

# BRIDGING THE *Implementation Gap*

Challenges and Opportunities for California's  
Resilience Funding Landscape

OCTOBER 2024  
Policy Report



# ABOUT THIS REPORT

The Center for the Law, Energy & the Environment (CLEE) developed this policy report on behalf of the California Governor’s Office of Land Use and Climate Innovation (LCI)<sup>a</sup> to synthesize findings from program evaluations and build on those to identify key opportunities and challenges for California’s climate adaptation and resilience funding landscape. This report builds on CLEE’s evaluations of the Adaptation Planning Grant Program (APGP) and the Regional Resilience Planning and Implementation Grant Program (RRGP), published earlier in 2024. Additions to the analysis include a review of the policy-facing literature on California’s adaptation funding landscape and a preliminary mapping of the grant program landscape to identify trends over the last two decades. The report concludes with recommendations for State grant program administrators and policymakers to alleviate challenges and utilize opportunities in the funding landscape.

CLEE conducted interviews with APGP and RRGP grantees to prepare this report. The research team interviewees assured that interviews would be anonymized. Therefore, interview data will be referred to as “Interview with APGP/RRGP Round 1 Grantee” throughout the report. Direct quotations from interviews with either APGP or RRGP grantees are cited as “Program Grantee” to maintain anonymity.

## ABOUT THE CENTER FOR LAW, ENERGY & THE ENVIRONMENT

The Center for Law, Energy & the Environment (CLEE) channels the expertise and creativity of the Berkeley Law community into pragmatic policy solutions to environmental and energy challenges. CLEE works with government, business, and the nonprofit sector to help solve urgent problems requiring innovative, often interdisciplinary approaches. Drawing on the combined expertise of faculty, staff, and students across the University of California, Berkeley, CLEE strives to translate empirical findings into smart public policy solutions to better environmental and energy governance systems.

## THE INTEGRATED CLIMATE ADAPTATION AND RESILIENCY PROGRAM

The Integrated Climate Adaptation and Resiliency Program (ICARP) (PRC 71350-71360) drives California’s response to climate impacts, prioritizing equitable approaches that integrate mitigation and adaptation. ICARP’s home within the Governor’s Office of Land Use and Climate Innovation enables the State to coordinate across local, regional, and state efforts to support cohesive strategies.

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<sup>a</sup> Formerly the Governor’s Office of Planning and Research (OPR).

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Funding Landscape

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## GLOSSARY OF TERMS

**California Native American tribe** refers to a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the Native American Heritage Commission for the purposes of Chapter 905 of the Statutes of 2004.

**Climate adaptation** describes taking action to prepare for and adjust to the current and projected impacts of climate change.

**Climate resilience** is the capacity of a system to maintain function in the face of stresses imposed by climate change and to adapt the system to be better prepared for future climate impacts. A community's resilience is determined by its ability to survive, adapt, and thrive no matter what acute shock or chronic stressor it experiences.

**Climate vulnerability** describes the degree to which natural, built, and human systems are at risk of exposure to climate change impacts.

**Equity-oriented investments** address systemic disparities by directing resources to historically marginalized and under-resourced communities.

**Integrated planning** emphasizes both mitigation and adaptation strategies for building resilience while aligning adaptation planning with other concurrent planning processes.

**Local governance** refers to strategies that give local jurisdictions and communities decision-making power over how adaptation actions are designed, implemented, and monitored, and how success is evaluated.

**Maladaptation** occurs when an action intended to facilitate adaptation instead increases exposure and sensitivity to climate change impacts. When maladaptation occurs, communities become even more likely to be negatively affected by climate change.

**Plan alignment** is the process of leveraging connections, information, and resources to build shared language, data foundations, and processes across multiple planning efforts at any scale.

**Vulnerable communities** refer to certain groups who experience heightened risk and increased sensitivity to climate change and have less capacity and fewer resources to cope with, adapt to, or recover from climate impacts. These disproportionate effects are caused by physical (built and environmental), social, political, and/ or economic factor(s), which are exacerbated by climate impacts. These factors include, but are not limited to, race, class, sexual orientation and identification, national origin, and income inequality.



## I. INTRODUCTION

Changing climate conditions, including drought, extreme heat, sea-level rise, and wildfire, pose significant risks to California's population and economy. Adaptation and resilience efforts are critical to prepare for and respond to these changes. The State of California has developed a robust climate adaptation and resilience framework, guided by the California Climate Adaptation Strategy,<sup>1</sup> the Integrated Climate Adaptation and Resiliency Program (ICARP) in the Governor's Office of Land Use and Climate Innovation (LCI), and a suite of sectoral policy and investment programs.

The Climate Adaptation Strategy provides a high-level framework to guide resilience activities across the State's regions and economic sectors, establishing priorities to build a climate-resilient economy, strengthen protections for climate-vulnerable communities, and bolster public health and safety to protect against increasing climate risks.<sup>2</sup>

ICARP coordinates local and regional actions with the State's Climate Adaptation Strategy through its Technical Advisory Council, an Adaptation Clearinghouse providing case studies and resources to guide adaptation and resilience activities, and a suite of statewide investment programs. ICARP's vision for a resilient California guides these efforts:<sup>3</sup>

*All Californians thrive in the face of a changing climate. Leading with innovation, California meets the challenge of climate change by taking bold actions to protect our economy, our quality of life, and all people. The state's most vulnerable communities are prioritized in these actions. Working across all levels of government, the state is prepared for both gradual changes and extreme events. Climate change adaptation and mitigation is standard practice in government and business throughout the state. California meets these goals with urgency, while achieving the following long-term outcomes:*

- *All people and communities respond to changing average conditions, shocks, and stresses in a manner that minimizes risks to public health, safety, and economic disruption and maximizes equity and protection of the most vulnerable.*
- *Natural systems adjust and maintain functioning ecosystems in the face of change.*



- *Infrastructure and built systems withstand changing conditions and shocks, including changes in climate, while continuing to provide essential services.*

Realizing this vision requires significant investment in resilience projects, partnerships, and local capacity. While these costs are significant, the costs of inaction are far greater.<sup>4</sup> The San Francisco Bay Conservation and Development Commission (BCDC) estimates that preparing built infrastructure in the San Francisco Bay Area for sea-level rise alone will cost \$110 billion, but the cost of inaction will be well over \$230 billion.<sup>5</sup> Similarly, a report commissioned by the California Department of Insurance estimates the annual cost of mitigating extreme heat in Los Angeles County through tree planting could reach \$351 million, but the savings from avoided public health costs and other co-benefits<sup>b</sup> could exceed \$500 million annually.<sup>6</sup>

Statewide cost assessments of climate risks and associated adaptation investments are still being developed. Nevertheless, these local estimates suggest that the investment necessary to address all climate hazards across the State's regions will be far higher. Fully satisfying this scale of investment cannot fall to the State alone; meeting adaptation and resilience funding needs will require layering funding and financing from federal, state, and local governments, the private sector, philanthropy, and other sources. However, State adaptation policy and funding are essential for preparing local jurisdictions to adapt to climate change and take advantage of alternative funding channels.

Recognizing this need to invest in climate action—from capacity building to long-range planning to implementation—California has committed to an integrated and advanced climate agenda to reduce greenhouse gas emissions (mitigation) and build resilience to a changing climate (adaptation). Most recently, the 2021 and 2022 State Budgets allocated over \$54 billion to climate change mitigation and adaptation grant programs.<sup>7</sup> This suite of grant programs built on a history of California climate investments, continuing the State's position at the forefront of supporting community-led, multi-benefit resilience-building measures.

