

SB 379 Compliance: Resources for Local Jurisdictions

February 15, 2022

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Housekeeping



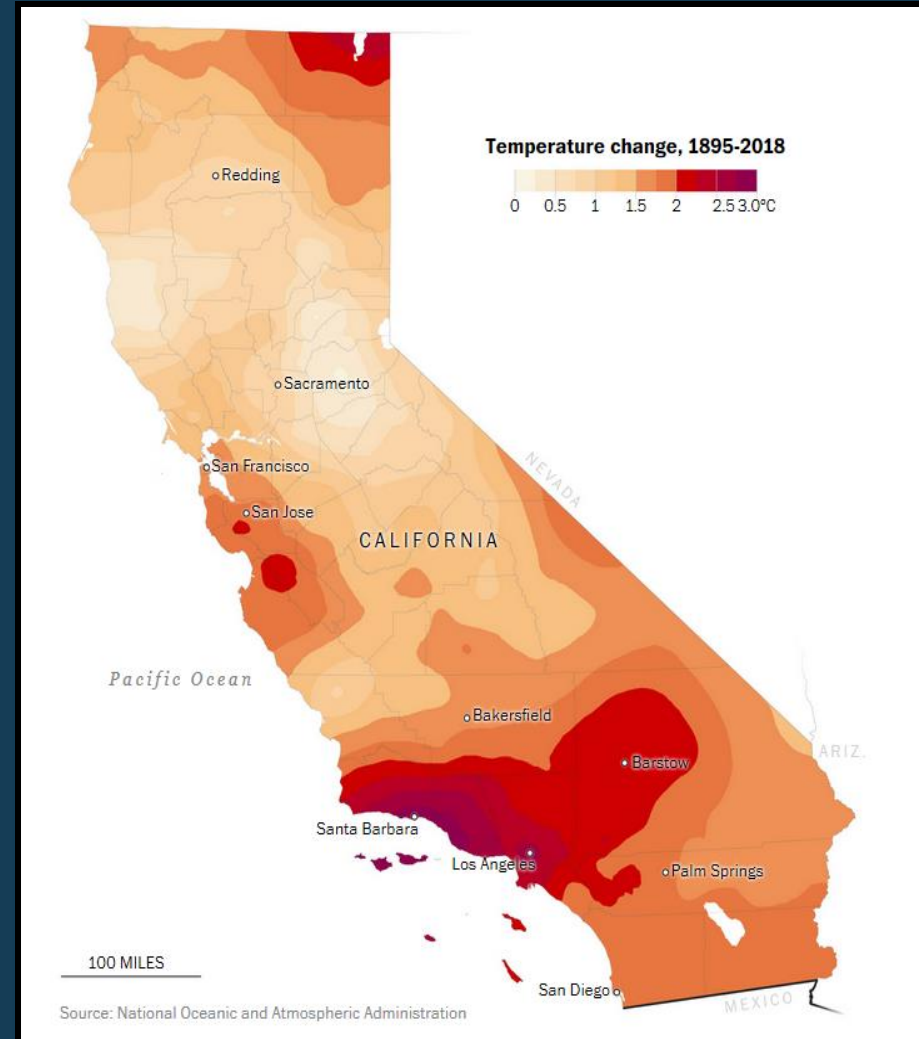
1. Meeting length: 1.5 hour
2. This meeting is being recorded
3. All participant lines will be muted
4. At the end, there will be a Q&A session
5. If you have a question during the presentation, please type it into the chat box or press the "raise hand" function.
6. We will log all questions and then voice a selection at the end of the presentation
7. A recording of this webinar and the PowerPoint slides will be available on the SCAG website. We will send a link to everyone who has registered after the event.

1. SB 379 Safety Element Update Overview
2. Viewing Your Local Climate Change Snapshot (Cal-Adapt)
3. Supporting Your Adaptation Planning & SB 379 Compliance
 - Regional Climate Adaptation Framework
 - SB 379 Compliance Curriculum for Local Jurisdictions
 - Housing Element Parcel Tool (HELPR) 2.0
 - NEW!** ➤ Climate Risk & Vulnerability Assessment Tool (CRVAT) [DEMO]
4. Questions & Discussion

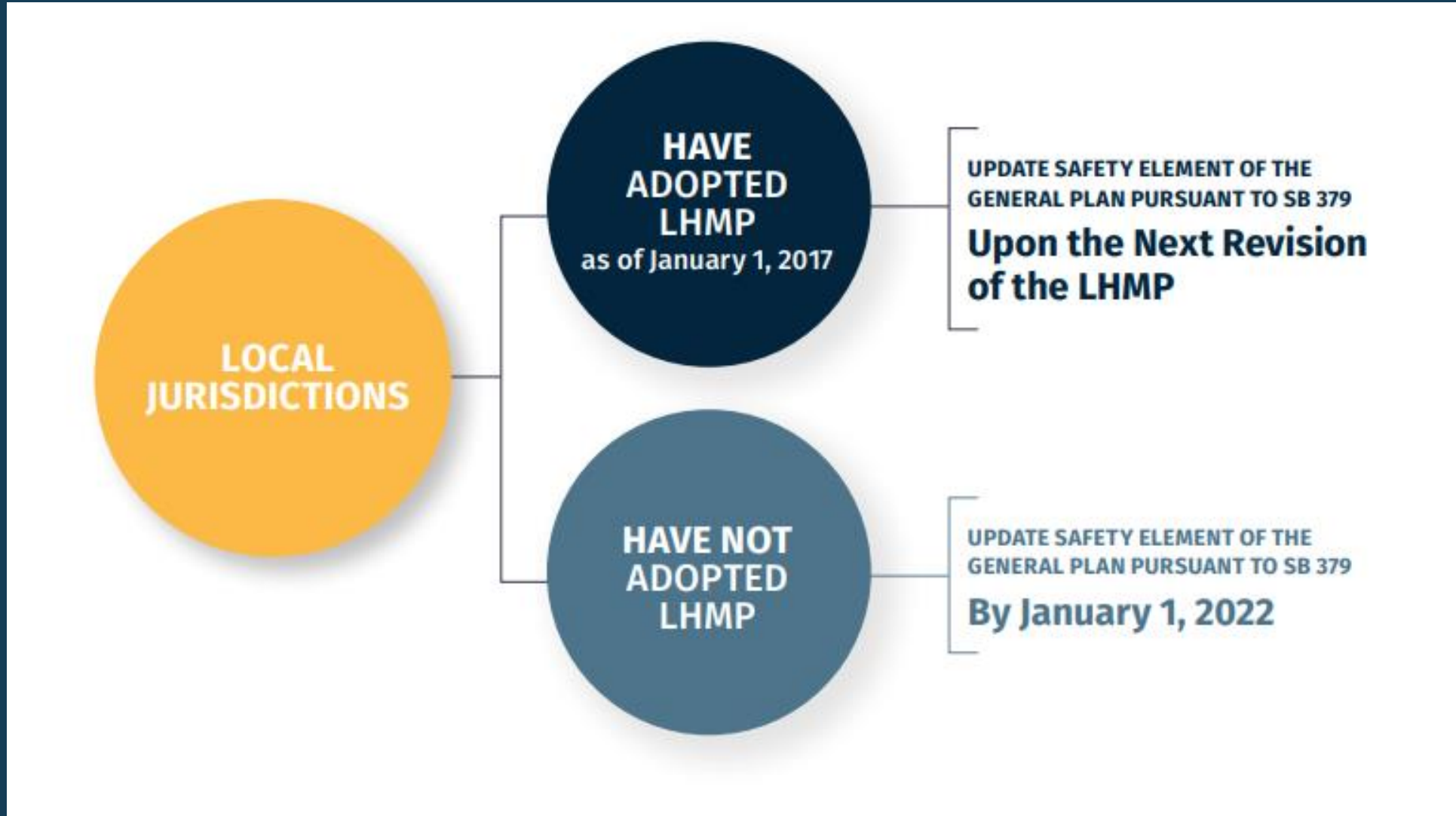
What is SB 379?

