



Santa Cruz County

2025 Multi-Jurisdiction Hazard Mitigation Plan Update

Volume 2, Section 7: Resource Conservation District of Santa Cruz County (RCD) Special District Annex

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Adoption Resolution

To comply with the Federal Disaster Mitigation Act of 2000 (DMA 2000), the Resource Conservation District has officially adopted this 2025 Santa Cruz County Multi-Jurisdictional Hazard Mitigation Plan, including Volume 1 in its entirety as well as this Volume 2 Special District annex. The adoption of the MJHMP recognizes the district's commitment to reducing the impacts of natural hazards within its jurisdiction and across Santa Cruz County.

A copy of the district's adoption record is provided on the following pages. Adoption records for all jurisdictions are summarized in Volume 1, Table ES-1.

RESOLUTION 2026-03

A RESOLUTION OF THE RESOURCE CONSERVATION DISTRICT OF SANTA CRUZ COUNTY ADOPTING THE SANTA CRUZ COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN 2025 UPDATE

WHEREAS, the Resource Conservation District of Santa Cruz County (District), a special district organized under state law, with no enforcement or regulatory functions, works closely with individuals, groups and agencies to provide practical solutions for soil, water, and watershed management concerns, and;

WHEREAS, the Board of Directors (Board) for the District recognizes the critical need for hazard mitigation actions to protect natural resources, people, and property within Santa Cruz County, and;

WHEREAS, Santa Cruz County Multi-Jurisdictional Hazard Mitigation Plan 2025 Update (“the Plan”) recognizes the threat that natural hazards pose to people, property infrastructure and natural resources within our district; and

WHEREAS, the implementation of hazard mitigation actions can significantly reduce the risk of injury, loss of life, property damage, and disruption caused by future natural hazard events; and

WHEREAS, the federal Disaster Mitigation Act of 2000 (DMA 2000) requires all cities, counties, and special districts to have adopted a Hazard Mitigation Plan to receive pre-and post-disaster mitigation funding from the Federal Emergency Management Agency (FEMA); and

WHEREAS, the District fully participated in the FEMA-prescribed mitigation planning process to prepare the Plan; and

WHEREAS, a coalition of Santa Cruz County local governments and special districts embarked on a planning process to prepare for and lessen the impacts of specified hazards by updating the Plan; and

WHEREAS, each participating jurisdiction, including the Resource Conservation District of Santa Cruz County, has been responsible for reviewing and approving its respective Jurisdictional Annex within the Plan, and the Plan compiles individual annexes into a unified framework to ensure a comprehensive and coordinated hazard mitigation strategy for the entire Santa Cruz County planning area, aligned with the goals, objectives, and priorities of the Plan; and

WHEREAS, the Santa Cruz County Multi-Jurisdictional Hazard Mitigation Plan 2025 Update is comprised of two volumes, including Volume 1: Base Plan, which contains the countywide hazard mitigation framework and risk assessment, and Volume 2: Jurisdictional Annexes, which document the hazard profiles, vulnerabilities, and mitigation actions of participating jurisdictions; and

WHEREAS, a public involvement process consistent with the requirements of DMA 2000 was conducted to develop the Plan; and

WHEREAS, the California Governor’s Office of Emergency Services (Cal OES) has reviewed and approved the Plan and has forwarded the plan to FEMA Region IX for final review and approval; and

NOW, THEREFORE, BE IT RESOLVED that the Resource Conservation District of Santa Cruz County hereby adopts the Santa Cruz County Multi-Jurisdictional Hazard Mitigation Plan 2025 Update

as an official plan of the jurisdiction. The Resource Conservation District of Santa Cruz County adopts Volume 1 of the Plan in its entirety and acknowledges that the Resource Conservation District of Santa Cruz County Jurisdictional Annex contained in Volume 2 represents the jurisdiction's specific hazard mitigation strategies and responsibilities.

BE IT FURTHER RESOLVED, the Board authorizes staff to make minor technical edits or administrative corrections to the Plan, as necessary to address FEMA review comments, prior to final adoption; and

BE IT FURTHER RESOLVED the District further encourages the respective departments identified in the implementation strategy of the plan to carry out the recommended mitigation actions assigned to them; and

BE IT FURTHER RESOLVED the proposed project is categorically exempt from the provisions of the CEQA Guidelines pursuant to the Provisions of Title 14 of the California Administrative Code, Section 15061(b)(3) (common sense exemption), and Section 15262 (Feasibility and Planning Studies); and

BE IT FURTHER RESOLVED, this Adoption Resolution will be submitted to Cal OES on behalf of the District by Santa Cruz County Staff to enable the Plan's final approval by Cal OES and FEMA.

I hereby certify that the foregoing Resolution RCDSCC 2026-03 was duly and regularly adopted by the Board of Directors of the RCDSCC at the meeting thereof held on the 15th day of April 2026 motion by John Ricker and seconded by Kelley Bell motion passed by the following roll call vote:

Ayes: Kelley Bell, Don Croll, Robert Ketley, Mike Manfre, Jim McKenna, John Ricker

Noes: -

Abstained: -

Absent: Howard Liebenberg

Attest: James J. McKenna

Name: Jim McKenna, Board President

RCDSCC 2026-03 - MJHMP adoption resolution

Final Audit Report

2026-04-23

Created:	2026-04-16
By:	Lily Ruderman (lruderman@rcdsantacruz.org)
Status:	Signed
Transaction ID:	CBJCHBCAABAAAsQDHeWI96ZUgC1bVGxqPH-t-oUxsiqMe

"RCDSCC 2026-03 - MJHMP adoption resolution" History

-  Document created by Lily Ruderman (lruderman@rcdsantacruz.org)
2026-04-16 - 7:44:28 PM GMT
-  Document emailed to James McKenna (jmckenna@calcentral.com) for signature
2026-04-16 - 7:44:47 PM GMT
-  Email viewed by James McKenna (jmckenna@calcentral.com)
2026-04-23 - 4:57:53 PM GMT
-  Document e-signed by James McKenna (jmckenna@calcentral.com)
Signature Date: 2026-04-23 - 4:58:19 PM GMT - Time Source: server
-  Agreement completed.
2026-04-23 - 4:58:19 PM GMT

Section 7. Resource Conservation District of Santa Cruz County (RCD)



7.1 Scope & Purpose

This Jurisdictional Annex for the Resource Conservation District of Santa Cruz County (RCD) of the 2025 Santa Cruz County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) details the hazard mitigation planning elements specific to the district's planning area. This annex is not intended to be a standalone document but appends to and supplements the information contained in the umbrella plan document (Volume 1). As such, all sections of the umbrella plan, including the planning process and other procedural requirements, apply to and were met by the RCD. This annex provides additional information specific to the district, with a focus on hazard identification and risk assessment, vulnerability assessment, problem statements, mitigation strategy, and capabilities assessments.

Resource Conservation District Points of Contact

Primary

Lisa Lurie, Executive Director
Resource Conservation District of Santa Cruz County
820 Bay Avenue, Suite 136
Capitola, California 95010
Telephone: (831) 464-2950
Email: llurie@rcdsantacruz.org

Alternate

Cameron McDonald, Ag Program Assistant
Resource Conservation District of Santa Cruz County
820 Bay Avenue, Suite 136
Capitola, California 95010
Telephone: (831) 464-2950
Email: cmcdonald@rcdsantacruz.org

7.2 Jurisdictional Setting

The Resource Conservation District of Santa Cruz County (RCD) is a special district established under Division 9 of the California Public Resources Code. Unlike a water or fire district, RCD is a non-regulatory entity whose mission is to help people protect, conserve, and restore natural resources through technical assistance, outreach, and on-the-ground projects. While the RCD's tax-based service boundary encompasses only the City of Capitola and the unincorporated areas of Santa Cruz County, its sphere of influence (SOI) as established by the Local Agency Formation Commission (LAFCO) extends to include all the cities within the county, notably Santa Cruz, Scotts Valley, and Watsonville. This distinction means that, although the district does not receive property tax revenue from these city areas, it retains the authority and capacity to provide technical assistance, conservation programs, and potentially annexation services across a broader jurisdictional footprint. In practical terms, the RCD can plan and prepare for natural resource and hazard mitigation work at a fully countywide level. The RCD works across watersheds, coastal areas, and rural landscapes where natural resource and hazard mitigation needs intersect.



The RCD does not operate a water distribution system or fire suppression service. Instead, its core functions include watershed restoration, stewardship in agriculture and regional collaboration. The RCD leads or partners on programs such as floodplain reconnection projects, streambank stabilization, forest fuel reduction and shaded fuel breaks, aquifer recharge, stormwater infiltration, agricultural water conservation, and coastal wetland restoration. Through its Partners in Restoration Permit Coordination Program, the RCD streamlines regulatory approvals for landowners to implement conservation practices, enabling faster and more cost-effective delivery of hazard mitigation and ecosystem projects.

The RCD's capabilities are primarily natural infrastructure, and it uses grant funds to implement projects that protect it. It employs staff in grant and project management, technical assistance, and public outreach, and supplements limited engineering and GIS functions in voluntary partnership with public and private landowners and managers. Fiscal support comes mainly from competitive grants, contracts, and local partnerships, but beginning in Fiscal Year (FY) 2025-2026 the district will also benefit from Measure Q, a voter-approved parcel tax dedicated to wildfire resilience, water resource protection, habitat restoration, and technical assistance to landowners. This funding provides reliable local match for state and federal mitigation grants and enables expansion of community-facing programs such as chipping, defensible space, stormwater management, agricultural irrigation efficiency, and recharge projects.

While the RCD does not perform emergency response, it provides post-disaster technical assistance to landowners via recovery and restoration assistance. Programs such as its forest health initiatives, chipping and defensible space assistance, drought resilience projects, and floodplain restoration directly reduce community exposure and vulnerability to wildfire, drought, flooding, slope failure, and climate-driven hazards. The RCD also serves as a convener and collaborator, working with the Fire Safe Council of Santa Cruz County, County OR3, Pajaro Valley Water Management Agency, water and fire districts, land managers, and local nonprofits to integrate hazard mitigation into land stewardship and climate adaptation.

The district is governed by a seven-member Board of Directors, appointed by the Santa Cruz County Board of Supervisors. The Board provides strategic direction, adopts annual budgets, and oversees financial accountability, while the Executive Director manages staff and program implementation.

The following is a summary of key information about the jurisdiction:

- **Year Established:** 1942 (one of the earliest conservation districts in California; organized under Division 9 PRC)
- **Population Served:** Entire Santa Cruz County (approx. 266,000 residents indirectly benefit through land stewardship, conservation, and hazard mitigation projects)
- **Coverage Area:** Countywide jurisdiction (approx. 446 square miles, spanning coastal zones, valleys, and upland forests)
- **Primary Services:** Non-regulatory technical assistance, natural resource management, watershed restoration, stewardship in agriculture, hazard mitigation, public outreach, and grant-funded implementation projects

7.2.1 Geography & Climate

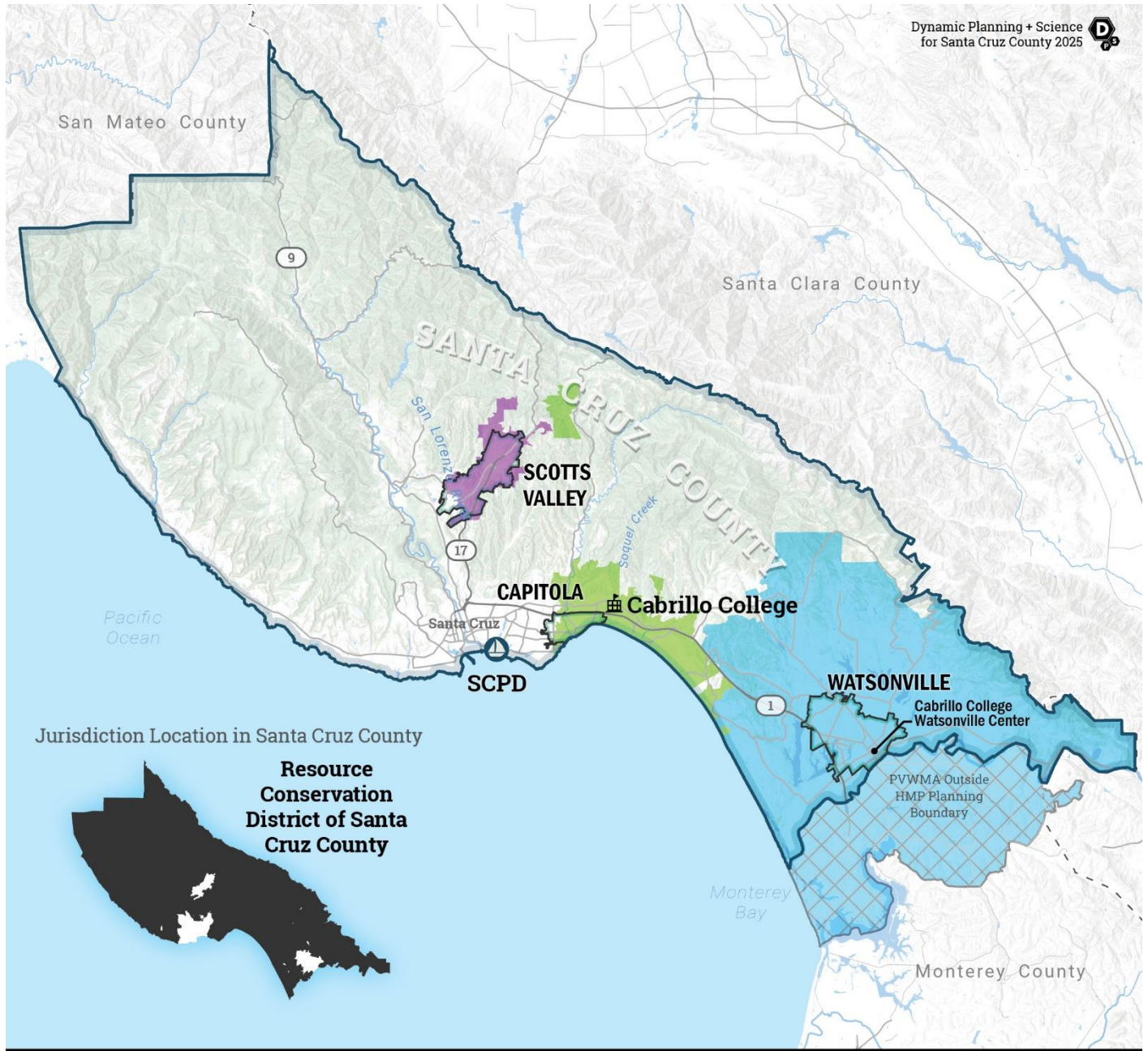
The Resource Conservation District of Santa Cruz County (RCD) encompasses a countywide service area of approximately 446 square miles, covering both incorporated cities and unincorporated communities. While the district's formal jurisdictional boundary includes Capitola and the unincorporated areas of the county, its sphere of influence, as recognized by the Santa Cruz County Local Agency Formation Commission (LAFCO), extends across all cities, including Santa Cruz, Watsonville, and Scotts Valley. This arrangement allows RCD to implement conservation and hazard mitigation programs on a countywide scale.

The district's service area spans a diverse landscape, from the coastal bluffs and estuaries of Monterey Bay to the steep, forested slopes of the Santa Cruz Mountains. This geography creates varied hazard conditions: coastal erosion and sea level rise threaten beaches, dunes, lagoons, and agricultural lands in low-lying coastal areas, while the entire County is subject to slope failures, landslides, and debris flows. Extensive wildland–urban interface (WUI) areas place rural communities at high risk of wildfire, where dense vegetation, limited ingress/egress, and prolonged drought stress increase ignition and suppression challenges.

The steep ridges and sandstone formations of the mountains are prone to erosion and sediment delivery, degrading streams and threatening roads. In contrast, the county's productive valleys face recurring flooding, particularly in the Pajaro River and slough systems, where aging culverts and undersized crossings contribute to access and drainage problems.

The climate of Santa Cruz County is Mediterranean, marked by wet winters and dry summers. Winter storms bring heavy rainfall that can trigger flooding, landslides, and coastal storm damage, while prolonged summer droughts stress ecosystems, reduce stream baseflows, and increase agricultural vulnerability. In recent decades, climate change has amplified these risks by producing longer dry periods, hotter summers, and more variable storm patterns, leading to more frequent drought emergencies, increased wildfire activity, and rising flood losses. Along the coast, sea level rise and stronger storm surges further compound risks to estuaries, wetlands, and groundwater resources.

Figure 7-1 identifies the Resource Conservation District's formal boundary and sphere of influence within Santa Cruz County.



Geographic Overview - Santa Cruz County HMP Participants

- Cabrillo College
- Participating Jurisdiction
- Pajaro Valley Water Management Agency
- Santa Cruz Port District
- Scotts Valley Water District
- Soquel Creek Water District

Santa Cruz County Resource Conservation District

Geographic extent is generally coterminous with the unincorporated county, with various incorporated areas excluded from the District's jurisdiction.



Figure 7-1: RCD Sphere of Influence

RCD's jurisdictional boundary covers Capitola and unincorporated Santa Cruz County, while its LAFCO-designated sphere of influence extends across all cities in the county.

7.2.2 Historic Overview

The RCD has a long history rooted in community collaboration and the need for organized natural resource management. Established in 1942, the RCD was formed to help landowners address soil erosion, water conservation, and watershed health at a time when agricultural productivity and land stewardship were critical local priorities.

Over the decades, the district has evolved significantly, to meet the changing needs of the community for resource conservation, from soil and water conservation to include forest health, wildfire preparedness, floodplain restoration, drought resilience, sustainable agriculture, and coastal resource protection. This evolution reflects the county's changing landscape and the increasing challenges posed by climate change, population growth in rural areas, and the expanding wildland–urban interface.

The RCD's history highlights its role as a trusted convener and technical resource, working alongside landowners, agricultural producers, and public agencies to deliver on-the-ground projects. Through initiatives such as the Partners in Restoration Permit Coordination Program, the Integrated Watershed Restoration Program, the RCD has secured capacity to accelerate conservation and hazard mitigation work.

Over time, the district has adapted to new challenges by expanding partnerships with local, state, and federal agencies, and by leveraging grant funding to deliver projects that protect people, infrastructure, and ecosystems through nature-based solutions. The underlying objective can be summed up as "Caring for nature so nature can care for us."

7.2.3 Demographics & Vulnerable Populations

This section describes the demographic characteristics of RCD Sphere of Influence (SOI) to guide hazard mitigation planning efforts. Natural disasters affect communities both physically and socially, and demographic composition plays a central role in determining how impacts are distributed, particularly among vulnerable groups with greater barriers to preparedness, response, and recovery. Understanding the county's social and economic landscape helps assess the potential social costs of hazard events, including impacts to housing, agriculture, public facilities, and essential services.

Exploring local demographic data highlights groups and geographic areas with specific vulnerabilities. Federal law defines at-risk individuals as "children, pregnant women, senior citizens, and other individuals who have access or functional needs in the event of a public health emergency" (42 U.S.C. § 2802(b)(4)(B) (2019)). These populations also include residents who are economically disadvantaged, live with disabilities, are dependent on caregivers, have limited English proficiency, lack access to transportation, experience homelessness, or manage chronic medical conditions. Vulnerability is not fixed, rather, risk can vary depending on the hazard type. Planning for these populations ensures limited resources are directed where they will be most effective.

Certain populations face greater risk following a natural hazard event due to age, economic mobility, physical disability, geographic location, or a combination of factors. Vulnerability in the face of a hazard event is not a fixed characteristic; the same individual may be at risk for some hazards but not at risk for



others. Planning for vulnerable populations in the context of hazard mitigation can help communities to prioritize limited resources where they will be the most effective. Refer to Volume 1, Section 1.4.3, for a more in-depth discussion of planning for vulnerable populations, at-risk individuals with access and functional needs, and environmental justice.

7.2.3.1 Income & Housing

Income and housing conditions across the RCD highlight both the economic diversity of the county and the structural vulnerabilities that influence community resilience to natural hazards. As a non-regulatory, grant- and partnership-driven agency focused on land stewardship and hazard mitigation, the RCD's mission aligns closely with the needs of underserved communities and geographies identified as having elevated vulnerability due to socioeconomic conditions.