In 2023-24, the Center for Law, Energy, and the Environment (CLEE) evaluated two grant programs administered by ICARP: the Adaptation Planning Grant Program (APGP) and the Regional Resilience Planning and Implementation Grant Program (RRGP).<sup>8, c</sup> The 2021 Budget Act allocated \$25 million for APGP and \$250 million for RRG, to be administered over three years.<sup>9</sup> Each program awarded one round of projects, investing \$9 million and \$21 million, respectively. The 2024 State Budget reverted funds for future rounds of both programs.<sup>10, d</sup>

CLEE's evaluation of each program found that APGP and RRG made strong additions to the State's funding portfolio and effectively responded to existing gaps in the adaptation funding landscape.<sup>11, 12</sup> The reversion of funding for APGP and RRG in 2024 suggests a need to review California's adaptation funding landscape and explore pathways to

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b Other co-benefits include reduced energy needs and reduced atmospheric carbon, among others.

c Evaluations completed between September 2023 and September 2024.

d The 2024 Budget Solution maintains the amounts committed to both programs' first rounds of funding, as well as minimal administrative costs needed to support Round 1 grantees. As of September 2024, neither program is funded for rounds beyond Round 1.

extend the successes of these programs. To explore this possibility, the research team reviewed policy-facing literature on adaptation funding strategies and mapped State adaptation grant programs to further explore challenges and opportunities facing the adaptation funding landscape in California.

Our analysis identifies three challenges facing the State's adaptation and resilience funding landscape: oversubscription, instability, and complexity. These challenges are nuanced, reflecting a high demonstrated need for adaptation funding as well as a need for strategic policy and programmatic decisions to ensure that existing funds are distributed efficiently and equitably. They are also not exclusive to California; similar challenges with unmet demand and complexity persist across national and international funding systems.<sup>13</sup>

Based on these findings, we identify opportunities to strengthen the State's adaptation funding landscape to achieve California's climate adaptation goals more effectively and support long-term resilience. We recommend the following priorities for State grant program administrators and State policymakers to alleviate and address key challenges:

- **State Grant Program Administrators: Maximize the resilience outcomes of existing funding programs** by facilitating plan alignment and supporting local governance approaches.
- **State Policymakers: Make adaptation and resilience funding more accessible** by institutionalizing navigation support for local implementation partners, including identifying opportunities to align State investments with Federal, private, and nonprofit funding.
- **State Policymakers: Sustain and maintain funding for adaptation and resilience** by developing a comprehensive funding and investment strategy to advance California's adaptation priorities.

Motivated by evaluations of two of California's adaptation and resilience grant programs and informed by a preliminary analysis of the broader funding landscape, we illustrate opportunities for strategic and proactive action to address the gap between the State's Climate Adaptation Strategy and the funding mechanisms necessary to implement it. Strengthening the financial resources and systems needed to reach adaptation goals will ensure the State can equitably deliver on its resilience priorities for California's communities.



## II. MOTIVATION FOR A LANDSCAPE-LEVEL ANALYSIS OF ADAPTATION AND RESILIENCE FUNDING IN CALIFORNIA

The Budget Act of 2021 allocated funding to a suite of adaptation grant programs to support resilience efforts in California’s most vulnerable communities. CLEE’s previously published [evaluations](#) suggest that APGP and RRGP, two of the programs included in the 2021 budget, filled important gaps in California’s funding landscape. These evaluations—and the programs’ subsequent cancellation—demonstrate ongoing challenges of the State’s approach to funding adaptation and resilience efforts.

### APGP AND RRGP AS STRONG ADDITIONS TO THE STATE’S FUNDING PORTFOLIO

The design, development, and implementation of APGP and RRGP addressed gaps in California’s adaptation funding landscape (see [Appendix A](#) for a list of Round 1 awarded projects from both programs). Together, APGP and RRGP:

- **Increased Access to Funds for Adaptation Planning:** Together, APGP and RRGP invested over \$29 million in adaptation projects through their first rounds of funding, \$14 million of which specifically supports locally and regionally led planning efforts across all regions of the State. APGP received \$140 million in funding requests (for \$9.5 million in available funds) through applications to the program’s second round, but the 2024 budget canceled funding for this round before awards were made.
- **Funded Multi-Risk and Multi-Sector Projects:** The majority of projects funded through the first round of both APGP and RRGP address multiple climate risks and hazards, ranging from sea-level rise to extreme heat. These projects, particularly those with a planning focus, span multiple sectors and foster valuable intersectoral collaboration on climate resilience efforts.
- **Supported Local Governance through Flexibility and Priority Alignment:** Informed by extensive engagement efforts, APGP and RRGP were designed to intentionally support local governance over adaptation solutions. They offered broad definitions of what

For this report, we draw on the first principle of locally led adaptation from the Global Center on Adaptation to define **Local Governance**.<sup>14</sup> In this context, **Local Governance** refers to strategies that give local jurisdictions and communities more decision-making power over how adaptation actions are designed, implemented, monitored, and how success is evaluated.

qualified as an “adaptation” or “resilience” strategy, encouraged self-definition of project regions (for RRGP), and supported flexible partnership structures that enabled local and regional decision-making over adaptation.

Ultimately, APGP and RRGP resulted in positive outcomes based on engagement, application interest, and grantee alignment with State and local priorities.<sup>15</sup> Both programs conducted extensive community engagement during the design phase, eliciting input from over 500 organizations to ensure they reflected the adaptation funding needs of California’s communities. Based on this input, both programs developed guidelines and goals to ensure funds were distributed equitably—via funding targets or funding set-asides—and supported projects with clear benefits for California’s most vulnerable communities. Awarded projects in each program’s first round advance integrated planning by emphasizing climate adaptation strategies while aligning planning activities with other concurrent planning processes, such as Hazard Mitigation Plans and General Plan Element updates. Finally, APGP staff conducted extensive engagement following the program’s first round to inform the development of a second round of funding, delivering valuable insights for other State grant programs.

## BOX 1. ROUND 1 APGP AND RRGF-FUNDED PROJECTS

Four examples of awarded projects from the first rounds of APGP and RRGF are summarized below to illustrate the types of adaptation and resilience efforts funded by these programs. Complete case studies are available on CLEE’s website.<sup>16</sup>

### **APGP: LA Cool Capital Stack Project**

The LA Cool Capital Stack project engages community-based partners to envision and design infrastructure interventions that build resilience in Los Angeles communities most vulnerable to climate risks such as extreme heat, flooding, wildfire, and drought. APGP funding formalized an innovative agency-community collaborative between Los Angeles County and the Infrastructure Justice for LA Coalition, supporting community capacity-building and intersectoral collaboration on multi-benefit climate adaptation planning.

### **APGP: Ramona Barona Climate Adaptation and Action Plan**

The Ramona Barona Climate Adaptation and Action Plan supports an integrated climate adaptation plan for the unincorporated community of Ramona and the Native American community of Barona in San Diego County. This project works collaboratively across community partners, sectors, and languages to build resilience to multiple climate risks. It establishes a multisectoral partnership that will result in the first integrated climate adaptation plan in both communities and lay the groundwork for future partnerships in other sectors.

### **RRGF: Santa Ana River Watershed Climate Adaptation and Resilience Plan**

The Santa Ana Watershed Project Authority and project partners are developing a community-informed and implementation-focused Climate Adaptation and Resilience Plan for the Santa Ana River Watershed (SARW). RRGF funding for this project supports the equitable distribution of resilience benefits across the watershed, focusing on the priority climate adaptation and resilience needs of underrepresented communities in the SARW.

### **RRGF: Kó:dom Hỳbísín (“Land Stewardship”)**

Kó:dom Hỳbísín, a Tribal-led project, seeks to build tribal workforce capacity and climate resilience through the creation of a tribal land stewardship program and prescribed fire crew to support wildfire, drought, and extreme heat resilience. RRGF funding for this project supports critical capacity-building work, advancing community-centered resilience initiatives that prioritize Tribal goals.