- Law passed in 2015, builds upon AB 162 (flood) and SB 1241 (fire)
- Key legislation for implementation of State's climate adaptation goals under *Safeguarding California*
- Applies to all cities and counties in California
- Requires climate adaptation and resilience strategies to be incorporated into the general plan safety element by

January 1, 2022



What is the timeline for complying with SB 379?



What are the statutory requirements of SB 379?

1. Vulnerability assessment

- Identifies the risks that climate change poses to the local jurisdiction and the geographic areas at risk from climate change impacts



2. Set of adaptation and resilience goals, policies, and objectives

- Based on the information in the vulnerability assessment
- For the protection of the community



3. Set of feasible implementation measures

- Designed to carry out the identified goals, policies, and objectives

What are the options to comply with SB 379?

Update the general plan safety element with the vulnerability assessment, adaptation and resilience strategies, and implementation measures

Attach, reference, or summarize in the safety element an existing plan or document that substantially fulfills the objectives and requirements of SB 379 (e.g., an adopted local hazard mitigation plan, climate adaptation plan, or similar)

What are the statutory requirements of SB 379?

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California LEGISLATIVE INFORMATION



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SB-379 Land use: general plan: safety element. (2015-2016)

Text Votes History Bill Analysis Today's Law As Amended Compare Versions Status Comments To Author

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Senate Bill No. 379
CHAPTER 608

An act to amend Section 65302 of the Government Code, relating to land use.

[Approved by Governor October 08, 2015. Filed with Secretary of State October 08, 2015.]

LEGISLATIVE COUNSEL'S DIGEST

SB 379, Jackson. Land use: general plan: safety element.

The Planning and Zoning Law requires the legislative body of a city or county to adopt a comprehensive, long-term general plan that includes various elements, including, among others, a safety element for the protection of the community from unreasonable risks associated with the effects of various geologic hazards, flooding, and wildland and urban fires.

This bill would, upon the next revision of a local hazard mitigation plan on or after January 1, 2017, or, if the local jurisdiction has not adopted a local hazard mitigation plan, beginning on or before January 1, 2022, require the safety element to be reviewed and updated as necessary to address climate adaptation and resiliency strategies applicable to that city or county. The bill would require the update to include a set of goals, policies, and objectives based on a vulnerability assessment, identifying the risks that climate change poses to the local jurisdiction and the geographic areas at risk from climate change impacts, and specified information from federal, state, regional, and local agencies. By imposing new duties on cities and counties, the bill would impose a state-mandated local program.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

Vote: majority Appropriation: no Fiscal Committee: yes Local Program: yes

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. Section 65302 of the Government Code is amended to read:

65302. The general plan shall consist of a statement of development policies and shall include a diagram or diagrams and text setting forth objectives, principles, standards, and plan proposals. The plan shall include the following elements:

(a) A land use element that designates the proposed general distribution and general location and extent of the uses of the land for housing, business, industry, open space, including agriculture, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste disposal facilities, and other categories of public and private uses of land. The location and designation of the extent of the uses of the land for public and private uses shall consider the identification of land and natural resources pursuant to paragraph (3) of subdivision (d). The land use element shall include a statement of the standards of population density and building intensity recommended for the various districts and other territory covered by the plan. The land use element shall

Which climate change hazards risks?

1. Vulnerability assessment

- Identifies **the risks that climate change poses** to the local jurisdiction and the geographic areas at risk from climate change impacts

Seismically-induced Hazards

- Surface rupture
- Tsunami
- Slope instability

Flood Hazards

- Flood hazard zones & maps (FEMA, USACE)
- Dam failure inundation maps (CalOES)
- 200-year flood plain maps (DWR)
- Levee protection zones

Fire Hazards

- Fire hazard severity zone maps (CalFire)
- Wildfire hazard areas (USGS)

Which climate change hazards risks? And to what extent?

1. Vulnerability assessment

- Identifies **the risks that climate change poses to the local jurisdiction and the geographic areas at risk** from climate change impacts

The risk climate change poses to the local jurisdiction and the geographic areas

- Existing and planned development
- Impacts on assets and infrastructure
- Maintaining essential public facilities
 - *inside & outside of at-risk areas*
- Establishing a working relationship amongst public agencies

What historical & existing resources are available?

1. Vulnerability assessment

- Identifies the risks that climate change poses to the local jurisdiction and the geographic areas at risk from climate change impacts

State

- Cal-Adapt
- California Adaptation Planning Guide
- Local Climate Change Snapshot Tool

Regional

- SoCal Regional Climate Adaptation Framework
- SoCal Adaptation Planning Guide
- SB 379 Guidebook & Technical Assistance
- Climate Risk & Vulnerability Tool (CRVAT)

Local

- Local agency asset types, resources, populations sensitive to climate change exposures
- Existing and planned development of structures, roads, utilities, essential public facilities

What are the statutory requirements of SB 379?

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Getting started on the vulnerability assessment

1. Vulnerability assessment

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- California Adaptation Planning Guide
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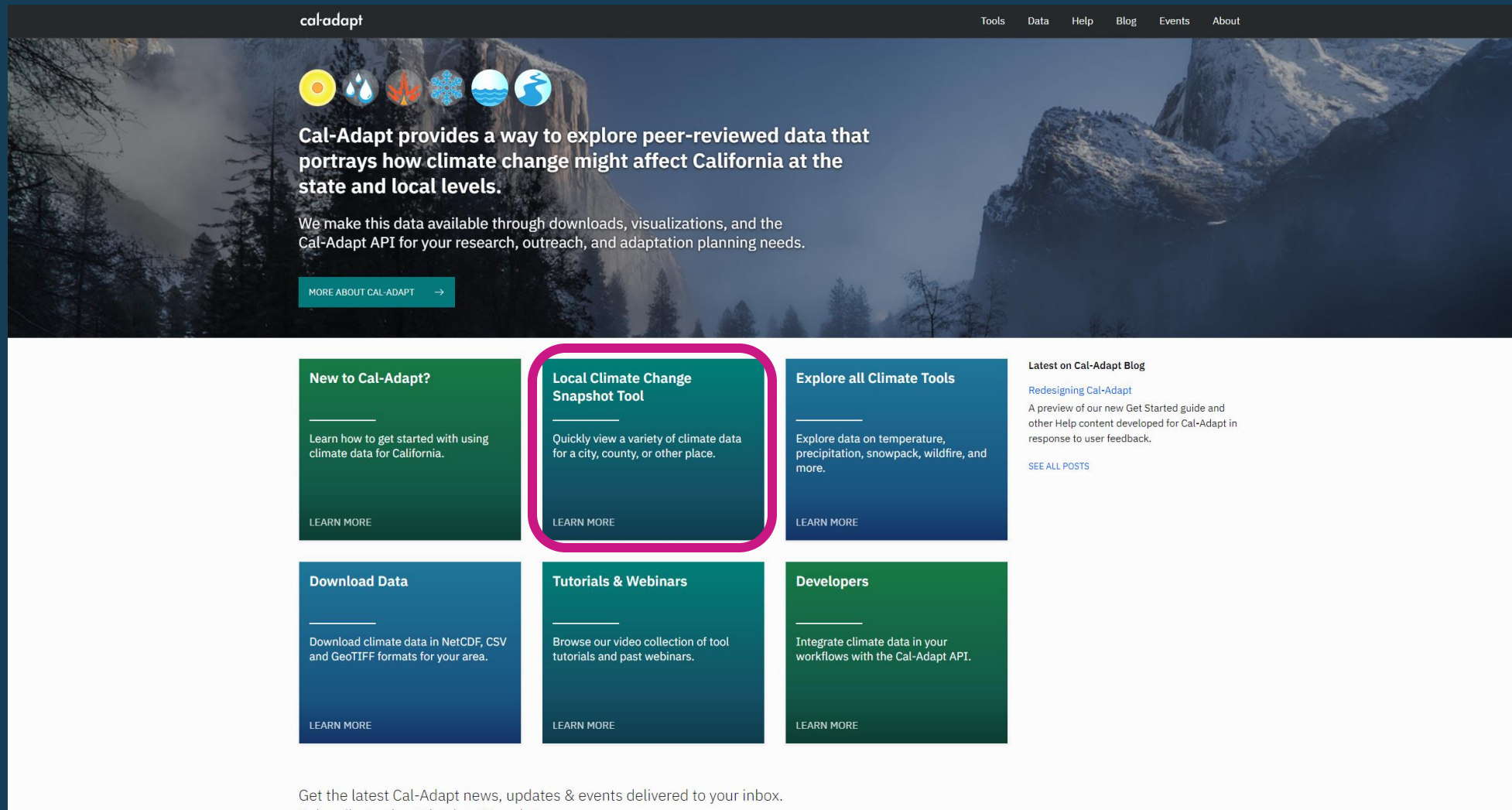
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Cal-Adapt: Local Climate Change Snapshot Tool



