues. Many community members reported relying on bottled water for cooking and drinking.

In addition to drinking water quality, many Disadvantaged Communities and Tribes also mentioned concerns about water affordability, which has been highlighted by the COVID-19 pandemic. The unaffordability of water necessitates calculated trade-offs with other needs for those on tight budgets. This is exacerbated for groups with concerns about the quality of their tap water who, in addition to a water bill, buy bottled water for cooking or drinking.



Community Partners

- 1 **All Positives Possible (Vallejo)** Drinking water was identified by community members as brownish/discolored and foul smelling. Some residents report a connection between poor water quality and feeling negative health effects, which causes anxiety when drinking water, cooking, or bathing. Many residents feel they have no choice but to purchase bottled water, causing further financial burdens on low-income residents.
- 2 **Brower Dellums Institute for Sustainable Policy Studies and Action (Deep East Oakland: Brookfield Village, Columbia Gardens, Sobrante Park)** Respondents expressed concerns about polluted drinking water, including taste, cloudy appearance, smell, and cost.
- 4 **Contra Costa Resource Conservation District (Antioch, Bay Point, Pittsburg)** Taste of water and unsafe drinking water are top priorities. Some participants noted that they buy bottled water for their animals to drink—that is the extent to which they felt their tap water is not safe to drink.
- 5 **Friends of Sausal Creek (Fruitvale District, Oakland)** Many participants expressed concern that their tap water isn't safe to drink, and many buy purified water to cook and drink. Participants were also concerned about the rising cost of water.
- 6 **Greenaction for Health and Environmental Justice (Bayview Hunters Point)** One-fifth of residents rated their drinking water as bad and almost another fifth rated theirs as poor.
- 7 **Marin City Climate Resilience and Health Justice (Marin City)** Most residents were concerned about the quality of water in Marin City and use bottled water as their main water source. Many respondents connected poor quality of water to health issues.
- 8 **Marin County Community Development Agency (Dillon Beach and Pt. Reyes Station)** In Dillon Beach more than half of respondents have water quality concerns. In Pt. Reyes Stations over a third have water quality concerns. In both locations, taste of water is an issue.
- 9 **META (East San Jose)** Safety of tap water was the top concern. Many participants buy bottled water for cooking and drinking. Specific concerns cited include: water is brown or yellow and tastes/smells like bleach. Other priority issues include old infrastructure, and the cost of water.
- 10 **Multicultural Center of Marin (Canal District, San Rafael)** Many community members feel that faucet water is not safe, and have concerns of possible health effects. Specific concerns about tap water cited include: water being unclear, having an unusual color, being cloudy, and having a chlorine or metallic smell. Many homes rely on purchased bottled water.
- 11 **Nuestra Casa (East Palo Alto)** Three quarters of respondents report buying bottled water for cooking and drinking. Respondents indicated that water quality depends on location and believe that expensive water is of better quality. There is concern about the environmental effects of buying so much bottled water. Specific water quality issues identified include: water is brown, yellow, rusty, black, cloudy, contaminated, tastes bad, smells bad, smells of chlorine, smells of bleach, causes health issues including rashes, burns skin, people's hair falling out, and eyes burning.
- 12 **Sonoma Ecology Center and Daily Acts (Petaluma and The Springs)** Many people, especially in the Latinx community, do not trust tap water for drinking. Many people are choosing to purchase bottled water or filter their tap water in place of drinking water directly from the tap.
- 13 **The Watershed Project (North Richmond)** Almost half of respondents experience problems with their tap water and many choose to drink bottled water.

California Native Tribe

- A **East Bay Tribes** Forty percent of respondents stated they noticed a difference in the quality and taste of their water. Additionally, most of the East Bay subregion residents stated they pay between \$10-\$50 extra a month on bottled water and/or five-gallon jugs for drinking water purposes.
- B **North Bay Tribes** The Tribal organizations desire to have their water tested since well water is the source of their drinking and cooking water. They host large gathering sites for Tribal ceremonies where clean water is necessary. Respondents were also concerned about how climate change affects water quality and supply.
- C **Peninsula Tribes** Respondents have all experienced some fluctuation in taste. All respondents identified they would like their tap water tested against the standard of the region. Half of respondents said they have had trouble paying for drinking water and identified access to affordable water as a priority. Half of respondents have experienced disruptions in their water service. Half of respondents identified having enough water as a concern.
- D **South Bay Tribes** Eighty-eight percent of respondents have noticed a difference in their water quality while living in their communities. Some Tribal members have stated that they taste chemicals in their water, or note a slight metallic smell, or that it is a bit gritty, and over time they developed less trust in their water quality. One-third of respondents rated the quality of their water as poor. Forty-four percent used bottled water for cooking and for mixing baby formula because they do not trust their tap water sources. All of South Bay subregion residents stated they pay between \$26-\$75 extra per month on bottled water and/or five-gallon jugs for drinking water purposes. A third of respondents said they have trouble paying for their drinking water.
- E **Tribes living outside of the SF Bay Region** Fifty-seven percent of respondents stated they use a different method for cooking and cleaning than their tap water. Forty percent of respondents pay over \$100-\$150 on their water bill a month. Thirty-eight percent of respondents stated they have trouble paying their monthly water bill.

