

Ounce of Prevention

Advancing Equitable Climate Resilience Planning in California

status report on implementation
of Senate Bill 379 (2015)

This report was prepared by



Farallon
Strategies



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Executive Summary

Ounce of Prevention; advancing equitable climate resilience planning in California; status report on implementation of Senate Bill 379 (2015)

Preface

In September 2022, the National Weather Service placed the entire State of California under an extreme heat advisory. Governor Newsom remarked that “this week’s unprecedented heat wave is a painful reminder of the costs and impacts of climate change – and it won’t be the last.”



As if on cue, a few months later, in January 2023, a parade of winter storms resulted in over \$30 billion in damages and economic losses in the state.

Not to forget wildfire, between 2015 and 2020, California saw an unprecedented \$50 billion in declared losses, with over 50,000 structures destroyed.

Benjamin Franklin’s adage, an ounce of prevention is worth a pound of cure, is especially true when it comes to impacts of climate change.

California’s Fourth Climate Change Assessment foresees significant impacts in coming decades affecting ambient temperature, wildfire, water supply, energy delivery and sea level rise.¹ Preparedness saves lives and treasure. According to a December 2019 study, every \$1 invested in adopting resilient building codes saves society \$11; enhancing infrastructure saves \$4 for every \$1 spent.²

The intent behind Senate Bill 379 (Jackson), signed by Governor Brown in 2015, was to institutionalize preparedness for climate change preparedness by mandating updates of municipal general plans. Cities and counties were given six years to prepare; the deadline for compliance was January 1, 2022.

So how did local jurisdictions perform?

¹ Bedsworth et al. (California Governor’s Office of Planning and Research, Scripps Institution of Oceanography, California Energy Commission, California Public Utilities Commission). 2018. Statewide Summary Report. California’s Fourth Climate Change Assessment. <https://climateassessment.ca.gov/state/index.html>

² Multi-Hazard Mitigation Council (2019.). Natural Hazard Mitigation Saves: 2019 Report. Principal Investigator Porter, K. National Institute of Building Sciences. Washington, DC. www.nibs.org

Unfortunately, only half of California’s municipalities complied with SB 379 by the deadline. Data from the Office of Planning and Research (OPR’s) ResilientCA Adaptation Planning Map show that only 51% of municipalities completed the main components of SB 379’s statutory requirements.³



Nonetheless, did SB 379 advance California’s ability to handle climate impacts? To answer this question—with the goal of helping adaptation practitioners—Farallon Strategies and Climate Resolve (Project Team) prepared this report, *Ounce of Prevention; Advancing Equitable Climate Resilience Planning in California; status report on implementation of Senate Bill 379 (2015)*. The grant that made this report possible was made through the California Conservation Innovations program of Resources Legacy Fund.

³ Only 251 of the state’s 483 municipalities are compliant, according to the Governor’s Office of Planning and Research (2023). The ResilientCA Adaptation Planning Map (RAP-Map). February 21, 2023; <https://resilientca.org/rap-map/>

The report reviews the key aspects of SB 379. In particular, the stipulated compliance mechanisms of the law and how municipalities responded. We reviewed general plans, climate adaptation plans, and local hazard mitigation plans. We identified jurisdictions that did a good job and a few that did not.⁴

Conclusions

Since SB 379's adoption in 2015, and the release of related general plan guidance in 2017, adaptation practice has grown in expertise and sophistication. What was once vague and uncertain about the impact of climate change has come into focus. Today, best practices are better known. Jurisdictions are matching adaptation policies with appropriate departments. The timeframes for implementing programs and projects are better understood. Sources of funding for planning and implementation are coming available. The practice of engaging community based organizations to perform outreach is more common.

Yet significant barriers remain. Despite clearly written guidance policies, and despite the presence of MPO and COG staff members ready to help, and despite eight climate collaboratives offering assistance, and despite consultants at the ready, hundreds of California cities are currently out of compliance with SB 379.

The other major problem is that jurisdictions may have met the letter of SB 379 but largely outsourced the process to planning consultants, many of whom deliver standardized template-based plans. Check-the-box plans typically lack local context and fail to prepare city staff on how to pursue implementation programs and funding.

Smaller less-resourced communities have been held to the same standard as well-resourced counties. Small cities were asked to spend precious funds on preparing assessments of their jurisdiction's climate vulnerabilities, which we found to be largely redundant with the vulnerability assessments prepared by county or regional planning agencies.

As a way of preparing smaller jurisdictions for compliance with SB 370, some municipal planning organizations (MPOs) and councils of government (COGs) developed analyses and plans that could then be used by local governments for climate planning, yet these regional organizations are not legislatively mandated to coordinate climate adaptation planning. Nor have these regional planning efforts been especially effective, and begs the question, at what scale are adaptation assessments and planning most effective, and should climate planning take place at the city level, the county, the region, the state, or all of the above—and, if all the above, how does one divide tasks to avoid redundancy?

In the final analysis, the authors believe SB 379 has succeeded by making climate adaptation a priority for hundreds of California jurisdictions. Had there not been a mandate, local governments may not have considered climate-related vulnerabilities, nor created policies to address them. In interviews, as well as in the plans themselves, jurisdictions explicitly cite SB 379 as the impetus for action.

⁴ The authors of this report have worked on numerous climate action plans, yet we avoid highlighting our efforts in order to provide an unbiased assessment of climate planning processes in California.

Based on the results of the research and interviews, the Project Team offers the following additional conclusions

How have jurisdictions complied with SB 379?

1. **Only half of California jurisdictions updated their Safety Elements to address climate change.** Of the state's 483 municipalities, only 251 are currently in compliance. By percentage, 48% of jurisdictions are out-of-compliance. Compliance was largely a function of municipality size. Larger jurisdictions, thanks to larger budgets and an ability to access grant dollars, were (for the most part) able to mount an update. Most cities simply updated their Local Hazard Mitigation Plans (LHMPs)—which are limited in their ability to re-shape local land use and programmatic endeavors. Only 38 jurisdictions in California created standalone climate adaptation plans. (The benefits of various climate planning methods are considered below.)
2. **Most (but not all) non-compliant jurisdictions lacked the financial and staff resources to engage in planning.** Most non-compliant jurisdictions lack internal staff and resources to hire consultants to perform the climate assessment and planning exercises. Some cities still are not aware about the law and its requirements; especially because there are no clear consequences for being out of compliance. In the past, grant dollars were largely unavailable, and most jurisdictions lack the skills to craft an eligible proposal for funding. Even the state's largest municipality, the City of Los Angeles, sought outside grant funding in order to update the Safety Element. It should be noted that Los Angeles failed to win that small grant.

What climate planning approach proved most effective in yielding desired outcomes?

3. **Standalone adaptation plans were often detailed and have the potential to lead to transformative implementation projects.** But some adaptation plans were hindered by being too aggressive or disconnected from other plans. For example, in an attempt to satisfy all stakeholders the City of Oakland adopted over 400 adaptation policies. They were unable to prioritize certain actions over others, however Oakland is also held up as a model for inclusive engagement to support community driven priorities. The City is currently re-visiting resilience planning in order to prioritize implementation. Other examples show that a great plan doesn't mean climate adaptation will actually occur. Staff champions at critical points in the jurisdiction are often the best link between stand alone plans and other initiatives. Ensuring staff have the capacity to lift the policies in a stand alone plan into other discussions is critical to this approach.
4. **LHMP updates are a cost-efficient approach for SB 379 compliance, but LHMPs have limitations.** A majority of SB 379-compliant jurisdictions stated that they achieved compliance by updating their LHMP, forgoing the more intensive planning efforts of updating their general plans or developing a standalone adaptation plan. Jurisdictions unquestionably benefit from updating their LHMPs. Doing so enables them to apply for

FEMA dollars, specifically hazard mitigation funds. In fact, every city and county in California should have a current LHMP. That being said, LHMPs tend to be much higher level policy documents (don't include specific projects or programs) than a general plan, nor are they integrated into the policy frameworks of the jurisdiction. An LHMP could therefore simply be a compliance document that does not result in actual change.

5. **Updates to General Plans are more effective than other planning approaches.**

Updating LHMPs does not typically entail a robust public engagement process. By contrast, updates to the general plan and the creation of adaptation plans will likely draw more public engagement. As land use decisions reside with local jurisdictions, and as general plans provide land use considerations, and as climate change will impact every jurisdiction, all localities should update their general plans to address climate change. As public health services and public works projects are typically provided by counties, it is imperative that California's counties develop integrated climate adaptation plans as well as updates to the general plan. As with other methods of compliance, this approach also relies upon well-capacitated staff to support the process and eventual implementation of efforts, however as a part of a document that is legally required to be implemented (a general plan) there is also additional incentives for a jurisdiction to ensure implementation even without a specified staff champion.



6. **Identification of disadvantaged communities** is one way local jurisdictions are incorporating environmental justice considerations in the safety element/adaptation planning; however, mapping tools and processes are inadequate in identifying the most climate vulnerable populations.
7. **Forming trusting relationships with community leaders** is key in ensuring community perspectives are integrated into climate adaptation planning.

Have jurisdictions implemented their climate resilience plans – and how?

8. **With limited capacity and limited resources, insisting on “best practices” may be the wrong approach.** One consultant suggested the idea of “best fit” over that of “best practice,” which is also reinforced by the narrative of the general plan guidelines. The perfect can be the enemy of the good when it comes to investing in resilience to climate change. In this evolving field, what constitutes “good work” is a moving target. The goal should be to create implementation plans that prioritize *feasible* adaptation policies and strategies that allow cities to track their progress in relation to specific actions.
9. **Capacity is a concern throughout the “resilience supply chain”—at the state, in local government, within nonprofits, in consultancies and academia.** OPR and other agencies have recently hired dozens of staff members to support new grant programs. Stretched thin by long hours, seasoned adaptation professionals in State agencies have recently moved on, necessitating replacements for senior positions. As a result, there are delays in delivery of planning and grant guidelines and programs that restrict implementation dollars moving to communities on the ground in a timely manner.

In the private sector, one consultancy recently lost their entire pool of climate resilience planners, most of them moved laterally to another firm. (It matters what happens to consultants, because certain consultancies enjoy favored nation status with specific city staffers; the shuffling of deck-chairs could result in substandard plans and delays.) In academia, job postings are constant and voluminous. Nonprofits are seeing experienced employees getting poached by other environmental groups, where their new positions are no longer related to climate. With new state and federal dollars pouring into resilience and related infrastructure, many of the people engaged in this new workforce will be learning on the job. The importance of building a strong community of practice to support this work is critical to the ultimate success of this work.

10. **It’s too soon to tell if SB 379 will effectively create new implementation programs.** This report cites examples—including LA County’s Safety Element that promises to limit development in the wildland-urban-interface (WUI)—but it is premature to conclude how SB 379 will ultimately spur new policies and programs. As climate adaptation will touch virtually every aspect of local government services, it’ll be years before we’re able to trace SB 379’s influence.

What has been the role of regional agencies and support organizations in facilitating local compliance?

11. **As a rule regional climate planning efforts have not been embraced by local jurisdictions.** Even when MPO and CBO planning processes were incredibly detailed and robust, cities, generally speaking, didn’t use the data. Simply, the consultants hired by cities utilized their own preferred data sources. Moreover, because local jurisdictions are focused

on land use and built infrastructure, they struggled to make use of aggregated regional data to complete their plans. In the Gateway Cities, not a single city took advantage of the COG's Adaptation Toolkit, indicating that regional planning frameworks are only helpful to local jurisdictions if the regional planning organization has funding to also serve as a technical assistance provider to member cities. Programs like SGC's BOOST, that provide technical assistance, was an efficient approach to compliance—leveraging regional and state plans to create local plans that meet minimum requirements at a low cost.

12. **Consultants who wrote the regional plans used those plans.** In many instances, only the consultants that created the regional plans used that information in developing local plans. For example, Placeworks and Atlas helped write the Resilient Inland Empire plan; those efforts fed into specific city plans in the Inland Empire that the consultants later developed. However, as a rule the regional planning exercises were not embraced by local jurisdictions or the consultants working for those jurisdictions.
13. **Nonprofit support helped municipalities, but more help is needed.** Technical assistance programs, like the SGC's BOOST, helped cities complete adaptation plans, but part-time assistance is not equipped to remedy the deeper dysfunction of staff turnover and loss of institutional knowledge upon transition of staff. These points highlight several important priorities the community of practice must address in order for climate change to be proactively and comprehensively addressed at the local level. Capacity building programs like CivicSpark offer a short-term solution to building local capacity for a given climate planning initiative, but must be accompanied by a longer term commitment to building local expertise and capacity to address climate change across local departments.

What has been the role of agency staff and contractors in facilitating local compliance?

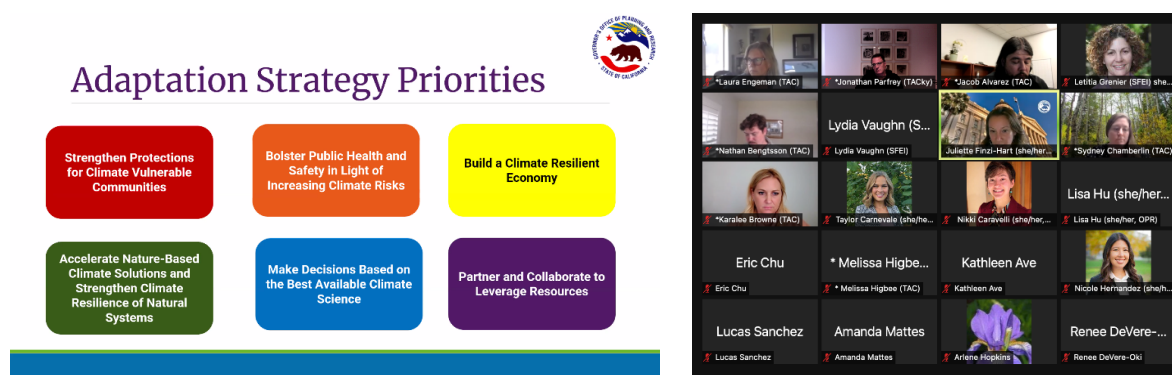
14. **Inconsistent approaches throughout the State.** In reviewing planning documents and revealed in interviews, the Project Team found inconsistent approaches across California's many jurisdictions in addressing SB 379 requirements.
15. **Agency staff, as a rule, were over-extended.** Capacity constraints, lack of knowledge, and limited funding sources tend to lead to anemic approaches and unspecific policies to address climate change. The existing practice unrealistically expects staff to connect and translate high-level, generic policies to the budgeting, design and implementation of specific programs and projects.