The screenshot shows the Cal-Adapt website homepage. At the top, there is a navigation bar with the 'cal-adapt' logo on the left and links for 'Tools', 'Data', 'Help', 'Blog', 'Events', and 'About' on the right. Below the navigation bar is a large hero image of a mountain landscape. In the center of the hero image, there are six circular icons representing different climate factors: sun, water, fire, snowflake, wind, and globe. Below the icons, the main text reads: 'Cal-Adapt provides a way to explore peer-reviewed data that portrays how climate change might affect California at the state and local levels.' This is followed by a sub-headline: 'We make this data available through downloads, visualizations, and the Cal-Adapt API for your research, outreach, and adaptation planning needs.' A button labeled 'MORE ABOUT CAL-ADAPT' with a right-pointing arrow is positioned below the text. The main content area below the hero image is divided into several sections. On the left, there are three columns of cards. The first column has a card titled 'New to Cal-Adapt?' with a description and a 'LEARN MORE' button. The second column has a card titled 'Local Climate Change Snapshot Tool' which is highlighted with a pink border; it includes a description and a 'LEARN MORE' button. The third column has a card titled 'Explore all Climate Tools' with a description and a 'LEARN MORE' button. On the right side of the main content area, there is a 'Latest on Cal-Adapt Blog' section featuring a link to 'Redesigning Cal-Adapt' and a 'SEE ALL POSTS' link. Below the main content area, there is a footer section with the text: 'Get the latest Cal-Adapt news, updates & events delivered to your inbox.' and a link to 'Subscribe to the Cal-Adapt Newsletter'.

<https://cal-adapt.org/>

Cal-Adapt: Local Climate Change Snapshot Tool

Local Climate Change Snapshot

Climate change related effects vary significantly throughout California, mirroring our state's diverse climate, topography, and ecology. This tool is a starting place if you are looking to get a quick sense of climate impacts in your region. The Snapshot tool provides climate projections for temperature, precipitation, and wildfire. Additional variables e.g. sea level rise will be added when they become available.

The Local Climate Change Snapshot Tool tool is designed to be straightforward and accessible for most users. Watch a [short video](#) on how to use the tool. If you want to explore the data in more depth, other [tools](#) on Cal-Adapt provide more configurable options.

Start by selecting a location. Search for address/zipcode or click on the map. To select an area, click on the County, City, Census Tract or Watershed options. Search by name/census tract number or click on the map.

Q Enter address or zipcode

Address County City Census Tract Watershed (HUC10)

GENERATE SNAPSHOT



Local Climate Change Snapshot: Overview

- Designed to be straightforward, introductory, and accessible
- Support local adaptation planning education, and advocacy
- Simplifies settings for parameters like GCMs and time intervals to quickly provide information

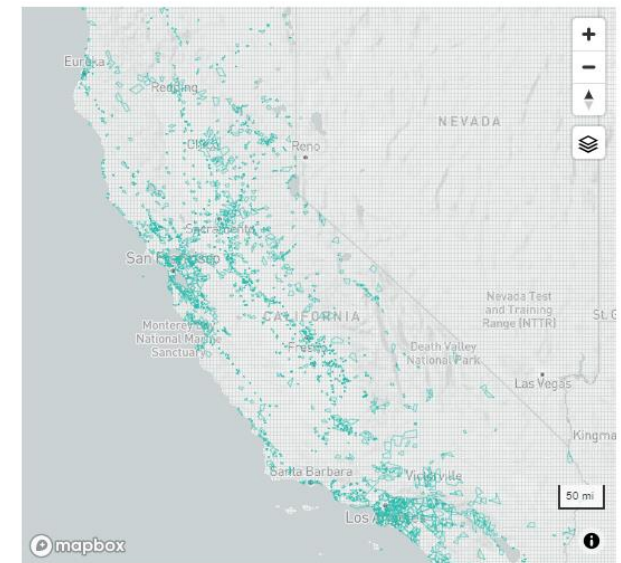
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Address
 County
 City
 Census Tract
 Watershed (HUC10)



Local Climate Change Snapshot: Data



TEMPERATURE

- Annual average maximum temperature
- Annual average minimum temperature
- Extreme heat days
- Warm nights



PRECIPITATION

- Maximum 1-day precipitation
- Maximum length of dry spell
- Annual precipitation



WILDFIRE

- Annual average area burned

<https://cal-adapt.org/tools/local-climate-change-snapshot/>

Local Climate Change Snapshot: How to Use the Tool

- 1) Select an aggregation boundary and location
- 2) View projections for a collection of physical climate variables
- 3) Connect with additional resources

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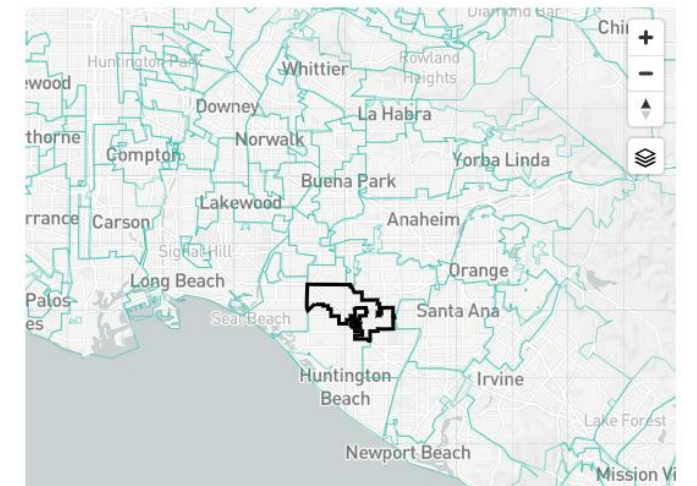
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Q Westminster, California X

Address County City Census Tract Watershed (HUC10)

GENERATE SNAPSHOT



Local Climate Change Snapshot: Westminster, CA

📍 SELECT A NEW LOCATION

Local Climate Change Snapshot for Westminster California



TEMPERATURE



PRECIPITATION



WILDFIRE

Overall temperatures are projected to rise in California during the 21st century. While the entire state will experience temperature increases, the local impacts will vary greatly with many communities and ecosystems already experiencing the effects of rising temperatures.