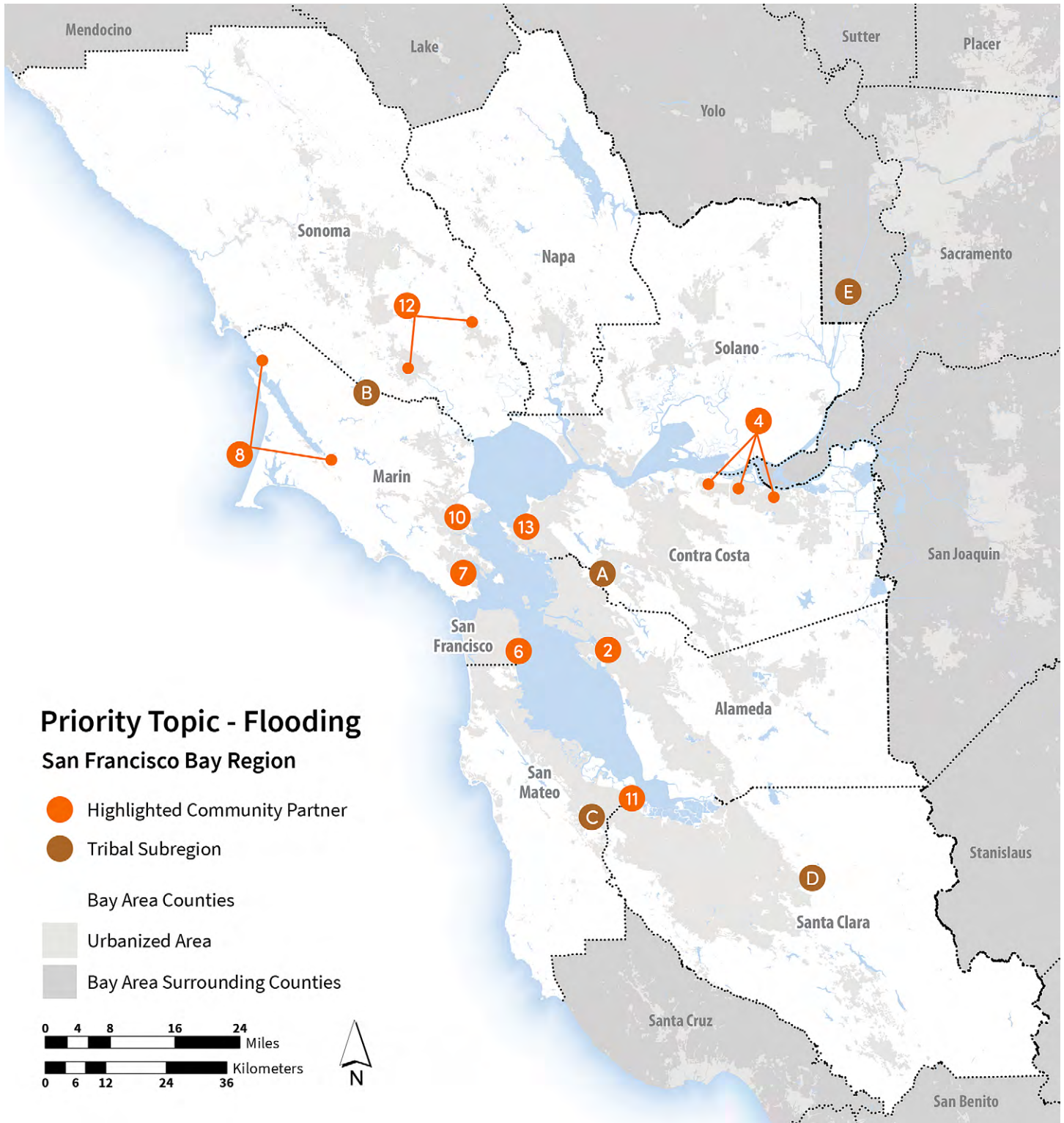


FLOODING

Many Disadvantaged Communities and Tribes in the Bay Area reported concerns about flooding related to storm surges, sea level rise, and groundwater rise. Flooding also causes a variety of other issues related to:

- 1) Public Health: Flood waters mix with contaminated materials that communities and Tribes are exposed to, or must wade through.
- 2) Transportation Access: Flooding cuts off access to homes, community centers, grocery stores, doctor's offices, and other important areas.
- 3) Infrastructure: Flooding damages or destroys critical infrastructure, including utilities such as electricity and gas, which can endanger public health.