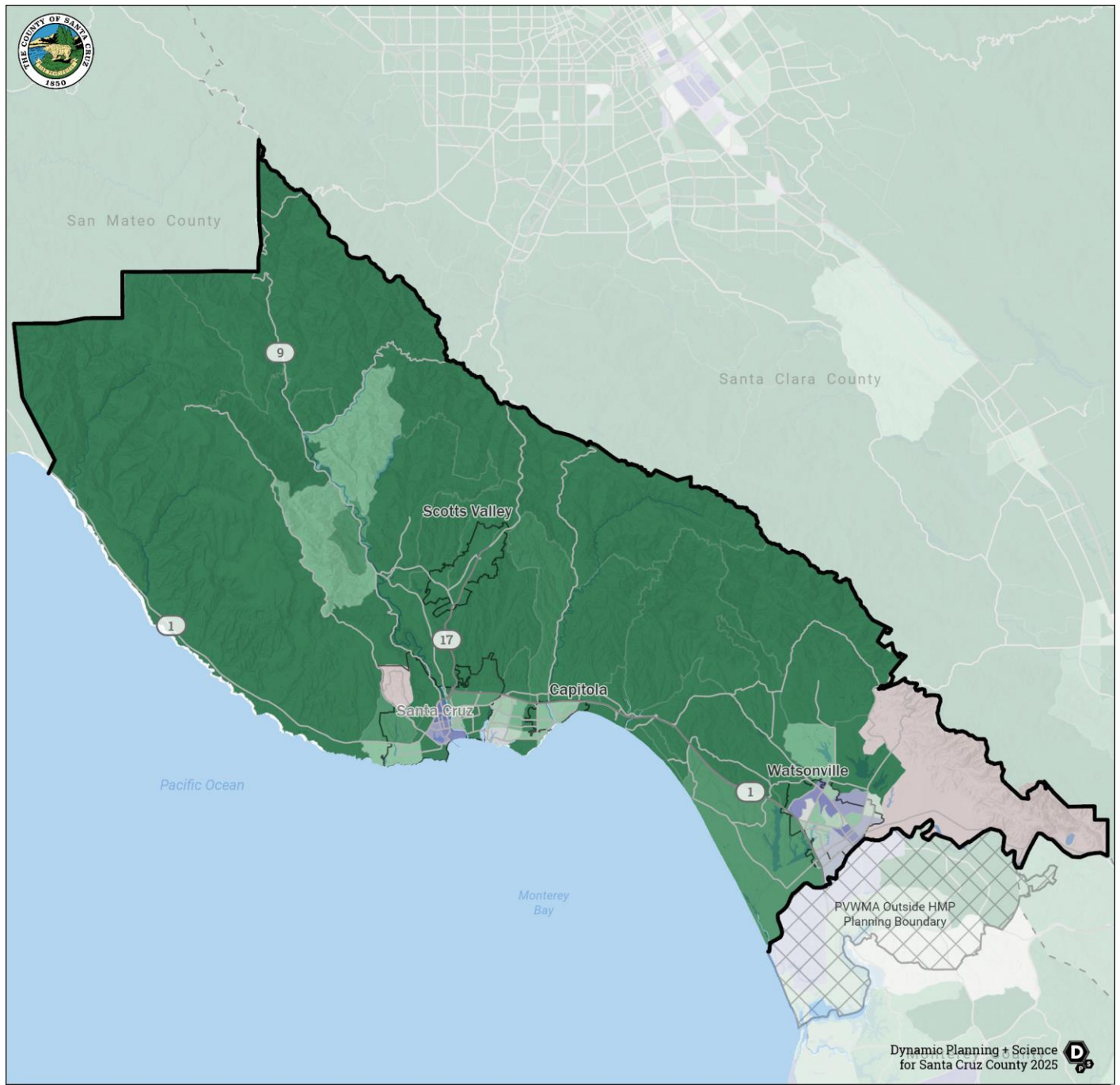
Income & Poverty Distribution

According to American Community Survey (ACS) data, median household income varies significantly across the RCD's countywide service area (Figure 7-2). While large portions of the Santa Cruz Mountains and certain unincorporated coastal areas report median household incomes exceeding \$119,300, indicative of relative affluence, there are notable pockets where median income falls below \$37,800 annually. These lower-income census tracts are concentrated in:

- **South County**, particularly in and around the City of Watsonville and the Pajaro Valley agricultural corridor;
- **The San Lorenzo Valley**, where rural topography, infrastructure challenges, and isolation contribute to reduced economic opportunity;
- **Parts of Live Oak and urban Santa Cruz**, which host concentrations of low-wage workers, renters, and communities of color.

The Poverty Status Map (Figure 7-3) reinforces this pattern by showing that more than 24% of the population lives below the poverty line in several areas of South County and within Watsonville, as well as parts of central Santa Cruz and Live Oak. These communities are often at higher risk during hazard events due to limited access to financial resources, barriers to insurance, and reduced capacity for recovery or property retrofitting.

The RCD's work in these regions, particularly through agricultural water conservation, erosion control, and floodplain reconnection is especially critical, as these hazard mitigation measures directly support economically vulnerable residents who are more likely to be disproportionately affected by disasters.



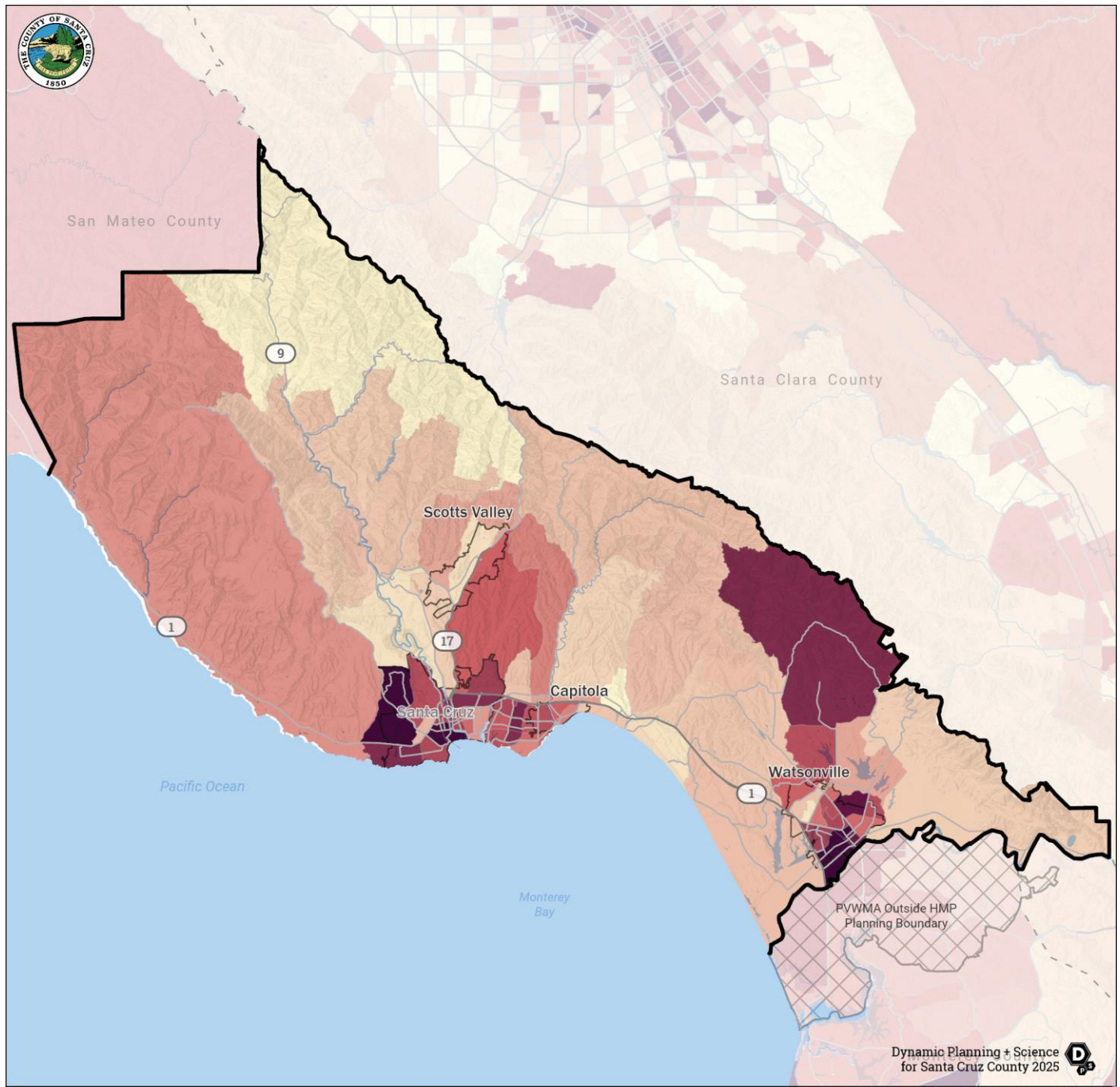
ACS Median Household Income Resource Conservation District

*Data sources: ESRI Demographics Service, ACS.

Median Household Income



Figure 7-2: RCD Median Household Income Map



ACS Poverty Status Resource Conservation District

*Data sources: ESRI Demographics Service, ACS.

Percent of Population Whose Annual Income is Below Poverty

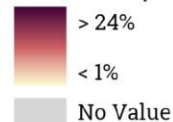


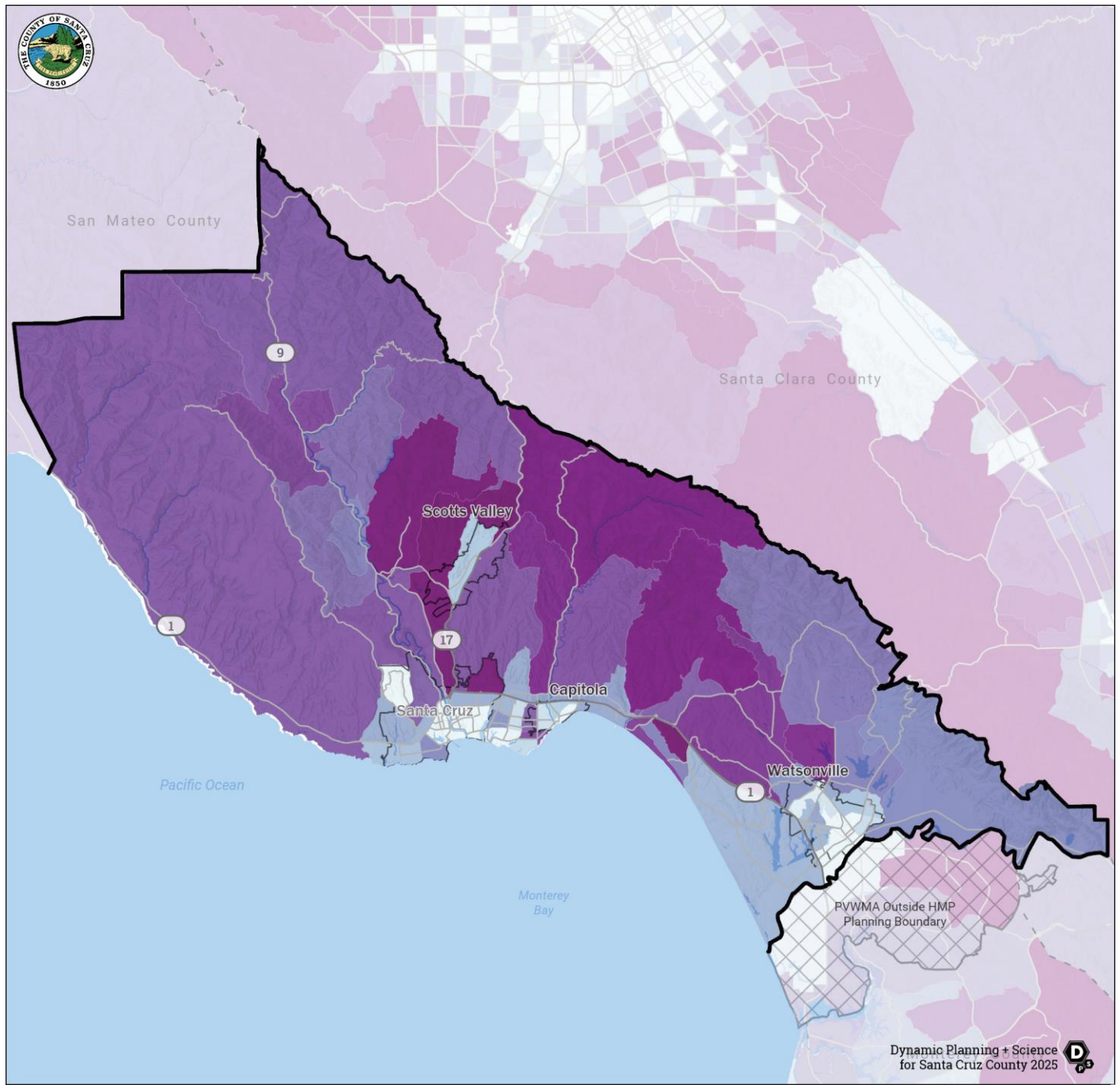
Figure 7-3: RCD Poverty Status Map

Housing Occupancy & Stability

Housing tenure also varies widely within the RCD's jurisdiction (Figure 7-4). Owner-occupancy rates exceed 88% in much of the mountainous interior and in parts of Aptos and Soquel, indicating a more stable and potentially better-resourced residential base. In contrast, lower rates of owner occupancy—below 41%—are found in urban centers such as Watsonville, central Santa Cruz, and parts of Live Oak. These areas contain higher concentrations of renters, seasonal laborers, and multifamily housing units, which correlate with increased social vulnerability and reduced investment in hazard-resistant improvements.

Renter-heavy communities often face challenges with infrastructure maintenance, insurance access, and evacuation resources. These same neighborhoods frequently intersect with hazard-prone geographies, such as low-lying flood zones, fire-exposed WUI areas, and regions with degraded stormwater systems. The RCD's chipping programs, recharge and infiltration projects, and streambank stabilization efforts provide protective benefits to these populations, helping reduce the long-term risk of displacement and disaster loss.

From a mitigation planning standpoint, these demographic disparities underscore the importance of aligning RCD programs with the communities most in need. Lower-income, high-renter areas often lack the political and financial capital to initiate large-scale resilience projects. However, because of the nature of the RCD's mission, it typically works with landowners—whether they live on their land or not—hence, household status is typically not a factor in its day-to-day operations. Through its technical assistance model and partnerships with local agencies and nonprofits, the RCD serves as a bridge to bring resources, permitting expertise, and ecological restoration to places that would otherwise remain underserved.



ACS Housing Occupancy Resource Conservation District

*Data sources: ESRI Demographics Service, ACS.

Percent of Housing Units that are Owner-Occupied

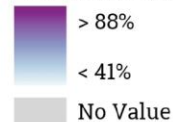


Figure 7-4: RCD Owner-Occupied Housing Units Map

7.2.3.2 Dependent & Disabled Populations

Age and disability status significantly influence vulnerability to natural hazards. Children, older adults, and individuals with disabilities often require support from others during emergencies. These groups may face challenges with mobility, communication, or decision-making. During disasters, they are more likely to experience difficulties with evacuation, access to medical care, and recovery.

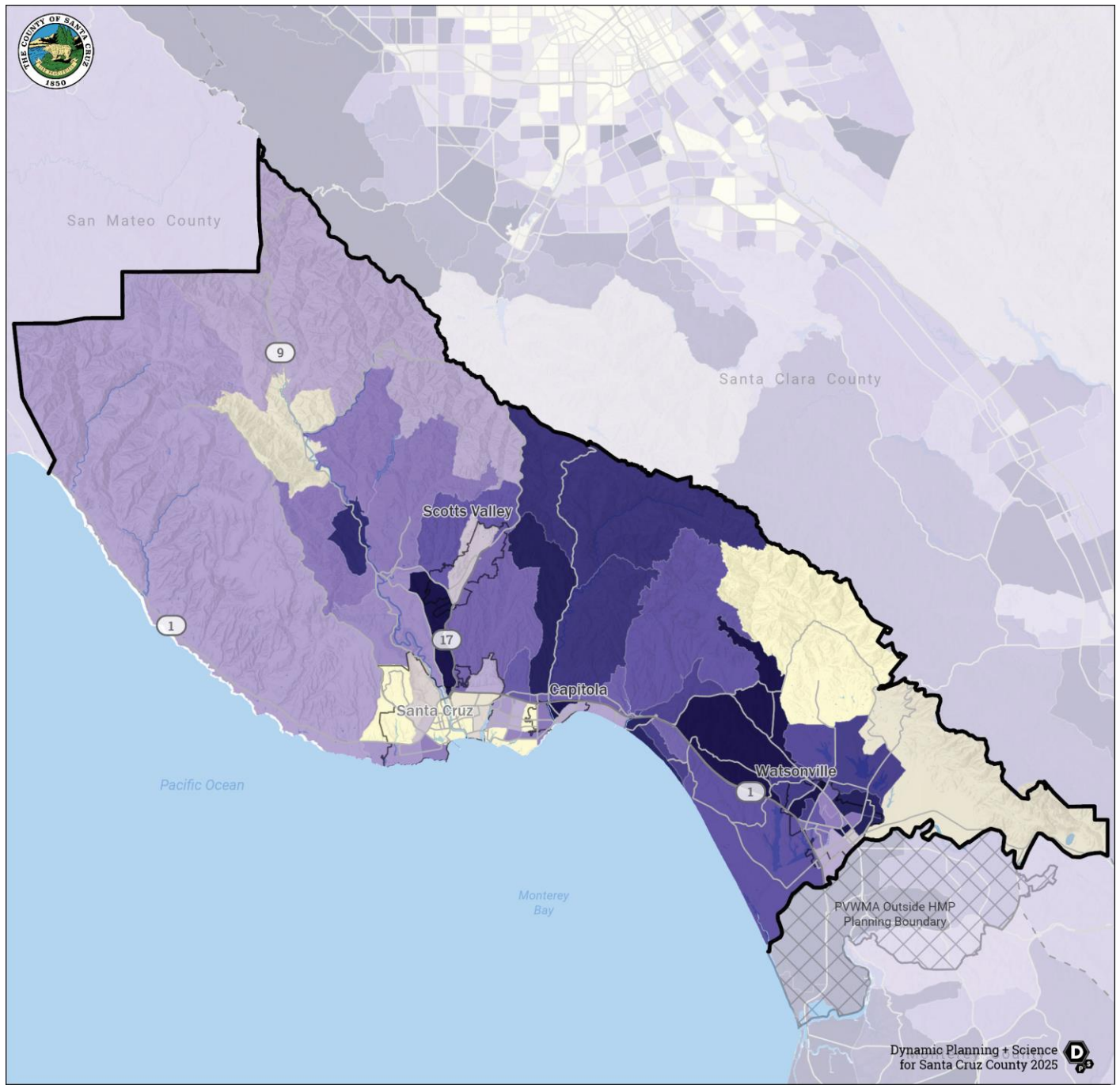
These vulnerabilities can become worse when combined with poverty, language barriers, or unstable housing. As a result, targeted planning is necessary to meet the specific needs of these populations. The RCD will consider these factors when developing and implementing hazard mitigation programs.

According to data from the ACS, many areas in the RCD service region have high percentages of dependent populations. Dependent age groups include individuals under age 18 and those over age 65. Age Dependency Ratios are often used to measure the financial pressure on the actively working population of a community. Figure 7-5 shows that in some areas of South County and the Pajaro Valley, more than 48 percent of residents are in these age groups. Other areas with similar concentrations include parts of the San Lorenzo Valley, Aptos Hills, and several rural communities.

These demographic patterns suggest that many households in the RCD service area include individuals who may need additional support to improve safety and resilience at the household level. The presence of children and older adults highlights the importance of inclusive communication, accessible guidance, and reliable support for implementing mitigation projects in and around the home.

Figure 7-6 shows the percentage of older adults living with disabilities. In some census tracts in South County, Live Oak, and rural inland areas, more than 47 percent of residents aged 65 or older report having a disability. These disabilities may include mobility impairments, vision or hearing loss, or chronic health conditions. These factors can delay evacuation, reduce access to emergency warnings, or increase the need for uninterrupted utilities and medical care.

The demographic data in this section helps guide decisions about project location and design. It ensures that the RCD's mitigation strategy is targeted in areas where vulnerability is highest. By focusing on the needs of children, older adults, and people with disabilities, the RCD supports community resilience and reduces long-term disaster impacts across Santa Cruz County. As two examples, the RCD's Ag Stewardship team works with socially disadvantaged farmers and ranchers, and it also provides wood chipping for the disabled and elderly.



ACS Dependent Age Groups Resource Conservation District

*Data sources: ESRI Demographics Service, ACS.