Has SB 379 achieved its fundamental goal in making communities more resilient?

19. **Yes, SB 379 has spurred climate adaptation planning that wouldn't have happened otherwise; but surely there was less preparedness planning than hoped.** By forcing jurisdictions to update their LHMPs, cities and counties are better prepared for climate impacts, and updating LHMPs will also help municipalities pursue federal hazard mitigation funding. That said, half of the State's jurisdictions failed to document compliance at any level. Many of these local governments face considerable constraints in fulfilling the planning mandate, let alone actually implement programs suggested by these plans. Some jurisdictions, including the ones interviewed for this report, found ways to fund the planning effort or were able to leverage staff time and outside resources to creatively meet SB 379 requirements, such as leveraging the SGC BOOST TA program. However, as noted elsewhere, simply updating LHMPs and referencing them in a general plan, is not sufficient to actualize climate resilience in their communities.
20. **General plan updates and standalone adaptation planning processes yielded useful outcomes.** The municipalities that complied with SB 379 generally found the planning process useful. The process that municipalities undertake to become compliant entails many measures, including data collection, assessing community vulnerabilities and risk, developing strategies to mitigate risk, and identifying implementation measures and funding priorities. Altogether these exercises helped practitioners recognize the compounding impacts of climate change and the importance of addressing climate risk across plans and departments in a jurisdiction.

Recommendations

We offer four key overarching recommendations on how the State of California may provide funding and guidance to best achieve resilience outcomes. These are 1) address the crisis of capacity, 2) create efficiencies of scale, 3) fund climate planning at the local level, 4) encourage robust climate adaptation plans.



Address the crisis of capacity

At every level of planning and implementation – from state agencies to local governments, from consultant firms to community based organizations – all of these entities are facing severe capacity constraints. The following are the Project Team’s specific recommendations pertaining to addressing the crisis of capacity:

1. **Invest in workforce development and retention.** The federal government, State, and all subsidiary levels of governance should invest in workforce development and retention. Climate impacts are manifold and promise to upend how government operates. Skilled practitioners are needed to plan for these changes. The State of California should invest in AmeriCorps workforce development programs, such as CivicSpark. Senior municipal workers should be retained with special incentives, such as tax credits.
2. **Amend legislation to allow municipalities to complete their vulnerability assessments by reference to regional or statewide climate analyses.** Local government staff would have more staff time to focus on the implementation of projects and programs if the State and regional organizations/agencies (e.g. councils of governments) performing these expensive and noncontroversial analyses local governments will have more staff time to focus on the implementation of projects and programs (see Recommendation #3) and gain a high-level understanding of the climate hazards impacting their region.
3. **Provide block-grant or other sustainable funding for plan development.** Local capacity is so constrained that most municipalities do not even have the capacity to write and submit competitive proposals. Block grants or formula grants - as opposed to competitive grants that have onerous requirements- to councils-of-government and planning dollars to local governments on an “as needed” basis would help local governments meet statutory

requirements. The State could provide block-grant or other sustainable funding for plan development.

4. **Support existing climate collaboratives and technical assistance programs.** The State should allocate funding to the Office of Planning and Research or the Strategic Growth Council to support existing climate collaboratives, such as those represented by the Alliance of Regional Collaboratives for Climate Adaptation, as well as other statewide and regional technical assistance programs, which build capacity through peer learning, resource sharing, grant support, and joint policy and program development. In some regions where there are several climate collaboratives operating at different scales (e.g. Bay Area has several regional and countywide climate collaboratives), climate collaboratives must strategize how to work effectively across scales to ensure they are not requesting too much time and resources from low-capacity organizations to participate.
5. **Grantmaking agencies responsible for distributing climate adaptation and resilience funding should implement the recommendations of “Climate Crossroads: California’s Readiness to Act on Climate Resilience” produced by the California Resilience Partnership** including: 1. Overhauling existing grant programs, 2. Increasing core capacities across the community of practice, 3. Provide set asides for community based organization leadership, 4. Deferring to regional self organization for greater impact, 5. Utilizing existing policy and program levers, 6. Make it easier to understand the impact of the various funding programs.

Create efficiencies of scale

Planning for climate change is essential. However, there is such a thing as over-planning. We found that some regions repetitively write climate assessments, arriving at the same conclusions. The State has a role in creating efficiencies in adaptation planning and implementation by appropriately designating climate adaptation work across scales while allowing regions to self organize to support greater impact.

6. **Distribute adaptation planning work appropriately between local and regional level.** The State, via the Strategic Growth Council and the Governor’s Office of Planning and Research, should provide funding for regional organizations or climate collaboratives to conduct landscape assessments that help identify regionally-specific governance structures, and fund each of these levels of governance to work together on joint planning and implementation initiatives. By supporting the development of regional vulnerability assessments and plans, the State can reduce the planning mandates on individual municipalities thereby allowing jurisdictions to focus on more narrow plans that advance specific resilience projects and programs. Rather than engage in planning to check-a-box, we wish to see local jurisdictions focus on land-use choices, which are clearly within their scope of authority. As well as update their plans to make climate adaptations that are feasible and implementable.



7. **Provide specific plan alignment guidance.** The State should provide specific plan alignment guidance across general plans, local hazard mitigation plans, climate adaptation plans, and local coastal plans. The State should update guidance to align with the competing and often contradictory timelines of other related planning requirements. The guidance should take into account the life-cycle of plans. If completed through an LHMP process, compliance should factor in the differences in 5 yr vs 20 year life-cycles of plans, CEQA, and other various issues that create compliance issues with LHMP led efforts. Specifically, the Adaptation Planning Guide should be continuously updated to respond to the emerging community of practice and provide better guidance for practitioners and consultants working in this space.
8. **Develop effective partnership models.** Partnership models at the local and regional level should be evaluated and shared to 1) enable local governments to contract with community based organizations to develop a community-driven planning process and lead public engagement, and 2) allow for local jurisdictions and community based organizations to effectively contribute to and guide regional planning processes without draining resources and capacity.
9. **Designate review authority of SB 379 compliance to the Office of Planning and Research (OPR).** The State should hold jurisdictions accountable for meeting requirements to implement plans by providing the State Office of Planning and Research with review and approval abilities, like is already done for local hazard mitigation plans

through the California Governor's Office of Emergency Services. CalOES is informally reviewing plans for compliance now, and it is resulting in plans meeting specific LHMP requirements, rather than comprehensively addressing climate adaptation in the long range general plan for local governments.

Fund climate planning at the local level

The recently established Adaptation Planning Grant Program, with \$25 million at its disposal, will likely help a number of California jurisdictions comply with SB 379. But funding will fall short of underwriting the planning processes for all 232 cities and counties that are currently out-of-compliance, and this is without considering the cost of implementation of planning. Additional state and private philanthropic funding are needed.

10. **Renew OPR's Adaptation Planning Grant Program.** The State should renew the Adaptation Planning Grant Program at \$15 million per year, and do so indefinitely as plans will need to be updated as climate threats rise in severity necessitating an adaptive approach to climate planning.
11. **Allow flexibility in funding toward local climate planning.** The State should allow other climate planning requirements to fund planning efforts that will satisfy SB 379. The California Public Utilities Commission (CPUC) rulemaking, R.18-04-019, tasks the state's investor-owned-utilities (IOUs) to perform climate change vulnerability assessments and climate adaptation in disadvantaged communities,⁵ among other climate impact planning efforts.⁶ Unquestionably, electric service is crucial during extreme heat and wildfire events. As such, utility coordination with local jurisdictions is crucial. Therefore, CPUC should allow for a rate case that allows IOUs to send dollars to local jurisdictions to co-develop local climate plans. A second example, the California Governor's Office of Emergency Services (CalOES) could take a more proactive role in awarding planning dollars for local jurisdictions to prepare LHMPs that are specifically designed to address longer range climate considerations than the typical five year LHMP planning horizon.
12. **Renew funding for SGC's BOOST Program.** The State should renew and expand funding to provide ongoing technical assistance to local jurisdictions, as well as help local governments navigate the resources available to support planning and implementation.
13. **Leverage private philanthropy.** The Bay Area Council's California Resilience Challenge⁷ and Southern California Gas Company's Climate Adaptation & Resiliency Planning Grant Program⁸ have awarded millions of grant dollars to local jurisdictions to perform planning

⁵ California Public Utilities Commission (2020). *Decision On Energy Utility Climate Change Vulnerability Assessments And Climate Adaptation In Disadvantaged Communities (Phase 1, Topics 4 And 5)*.

<https://docs.cpuc.ca.gov/PublishedDocs/Published/Go00/M345/K697/345697117.PDF>

⁶ California Public Utilities Commission. *Climate Adaptation*. Accessed November 29, 2022.

<https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/climate-change>

⁷ Bay Area Council Foundation. *California Resilience Challenge Fund*. Accessed November 29, 2022.

<https://resilientcal.org/>

⁸ SoCalGas. *Climate Grant*. Accessed November 29, 2022.

<https://www.socalgas.com/sustainability/sustainability-at-socalgas/climate-grant>

and research. Southern California Edison is supporting Climate Resolve's Ready for Tomorrow program that assists local jurisdictions on their climate planning activities. Resources Legacy Fund should strongly consider convening California funders – especially community foundations – to highlight the need for equitable community-driven climate adaptation planning.

Encourage robust climate adaptation plans

Of the three approaches to SB 379 compliance — 1) updating the jurisdiction's general plan, 2) updating the local hazard mitigation plan (LHMP) and 3) creating a standalone climate adaptation plan — larger municipalities should perform all three, while smaller jurisdictions may elect to update their LHMP. The Governor's Office of Planning and Research should encourage jurisdictions to develop robust-as-possible plans as finances and capacity allows.



14. Large jurisdictions – counties and cities with populations greater than 150,000 people – should develop a standalone climate adaptation plan that harmonizes with the jurisdiction's sustainability plan, general plan and LHMP, among other planning documents.
15. Mid-sized jurisdictions – with populations ranging from 80,000-150,000 – should update their general plan to account for climate impacts as well as update their LHMP. Particularly vulnerable mid-size jurisdictions should further consider standalone climate adaptation plans.

16. Small jurisdictions – with fewer than 80,000 people - should utilize external resources provided by their county or COG, technical assistance programs, or pool efforts with nearby jurisdictions to comply with SB 379 via LHMP integration approach. The exception would be highly at-risk communities, which should still consider conducting a stand-alone adaptation plan or comprehensive safety element update
17. Regional plans may prove helpful in the future. Climate assessments, if developed regionally and allowed by statute to satisfy SB 379 at the municipal level, cities and counties would more likely use these regional frameworks, and as a result, create regional alignment around shared priorities and policies that could be implemented through shared agreements or other collaborative constructs.

Introduction

This report explores how local jurisdictions in California have addressed adaptation planning, highlighting barriers and best practices. No such statewide analysis of climate adaptation and resilience planning in general plans has been performed since the passage of SB 379 in 2015.



Adaptation planning is in its infancy. Standards of practice are only now coming into focus. California produced its first statewide climate adaptation plan in 2009.⁹ However, for local governments, it was not until 2015, when Governor Brown signed Senate Bill 379 (Jackson) that municipalities were tasked to develop their own plans to address climate impacts. The result has been dramatic. SB 379, along with its follow-on bills, and guidance documents, has spurred the expansion of adaptation practice among local government staff members, consultancies and nonprofit organizations.

This report – *Ounce of Prevention; Advancing Equitable Climate Resilience Planning in California; status report on implementation of Senate Bill 379 (2015)* – so named because only half of the state’s jurisdictions are in compliance – seeks to inform agencies and policymakers upon the next update of adaptation guidance documents, or when they elect to formally amend existing statute.

⁹ https://resources.ca.gov/CNRALegacyFiles/docs/climate/Statewide_Adaptation_Strategy.pdf

This report is also intended for the emerging community of adaptation practitioners, working to meet the needs of the local communities grappling with climate impacts today and planning for more severe impacts in the coming years.

This report documents emerging best practices of adaptation planning in California and identifies critical barriers and gaps to realizing resilient outcomes in communities across the State. Appendix A documents the methodology employed to address the following research questions:

- How have jurisdictions complied with SB 379?
- What climate planning approach proved most effective?
- Have jurisdictions implemented their climate resilience plans – and how?
- What has been the role of regional agencies in facilitating local compliance?
- What has been the role of consultants in facilitating local compliance?
- Has SB 379 achieved its fundamental goal in making communities more resilient?

The desired outcome from this report would be to raise the standard of climate resilience planning, and to not merely encourage statutory compliance but rather encourage the creation of policies and programs that reflect community priorities and generate a pipeline of high-impact resilience and equity-centered projects. With funding coming online from State and federal sources to support adaptation, it's critical that California practitioners and decision-makers meet this moment with clear vision and clarity of purpose.