Many Disadvantaged Communities and Tribes also express concern over trash, illegal dumping, and storm drains clogging with debris during flood events.



Community Partners

- 2 Brower Dellums Institute for Sustainable Policy Studies and Action (Deep East Oakland: Brookfield Village, Columbia Gardens, Sobrante Park)** Flooding was one of the biggest issues raised in the needs assessment. Residents expressed concern that drainage lines are inadequate to handle the rainy season. This type of flooding disrupts pedestrian access to sidewalks.
- 4 Contra Costa Resource Conservation District (Antioch, Bay Point, Pittsburg)** Respondents are concerned with poor drainage and problems during king tides or long periods of rain. In listening sessions, participants said that flooding due to blocked storm drains is associated with neglected waterways, storm drains, homes and commercial areas. Antioch participants also mentioned a sewage smell.
- 6 Greenaction for Health and Environmental Justice (Bayview Hunters Point)** Sixty-three percent of respondents are concerned about vulnerability to flooding and sea level rise. Sea level rise and storm surges could cause flooding of many of the hazardous and radioactive waste contamination sites, transportation infrastructure, and utilities along the waterfront. Toxic materials and waste beneath the surface could be dredged up and exacerbate public health risk of the area.
- 7 Marin City Climate Resilience and Health Justice (Marin City)** Flooding was the top concern expressed by respondents. Marin City is subject to flooding from stormwater, groundwater emergence, and sea level rise. Chronic flooding has twice shut down southbound traffic completely on Highway 101. Residents refer to the area as “the bowl without a spout.” Community members must wade through contaminated floodwaters to access necessary services. Recurrent contaminated floodwaters create other public health impacts.
- 8 Marin County Community Development Agency (Dillon Beach and Pt. Reyes Station)** Dillon Beach: 27% of respondents were concerned about flooding of drinking water wells; 17% flooding from storm surges. In Pt. Reyes Station, 64% were concerned about flooding outside of town interfering with access in and out of town. 56% were concerned with flooding within the town, and 40% were concerned with homes along creeks flooding.
- 10 Multicultural Center of Marin (Canal District, San Rafael)** “Stormwater accumulation” is the second most important priority for this community: heavy rain floods the streets and limits access to markets, community centers, schools, and residents’ homes. Trash in streets can clog drains and exacerbate flooding issues.
- 11 Nuestra Casa (East Palo Alto)** After drinking water quality and infrastructure and pipes, flooding was the next most identified issue, noted by 38.6% of respondents (275). Many respondents said they would use any available public funding for flood control measures. In the listening sessions, many mentioned several areas that were said to flood severely in the winter.
- 12 Sonoma Ecology Center and Daily Acts (Petaluma and The Springs)** Stormwater was one of the top issues that flood streets (67% of respondents), trails or sidewalks (32%), cause erosion (23%) and sewage-manhole overflows (14%), a public health issue.
- 13 The Watershed Project (North Richmond)** 73% have personal experience with flooding including difficulty walking or driving, and damage to infrastructure including flooding of homes, or potholes in streets. Other related concerns include sea level rise and vulnerability of the wastewater treatment plant, and trash or other pollutants in floodwaters.