Percent of Population in Dependent Age Groups

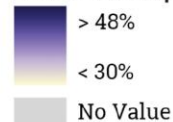
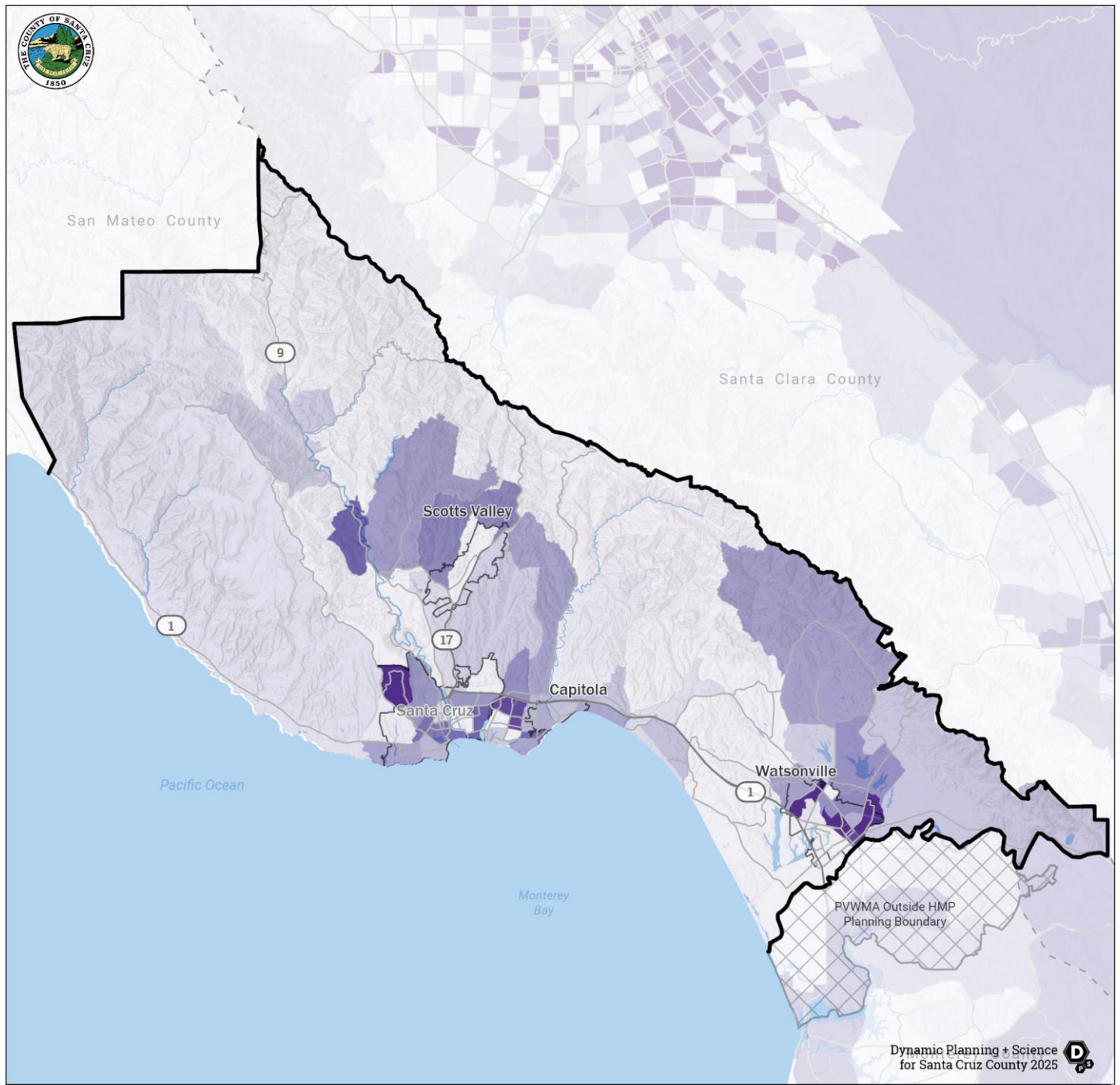


Figure 7-5: RCD Economically Dependent Age Groups Map



ACS Disabled Elderly Resource Conservation District

*Data sources: ESRI Demographics Service, ACS.

Percent of Elderly Population (65+) with a Disability

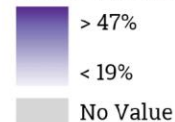


Figure 7-6: RCD Disabled Elderly Map



7.2.3.3 Race, Ethnicity & Language

Natural disasters compound racial disparities; non-white individuals and communities receive less recovery aid from FEMA than their white counterparts, even where the amount of damage is the same. (Howell, Junia; Elliott, James R., 2019) (National Advisory Council, 2020) These disparities are evidence of the complicated relationship between disaster recovery and overlapping social vulnerabilities including race, income, language, and health. Black and Latinx residents are more likely to be low income and renters, conditions which create barriers to navigating FEMA's Individual Assistance programs. Communities with more non-white residents may have lower tax revenue and property values, which means less investment in mitigation and rebuilding efforts before and after an emergency.

The racial, ethnic, and linguistic composition of communities in Santa Cruz County provides important context for hazard mitigation planning and outreach. The RCD works across diverse communities, many of which have historically experienced unequal access to resources for disaster preparedness, mitigation for long-term resilience.

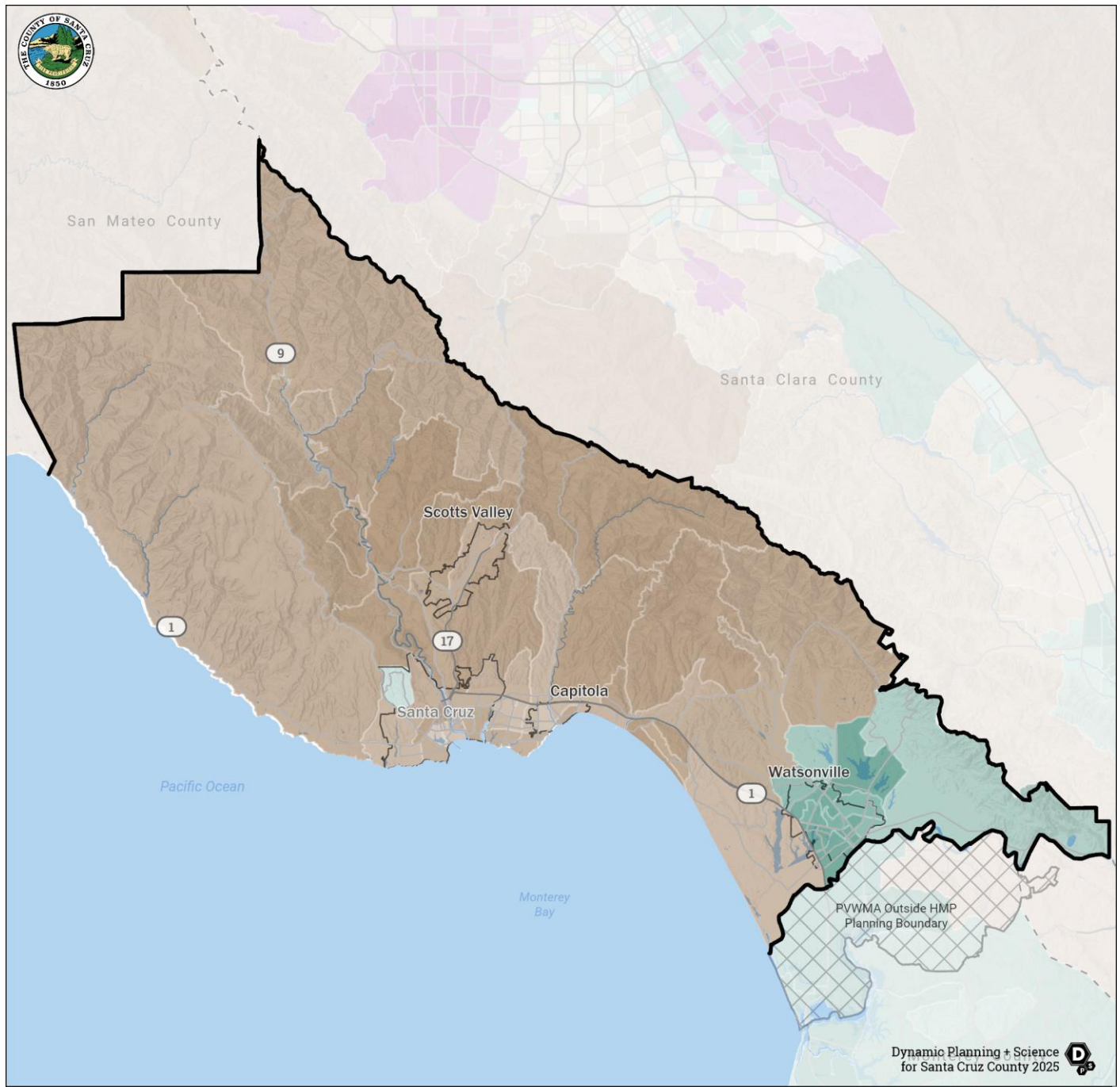
According to the ACS Race and Ethnicity data (Figure 7-7), the unincorporated areas of Santa Cruz County are predominantly White, non-Hispanic. However, the region also includes large Hispanic or Latino populations, especially in South County. The City of Watsonville and surrounding unincorporated areas have a majority Latino population. These areas include agricultural communities and farmworker households that face persistent socioeconomic and environmental risks.

Figure 7-8 shows that the use of Spanish in the home is widespread in the southern and eastern parts of the county. In many census tracts around Watsonville, more than 33 percent of residents aged five and older speak Spanish at home. Spanish-speaking populations are also present in parts of Live Oak, Soquel, and the Corralitos area.

Language access is an essential part of equitable hazard mitigation. Households that rely on Spanish may not receive emergency alerts or mitigation guidance in a timely way unless materials are translated and distributed through trusted channels. These households may also include Limited English Proficiency (LEP) individuals who are less likely to participate in public workshops or government meetings without targeted outreach.

The RCD provides post-disaster recovery assistance, and also plays a key role in building resilience before disasters occur. Many of its programs benefit frontline communities that include LEP populations. These programs include stormwater infiltration, floodplain restoration, defensible space, and agricultural water conservation. As the RCD expands its outreach and Measure Q-funded programs, it is important to continue developing Spanish-language materials, community workshops, and trusted partnerships in these areas.

By integrating language and cultural considerations into program delivery, the RCD will ensure its mitigation efforts are inclusive and accessible to all parts of the county.



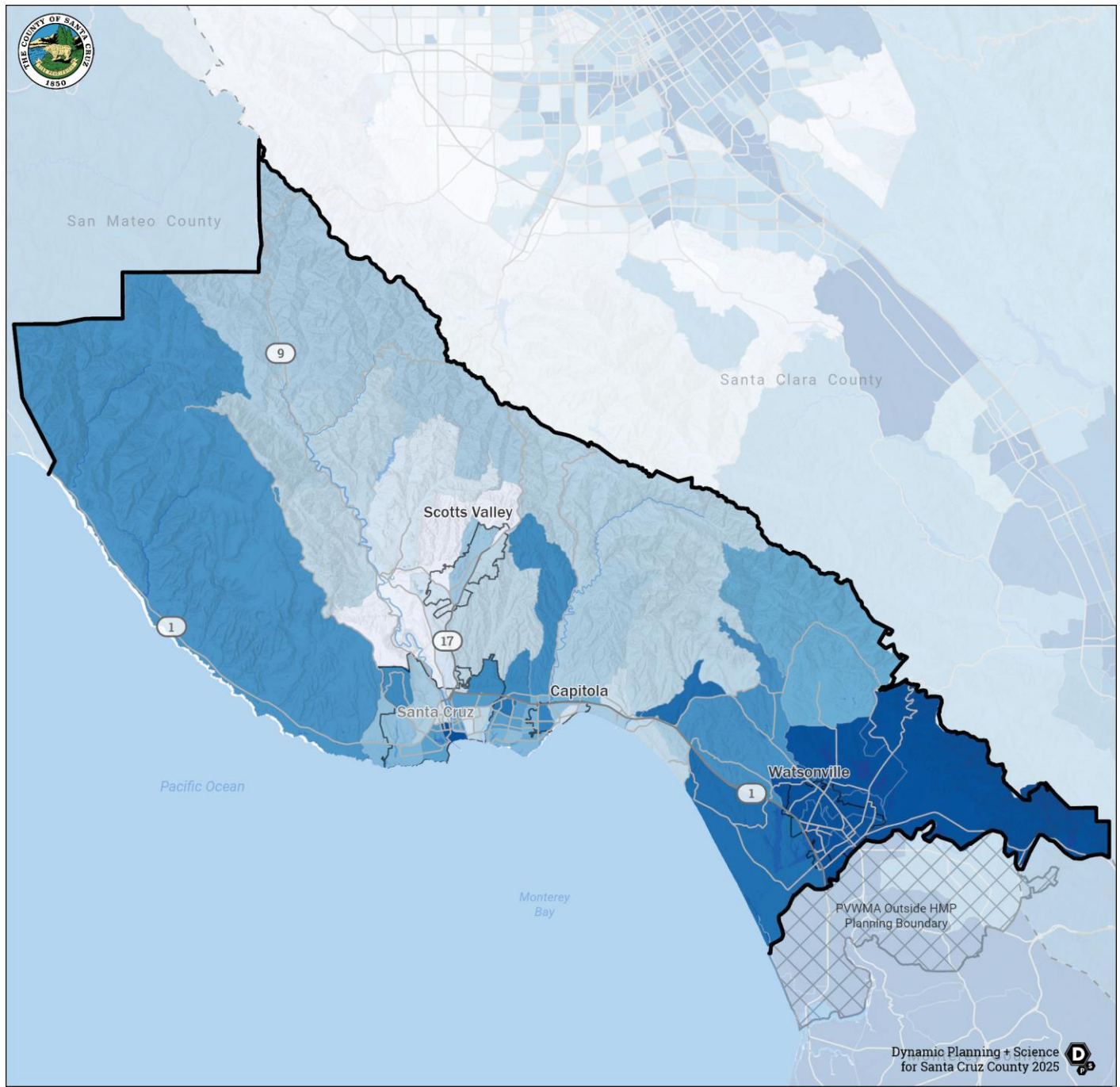
ACS Race and Ethnicity Unincorporated County

*Data sources: ESRI Demographics Service, ACS.

ACS Race and Ethnicity Predominance

- | | | |
|---|---|--|
| White alone, not Hispanic or Latino | Asian alone, not Hispanic or Latino | Native Hawaiian and other Pacific Islander alone, not Hispanic or Latino |
| Hispanic or Latino | American Indian and Alaska Native alone, not Hispanic or Latino | Some other race alone, not Hispanic or Latino |
| Black or African American alone, not Hispanic or Latino | Two or more races, not Hispanic or Latino | |

Figure 7-7: RCD Race and Ethnicity Predominance Map



ACS Language Spoken Resource Conservation District

*Data sources: ESRI Demographics Service, ACS.

Percent of Population (5+) Who Speak Spanish at Home



Figure 7-8 RCD Spanish-Speaking Population Map

7.2.3.4 Social Vulnerability Index (SVI)

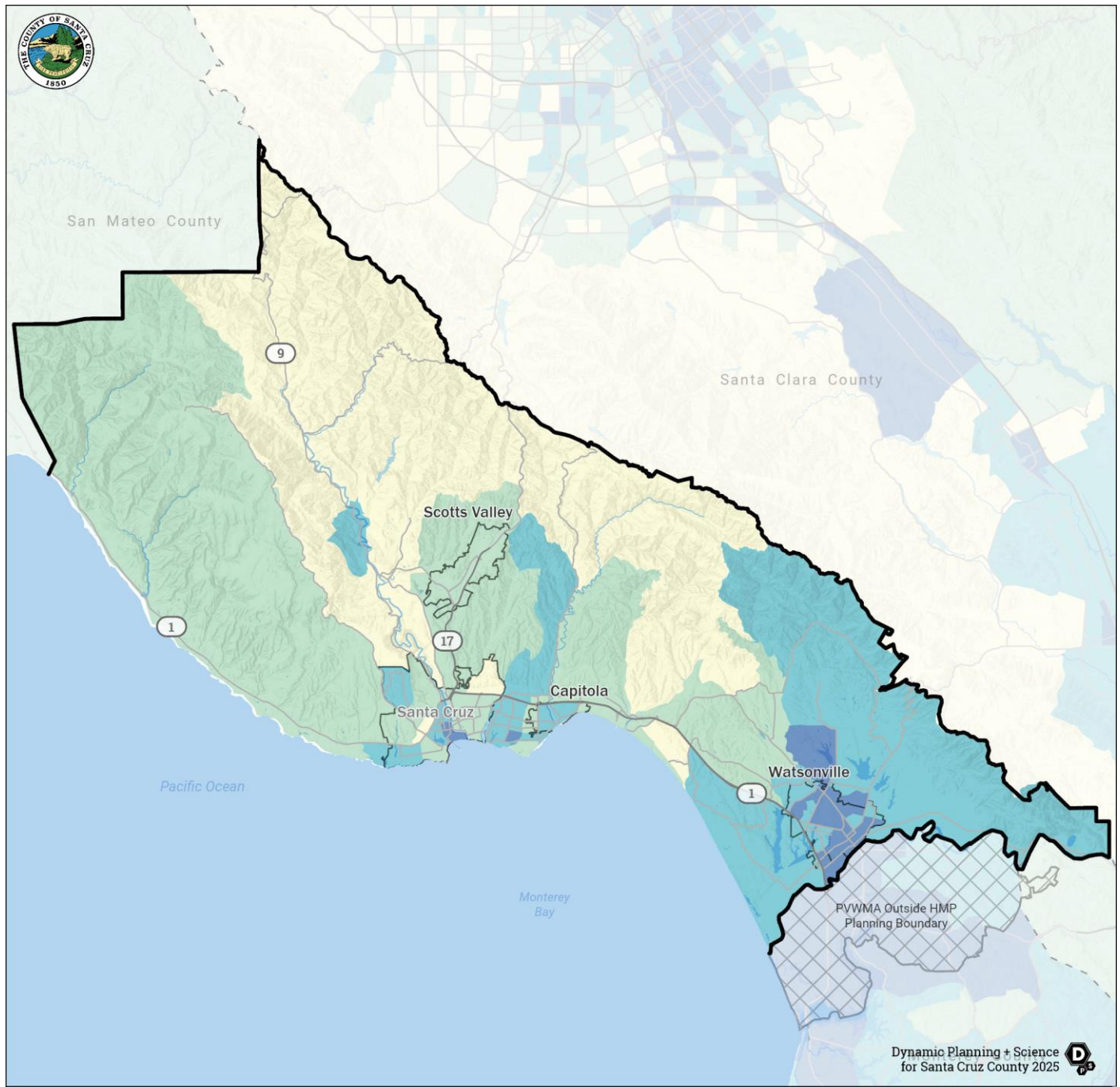
The CDC Social Vulnerability Index (SVI) for the RCD reveals important spatial and demographic patterns that have direct implications for equitable hazard mitigation planning. As discussed in detail in Volume 1, Section 1.4.3.6, the SVI is a composite measure developed by the CDC to identify communities that are more likely to require support before, during, and after a disaster. It incorporates a range of factors across four key dimensions: socioeconomic status, household composition and disability, minority status and language, and housing type and transportation access. The resulting index score ranges from 0 (lowest vulnerability) to 1 (highest vulnerability).

The SVI map in Figure 7-9 shows that social vulnerability within the RCD service area is unevenly distributed. Much of the unincorporated mid and north county areas, including Scotts Valley, Bonny Doon, and Aptos Hills, fall within the low vulnerability range of 0.00 to 0.25. These communities generally have higher household incomes, higher rates of homeownership, and greater access to resources for recovery.

In contrast, south county communities around Watsonville and the Pajaro Valley show higher vulnerability scores of 0.50 to 1.00. These areas contain large numbers of agricultural workers, renters, and households where Spanish is the primary language spoken at home. Many of these communities face challenges such as limited access to transportation, lower household incomes, and higher rates of dependent populations. These conditions can make disaster preparedness and recovery more difficult.

Moderate vulnerability scores of 0.25 to 0.50 appear in Live Oak, Soquel, and the San Lorenzo Valley. These communities include older housing stock, concentrations of seniors, and households with limited emergency evacuation options. Narrow mountain roads and flood prone areas increase the difficulty of safe evacuation.

The presence of higher social vulnerability in parts of the RCD service area highlights the importance of targeted hazard mitigation strategies. Households in these areas may face greater barriers to implementing mitigation projects. They may also face difficulties in purchasing insurance or accessing recovery assistance. The RCD programs such as defensible space projects, chipping services in wildfire prone areas, recharge and floodplain restoration and stormwater infiltration in the Pajaro Valley.



CDC Social Vulnerability Index 2022

Unincorporated County

*Data sources: ESRI Demographics Service, ACS.

CDC Social Vulnerability Index

0.0000 - 0.2500	0.7501 - 1.0000
0.2501 - 0.5000	No data
0.5001 - 0.7500	

Figure 7-9: RCD - CDC Social Vulnerability Index 2022 Map

7.2.4 Economy

The RCD does not operate like a traditional service provider that collects fees or property taxes for most of its programs. Instead, the RCD relies on competitive grants, contracts, and partnerships to support its work. This funding model links the RCD directly to broader state and federal economic trends, since many of its resources come from water resource and habitat restoration programs, agricultural land and water stewardship programs, forest health and wildfire prevention programs, and climate adaptation initiatives.

Beginning in FY 2025-2026, the RCD will also receive support from Measure Q. This local parcel tax provides a dedicated funding stream for wildfire preparedness, water resource protection, habitat restoration, and technical assistance to landowners. Measure Q serves as a reliable local match for larger state and federal mitigation grants. It improves the district's ability to leverage outside funding by meeting grant requirements that demand cost sharing or community investment.

The RCD's grant funded programs are directly and indirectly tied to hazard mitigation and climate adaptation. Funding from agencies such as CAL FIRE, DWR, and NRCS has supported fuel reduction, recharge projects, floodplain restoration, and agricultural water conservation. These projects not only reduce risks of hazards but also generate economic benefits. They protect farmland, preserve infrastructure, and reduce the long-term costs of disaster recovery.

The local economy also shapes the demand for RCD programs. Agriculture remains a major employer in South County, where many workers face economic and housing insecurity. Grant funded RCD projects in this region provide essential protections by improving flood control, providing technical assistance to socially disadvantaged farmers and ranchers, reducing erosion, work on private roads, and conserving water resources. In mountain communities where tourism and recreation are key economic drivers, RCD wildfire and forest health programs protect both homes, ecosystems, and the economic base of the region.

The ability of the RCD to secure grant funding is a critical part of Santa Cruz County's resilience. Each successful grant brings outside dollars into the local economy, supports contractors and technical staff, and reduces future losses from disasters. Underscoring this point, the RCD leverages each tax dollar to bring on average more than \$33 in federal, state, and other funds to Santa Cruz County. By combining local funds such as Measure Q with external resources, the RCD strengthens the financial capacity of the region to invest in long term hazard mitigation.

7.2.5 Growth Trends & Future Development

Future growth in Santa Cruz County is expected to occur primarily within the cities of Santa Cruz, Watsonville, Scotts Valley, and Capitola, as identified in local General Plans and the County's housing allocations. The unincorporated areas will continue to see gradual change in rural communities, particularly in the San Lorenzo Valley, Bonny Doon, and coastal zones. While the RCD does not regulate land use or approve development, population and housing growth across the county will shape the demand for its programs and the types of hazard mitigation projects needed.