## **FUNDING REVERSION SUGGESTS A NEED TO IDENTIFY LANDSCAPE-LEVEL CHALLENGES**

ICARP staff designed and implemented both APGP and RRGP in a manner responsive to frequent feedback regarding accessible and equitable State funding for adaptation, offering a model for other adaptation and resilience grant programs.<sup>17,18</sup> However, the reversion and elimination of future funding rounds for both programs suggests a need to review the State's resilience funding landscape and identify pathways to build on this model.

Motivated by APGP and RRGP program evaluation findings, CLEE conducted a preliminary landscape mapping of California's adaptation and resilience grant programs alongside a policy-facing literature review. This analysis revealed three intersecting challenges of the State's funding landscape, each highlighting opportunities for targeted and strategic intervention. We outline these three challenges in the following section, followed by recommendations for State grant program administrators and policymakers to further strengthen California's adaptation funding landscape.





### III. CHALLENGES OF CALIFORNIA'S ADAPTATION AND RESILIENCE FUNDING LANDSCAPE

California's adaptation and resilience funding landscape includes a large number of programs and administering agencies. However, the funding environment encounters nuanced challenges linked to fluctuations in the State budget and the intricacies of financing adaptation initiatives.

Specifically, three intersecting challenges—funding oversubscription, instability, and complexity—limit the potential impact of State investments.

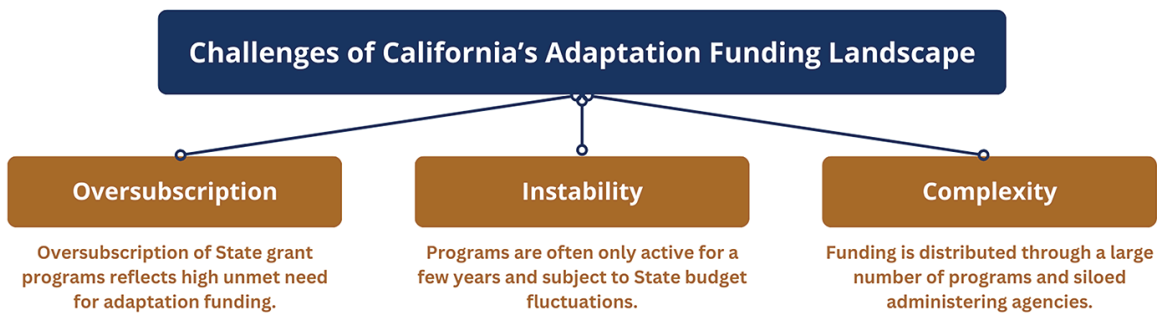
**Oversubscription:** California's communities collectively face an adaptation funding shortage on the order of billions, reflected in high demand for State grants. Analysis of a suite of California's adaptation and resilience grants shows that they are oversubscribed (i.e., funding requests relative to funding available) by an average of 652 percent.<sup>e</sup>

**Instability:** The majority of grant programs are only active for a few years at a time, creating a funding instability that fluctuates significantly with budget cycles and the availability of periodic funds like ballot proposition dollars. This instability creates challenges for applicants' and grantees' capacity to plan for, access, and leverage existing funding.

**Complexity:** The funding landscape is complex, with a high number of siloed administering agencies and a lack of standardization in program requirements and eligibility criteria, creating barriers to program navigation and funding access.

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<sup>e</sup> Competitive grants are expected to receive greater requests for funding than what is available. While there is no target oversubscription rate for competitive grant programs, we can assume that the baseline expected rate of subscription is higher than 100%.



*Figure 1. Three Challenges of California's Climate Adaptation Funding Landscape: Oversubscription, Instability, and Complexity.*

## BOX 2. CLEE'S ANALYSIS OF CALIFORNIA'S ADAPTATION AND RESILIENCE GRANT PROGRAM LANDSCAPE

The research team gathered preliminary data on a subset of California's adaptation and resilience grant programs to identify patterns in the program landscape and further contextualize our evaluations of APGP and RRGP. A preliminary search of the State's grant program database ([grants.ca.gov](https://grants.ca.gov)) identified 91 State grant programs with climate adaptation or resilience outcomes. To narrow the number of programs for analysis, we excluded programs that were limited in scope (i.e., programs that were significantly restricted in geographic, applicant, or project eligibility) or lacked sufficient data for analysis (e.g., timelines, funding amounts).<sup>f</sup> This resulted in fifty-two grant programs in the final analysis ([Appendix B](#)).

This list of programs is representative, but not exhaustive, of California's adaptation and resilience funding landscape. While a comprehensive analysis of the funding landscape is outside the scope of this work, future research could extend this analysis through interviews with program managers and funding agencies, among other sources.

<sup>f</sup> e.g., programs exclusive to applicants from the Sierra Nevada region, programs exclusive to landowners, or programs that only fund stream restoration activities for the purpose of supporting salmon populations.

## FUNDING OVERSUBSCRIPTION

Climate risks pose high economic costs, and demand for adaptation funding far outweighs currently available funding. The 2024 Los Angeles County Climate Cost Study estimates that municipal, county, state, and federal governments will need to spend at least \$12.5 billion through 2040 to adapt Los Angeles County to climate change.<sup>19</sup> While similar estimates for other jurisdictions across the State are not currently available, an ICARP grant program applicant representing a medium-sized city (i.e., with a population between 50,000 and 100,000) estimates that their city's adaptation costs will range from \$1.1 billion to \$3.5 billion, far beyond the community's financial reach.

### BOX 3. STATE FUNDING IS ONE COMPONENT OF A HOLISTIC FUNDING STRATEGY

Multiple funding sources exist to support communities in advancing adaptation and resilience priorities. In addition to investments made by the State, local governments have access to locally directed funding programs, private and philanthropic funds, and federal funding programs, including competitive grants and formula grants. The latter allocates funding amounts to eligible applicants and project applications based on specific criteria, such as population.

High demand for adaptation and resilience funding underscores the need for holistic funding strategies that stack investments from multiple sources to meet financing needs. CLEE's 2022 Report, *Funding San Francisco Climate Action: Strategies for Revenue, Implementation, and Equity*, offers an example of building a holistic funding strategy to advance the implementation of climate action planning priorities.<sup>20</sup>

Analysis of a subset of adaptation grant programs that operated roughly contemporaneously with APGP and RRGF shows that all are significantly oversubscribed,<sup>g</sup> many by over 700 percent. The second round of APGP issued a request for applications in Spring 2024 and received funding requests totaling 1,444 percent of the available funds. However, the 2024-25 budget eliminated funding for this second round.

The cancellation of APGP Round 2 eliminated \$9.5 million previously committed for this round. The program received 149 intent-to-apply surveys and 94 complete applications.

<sup>g</sup> CLEE analysis based on funding availability and requested funding for seven adaptation and resilience grant program rounds, including Rounds 1 and 2 of the Adaptation Planning Grant Program (APGP), Round 1 of the Regional Resilience Grant Program (RRGP) Round 1, Round 1 of the Community Resilience Centers (CRC) Program, Round 1 of the Regional Climate Collaboratives (RCC) Program, Round 2 of the California Department of Transportation's Climate Adaptation Planning Grant Program, and Round 4 of the Transformative Climate Collaboratives (TCC) Implementation Grant Program. This list is a subset of the programs included in CLEE's Program Landscape Mapping analysis (see Box 2). Programs included in the analysis of funding oversubscription were selected in large part due to funding data availability.