California Native Tribe

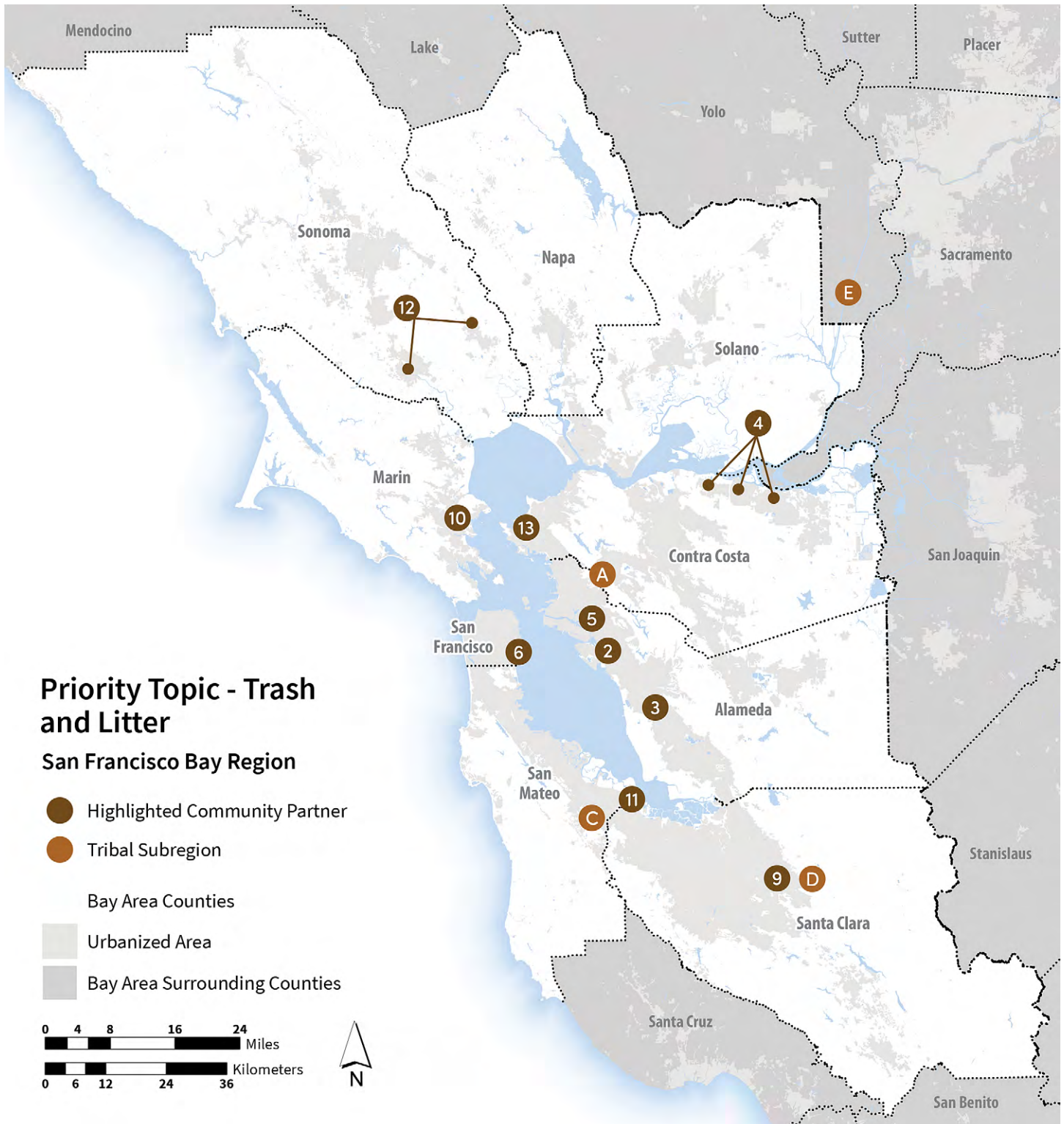
- A East Bay Tribes** Respondents said they see road flooding in Union City. Respondent stated strong concern about the potential for sea level rise to expose burial sites and remains. Respondents also expressed concern regarding destruction of ancestral homelands and inundation of their territories due to rising sea levels.
- B North Bay Tribes** Respondents have stated that downtown urban areas of Napa and the Napa River have flooded severely and are due for more intense flooding in the future.
- C Peninsula Tribes** Respondents have identified this as a concern but did not provide further follow-up.
- D South Bay Tribes** Respondents stated that Alma Avenue floods often along with Plata Arroyo Park. Tribal members identified a strong concern about the potential for sea level rise to expose burial sites and remains. Also, they are concerned about the destruction of ancestral homelands and inundation of their territories due to rising sea levels. Tribes want to use Traditional Ecological Knowledge (TEK) to combat sea level rise and erosion (e.g., planting native species and continuing cultural practices for stewarding the land).
- E Tribes living outside of the SF Bay Region** Numerous respondents have identified the most hazardous flood areas and have provided specific locations including addresses that get inundated. Respondents have also said that with the sea levels rising it will change the shape and function of the coast. Some members shared that during their lifetime they have noticed the effects on the wildlife and changes to the way of the land. They have also seen water agencies try to prepare for the sea levels rising, however; the aid given was insufficient.



TRASH AND LITTER

Many Disadvantaged Communities and Tribes in the Bay Area report concerns about illegal dumping and trash in streets that ends up in storm drains and surrounding water bodies. This concern was often linked to crime, disinvestment, and lack of services as well as to housing insecurity. Trash and litter that backs up storm drains can exacerbate flooding issues and result in Disadvantaged Communities and Tribal members wading through contaminated standing water.