The Association of Monterey Bay Area Governments (AMBAG) projects the county's population to increase modestly over the next two decades. Watsonville and South County are expected to absorb much of this growth through new housing, including allocations for affordable units required under the Regional Housing Needs Allocation. These areas already have high concentrations of socially vulnerable populations and face risks from flooding, sea level rise, and drought. Growth in these areas will increase the need for RCD programs that improve floodplain management, groundwater recharge, and agricultural water efficiency.

In the north and mid-county, development will remain limited by geography, wildfire risk, and environmental constraints. Growth in the San Lorenzo Valley and the Santa Cruz Mountains will continue to place homes in the wildland urban interface. This will expand the need for defensible space, fuel reduction, and forest health projects that the RCD currently manages in collaboration with CALFIRE, local fire departments/districts, the Fire Safe Council and local partners. Coastal growth pressures, including redevelopment of existing sites in Capitola and Live Oak, will increase demand for shoreline and bluff protection projects that reduce erosion and maintain ecosystem function.

Future development patterns will also be influenced by groundwater sustainability planning and climate adaptation goals. The RCD partners with the City of Santa Cruz, City of Watsonville, Pajaro Valley Water Management Agency, the Santa Margarita Groundwater Agency, and Soquel Creek Water District to integrate conservation projects with basin management plans. As state and federal funding becomes more closely tied to climate resilience, the RCD's grant-based structure positions it to bring significant outside resources into the county to address growth-related hazard challenges.

In summary, the RCD anticipates that countywide growth will be steady but modest, with most new development concentrated in existing urban areas. Growth in socially vulnerable communities in the south, in wildfire-prone mountain areas, and along the coast will require targeted mitigation and conservation projects. The RCD is well positioned to support these needs through its grant funding capabilities, its technical assistance programs, and its ability to coordinate across jurisdictions.

7.3 Planning Process

The RCD followed the planning process detailed in Volume 1, Section 2, including participating in the county-wide Hazard Mitigation Planning Team (HMPT) and formulating their own internal planning team to support the broader planning process.

The district's representatives in the Steering Group led stakeholder and public engagement efforts alongside the Consultant Team, with assistance from the HMPT and their internal planning team. This engagement process is described in Volume 1. Specifically, for the RCD, this included postings to the district website, announcements in its newsletter, and presentations to district leadership, as documented in Appendix B. Examples of Key Stakeholders engaged by Santa Cruz County on behalf of the district with relevance to the development of the RCD's mitigation strategy include the USDA and other federal agencies; CAL FIRE and other state agencies; the City of Santa Cruz and other neighboring jurisdictions; local Fire Safe Councils; community-based organizations like Watsonville Wetlands Watch; utility providers like AT&T and water districts; UC Santa Cruz and other academia; and local businesses.

All Key Stakeholders that were invited to participate in the planning process are listed in Volume 1, Section 2, and the input received from stakeholders was integrated into the district's annex, as described in Volume 1 Table 2-9. The district's internal planning participants, their positions, and how they participated in the planning process are shown in Table 7-1.

Table 7-1: RCD Participants

Planning Group Members	Title	Description of Involvement
Lisa Lurie	Executive Director	Lead Point of Contact; HMPT Meetings #2 and #4; Breakouts #1 and #2
Cameron McDonald	Ag Program Assistant	Alternate Point of Contact; HMPT Meetings #1, #2, #3 and #4; Breakouts #1 and #2
Angela Gruys	Senior Program and Communications Specialist	Participating Stakeholder; HMPT Meetings #2 and #4; Breakouts #1 and #2
Matt Abernathy	Forest Health Program Manager	Participating Stakeholder; HMPT Meetings #1, #2, and #3; Breakouts #1 and #2

The RCD participated in a comprehensive hazard mitigation planning process as part of the 2025 Santa Cruz County MJHMP update. This included a series of breakout meetings, listed in Table 7-2 that engaged the district's planning team, which included key district personnel and stakeholders in evaluating hazards, identifying local vulnerabilities, and prioritizing mitigation strategies

The kickoff meeting held on January 27, 2025, launched the planning process by introducing the project scope and clarifying the roles of the Steering Group and participating jurisdictional teams. In the months that followed, a series of structured meetings addressed foundational elements of the plan, including a review of key changes since the 2021 Local Hazard Mitigation Plan, an overview of hazard mitigation principles, and exercises to prioritize local hazards. On July 30, 2025, participants engaged in a hexagon mapping activity designed to visually identify mitigation actions that could benefit from or require inter-jurisdictional coordination. These collaborative efforts helped shape a refined set of mitigation alternatives, establish shared planning goals, and align local strategies with FEMA's Hazard Mitigation Assistance (HMA) funding framework.

Throughout the series of breakout meetings, RCD engaged in a structured and collaborative planning process focused on assessing hazard risks, identifying vulnerabilities, and developing targeted mitigation strategies. The meetings began with recaps of the county-wide HMPT meetings to ensure alignment of goals and progress.

During the May 12, 2025, breakout out meeting, discussions concentrated on community engagement outcomes, initial risk assessments, and the integration of demographic data to better understand vulnerable



populations. Jurisdictional teams reviewed their specific hazard exposures using the Risk Assessment Mapping Platform (RAMP) and participated in prioritization exercises to identify their top hazards.

The July 17, 2025, breakout meeting shifted toward reviewing local capabilities and defining specific areas of concern, which informed the drafting of problem statements. Teams worked collaboratively to refine mitigation alternatives, align actions with FEMA guidelines, and develop a shortlist of priority mitigation actions and inter-jurisdictional collaboration opportunities.

The meetings also included consensus-building activities around hazard rankings, capabilities, and planned actions, while providing regular updates on the overall project schedule.

Table 7-2: Jurisdictional Breakout Meeting Records

Meeting & Date	Agenda / Topics	Goals / Key Inputs
County-Wide Steering Group and HMPT Meetings #1 & #2 January – March 2025		
RCD Planning Team Breakout Meeting #1 May 12, 2025	- County-wide HMPT meetings #1 and #2 recaps - Community engagement progress and results - Risk assessment and community vulnerability - Demographics and vulnerable populations - Overview of jurisdiction-specific hazard risks and exposure - Introduction to Risk Assessment Mapping Platform (RAMP) - Jurisdiction-specific hazard risk ranking exercise - Project schedule updates and next steps	- Consensus on jurisdiction-specific priority hazards - Identify capabilities and potential mitigation actions - Community engagement volunteers
County-Wide HMPT Meeting #3 June 2025		
RCD Planning Team Breakout Meeting #2 July 17, 2025	- Breakout Meeting #1 and HMPT #3 recaps - Review capabilities assessment - Review areas of concern and define problem statements - Principles of effective mitigation strategies and actions, and mitigation alternatives - Refine and align jurisdiction-specific mitigation actions exercise - Project schedule updates and next steps	- Consensus on jurisdiction-specific capabilities - Consensus on jurisdiction-specific areas of concern - Consensus on priority mitigation actions and collaboration opportunities - Community engagement volunteers
County-Wide HMPT Meeting #4 August 2025		

7.3.1 Public Input & Draft Review

As detailed in Volume 1, Section 2, the draft plan was available for public review and comment from September 29 to October 20, 2025. Public comments received during that time were similar to those gathered

throughout the public engagement process, including the need for more equity in the distribution of mitigation activities and funding and the need for enhanced cooperation among jurisdictions, utility providers, and state agencies. These comments were incorporated into the city's mitigation strategy, as appropriate; although, most were already addressed by the Mitigation Action Plan which was based on previous public input.

Public and stakeholder input was gathered and incorporated throughout the plan development process, before the public review period, such as from the online public survey (see Volume 1, Section 2.1.2 and Appendix B, for details). During the review period, jurisdictional staff and stakeholders that participated in the plan development also reviewed the public draft and provided comments on minor corrections and revisions, which were addressed in the final plan.

7.4 What's New

This section offers an overview of the hazard mitigation planning efforts for the planning area and highlights the updates made in this 2025 MJHMP. This is the first time RCD has participated in the MJHMP process. Through this MJHMP process, the RCD has identified its highest-priority hazards, developed hazard-specific problem statements, and proposed actionable mitigation strategies.

7.4.1 Mitigation Activities

Although the RCD has not previously adopted formal mitigation actions within a Hazard Mitigation Plan, the district has implemented a wide range of projects, programs, and policies that function as hazard mitigation. These efforts demonstrate the RCD's long-standing commitment to conserving natural resources, reducing community exposure to hazards, and supporting long-term resilience. The district's work in areas such as drought resilience, floodplain restoration, forest health, and wildfire preparedness provides direct mitigation benefits while also strengthening the capacity of communities and landowners to adapt to changing conditions.

Over the past several decades, the RCD has advanced a wide range of natural resource and hazard mitigation projects across Santa Cruz County. Major efforts have included floodplain reconnection and streambank stabilization in the Pajaro Valley and Watsonville Slough, coastal wetland restoration along Monterey Bay, improvement of rural roads, and removal of fish passage barriers that also improve flood capacity. These projects reduce vulnerability to flooding, erosion, and habitat loss while supporting both ecological and community resilience.

The district has also expanded programs that address drought and agricultural water conservation. Through the Community Water Dialogue and Pajaro Valley agricultural partnerships (including Pajaro Valley Water Management Agency), the RCD has promoted efficient irrigation practices, aquifer recharge projects, and soil health initiatives that increase water retention and reduce groundwater overdraft. These measures help extend water availability during droughts and protect long-term agricultural viability.



Forest health and wildfire preparedness have been another significant focus. The RCD coordinates shaded fuel breaks, defensible space assistance, and chipping programs to all landowners in the wildland urban interface that reduce wildfire risk in the San Lorenzo Valley, Bonny Doon, and other high-risk areas. Partnerships with the Fire Safe Council of Santa Cruz County and Cal Fire have expanded the scale and impact of these efforts, protecting both communities and critical watershed resources.

Regionally, the RCD has played a leadership role in advancing integrated watershed management. Through the Integrated Watershed Restoration Program, the Early Mitigation Partnership, and the Santa Cruz Regional Conservation Investment Strategy, the district has coordinated funding, permitting, and planning across multiple jurisdictions. These efforts allow conservation and hazard mitigation projects to be delivered more quickly and at larger scales.

The district has also improved permitting efficiency for landowners and partner agencies. The Partners in Restoration Program and Public Works Plan streamline regulatory approvals for conservation and mitigation projects. This reduces project delays and costs while enabling faster implementation of erosion control, stormwater management, and habitat restoration practices as well as forest health and wildfire resilience projects that also function as hazard mitigation.

As a first-time participant in a hazard mitigation plan, the RCD had no formally adopted mitigation actions from a previous plan. However, the RCD continues to advance a range of ongoing and planned efforts that support hazard mitigation, climate resilience, and long-term water security. These are highlighted in this section, reflecting the district's continued dedication to long-term risk reduction. These actions, ranging from mitigation to community outreach initiatives, represent the RCD's proactive approach to addressing hazards as funding and partnerships allow.

7.4.2 Mitigation Successes

Although the RCD is participating in a formal hazard mitigation plan for the first time, multiple important mitigation actions and other efforts to increase the district's resilience to hazards have been completed. Some of these endeavors in which the district collaborated with other agencies are described in Volume 1, Section 1.5.2.1 This section describes additional district-specific success stories, which highlight the RCD's commitment to reducing risks and building a more resilient community in the face of natural hazards.

Managed Aquifer Recharge

The RCD supports Managed Aquifer Recharge (MAR) to address groundwater overdraft and seawater intrusion in the Pajaro Valley, which depends entirely on groundwater for agriculture, communities, and ecosystems. MAR projects capture stormwater and direct it into infiltration basins and other recharge systems, increasing natural aquifer storage and drought resilience.

A major initiative is the Recharge Net Metering (ReNeM) Program, which provides rebates to landowners for water infiltrated on their property. This incentive encourages private participation and expands recharge benefits, and was done in partnership with the Pajaro Valley Water Management Agency and the University of California Santa Cruz.

Funding for MAR projects comes from the Pajaro Valley Water Management Agency, the California State Coastal Conservancy, the U.S. Department of Agriculture, the California Department of Water Resources, and partner grants managed by the RCD. These investments protect long-term water supply, improve drought preparedness, and reduce hazard risks tied to groundwater depletion.

Chipping Program

The Chipping Program is a cornerstone of the RCD's wildfire mitigation efforts. This free program helps residents dispose of woody material created through defensible space and vegetation management. By providing chipping services, the RCD reduces hazardous fuel accumulation around homes and along access



Figure 7-10: RCD Chipping Program



routes, particularly in rural and wildland urban interface communities. The program is supported by Cal Fire grants and partnerships with Fire Safe Councils. It directly lowers wildfire risk for households that might not otherwise have the means to manage fuel safely and effectively.

Scott Creek Coastal Resiliency Project

Along the coast, the RCD is a key partner in the Scott Creek Coastal Resiliency Project and other coastal wetland restoration and transportation infrastructure resiliency efforts. These projects restore coastal bluffs, dunes, and estuaries to buffer wave action and storm surge. They also address risks from coastal erosion and sea level rise. Funding has been provided by the California State Coastal Conservancy, the California Department of Transportation (Caltrans), and federal partners such as NOAA. By restoring ecosystem dynamism, these projects help protect Highway 1, coastal neighborhoods, and sensitive ecosystems from accelerating coastal hazards.



Figure 7-11: Scotts Creek Resiliency Project

7.5 Risk Assessment

This section focuses on profiling hazards specific to the RCD and assessing their vulnerability independent of the broader county-wide planning area, which has been evaluated in Section 3 of Volume 1. The hazard profiles in Volume 1 discuss overall impacts to the planning area and describe relevant plans, policies, and regulations; past events; location; frequency and probability of future occurrences; severity and extent; warning time; secondary hazards; and climate change impacts. For more information on risk assessment methodologies, see Volume 1, Appendix A.



This section includes a tailored vulnerability assessment, analyzing assets at risk such as population, property, and critical facilities and infrastructure unique to the district, and information on district-specific differences in hazard vulnerability across the planning area. It also identifies total district assets at risk, including people, property, and critical facilities and infrastructure within the district. In addition, this section presents growth and development trends for the communities served, offering insights into vulnerabilities and risks that represent the broader context of assets at risk.

7.5.1 Hazard Screening & Prioritization

Members of the planning team from each participating jurisdiction came together to collaboratively decide which county-wide hazards would be included in the MJHMP and which would be excluded. The hazard screening and prioritization took place early in the process and integrated historic data, local knowledge, and consensus opinions to create a risk assessment matrix for the county as well as for each participating jurisdiction. These matrices indicate the priority of hazards prior to further refinement. Details about this process, the results of the discussion, and in-depth profiles for county-wide hazards can be found in Volume 1, Sections 2 and 3, and as outlined in Section 7.3 of this annex.

It should be noted that the RCD's primary mission of land stewardship, as well as its limited authority over development other than that associated with its natural resource conservation projects, further narrowed the list of priority hazards. The final results of the hazard screening and prioritization exercises are summarized in Table 7-4, including which specific subhazards were selected by the RCD's planning team.

The RCD's internal planning group used the same hazard identification and prioritization process as the county-wide Planning Team. They reviewed previously prepared relevant documents and past events to determine the realm of natural hazards that have the potential to affect the district. Table 7-3 provides a crosswalk of hazards identified in select planning documents, including the 2020 Santa Cruz County General Plan Safety Element, 2021 Santa Cruz County LHMP, and 2023 State of California HMP. The crosswalk was used to develop a preliminary hazards list, providing a framework for the group to evaluate which hazards were truly relevant to the district and which ones were not.

The internal planning group then ranked hazards based on their probability of affecting the RCD and potential impacts on the communities it serves, and also reviewed hazards for relevance to the district's purpose and within its limited authority. Figure 7-12 displays the results of the hazard risk ranking exercise that was performed before further refinement. All hazards have been profiled in Volume 1 of this document. The purpose of this annex is to specifically address RCD's vulnerability to specifically identified hazards.



Table 7-3: RCD Document Review Crosswalk

Hazard	2020 Santa Cruz County General Plan Safety Element	2021 Santa Cruz County HMP	2023 California SHMP
Agricultural Pests			■
Avalanche			■
Climate Change		■	■
Coastal	■	■	■
Dam Failure	■	■	■
Drought		■	■
Earthquake / Liquefaction	■	■	■
Extreme Cold		■	■
Extreme Heat		■	■
Extreme Weather / Storms	■	■	■
Flood	■	■	■
Geologic / Mass Movement	■	■	■
Human-Caused	■		■
Insects			■
Levee Failure		■	■
Pandemic Disease			■
Sea Level Rise	■	■	■
Soil	■	■	■
Subsidence		■	■
Tornado			■
Tsunami / Seiche Wave	■	■	■
Volcano			■
Wildfire	■	■	■



Risk Assessment Matrix Definitions

PROBABILITY RATING

The likelihood of a hazard event occurring within a time period?

PROBABILITY	Highly Likely	Highly likely - 100% annual probability. Or Likely to occur every year in your lifetime.
	Likely	Likely - between 10 & 100% annual probability. Or will occur several times in your lifetime.
	Possible	Possible - between 1 & 10% annual probability. Or Likely to occur some time in your lifetime.
	Unlikely	Unlikely - less than 1% annual probability. Or unlikely but possible to occur in your lifetime.

To concentrate resources, the jurisdictional planning team will focus on "High" and "Extreme" risk hazards. These hazards have the higher probability and greater impact as it relates to the jurisdictions planning area.

Hazard definitions are included in **Vol. 1** of this plan. Some hazards are discussed as subset hazards— e.g., "Dam Failure" within the "Flood" hazard profile. If a hazard is not present on the risk matrix or are grey in color, the jurisdictional planning team felt the hazard had a minimal footprint within their planning area and was not ranked.

Hazard Information / Legend:



Climate Change impacts will be addressed at the end of each hazard section and as a stand alone section for each jurisdiction.

For County and Municipal governments you will be required to address climate change impacts in the Safety Element of your General Plan. Climate change may change the frequency, duration and intensity of hazards listed above.

IMPACT RATING

In terms of injuries, damage, or death, would you anticipate impacts to be minor, limited, critical, or catastrophic when a significant hazard event occurs? The impact could be in terms of one hazard event (flooding from a culvert failure) or a large-scale event (multiple rivers flooding) in the same jurisdictional boundary.

IMPACT			
Minor	Limited	Critical	Catastrophic
Minor - very few injuries, if any. Only minor property damage & minimal disruption on quality of life. Temporary shutdown of critical facilities.	Limited - minor injuries only. Approx. 10% or less of property in disaster footprint damaged or destroyed. Complete shutdown of critical facilities for more than one day.	Critical - multiple deaths/injuries possible. Between 25% and 50% of property in disaster footprint is damaged or destroyed. Complete shutdown of critical facilities for more than one week.	Catastrophic - high number of deaths/injuries possible. More than 50% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for 30 days or more.

Resource Conservation District Risk Matrix

PROBABILITY	IMPACT			
	Minor	Limited	Critical	Catastrophic
	Highly Likely	Medium	High	Extreme
	Likely	High	Extreme	Extreme
	Possible	Low	High	High
	Unlikely	Low	Medium	Medium

Legend for Risk Matrix:

- Highly Likely / Limited:** Sea Level Rise, Slope Failure, Flood
- Likely / Limited:** Coastal Erosion, Drought, Wildfire
- Possible / Limited:** Dam Failure

Figure 7-12: RCD Risk Assessment Matrix

Table 7-4: RCD Hazards Prioritization Summary

Hazard	Priority	Explanation
Wildfire	High	Profiled in Volume 1, Section 3.2.1, and Section 7.5.2.1 in this annex
Flood	Extreme	Profiled in Volume 1, Section 3.2.2, and Section 7.5.2.2 in this annex (not including Levee Failure due to being outside jurisdictional mission and authority)
Earthquake	-	Not a priority due to being outside jurisdictional mission and authority
Severe Weather	-	Not a priority due to being outside jurisdictional mission and authority
Coastal Hazards	Medium	Profiled in Volume 1, Section 3.2.5, and Section 7.5.2.4 in this annex, including Coastal Erosion (Coastal Storm and Wave Run-Up and Surge recognized as compounding hazards but are not RCD's focus; Tsunami not included due to being outside jurisdictional mission and authority)
Slope Failure	Extreme	Profiled in Volume 1, Section 3.2.6, and Section 7.5.2.3 in this annex
Dam Failure	Medium	Profiled in Volume 1, Section 3.2.7, and Section 7.5.2.6 in this annex
Drought	High	Profiled in Volume 1, Section 3.2.8, and Section 7.5.2.5 in this annex
Extreme Heat	-	Not a priority due to being outside jurisdictional mission and authority
Climate Change	Extreme	Profiled in Volume 1, Section 3.2.10, and Section 7.5.2.7 in this annex, including Sea-Level Rise

7.5.2 Vulnerability to Specific Hazards

Assessing vulnerabilities exposes the unique characteristics of individual hazards and begins the process of narrowing down which areas within RCD are vulnerable to specific hazard events. The vulnerability assessment considered unique local knowledge of hazards and impacts and a GIS overlaying method for examining such vulnerabilities in more depth. Using these methods, the district's planning group estimated vulnerable populations, properties, and assets, and potential losses, primarily to earthquake and wildfire. In addition, the exposure of district assets to drought, geological, and flood hazards were also considered.