SELECT CLIMATE INDICATOR: ▾

Number of days in a year when daily maximum temperature is above a threshold temperature of **95.6 °F**

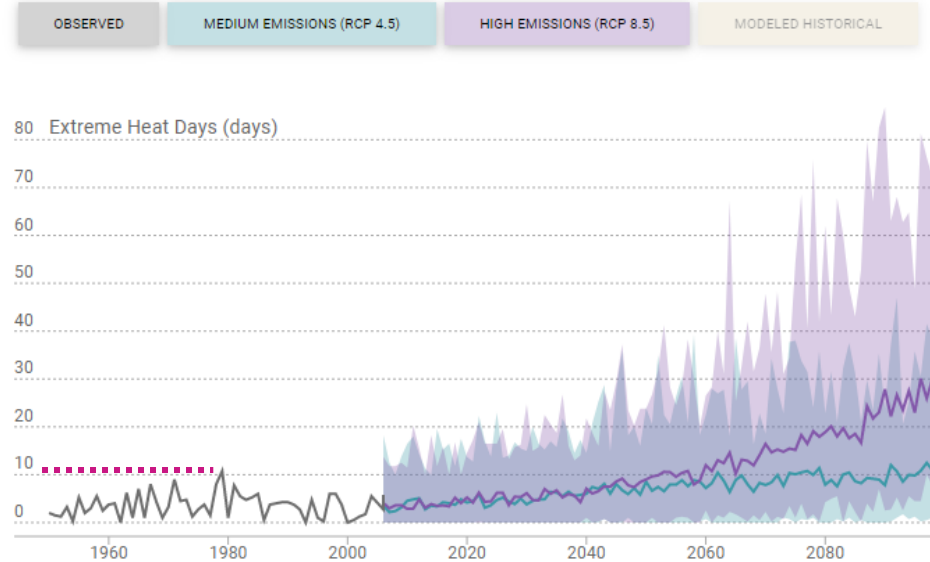
Note: Threshold temperature used in this tool is location specific. It is defined as the 98th percentile value of historical daily maximum/minimum temperatures (from 1961–1990, between April and October) observed at a location.

↓ CREATE REPORT

Local Climate Change Snapshot: Westminster, CA

This visualization shows the most likely outcome (—, —) and range (■, ■) of future projections of Extreme Heat Days.

- [Tour this visualization](#)
- [About the data](#)
- [Best practices for working with climate data](#)
- [Explore related climate tools](#)



[↓ GRAPHIC](#) [↓ DATA](#)

This table provides a snapshot of Extreme Heat Days for three 30-year time periods.

- [About this table](#)

Observed (1961-1990)	30yr Average: 4 days		
	Change from baseline ⓘ	30yr Average	30yr Range
Baseline (1961-1990)			
MODELED HISTORICAL	-	2 days	1 - 3 days
Mid-Century (2035-2064)			
MEDIUM EMISSIONS (RCP 4.5)	+5 days	7 days	4 - 15 days
HIGH EMISSIONS (RCP 8.5)	+7 days	9 days	6 - 20 days
End-Century (2070-2099)			
MEDIUM EMISSIONS (RCP 4.5)	+8 days	10 days	6 - 26 days
HIGH EMISSIONS (RCP 8.5)	+19 days	21 days	12 - 54 days

[↓ GRAPHIC](#) [↓ DATA](#)



Regional Resources for SB 379 Compliance

1. Vulnerability assessment

- Identifies the risks that climate change poses to the local jurisdiction and the geographic areas at risk from climate change impacts

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Regional



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Local

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- Existing and planned development of structures, roads, utilities, essential public facilities


SoCal Regional Climate Adaptation Framework



OUR WORK


- Connect SoCal +
- Inclusion, Diversity, Equity & Awareness
- Programs & Projects -
 - Housing +
 - Economy & Finance +
 - Federal & State Compliance +
 - Sustainability -
 - Public Health +
 - Sustainability Program -
 - Climate Change -
 - Regional Climate Adaptation Framework**
 - Climate & Economic Development Project
 - Adaptation
 - Mitigation
 - Climate Change & The Future of Southern California
 - Climate Change Resources
 - HQTA Pilot Project
 - Alternative Fuels & Vehicles +
 - Open Space +
 - Green Region Initiative
 - Green Buildings
 - Energy +
 - Water
 - Solid Waste
 - Sustainability Resources +

REGIONAL CLIMATE ADAPTATION FRAMEWORK




The Southern California Association of Governments (SCAG) developed the **Regional Climate Adaptation Framework** (Framework) to assist local and regional jurisdictions in managing the negative impacts of climate change. The Framework provides an overview of how the Southern California region can work together to plan and prepare for the impacts of sea level rise, extreme heat, increasingly frequent and damaging wildfires, and other climate-related issues. With the impacts of severe climate hazards and issues already being felt, adaptation planning is necessary to help individuals, communities, and natural systems cope with the unavoidable consequences of a changing climate. The Framework was developed over a two-year period, beginning in February 2019 and ending in February 2021.


SCAG worked with local municipalities, advocacy groups, universities, and other stakeholders to assess the unique issues affecting the SCAG region, available planning tools and resources, scientific data, and messaging strategies. Many local jurisdictions do not have the resources to adequately assess their local hazards, develop effective adaptation plans, and participate in regional planning efforts – our framework provides jurisdictions with a roadmap to adaptation in an effort to help build a more resilient Southern California.

As part of the overall Framework, SCAG is sharing new tools for local jurisdictions – first, the Communication & Outreach Strategies and Templates that can help jurisdictions and community based organizations engage with residents to understand better how climate related hazards are affecting community members. Second, SCAG developed the  Southern California Climate Adaptation Planning Guide as a resource for local planning that describes the range of climate change hazards the SCAG region is likely to face in the coming decades.


It also describes adaptation principles geared to the region, and outlines a general process of adaptation planning that can be applied by any agency, no matter where they fall across the spectrums of funding, available resources, knowledge of vulnerabilities, and planning sophistication. It provides member agencies, including towns, cities, counties and subregional organizations with a compendium of tools, resources, and best practices to efficiently advance their adaptation planning using the best resources available.



The project was funded by the Caltrans Adaptation Planning grant program.