Overview of Local Climate Adaptation Policy

California cities and counties are required to address climate change through the lens of greenhouse gas (GHG) emissions in the California Environmental Quality Act (CEQA) as codified by Senate Bill (SB) 97¹⁰, which passed in 2007 and is included in the CEQA Guidelines in 2009. However, no such mandate existed for climate adaptation until 2015. The mandate on adaptation took a different form; instead of being addressed through CEQA, the legislature, in coordination with the Office of Planning and Research (OPR), addressed adaptation through general plan statute and guidelines. This allowed for greater flexibility in implementing a planning process, while reducing the legal specificity that might have come from an approach mirroring GHG emissions. In sum, GHG emissions are required to be addressed by CEQA, but not explicitly by general plans. By contrast, adaptation is required to be addressed in general plans, but not explicitly in CEQA.

In October 2015, Senate Bill (SB) 379 was signed into law, amending Government Code Section 65302(g), requiring all cities and counties in California to incorporate climate adaptation and resilience strategies into their general plan's safety element, or by reference to other planning documents (e.g., climate action/adaptation plan, local hazard mitigation plan, or other similar

¹⁰ California State Legislative Information. *SB-97 CEQA: greenhouse gas emissions*. (2007). Retrieved from https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=200720080SB97

plans). The updates are required upon the next update of their local hazard mitigation plan (LHMP) on or after January 1, 2017. Local jurisdictions without an LHMP must update their safety elements beginning on or before January 1, 2022. An alternative compliance mechanism was approved via SB 1035 (Jackson, 2018), tethering safety element updates to housing element cycles, to take place no less than every eight years. The bill also stipulated that jurisdictions should identify new research associated with flooding, wildfire, heat as well as adaptation and resilience strategies thereof.

This report was developed after the January 1, 2022 deadline, when all jurisdictions were supposed to have satisfied the requirements of SB 379. To meet the requirements of SB 379, local jurisdictions must update the safety element of their general plan to include:

1. A vulnerability assessment identifying the risks that climate change poses to the local jurisdiction.
2. A set of goals, policies, and objectives based on a vulnerability assessment for the protection of the community.
3. A set of feasible implementation strategies to carry out the goals, policies, and objectives.

Prior to the passage of SB 379, there was no requirement that tasked municipalities to consider climate adaptation as part of their general planning process. While some cities and counties were proactive in addressing climate change adaptation in their local planning efforts, many were not. The requirement for climate adaptation and resilience strategies to be incorporated into the safety element of the general plan was introduced to encourage better land use decisions, enable local officials to develop targets and responses that mitigate risk, and avoid potentially costly actions associated with climate change hazards and impacts. This report asks the critical question of whether these objectives have been achieved as the adaptation community of practice has emerged in California.

Key Guidance & Interpretation of Legislation

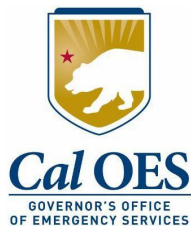
In order to fulfill the requirements of SB 379, there are several resources from state agencies and non-governmental organizations that jurisdictions are able to reference for guidance.



Office of Planning and Research General Plan Guidelines

The Office of Planning and Research (OPR) [General Plan Guidelines](https://opr.ca.gov/planning/general-plan/guidelines.html) (GPG), updated comprehensively in 2017, serves as the authoritative guidance for drafting a general plan in the State of California. The GPG is not law, but rather guidance on how to comply with statute.¹¹ Communities can develop a general plan or undergo an update without using the GPG, as long as they comply with all statutory requirements. The GPG is a tool to help communities understand statute. The GPG is intended to be updated regularly, with an update just initiated in 2022.

¹¹ Office of Planning and Research. *General Plan Guidelines and Technical Advisories*
<https://opr.ca.gov/planning/general-plan/guidelines.html>



California Adaptation Planning Guide

Absent formal requirements by the State, the California Governor's Office of Emergency Services (CalOES) with support from the California Natural Resources Agency and OPR prepared the first Adaptation Planning Guide (APG) in 2012 through a partnership with California Polytechnic State University (San Luis Obispo), other state agencies, and experts from local jurisdictions and nongovernmental organizations. Since the development of the 2012 APG, the state enacted requirements for local adaptation planning.

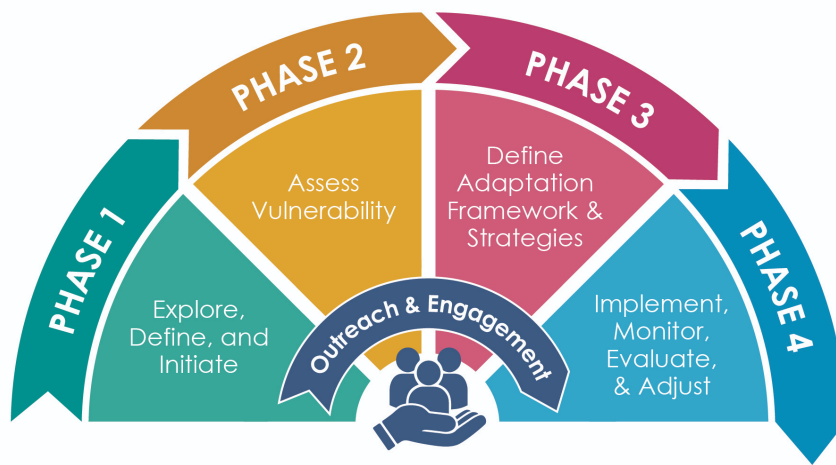


Figure 1: Adaptation Planning Phases

From 2018 to 2020, CalOES and OPR [updated the APG](#) in collaboration with a consultant team composed of Placeworks, Cal Poly San Luis Obispo, ICF, and Climate Resolve, and an interagency working group made up of state agencies, nongovernmental organizations, and experts from local and regional jurisdictions.¹² The updated APG provides helpful resources to local governments as they comply with these requirements and provides recommendations on community-scale adaptation planning. The APG also explains how these plans and processes can be integrated with other local and tribal government planning and operations. The APG lists four phases, or steps, for climate adaptation planning.

ARCCA SB379 Fact Sheet

In addition to the GPG and APG, the [Alliance of Regional Collaboratives for Climate Adaptation](#) (ARCCA) developed an [SB 379 factsheet](#) as a primer that describes a step-by-step process cities and counties can follow to satisfy the requirements of SB 379.¹³

¹² Office of Planning and Research (2020). *Adaptation Planning Guide (APG)*
<https://resilientca.org/apg/intro/>

¹³ Alliance of Regional Collaboratives for Climate Adaptation (2016). *3-Step Approach to SB 379 Implementation*
<https://arccacalifornia.org/wp-content/uploads/2016/02/SB-379-Fact-Sheet.pdf>



SCAG Regional Climate Adaptation Framework

As an example of a regional approach to climate adaptation planning, the Southern California Association of Governments (SCAG's) [Regional Climate Adaptation Framework](#) ("Framework") provides a suite of tools and guidance for local jurisdictions seeking to comply with SB 379.¹⁴ The Framework provides clarity for local governments on how they might be able to work within a regional construct. The Framework includes Communication & Outreach Strategies and Templates intended to help jurisdictions and community based organizations engage with residents to understand better how climate related hazards are affecting community members. The Framework also includes the [Southern California Climate Adaptation Planning Guide](#), a resource for local planning that describes the range of climate change hazards the SCAG region is likely to face in the coming decades.¹⁵

In addition, SCAG developed a [SB 379 Compliance Curriculum guidebook](#) for local jurisdictions that links existing SCAG resources and tools to support local safety element updates, which will ultimately enhance both local and regional climate resilience.¹⁶ This document is meant to help jurisdictions primarily address this requirement utilizing the Framework and additional regional resources to update safety elements pursuant to SB 379. Additionally, the curriculum can be similarly applied to updating other plans (e.g., climate action/adaptation plan or local hazard mitigation plan) to comply with SB 379.



Integrated Climate Adaptation and Resiliency Program

Another key resource for local governments and decision makers working to comply with SB 379 is OPR's [Integrated Climate Adaptation and Resilience Program](#) (ICARP). One of the key components of the ICARP program is the [State Adaptation Clearinghouse](#) is a centralized source of information and resources to support planning for and implementing climate adaptation projects to promote resilience across California. The State Adaptation Clearinghouse is a searchable database of resources organized by adaptation topic or region, case studies, tools and data that supports an evolving community of practice amongst public agencies, planners, and decision makers including state, tribal, local, and regional governments. ICARP includes a nascent program that is still building capacity to provide technical assistance.

¹⁴ Southern California Association of Governments. (2021). *Regional Climate Adaptation Framework*. <https://scag.ca.gov/climate-change-regional-adaptation-framework>.

¹⁵ Southern California Association of Governments (2021). Southern California Climate Adaptation Planning Guide https://scag.ca.gov/sites/main/files/file-attachments/socaladaptationplanningguide_oct2020_0.pdf

¹⁶ Southern California Association of Governments. (2021). SB 379 Compliance Curriculum Guidebook. https://scag.ca.gov/sites/main/files/file-attachments/3000_sb379guidebook_final.pdf

Status of SB 379 Compliance

The Governor's Office of Planning and Research (OPR) conducted several efforts to understand where California jurisdictions are in complying with SB 379. In 2019, OPR released "Local Jurisdictions Adaptation and Resiliency Planning: Senate Bill 379" an informal survey inquiring local efforts to meet SB 379 requirements. The survey results provided OPR and other interested stakeholders insight into a small sample of jurisdictions that were working to meet SB 379 requirements.¹⁷ The survey responses provided information regarding jurisdictions' ability to fulfill SB 379 requirements, and insight into local jurisdictions' planning processes. Figure 2 and 3 illustrate the percentage of cities and counties that have addressed elements of SB 379.

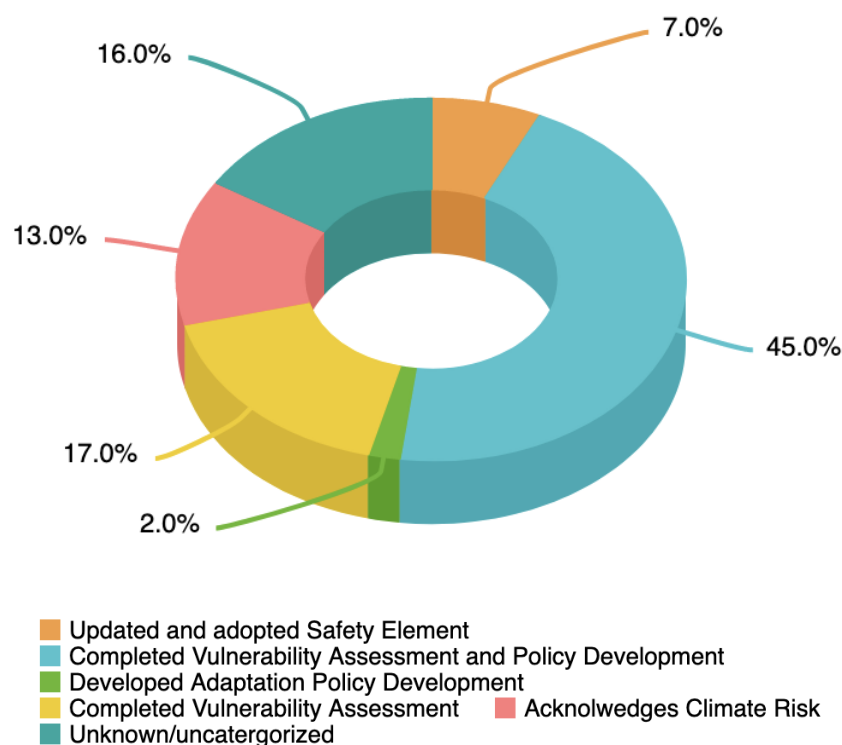


Figure 2: Percentage of Adaptation Levels (City)¹⁸

¹⁷ CA Governor's Office of Planning and Research. (2019). (rep.). *Local Adaptation and Resiliency Planning: SB 379 Survey Report*. Retrieved from <https://opr.ca.gov/docs/20200626-SB-379-Report.pdf>.

¹⁸ Governor's Office of Planning and Research (2022). The ResilientCA Adaptation Planning Map (RAP-Map). August 25, 2022; <https://resilientca.org/rap-map/>

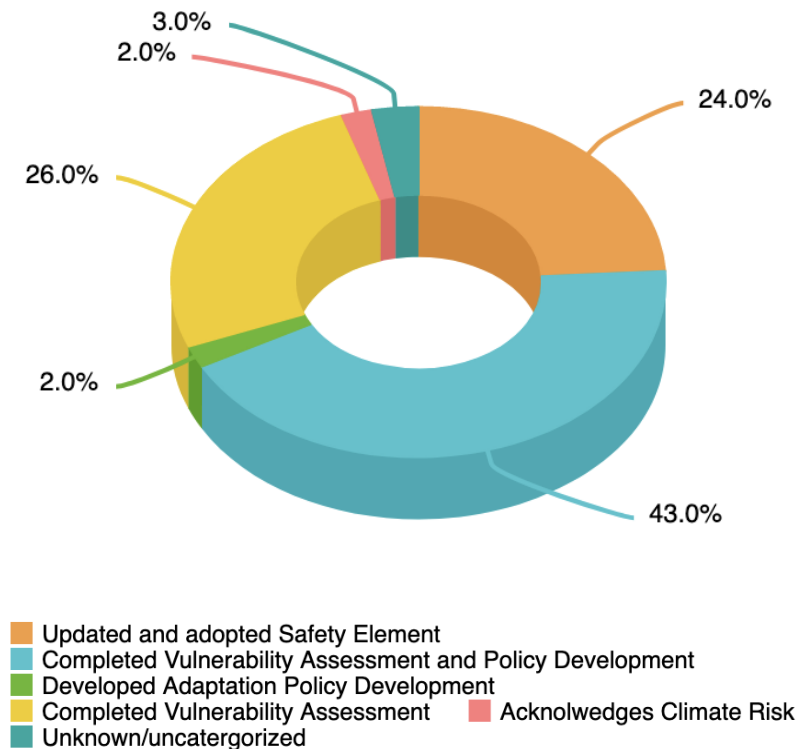


Figure 3: Percentage of Adaptation Levels (County)¹⁹

The survey found that jurisdictions were at different stages within the planning process, and jurisdictions are updating a variety of documents to comply with SB 379. Four years after the passage of SB 379, only 7% of cities and 24% of counties had an updated and adopted safety element. Many are updating their safety element, but other jurisdictions were taking the “incorporation by reference” approach and completing local hazard mitigation plans and/or climate adaptation plans and referencing them in their general plan. The survey also found that jurisdictions faced uncertainty around defining vulnerable communities and/or community assets. Lastly, the survey reported that most jurisdictions experienced barriers accessing funding and building needed capacity within their department to meet SB 379 requirements.