Many of the hazard profiles include a snapshot map and damage estimation tables that illustrate the district's vulnerabilities to those specific hazards. These maps assisted the planning group in understanding the hazard exposure of populations, parcels, and critical facilities and infrastructure. Each snapshot map contains an exposure summary that displays the percentage of the population, the improvement and content value of parcels, and the amount of critical infrastructure that is exposed. For hazards without geospatial extents, such as drought, narratives are provided instead of exposure maps and tables.



Based on the hazard prioritization exercise, this vulnerability assessment focuses on six hazards for RCD, some of which encompass subhazards such as Coastal Erosion and Sea Level Rise.

Wildfire
SECTION 7.5.2.1



Flood
SECTION 7.5.2.2



Slope Failure
SECTION 7.5.2.3



Coastal Hazards
SECTION 7.5.2.4



Drought
SECTION 7.5.2.5



Dam Failure
SECTION 7.5.2.6



Climate Change
SECTION 7.5.2.7



7.5.2.1 Wildfire Hazard

The RCD has a service area and sphere of influence that extend across the entire county. This means that the district's planning footprint is coterminous with the county boundary. Wildfire risk is widespread throughout this area and exposure to fire hazards does not differ between the RCD service area and the county as a whole. What does differ is the role of the RCD in addressing these risks.

Wildfire risk is pronounced across much of Santa Cruz County, especially in unincorporated, wildland-urban interface areas. According to the exposure data (Table 7-5):

- Approximately 58% of all parcels in the county fall within moderate, high, or very high wildfire hazard zones.
- This includes 8,886 parcels (19%) in moderate risk, 16,308 parcels (33%) in high risk, and 2,526 parcels (5%) in very high-risk zones.
- The total estimated property value at risk is over \$31 billion—directly aligning with heightened hazard potential in these areas.

Although the RCD does not own or manage infrastructure, it serves communities disproportionately located in high-risk fire zones by advocating for the natural infrastructure. As shown in Figure 7-13, these include rural neighborhoods and mountain communities in the San Lorenzo Valley, Bonny Doon, and Corralitos, where rugged terrain and limited access elevate vulnerability. Many of the approximately 27,700 parcels at risk in the county coincide with RCD's service areas and represent tens of thousands of residents who could benefit from mitigation support.

Climate conditions are making wildfire more frequent and more severe. The 2020 CZU Lightning Complex Fire demonstrated that fires burning near RCD communities can still cause major disruption. As shown in Figure 7-14, much of the county falls within areas where fire recurrence is expected every 16 to 64 years, with shorter intervals of 6 to 15 years in the San Lorenzo Valley and other mountain slopes. These conditions mean that communities will continue to face repeated fire events. The impacts include power outages, poor air quality from smoke, mandatory evacuations, and erosion that damages infrastructure and affects community health.

The RCD's wildfire mitigation programs address these vulnerabilities by empowering residents to reduce fuel and create defensible space. Signature efforts include the Chipping Program (free removal of vegetation from properties), shaded fuel break projects, and forest health restoration across heavily exposed landscapes. These programs reduce risk for households and watersheds alike.

By focusing on areas where parcel exposure intersects with high hazard zones, the RCD ensures its mitigation efforts reach those facing the greatest wildfire threats. This targeted work supports regional resilience through funding sources like Cal Fire, helping safeguard both community safety and ecological health.



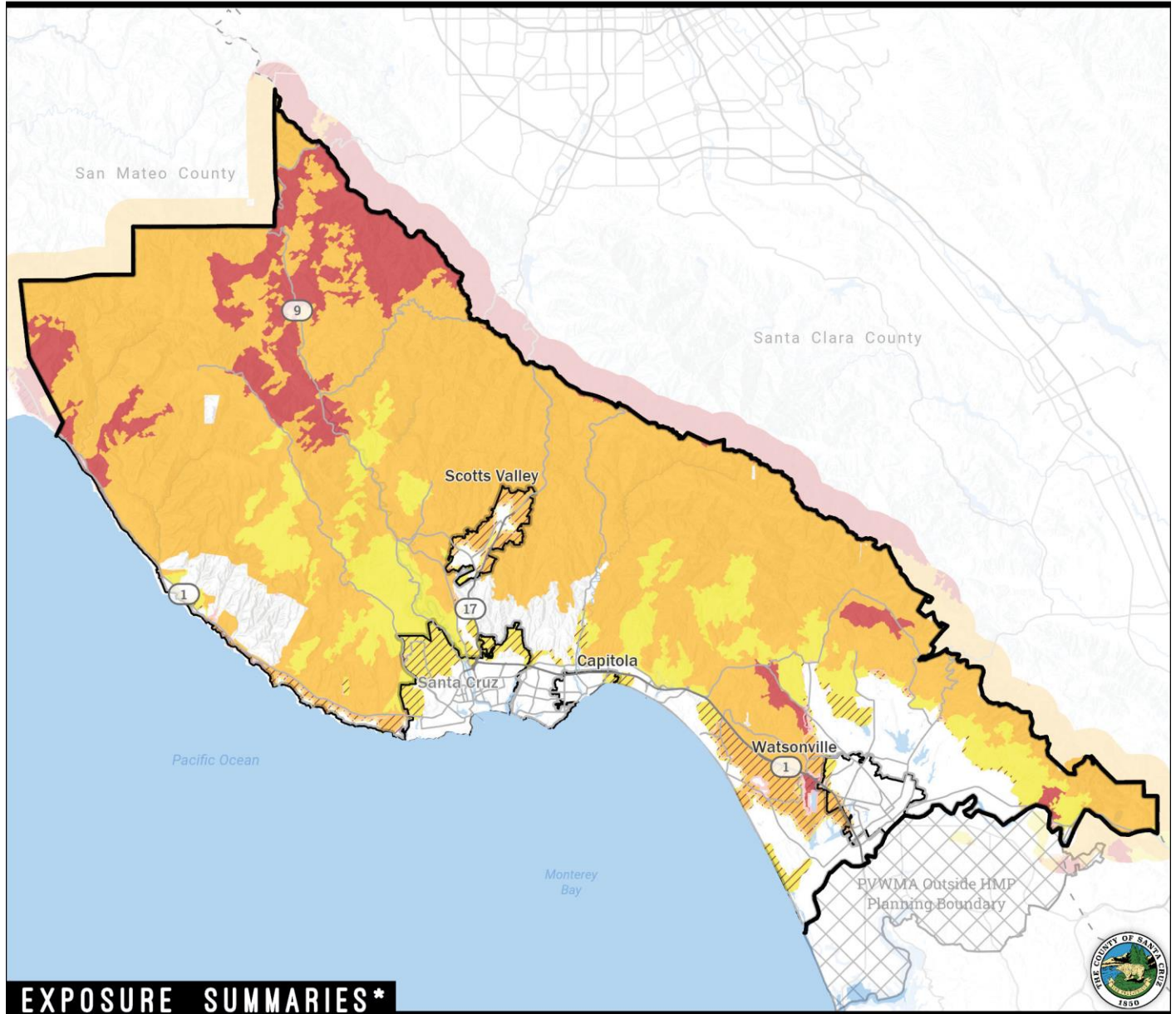
Table 7-5: County-Wide Wildfire Risk Data

	Total Parcels		Total Market Value (\$)	Total Content Value (\$)	Total Value (\$)	
Unincorporated County	47,630		\$35,189,614,790	\$19,116,504,796	\$54,306,119,586	

Wildfire Severity Zone (FHSZ)	Parcel Count	% of Total	Market Value Exposure (\$)	Content Value Exposure (\$)	Total Exposure (\$)	% of Total
Moderate	8,886	18.66%	\$6,767,219,997	\$3,638,488,998	\$10,405,708,995	19%
LRA Moderate	2,507	5.3%	\$2,101,182,397	\$1,176,609,598	\$3,277,791,995	6.0%
SRA Moderate	6,379	13.4%	\$4,666,037,600	\$2,461,879,400	\$7,127,917,000	13.1%
High	16,308	34.24%	\$11,895,609,999	\$6,137,691,999	\$18,033,301,998	33%
LRA High	1,610	3.4%	\$1,207,929,601	\$638,923,400	\$1,846,853,001	3.4%
SRA High	14,698	30.9%	\$10,687,680,398	\$5,498,768,599	\$16,186,448,997	29.8%
Very High	2,526	5.30%	\$1,706,991,201	\$911,415,601	\$2,618,406,801	5%
LRA Very High	46	0.1%	\$36,790,000	\$26,774,000	\$63,564,000	0.1%
SRA Very High	2,480	5.2%	\$1,670,201,201	\$884,641,600	\$2,554,842,801	4.7%
Total	27,720	58.2%	\$20,369,821,197	\$10,687,596,598	\$31,057,417,795	57.2%

WILDFIRE RISK EXPOSURE

UNINCORPORATED COUNTY



EXPOSURE SUMMARIES*

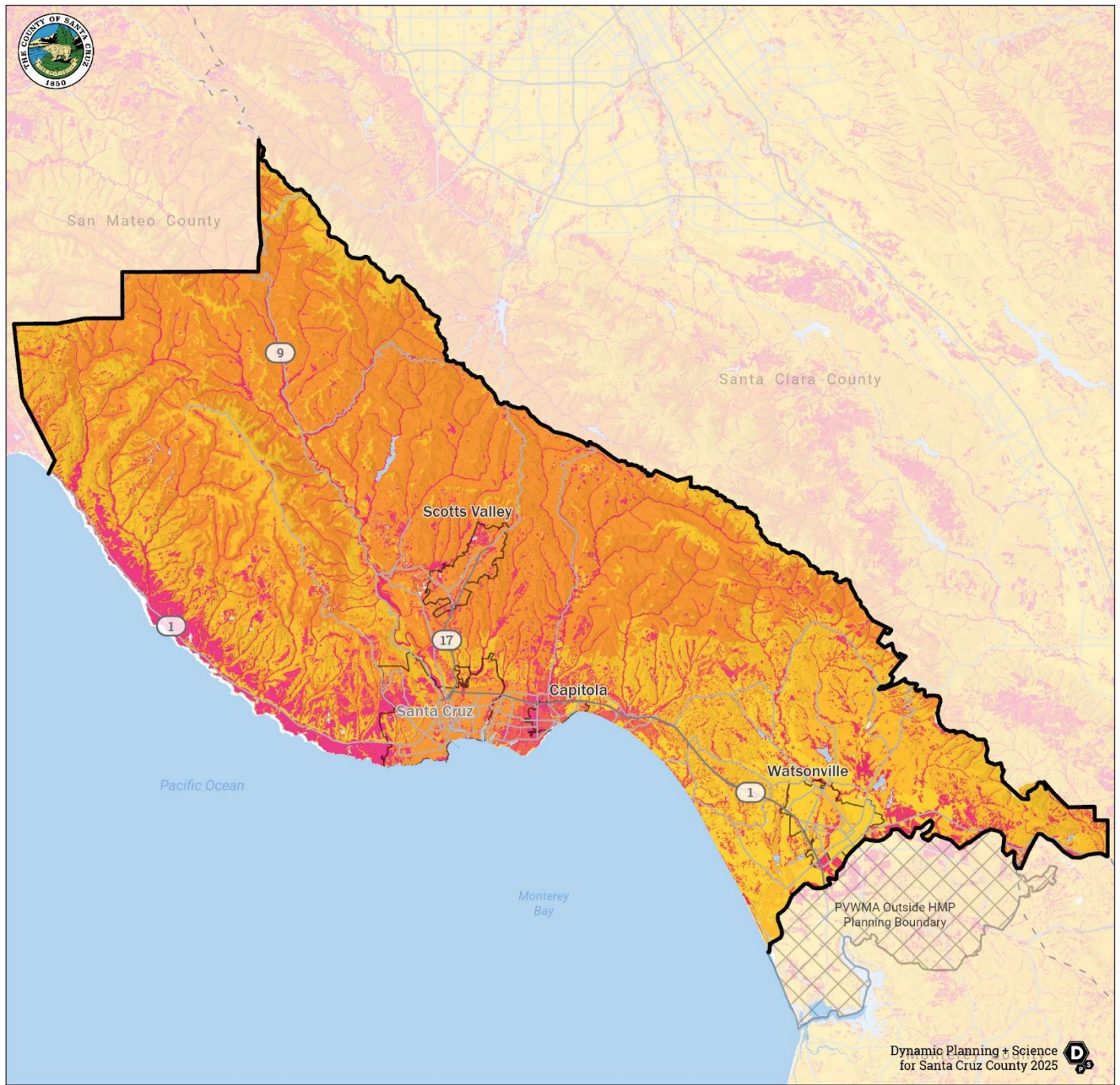
POPULATION COUNT IN HAZARD AREA		PARCEL COUNT IN HAZARD AREA		PARCEL VALUE IN HAZARD AREA		CRITICAL INFRASTRUCTURE COUNTS IN HAZARD AREA			
Count	Exp. Rate**	Count	Exp. Rate**	Sum of Improvement Value	Exp. Rate**	Infrastructure Category	Count	Exp. Rate**	Count/Sum Includes:
5,450	4%	2,526	5%	\$1,706,991,201	5%	Essential Facilities	4	10%	VERY HIGH
Count Includes: VERY HIGH		Count Includes: VERY HIGH		Sum of Content Value		Hazmat	12	3%	
				\$911,415,601	5%	High Potential Loss	28	5%	
				Count Includes: VERY HIGH		Transportation & Lifeline	234	6%	
									Sum of Transportation & Lifeline Linear Mileage
									238 7%

*Exposure summaries include very high risk areas. Hazard data source: Cal Fire.

**Exposure Rate - Exposed summary or count as a percentage of total summary or count within jurisdiction.

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Figure 7-13: Exposure Summary – RCD Wildfire Risk



Mean Fire Return Interval Resource Conservation District

*Data sources: USGS LANDFIRE.

average period between fires (Years)



Figure 7-14: RCD Mean Fire Return Interval Map

7.5.2.2 Flood Hazard

Flooding is a significant hazard across the RCD service area. As shown in Figure 7-15, FEMA data indicate that close to 10,000 residents and more than 3,300 parcels lie within the 100- and 500-year flood hazard areas of Santa Cruz County. The estimated market value of exposed improvements is more than \$2.0 billion, with an additional \$1.2 billion in content value at risk.

It is important to note that flood risks are not evenly distributed. Rural communities and farms in various watersheds across the county experience recurring flood impacts. Factors include, but are not limited to, aging culverts, undersized crossings, and poor access for emergency vehicles and maintenance. Increased peak flows and sedimentation are also eroding streambanks and reducing floodplain function. These conditions threaten public safety, wildlife habitat, and the floodwater storage benefits of ongoing enhancement projects. In addition, rising storm intensity and sediment accumulation are overwhelming small channels, especially where public and private rural roads lack erosion control and drainage retrofits.

Additional analysis by the California Department of Water Resources and the U.S. Army Corps of Engineers highlights Flood Awareness Zones, shown in Figure 7-16; however, more comprehensive analysis is needed to fully capture historical and future flood risks. These areas are outside FEMA's mapped floodplains but may still flood during major storm events. Within the RCD service area, approximately 600 residents and 300 parcels are located in these zones. The estimated value of exposed improvements is more than \$173 million, with an additional \$95 million in content value. While no critical facilities fall within these areas, the presence of homes, rural roads, and agricultural operations illustrates how localized flooding can disrupt access and create serious challenges for residents.

The RCD does not own infrastructure but plays a central role in addressing flood risks through watershed-based mitigation. A cornerstone of this effort is the Integrated Watershed Restoration Program (IWRP), which coordinates multi-agency planning, funding, and permitting to advance priority projects. Through IWRP, the RCD has helped implement culvert replacements, bank stabilization, fish passage improvements, and floodplain reconnection projects. These actions reduce localized flooding, restore natural stream function, and provide long-term resilience to both human and ecological communities.

Flood exposure across the county demonstrates the need for both structural and nature-based solutions. The inclusion of FEMA floodplain mapping and DWR awareness zones underscores that vulnerability extends beyond federally designated areas. The RCD's focus on restoration and landowner support ensures that mitigation efforts reach the smaller watersheds and rural roads where localized flooding occurs most often. By combining technical assistance, project delivery, and partnerships, the RCD helps reduce risk for thousands of residents and supports resilience in vulnerable communities across Santa Cruz County.

As a special district and not a municipality, the RCD does not participate in the National Flood Insurance Program (NFIP); however, the RCD complies with all minimum floodplain development standards and environmental review requirements established by the county and municipalities where its projects are located.



FEMA FLOOD RISK EXPOSURE

RESOURCE CONSERVATION DISTRICT

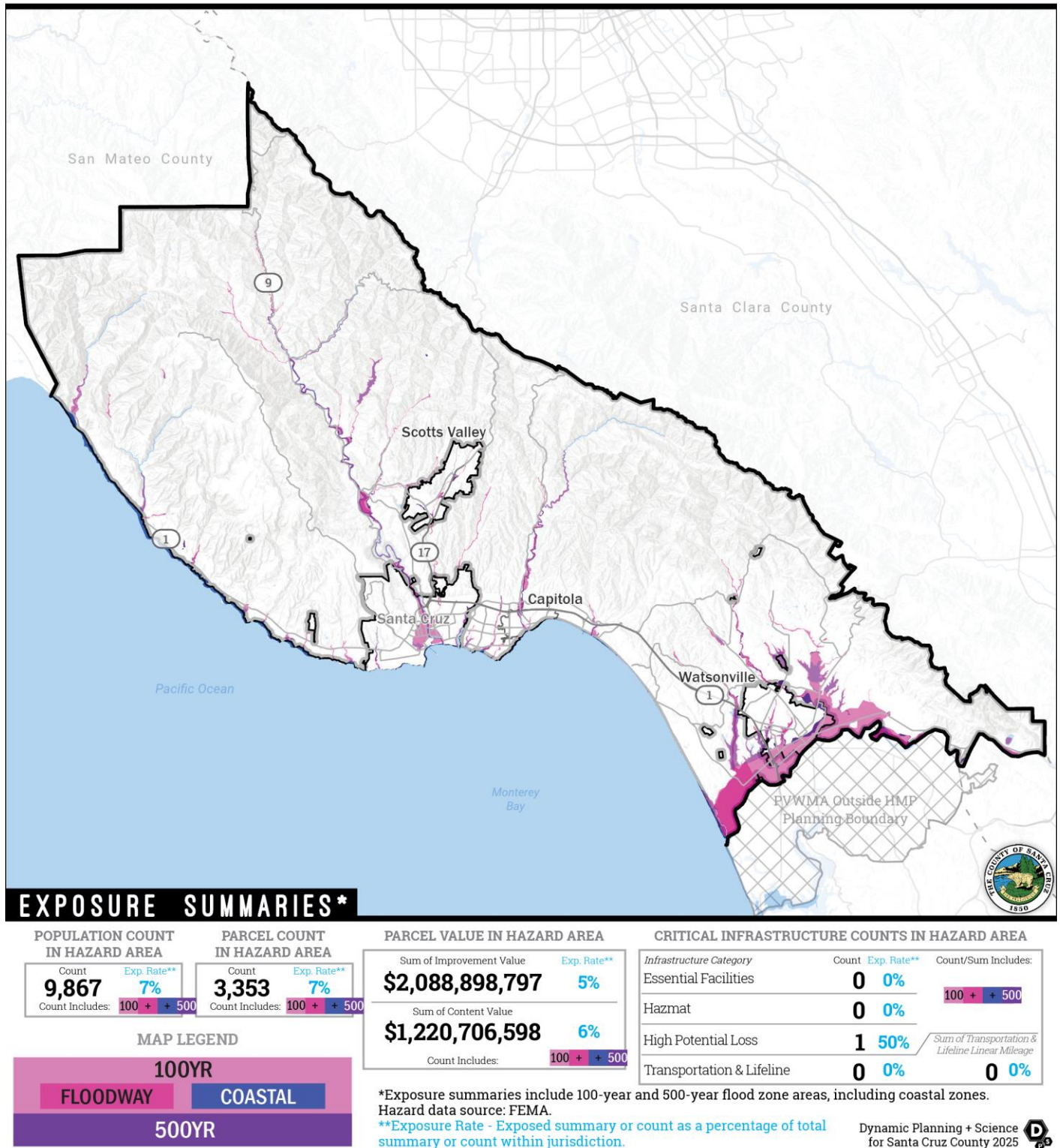
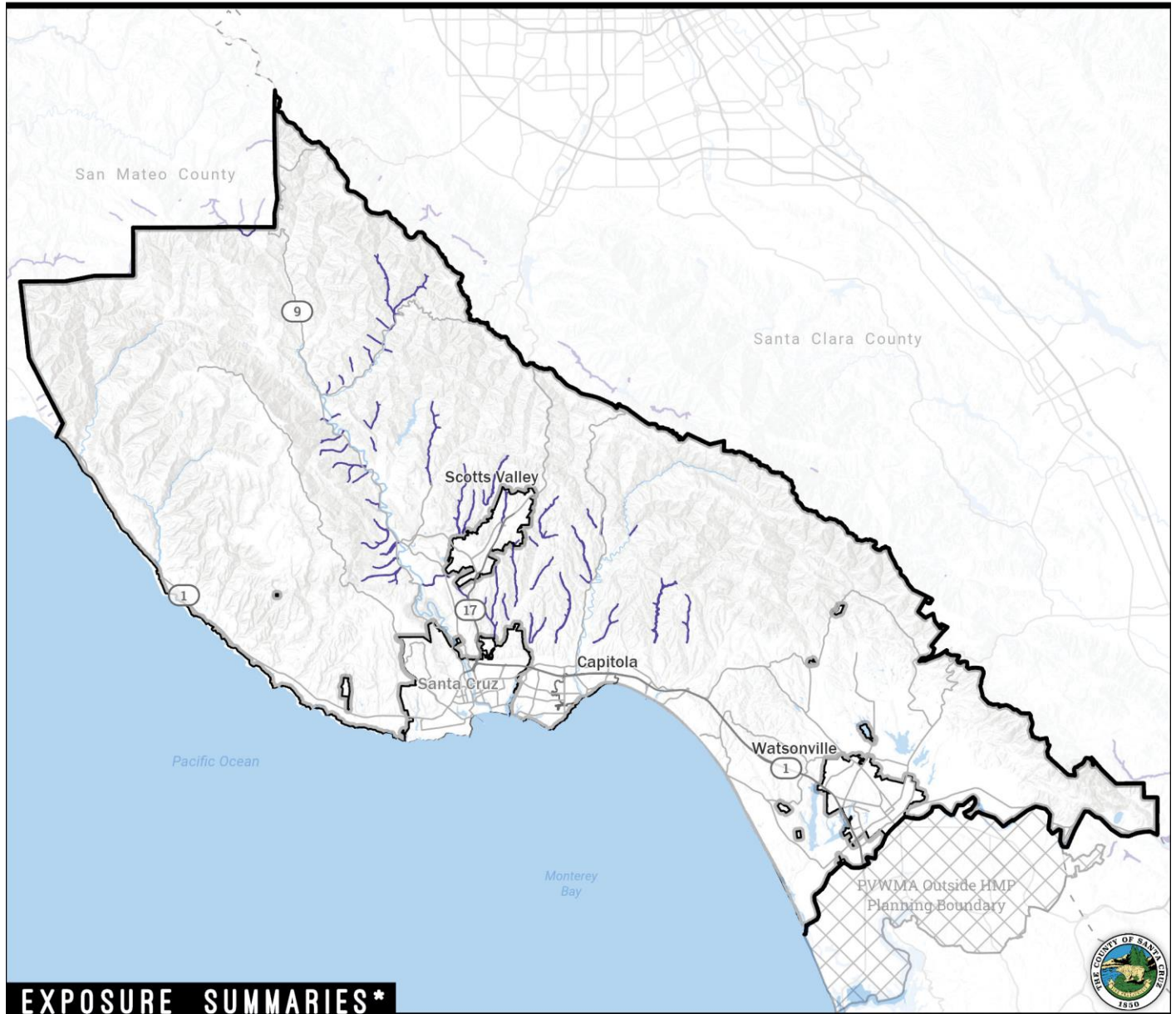