*Table 1. Funding Availability and Demand for a Selection of California's Adaptation and Resilience Grants in their Most Recent Funding Rounds<sup>h</sup>*

PROGRAM	ADMINISTERING AGENCY OR DEPARTMENT	ROUND	YEAR	FUNDING AVAILABLE	FUNDING REQUESTED	PERCENT OVER-SUBSCRIBED
Adaptation Planning Grant Program (APGP)	Integrated Climate Adaptation and Resiliency Program	Round 1	2023	\$8,000,000	\$63,000,000	787% (7.9 times the available funding)
Adaptation Planning Grant Program (APGP)	Integrated Climate Adaptation and Resiliency Program	Round 2	2024	\$9,500,000	\$146,710,656	1,444% (14.4 times the available funding)
Regional Resilience Planning and Implementation Grant Program (RRGP)	Integrated Climate Adaptation and Resiliency Program	Round 1	2023	\$21,700,000	\$106,647,000	491% (4.9 times the available funding)
Community Resilience Centers (CRC) Planning Grant Program	Strategic Growth Council	Round 1	2024	\$5,000,000	\$37,000,000	740% (7.4 times the available funding)
Regional Climate Collaboratives (RCC) Program	Strategic Growth Council	Round 1	2022	\$8,500,000	\$66,600,000	783% (7.8 times the available funding)
Climate Adaptation Planning Grant Program	California Department of Transportation	Round 2	2024	\$31,800,000	\$33,915,284	106% (1.1 times the available funding)
Transformative Climate Communities (TCC) Implementation Grant Program	Strategic Growth Council	Round 4	2022	\$105,000,000	\$226,194,113	215% (2.2 times the available funding)

<sup>h</sup> We include both Round 1 and Round 2 of the Adaptation Planning Grant Program because while funding availability and request data is available on Round 2, the program was canceled and Round 1 funds reversed before grantees were awarded. Round 1 of APGP is the most recent round of funded projects, while Round 2 is the most recent round for which we have funding availability and request data.

Interviewees identified high demand as a challenge to accessing State funding programs. Areas of especially high perceived need and associated competition for available funding include planning funding, regional-scale projects, and funding that allows applicants to identify priority climate risks. One grantee interviewed for this analysis noted, “It is hard to get funding support for long-term planning. People want to throw their weight behind a project that already has teeth because they want to get things done. It’s hard to convince people to put their effort into something that is not going to bear fruit for many years.”

While the State is not responsible for meeting all of the established funding demand, current oversubscription and high competition have implications for equity: communities with the fewest resources to undergo repeated grant application processes often already face disproportionate climate and socioeconomic burdens.

*“I’m not trying to sound too pessimistic, but we’re used to not having much funding out here anyway. Any kind of state money that we can bring in to fund our projects is valuable, especially since we haven’t been getting it a lot in the past, unlike some of the bigger districts that have more funding sources and can cost share. But the people I work with are the smaller communities that just haven’t built infrastructure.”*

- Program Grantee

RRGP sought to address gaps in funding for regional-scale efforts by supporting resilience planning and implementation projects on climate risks that transcend city or county boundaries. The program encouraged applicants to self-define their region, generating innovative approaches to adaptation, such as developing a coordinated flood risk and drought resilience strategy for communities sharing a common aquifer in the Le Grand Community Water Program.

## FUNDING INSTABILITY

California’s adaptation funding landscape, while robust, is also characterized by a funding instability that results in inefficiencies and barriers to advancing equitable distribution and outcomes.<sup>21</sup> Many programs are only active for a few years,<sup>i</sup> limiting their ability to incorporate meaningful applicant and community feedback into program design. This funding instability also limits the ability of potential applicants to undergo necessary and time-consuming pre-application work (e.g., planning, partnership formation, etc.) and have certainty that a funding source will be available when they are ready to apply.

Of the 52 programs included in CLEE’s analysis, only 15 have information on funding availability for future rounds.<sup>j</sup> The programs that do not have future funding information available include programs that ended in the last six years, programs that were canceled by the 2024-25 Budget Solution, and programs that lack clarity on funding status. Over half of these programs were active for less than four years, illustrating the start-and-stop nature of California’s adaptation and resilience funding landscape. This instability generates a notable funding uncertainty that exacerbates equity barriers for under resourced

i The 52 grant programs included in CLEE’s analysis had a median program length of 3 years. Program length refers to the number of years in which a program was funded and was funding projects. The average program length of these 52 programs, which is skewed by five programs that have been or were active for more than 13 years, is 5.6 years.

j At the time of writing (September 2024).

applicants with limited capacity to seek funding and limits opportunities for grant programs to improve and demonstrate value.

Short program life cycles also limit the effectiveness of adaptation and resilience activities that require ongoing maintenance, such as vegetation management for wildfire protection. Funding instability also impacts grantees' ability to successfully maintain ongoing project activities or transition between project phases, from planning to implementation. Projects that are only partially funded or not funded through the entire life cycle have reduced capacity to meaningfully build resilience and deliver return on investment for State funds, creating inefficiencies for State investments and local jurisdictions.

*“Vegetation inevitably grows back, so ongoing funding is essential for maintaining the roads.” - Program Grantee*

Short program length also limits opportunities for grant programs to undergo feedback and evaluation processes, which can reveal areas for improvement that benefit not only the evaluated program but the State's other grant programs as well. For example, the first round of APGP awards reflected a lack of diverse regional engagement, especially rural engagement. In response to this finding, APGP staff developed a Regional Diversity Funding Priority for Round 2, committing to fund one project from each of the nine California Climate Assessments regions. The cancellation of Round 2 funding after applications were submitted resulted in staff being unable to implement this solution in the grant award process or evaluate its effectiveness in future program rounds.

Finally, grant program applications require significant capacity from applicants, which can perpetuate barriers to climate action, especially for under resourced jurisdictions already facing limited funding and staff capacity.<sup>22, 23, 24</sup> The uncertainty involved with funding instability—even for those who receive grants—can prevent applicants from pursuing grant funding that they need and direct their limited capacity elsewhere.

*“I just know there's a big budget deficit, and when they have to redo budgets, these sorts of programs can even pull money back that had already been awarded. It happens. Man, it's a budget crisis, right? It's just too much uncertainty for us. I won't be applying for any more State-funded grants for the next year or two, unless I know it's secure funding, because it's so much work to apply, and the State's funding budget is so unsure.” - Program Grantee*

While the State made substantial investments in adaptation in the 2021 Climate Budget, these were one-time funding allocations, and many of the programs that emerged from this investment have since seen reversions as part of the 2024 Budget Solution. This most recent boom-and-bust pattern illustrates the impact of California's budget fluctuations on the availability and potential effectiveness of critical adaptation and resilience funds.

For Round 2, APGP staff set a Regional Diversity Funding Target, streamlined the program guidelines, and held additional workshops and office hours to support applicants. The makeup of applications for APGP's second round suggests that these changes increased program accessibility: APGP Round 2 received 94 applications, including 52 from Disadvantaged Communities, 11 from California Native American Tribes, and 7 from Small & Rural Communities.

OPR contracted with a third party (Civix) to provide application technical assistance (TA) to eligible APGP Round 2 applicants, prioritizing applicants from APGP's Funding Target communities (California Native American Tribes, Disadvantaged Communities (DAC), and Small and Rural Communities).<sup>25</sup>

## FUNDING COMPLEXITY

Funding for adaptation and resilience is not only unstable but also distributed through siloed administering agencies, each with its own application process and eligibility requirements. Seventeen different agencies and departments administer the 52 grants mapped in this analysis. ICARP staff indicated that many State grant program staff serve on interagency review panels for other grant programs with the intention to align on application processes and requirements where possible. However, implementing standardized procedures across all adaptation and resilience grant programs remains challenging without clear authority or capacity.