A 2020 climate planning report, *Ready for Tomorrow*, published by Climate Resolve, found that jurisdictions need better guidance from the state and that lower-capacity jurisdictions need more resources and funding in order to comply with SB 379.²⁰ Additionally, the report found that many Southern California municipalities with low-income, vulnerable communities lack the capacity to adequately comply with SB 379. *Ready for Tomorrow* recommends that government agencies, like the Strategic Growth Council and OPR, as well as industry, can help under-resourced jurisdictions by funding the development of grant applications.²¹ The report is complemented by a searchable

¹⁹ Governor's Office of Planning and Research (2022). The ResilientCA Adaptation Planning Map (RAP-Map). August 25, 2022; <https://resilientca.org/rap-map/>

²⁰ Eclarino, K., Hernandez, N., Jacobson, S., & Parfrey, J. (2020). *Ready for tomorrow? A snapshot of climate preparedness planning in Southern California*. Climate Resolve. <https://www.climateresolve.org/wp-content/uploads/2020/01/Ready-For-Tomorrow-SCE-Report-1.pdf>

²¹ *ibid*

matrix²² on Climate Resolve’s website that details the status of climate preparedness planning by more than 200 municipalities in Southern California.

The report highlighted that state-level policymakers and key stakeholders are often unaware of the current state of municipal level climate planning and that the State lacks consistent guidelines that address the strengths and weaknesses within climate planning efforts. The report further suggested that OPR create a statewide tracking system for localized climate preparedness and create a “best practices” report which can evaluate the strengths and weaknesses associated with compliance to SB 379 and SB1000. Most recently, the California Resilience Partnership released “Climate Crossroads” connecting policy to dollars by Resilient Cities Catalyst (RCC), Farallon, and CivicWell. This landscape analysis report includes [six core recommendations](#) to inform the design of more effective and equitable State grant programs.

Results

The Project Team reviewed plans and interviewed planning teams to identify best practices and barriers to SB 379 compliance. Results are organized into the following topic areas:

- [Planning Approaches](#)
- [Plan Preparation](#)
- [Strategies and Policies](#)
- [Plan Implementation](#)

Following the discussion of each of these topic areas is a table indicating the conclusion or recommendation that the Project Team generated from the results.

Planning Approaches

Local jurisdictions may address climate adaptation by updating their general plan, or addressing the requirements in another planning document such as a local hazard mitigation plan (LHMP) or stand-alone Climate Adaptation Plan, then referencing the plan in their general plan’s safety element. While general plans can be effective in addressing climate adaptation challenges related to land use, they are often broad, visionary documents that often do not provide specific details on actionable projects or programs.

A recent study looked at the effectiveness of different scales of climate adaptation plans and found that cities with narrow-scope plans were more effective when they were focused on reducing climate risks in their jurisdictions and steering development away from areas with high exposure to climate hazards.²³

²² Climate Resolve. (2020). *Ready for Tomorrow*. <https://www.climateresolve.org/ready-for-tomorrow/>

²³ Lyles, W., Berke, P., & Heimon Overstreet, K. (2018). *Where to begin municipal climate adaptation planning? Evaluating two local choices*. *Journal of Environmental Planning and Management*, Vol 61, Issue 12. <https://www.tandfonline.com/doi/full/10.1080/09640568.2017.1379958>

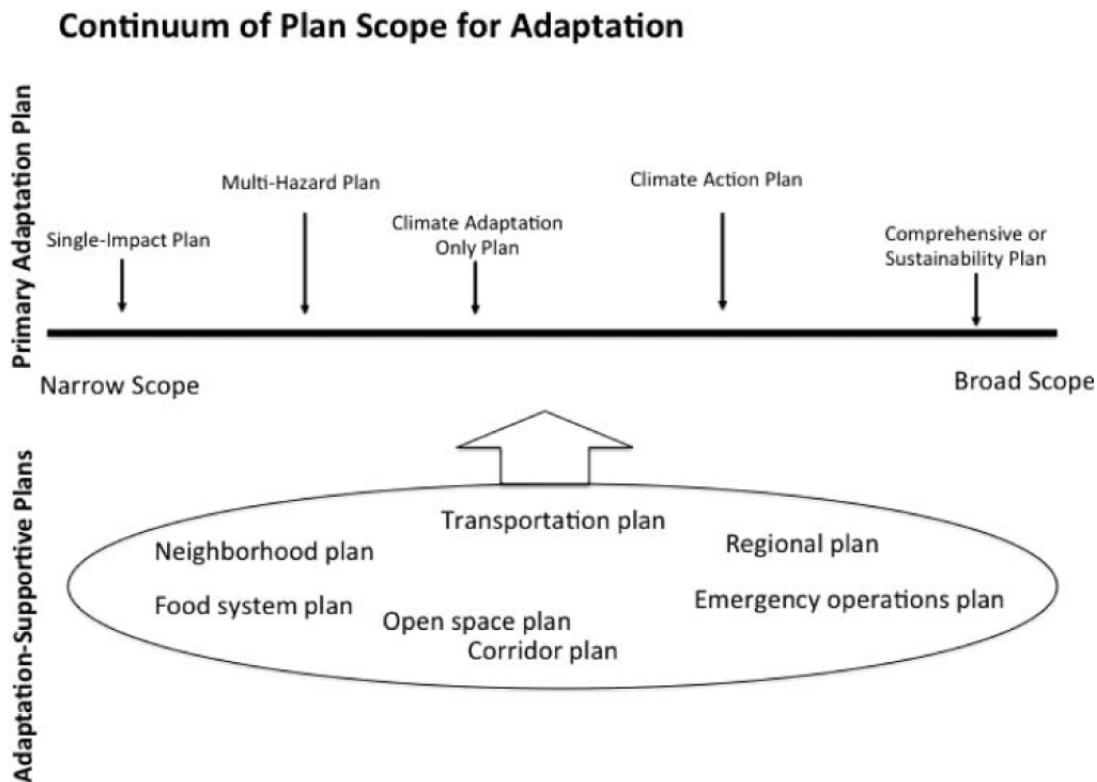


Figure 4: Different scales of climate adaptation plans can be used to address varying aspects of regional and local climate vulnerability.²⁴

Some jurisdictions may choose to pursue a hybrid approach that includes the preparation of a climate adaptation plan in addition to a general plan update. Narrow scope and broad scope plans can be used in tandem, where regional collaboration can address multi-jurisdictional sectors (e.g. agriculture) while local municipalities can focus on protecting local critical infrastructure and community assets.

Broad scope plans can be useful in scenarios where regions are jurisdictionally fragmented. Narrow scope plans, when designed to address locally specific climate hazards, can be effective in safeguarding vulnerable areas from further development and involving community input throughout the planning process.²⁵ Regardless of approach, the adaptation policies should be consistent across planning documents.

Comprehensive Safety Element Update

A common approach to SB 379 compliance involves comprehensively updating the safety element of the general plan to directly include a vulnerability assessment that identifies the risks that climate change poses to the local jurisdiction. Findings from the vulnerability assessment are used to create a set of adaptation and resiliency strategies that reduce or mitigate identified climate risk and impacts.

²⁴ Ibid pg 5

²⁵ Lyles, W., Berke, P., & Heimon Overstreet, K. (2018). *Where to begin municipal climate adaptation planning? evaluating two local choices*. Journal of Environmental Planning and Management, Vol 61, Issue 12. <https://www.tandfonline.com/doi/full/10.1080/09640568.2017.1379958>

This may occur as part of a whole general plan update, or a jurisdiction may choose to update only specific elements in their general plan.

The City of Pacifica took this approach by completing a full general plan update in 2022 that incorporated a climate vulnerability assessment and adaptation policies into their safety element. The Pacifica General Plan was updated in coordination with the Local Coastal Plan (LCP), for coastal considerations. The Town of Mammoth Lakes also chose to do their SB 379 compliance directly in their general plan as a result of a CalTrans SB 1 grant they received to do the work.

The City of Ceres incorporated climate adaptation in their new Health and Safety element when they adopted their new general plan in 2018. And, the County of Los Angeles incorporated climate adaptation and resilience strategies in 2022, building upon the 2021 efforts from the County's Vulnerability Assessment. The County of Los Angeles expressed the synergy between these two efforts helped to efficiently allocate key resources amongst its other activities such as the update to the County's Housing Element.

Incorporation by Reference

If not conducting a comprehensive general plan or safety element update, a jurisdiction may choose to address SB 379 requirements in a different planning document, then incorporate that plan into the general plan by adding language into the safety element which references and directs the reader to the other document. The two most common types of plan in this approach are a hazard mitigation plan and a stand alone climate adaptation plan.

Hazard Mitigation Plan

California's Assembly Bill (AB) 2140 (Section 65302.6) specifically provides that a community may adopt by reference an Local Hazard Mitigation Plan (LHMP) into its safety element if it meets applicable state requirements. LHMPs can satisfy several safety element requirements, including those in SB 379. Together, AB 2140 and SB 379 provide another avenue for SB 379 regulatory compliance via the LHMP.

One benefit of addressing SB 379 requirements through the LHMP is that federal funding is available to support updates of the LHMP. LHMPs offer a well-established process for incorporating climate projections, risk, and adaptation strategies. While the Federal Emergency Management Agency (FEMA) does not require local jurisdictions to consider climate impacts in their LHMPs specifically, the agency does provide guidance, tools, and funding to support municipalities who seek to integrate or add climate as a hazard of concern. The California Office of Emergency Services (CalOES), through the Hazard Mitigation Program Unit, offers funding for local jurisdictions to develop their LHMPs, making incorporation of the LHMP by reference a cost-effective and appealing approach for local governments to achieve SB 379 compliance.

For jurisdictions that have an adopted LHMP that includes climate change as a hazard of concern and addresses climate impacts in the risk assessment and mitigation strategies, jurisdictions may add language into the safety element referencing the LHMP, and how the LHMP responds to the requirements of SB 379. The City Santa Cruz took this approach. Their LHMP contains their Climate

Adaptation Plan as an appendix. Planning staff wrote a short reference to the LHMP, and included it in the introduction of the safety element. This allowed the City to save time and money that would otherwise need to integrate the analysis and strategies of other plans into the safety element. Staff estimated that they saved 6 months of time by incorporating by reference.

Sonoma County chose to do a Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) in partnership with four cities and towns in the County, and nine special districts. The MJHMP effort was led by Tetra Tech and, although satisfying the requirements for developing an LHMP and including significant content on climate change, did not meet the requirements for SB379. The County and participating cities are currently working to incorporate the MJHMP into their general plans to reach SB 379 compliance under contract to Rincon Consultants. The County chose this route to compliance because they were able to obtain a planning grant from FEMA to prepare the LHMP, which allowed for a significant amount of work to be completed using federal funding. Similar to Sonoma County, Tulare County in the San Joaquin Valley are in the process of drafting a new Multi-Jurisdictional Hazard Mitigation Plan intended to reach SB 379 compliance, and are incorporating elements of environmental justice into the plan update.

It's important to note that LHMP's are limited in addressing one of the most crucial climate impacts, extreme heat. The cost effectiveness requirements associated with FEMA Hazard Mitigation program make funding extreme heat projects nearly impossible. Only a handful of heat mitigation projects have been approved.

In September 2022, FEMA amended the Flood Mitigation Assistance and Building Resilient Infrastructure and Communities program to somewhat improve heat programs applicability. Even though heat injures more people than any other natural disaster, FEMA explicitly recommends that applicants tether heat mitigation projects to other mitigation efforts. Mitigation to flood, fire, tornadoes, hurricanes, earthquakes all merit standalone investment, while extreme heat does not. Why would a municipality write a lengthy FEMA proposal on heat mitigation only to have it rejected?

Stand Alone Adaptation Plans

If cities do not have an adopted LHMP, a stand alone climate adaptation plan provides another pathway for incorporating climate risk and adaptation strategies. By incorporating climate risk in climate adaptation plans or climate action and adaptation plans, local jurisdictions can easily identify and prioritize strategies with co-benefits—those that reduce emissions while also building community resilience. The development of climate action and adaptation plans can also serve as a community education campaign that brings awareness to the issues and signals a city's commitment to acting on climate change. Cities, however, are not required to make climate adaptation plans, nor are specific funds delegated to develop them. The City of San Diego prepared a stand-alone plan, Resilient SD, which will be incorporated by reference in the safety element.

Incorporating Environmental Justice into Climate Adaptation Planning

Per OPR’s General Plan Guidelines on Environmental Justice (EJ) Elements, “Local agencies should consider coordinating preparation of an EJ element or equivalent, as described in this section, with other statutory requirements to address climate change. While not specifically required in Government Code Section 65302(h), local agencies should consider the disproportionate impacts of climate change on vulnerable and low-income communities compared to the population as a whole; therefore, considering climate vulnerability in low-income communities when preparing the vulnerability assessment and adaptation goals, policies, and programs for the safety element would be an appropriate linkage with the EJ element or equivalent.”