SOUTHERN CALIFORNIA CLIMATE ADAPTATION PLANNING GUIDE
October 2020



SOUTHERN CALIFORNIA CLIMATE ADAPTATION PLANNING GUIDE

SOCAL APG RESOURCES

COMMUNICATION & OUTREACH TOOLKIT

SB 379 GUIDEBOOK

CLIMATE RISK & VULNERABILITY ASSESSMENT TOOL

LIBRARY OF MODEL POLICIES

<https://scag.ca.gov/climate-change-regional-adaptation-framework>

SoCal Regional Climate Adaptation Framework

Overview:

- Completed in February 2021
- 2- year effort funded through SB 1 Adaptation Planning Grant
- SCAG, Cambridge Systematics, ESA, and HereLA

Includes:

- Outreach & Communications Strategies
- Planning Guidance & Model Policy Language
- Climate Adaptation Metrics & Tools for Local and Regional Agencies
- Adaptation Infrastructure Finance & Funding Guidance

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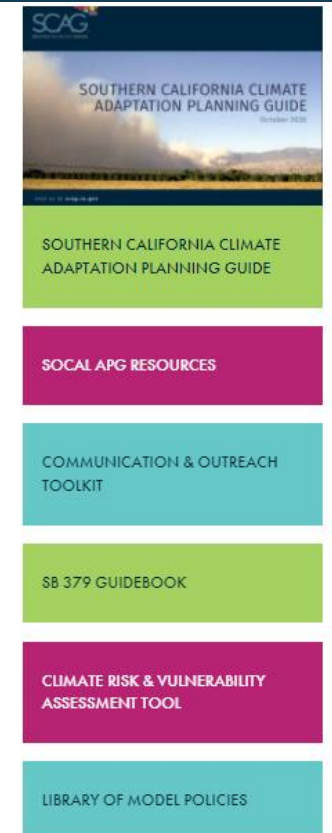
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SB 379 Compliance Curriculum for Local Jurisdictions

REGIONAL CLIMATE ADAPTATION FRAMEWORK



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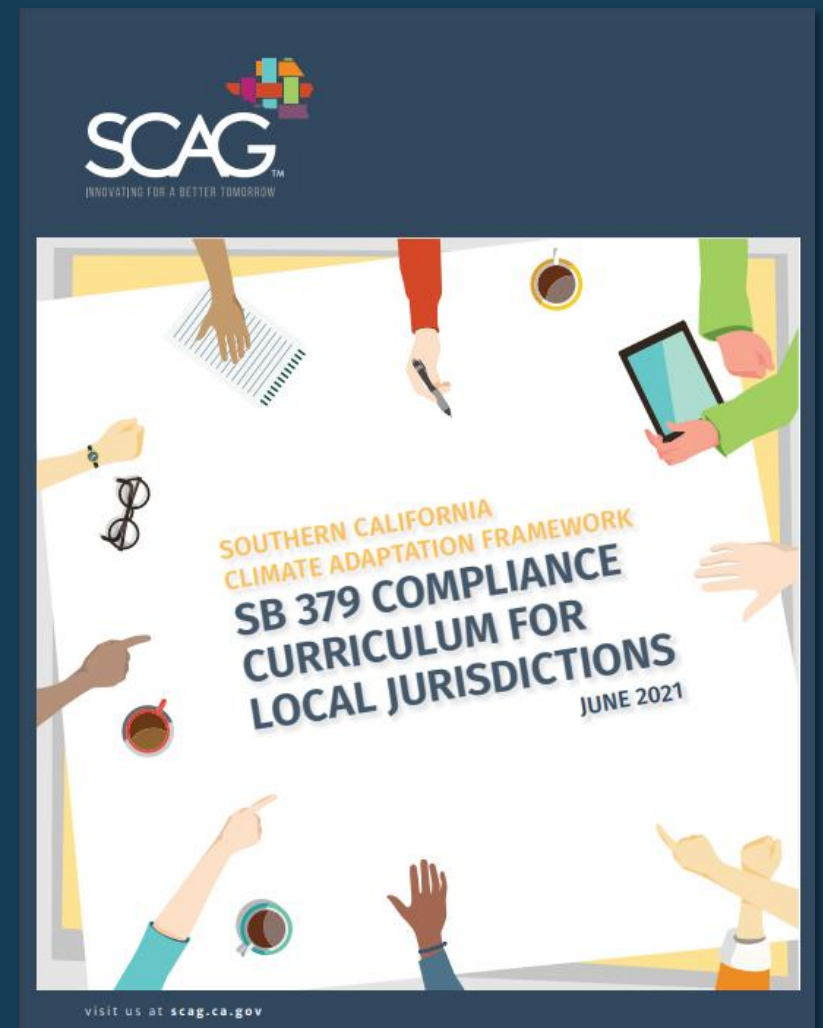
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<https://scag.ca.gov/climate-change-regional-adaptation-framework>

Section 1: SB 379 Introduction & Guidebook Overview

Requires climate adaptation and resilience strategies to be incorporated into the general plan safety element by January 1, 2022

1. Vulnerability assessment

- Identifies the risks that climate change poses to the local jurisdiction and the geographic areas at risk from climate change impacts



2. Set of adaptation and resilience goals, policies, and objectives

- Based on the information in the vulnerability assessment
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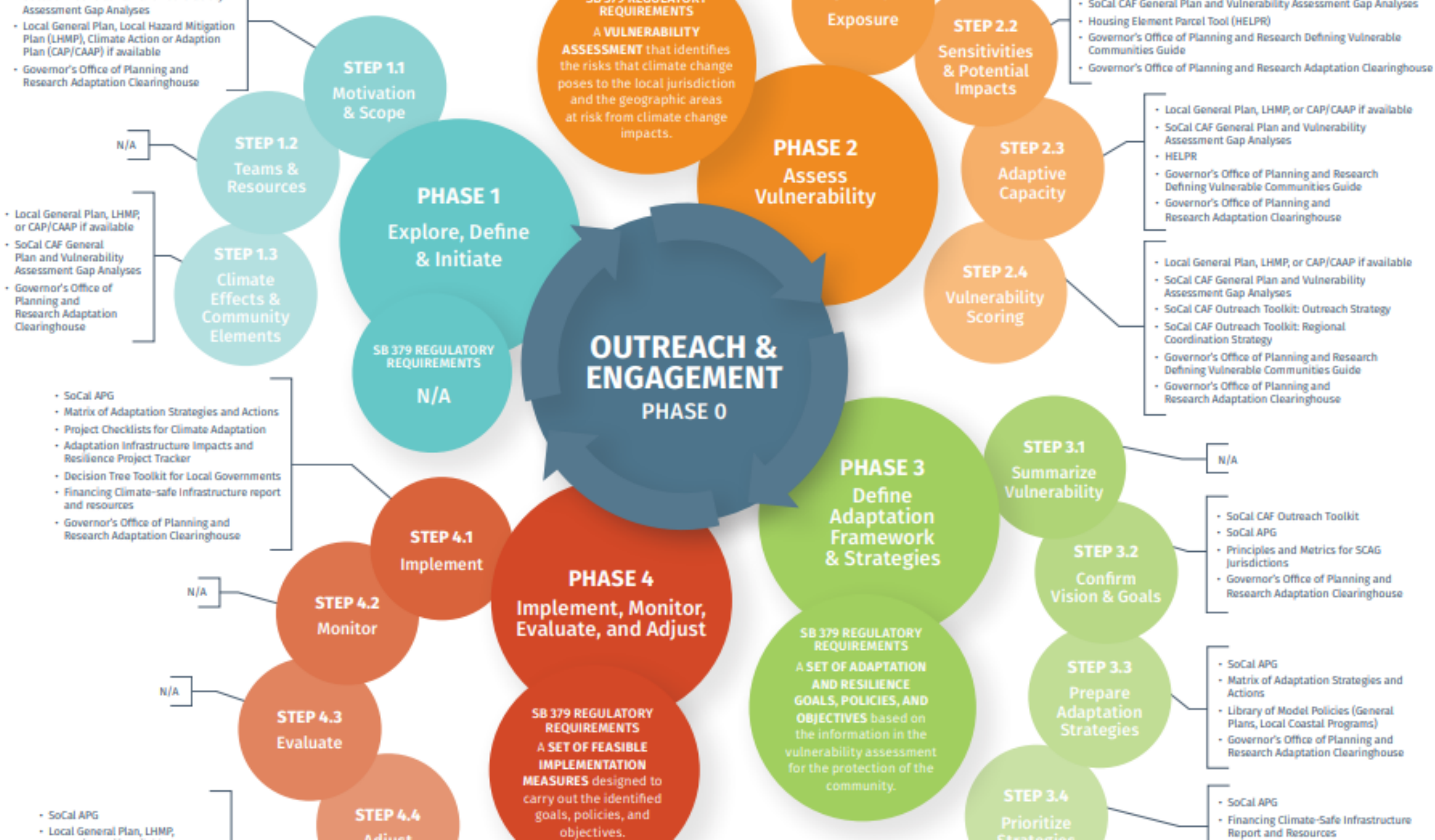
3. Set of feasible implementation measures

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Section 3: Using the SB 379 Guidebook



- **Section 3** of the Guidebook, the "Compliance Curriculum" follows the SoCal APG 4 Phases of adaptation planning
- Provides step-by-step guidance on developing the three main components of SB 379:
 1. Vulnerability assessment
 2. Adaptation and resilience goals, policies, and objectives
 3. Feasible implementation measures



What is included in the guidebook?