This complex landscape creates barriers for applicants, especially for the majority of local governments that do not have full-time staff dedicated to seeking out and preparing grant applications. Agencies and departments often have different application requirements and components, requiring significant applicant time to tailor project applications to multiple programs. Limited informal resources exist to help applicants identify the best-fit program(s) for their projects.

This complexity creates significant barriers to advancing equity in the application process, as the local jurisdictions least likely to have staff dedicated to seeking out, preparing, and diversifying grant applications are often the most in need of support for adaptation planning and implementation.<sup>27</sup> CLEE's evaluations of APGP and RRGP identified funding navigation as a major challenge for applicants,<sup>28</sup> which is consistent with other analyses of California's adaptation funding landscape.<sup>29</sup>

*“The bottleneck on our end seems to be how much of the administration of the grants we're able to do. So, I think that's where the limited capacity of the Tribe is the biggest limitation when it comes to, you know, going out and getting more funding.”*

*- Program Grantee*

The complex adaptation funding system causes State grant program staff to duplicate work, as similar grant application and award processes occur across different programs, often at the same time.<sup>30</sup> With limited resources for adaptation, these inefficiencies hinder effective fund deployment. Simplifying the funding process could make adaptation investments more efficient for applicants and the State.

In the first rounds of APGP and RRGP, ICARP staff offered informal navigation support to prospective applicants throughout the application process due to the absence of formal navigation resources on the likelihood of success and opportunities for stacking multiple funding sources.<sup>26</sup>





## IV. OPPORTUNITIES TO STRENGTHEN CALIFORNIA'S ADAPTATION AND RESILIENCE FUNDING LANDSCAPE

While these challenges of the State's funding landscape present barriers, they also highlight opportunities for the State to further expand its leadership in funding climate adaptation and resilience. Investments such as those made in the 2021 Budget and support for innovative program development—as with APGP and RRGP—provide a strong foundation for California to continue refining its approach to meeting funding needs. This analysis identified three key opportunities for the State to build on these efforts and strengthen its adaptation and resilience funding portfolio.

- **Opportunity for State Grant Program Administrators: Maximize the Resilience Outcomes of Existing Funding Programs.** California has a robust foundation on which to improve the adaptation funding landscape. This includes the existing suite of grant programs and ICARP's role as the State's clearinghouse for adaptation and resilience information. Priority recommendations for State grant administrators include elevating and facilitating plan alignment and advancing local governance in adaptation strategies to achieve more equitable resilience outcomes.
- **Opportunity for State Policymakers: Make Adaptation and Resilience Funding More Accessible.** The State has invested significant time and funds in supporting local and regional adaptation initiatives, and recent Federal programs have also directed funding to resilience projects. Priority recommendations for the California Legislature and Governor's Office include institutionalizing support to navigate State funding opportunities and aligning State funding with Federal, private, and nonprofit funding sources to encourage balanced funding portfolios.
- **Opportunity for State Policymakers: Sustain and Maintain Predictable Funding for Adaptation and Resilience.** California has made several long-term research and capacity investments to advance its climate adaptation goals. A priority recommendation for the California Legislature and Governor's Office is to develop a comprehensive funding and investment strategy that aligns with the priorities of the State's Climate Adaptation Strategy through sustained funding for adaptation and resilience.

## MAXIMIZE THE RESILIENCE OUTCOMES OF EXISTING FUNDING PROGRAMS

Building long-term capacity to undertake critical adaptation and resilience projects—especially under difficult budget conditions—requires strategic use of available resources to maximize the resilience outcomes of existing funding programs. The following recommendations for State grant program administrators provide near-term opportunities to better leverage existing funding channels through enhanced coordination and resource utilization.

### State Grant Program Administrators: Elevate and Facilitate Plan Alignment

**Plan alignment** is the process of leveraging connections, information, and resources to build shared language, data foundations, and processes across multiple planning efforts at any scale.<sup>31</sup> It is a practical approach for ensuring the efficient implementation of adaptation strategies and enabling applicants' eligibility for different funding sources and future funding cycles. Conversely, the lack of plan alignment increases the likelihood of conflictual planning processes, makes for inefficient use of fiscal resources and staff capacity, and may result in projects that cannot effectively be converted to implementation.

Plan alignment is also crucial for enabling equitable adaptation and avoiding maladaptation. Advancing plan alignment encourages holistic, multi-sector, and multi-risk planning in communities disproportionately vulnerable to climate change and those that have historically experienced underinvestment in critical adaptation and resilience-building activities. Strategic prioritization of plan alignment in this context may alleviate some of the challenges identified by practitioners in accessing funding for areas of especially high need, including equity-oriented, planning-focused, and regional-scale adaptation processes.

State grant program administrators can elevate and facilitate plan alignment through:

- 1. Encouraging plan alignment in grant program guidelines.** Requiring applications to enumerate how they will advance plan alignment ensures that resulting plans are inclusive, holistic, and actionable; administrators can achieve this through narrative application questions, project eligibility requirements, or partnership agreements.
- 2. Utilizing and supporting updates to ICARP's Plan Alignment Toolkit.** Administrators should direct applicants to the Toolkit and provide ICARP with feedback on how effectively these resources support applicants' efforts to design alignment processes. Administrators should also share examples of plan alignment through the Resilient California Adaptation Clearinghouse to support prospective applicants by providing effective and replicable models for plan alignment processes.<sup>34</sup>

Implementing Actors:  
State Grant Program  
Administrators

ICARP staff released the [Climate Resilience Plan Alignment Toolkit](#) in December 2022 to aid local jurisdictions in aligning climate adaptation planning processes,<sup>32</sup> and the second round of APGP specifically elevated plan alignment as a core project component for all applicants in the Round 2 Program Guidelines.<sup>33</sup>

## State Grant Program Administrators: Advance Local Governance in Adaptation Strategies and Solutions

**Local governance** strategies include tailoring funding programs to address local or regional priorities, advancing local and community ownership over projects and planning processes, and encouraging place-based approaches instead of one-size-fits-all models.

Incorporating local governance approaches in grant program guidelines can strategically address multiple challenges of California’s adaptation funding landscape. Advancing local decision-making power over how adaptation projects are conceptualized, designed, and implemented can ensure that funding is utilized most effectively for locally significant climate risks. Prioritizing local design in adaptation investments can also advance equity by empowering local jurisdictions to plan and implement the projects most needed by impacted communities. Foundational to the success of these strategies are capacity-building measures that support local jurisdictions and program grantees in leveraging State funding, such as technical assistance and application guidance.

State grant program administrators can advance local governance over adaptation strategies and solutions by incorporating the following measures in grant program design:

- 1. Community engagement and input throughout the grant program design and development process**, including engagement in program design, implementation, and monitoring stages. Grant program managers should include engagement processes such as needs assessments in the program design phase and accessible avenues for community and/or applicant feedback between award rounds. For example, both RRG and APGP program staff engaged over 500 organizations through workshops, listening sessions, and office hours to identify the funding needs of California’s various communities and design program priorities to meet those needs.
- 2. Flexible governance structures to support local decision-making** in project conceptualization, development, and implementation. These may include funding eligibility or technical assistance for community oversight structures, community benefits approaches, and innovative governance structures such as local agency-community partnerships and collaboratives. For example, the LA Cool Capital Stack project funded by APGP’s first round created an agency-community collaborative between Los Angeles County, the Los Angeles Metro, and the Infrastructure Justice for Los Angeles Coalition, representing a wide range of public interest organizations. Interviewed grantees from APGP and RRG also highlighted that the flexibility afforded by both programs increased the accessibility and relevance of the grant program for tribal applicants.

In Round 1, APGP staff established funding targets to reach under-resourced and vulnerable communities. In response to an uneven geographic distribution of first-round awards, staff expanded these targets in Round 2 to include low-income small and rural communities before the program’s cancellation.