SB 1000 states the need for incorporating elements of environmental justice into climate adaptation planning, to ensure that marginalized communities are less vulnerable to climatic hazards in their regions. Local jurisdictions can integrate environmental justice into their climate adaptation and resilience planning by identifying climate-vulnerable populations and communities, engaging with those communities, centering their needs in planning processes, and ultimately prioritizing adaptation investments in those communities.

Identification of Climate-Vulnerable Populations

SB 1000 requires cities and counties to identify “disadvantaged communities” (DACs), which are defined as those experiencing disproportionate environmental or pollution burden. This definition of disadvantaged follows the CalEnvironScreen index which maps DACs according to their index of factors. However, there are many ways to measure and describe the barriers and disadvantages communities face and there is an increasing call from frontline communities to expand the acceptable sources of DAC definitions to allow for set aside funding and resources to flow to communities that need them but may not fall under CalEnvrioScreen’s definition.

While disadvantaged communities are likely to also experience disproportionate impacts of climate hazards, disadvantaged communities do not encompass all climate-vulnerable communities.

Identification of or mapping climate-vulnerable populations is one way local jurisdictions are incorporating environmental justice considerations in the safety element/adaptation planning. However, processes and tools for the identification of disadvantaged or climate-vulnerable communities are inconsistent and often inadequate in identifying the most vulnerable communities at a local scale, as data is often aggregated at the census tract level. Therefore, community engagement is critical in identifying the most vulnerable populations. See the community engagement section of this report (page 40) for best practices on community engagement and identification of vulnerability and assets.

Involving Climate-Vulnerable Communities in Planning

Communities which are the most vulnerable to climate change often experience legacies of structural marginalization. Involving historically marginalized communities in climate adaptation planning is critical to accurately respond to the needs of these communities, and addresses issues of systemic discrimination in the process. To center the needs of climate vulnerable populations in climate planning, the OPR General Plan guidelines suggest engaging communities, especially with low-income communities, communities of color, sensitive populations, tribal governments, and organizations focused on public health and environmental justice, early on in the climate vulnerability assessment process.²⁶ Composing a steering committee of community leaders and municipality employees can be an effective strategy to organize collaborative decision making during climate adaptation planning processes. Engaging with community leaders via a steering committee allows for community members to provide feedback at every step of the planning process, from vulnerability assessment to plan implementation.²⁷

Forming trusting relationships with community leaders is key in ensuring community perspectives are integrated into climate adaptation planning. Partnering with CBOs, or other entities such as religious centers, academic institutions, or business associations facilitates stronger relationships with communities that should be involved in planning processes. These types of organizations may have trusted relationships and can potentially provide pathways for involvement in local climate adaptation planning. Creating relationships and incorporating the perspectives of community members through the assistance of an NGO or CBO can accelerate the process of incorporating accurate representation of community needs and perspectives in climate adaptation planning.^{28 29 30} For example, the City of San Diego has adopted the following adaptation policies in their Resilient SD Plan:

- Policy RE-4: Deepen community partnerships to support greater community involvement in resilience action and plan implementation.

²⁶ Staples, M.A. (2021). *Environmental Justice in General Plans: Strategic Considerations for Planning and Land Use Professionals*. Argent Communications Group.
<https://argentco.com/post/environmental-justice-in-general-plans-strategic-considerations-for-planning-and-land-use-professionals/>

²⁷ Ziegler T.B. et al. (2019) *Shifting from “Community-Placed” to “Community-Based” Research to Advance Health Equity: A Case Study of the Heatwaves, Housing, and Health: Increasing Climate Resiliency in Detroit (HHH) Partnership*. International Journal of Environmental Research and Public Health.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6765799/pdf/ijerph-16-03310.pdf>

²⁸ Obraczka, M., et al. (2017). *Analysis of Coastal Environmental Management Practices in Subregions of California and Brazil* Journal of Coastal Research 33(6).
https://www.researchgate.net/publication/314112559_Analysis_of_Coastal_Environmental_Management_Practices_in_Subregions_of_California_and_Brazil

²⁹ Duran Fiack, Jeremy Cumberbatch, Michael Sutherland, Nadine Zerphey, Sustainable adaptation: Social equity and local climate adaptation planning in U.S. cities, *Cities*, Volume 115, 2021 <https://doi.org/10.1016/j.cities.2021.103235>.

³⁰ Phadke, R., Manning, C., & Burlager, S. (2015). *Making it personal: Diversity and deliberation in climate adaptation planning*. Climate Risk Management.
<https://www.sciencedirect.com/science/article/pii/S2212096315000236>



Prioritization of Climate Adaptation in Climate-Vulnerable Communities

Jurisdictions are prioritizing adaptation strategies in areas with the greatest social vulnerability to climate impacts. When climate vulnerable communities are identified and engaged, jurisdictions must follow through with policies that prioritize adaptation projects and programs in these communities to ensure that trust is built and not broken. For example, the City of San Diego has adopted the following adaptation policies in their Resilient SD Plan:

- Policy RE-1: Prioritize resilience investments and implementation of strategies in Communities of Concern, as identified in the Climate Equity Index.
- Policy RE-3: Prioritize strategies with multiple benefits that increase adaptive capacity of the City's most vulnerable communities.
- Policy RE-5: Ensure vulnerable communities have resources necessary to respond to climate change impacts.

While the City is still in the process of updating their Environmental Justice Element, they are building on the work done in the Resilient SD plan. They cited that the creation of Resilient SD allowed the City to build new connections to their community which they had not had before and learned new strategies to communicate and build trust which they will utilize when working on their Environmental Justice update.

Conclusions and Recommendations

Table 1 below lists the conclusions and recommendations that resulted from the Project Team’s findings with respect to planning approaches. A more detailed description of the conclusions and recommendations can be found at the end of this report.

Table 1. Planning Approaches - Conclusions and Recommendations

Conclusions	3	Most of the standalone adaptation plans were exceptionally detailed and could lead to transformative implementation projects if embedded in other plans and programs.
	4	LHMP updates are a cost efficient approach for SB 379 compliance in the short term, but have limitations to implementation.
	5	Updates to General Plans are more effective than other planning approaches.
	6	Identification of disadvantaged communities is one way local jurisdictions are incorporating environmental justice considerations in the safety element/adaptation planning; however, mapping tools and processes are inadequate in identifying the most climate vulnerable populations.
	7	Forming trusting relationships with community leaders is key in ensuring community perspectives are integrated into climate adaptation planning
	19	SB 379 has spurred climate adaptation planning that wouldn't have happened otherwise; but there was less planning completed than intended.
	20	General plan updates and standalone adaptation planning processes yielded useful outcomes.
Recommendations	14	Large jurisdictions should develop a standalone climate adaptation plan.
	15	Mid-sized jurisdictions should update their general plan to account for climate impacts as well as update their LHMP.
	16	Jurisdictions with fewer than 80,000 people should utilize external resources to comply with SB 379.

Plan Preparation

Climate adaptation planning is a time-intensive and costly process, especially for smaller, less funded jurisdictions throughout the State. Lack of staff capacity and funding was identified as a critical resilience challenge in the Office of Planning and Research's 2020 Adaptation Planning Survey results, wherein 76% of jurisdictions reported no staff or very little staff, with limited funding for consultants to address climate resilience and adaptation³¹. In addition, most staff lack technical knowledge or expertise to lead a climate adaptation or resilience planning process, with their primary focus or job description not related to climate planning³². These internal challenges can result in a reliance on outsourcing climate planning to private consultants. The scale at which climate adaptation plans are conducted also influences the specificity of the policies, projects, and programs that are adopted. Whether a plan is developed internally or externally, and at what scale, determines how communities engage in the adaptation planning process.



Internal Staff vs Consultant Plan Preparation

State legislation requiring local jurisdictions address climate impacts and environmental justice in their general plans has left many local governments scrambling to navigate a complex regulatory environment with ambiguous, and at times conflicting guidance³³. The result has been the rise of a private climate planning consulting sector. Consultants are tasked with developing not only tools and frameworks to support local planning, but also the plans themselves. The average general plan update cycle for a jurisdiction in California can cost anywhere between one to ten million dollars or

³¹ CA Office of Planning and Research (2020) *2020 Annual Planning Survey Answers*.
<https://opr.ca.gov/publications.html>

³² California Resilience Partnership (2022). *Climate Crossroads: California's Readiness to Act on Climate Resilience*.
<https://www.rcc.city/california-climate-crossroads#about-the-report>

³³ California Resilience Partnership (2022). *Climate Crossroads: California's Readiness to Act on Climate Resilience*.
<https://www.rcc.city/california-climate-crossroads#about-the-report>

more—an expense that is rooted in the lack of capacity for local governments to do the work in house, depending on the size of the jurisdiction. This exacerbates a cycle of outsourcing that leaves communities with a well-polished document, but too often with little direction on how to implement policies and programs, or one-size-fits-all strategies that may not be tailored to the community.

While consultants can provide specific technical expertise and support project management, too often consultants operate under a fee for deliverable model that may limit the effectiveness of the planning process. For example, if the work is outsourced to a private consultant, city staff may lose ownership over the plan, and not engage in as many cross-departmental conversations, resulting in uncertainty of how the plan should be implemented. This may create difficulty for the County as they seek to operationalize the plan. Outsourcing to consultants may also result in a lost opportunity to build in-house expertise on climate resilience as well as develop lasting relationships with community based organizations and residents, if the public engagement process is also done externally. For example, the Strategic Growth Council (SGC's) Build Organize Optimize Strengthen and Transform (BOOST)³⁴ and the CivicSpark³⁵ AmeriCorps program exists to help build the capacity of local jurisdictions to advance their climate goals.

On the other hand, the use of consultants may also benefit the planning process and the local jurisdiction through increasing capacity and education of staff, as well as building relationships. Consultants can help bolster the capacity of staff and help build expertise when they operate as an extension of staff, rather than operating independently on deliverables. Jurisdiction staff cannot be experts in every sector, so working with consultants can help educate staff on climate adaptation so that they are better equipped to manage and integrate adaptation concerns in other areas of their operations. Consultants are particularly helpful in distilling complex scientific information and developing detailed climate scenarios and assessing the potential impact on critical assets. Similarly, contracting with local nonprofits, rather than national or global consulting firms, can help bolster community engagement and help staff develop relationships with community leaders.

³⁴ Institute for Local Governmental (2021). *BOOST Program*. <https://www.ca-ilg.org/boost-program>

³⁵ CivicSpark. (n.d.). *Our Mission*. <https://civicspark.civicwell.org/>

Consultant Preparation or Technical Assistance



Strategic Growth Council BOOST Program

The Strategic Growth Council's (SGC) BOOST program provides under-resourced cities and towns in building capacity, optimizing existing resources, strengthening community partnerships, and transforming their approach to address and fund climate activities. Through BOOST, technical assistance providers partner with seven cities and towns to provide tailored support with advancing climate action and resilience. Selected jurisdictions vary in size, geography, and demographics and are selected based on their status as low-income or disadvantaged communities, limited local government staff capacity, and demonstrated desire to work on climate-related issues. These communities receive capacity building support in the form of training, partnership development, community engagement planning and implementation support, grant application assistance, planning support, and communications assistance. In the second round of the program, BOOST technical assistance providers are supporting the development of the City of Maywood's Climate Action and Adaptation Plan, implementation of the City of Rialto's Climate Adaptation Plan and the update of the City of La Puente's Safety Element to comply with SB 379 requirements.



Sonoma County

Sonoma County contracted with TetraTech to develop their Multi-Jurisdictional Hazard Mitigation Plan. The County laid out expectations and necessary items to include at the outset of the project and had several review sessions with TetraTech, while TetraTech led the research, writing, and public engagement aspects of the overall plan. TetraTech built potential actions, responsible departments, and a reporting timeline linked to their automatic reporting software, but they will not be under contract when it is time to report on implementation. County staff and stakeholders were responsible for the development of climate related hazards discussions, much of which was not included in the final MJHMP.

While the FEMA LHMP compliance gained through creating an MJHMP is important, stakeholders cited that there is a downside to a common approach to planning when using outside consultants where the jurisdiction can only provide enough funding to create a document from the consultant's existing template, then they close the project without having incorporated the locally available information. This approach may not only miss opportunities, but disrupt continuity of the jurisdiction's or region's approach to climate. Stakeholders cited that Sonoma has extensive local work that could have been incorporated and aligned in a regional plan, yet this approach required a more flexible framework and timing than was possible through a standard MJHMP development process.

Rincon Consultants has since been hired to take the MJHMP and augment information to provide a climate vulnerability assessment that will inform the safety element for Sonoma County, which would then be intended to comply with SB 379. Acknowledging the emergency management centered approach in the MJHMP, the SB 379 compliance process will result in significant additional time to complete a process that if developed at one time would have been more efficient, more timely, and likely less expensive in aggregate. Following the completion of the SB 379 compliance process, local jurisdictions will then need to adopt relevant components of the regional plans into local plans.

Although regional planning processes can have many benefits, the multiple authors and processes spread over several years suggest that the Sonoma County process was not ideal to establish a clear and implementable set of plans and policies that guide implementation.



Los Angeles County

The County of Los Angeles' General Plan Safety Element Update's adaptation and resilience strategies were based on the data of the County's Climate Vulnerability Assessment (CVA). In the beginning stages, the County looked at ways to conduct the CVA in-house, but found difficulty since they found its unincorporated communities and 88 cities faced very diverse climate hazards.