Waterway pollution and contamination – including oil, plastic, and paint - was further detailed under this problem, as Disadvantaged Communities and Tribal members connected the street level trash with their concerns with the pollution and contamination in creeks and other waterways. One community member summed up the health effect on the community, “Fish eat the plastic, and then we eat the fish, and the other animals and everyone gets sick...”.



Community Partners

- 2 **Brower Dellums Institute for Sustainable Policy Studies and Action (Deep East Oakland: Brookfield Village, Columbia Gardens, Sobrante Park)** Illegal dumping was the third most identified issue through the needs assessment process and was particularly highly identified through the San Leandro Creek water survey.
- 3 **City of Hayward (Tennyson Corridor)** Pollution, litter, and plastic going into the ocean were identified as issues.
- 4 **Contra Costa Resource Conservation District (Antioch, Bay Point, Pittsburg)** Polluted stormwater and trash in creeks, waterways, and streets were among the most common problems identified in the listening sessions. In surveys, litter in streets and storm drains was most frequently chosen as the top priority. 67% of survey respondents identified it as an issue in their community and 40% of survey respondents said it was the issue they would address first. Illegal dumping was also identified as an issue contributing to trash on roadways.
- 5 **Friends of Sausal Creek (Fruitvale District, Oakland)** Illegal dumping and trash in streets and in storm drains are identified as top concerns and some attribute the increase to the homeless encampment growth in Oakland and a lack of security and enforcement of laws in the community.
- 6 **Greenaction for Health and Environmental Justice (Bayview Hunters Point)** 55% of respondents are concerned about illegal dumping.
- 9 **META (East San Jose)** Trash was one of the top three issues identified by Spanish-speaking respondents.
- 10 **Multicultural Center of Marin (Canal District, San Rafael)** Trash was observed floating in the streets of the neighborhood during and after big rains, causing clogged drains and unsightly neighborhoods.
- 11 **Nuestra Casa (East Palo Alto)** 23.8% (170) respondents identified litter/trash as an issue in East Palo Alto. In the listening sessions, many mentioned worries about trash/litter pick up and control, better waste management, including more trash cans, and cleaning trash from storm drains.
- 12 **Sonoma Ecology Center and Daily Acts (Petaluma and The Springs)** The primary trash and dumping issues reported were trash and small litter, large illegally dumped items, and homeless-camp waste, all of which were thought to have impacts on water quality.
- 13 **The Watershed Project (North Richmond)** Respondents were concerned about the amount of trash or other pollutants in floodwaters.

California Native Tribe

- A **East Bay Tribes** Respondents identified trash accumulating in empty lots, next to the freeway, and heading out to Oakland and San Lorenzo. Trash also accumulates in Alameda Creek, off the Hayward Shoreline, and Lisjan Creek.
- C **Peninsula Tribes** All respondents indicated that trash is a major concern. Respondents mentioned that the ocean and beaches are full of trash and debris and that ends up in the ocean and further adds to the ocean trash mass that continues to destroy sea life, fish and other aquatic life.
- D **South Bay Tribes** Respondents identified Guadalupe Creek as a trash dumping site and a homeless encampment. 85% from the South Bay identified pollution in creeks from chemicals or trash as a concern. Trash and homeless encampments along highways and along freeways 101, 680, and Balboa Avenue were mentioned as trash dumping sites. Large homeless encampments are along the intersection of Monterrey Road on Highway 82.
- E **Tribes living outside of the SF Bay Region** Fresno and Marina were identified as trash dumping points.