*“OPR [LCI] has shown a lot of flexibility when it comes to developing our proposal, our work plan, our budget... [sic] that is helpful, you know, as our management priorities shift around... it allows the Tribe [to] really utilize that funding for the Tribe’s priorities.” - Program Grantee*

## MAKE ADAPTATION AND RESILIENCE FUNDING MORE ACCESSIBLE

The State is well positioned to build systems-level capacity to address the challenges of the adaptation funding landscape and ensure that distributed funds advance equitable resilience outcomes. The following recommendations are intended to inform longer-term legislative and policy activities.

### State Policymakers: Institutionalize Support for Navigating State Funding Opportunities

Institutionalized support for navigating the funding landscape can ensure that allocated funds are impactful and equitably distributed, particularly given the complexity of California’s adaptation funding landscape. While the State Library does maintain an online database of State grant opportunities,<sup>35</sup> it relies on information submitted by administering agencies, spans all grant topics and sectors, and is often not updated frequently enough to reflect current funding availability. These gaps in the California Grants Portal and the current lack of program navigation support result in the inefficient use of applicants’ and State staff’s time and resources. They also pose a risk of limiting the uptake of funding in regions with limited capacity to find and apply for grants.

**To reduce the risks associated with a complex funding landscape, the State should establish a centralized grant support hub within a single State agency to help applicants and grantees navigate adaptation funding opportunities.** ICARP, within the Governor’s Office of Land Use and Climate Innovation (LCI), is well positioned to fill this role with appropriate State assistance. LCI, formerly the Governor’s Office of Planning and Research (OPR), is well established as a State-level coordinating entity with experience in multiple investment areas.<sup>36</sup> While ICARP program staff do advise prospective applicants through the program application process, the informal nature of this navigation support runs the risk of being impacted by similar challenges with instability and high demand prevalent in the broader funding landscape. To preempt this, the State should institutionalize ICARP’s role as the primary agency providing dedicated navigation support for program applicants and fund pilot approaches for innovative grant navigation structures.<sup>37</sup> The State should also ensure that ICARP has the resources to fulfill this role while maximizing equitable outcomes, including adequate staffing and directives to prioritize technical assistance and navigation support for applicants representing disadvantaged communities.

### State Policymakers: Align State Funding Opportunities with Federal, Private, and Nonprofit Funding Sources

While State funding is essential for advancing local adaptation and resilience priorities, it is most effective when working in concert with Federal, private, and philanthropic resources to achieve resilience goals. The high cost of climate adaptation necessitates a holistic funding strategy that capitalizes on Federal climate investments and private and nonprofit dollars. Aligning

Implementing Actors:  
California Legislature and  
Governor’s Office

APGP Round 1 incorporated consideration of the [Biden-Harris Administration’s Justice40 Initiative](#) to intentionally align state adaptation funding and program design with Federal resilience frameworks; of the thirteen projects awarded in Round 1, nine are in Justice40 communities. For Round 2, APGA staff expanded this alignment, committing to prioritize applications that integrate long-term funding and financing mechanisms.

State funding with other sources builds flexibility and stability in the funding landscape, helping to address some of the risks—including inequitable funding distribution—of a competitive and budget-dependent grant landscape.

**To make optimal use of diverse funding sources and build stability in the funding landscape, the State should strategically design funding opportunities for applicants interested in linking State funds with Federal, private, or nonprofit dollars.** The State should refine its grant programs to align directly with other sources, enabling applicants to link State-awarded planning funds with Federal implementation dollars or supplement State awards to fully finance partially funded projects. Similar outcomes could be achieved by encouraging applicants to include strategies for integrated financing in project applications. To support applicants in building balanced and robust funding plans, the State could assist—potentially through ICARP—with identifying complementary funding programs, understanding what State program deliverables guarantee eligibility for Federal funds, and directing applicants to appropriate private and nonprofit sources to enhance capacity and encourage sustainable funding mechanisms. Applicants representing disadvantaged and under-resourced communities should be prioritized for this technical assistance to reduce the administrative burden on lower-capacity applicants and ensure that California’s vulnerable communities can access the benefits of integrated financing.

## SUSTAIN AND MAINTAIN PREDICTABLE FUNDING FOR ADAPTATION AND RESILIENCE

Sustained funding for adaptation and resilience in California is essential to ensure funding throughout the project life cycle and guarantee equitable access to funding. Program cuts via budget fluctuations affect not only grants’ ability to directly fund projects but also program staff’s ability to offer ongoing support and resources to awarded projects throughout their lifetime. Sustained and predictable funding ensures that applicants can adequately budget their staff’s time to prepare for grant cycles, supports applicants in long-term planning for multi-phase adaptation projects, and enables applicants to better align and stack resources from multiple sources.

California has made significant investments in climate mitigation and adaptation over the last decade. This includes investments made with revenues from the State’s cap and trade auctions, bonds, and other State funding programs. The 2021 Climate Budget represented an important evolution in this approach, providing a more complete investment that included several multiple-year allocations and drew on several sources of funds. The reversion of many of the funds included in the 2021 Climate Budget walks back some of these advancements. While Proposition 4—famously referred to as the 2024 Climate Bond—will provide an important source of future funding, it is not sufficient on its own (see Box 4).

**Implementing Actors:**  
California Legislature and  
Governor’s Office

## BOX 4. PROPOSITION 4: SENATE BILL 867 SAFE DRINKING WATER, WILDFIRE PREVENTION, DROUGHT PREPAREDNESS, AND CLEAN AIR BOND ACT OF 2024

The Legislature passed, and the Governor signed Proposition 4, the Safe Drinking Water, Wildfire Prevention, Drought Preparedness, and Clean Air Bond Act of 2024 (Senate Bill 867) this year.<sup>38</sup> Proposition 4 would authorize the sale of bonds to fund environmental and climate investments, including drought, flood and water supply, forest health and wildfire prevention, sea-level rise, land conservation, energy infrastructure, parks and urban greening, extreme heat, and climate-smart agriculture.<sup>39</sup> Most Climate Bond funds would be distributed as loans and grants to local governments, Native American tribes, nonprofits, and businesses.

If passed by voter approval, Proposition 4 would support significant multi-year investments in necessary climate programs, many of which experienced funding cuts due to California's budget deficit. However, while Prop 4 includes \$50 million dedicated to ICARP's Extreme Heat and Community Resilience grant program, it does not include funding for APGP, RRG, or flexible funds otherwise dedicated to climate adaptation and resilience activities. Further, most Prop 4 funding will be dedicated to capital investments and long-term infrastructure projects—as is standard for State bonds—with limited funding for planning or project pre-development. Although these investments in project implementation are critical for building resilience, Prop 4 does not sufficiently address the gaps in adaptation and resilience planning funding, including those due to the elimination of funding for APGP and RRG.

**To ensure sustained funding for climate adaptation and resilience efforts outside of individual bond measures, the State should develop a comprehensive funding and investment strategy<sup>40,41</sup> that aligns with the priorities of the State's Climate Adaptation Strategy.<sup>42</sup>** Given recent Federal investments in climate action and significant learnings from State funding programs, California has an opportunity to formalize mechanisms for equitably funding local and regional adaptation efforts that advance the State's broader adaptation priorities.<sup>43</sup>

*“As we were trying to bring partners on board, their question was, why should we do this? What happens to RRG going forward? What is the State's overarching strategy for funding climate adaptation or resiliency? I don't think that they understand what it is. As we know, the need is tremendous, but I think that the overall strategy is a little bit fuzzy.” - Program Grantee*

A comprehensive funding strategy for adaptation and resilience should outline the State's plan for funding projects through their life cycle, from pre-development to implementation and evaluation; prioritize the deployment of flexible and hazard-agnostic funds; and clearly articulate the State's long-term goals for improving the climate adaptation funding landscape. The strategy should include a framework for strategically

linking multiple types of funding—including Federal, State, and private investments—and explore a combination of funding strategies, including dedicated funding streams through annual budgets, proposition dollars, a non-competitive climate block grant,<sup>44</sup> and the establishment of a resilience investment fund that draws on both public and private sources.