The Los Angeles County CVA team included Buro Happold as the prime consultant, Climate Resolve which led the stakeholder engagement process, Jessica Ruvinsky with Bellwether Collaboratory, who led the cascading impacts analysis, and several advisors including energy and infrastructure specialist Mikhail Chester, and the sustainability and equity expert Natalie Donlin-Zappella. The Department of Regional Planning, along with their sister agency, the County Office of Sustainability, created a vulnerability assessment that addressed climate impacts countywide, including municipalities, not merely the unincorporated areas within the County's jurisdiction. The County Plan is also mentioned, below, in the Internal Preparation section; as the Safety Element update was performed internally.



City of Rialto

In 2019, the City of Rialto prepared its Climate Adaptation Plan (CAP) and worked with the consulting firm, Dudek, who previously were contracted to assist the City to develop their Active Transportation Plan (2018) and Safe Routes to School Plan (2018). Both of these plans were developed with extensive community engagement which identified several knowledgeable stakeholders that also were a part of the City's CAP Technical Advisory Committee. In addition to complying with SB 379 by preparing a vulnerability assessment, the CAP also included an equity assessment which identifies how climate hazards disproportionately affects its vulnerable populations.

The ongoing partnership between the City of Rialto and Dudek proved to be beneficial to the City as COVID-19 led to unexpected staff turnover. Dudek's lead Project Manager provided the City with institutional memory to help bridge short term staffing challenges with more than five years of knowledge working on prior planning development and implementation in the City.

Internal Preparation



City of San Diego

The City of San Diego staff prepared a policy document, Climate Resilient San Diego, which was developed based on a technical vulnerability assessment authored by ICF. Using this assessment, the City of San Diego was able to create the Resilient SD plan internally, leveraging partnerships with NOAA and NASA, as well as volunteers who helped complete their extreme heat assessment. Planning staff also received support from the Strategic Growth Council's Build Organize Optimize Strengthen and Transform (BOOST) program, which provides customized and tailored support to help build staff capacity and provide resources to develop climate projects and secure funding. These external

supports allowed City staff to drive the planning process internally, using mainly staff time to fund the process.



City of Santa Cruz

The City of Santa Cruz also prepared their Climate Adaptation Plan internally, with outside assistance only on the sea level rise vulnerability assessment which was completed by the Central Coast Wetlands Group. The Climate Adaptation Plan was included as an appendix to their Local Hazard Mitigation Plan, but functions as a stand alone document as well. They were able to complete the Climate Adaptation Plan with only staff time, including intern support. For their core Project Team, they included a representative from almost every City department (excluding human resources and other administrative departments) which worked well for cross-department consensus and was followed by a citywide review process that allowed all departments to review and comment on the plan. The City of Santa Cruz is planning their next Climate Adaptation Plan, and is currently planning on hiring consultants to assist their efforts, although it is likely that City staff will stay deeply involved and work closely with the consultant rather than assigning a deliverable.

County of Los Angeles

Although the County of Los Angeles Safety Element utilized the CVA's findings on countywide natural and climate-induced hazards, the development of the Safety Element was performed internally by its Department of Regional Planning. During development, other County departments were consulted and provided feedback including the Department of Public Works, the Fire Department and the Department of Public Health. These comments aided in the development of policies and strategies, such as including updating fire-related land use and building regulations, updating hazard maps, and clarifying language on risk to development in wildfire-prone areas.

Regional Adaptation Planning & Coordination

While the benefits of every jurisdiction developing specific policies to protect their most vulnerable assets and populations is evident, our findings suggest that it can be redundant and inefficient for every city and county to prepare a climate vulnerability assessment (as SB 379 requires) given the regional nature of climate impacts. Collaborating across jurisdictions to compose a robust, regional vulnerability assessment would reduce the cost, tax on staff capacity, and redundancy of local plans.

Assessing vulnerability and developing a vision and resiliency strategies at the regional level ensures consistent climate projections and scientific data are used across jurisdictions, as well as alignment between local jurisdictions and special districts and utilities. A more regional approach to climate adaptation would also allow for cities to focus on narrower planning efforts (e.g. sea level rise adaptation plan, urban greening plan, energy resilience plan, etc.) and implement specific projects and programs that protect vulnerable communities and assets, consistent with the regional strategy. Understanding these benefits, several regional organizations have taken initiative to coordinate climate adaptation and resilience planning.

For example, several councils of governments (COGs) throughout the State have developed regional vulnerability assessments and adaptation frameworks, including the Western Riverside, Gateway

Cities, and San Joaquin, and South Bay COGs. These planning frameworks and toolkits have helped streamline local compliance with SB 379 in their respective regions by providing resources such as vulnerability assessment tools, climate data and projections, planning guidance, model policies, staff capacity, and grant support to local jurisdictions.

In other cases, counties have taken an active role in supporting adaptation and resilience planning for cities and the unincorporated areas through the coordination of multi-jurisdictional hazard mitigation plans or regional adaptation plans. Los Angeles County developed a county-wide climate vulnerability assessment. The CVA was developed by the County's Chief Sustainability Office in collaboration with a wide range of partners, including an interdepartmental County Project team, an Advisory Committee made up of community based organizations, universities, utilities, and local government agencies, and a Consultant Team.

In the Bay Area, regional agencies are leading the coordination of a regional sea level rise adaptation strategy. The San Francisco Bay Conservation and Development Commission developed the Bay Adapt Joint Platform to provide guiding principles and region-wide goals, actions, and tasks to expedite and improve the coordination of sea level rise adaptation in the Bay Area.



ARCCA collaboratives – like the Capital Region Climate Readiness Collaborative (CRCRC), Bay Area Climate Adaptation Network (BayCAN), Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC) and San Diego Regional Climate Collaborative (SDRCC) – can be enormously useful in building local staff understanding of adaptation strategies, as well as provide technical assistance, and guide the development of regional roadmaps. These efforts have influenced individual adaptation plans.

These examples demonstrate how regional organizations can support and influence individual adaptation plans, and can help inform policy amendments that allow for these regional organizations and agencies to lead vulnerability assessments/adaptation planning processes in order to reduce the redundancy of local planning efforts.

Regional Plan Crosswalking

Whether or not a local jurisdiction exists within the service area of a regional organization that has provided a regional climate adaptation framework, smaller jurisdictions can and should align their policies with regional plans. For example, the City of Orland updated their safety element to be consistent with the Glenn County Multi Jurisdictional Hazard Mitigation Plan and the safety element specifies that the MJHMP should be consulted for further information on risks. The safety element also refers to fire hazards discussed in the Glenn County Community Wildfire Protection Plan (CWPP). Similarly, to understand overlaps and gaps in the City of Santa Cruz and Santa Cruz County's plans, the City of Santa Cruz crosswalked all of their adaptation strategies with the County's and listed discrepancies as well as areas of alignment with the goal of creating a broader understanding of coordinated climate adaptation.

Community Engagement

Conducting robust community engagement throughout the development of a climate adaptation plan is a necessary component of creating better policies, programs, and projects that meet the needs of, and are well supported by, the communities they are intended to serve. Historically, community engagement has encompassed merely informing communities about a project, or asking communities to provide input on a plan that has largely already been developed, rather than empowering communities to have influence over a planning process. Since the adoption of SB 379, there has been significant progress in the understanding and resources available to support equitable community engagement and community-driven resilience planning. Community-driven climate resilience planning is defined as the process by which “residents of vulnerable and impacted communities define for themselves the complex climate challenges they face, and the climate solutions most relevant to their unique assets and threats.”³⁶

The Project Team identified several best practices for equitable community engagement and community driven resilience planning including: (1) compensating community members for their time, (2) co-developing of community engagement plans, (3) assessing community vulnerability and assets, (4) increasing the capacity of community based organizations to lead community outreach and engagement activities, (5) combining and streamlining engagement efforts, and (6) utilizing culturally appropriate climate communications.

Compensation for Community Time

One of the most important factors to take into account when embarking on community engagement is that under-resourced communities should be compensated for their time and expertise. In many public engagement efforts, jurisdictions continue to cite that they often engage with the same groups over and over, those which have the leisure time to show up to public meetings. Providing stipends or other forms of compensation can help remove one of the barriers to participation for members of the communities that jurisdictions are most trying to reach. If asking community members to attend meetings, join an advisory body, or participate in surveys and other activities, jurisdictions need to factor in appropriate compensation in their outreach budgets. The City of Santa Cruz gave stipends for one-on-one interviews for people from frontline communities and the County of Los Angeles gave \$1,250 stipends to each CBO that participated in its Advisory Committee, and \$50 stipends to listening session participants

Co-Development of Community Engagement Plans

The City of San Diego developed a detailed separate community engagement plan for their Resilient SD plan. The plan consisted of three engagement tools, contracting with CBOs, two polling efforts, both online and in-person, two workshops, and several events throughout different communities. The engagement tools were posted online, promoted through social media and sent directly to certain CBOs. Engagement tools asked for participants’ age, ethnicity, and a vote on vision, goals, and resilience/adaptation concerns and priorities. The polling opportunities were available online or in person at several types of events. This included polling using stickers to vote to encourage participation from youth.

³⁶ National Association of Climate Resilience Planners. (2017). *Community-Driven Climate Resilience Planning*. <https://movementstrategy.org/wp-content/uploads/2021/10/Community-Driven-Climate-Resilience-Planning-A-Framework.pdf>

The City also contracted directly with several CBOs to do outreach and information gathering on the behalf of the City and the Resilient SD Plan. Each CBO had their own approach tailored to their community, but activities included phone banking in English and Spanish, CBO-run workshops, surveys, and presentations to their communities.



Tulare County is in the drafting phases of a new MJHMP, and is already seeking to engage diverse groups of stakeholders by broadening their call for input into the plan. Their outreach videos feature local Spanish speakers asking for input in Spanish and the video included representatives from tribal nations showing early engagement with various communities.³⁷ While they are still early in the planning process, the early partnerships shown on the outreach videos demonstrate that the County is likely going to be working closely with community organizations or tribal governments in the process.

³⁷ Tulare County Resource Management Agency (2022). Tulare County Adaptation and Resiliency Plan & Local Hazard Mitigation Plan.
<https://tularecounty.ca.gov/rma/planning-building/tulare-county-adaptation-and-resiliency-plan/>

Assessing Community Vulnerability and Assets

Equitable and community driven resilience planning involves assessing climate vulnerability through a participatory process. While jurisdictions seeking to comply with SB 379 may tend to focus on assessing vulnerability of the built environment and infrastructure, centering voices of the community in the planning process ensures that the vulnerability assessment centers people. Involving residents and community leaders in the vulnerability assessment has also been shown to increase community support for the solutions developed to mitigate the identified risk to people and communities.



The County of Los Angeles' stakeholder engagement for its CVA process occurred from August 2020 through 2021, and due to the COVID-19 pandemic had to pivot using online platforms such as Zoom, Mentimeter, and Google Jamboards. This proved successful given the circumstances as over 400 stakeholders were able to participate in the development of the CVA. The stakeholder engagement process for developing the CVA included a range of activities, including public workshops, a cities summit, Advisory Committee meetings, listening sessions co hosted by trusted community leaders, and stakeholder interviews. These activities helped to inform the CVA's data needs, equity framing, stakeholder engagement process, desktop review, physical and social vulnerability key findings, and insights on cascading impacts.

Additionally, the County of Los Angeles' outreach and engagement plan for the Safety Element Update prioritized gathering information and feedback from stakeholders in communities that are the most vulnerable to specific hazards. Throughout 2020, the County hosted four focus groups (planned for five but the flood hazard focus group were canceled due to a lack of attendance), two on

extreme heat and two on wildfire. Additionally, surveys on wildfire, flood, and extreme heat were made available on the project website to gather information on adaptive capacity from a wider audience. The surveys were offered in English, Spanish, and Chinese from May 2020 through September 2020. Staff received 768 responses in total. And in 2021, the County hosted four climate adaptation workshops where the public had opportunities to discuss extreme heat, flood, and wildfire hazards.

Another route jurisdictions have taken is creating indexes to measure vulnerability or risk including social and environmental factors, and mapping their areas. In 2018, The City of Santa Cruz developed a social vulnerability index in their Climate Adaptation Plan. The City does not have any state-designated disadvantaged communities, as those are defined at the census tract level which is a larger geographic area than what the city considers to be their vulnerable communities. To portray these more localized areas of concern and be able to identify and serve their most vulnerable communities, the City developed five categories to measure the social vulnerability of different areas of the City. These categories included income, age, language ability, disability, and crime incidence. Climate risks, such as fire and sea level rise were evaluated separately.

The City of San Diego, whose Climate Resilient SD was released in 2021 built the index idea further and developed an extensive Climate Equity Index of 43 categories to identify communities of concern who lack access to opportunity. The metrics used to calculate a community's access to opportunity included multiple measures of pollution burden, natural disaster risk (including climate-related risk), mobility opportunities, as well as health, housing and socioeconomic factors. One of the purposes of the Climate Resilient San Diego plan is to prioritize, protect, and uplift the City's most vulnerable communities, identified through the Climate Equity Index.

Similarly, the City of Rialto prepared a Capability Assessment to address how the community's current capacity to endure hazards was taken into account to prioritize the types and extent of adaptive capacity measures. The current capacity was determined by how effective the current local policies and programs are in addressing each climate hazard. Additionally, the City prepared an Equity Assessment to show how climate hazards can disproportionately affect vulnerable populations that may have a more difficult time responding to hazard events because of age, language barriers, income, housing, or other characteristics. Vulnerable populations identified were older adults, young children, people with pre-existing conditions, and active commuters.