Phase 1: Explore, Define, and Initiate

Climate adaptation planning compliance begins with a scoping phase that includes understanding your jurisdiction's SB 379 compliance status, the necessary resources to achieve compliance, and gaining a preliminary understanding of climate change effects on your jurisdiction and community.



STEP 1.1: DETERMINE MOTIVATION AND SCOPE

Things to Prepare	Resources
<input checked="" type="checkbox"/> Identify Existing Documents for SB 379 Compliance	<input checked="" type="checkbox"/> SCAG GRI
<input checked="" type="checkbox"/> Identify Intra- and Interdepartmental Stakeholders	<input checked="" type="checkbox"/> SoCal CAF General Plan and Vulnerability Assessment Gap Analyses
<input checked="" type="checkbox"/> Timeline to Meet SB 379 Requirements	<input checked="" type="checkbox"/> Local General Plan, Local Hazard Mitigation Plan (LHMP), Climate Action or Adaptation Plan (CAP/CAAP) if available
	<input checked="" type="checkbox"/> Governor's Office of Planning and Research Adaptation Clearinghouse

The first step towards compliance of SB 379 begins with an audit of existing sustainability, adaptation, and resilience efforts by your local government. Local governments have two options to comply with SB 379:

- Updating the general plan safety element to include climate adaptation and resilience strategies if an LHMP has not been adopted; OR
- If an existing LHMP or CAP/CAAP contains climate adaptation and resilience strategies that comply with the requirements of SB 379, the safety element can be updated by summarizing and referencing the adaptation information already incorporated in the LHMP, CAP/CAAP, or similar plan.

Under option (1) of SB 379 compliance, the safety element of the general plan must be updated to address climate adaptation and resilience strategies if your city or county has not adopted an LHMP. If your jurisdiction has not adopted an LHMP, continue to [Step 1.2](#).

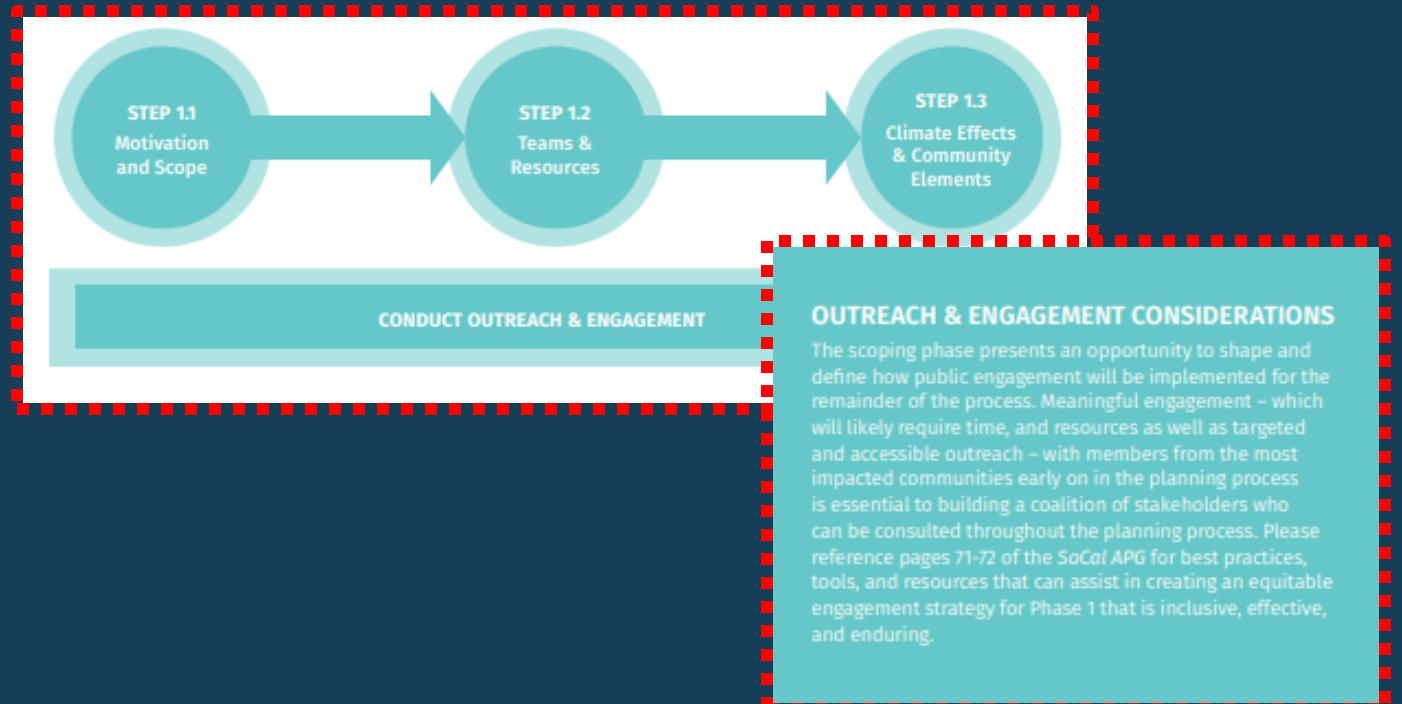
Under option (2), a summary of an existing LHMP, CAP/CAAP, or similar plan may already satisfy the SB 379 regulatory requirements. Begin by reviewing your existing General Plan, LHMP, or CAP/CAAP, if applicable, to see if your existing plans address and contain climate adaptation and resilience strategies.

To help with the review of existing adaptation documents across the region, SCAG conducted a gap analysis of cities, counties, and tribal governments within the SCAG region that have adopted, or are in the process of adopting, climate adaptation policies as part of their general plans, local hazard

OUTREACH & ENGAGEMENT CONSIDERATIONS

The scoping phase presents an opportunity to shape and define how public engagement will be implemented for the remainder of the process. Meaningful engagement – which will likely require time, and resources as well as targeted and accessible outreach – with members from the most impacted communities early on in the planning process is essential to building a coalition of stakeholders who can be consulted throughout the planning process. Please reference pages 71-72 of the SoCal APG for best practices, tools, and resources that can assist in creating an equitable engagement strategy for Phase 1 that is inclusive, effective, and enduring.