Figure 7-15: Exposure Summary - RCD Flood Risk (FEMA Zones)



FLOOD AWARENESS ZONES - BAM

RESOURCE CONSERVATION DISTRICT



EXPOSURE SUMMARIES*

POPULATION COUNT IN HAZARD AREA

Count	Exp. Rate**
598	0%
Count Includes:	AZ

PARCEL COUNT IN HAZARD AREA

Count	Exp. Rate**
306	1%
Count Includes:	AZ

PARCEL VALUE IN HAZARD AREA

Sum of Improvement Value	Exp. Rate**
\$173,866,000	0%
Sum of Content Value	
\$94,942,600	0%
Count Includes:	AZ

CRITICAL INFRASTRUCTURE COUNTS IN HAZARD AREA

Infrastructure Category	Count	Exp. Rate**	Count/Sum Includes:
Essential Facilities	0	0%	AZ
Hazmat	0	0%	
High Potential Loss	0	0%	
Transportation & Lifeline	0	0%	
			Sum of Transportation & Lifeline Linear Mileage
	0	0%	

MAP LEGEND

**Awareness
Zone**

*Exposure summaries include within flooding awareness zone. Hazard data source: USACE BAM.

**Exposure Rate - Exposed summary or count as a percentage of total summary or count within jurisdiction.

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Figure 7-16: Exposure Summary - RCD Flood Risk (DWR Awareness Zones)



7.5.2.3 Slope Failure Hazard

The RCD service area includes the steep terrain of the Santa Cruz Mountains, where landslides and slope failures are a significant hazard. As shown in Figure 7-17, exposure data indicate that more than 47,000 residents and 13,700 parcels are located within high landslide susceptibility zones across the county. The total economic exposure is substantial, with over \$10.5 billion in improvement value and \$5.3 billion in content value at risk. These values represent more than one quarter of the county's total assessed improvements and contents.

Landslides have both direct and indirect consequences for communities served by the RCD. Landslides degrade stream quality through sedimentation and block access to ongoing erosion control and vegetation management projects. Chronic slope instability in watersheds is driven by geologic conditions, deforestation, soil factors (i.e., hard claypan), and increased runoff from development, insufficient drainage infrastructure, and high-intensity storms. Steep, privately maintained rural roads are also vulnerable to landslides and debris flows, which can cut off access for landowners, fire response, and RCD project implementation.

Heavy rainfall, such as atmospheric river events, is the most common trigger for slope failure. Earthquakes also present a serious risk in these areas, as do post-fire conditions where vegetation loss accelerates erosion and destabilizes slopes. Historical examples, including the 1982 El Niño storms and the 2017 winter storms, demonstrate the recurring and damaging nature of landslides in the Santa Cruz Mountains.

While the RCD does not operate infrastructure, it plays a central role in slope stabilization and watershed recovery through soil conservation, erosion control, drainage projects, and restoration projects. The district partners with landowners and agencies to install erosion control measures, stabilize streambanks, and improve rural road drainage. These projects reduce sediment delivery into waterways, maintain access for emergency services, and protect both public safety and natural resources. Programs delivered through the Integrated Watershed Restoration Program (IWRP) and RCD-led road improvement and home drainage projects have been especially effective in reducing long-term slope failure risk.

The extent of exposure shown in Figure 7-17 underscores the importance of continued investment in slope stabilization and watershed health. By combining technical assistance, landowner outreach, and multi-agency coordination, the RCD reduces the vulnerability of communities, watersheds, and natural resources to the widespread hazard of landslides and debris flows.



LANDSLIDE RISK EXPOSURE

RESOURCE CONSERVATION DISTRICT

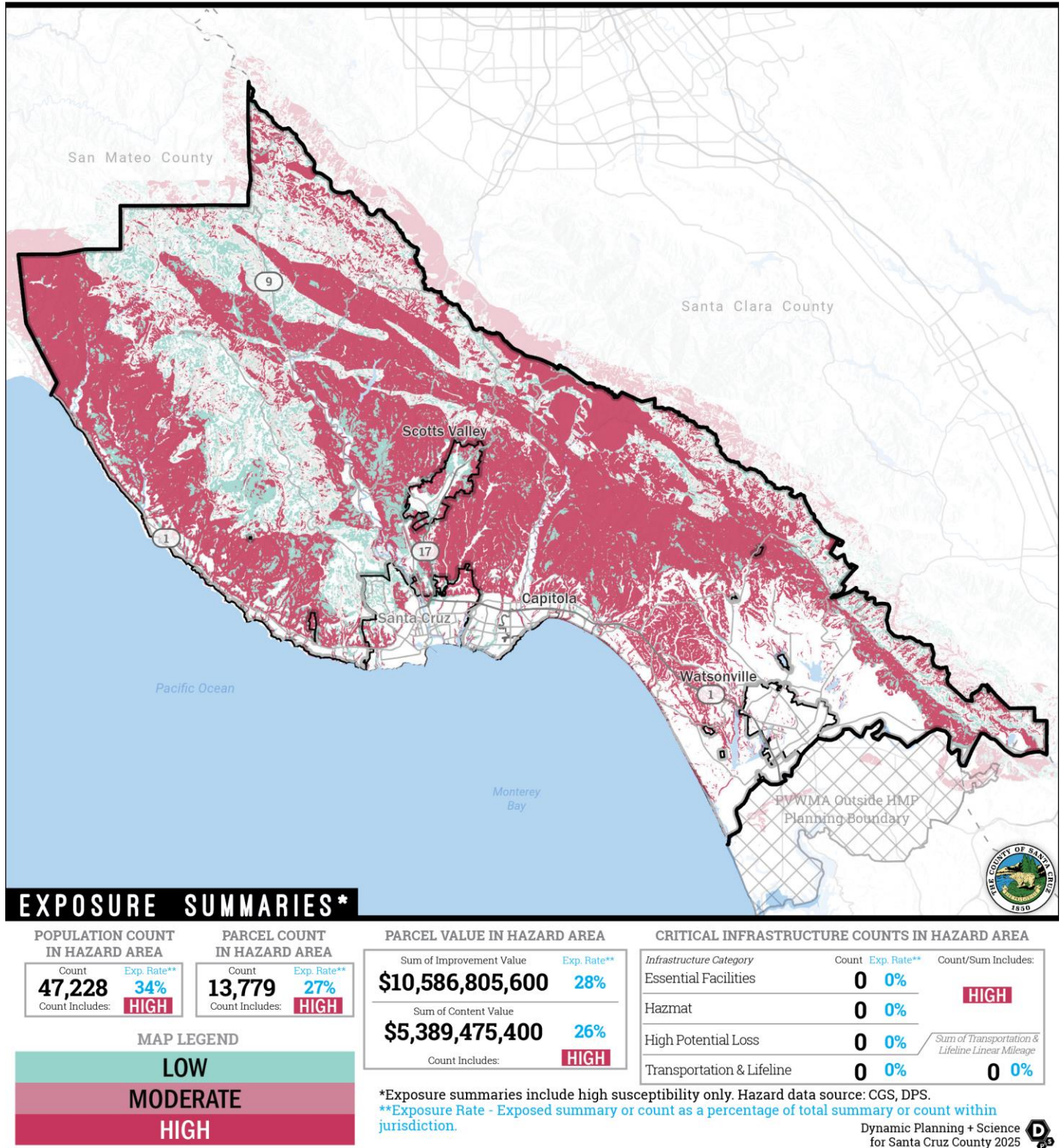


Figure 7-17: RCD Slope Failure Susceptibility Map



7.5.2.4 Coastal Hazards

The RCD's partners and program work face growing risks from coastal hazards and especially coastal erosion. These threats are intensified by the district's location adjacent to the Pacific Ocean and climate change and sea level rise, as discussed in Section 7.5.2.7.

Coastal erosion is an ongoing hazard that affects both natural systems and built communities in Santa Cruz County. Shoreline retreat, bluff failure, and dune loss threaten infrastructure, agricultural lands, and critical habitats. For the RCD, these hazards directly impact long-term restoration work and the sustainability of nature-based mitigation strategies.

The RCD's role in addressing coastal erosion centers on ecosystem-based resilience. Through its coastal restoration projects, the district works with partners to stabilize dunes, restore ecosystem dynamism, and restore estuarine habitats that absorb storm surge and reduce erosion pressures. Projects along the Monterey Bay shoreline also integrate habitat benefits with hazard mitigation by creating conditions that sustain biodiversity while reducing flood and erosion risks to nearby communities.

Coastal erosion is also closely linked to sea level rise, compounding upstream flooding and saltwater intrusion in coastal watersheds. The district uses a multi benefit approach that combines dune restoration, estuary management, and watershed planning to ensure mitigation strategies address both immediate erosion concerns and long term shoreline change. These efforts help maintain coastal ecosystem services, reduce vulnerability for landowners, and extend the protective value of restored natural features in the face of accelerating coastal hazards.

7.5.2.5 Drought Hazard

The National Drought Monitor provides drought data and maps nationally and on a localized, watershed scale. The National Drought Monitor is the product of 11 agencies, including the NDMC, NOAA and USDA, and is available at droughtmonitor.unl.edu. The National Drought Monitor categorizes the level of drought from D0 through D4, with D4 being the highest “exceptional drought.” Table 7-6 depicts drought classifications and impacts from the level of drought occurrence in California, while Figure 7-18 shows a time series of the level of drought in Santa Cruz County from 2000 to 2023 according to the National Drought Monitor.

Drought is a chronic hazard for the San Lorenzo Valley, City of Santa Cruz, Pajaro Valley, and Watsonville with conditions recurring regularly over the past two decades. As shown in Figure 7-18, Santa Cruz County has experienced multiple prolonged drought cycles since 2000, including exceptional drought (D4) conditions between 2014 and 2016 and again during 2021 and 2022. These cycles have had profound impacts on local water supply, agriculture, ecology, and vulnerable populations.

The City of Santa Cruz and San Lorenzo Valley depend on surface water for their water supplies, which are more immediately impacted by drought. Further, the adverse impacts of surface water drought depletion on aquatic habitat and surrounding forest ecology can be severe, reducing both quantity and quality for people and sensitive species. Watsonville depends heavily on the Pajaro Valley Groundwater Basin, which is already overdrafted and subject to chronic depletion. In addition, the Mid-County and Santa Margarita Basins are impacted by overdraft and threatened by climate change.

Extended drought reduces recharge of aquifers and surface water flows, placing stress on municipal wells and water supplies for fire suppression. Declining groundwater levels also heighten the risk of saltwater intrusion from the Monterey Bay into the Pajaro Valley Basin, further threatening long-term water quality and reliability.

Drought impacts disproportionately affect low-income residents, farm workers, and disadvantaged households, who may face rising utility costs, stricter water use restrictions, and employment disruptions in the agriculture and food processing sectors. In rural and fringe neighborhoods where residents rely on shallow or aging wells, prolonged drought increases the risk of well failure or degraded water quality, further exacerbating inequities in water access.

Climate change is expected to intensify the frequency and duration of multi-year droughts, increasing Watsonville and the broader Pajaro Valley’s dependence on the already overdrawn Pajaro Valley Basin. Pajaro Valley Water Management Agency’s limited storage capacity compounds this vulnerability, leaving residents and agricultural operations more exposed to recurring water shortages. Drought conditions also interact with other hazards, such as increasing wildfire risk by drying vegetation and reducing water available for suppression.

Building resilience to drought in Watsonville and the broader Pajaro Valley will require expanding groundwater recharge projects, investing in water conservation and efficiency programs, and advancing equitable drought planning that prioritizes at-risk communities. Collaboration with the Pajaro Valley Water



Management Agency, local farmers, and regional partners remains critical to ensuring long-term water security for residents, agriculture, and the local economy.

Table 7-6: Drought Classifications and Impacts

Category	Description	Possible Impacts
D0	Abnormally Dry	- Soil is dry; irrigation delivery begins early - Dryland crop germination is stunted - Active fire season begins
D1	Moderate Drought	- Dryland pasture growth is stunted; producers give supplemental feed to cattle - Landscaping and gardens need irrigation earlier; wildlife patterns begin to change - Stock ponds and creeks are lower than usual
D2	Severe Drought	- Producers increase water efficiency methods and drought-resistant crops - Grazing land inadequate - Fire season is longer, with high burn intensity, dry fuels, and large fire spatial extent; more fire crews on staff - Lake- and river-based tourism declines; boat ramps close - Trees are stressed; plants increase reproductive mechanisms; wildlife diseases increase - Water temperatures increase; programs to divert water to protect fish begin - River flows decrease; reservoir levels are low and banks are exposed
D3	Extreme Drought	- Federal water not adequate to meet irrigation contracts; extracting supplemental groundwater is expensive - Fire season lasts year-round; fires occur in typically wet parts of the state; burn bans are implemented - Ski and rafting business is low; mountain communities suffer - Low water levels impede fish migration and cause lower survival rates - Wildlife encroach on developed areas; little native food and water is available for bears, which hibernate less - Water sanitation is a concern; reservoir levels drop significantly; surface water is nearly dry, flows are very low; water theft occurs - Livestock need supplemental feed, cattle and horses are sold; little pasture remains - Well and aquifer levels decrease; homeowners drill new wells
D4	Exceptional Drought	- Fire season is very costly; number of fires and areas burned are extensive - Many recreational activities are affected - Fields are left fallow; orchards are removed; vegetable yields are low; honey harvest is small; agricultural unemployment is high, food aid is needed - Fish rescue and relocation begins; pine beetle infestation occurs; forest mortality is high; wetlands dry up; wildlife death is widespread; algae blooms appear - Poor air quality affects health; greenhouse gas emissions increase as hydropower production decreases; West Nile outbreaks rise - Water shortages are widespread; surface water is depleted; federal irrigation water deliveries are curtailed; water prices are extremely high; wells are dry, more and deeper wells are drilled; water quality is poor

Source: Adapted from U.S. Drought Monitor Drought Classifications and Impacts

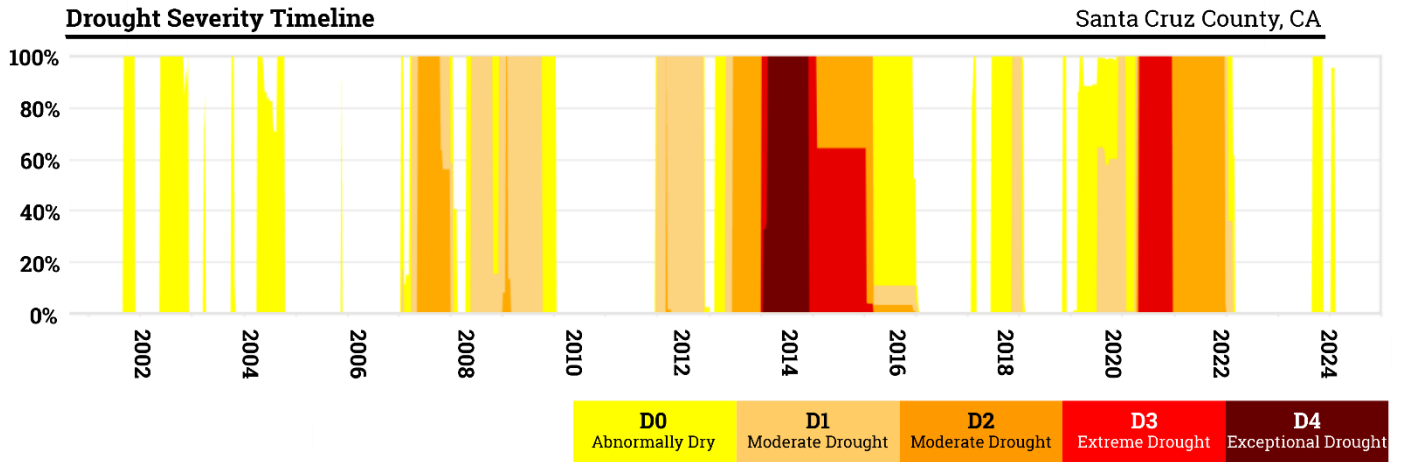


Figure 7-18: Drought Severity Timeline 2000-2024

7.5.2.6 Dam Failure Hazard

Dam failure is not a widespread hazard in Santa Cruz County but remains a concern in watersheds with small aging dams and impoundments. These structures were often built for historic agricultural, industrial, or water storage uses and many are now beyond their original design life. Failures in these small dams can release large volumes of sediment, cause localized flooding, and disrupt ecological conditions in priority watersheds.

For the RCD, the risk from dam failure is less about damage to built infrastructure and more about the cascading effects on watershed health. Sudden sediment release can degrade fish habitat, reduce water quality, and bury stream restoration investments. Local flooding from structural failure can damage roads, farms, and riparian corridors. These events also complicate the effectiveness of ongoing erosion control and habitat restoration projects.

The RCD plays a role in addressing this hazard through its Integrated Watershed Restoration Program (IWRP) and related efforts that support dam removal, culvert replacement, and fish passage improvements. By coordinating planning and funding across agencies, the RCD helps reduce reliance on aging dams while restoring natural stream function. Where full removal is not feasible, the RCD works with partners to implement erosion control, sediment management, and habitat restoration that reduce downstream risks.

While the overall exposure from dam failure is limited compared to other hazards, the localized impacts on watersheds and restoration projects are significant. The RCD's focus on watershed health, sediment reduction, and ecological resilience makes it a central partner in minimizing the risks associated with failing small dams.



7.5.2.7 Climate Change Hazard

Climate change is a long-term threat that influences every hazard faced within the RCD service area. Hotter summers, shifting precipitation patterns, and more frequent droughts threaten the viability of the RCD's forest health, vegetation management, stewardship in agriculture, and erosion control efforts. These changes complicate planning horizons and increase uncertainty for ecosystem-based mitigation strategies.

Unlike water utilities that track direct supply impacts, the RCD's vulnerability is expressed through the condition of natural systems. Reduced precipitation and longer dry seasons undermine streamflow and groundwater recharge, which directly affects restoration projects and watershed resilience. Hotter summers increase wildfire risk by drying fuels and stressing vegetation. More variable and intense rainfall drives slope instability, erosion, and sedimentation in streams. These combined effects make it more difficult to sustain long-term investments in floodplain restoration, reforestation, and soil conservation.

State and federal climate assessments anticipate further intensification of wet and dry extremes, along with rising temperatures that stress both ecosystems and working lands. In practical terms, droughts will reduce water availability for groundwater-dependent habitats and farming operations, while intense storms will overwhelm rural roads and stream channels. For the RCD, these conditions reinforce the importance of programs that combine hazard mitigation with climate adaptation, such as the Forest Health and Wildfire Resilience Program, Managed Aquifer Recharge projects, and the Integrated Watershed Restoration Program (IWRP).

As such, this MJHMP annex addresses climate change as a cross-cutting factor for every hazard of concern. The impacts of changing temperature, precipitation, and storm patterns are considered within the wildfire, flood, drought, slope failure, and coastal hazard sections. By integrating climate adaptation into each program area, the RCD ensures that its conservation and hazard mitigation strategies remain effective in the face of long-term change.