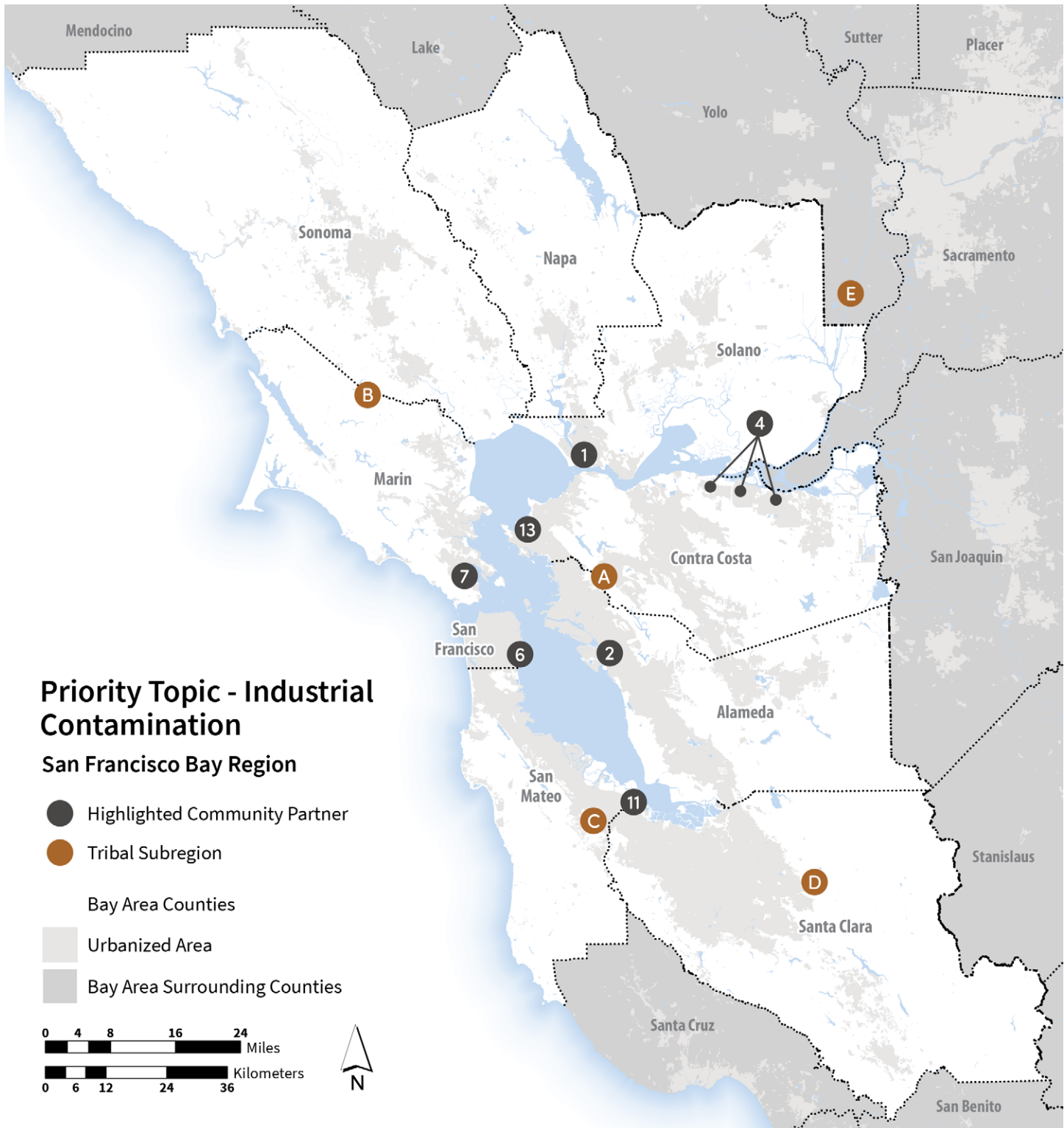


INDUSTRIAL CONTAMINATION

Many Disadvantaged Communities and Tribes in the Bay Area report concerns about industrial and hazardous contamination, and how this contamination and pollution can get into waterways, and ultimately into peoples' bodies through exposure and/or ingestion.

There are many sources of hazardous and industrial contamination and pollution in communities: old gas stations, dry cleaners, and highways contaminate groundwater and pollute stormwater runoff, exposing Disadvantaged Communities and Tribal members to toxins in waterways and possibly leaching into drinking water supplies.

Clogged storm drains from trash and illegal dumping can cause contaminated runoff and flood waters to back up in Disadvantaged Communities and Tribal areas, resulting in residents wading through these contaminated waters to access important services such as grocery stores and work.



Community Partners

- 1 All Positives Possible (Vallejo)** South Vallejo has historical and current pollution from many sources, including the Old Sperry Flour Mill, Mare Island Former Naval Base, the Ryder Street Wastewater Treatment Plant, the old 7-Up Plant, the former Pacific Gas & Electric Manufacturing Gas Plant, and other companies, some of which have closed down, leaving their contamination behind. Some polluters have further impacted community health through incidents such as the NuStar Energy explosions that sent toxic particles into the air. Additional polluters attempting to start business in Vallejo have been stopped by community activism.
- 2 Brower Dellums Institute for Sustainable Policy Studies and Action (Deep East Oakland)** Salt water incursion pushes existing polluted groundwater closer to the surface where it can infiltrate into sewers, buildings, etc.
- 6 Greenaction for Health and Environmental Justice (Bayview Hunters Point)** 64% of respondents are concerned about industrial/hazardous contamination.
- 7 Marin City Climate Resilience and Health Justice (Marin City)** Current and historic sources of pollution and toxic environmental conditions are creating serious health consequences in the community. Those sources include one unassessed Superfund site and possibly others. Residents are concerned about chemicals and petroleum contaminants or residue persisting in the soil, as well as contamination from the shipyard area, flood water containing toxins, contamination from Highway 101 stormwater runoff, lead pipes, and sewage leaks. Longtime residents share reports of toxic dumping as part of wartime industry. Prior to the Gateway Shopping Center there was both a dry cleaner and a gas station located on the property, and three kerosene stations throughout the community.
- 8 Marin County Community Development Agency (Dillon Beach and Pt. Reyes Station)** Listening session participants voiced concerns about contaminated fish and Keller Canyon landfill pollution.
- 11 Nuestra Casa (East Palo Alto)** 27.8% (198) respondents indicated that industrial contamination is an issue in East Palo Alto.
- 13 The Watershed Project (North Richmond)** Community members hope to see protections from sea level rise along the shoreline, where the landfill and wastewater treatment plant are at risk from flooding and thus severe pollution problems.