This approach is becoming more popular, as The Cities of Ceres and Orland are beginning the work of identifying more vulnerable populations in their communities. Both Cities listed considerations such as age, location, housing status and other factors which may make certain populations more impacted by climate change. These cities have not yet used these factors to map out where their most vulnerable populations are, but they appear to be embracing this process.

Increasing Capacity of Community Based Organizations

Partnering with Community Based Organizations amplifies the roles of marginalized community leaders in planning processes, especially if the partnering CBO are headquartered within the

municipality.³⁸ The City of San Diego piloted a new model of engagement for their CAP, which was replicated in the Resilient SD Plan. The City contracted with CBOs to do outreach in communities of concern through a contract with a fiscal sponsor. Through this model, the City of San Diego was able to compensate CBOs to develop outreach plans in the communities they serve, allowing for the development of more tailored and effective outreach materials and approaches as discussed above. Furthermore, this model allowed CBOs to implement their outreach plans, leveraging trusted relationships to effectively engage community members and collect input on the City's climate action plan and Resilient SD Plan. The City intends to use a similar approach for the preparation of the City's Environmental Justice Element.

Increasing the capacity of CBOs or community leaders to participate in long-standing community advisory committees is another effective strategy in community-driven planning processes³⁹. The City of Pacifica developed a General Plan Outreach Committee, a committee of citizens responsible for stimulating broader community engagement in the process. The General Plan Outreach Committee conducted community interviews and community forums, in addition to joint city council/planning commission workshops. Similarly, Yolo County established the Yolo County Climate Action Commission with the purpose of assisting Yolo County in addressing the climate change crisis by developing and implementing a climate action and adaptation plan.

The City of Santa Cruz credits the engagement for their Climate Adaptation Plan as the start of many long term community partnerships. Community engagement efforts for the Climate Adaptation Plan became an important starting point for a new era of community relationships in the City. As a result of this work, the City has been able to work together with different neighborhoods, community groups, and a local Tribe on projects and grants, creating enduring relationships and partnerships and learning how to support and help these partners grow capacity.

Combining and Streamlining Engagement Efforts

In the City of San Diego, there are several plans (including their CAP, Resilient SD, and their EJ Element update) which have required engagement with CBOs on similar focus areas. The result of so much ongoing engagement with communities and CBOs that are already generally under capacity is that CBOs are overtaxed and have difficulty continuing to engage with the City. From the community perspective, CBOs are providing very similar feedback across planning processes, yet, are not seeing the results of their feedback. The City appears to not have structures in place to share input received from communities among departments and planning efforts, leading to CBOs needing to repeat themselves in different engagement efforts. This results in a sense of frustration that no action is taken on the communities' feedback, despite the feedback being given multiple times. The CBOs that have been engaging with the City are ready to move away from input and make concrete contributions to implementing the plans and policies that have already been developed, through clarity on and active involvement in the City's decision-making processes. Moving forward, the City could create combined engagement efforts that are coordinated across departments to create one point of engagement for communities which can be incorporated into multiple planning processes,

³⁸ Rigolon, A. & Gibson, S. (2021). *The role of non-governmental organizations in achieving environmental justice for green and blue spaces*. Landscape and Urban Planning Vol. 205.

<https://www.sciencedirect.com/science/article/abs/pii/S0169204620314535>

³⁹ California Resilience Partnership (2022). *Climate Crossroads: California's Readiness to Act on Climate Resilience*. <https://static1.squarespace.com/static/5dba154a6b94a433b56a2b1d/t/62e044489a67c06a2076100d/1658864734999/CRP-climate-crossroads-report-09.pdf>

thus reducing the engagement demand on communities and maximizing the impact of their feedback.

Another way to streamline engagement efforts is to meet the community where and when they are already gathering, rather than expect to draw the public to a separate workshop or planning meeting. The City of Ceres used this approach in their general plan update, for which they held several types of public engagement events. In addition to the traditional route of creating workshops and public meetings which the community was invited to attend, they also made an effort to reach the community where they gathered. The City attended a community street fair, hosting a booth explaining the plan update and with an interactive board that allowed community members to vote with stickers on what priorities were most important to them. They also gave presentations in English and Spanish at a local church. This level of outreach was likely possible because updates were part of the comprehensive general plan update, rather than a stand alone climate plan and it allowed the City to combine engagement from multiple general plan elements into one point of contact for the community.

The City of San Diego also combined engagement efforts with other community events.. A local CBO that the City worked with to do engagement surveyed and presented material about the resilience plan at ongoing food distribution events. City staff also tabled at a local market, a back to school event, an outdoor movie event, and a local circus, presenting information and opportunities to fill out surveys on the plan goals and strategies. In addition, the City partnered with a local YMCA and a CBO to install a living wall in an event that included surveying and education on the Resilient SD plan.

Culturally Appropriate Climate Communications

When doing community engagement, it is critical to use tools, platforms, and language appropriate to the targeted communities. Beyond translation of materials into relevant languages for the public, many jurisdictions have found the importance of using non-politicizing language, being transparent about their process, and using tools and information sharing which are easily accessible to their communities.

The City of San Diego cited some of their public engagement success on their focus on hazards beyond sea level rise and steering away from the term “managed retreat” when discussing sea level rise. They observed how unsuccessful other jurisdictions were in public conversations on sea level rise, so in their communications, the City of San Diego focused on how additional climate hazards, such as extreme heat, could impact people on a daily basis. They focused on outlining all impacts of climate change which would affect all the City’s citizens and in shoreline discussions, they focused on discussing nature-based solutions and land use change rather than retreat.

Digital engagement is another important facet of community engagement and information sharing. Online tools can increase accessibility since they are available 24/7 and can use visuals and translation to broaden audiences. Additionally, they are an important part of transparency in plan processes, letting the public understand the plan and easily access information about meetings, decisions, and review periods. Several of the jurisdictions reviewed, including the City of Pacifica, City of Santa Cruz, Sonoma County, and City of San Diego created websites for their SB 379 update plans or at least separate webpages on their jurisdiction site.

There are also ways to go beyond transparency on the plan process to engage the public through online tools that provide resources back. The Sonoma County MJHMP used a story map for their public hazard awareness campaign with publicly accessible data, which generated a fair amount of engagement and web traffic.

Sonoma County's ArcGIS mapping tools created a navigable map that allows the public to easily scroll through and zoom in on the County's hazards in more detail than a static map in a PDF document.⁴⁰ In other communications, however, the County's consultant experienced challenges when presenting technical documents to the public. After engagement, it was noted that more work was needed in order for the documents to be understandable to the public, in order for the public to be able to give feedback.

Conclusions and Recommendations

Table 2 below lists the conclusions and recommendations that resulted from the Project Team's findings with respect to plan preparation. A more detailed description of the conclusions and recommendations can be found at the end of this report.

Table 2. Plan Preparation - Conclusions and Recommendations

Conclusions	12	If regional agencies developed the regional plans, they were used.
	13	Nonprofit support helped municipalities, but more help is needed.
	14	Inconsistent approaches across California's many jurisdictions in addressing SB 379 requirements.
	15	Capacity constraints, lack of knowledge, and limited funding sources tend to lead to anemic approaches and unspecific policies to address climate change.
	16	If "climate champions" within a local jurisdiction transition to a different role, the institutional memory of the organization is often lost.
	17	City planners are generalists, not climate specialists.
	18	Consultants are generally doing good work, but hiring them does not build long-term capacity in local governments.
Recommendations	1	Invest in workforce development and retention.
	2	Reference regional or statewide analyses in local vulnerability assessments.
	3	Provide block-grant or other sustainable funding for plan development.

⁴⁰ Sonoma County. (2021). *Sonoma County Hazard Exposure Dashboard*.
<https://experience.arcgis.com/experience/64d531fcoe654c19a40a172a074a5640/page/Hazards/?views=Wildfire>

	4	Support existing climate collaboratives and technical assistance programs.
	5	Grantmaking agencies responsible for distributing climate adaptation should overhaul existing programs and processes.
	6	Allocate adaptation planning appropriately between local and the regional scale.
	7	Provide specific plan alignment guidance.

Strategies and Policies

One of the key challenges in advancing climate resilience in communities across the State is developing actionable policies, projects and programs that have community, staff, and elected official support. As a result, many guides and tools provide model policies for jurisdictions, including Greenbelt Alliance’s Resilience Playbook as well as the SCAG Climate Adaptation Model Policies for general plans. For cities and counties that are addressing local hazard mitigation plans or climate adaptation plans that are not scoped to include an environmental assessment (e.g. EIR, MND, etc), planners face the challenge of developing policies with enough specificity that result in a clear path to implementation, while not being so specific as to trigger the California Environmental Quality Act. The following items represent ways that jurisdictions can strengthen their adaptation strategies.

Actionable Language

The City of Pacifica distinguishes between *guiding policies* and *implementation policies*. The City used strong, unambiguous language such as *require*, *prohibit*, *enforce*, *develop* and *amend*. In comparison, the Town of Mammoth Lakes focuses primarily on water and snow management strategies that are higher level, starting with verbs like *explore*, *collaborate*, *support*, and *consider*. There are fewer *develop* or *require* policies that have clear directives. Using strong and specific language ensures that an item is required to be done, rather than in cases of less concrete language which can allow implementers to defer that item.

Ordinances and Amendments to Code

Creating ordinances and amendments to jurisdiction codes and be important adaptation strategies. Jurisdictions that met SB 379 requirements by updating their general plans were typically able to identify more ways to update ordinances and codes and be more specific in identifying individual ordinances and codes to update than jurisdictions who addressed climate adaptation and resilience through hazard mitigation plans or stand alone plans.



The City of Pacifica’s General Plan update included in their guiding and implementing policies specific updates to ordinances and city codes to address climate risks. These mainly focused on the City’s zoning ordinance and flooding or sea level rise related ordinances, which were echoed in the City’s Local Coastal Program.

The Town of Mammoth Lakes, who also updated their general plan, followed a similar route by identifying a timeline in their general plan Implementation Program by which several ordinances and codes should be updated. These actions concerned fire hazards and increasing safety in the wildland urban interface.

While Sonoma County's Multi-Jurisdictional Hazard Mitigation Plan does not create explicit requirements to update ordinances and amend codes, they do present a menu of options that planning partners can reference when deciding how to address adaptation needs. TetraTech created several tables corresponding with hazards and filled with example actions that could be taken to address the mitigation of each hazard. This included examples of ordinance and codes that could be updated and how they could be updated in order to address the hazard. The work completed by Tetra Tech is being brought forward into the work by Rincon Consultants as they develop the Countywide vulnerability assessment.

The plan also includes an extensive overview of federal and state policy and regulations that may influence adaptation actions that planning partners design or implement. Each policy is briefly summarized along with key information about how the item might influence ordinance and code updates.

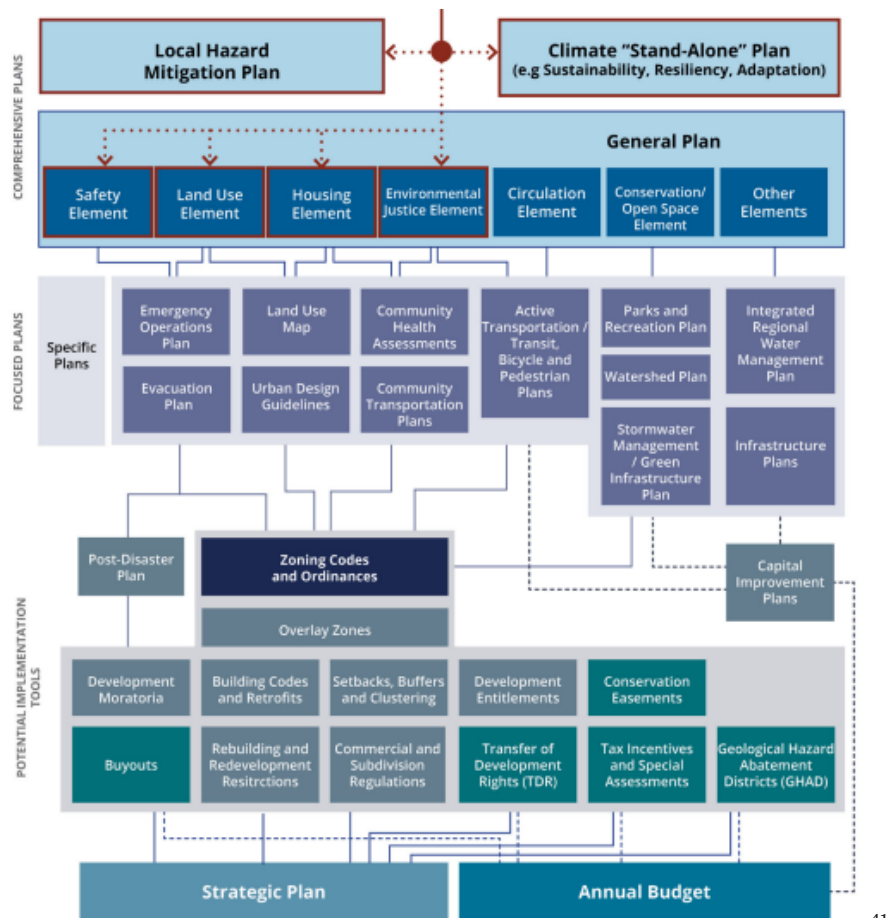
Updating Additional Plans

Implementing adaptation requires more than one plan. When a jurisdiction creates their SB 379 compliant plan, some of their process or strategies may involve reviewing other plans or recommending the update or creation of additional plans. As shown below in the graphic prepared for the Draft BayAdapt plan produced by the Bay Conservation Development Commission, ensuring success is different than compliance and involves institutionalization.

