



Storms, Rainfall and Flooding

- Extreme precipitation events are a substantial threat in San Mateo County and will continue to increase as a result of climate change.

Flooding Impacts to Vulnerable Populations

Flooding can disproportionately affect low-income people, people of color, renters, people with access and functional needs, seniors, people experiencing homelessness, and those without cars.

- People with lower incomes are less likely to be able to pay for property or flood insurance or for structural retrofits or repairs to their home that might reduce flood impacts,
- Renters are limited to approaches landlords approve.
- Older adults, those with access and functional needs, and those without cars face increased evacuation challenges in cases where advanced flood warnings are issued.
- Many people experiencing homelessness camp by waterways where they may be harmed or have their possessions swept away by flood water.
- People of color are much less likely to receive post-disaster federal assistance In the post-disaster period, making recovery more challenging, if not impossible.

Flooding Impacts to Health

Beyond impacts to immediate safety, floods are a public health issue and can have disproportionate impacts on people already living in precarious situations, particularly those with preexisting health conditions. Many people find themselves experiencing multiple challenges, compounding the impacts.

Health impacts from extreme precipitation events can include:

- Exposure to waterborne diseases via sewage-contaminated water.
- Skin and lung infections due to increased mold growth in moist conditions.
- Vector-borne diseases due to more widespread mosquito growth in standing water.
- Emotional and psychological trauma due to the hazard event or post-event conditions

Flooding Impacts to Transportation Infrastructure

Heavy precipitation and resulting flooding may erode roadways, leading to significant and costly damage that delays commuters and slows the movement of goods and services throughout the County. Bus stops and BART or Caltrain stations may be flooded, challenging the ability of public transit users to access employment, education, or healthcare.

Flooding of transportation infrastructure may limit access to healthcare facilities or impact the ability of these facilities to function such as through loss of power

Adaptation Strategies to Flooding

Inland Strategies

Green infrastructure that also addresses flooding hazards.

Frequent inspections of drainage systems to make sure culverts and catchment basins are functional, are clear of blockages, and are designed to manage current volumes of water and volumes of water anticipated for the future.

Install rain gardens in public rights-of-way to reduce precipitation runoff into creeks and storm-water management systems and to reduce flooding.

Installation of porous roadways or other means to increase the amount of water that is absorbed into the ground.



Planning and Policy Strategies

Installation of green roofs. Develop incentives or ordinances that require the installation of green roofs to reduce precipitation runoff into creeks and stormwater management systems, thereby reducing flooding.

Funding for vulnerable communities. Develop funding and finance mechanisms to help vulnerable communities elevate or adapt homes, buildings, and businesses in flood-prone areas.

Public buyouts of homes at risk of flooding and from coastal erosion.

Ensure access to key services by socially vulnerable populations are not blocked by flooding. Key services include health clinics, food banks, homeless shelters, etc.

Work with communities. Work with communities to learn about current and past flooding “problem areas” and their experience with the effectiveness of local infrastructure. These observations can be used to ground truth modeling results.

Shoreline Strategies

Restore, enhance, or create new wetlands adjacent to waterways to reduce flooding and erosion.

Install horizontal levees to mitigate flooding.

Junia Howell, James R Elliott, Damages Done: The Longitudinal Impacts of Natural Hazards on Wealth Inequality in the United States, *Social Problems*, Volume 66, Issue 3, August 2019, Pages 448–467, <https://doi.org/10.1093/socpro/spy016>

Flavelle, C. (2021, June 7.) Why Does Disaster Aid Often Favor White People? *The New York Times*. Retrieved from: FEMA Disaster Aid Often Widens Racial Disparities - *The New York Times* ([nytimes.com](https://www.nytimes.com))