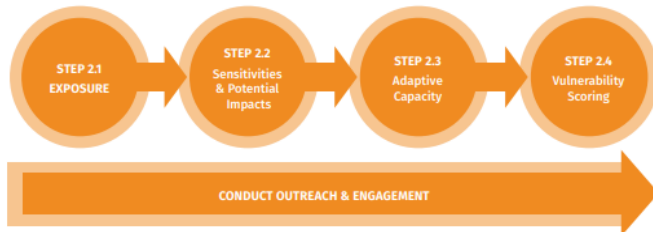
- An outline of each Phase and narrative guidance on the adaptation planning process to accomplish each Step
- Outreach considerations for each Phase



What is included in the guidebook?

Phase 2 : Assess Vulnerability

With a baseline understanding of your jurisdiction's needs, the next step is to assess the existing vulnerabilities that impact your jurisdiction by conducting a **VULNERABILITY ASSESSMENT**. For SB 379 compliance, an assessment of your jurisdiction's vulnerabilities must include identifying the risks climate change poses to your jurisdiction and the surrounding geographic area.



STEP 2.1: IDENTIFY CLIMATE HAZARD EXPOSURE

Things to Prepare	Resources
<ul style="list-style-type: none"> ☑ List of Existing Policies and/or Plans that include Climate Adaptation Goals, Strategies, Policies, etc. 	<ul style="list-style-type: none"> ☑ Local General Plan, Local Hazard Mitigation Plan (LHMP), Climate Action or Adaptation Plan (CAP/CAAP) if available ☑ SoCal CAF General Plan and Vulnerability Assessment Gap Analyses ☑ SoCal CAF Adaptation Infrastructure Impacts and Resilience Project Tracker ☑ Governor's Office of Planning and Research Defining Vulnerable Communities Guide ☑ Governor's Office of Planning and Research Adaptation Clearinghouse

Understanding the risks of climate change to your jurisdiction involves studying the impacts of climate hazards to your surrounding geographic area as climate hazards often cross jurisdictional boundaries.

To help jurisdictions understand the current status of climate change vulnerability assessments across the Southern California region, SCAG conducted a county-wide gap analysis of vulnerability assessments. The gap analysis highlights regional progress made in assessing climate vulnerabilities and gaps that may need to be addressed either regionally or by the cities within each county jurisdiction. For the purposes of this gap analysis, the following climate hazards and asset types were assessed:

- **Climate Hazards:** Drought; Severe Storms/Wind; Extreme Heat; Inland Flooding; Landslides; Sea Level Rise/Coastal Flooding; Wildfire; Air Quality, Human Health and Ecological Hazards
- **Assets:** Natural and Managed Resources; Land Use and Community Development; Infrastructure; Public Health, Socioeconomics and Equity

The "Gap Analysis of Existing Countywide Climate Change Vulnerability Assessments in the SCAG Region" report can be found under *Appendix C of the SoCal APG* on the SCAG Regional Climate Adaptation Framework website. Findings from the report reflect data as of January 2020. The findings from this report can help provide an overview of the primary climate change vulnerabilities impacting your jurisdiction, as well as secondary impacts requiring further assessment and a unique set of policies, objectives, and strategies to address overlapping impacts.

OUTREACH & ENGAGEMENT CONSIDERATIONS

Community input during the vulnerability assessment phase is critical to develop an on-the-ground understanding of climate vulnerabilities and to ensure that community needs and priorities are centered. A vulnerability assessment is required as part of SB 379, and your communities are your best experts. Please reference page 102 of the SoCal APG for best practices for Phase 2 of the planning process.

- Table listing "Things to Prepare" and the associated "Resources" for each Step

STEP 2.1: IDENTIFY CLIMATE HAZARD EXPOSURE

Things to Prepare	Resources
<ul style="list-style-type: none"> ☑ List of Existing Policies and/or Plans that include Climate Adaptation Goals, Strategies, Policies, etc. 	<ul style="list-style-type: none"> ☑ Local General Plan, Local Hazard Mitigation Plan (LHMP), Climate Action or Adaptation Plan (CAP/CAAP) if available ☑ SoCal CAF General Plan and Vulnerability Assessment Gap Analyses ☑ SoCal CAF Adaptation Infrastructure Impacts and Resilience Project Tracker ☑ Governor's Office of Planning and Research Defining Vulnerable Communities Guide ☑ Governor's Office of Planning and Research Adaptation Clearinghouse

What is included in the guidebook?

STEP 3.3: PREPARE ADAPTATION STRATEGIES

Things to Prepare	Resources
<input checked="" type="checkbox"/> A List of Adaptation Strategies that Address the Vulnerability Assessment	<input checked="" type="checkbox"/> SoCal APG <input checked="" type="checkbox"/> Matrix of Adaptation Strategies and Actions <input checked="" type="checkbox"/> Library of Model Policies (General Plans, Local Coastal Programs) <input checked="" type="checkbox"/> Governor's Office of Planning and Research Adaptation Clearinghouse

An adaptation strategy can be a policy, program, project, or action (for actions, see Phase 4) that increases resilience to climate change hazards. Climate adaptation strategies should be crafted in a manner that fits within the framework appropriate to the plan or program being developed (e.g., the general plan safety element, climate action or adaptation plan). Typically, for general plans, the framework includes goal statements with multiple objectives and/or policies associated with each goal. Following this framework is one option to comply with SB 379.

While each jurisdiction will have unique community-driven needs and vulnerabilities, you can identify climate adaptation strategies and actions that are applicable to your context and community by referencing the *Matrix of Adaptation Strategies and Actions*, found under *Appendix B of the SoCal APG*. This matrix provides over 275 climate adaptation strategies and actions organized and which can be filtered by climate hazards (e.g., multiple hazards, inland flood, extreme heat, etc.) and assets (e.g., agriculture, energy infrastructure, public transit, vulnerable populations, etc.). As many strategies and actions are cross-cutting and can apply to multiple hazards or multiple assets, it is recommended to filter by "multiple hazards" first.

- Narrative guidance on where to find and how to use existing resources for each Step
- Snapshots of existing resources

Snapshot of Matrix of Adaptation Strategies

	A	B	C	D
	Climate Change Hazard	Asset	Strategy	Action
1	Multiple Hazards	Vulnerable Populations	Expand public outreach and education to policymakers, businesses, and the general public	Partner with major employers that manage outdoor workers to augment training, including assurance of adequate water, shade, and rest breaks, protection from poor air quality, training on heat risks, and vector-borne disease avoidance.
143	Multiple Hazards	Vulnerable Populations	Expand public outreach and education to policymakers, businesses, and the general public	Partner with agricultural employers to make sure workers have adequate protection from extreme conditions and that healthy and safe working conditions are maintained.
144	Multiple Hazards	Vulnerable Populations	Identify and protect communities vulnerable to climate effects	Facilitate planning and implementation of adaptation measures in communities with unequal burdens from climate risks or insufficient resources to respond to these risks, and incorporate environmental equity into various grants for local adaptation.
146	Multiple Hazards	Vulnerable Populations	Identify and protect communities vulnerable to climate effects	Focus planning and intervention programs on neighborhoods that currently experience social or environmental injustice or bear a disproportionate burden of potential public health impacts.
147	Multiple Hazards	Vulnerable Populations	Identify and protect communities vulnerable to climate effects	Focus planning and intervention programs on neighborhoods that currently experience social or environmental injustice or bear a disproportionate burden of potential public health impacts.