California Native Tribe

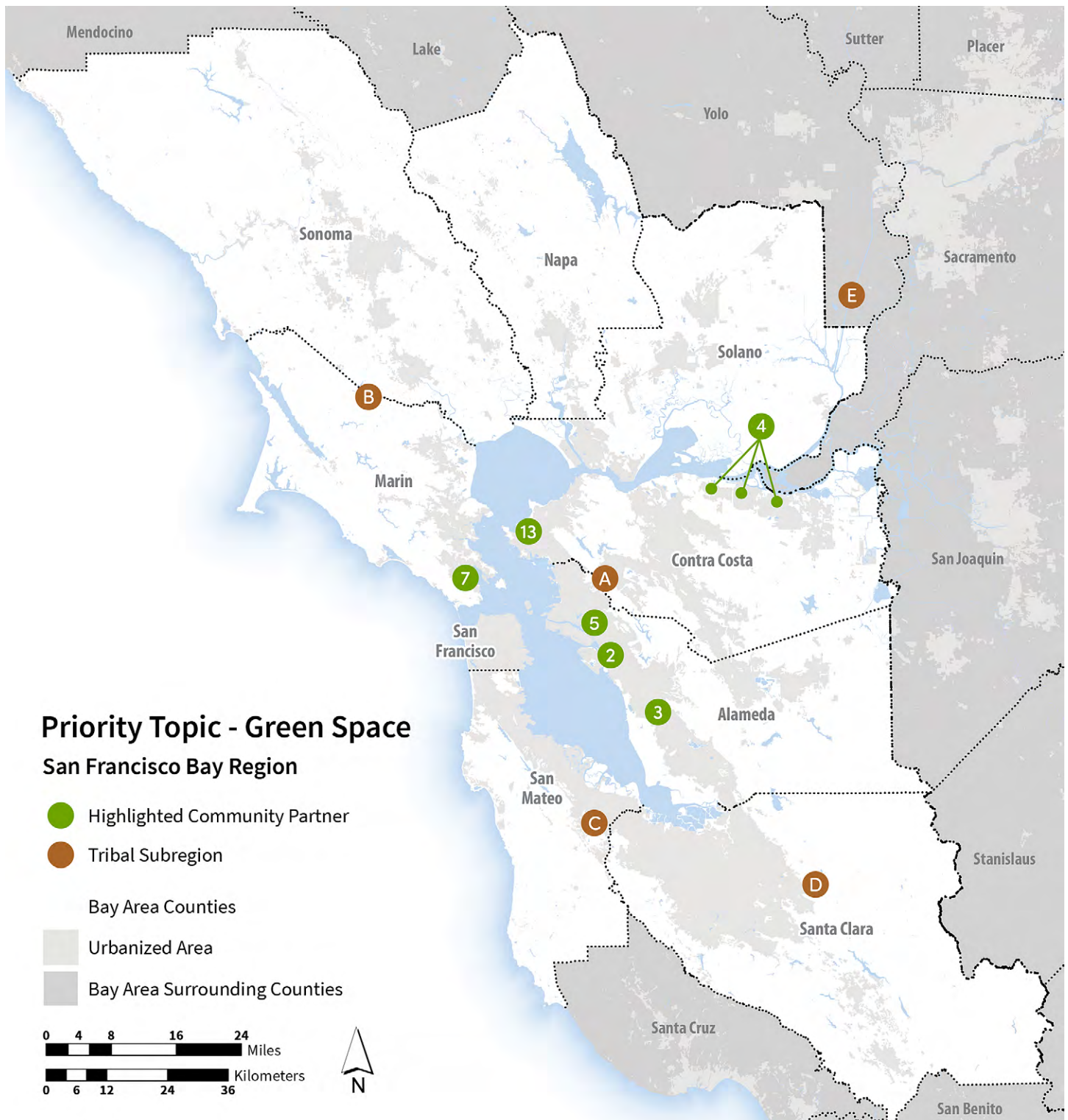
- A East Bay Tribes** Respondents were concerned with pollution of Hayward Shoreline and Alameda Creek.
- B North Bay Tribes** Respondents stated they do not trust Napa County's reporting on water sustainability. They are concerned about pesticides and other chemicals being used for grapes.
- C Peninsula Tribes** Some top priorities of respondents include ocean pollution, land use, air pollution, abandoned mines, and harmful algal blooms.
- D South Bay Tribes** Respondents reported that parks and spaces such as local and traditional creeks are highly polluted by human waste, trash, and invasive species.
- E Tribes living outside of the SF Bay Region** Respondents identified Clear Lake as a massive Tribal concern due to the mercury and other chemical pollutants and a sulphur mine that is polluting Clear Lake. Fresno and Marina are trash dumping points. Madera has polluted creeks and rivers from the spraying of pesticides.