Over the last several years, practitioners, researchers, and community organizations developed extensive recommendations for the State’s adaptation funding landscape to respond to the challenges around funding instability and program oversubscription.<sup>45</sup> The State can leverage these recommendations and convene a working group of adaptation funding experts and community representatives to inform the development of the adaptation funding and investment strategy. The working group can provide oversight to ensure that any adopted strategy addresses equity by identifying and prioritizing funding for historically underserved communities and regions most vulnerable to climate impacts, in addition to developing concrete metrics to assess the equitable distribution of resources.

This funding strategy should be updated concurrently with the State’s Climate Adaptation Strategy to ensure alignment between State investment and planning processes. Regular updates to the funding strategy would also ensure adaptability to changes in the national funding landscape and shifts in California communities’ funding needs, providing effective and equitable continuous support for critical resilience efforts.





## IV. CONCLUSION

California has set a strong precedent for advancing climate adaptation. As the first state to undertake a comprehensive Climate Change Assessment, California leads the country in science-based approaches to identify climate risks and build resilience. The State's Climate Adaptation Strategy synthesizes these efforts, and ICARP enables a coordinated approach to advancing resilience. However, despite significant State investments in adaptation and resilience, an implementation gap remains between the Climate Adaptation Strategy and the funding necessary to achieve the Strategy's priorities.

**CLEE's evaluations found that APGP and RRGP—two of the State's newest adaptation grant programs—were valuable additions to the State's resilience funding portfolio.** APGP and RRGP advanced an equity-oriented and integrated approach to funding local and regional adaptation projects, offering examples for the State's other resilience grant programs. However, their cancellation through the 2024-25 Budget Solution suggests a need to review California's adaptation funding landscape and explore pathways to extend the successes of these programs.

**Our preliminary analysis finds that State adaptation funding in California is characterized by an oversubscribed, unstable, and complex funding landscape, which limits the State's ability to advance and implement equitable adaptation efforts.**

- *Funding Oversubscription:* There is a high unmet need for adaptation funding. Many of the State's adaptation and resilience grants are oversubscribed by more than 700%, resulting in highly competitive programs that risk perpetuating funding gaps between higher-resourced and lower-resourced jurisdictions.
- *Funding Instability:* The funding landscape is subject to budget fluctuations. Programs are, on average, only active for five years, with many recent programs cut after only one round. This can generate a lack of return on application investment for applicants and reduced opportunities for programs to benefit from ongoing feedback, evaluation, and refinement.
- *Funding Complexity:* Existing State programs are administered by a large number of siloed agencies and departments; there were seventeen different administrators for the 52 programs mapped in CLEE's analysis. Navigating the

funding landscape is a significant barrier for applicants, and the complexity of the landscape can result in inefficiencies in local and agency staff resources.

While nuanced, these challenges suggest an opportunity for the State to refine its approach to adaptation funding, leveraging decades of progressive investments in research, capacity-building, and direct project financing.

**California now has several opportunities to build on its success as a climate leader and strengthen the State’s approach to adaptation funding.** Informed by CLEE’s evaluations of APGP and RRGF and a preliminary analysis of existing grant programs, we make recommendations for improving the funding landscape to better facilitate the efficient and equitable deployment of critical funds.

- *Maximize the Resilience Outcomes of Existing Funding Programs:* To ensure sustained capacity for adaptation and address current funding needs, State grant program administrators should focus on enhancing coordination and resource utilization to maximize the resilience outcomes of current programs. This includes aligning funding criteria across programs to ensure consistency and predictability for applicants. By developing clear guidelines for plan alignment and offering technical assistance, grant administrators can help local governments implement adaptation strategies that are cohesive with the State’s Climate Adaptation Strategy. Strengthening local governance through capacity-building efforts, such as training programs and resource-sharing platforms, can empower local governments to lead on adaptation solutions and ensure that grant funding is used effectively and equitably.
- *Make Adaptation and Resilience Funding More Accessible:* To create a more stable and accessible funding environment, the California Legislature and Governor’s Office should institutionalize support mechanisms to help communities navigate state funding opportunities. This could include establishing a centralized technical assistance hub that offers guidance to applicants throughout the application process and developing shared tools, like digital dashboards, to track available funding opportunities across state and federal programs. By aligning state funding with federal, private, and nonprofit resources, California can also reduce the administrative burden on applicants and increase the total pool of available resources.
- *Sustain and Maintain Predictable Funding for Adaptation and Resilience:* Long-term sustainability requires a comprehensive investment strategy that transcends short-term bond measures. The California Legislature and the Governor’s Office should work together to create a multi-year funding framework that aligns with the priorities of the Climate Adaptation Strategy, ensuring continuous support for critical resilience projects. This framework could include dedicated funding streams through annual budgets, increased flexibility in allocated funds, and establishing a resilience investment fund that draws from public and private sources. To address equity concerns, the strategy should prioritize funding for historically underserved communities and regions most vulnerable to climate impacts, with metrics in place to assess the equitable distribution of resources.

## APPENDIX A. LIST OF AWARDED PROJECTS THROUGH ROUND 1 OF APGP AND RRG

ADAPTATION PLANNING GRANT PROGRAM (APGP) ROUND 1 AWARDED PROJECTS				
PROJECT NAME	PROJECT LEAD	REGION	AWARD AMOUNT	CLIMATE RISKS
City of Berkeley Safety Plan and Environmental Element Update	City of Berkeley	SF Bay Area	\$497,042	Sea Level Rise, Extreme Heat, Flooding
City of San Fernando Climate Action and Resilience Plan	Climate Resolve & City of San Fernando	Los Angeles	\$599,918	Extreme Heat, Air Pollution
Planning for an Equitable, Climate Safe Lake	Lake County	North Coast	\$649,350	Wildfire
Hoopa Valley Tribe Climate Adaptation Plan	Hoopa Valley Tribe	North Coast	\$338,448	Drought, Heat, Wildfire, Air Quality, Extreme Weather, Flooding
LA's Cool Capital Stack	Los Angeles County	Los Angeles	\$401,100	Extreme Heat, Flooding, Wildfire, and Drought
Lake Elsinore Climate Adaptation Plan	City of Lake Elsinore	Inland Deserts	\$556,000	Extreme Heat, Wildfire
Ramona Barona Climate Adaptation and Action Plan	Ramona Municipal Water District	San Diego Region	\$596,600	Wildfire, Flooding, Extreme Weather, Drought
San Jose Interdependent Water, Energy, Security Electrified Transportation Climate Adaptation Plan	City of San Jose	SF Bay Area	\$649,970	Extreme Heat, Flooding, Wildfire
San Mateo County OneWatershed Climate Resilience Framework	San Mateo County	SF Bay Area	\$649,648	Extreme Heat, Drought, Sea Level Rise, Flooding
San Rafael Climate Adaptation Planning Collaborative	City of San Rafael	SF Bay Area	\$644,200	Coastal Flooding, Sea Level Rise
Shade Equity Masterplan for the Unincorporated Eastern Coachella Valley	Kounkuey	Inland Deserts	\$644,411	Extreme Heat