A more detailed discussion of climate projections and observed changes is provided in Volume 1, Section 3.2.10 of this plan.

Sea Level Rise

Sea level rise poses a growing threat to coastal areas within the RCD's service area, as further discussed in Section 7.5.2.4, Coastal Hazards. Higher sea levels are expected to compound upstream flooding, increase groundwater salinity, and reduce stormwater infiltration in coastal watersheds targeted for managed aquifer recharge. These changes undermine the effectiveness of groundwater recharge projects and increase the risk of water quality degradation in low-lying agricultural and residential areas.

Coastal estuaries and lagoons where the RCD is working in partnership with land managers, such as those at Scott Creek and Waddell Creek, are particularly vulnerable. Rising seas and saltwater intrusion threaten habitat function, degrade ecosystem resilience, and place long-term stress on species that depend on brackish and freshwater conditions. Loss of wetland and lagoon habitat would also reduce natural flood storage capacity, further amplifying flood risk along the coast.

The RCD addresses these risks through a range of water-focused programs. Its Managed Aquifer Recharge projects increase infiltration in coastal watersheds, helping to offset rising salinity and maintain local water supplies. Estuary and lagoon restoration projects aim to enhance tidal exchange, restore habitat, and buffer coastal communities from sea level rise impacts. The district also coordinates with partners through the IWRP to identify and advance multi-benefit projects that combine flood protection, habitat restoration, and water quality improvement.

Sea level rise adds a long-term layer of vulnerability to existing coastal hazards. For the RCD, this means scaling up programs that protect estuaries, maintain recharge opportunities, and integrate ecosystem-based approaches to coastal resilience. These strategies provide multiple benefits by safeguarding natural resources, supporting groundwater reliability, and reducing community exposure to coastal flooding.



7.5.3 Planning for Hazards & Growth

The Resource Conservation District of Santa Cruz County incorporates hazard awareness into its long term planning and program decisions to support resilience and sustainability. The district's plans and collaborative frameworks provide a foundation for addressing future climate risks, watershed health, and resource management. These efforts focus on maintaining effective conservation services and hazard mitigation programs under changing environmental conditions.

Although the RCD does not manage water delivery systems or built infrastructure like utility districts, it takes a proactive approach to maintaining and expanding programs that are essential to public safety, ecosystem health, and community resilience. District initiatives focus on implementing projects that strengthen watershed function, improve wildfire resilience and natural infrastructure, and expand drought resilience. These projects improve performance during both normal conditions and emergencies such as wildfires, droughts, floods, and coastal storms.

Future development in Santa Cruz County will continue to occur in areas exposed to hazard risk, including floodplains, wildland urban interface zones, and the coastal margin; although, current regulations limit and strictly regulate development in these areas. As climate impacts increase, it will be important for the RCD to align conservation strategies, landowner assistance, and community education with known risks. The district's investments in forest health, floodplain restoration, water conservation, stormwater management, managed aquifer recharge, and community wildfire programs will help reduce exposure, protect natural and working lands, and support long term resilience for both people and ecosystems.

7.5.3.1 Development & Hazard Considerations

The RCD does not manage new residential or commercial development approvals. However, the district plays an important role in shaping how development interacts with natural hazards through its technical assistance, planning partnerships, and on-the-ground projects.

Much of the county's growth is occurring in areas with known hazard exposure. New housing allocations are concentrated in Watsonville, Live Oak, and other urbanized areas that are subject to flood, sea level rise, and coastal erosion. Rural development in the San Lorenzo Valley and the North Coast increases exposure to wildfire, slope failure, and road access limitations. These conditions create cumulative risks for residents, infrastructure, and natural resources.

The RCD supports hazard-informed development by working with landowners on a voluntary basis to advance conservation practices that reduce erosion, restore floodplains, and improve stormwater management. Programs such as the Integrated Watershed Restoration Program (IWRP) and the Partners in Restoration Permit Coordination Program enable landowners and agencies to implement projects that offset development-related impacts. Examples include bank stabilization, culvert upgrades, defensible space projects, and recharge basins that protect both new and existing communities from hazard risks.

As climate impacts intensify, development in hazard-prone areas will place additional pressure on watersheds and ecosystems. The RCD's role is to provide landowners and local governments with tools and

projects that ensure growth occurs in ways that protect water quality, reduce flood and fire risk, and maintain ecological resilience. This work aligns with countywide planning efforts and supports FEMA's directive to integrate hazard mitigation with future development planning.

7.5.4 Hazard Problem Statements

As part of the mitigation action identification process, the internal planning group for each jurisdiction identified areas of concern (aka problem statements) for their respective facilities based on the risk assessment and vulnerability analysis. Problem statements focused on the impact, victim, and the threat that the hazard could create in the jurisdiction, as described in Table 7-7. Identifying common issues and weaknesses through these problem statements assisted the planning group in understanding the realm of resources needed for mitigation.

The goal is to have at least one mitigation action for every problem statement. Projects or actions have been developed to mitigate each problem identified. See Table 7-9 for a full list of mitigation actions and corresponding problem statements that they address. Each problem statement is coded with a problem number for cross-referencing between Table 7-7 and Table 7-9.

Table 7-7: RCD Problem Statements

Hazard	Sub-Hazard	Area of Concern	Problem IS	Description	Related Mitigation Actions
Climate Change		Threat	ps-CC-RCD-01	Near- and long-term climate change effects?such as hotter summers, shifting precipitation patterns, and more frequent drought?threaten the viability of forest health, vegetation management, and erosion control efforts. These impacts complicate planning horizons and increase uncertainty for ecosystem-based mitigation strategies.	ma-CC-RCD-01
Coastal Hazards	Coastal Erosion	Impact	ps-CE-RCD-01	Ongoing coastal erosion affects the long-term ecological viability of dunes, bluffs, and estuaries.	ma-CE-RCD-01
Coastal Hazards	Coastal Erosion	Threat	ps-CE-RCD-02	Stronger coastal storms and rising seas are accelerating erosion rates necessitating the need for a more rapid, integrated approach to infrastructure and ecosystem resilience planning and implementation.	ma-CE-SCW-03
Dam Failure		Impact	ps-DF-RCD-01	Failures in small, non-functioning, aging dams can release sediment, cause flooding, threaten life and property, and disrupt ecological conditions in priority watersheds.	ma-DF-RCD-02



Hazard	Sub-Hazard	Area of Concern	Problem IS	Description	Related Mitigation Actions
Drought		Impact	ps-DR-RCD-01	Extended droughts reduce stream baseflows and aquifer recharge, undermining watershed restoration efforts and the effectiveness of managed aquifer recharge projects, and necessitating water conservation strategies. Droughts impact working lands, food resources, species, soil, and water availability.	ma-DR-SCC-03, ma-DR-SCW-01, ma-DR-SVW-01, ma-DR-RCD-02
Drought		Threat	ps-DR-RCD-02	Climate change is driving more frequent and prolonged drought cycles that threaten groundwater-dependent habitats and increase reliance on over drafted basins.	ma-DR-CBC-03
Drought		Threat	ps-DR-RCD-03	Shallow agricultural wells and water-dependent ecosystems in coastal and foothill areas face chronic vulnerability to water scarcity during multi-year droughts.	ma-DR-RCD-04, ma-DR-RCD-03
Drought		Victim	ps-DR-RCD-04	Droughts decrease crop flexibility and viability, with disproportionate impacts on small farmers, agricultural workers, food industry workers, and others reliant on the local food economy.	ma-DR-SCC-02
Drought		Threat	ps-DR-RCD-05	Extended droughts threaten forest health and long-term resilience, increasing risk of secondary hazards such as severe wildfire from infestations, disease, and water-stressed vegetation.	ma-DR-RCD-04
Drought		Threat	ps-DR-RCD-06	Extended droughts and changes in historical wet and dry season conditions due to climate change decrease crop flexibility, viability, and resilience.	ma-DR-RCD-04
Flood		Victim	ps-FL-RCD-01	At-risk communities, farmers, and ranchers experience recurring flood impacts due to aging culverts, undersized crossings, reduced function of natural floodplain systems, and poor maintenance.	ma-FL-RCD-02, ma-FL-SCC-08
Flood		Impact	ps-FL-RCD-02	Flooding frequently damages roads (including emergency access) and natural infrastructure, reducing long-term watershed function and habitat quality, and necessitating floodplain restoration projects led by RCD.	ma-FL-RCD-02, ma-FL-SCC-04, ma-FL-SCC-07, ma-FL-RCD-01, ma-FL-RCD-03



Hazard	Sub-Hazard	Area of Concern	Problem IS	Description	Related Mitigation Actions
Flood		Threat	ps-FL-RCD-03	Increasing storm intensity and sediment and debris accumulation from flooding, often exacerbated by land use changes and lack of best management practices, are overwhelming local stream channels, especially where erosion control and drainage retrofits on rural roads have not been implemented.	ma-AH-RCD-01, ma-FL-RCD-02
Slope Failure		Impact	ps-SF-RCD-01	Landslides degrade stream quality through sedimentation, can inhibit roads and neighborhood access, and can degrade long-term ecological function.	ma-AH-RCD-01
Slope Failure		Threat	ps-SF-RCD-02	Local geologic conditions (e.g., Santa Margarita Sandstone) paired with changes in land use and extreme precipitation events create chronic slope instability in local watersheds.	ma-AH-SCC-08
Slope Failure		Victim	ps-SF-RCD-03	At-risk communities with limited access are impacted by hillside erosion and landslides in the Santa Cruz Mountains, especially in oversteepened areas and other high risk areas where people and infrastructure are concentrated.	ma-SF-RCD-01
Sea Level Rise		Impact	ps-SLR-RCD-01	Sea level rise is expected to compound upstream flooding and reduce groundwater quality and supply in coastal watersheds.	ma-SLR-SCW-02
Sea Level Rise		Threat	ps-SLR-RCD-02	Coastal estuaries and lagoons, such as Scott and Waddell Creeks, are at risk of habitat loss that threatens ecosystem function.	ma-SLR-RCD-01
Wildfire		Victim	ps-WF-RCD-01	People, grey and green infrastructure (including ecological restoration outcomes), species, and habitats are vulnerable to catastrophic wildfires.	ma-AH-SCC-06
Wildfire		Impact	ps-WF-RCD-02	Uncontrolled high severity wildfires degrade forest health, water quality, and overall ecological resilience, necessitating strategic wildfire risk reduction actions.	ma-WF-SCC-05, ma-WF-SCC-08, ma-WF-RCD-01
Wildfire		Threat	ps-WF-RCD-03	Accumulated fuels, prolonged drought, and limited ingress/egress in vulnerable, high risk rural areas elevate wildfire risk in priority landscapes necessitating ongoing project work.	ma-WF-SCC-01



7.5.4.1 Climate Change Impacts & Vulnerable Populations

The RCD is a non-regulatory special district whose mission is to help people protect, conserve, and restore natural resources through technical assistance, outreach, and implementation of on-the-ground projects. While the RCD does not deliver water or emergency services, it plays a vital role in advancing natural infrastructure solutions and conservation practices that reduce community vulnerability to climate-driven hazards. Climate change poses compounding risks across the watersheds, coastal areas, and working landscapes where the RCD operates, and these risks disproportionately affect disadvantaged rural residents, small-scale farmers, agricultural workers, and communities with limited access to resources.

Drought and Water Supply: Extended droughts threaten stream baseflows, aquifer recharge, and agricultural viability. Small farmers and agricultural workers face disproportionate hardship due to reduced crop flexibility, declining groundwater availability, and rising production costs. Surface water-dependent habitats and groundwater-dependent shallow wells in foothill and coastal areas are particularly vulnerable. Drought also degrades forest health, increasing risk of secondary hazards such as severe wildfire driven by water-stressed vegetation and disease.

Flooding: Flood impacts are frequent in rural areas where aging culverts, undersized crossings, and reduced natural floodplain function contribute to road damage, erosion, and degraded watershed health. These impacts directly affect residents, farmers, and ranchers, who may experience loss of access, property damage, and crop disruption. Increasing storm intensity, combined with sediment and debris accumulation, is overwhelming local stream systems, particularly where erosion control and drainage retrofits on private rural roads have not been implemented.

Sea Level Rise and Coastal Hazards: Coastal erosion, stronger storms, and sea level rise are degrading dunes, bluffs, and estuarine systems across Santa Cruz County. Sea level rise compounds upstream flooding and threatens groundwater quality in coastal watersheds, while estuaries and lagoons such as Scott and Waddell Creeks face habitat loss that reduces ecosystem resilience.

Slope Failure: Landslides and chronic erosion degrade stream quality, block emergency and residential access, and threaten rural hillside communities with limited evacuation options. Local geology, including Santa Margarita Sandstone, combined with intense rainfall and land use changes, creates long-term slope instability across mountain watersheds.

Wildfire: Uncontrolled, high-severity wildfires degrade ecological restoration outcomes, forest health, and water quality. Vulnerable rural residents, including those in isolated areas with limited ingress and egress, face disproportionate evacuation challenges. Wildfire risk is exacerbated by accumulated fuels, prolonged drought, and vegetation stress.

Climate Change and Natural Infrastructure: Near- and long-term climate impacts, including hotter summers and shifting precipitation patterns, complicate the effectiveness of ecosystem-based mitigation strategies. Projects in forest management, streambank stabilization, aquifer recharge, and habitat restoration face increased uncertainty under changing conditions.



The RCD does not provide direct emergency response but reduces community vulnerability through proactive conservation and post-disaster technical assistance. Programs such as fuel reduction and chipping, floodplain restoration, drought resilience projects, and agricultural water conservation directly support hazard mitigation while improving ecosystem health. With new dedicated funding from Measure Q, the RCD can expand its role in implementing wildfire resilience, water resource protection, and climate adaptation projects countywide, serving as a critical partner in reducing long-term hazard risk and supporting vulnerable populations.



7.6 Mitigation Strategy

This section provides the framework for how the district will reduce hazard risk within its jurisdiction while supporting the broader goals of the Santa Cruz County MJHMP. It includes an overview of existing capabilities, opportunities to strengthen resilience, and the district's prioritized mitigation actions. Together, these elements demonstrate how the RCD integrates hazard awareness into its planning and development processes while contributing to a coordinated countywide approach.

Within the Santa Cruz County MJHMP, the mitigation strategy serves as the roadmap for future hazard mitigation efforts. For the RCD, the strategy outlined in this annex reflects the outcomes of the countywide planning process while also addressing the district's unique risks, priorities, and community needs. The strategy is designed to reduce vulnerabilities identified in the risk assessment, including the problem statements developed for flooding, earthquakes and liquefaction, slope failure, wildfire, drought, severe storms, extreme heat, and climate change.

Mitigation actions identified in this annex include both policy-based and project-based initiatives, with an emphasis on integrating resilience into land use planning, infrastructure investments, and community programs. Actions are structured to align with FEMA's requirements and to coordinate with existing city, county, and regional planning mechanisms. Each action identifies responsible parties, potential funding sources, and the resources needed for implementation.

For the RCD, this strategy provides a framework for strengthening resilience by combining county- and city-led initiatives—such as infrastructure improvements, building code enforcement, and community preparedness—with regional coordination through the MJHMP. By advancing these efforts in alignment with the general plans and other local planning documents, the RCD enhances its ability to reduce hazard risk with its partners while supporting long-term community safety, sustainability, and economic stability county-wide.

The subsections that follow describe these elements in detail:

- **Section 7.6.1 Aligning Action Planning** with capabilities provides a summary of the RCD's capacity to address natural hazards.
- **Section 7.6.2 Mitigation Action Plan** presents the RCD's prioritized actions to guide implementation in coordination with countywide strategies.

7.6.1 Aligning the Action Plan

This section connects the RCD's mitigation actions with its existing capabilities and areas for growth. Capability assessments are a required element of hazard mitigation planning under the Disaster Mitigation Act of 2000 and FEMA's 2023 guidance, ensuring that actions are realistic, achievable, and aligned with available resources.

The section begins with a summary of the RCD's capabilities across four areas: planning and regulatory, administrative and technical, fiscal, and education and outreach. This overview highlights the tools and

strengths that the district already uses to reduce hazard risk. The section then provides a detailed analysis of each capability area, identifying both current practices and opportunities to expand resilience.

7.6.1.1 Capabilities & Opportunities Assessment

To develop a realistic and actionable mitigation strategy, it must account for existing jurisdictional capabilities and what future opportunities there are to enhance those capabilities for purposes of hazard mitigation. This section provides an assessment of the RCD's existing capabilities and future opportunities, including planning and regulatory, administrative and technical, fiscal, and public outreach and education capabilities. This assessment also identifies opportunities to integrate this MJHMP into future planning, policies, or programs to weave mitigation efforts into daily operations and address hazard problems holistically. Capabilities are categorized into four groups and include various mechanisms.

- **Planning and Regulatory Capabilities:** Existing long-range plans, emergency response plans, hazard-specific plans, land use policies, and building and development standards.
- **Administrative and Technical Capabilities:** Available expertise in emergency services, engineering, grant management, and community planning.
- **Fiscal Capabilities:** Budgetary capacity, taxing authority, grants, and other funding mechanisms that can support mitigation projects.
- **Outreach and Education Capabilities:** Existing programs for providing technical assistance, community education, public warnings, and stakeholder engagement.

A full description of the process used to develop the capabilities assessment is provided in Volume 1, Section 2.3.3. This capabilities and opportunities assessment for RCD lists the various types of capabilities along with how they have been, currently are, or will in the future be integrated into hazard mitigation planning efforts. The three "HMP Integration" columns that identify the capability's status and usage are color-coded with green, yellow, or orange shading to communicate the following:

- **Status:** If the capability is present at all and what level of use it has generally.
- **Current Mitigation Use:** If the capability is currently being used in mitigation efforts, specifically, and at what level.
- **Future Opportunity:** If there is a future opportunity to integrate the capability into mitigation efforts and at what level.

Planning & Regulatory Capabilities

As a special district with limited authority and not a municipality, the RCD does not maintain traditional planning or regulatory tools, such as a Capital Improvement Program or hazard-specific development standards. Instead, its approach is project-based, with grant funding used to deliver initiatives including culvert replacements, managed aquifer recharge basins, and floodplain restoration projects that reduce hazard risk. That said, the RCD complies with all development standards and environmental review requirements for the State of California, including the California Environmental Quality Act (CEQA), and within the county and municipalities where its projects are located. These local regulatory environments



are described in Volume 1 for Santa Cruz County and in the municipal annexes of Volume 2 for the Cities of Capitola, Watsonville, and Scotts Valley. The RCD also follows the City of Santa Cruz's development regulations for projects within that jurisdiction (see [City of Santa Cruz Municipal Code](#)).

The district does not operate a formal fire prevention plan but contributes to wildfire mitigation by implementing shaded fuel breaks, chipping, and defensible space programs in coordination with CALFIRE, local fire departments/districts, and Fire Safe Councils. Similarly, while it does not manage a stormwater inspection program, the RCD advances hazard reduction through education, technical assistance, recharge basins, green infrastructure, and stormwater projects.

The RCD also participates in the countywide Community Wildfire Protection Plan and supports local Firewise communities. The RCD has also co-led the development of the Santa Cruz Mountains Regional Priority Plan for forest health and wildfire resilience. Through these collaborative efforts, the district leverages its technical expertise and partnerships to integrate hazard reduction into watershed restoration and landowner assistance programs.

Future integration of the MJHMP will occur through various processes and mechanisms outlined across multiple mitigation actions. A key opportunity for future hazard mitigation integration with the RCD's existing planning mechanisms is to increase consideration of climate change projections and the coastal hazards vulnerability assessment from this plan in project planning and implementation. This includes coastal erosion mitigation through nature-based solutions at RCD project sites in support of estuary, slough, and dune health (e.g., ma-CC-RCD-01 in Table 7-9).

Administrative & Technical Capacity

The RCD has education in disaster risk reduction and emergency planning staff. However, it does not maintain in-house engineering or emergency management staff. Instead, it contracts for engineering services, often through USDA and technical consultants, and participates in regional emergency coordination through the county OR3.

Grant-writing, program management, and technical assistance regarding natural resources management, as well as leadership in regional planning and coordination are a core capacity for the district. Dedicated staff focus on securing external funding to support hazard mitigation and conservation projects. Outreach and education staff provide hazard information, lead workshops, and support community partnerships, though resources are limited relative to countywide needs.

While many RCD staff have GIS skills and capabilities, these skills are augmented through partnerships and consultants. This arrangement provides flexibility but limits the district's ability to independently manage mapping and hazard analysis.

Administrative strength lies in the district's ability to coordinate with other agencies. Strong partnerships with state and federal resource agencies, such as CAL FIRE and USDA NRCS, as well as with local agencies like the County OR3, PV Water, fire departments/districts, Fire Safe Councils, University of California Cooperative Extension, and NGOs, allow the RCD to extend its capacity beyond its small staff.

Warning Systems & Services

The RCD does not manage formal warning systems for hazards such as floods, wildfires, or earthquakes. Emergency notification and public alerting remain the responsibility of county and state agencies. The RCD's role is to support these systems by providing education, preparedness and resilience resources, and technical assistance to landowners.

Fiscal Capabilities

The RCD relies primarily on grants, contracts, and partnerships to fund hazard mitigation projects. Beginning in FY 2025-2026, the district will receive stable local funding through Measure Q, a voter-approved parcel tax that supports wildfire preparedness, water resource protection, habitat restoration, and landowner assistance. This revenue also serves as a critical local match for state and federal mitigation grants.

