

ENVIRONMENTAL HAZARDS IN VACAVILLE



Extreme Weather



Wildfire



Drought



Flood



Earthquake



Slope Failure

Extreme Weather

- Extreme weather encompasses high heat, high winds & heavy rain.
- Winds over 60 mph are damaging. High winds can cause damage across areas of up to hundreds of miles.
- Heavy rain can cause flooding, especially on impervious surfaces.
- Of the three types of extreme weather, heavy rain events from 2000-2020 caused the second greatest dollar amount in property damages.
- Warning time for all three types of extreme weather are generally available several days in advance.

Wildfire

- Wildfires are uncontrolled fires on undeveloped land, requiring suppression. They can be initiated naturally or by humans (85% of cases).
- Wildfires compromise rivers and watersheds, wildlife habitats, and local economies. After wildfires, the vulnerability to flooding increases due to forest destruction & ground cover damage within watersheds. Secondary hazards include reservoir contamination, transmission line destruction & flood contribution.
- Smoke and air pollution contains soot, tar & toxins (e.g., formaldehyde, benzene). Health impacts include difficulty breathing, depression & anxiety.
- Climate change can make forests more vulnerable (e.g., drought, invasive species) & increases lightning occurrences, wind speeds, & hot, dry spells.

Drought

- Water resources in Solano County have been stressed by periodic drought cycles and overuse. Climate change is expected to exacerbate existing conditions. A few weeks of drought during critical periods of agricultural development can have disastrous effects.
- Drought impacts the entire county via reduced air & water quality, increased water prices, restricted access to recreational areas & water restrictions.
- Climate change will likely exacerbate the following stresses: growing population, poor water quality, groundwater overdrafts & aging urban water infrastructure.

Flood

- Flooding is the second most destructive hazard. It is usually caused by extreme weather & excessive rainfall. Secondary hazards include levee failure & bank erosion.
- Warning times range from 24 to 48 hours for communities to prepare.

Earthquake

- Statewide, moderate earthquakes (\geq M5.5) may occur up to four times a year. Strong earthquakes (M6-M6.9) occur on an average of every 2-3 years. Major earthquakes (M7-M7.9) occur about every decade.
- An earthquake (\geq M6.7) in the Bay Area would generate strong shaking & ground failure throughout the region, damaging nearly all of the Bay Area.
- The Concord-Green Valley & the Hayward-Rodger's Creek faults have the highest likelihood of producing a M6.7 earthquake within the next 30 years.
- Building types susceptible to earthquake damage include structures built prior to 1950, unreinforced masonry buildings (URMs) & soft-story buildings. URMs can be reinforced with the addition of structural reinforcements.

Slope Failure

- Common types of slope failures include landslide, mudflow & debris flow, rockfall, & alluvial fans. Slope failures are often caused or exacerbated by hazards such as earthquakes, heavy rain, floods, & wildfires.
- Slope failures can contaminate water supplies, block drainages, impact bridges, & rip down power lines.
- The Middle & Lower Putah Creek & Ultatis Creek-Alamo Creek watersheds have been identified as priority areas by the County.

NEXT STEPS TO CONSIDER



Extreme Weather

- Register for Alert Solano at AlertSolano.com
- Download American Red Cross' "Emergency: Alerts" app
- Review emergency info at solanocounty.com/dept/oes/emergency & riovistacity.com/fire/page/community-emergency-preparedness

- Search for nearby Fire Safe Councils (e.g., Green Valley, Pleasants Valley)
- Check the news for potential free air purifier programs for eligible, vulnerable residents
- Monitor air quality with PurpleAir Sensors www2.purpleair.com



Wildfire



Drought

- Review the National Drought Monitor at droughtmonitor.unl.edu
- Install a sustainable garden designed around secondary water
- Participate in the water-efficient landscape rebate program (up to \$1,000) offered by SCWA

- Purchase insurance at fema.gov/flood-insurance
- Review resources at water.ca.gov/Programs/Flood-Management/Community-Resources/Flood-Risk
- Review Flood Factor at riskfactor.com
- Review the Adapting to Rising Tides program at explorer.adaptingtorisingtides.org/home



Flood



Earthquake

- Download "My Earthquake Alerts & Feed" app
- Review the California Residential Mitigation Program for seismic retrofitting options at californiaresidentialmitigationprogram.com
- Be aware of active faults: usgs.gov/programs/earthquake-hazards/hazards

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Slope Failure