GREEN SPACE

Many Disadvantaged Communities and Tribes in the Bay Area report concerns about lack of access to green space and nature for recreation. Many Disadvantaged Communities and Tribal members felt that there were few well-lit, safe, nearby green spaces where children and families can recreate. There is also limited access to existing spaces: folks don't know where to go or how to get there, or parks that are considered safe are too far away. This includes bodies of water such as creeks, rivers, and the ocean.

Many Disadvantaged Communities and Tribes that participated in the Bay Area DACTI Program have historically been excluded from green public spaces, and/or have been the last to receive green infrastructure improvements. Disadvantaged Communities and Tribal members mentioned lack of trees and plants along sidewalks in their areas. Lack of greenery is also connected to lower physical and mental health.



Community Partners

- 2 Brower Dellums Institute for Sustainable Policy Studies and Action (Deep East Oakland: Brookfield Village, Columbia Gardens, Sobrante Park)** Lack of park space and lack of safe attractive access connecting parks were the most identified issues in the needs assessment process.
- 3 City of Hayward (Tennyson Corridor)** Respondents identified community gardens and access to food as priorities, as well as de-paving and more green spaces, beautification, and celebrating Hayward's water assets.
- 4 Contra Costa Resource Conservation District (Antioch, Bay Point, Pittsburg)** Listening session participants communicated the need for more water for park landscaping, better access to shorelines, safer fishing, as well as safe drinking fountains in parks. Antioch listening session participants want safe places to view and access the river. Some mentioned reducing homeless encampments along the waterfront, access to recreation facilities, and outreach fairs or festivals sponsored by water districts. Bay Point residents mentioned the need to improve access to safe parks and trails.
- 5 Friends of Sausal Creek (Fruitvale District, Oakland)** The lack of public parks and green space was one of the top identified issues. Many of the respondents felt that there were few safe, outdoor recreational spaces for children and families and very little access to creek and green spaces.
- 7 Marin City Climate Resilience and Health Justice (Marin City)** Marin City does not have a community green space for gatherings and recreation.
- 13 The Watershed Project (North Richmond)** Community members feel there are not enough safe, accessible outdoor places for recreation in North Richmond and would like to see more parks, green space, and amenities such as lighting and drinking fountains on existing trails. On their post-surveys, 23% of residents wrote that they hope to see more urban greening, green infrastructure, or parks.

California Native Tribe

- A East Bay Tribes** Tribal Members cannot afford to live on their traditional territories, and because Tribes of the Bay Area don't have land, it's difficult for them to access green spaces for recreation and cultural practices, either because they cannot afford them or because their cultural sacred sites are now owned by private companies and landowners.
- B North Bay Tribes** Tribal members stated there is a lack of access to state parks and traditional land bases. They are required to request access to spaces that are reserved or owned privately in order for them to gather medicinal plants and basketry materials for ceremonial purposes. Poor water quality puts Tribal members at risk of contaminants and other pollution, and prevents them from being able to access cleaner, safe materials and water.
- C Peninsula Tribes** Respondents stated there is a lot of access to beaches, different parks, and community gardens; however, beaches are full of trash and there are homeless encampments in parks.
- D South Bay Tribes** Respondents stated that parks and spaces such as local and traditional creeks are highly polluted by human waste, trash, and invasive species.
- E Tribes living outside of the SF Bay Region** Similar to the East Bay Tribes, Tribal Members cannot afford to live on their traditional territories, and because Tribes of the Bay Area don't have land, it's difficult for them to access green spaces for recreation and cultural practices, either because they cannot afford them or because their cultural sacred sites are now owned by private companies and landowners.