## ADAPTATION PLANNING GRANT PROGRAM (APGP) ROUND 1 AWARDED PROJECTS

PROJECT NAME	PROJECT LEAD	REGION	AWARD AMOUNT	CLIMATE RISKS
Stockton Climate Action and Adaptation Plan	City of Stockton	San Joaquin Valley	\$650,000	Air Pollution, Flooding, Drought
WRCOG Energy Resilience Plan 2.0 Microgrid Feasibility Studies	Western Riverside Council of Governments (WRCOG)	Inland Deserts	\$471,000	Extreme Heat, Wildfire, Flooding
Yosemite Slough Adaptation Plan	City and County of San Francisco	SF Bay Area	\$649,000	Sea Level Rise and Coastal Flooding

## REGIONAL RESILIENCE PLANNING AND IMPLEMENTATION GRANT PROGRAM (RRGP) ROUND 1 AWARDED PROJECTS

### PLANNING GRANTS

PROJECT NAME	PROJECT LEAD	REGION	AWARD AMOUNT	CLIMATE RISKS
Mendocino, Lake, Sonoma Tribal Resilience Initiative on Air Quality and Drought (MLS-TRIAD)	Public Health Institute	North Coast	\$657,415	Air quality, Drought, Wildfire
North Coast Regional Climate Resilience Plan	County of Humboldt/ North Coast Resource Partnership	North Coast, SF Bay Area, Sierra Nevada	\$650,000	Sea Level Rise, Wildfire, Flood, Extreme Heat
Paradise Regional Wildfire Resilience Implementation Plan	Paradise Recreation and Park District	Sacramento Valley, Sierra Nevada	\$570,533	Wildfire
Santa Ana River Watershed Climate Adaptation and Resilience Plan	Santa Ana River Watershed Project Authority	Greater Los Angeles, Inland Desert	\$644,190	Drought, Flooding, Wildfire
Yolo County Regional Resilience Collaborative	County of Yolo	Sacramento Valley	\$598,420	Drought, Flood, Extreme Heat, Wildfire
Monterey Bay Adaptation and Resilience Implementation and Funding Roadmap	City of Watsonville	Central Coast	\$649,335	Drought, Extreme Heat, Sea Level Rise, Flood, Wildfire
Coachella Valley Regional Water Resilience Plan	Coachella Valley Water District	Inland Desert	\$649,335	Drought
Solano Bayshore Resiliency Project	Fairfield-Suisun Sewer District	SF Bay Area	\$601,113	Sea Level Rise

**REGIONAL RESILIENCE PLANNING AND IMPLEMENTATION GRANT PROGRAM (RRGP)  
ROUND 1 AWARDED PROJECTS  
PLANNING GRANTS**

PROJECT NAME	PROJECT LEAD	REGION	AWARD AMOUNT	CLIMATE RISKS
Climate Resiliency through Regional Water Recharge in the San Joaquin Valley	California State University, Fresno Foundation - California Water Institute	San Joaquin Valley	\$568,888	Drought, Flood
Building Climate Resilience in the Central Sierra Region	County of Nevada	Sierra Nevada	\$650,000	Extreme Heat, Drought, Wildfire

**REGIONAL RESILIENCE PLANNING AND IMPLEMENTATION GRANT PROGRAM (RRGP)  
ROUND 1 AWARDED PROJECTS  
IMPLEMENTATION GRANTS**

PROJECT NAME	PROJECT LEAD	REGION	AWARD AMOUNT	CLIMATE RISKS
Regional Cohesive Fire Strategy for Evacuation Preparedness and Wildfire Resilience	County of San Diego	Greater San Diego	\$1,588,838	Wildfire
Los Angeles Regional Collaborative: Heat Education, Ambassadors, and Training (LARC-HEAT)	University of California, Los Angeles/Los Angeles Regional Collaborative	Greater Los Angeles	\$2,999,999	Extreme Heat, Flooding, Wildfire
Energy-Resilient Fire Services in High-Threat Communities	Redwood Coast Energy Authority	North Coast	\$3,000,000	Extreme Heat, Flooding, Wildfire
Cultural Fire & Land Stewardship for Wildfire & Climate Resilience	Tamien Nation	Sierra Nevada, SF Bay Area	\$2,989,995	Drought, Wildfire
Le Grand Community Water Program	Le Grand Athlone Water District	San Joaquin Valley	\$3,000,000	Drought, Floods
Kó:dom Hýbísín (“Land Stewardship”)	Mechoopda Indian Tribe of Chico Rancheria	Sacramento Valley, Sierra Nevada	\$1,931,410	Extreme Heat, Wildfire, Drought

## APPENDIX B. LIST OF GRANT PROGRAMS INCLUDED IN GRANT LANDSCAPE MAPPING ANALYSIS

The list of 52 grant programs included in CLEE’s final analysis is representative, but not exhaustive, of California’s adaptation and resilience funding landscape. Data on funding history and current status of programs is often lacking, inconsistent, or out-dated. Therefore, we selected programs to include based on data availability. While a comprehensive analysis of the funding landscape is outside the scope of this work, ideally, it would include a complete analysis of funding trends gathered through interviews with program managers and funding agencies, among other sources.

ADMINISTERING AGENCY OR DEPARTMENT	PROGRAM NAME
California Coastal Commission	Local Coastal Program Grant Program
California Environmental Protection Agency	Environmental Justice Small Grants
	Cal EPA EJ Action Grants Program
California Natural Resources Agency	Urban Greening Program
	Tribal Nature-Based Solutions Program
Coastal Conservancy	Rolling Grants (Sea Level Rise, Wildfire, Coastal Resilience, etc.)
	Climate Ready Program
Department of Conservation	Sustainable Groundwater Management Watershed Coordinator Grants
	Working Lands, Riparian Corridors Watershed Restoration Grants
	Multi-benefit Land Repurposing Program
	Climate Smart Land Management Program
	Sustainable Agricultural Lands Conservation
	Regional Forest and Fire Capacity Program
Department of Food and Agriculture	State Water Efficiency & Enhancement (SWEEP) Program
	Fairgrounds and Community Resilience Centers
	Conservation Agriculture Planning Grants Program
Department of Forestry and Fire Protection	Forest Health Grants
	Urban and Community Forestry Grants
	Wildfire Prevention Grants
	Rural Fire Capacity Grants
	Tribal Wildfire Resilience Grants
	Business and Workforce Development Grants
Department of Housing and Community Development	Infill Infrastructure Grant Program
	Local Early Action Planning Grants (LEAP)
	Regional Early Action Planning Grants (REAP) 2.0

ADMINISTERING AGENCY OR DEPARTMENT	PROGRAM NAME
Department of Parks & Recreation	Outdoor Equity Program
Department of Resources Recycling and Recovery	Community Composting for Green Spaces Grant Program
Department of Transportation	SB 1 Sustainable Transportation Planning Grants
	Clean California Local Grant Program
Department of Water Resources	Urban Streams Restoration Program
	Urban Flood Protection Grant
	Floodplain Management, Protection, Risk Awareness Grants
	SGMA Implementation
	Drought Relief Program
	Watershed Resilience Program
	Coastal Watershed Flood Risk Reduction
Ocean Protection Council	Prop 68 Coastal Resilience Grants
	SB 1 SLR Planning Grants
Office of Planning and Research	Extreme Heat and Community Resilience Program
	Community Economic Resilience Fund
	Adaptation Planning Grant Program
	Regional Resilience Planning and Implementation Grant Program
State Water Resources Control Board	Prop 1 Stormwater Grant Program
	Safe and Affordable Funding for Equity and Resilience
Strategic Growth Council	Affordable Housing and Sustainable Communities Grant Program
	Transformative Climate Communities
	Regional Climate Collaboratives
	Community Resilience Centers
	Prop 84 Sustainable Communities Planning Grants & Incentives Program
	BOOST Program
Wildlife Conservation Board	Climate Adaptation and Resiliency Program (Watershed Climate Resilience)
	Forest Conservation Program

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