Sonoma County's MJHMP created a Hazard Mitigation Action Plan which outlined many strategies that the County could take to mitigate their hazards. These strategies included the development of additional plans or studies needed before project implementation, such as:

- Preparing a SLR and Coastal hazards Risk and Vulnerability Assessments
- Conducting a Russian River Flood Risk and Vulnerability Assessment
- Analyzing and identifying feasible green infrastructure actions
- Developing a strategic plan for damage assessment and recovery of essential public facilities

In addition to the development of new plans or assessments, the listed strategies also recommended the implementation of existing plans, such as Wildfire Resilient Sonoma County's "Nature-based Mitigation to Adapt in an Era of Mega-fires" plan which contains recommended actions for the County to take to reduce regional wildfire risk. The strategies also recommend integrating the MJHMP into other planning documents, such as the County General Plan, Emergency Operations Plan, Climate Action Plan, Community Wildfire Protection Plan, and others.



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The City of Pacifica took a joint approach to plan updates and chose to update their general plan and their local coastal program at the same time. They used concurrent processes and outreach for a streamlined approach that enabled them to crosswalk their policies and strategies to produce closely aligned documents. They indicated throughout the documents where the policies and strategies indicated were the same as in the other plan, making it very clear where the plans overlapped. The City of Santa Cruz’s Climate Adaptation Plan crosswalked the City’s strategies with Santa Cruz County’s adaptation strategies in order identify areas of concurrence and gaps.

⁴¹ Bay Conservation Development Commission, DRAFT. (October 2021). *BayAdapt Joint Platform, Ch.3*

Conclusions and Recommendations

Table 3 below lists the conclusions and recommendations that resulted from the Project Team’s findings with respect to strategy and policy development. A more detailed description of the conclusions and recommendations can be found at the end of this report.

Table 3. Strategy and Policy Development - Conclusions and Recommendations

Conclusions	3	Most of the stand-alone adaptation plans were detailed and could lead to transformative implementation projects.
	8	In a constantly evolving field, the threshold for good work or “best practices” is a moving target .
Recommendations	9	Designate review authority to the Office of Planning and Research.
	14	Large jurisdictions should develop standalone climate adaptation plans.
	15	Mid-sized jurisdictions should update their general plan to account for climate impacts as well as update their LHMP.
	16	Small jurisdictions should utilize external resources provided by their county or COG technical assistance programs or pool efforts with neighboring jurisdictions to comply with SB 379.
	17	Regional frameworks can create regional alignment around shared priorities and policies.

Plan Implementation



While SB 379 requires the development of a vulnerability assessment and adaptation strategies that address potential climate impacts for a given jurisdiction, and the statute explicitly requires the implementation of strategies, there is no specific approach to implementation of the strategies identified. Implementation of adaptation strategies requires advanced coordination across city and county departments (e.g. public works, sustainability, planning) as well

as across jurisdictions, funding to develop and implement projects that advance a given strategy, and monitoring of progress over time. While more state and federal funding is being allocated toward

climate adaptation in 2022-2023 than at any other point in time, staff turnover and lack of staff capacity to coordinate across departments, much less across jurisdictions, remains a critical barrier to implementation and monitoring.

Several of the jurisdictions interviewed created implementation programs or plans as part of their SB 379 compliant plans. These implementation plans varied in level of detail and comprehensiveness. The Town of Mammoth Lakes has an Implementation Program of their general plan that specifies which organization or department leads the action and the timeframe for implementation, but they did not match it to funding opportunities. Their adaptation policies are integrated into the Implementation Program, but no priority is assigned to actions, although timeframes for implementation are indicated. Jurisdiction staff also cited that they did not have ways to track which action items had been completed.

Sonoma County Multi-jurisdictional Hazard Mitigation Plan's Implementation Plan is detailed, including the lead agency, support agency, estimated cost, source of funding, and timeline. Consultants included definitive language in the implementation plan, stating that "By adopting this plan, each planning partner also agrees to the plan implementation and maintenance protocol established in Volume 1. Failure to meet these criteria may result in a partner being dropped from the partnership by the Steering Committee, and thus losing eligibility under the scope of this plan." Sonoma County's consultant, TetraTech, included one year of use of their proprietary tool to trigger outreach emails to all lead departments and agencies to ask for updates and will automatically generate a progress report with that information. Sonoma County is responsible for compiling updates for an annual progress review. TetraTech built responsible departments and progress monitoring timeline into this plan, which is linked to their automatic reporting software, but they will not be under contract during the reporting timeframe. Additionally, due to staff turnover, there may be limited staff left in the department who worked on and are familiar with the plan, which may create challenges when assessing progress on the plan. With Rincon, new consultants, now supporting the County in achieving SB379 compliance, a further variable is added that will cause challenges in continuity between the various efforts.

The City of Santa Cruz in their 2018 Climate Adaptation Plan, and subsequent updated 2022 Climate Action and Adaptation Plan chose to do implementation largely through existing and expanded programs. Their Sustainability and Climate Action Manager gathers updates on implementation every year, but this puts the burden on that role to be the main point of contact for all climate related issues. The City will begin a new Climate Adaptation Plan in the coming year, where the implementation plan will contain more accountability measures and distributed responsibility. The original plan identified grants to potentially fund the measures included in the plan, some of which the City has indeed pursued, but did not include any financing plans or strategies. The implementation of the plan has also benefited from support from the City Manager's Office, which can help compel the coordination and cooperation needed, and help the Sustainability and Climate Action Manager make bolder moves, including pursuing larger grants. The implementation of the City of Santa Cruz plans and programs have been complicated by recent storm-related impacts that have required the City to reevaluate certain triggers and adaptation pathways identified in the recently adopted plan.

The City of San Diego is responsible for the implementation of the Resilient SD Plan, but requires coordination with many other departments. Low staff capacity adds to the challenge, although the

City just added a new Climate Resilience Officer who is developing a staffing plan and has already increased the capacity of the City to coordinate and implement priority actions.

Conclusions and Recommendations

Table 4 below lists the conclusions and recommendations that resulted from the Project Team’s findings with respect to implementation. A more detailed description of the conclusions and recommendations can be found at the end of this report.

Table 4. Implementation - Conclusions and Recommendations

Conclusions	9	Capacity is a concern throughout the “resilience supply chain”—at the state, in local government, within nonprofits, in consultancies and academia.
	10	Too soon to tell if SB379 will effectively create new implementation programs.
	11	As a rule regional climate planning efforts have not been embraced by local jurisdictions.
	12	If regional agencies developed the regional plans, they were used.
	13	Nonprofit support helped municipalities, but more help is needed.
Recommendations	1	Invest in workforce development and retention.
	2	Allow municipalities to complete their vulnerability assessments by reference to regional or statewide climate analyses.
	7	Provide specific plan alignment guidance.
	8	Develop effective partnership models.
	9	Designate review authority for the Office of Planning and Research.
	10	Renew OPR’s Adaptation Planning Grant Program.
	11	Allow flexibility in funding toward local climate planning.
	12	Renew funding for SGC’s BOOST Program
	13	Leverage private philanthropy

Appendix A. Methodology

Resilience plans were identified from existing databases such as the Regional Resilience Framework Landscape Analysis & Status of Matrix from the Southern California Association of Governments (SCAG) region, and the Office of Planning and Research's SB 379 Survey Report, and the Project Team's experiential knowledge of working in the community of practice. Plans were chosen for review based on recommendations of regional and state level stakeholders.

The Project Team assessed planning approaches and the quality of SB 379 compliance based on those approaches. During each plan review, the Project Team noted best practices that met or exceeded the minimum requirement of SB 379. The results of each plan review were used to inform which jurisdictions to interview. A complete list of interview questions can be found below, although depending on time and person interviewed, not every question was asked in every interview.

Based on recommendations from state and regional agencies, and the Project Team's own expertise, the Project Team selected nine jurisdictions with plans that exemplified some of the most successful and inclusive planning practices and interviewed city/county staff (and in some cases, consultants). The Project Team selected jurisdictions to interview based on the quality of their plans, as well as seeking to cover diverse geographies and size of jurisdictions. Selected jurisdictions and plans include:

- City of Ceres - General Plan
- City of Orland - General Plan
- City of Pacifica - General Plan
- City of Rialto - Climate Action Plan
- City of San Diego - Resilient SD
- City of Santa Cruz - Climate Adaptation Plan, Climate Action and Adaptation Plan, Local Hazard Mitigation Plan, General Plan
- County of Los Angeles - General Plan
- County of Sonoma - Multi-Jurisdictional Hazard Mitigation Plan
- Town of Mammoth Lakes - General Plan

The Project Team also reviewed the following planning efforts, but did not interview staff. Members of this Project Team had a role in each of these initiatives as either an advisor, Project Team member, or stakeholder engaged in the public process:

- Bay Conservation and Development Commission's - BayAdapt Joint Platform
- County of Tulare - Multi-Jurisdictional Hazard Mitigation Plan outreach materials
- County of Yolo - Yolo County Climate Action Commission
- Gateway Cities Council of Governments - CAP Framework
- San Joaquin County Council of Governments - Climate Adaptation and Resilience Study
- South Bay Cities Council of Governments - Climate Adaptation Framework
- Southern California Association of Governments - Climate Adaptation Framework

Lastly, the Project Team interviewed state agency staff members, who requested anonymity, as well as several planning consultants and organizations who were involved in the creation of SB 379 compliant plans:

- Claire Bonham-Carter and Diana Edwards - AECOM
- Aaron Pfannenstiel - Atlas Planning Solutions
- Rose Newberry - Dudek
- Tammy Seale - Placeworks
- Reema Shakra and Lexi Journey - Rincon Consultants
- Rob Flaner - Tetrattech
- Lisa Micheli, PhD - Pepperwood Preserve

Interview Questions

Interview questions were modified, amended or eliminated depending on relevance to each jurisdiction and person being interviewed.

1. Which planning documents did you update to comply with SB 379?
 - a. Did those include LHMP, safety element, and or Climate Adaptation Plan?
 - b. Do you think that was the most effective approach or would you choose differently now?
 - c. If you prepared LHMP or separate CAP, did you integrate into safety element?
 - d. How did you fund these updates?
2. If you have disadvantaged communities in your jurisdiction, which planning documents did you update to comply with SB1000?
 - a. Did you develop a stand alone plan or were SB 1000 required components integrated throughout GP elements?
 - b. Do you think that was the most effective approach or would you choose differently now?
 - c. How did you fund these updates?
3. Are you connecting your environmental justice policy and goal updates (SB 1000) with your adaptation and resilience policy and goal updates (SB 379)?
 - a. Do you think that was the most effective approach or would you choose differently now?
4. Did you crosswalk climate resilience (mitigation/adaptation) policies/strategies across other plans or documents to ensure consistency?
 - a. Which specific documents did your jurisdiction choose to update?
 - b. Did this include the Safety Element?
 - i. Why or why not?
5. Is there an implementation plan for your updates (SB 379 and SB1000 if applicable) ?
 - a. Who is responsible for implementing this plan?
 - b. Has your jurisdiction identified funding or developed programs/projects to implement these climate resilience and environmental justice strategies?
 - c. Is there a monitoring plan or strategy?
 - d. Are there other ways you are operationalizing your planning updates?

6. With whom did you work to do the updates to comply with SB 379?
 - a. Jurisdiction Staff?
 - i. Was there a Project Team?
 - ii. What department prepared the plan?
 - iii. Was their cross-department coordination on the development of the plan?
 - b. Consultants?
 - i. What was the workload divide?
 - c. Regional governments or entities? (COGs, MPOs, etc)
 - i. Which ones and how did they support?
 - ii. Did you utilize any scientific finding or analysis made for your region by a regional entity?
 - iii. Do you think regional entities could or should play a larger role in this compliance?
 - d. CBOs, community groups and the public?
 - i. How did you conduct facilitation of community/public engagement?
 - ii. How did Covid-19 impact the public engagement process?
 - iii. Were the groups that participated from your identified disadvantaged/climate-vulnerable communities (if applicable)?
 - iv. How was community feedback received? (Surveys, meetings comments, zoom sessions, etc)
 - v. Examples of feedback which enhanced the plan?
 - vi. Did this create new ongoing partnerships or was it one-time engagement?
 - e. Technical Assistance Programs?
 - i. BOOST or others?
 - f. Other jurisdictions?
 - i. Was there planning alignment or collaboration?

7. If you completed SB1000 updates, how did you include climate adaptation and resilience and with whom did you work to do that?
 - a. Jurisdiction Staff?
 - i. Was there a project team?
 - ii. What department prepared the plan?
 - iii. Was their cross-department coordination on the development of the plan?
 - b. Consultants?
 - i. What was the workload divide between staff and consultants?
 - ii. How did that process go?
 - c. Regional governments or entities? (COGs, MPOs, etc)
 - i. Which ones and how did they support?
 - ii. Did you utilize any scientific finding or analysis made for your region by a regional entity?
 - iii. Do you think regional entities could or should play a larger role in this compliance?
 - d. CBOs, community groups and the public?
 - i. How did you conduct facilitation of community/public engagement?
 - ii. How did Covid-19 impact the public engagement process?

- iii. Were the groups that participated from your identified disadvantaged/climate-vulnerable communities (if applicable)?
 - iv. How was community feedback received? (Surveys, meetings comments, zoom sessions, etc)
 - v. Examples of feedback which enhanced the plan?
 - vi. Did this create new, ongoing partnerships or was it one-time engagement?
 - e. Technical Assistance Programs?
 - i. BOOST or others?
 - f. Other jurisdictions?
 - i. Was there planning alignment or collaboration?
- 8. Have these SB 379 (and SB1000, if applicable) updates made your community better prepared to face climate stresses and recover from shocks in an equitable way?
 - a. What work to improve resilience does your jurisdiction still need to do?
 - b. How could SB1000/SB 379 be more effective in creating equitable community resilience?