The district does not levy utility fees, system development fees, or special tax bonds, nor does it issue debt through general obligation bonds. Instead, fiscal strategy centers on leveraging Measure Q with competitive grant programs to expand community resilience projects.

Education & Outreach Capabilities

The RCD maintains strong education and outreach capacity for its size. Its website provides accessible information on wildfire, drought, flooding, and agricultural soil conservation programs. Active social media channels are used to share project updates, safety information, and conservation tips.

The district hosts workshops throughout the year on various environmental themes related to living on rural properties and also participates in wildfire safety events, Earth Day fairs, and community workshops, providing materials and technical guidance to residents (e.g., irrigator trainings about water use efficiency on farms). Outreach includes digital newsletters, printed flyers, and direct technical assistance via phone, email, and field visits.

The RCD also partners with the Fire Safe Councils of Santa Cruz County, Bonny Doon, and South Skyline to expand chipping services, defensible space programs, and outreach into rural and high-risk communities. These efforts ensure that hazard mitigation is linked directly to community engagement and resident action.



ASSESSMENT LEGEND

HMP Integration

Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Table 7-8: RCD Capabilities and Opportunities Assessment

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Planning and Regulatory Capabilities				
Hazard Reduction Programs (Annually Conducted)				
Capital Improvements Program (CIP) or Plan				No formal plan, but project-based capital planning occurs through grants (e.g., culvert upgrades, aquifer recharge infrastructure)
Annual Fire Prevention Plan				No formal plan, but conducts fire protection programs and participates in vegetation management, shaded fuel breaks, and other fire prevention and mitigation activities with partners such as the Fire Safe Council
Seismic Safety Program (Non-structural)	N/A	N/A	N/A	Not within district’s authority, scope, or purpose
Earthquake Modernization Plan (Building Safety)	N/A	N/A	N/A	Not within district's authority, scope, or purpose
Stormwater Management Program (Annual Inspections)				
Hazard Plans and Programs				
Floodplain Response Plan				No formal plan and does not lead emergency flood response, but supports pre-disaster flood planning through watershed restoration and infrastructure retrofits
Community Wildfire Protection Plan (CWPP)				Participates in the Santa Cruz County CWPP and supports implementation by conducting fuel break, chipping, and defensible space projects
Ground Water Management Planning / Plans				No formal plan, but leads and supports aquifer recharge, water conservation, and stormwater infiltration across local basins



Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Climate Action Plan				No formal plan, but agency contributes to regional climate resilience through forest health, water conservation, and ecosystem services
Drought Mgmt/Contingency Plan				No formal plan, but leads drought resilience work such as habitat flow improvements, greywater reuse, efficient agricultural irrigation, and other projects coordinated with local water agencies
FireWise Communities within District				Partners with and supports local Firewise communities
Hazard-Related Public Outreach Program				Provides educational materials, workshops, and resources related to drought, wildfire, geological, and flood hazards
Administrative and Technical				
Staff Capacity				
Emergency Manager				Not an emergency response agency, but participates in regional coordination efforts
Civil Engineer				Engineering support provided via contract (e.g., with USDA)
Dedicated Public Outreach Personnel				Outreach/education team supports workshops, public information distribution, and community partnerships; resource-limited but active
GIS Specialist and Capability				GIS functions are either shared or consultant-supported
Grant Manager, Writer, or Specialist				Dedicated staff focused on grant writing and program funding
Other				Leverages interagency coordination rather than internal staffing via strong partnerships with County OES, PV Water, Fire Safe Council, NGOs, and others
Warning Systems/Services				
General	N/A	N/A	N/A	Not within district's authority, scope, or purpose
Flood	N/A	N/A	N/A	Not within district's authority, scope, or purpose
Wildfire	N/A	N/A	N/A	Not within district's authority, scope, or purpose
Geological Hazards	N/A	N/A	N/A	Not within district's authority, scope, or purpose
Fiscal Capabilities				
Financial Resources for Hazard Mitigation				
Levy for Specific Purposes with Voter Approval				Measure Q is a voter-approved parcel tax that provides dedicated local funding to the Resource Conservation District of Santa Cruz County. It supports wildfire preparedness, habitat restoration, and technical assistance to landowners, while also serving as local match for state and federal grants. Revenue collection begins in FY 2025-26, enabling program implementation starting in late 2024 or early 2025.
Utilities Fees	N/A	N/A	N/A	Not within district's authority, scope, or purpose



Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
System Development Fee	N/A	N/A	N/A	Not within district's authority, scope, or purpose
General Obligation Bonds to Incur Debt	N/A	N/A	N/A	Not within district's authority, scope, or purpose
Special Tax Bonds to Incur Debt	N/A	N/A	N/A	Not within district's authority, scope, or purpose
Withheld Spending in Hazard-Prone Areas				Indirectly influences mitigation investments by prioritizing grant projects in hazard-prone rural areas
Stormwater Service Fees	N/A	N/A	N/A	Not within district's authority, scope, or purpose
Capital Improvement Project Funding				Capital project funding via grants
Education / Outreach Capabilities				
Education/Outreach Resources				
Website Dedicated to Hazard Topics				Maintains a comprehensive website with project dashboards; wildfire, drought, water, and soil resilience information; and other educational resources related to hazard topics
Dedicated Social Media				Actively posts project updates, hazard safety content, and resource conservation tips via Facebook and Instagram
Hazard Info. Avail. at Library/ Planning Desk				No physical desk, but provides technical assistance and hazard information via phone, email, website and community outreach activities
Annual Public Safety Events				Participates in wildfire safety and education events, Earth Day fairs, and conducts regular public workshops
Ability to Field Public Tech. Assistance Requests				Provides technical assistance on water and soil conservation and wildfire mitigation for landowners through web forms and field visits
Public Safety Newsletters or Printed Outreach				Distributes occasional digital newsletters and printed flyers on programs and resources
Fire Safe Councils				Partners with Fire Safe Councils of Santa Cruz County, Bonny Doon, and South Skylines to deliver chipping, outreach, and defensible space programs
Resource Conservation Districts				Primary district for Santa Cruz County; collaborates with other RCDs on regional efforts
Other				Leverages interagency coordination rather than internal staffing via strong partnerships with County OES, PV Water, Fire Safe Council, NGOs, and others

7.6.2 Resource Conservation District of Santa Cruz County Mitigation Action Plan

RCD mitigation actions were developed based upon the jurisdiction's priorities, risk assessment results, and mitigation alternatives. The mitigation action prioritization method used by all participating jurisdictions is described in Volume 1 Section 4. Table 7-9 lists each priority mitigation action, responsible party, time frame, potential funding source, implementation steps, and resources need to implement based upon consensus among the RCD's planning group members. All mitigation actions across jurisdictions are accessible through MAST (Mitigation Action Support Tool), providing comprehensive details including the mitigation goal, responsible party, timeline, potential funding sources, implementation steps, and required resources. As a dynamic document, hazard problem statements and mitigation activities will be regularly updated through MAST to reflect evolving needs and circumstances.

As a first-time participant in a hazard mitigation plan, RCD did not have any existing mitigation actions from a prior plan to evaluate. Therefore, all mitigation actions identified in this planning cycle are newly developed based on the district's updated risk assessment, local capabilities, and areas of concern identified during stakeholder engagement and interagency collaboration. These new actions were crafted to address the district's highest priority hazards, align with FEMA's hazard mitigation guidance, and reflect local infrastructure vulnerabilities and water resource challenges. The development of these mitigation strategies marks an important step in integrating resilience into the district's operations and long-term planning. All RCD mitigation actions are documented in Table 7-9.

RCD developed unique mitigation actions, tailored to their own unique priorities, vulnerabilities, and capabilities. Each action contains a level of detail that meets the regulatory requirements of FEMA and DMA 2000, including identifying the responsible party, time frame, potential funding source, implementation steps, and resources needed to implement. It is important to note that the RCD is a small agency with a mostly horizontal structure. Therefore, there are no specific departments or divisions responsible for overseeing these mitigation actions; instead, responsibilities for actions will be shared across all positions in the agency.

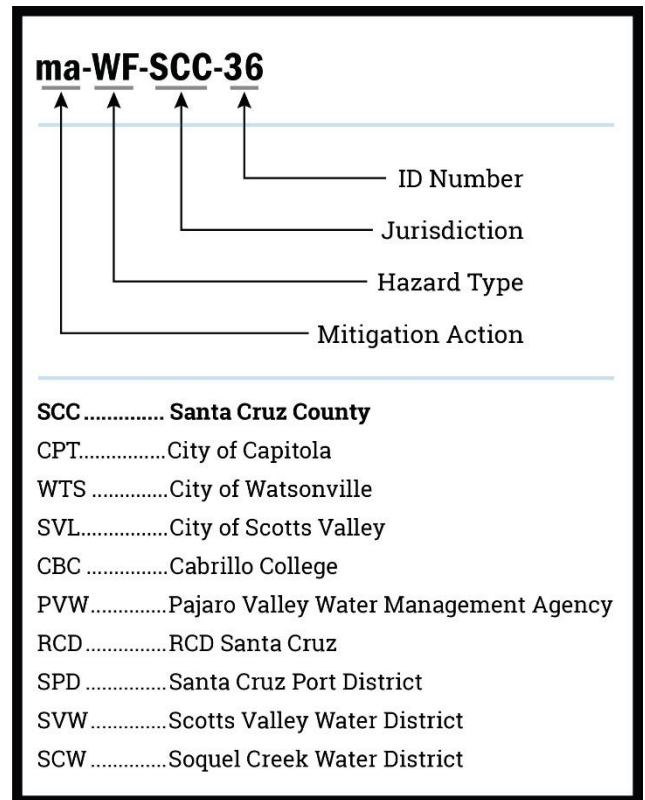


Figure 7-19: Mitigation Action Number Key



All actions are assigned a unique identification number, as illustrated in MAST and in Figure 7-19, using alphanumeric characters that denote specific attributes of the action, including the type of hazard being mitigated, facilitating easy reference and management. Table 7-9 lists each mitigation action for the district.

Table 7-9: RCD Mitigation Action Plan

Hazard	Action ID	Action Title	Description	FEMA Mitigation Alternative	Timeline	Responsibility	Cost	Benefit	Internal Funding Source	External Funding Source	Priority (Based on Criteria)	Problems Addressed
All Hazard	ma-AH-RCD-01	Living on Rural Properties Program	Facilitate outreach, education, technical and financial assistance for rural residents related to risk reduction "best management practices" for wildfire resilience, slope and stream bank stabilization, flood management, water conservation, on-site infrastructure protection, and healthy and adaptive ecosystems.	PE&A	Ongoing	RCD + County, NRCS, other stakeholders, and consultants	Medium	High	Staff Time	Potential funding: County, USDA, Measure Q, Prop 4, EPA, HMGP	Very High	ps-FL-RCD-03, ps-CE-SPD-03, ps-CS-SPD-01, ps-LV-SCC-01, ps-SF-RCD-01, ps-WF-SCW-02
All Hazard	ma-AH-RCD-02	Community Resilience Coordination & Collaboration	Collaborate and coordinate with planning partners on outreach and education programs for climate resilience and hazard mitigation to address risks from all hazards through a coordinated communications strategy and tools such as workshops, printed and social media, site tours, and facilitated neighbors-meeting-neighbors events. Lead, convene, and participate in regional collaborations to understand and address through collective action climate resilience and risk mitigation (e.g., Santa Cruz Mountains Stewardship Network, Pajaro Compass, Integrated Watershed Restoration Program, Monterey Bay Area Climate Justice Collaborative, Conservation Lands Network, Fire Safe Councils).	PRV, PE&A	Ongoing	RCD + County, NRCS, planning and land stewardship partners, CBOs, and other stakeholders	Low	High	Staff Time	Potential funding: County, USDA, Measure Q, Prop 4, EPA, Calfire, HMGP	Very High	ps-CC-SVL-04
Climate Change	ma-CC-RCD-01	Integrate Climate Projections into Land Stewardship Planning	Integrate risk assessment and hazard mitigation strategies from this plan and incorporate downscaled climate change projections into RCD's conservation planning activities (including vegetation management, forest health, erosion control, soil health, farm water and nutrient management, and ecological restoration projects) to improve long-term resilience and adaptive management under future climate scenarios. Develop new data where needed to better inform conservation planning based on climate projections.	PRV, NRP	Medium 3-5 Years	RCD + NRCS and climate science partners	Medium	Medium	Staff Time	Potential funding: CDFA, Coastal Conservancy, prop 4, USDA, HMGP	High	ps-CC-RCD-01, ps-CC-CBC-01, ps-CC-CPT-03, ps-CC-SCC-01, ps-CC-SPD-01, ps-CC-SVL-02, ps-CC-WTS-02, ps-CC-WTS-03
Coastal Hazards (Coastal Erosion)	ma-CE-RCD-01	Integrate Coastal Erosion Hazard Assessments with Estuary, Slough & Dune Projects	Assess and integrate coastal hazard mitigation through nature-based solutions at RCD project sites facing chronic erosion, especially in support of estuary, slough, and dune health. Develop a framework for site prioritization.	NRP, PPRO	Medium 3-5 Years	RCD + CCC, local partners, public and private landowners	High	High	Staff Time	Potential funding: Coastal Conservancy, Caltrans, USDA, Prop 4, HMGP	Medium	ps-CE-RCD-02, ps-CE-RCD-01, ps-CC-RCD-01
Dam Failure	ma-DF-RCD-01	Remnant Small Dam Safety Outreach & Retrofit	Collaborate with private dam owners to identify, assess, and provide education, technical assistance, and referrals to funding resources for retrofitting or removing aging water control structures that inhibit fish passage or pose upstream, downstream and on-site risks to people, farms, and ecosystems.	SP, PE&A	Medium 3-5 Years	RCD + private owners, County	Medium	High	Staff Time	Potential funding: EPA, NOAA, County, HMGP	Medium	ps-DF-SCC-02, ps-DF-RCD-01

Hazard	Action ID	Action Title	Description	FEMA Mitigation Alternative	Timeline	Responsibility	Cost	Benefit	Internal Funding Source	External Funding Source	Priority (Based on Criteria)	Problems Addressed
Dam Failure	ma-DF-RCD-02	Habitat Pond Safety & Resilience	Provide education, technical assistance, and referrals to financial resources to landowners to improve the safety, function, and ecological value of natural and constructed ponds. The program assists landowners with assessing pond stability and flood risks, and implementing improvements such as repairing embankments, upgrading spillways and outlets, restoring native vegetation, and enhancing wildlife habitat. These actions help prevent pond failures and downstream flooding, improve water quality, and support healthy aquatic and riparian ecosystems.	PE&A, NRP, SP	Medium 3-5 Years	RCD + private landowners	Medium	High	Staff Time	Potential funding: CDFW, UDSA, USFWS, DWR, HMGP	Medium	ps-DF-RCD-01
Drought	ma-DR-RCD-01	Agricultural Irrigation Efficiency & Water Conservation Program	Provide technical and financial assistance to farms for implementing efficient irrigation and other drought-adaptive practices.	PE&A, NRP	Ongoing	RCD + NRCS, UCCE, PVWMA	Medium	High	Staff Time	Potential funding: PVWater, CDFA, DWR, USDA, HMGP	High	ps-DR-SCC-02, ps-DR-RCD-01, ps-DR-RCD-02, ps-DR-RCD-03, ps-DR-RCD-04, ps-DR-RCD-05, ps-DR-RCD-06, ps-CC-RCD-01
Drought	ma-DR-RCD-02	Streamflow & Recharge Enhancement Projects	Implement managed aquifer recharge and habitat restoration at sites with high infiltration potential to offset baseflow and aquifer decline during droughts.	NRP, SP	Ongoing	RCD, PVWMA, UCSC, water agencies, private landowners	High	High	Staff Time	Potential funding: DWR, Prop 4, Measure Q, HMGP	High	ps-DR-RCD-01, ps-DR-SCC-03, ps-DR-RCD-02, ps-DR-RCD-03, ps-DR-RCD-05, ps-DR-RCD-06,ps-CC-RCD-01
Drought	ma-DR-RCD-03	Soil Health Planning & Conservation Projects	Conduct planning and implement conservation practices and projects to improve soil health factors including organic matter content and aggregate stability on agricultural, rural residential, and parks/open space properties.	PRV, NRP	Ongoing	RCD + NRCS, state and local partners	High	High	Staff Time	Potential funding: CDFA, USDA, Prop 4, Measure Q, HGMP	High	ps-DR-RCD-03, ps-DR-RCD-01, ps-DR-RCD-02, ps-DR-RCD-04, ps-DR-RCD-05, ps-DR-RCD-06
Drought	ma-DR-RCD-04	Multi-Benefit Water Resilience Projects	Plan, design, and implement multi-benefit land repurposing and water resilience projects.	SP, NRP	Medium 3-5 Years	RCD + County, PVWMA, PRFMA, and private landowner partners	High	High	Staff Time	Potential funding: DWR, Prop 4, Measure Q, HMGP, USDA	High	ps-DR-RCD-03, ps-DR-RCD-05, ps-DR-RCD-06, ps-DR-RCD-01, ps-DR-RCD-02, ps-DR-RCD-04, ps-CC-RCD-01
Flood + Slope Failure	ma-FL-RCD-01	Rural Roads & Home Drainage Program	Provide education, technical assistance, and guidance on financial support to public and private landowners for stabilizing high-risk slopes and streambanks to implement improvements that protect both people and natural resources. Projects may include upgrading road drainage and culverts, stabilizing slopes, restoring vegetation, rain gardens/swales, applying ecologically sensitive geotechnical techniques, and other best management practices to help maintain safe access to homes, prevent landslides, reduce flood and sediment hazards, and protect water quality and fisheries habitat.	SP, PPRO, NRP, PE&A	Medium 3-5 Years	RCD + County, NRCS, private and public landowners, roads CSAs and Road Associations	High	High	Staff Time	Potential funding: County, USDA, Measure Q, Prop 4, EPA, HMGP	Very High	ps-FL-RCD-02, ps-FL-CBC-02,ps-FL-RCD-01, ps-FL-RCD-03, ps-SF-RCD-01, ps-SF-RCD-02, ps-SF-RCD-03
Flood	ma-FL-RCD-02	Multi-Benefit Habitat Restoration	Expand multi-benefit floodplain, stream, and wetland restoration projects that reduce flood risk while restoring ecosystem function, particularly where prior land use changes have damaged natural infrastructure.	NRP, NSP	Medium 3-5 Years	RCD + County, NOAA, NRCS, USFWS, public and private landowners, other state and local partners	High	High	Staff Time	Potential funding: County, USDA, Measure Q, Prop 4, EPA, HMGP, NOAA, Coastal Conservancy	High	ps-FL-RCD-01, ps-FL-RCD-02, ps-FL-RCD-03, ps-CC-RCD-01
Flood	ma-FL-RCD-03	Streamwood Program	Facilitate outreach, education, technical and financial resources for the proper placement, modification, or removal of streamwood to protect infrastructure and support healthy and resilient ecosystems.	NRP, PE&A	Medium 3-5 Years	RCD + County and landowners	Medium	High	Staff Time	Potential funding: County, NOAA, Prop 4, HMGP	High	ps-FL-RCD-02, ps-FL-RCD-01, ps-FL-RCD-03, ps-CC-RCD-01

Hazard	Action ID	Action Title	Description	FEMA Mitigation Alternative	Timeline	Responsibility	Cost	Benefit	Internal Funding Source	External Funding Source	Priority (Based on Criteria)	Problems Addressed
Sea Level Rise	ma-SLR-RCD-01	Coastal Habitat Resilience Planning	Conduct planning and modeling for estuarine and coastal watersheds (e.g., Scott / Waddell / San Vicente) to identify habitat restoration opportunities.	PRV, NRP	Medium 3-5 Years	RCD + Regional Transportation Commission, Caltrans, academic/consultant partners	Medium	Medium	Staff Time	Potential funding: Prop 4, Coastal Conservancy, NOAA	High	ps-SLR-RCD-02, ps-SLR-RCD-01, ps-CC-RCD-01
Wildfire	ma-WF-RCD-01	Forest Health & Wildfire Resiliency Program Implementation	Use the Regional Priority Plan (RPP) and Community Wildfire Prevention Plan (CWPP) to scale up strategic forest health and wildfire resilience activities including timber stand improvement, vegetation treatment, fuel reduction and shaded fuel breaks, invasive species management, and post-fire recovery projects in high-priority landscapes.	NRP, PPRO	Medium 3-5 Years	RCD + County, CAL FIRE, fire districts, public and private landowners	High	High	Staff Time	Potential funding: Calfire, Coastal Conservancy, Prop 4, Measure Q, Dept of Conservation, HMGP	High	ps-WF-RCD-02, ps-WF-RCD-01, ps-WF-RCD-03,ps-CC-RCD-01
Wildfire	ma-WF-RCD-02	Community Wildfire Resilience Program	Provides education, technical assistance, and financial support to landowners for creating defensible space and reducing fuels to support ecologically considerate wildfire readiness. Includes chipping, support HIZ inspections, site and neighborhood defensible space and wildfire resiliency assessments, and landscape planning.	PRV, PE&A	Ongoing	RCD + FSC, County	High	High	Staff Time	Potential funding: Calfire, CAFSC, County, Measure Q, Prop 4, USFS, HMGP	High	ps-WF-SVL-05, ps-WF-RCD-01, ps-WF-RCD-02, ps-WF-RCD-03



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