Another tool that can help you develop a set of adaptation and resilience goals, policies, and objectives pursuant to SB 379 is SCAG's *Library of Model Policies*, found under *Appendix F of the SoCal APG*. The library consists of a summary document and spreadsheet compiling a large selection of model policies that address various aspects of climate adaptation. The matrix can be used as an additional starting point to update safety elements pursuant to SB 379 and assist with integrating climate adaptation into other general plan elements. Most of the policies address multiple climate hazards, but there are also model policies for specific climate hazards related to extreme heat, air quality and vector borne disease, drought, severe storm/wind, inland flood, landslide, and wildfire. The general plan model policies are meant to be used as a starting point and should be refined to suit the unique context of your local community. SCAG has also developed a suite of model policies for coastal communities that are vulnerable to sea level rise, also found under *Appendix F of the SoCal APG*. This resource can assist coastal communities with

Snapshot of Library of Model Policies

	A	B	C	D	E	F	G
	County	City	Element	Policy Category	Topic	Policy	Source
3	Los Angeles	Inglewood	Environmental Justice	Healthy Communities	Access to Healthy Food	E4-1 Address whether zoning allows providers of fresh produce (grocery stores, farmers markets, produce stands) to locate within three-quarters of a mile of all residences in the City. E4-2 Encourage the development of healthy food establishments in areas with a high concentration of fast food establishments, convenience stores, and liquor stores. For example, through updated zoning regulations, future use requirements to encourage quality siting of new restaurants, in areas that lack them.	http://www.chlorbatesonline.org https://www.socalapg.com/2016/12/12/appendix-f-model-policies/
4	Los Angeles	Inglewood	Environmental Justice	Healthy Communities	Access to Healthy Food	E4-1 Address whether zoning allows providers of fresh produce (grocery stores, farmers markets, produce stands) to locate within three-quarters of a mile of all residences in the City. E4-2 Encourage the development of healthy food establishments in areas with a high concentration of fast food establishments, convenience stores, and liquor stores. For example, through updated zoning regulations, future use requirements to encourage quality siting of new restaurants, in areas that lack them.	http://www.chlorbatesonline.org https://www.socalapg.com/2016/12/12/appendix-f-model-policies/

Snapshot of Matrix of Adaptation Strategies

	A	B	C	D
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147	Multiple Hazards	Vulnerable Populations	Identify and protect communities vulnerable to climate effects	Focus planning and intervention programs on neighborhoods that currently experience social or environmental injustice or bear a disproportionate burden of potential public health impacts.

What is included in the guidebook?

The implementation actions you choose should be suited to your local circumstances, but you must specifically address the following in your implementation measures to comply with SB 379.

Required by SB379	SCAG Resources
Feasible methods to avoid or minimize climate change impacts associated with new uses of land.	<input checked="" type="checkbox"/> Matrix of Adaptation Strategies and Actions <input checked="" type="checkbox"/> Project Checklists for Climate Adaptation <input checked="" type="checkbox"/> HELPR
The location, when feasible, of new essential public facilities outside of at-risk areas, including, but not limited to, hospitals and health care facilities, emergency shelters, emergency command centers, and emergency communications facilities, or identifying construction methods or other methods to minimize damage if these facilities are located in at-risk areas.	<input checked="" type="checkbox"/> Project Checklists for Climate Adaptation <input checked="" type="checkbox"/> Adaptation Infrastructure Impacts and Resilience Project Tracker <input checked="" type="checkbox"/> Decision Tree Toolkit for Local Governments <input checked="" type="checkbox"/> HELPR
The designation of adequate and feasible infrastructure located in an at-risk area.	<input checked="" type="checkbox"/> Library of Model Policies (General Plans, Local Coastal Programs) <input checked="" type="checkbox"/> Matrix of Adaptation Strategies and Actions <input checked="" type="checkbox"/> Project Checklists for Climate Adaptation
Guidelines for working cooperatively with relevant local, regional, state, and federal agencies.	<input checked="" type="checkbox"/> SoCal APG <input checked="" type="checkbox"/> SoCal CAF Outreach toolkit
The identification of natural infrastructure that may be used in adaptation projects. Where feasible, the plan shall use existing natural features and ecosystem processes, or the restoration of natural features and ecosystem processes, when developing alternatives for consideration.	<input checked="" type="checkbox"/> Library of Model Policies (General Plans, Local Coastal Programs) <input checked="" type="checkbox"/> Matrix of Adaptation Strategies and Actions <input checked="" type="checkbox"/> Principles and Metrics for SCAG Jurisdictions

STEP 4.2: MONITOR

You can find more information on this step in the SoCal APG, but this step is not explicitly required as part of SB 379. It is important to monitor changing conditions and track the effectiveness of adaptation strategies to ensure that they adequately and effectively address community vulnerability. You can reference this step of the SoCal APG, the *Principles and Metrics for Local Jurisdictions*, as well as the *Adaptation Infrastructure Impacts and Resilience Project Tracker* when updating the safety element pursuant to SB 379.

STEP 4.3: EVALUATE

You can find more information on this step in the SoCal APG, but this step is not explicitly required as part of SB 379. Climate science, conditions, best practices, and communities are constantly evolving. As the adaptation planning process is

BEST PRACTICES TO CONSIDER WHEN PREPARING IMPLEMENTATION MEASURES

- Foster local political buy in
- Seek sustained commitment
- Focus actions where the money is
- Piggyback on successful local projects
- Use existing processes, groups, or sources of funding
- Consider your jurisdiction's partners
- Do not be afraid to build something new

- Guidance on more detailed requirements of the law and associated resources
- Best practices for critical Steps

Required by SB379	SCAG Resources
Feasible methods to avoid or minimize climate change impacts associated with new uses of land.	<input checked="" type="checkbox"/> Matrix of Adaptation Strategies and Actions <input checked="" type="checkbox"/> Project Checklists for Climate Adaptation <input checked="" type="checkbox"/> HELPR
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BEST PRACTICES TO CONSIDER WHEN PREPARING IMPLEMENTATION MEASURES

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- Piggyback on successful local projects
- Use existing processes, groups, or sources of funding
- Consider your jurisdiction's partners
- Do not be afraid to build something new

Section 4: Connecting Safety & Environmental Justice Elements

SECTION 4

PLANNING FOR EQUITABLE CLIMATE ADAPTATION

4.1 | The Importance of Environmental Justice in Climate Adaptation Planning

Environmental Justice (EJ) is about equal and fair access to a healthy environment, with the goal of protecting underrepresented and vulnerable communities from incurring disproportionate environmental impacts. Climate change is not only an issue of the environment, but also an issue of environmental justice and human rights. Disruptions from climate change, whether individual events or worsening cumulative effects, will impact the region's public health, vulnerable populations, economy, natural resources, built environment, transportation system, housing and water supplies, utility infrastructure and emergency services to varying degrees. With the impacts of climate change already being felt, vulnerable communities continue to bear disproportionate burdens and experience the adverse impacts of climate change, even if many contribute little to the underlying causes. The ability to adapt to climate change is critical to prevent further heightened disparities in health outcomes across populations.

4.2 | Overview of SB 1000 Statutory Requirements

SB 1000 aims to encourage local jurisdictions and community stakeholders throughout California to proactively plan for and address environmental justice concerns at the outset when developing all components of a general plan, including the safety element. As mentioned in Section 1.4, the law requires a local jurisdiction with Disadvantaged Communities to prepare an EJ element or integrate EJ policies into other elements when two or more elements in a general plan are revised after January 1, 2018. Local jurisdictions with Disadvantaged Communities can comply with SB 1000 by incorporating EJ policies in their general plans through either a stand-alone element, or by integrating relevant goals, policies, and objectives throughout other elements. As you prepare your updated safety element to include climate adaptation and resilience strategies, we recommend including EJ policies as part of our SB 379-compliant safety element for efficient use of your jurisdiction's resources.

SB 379's statutes relate closely to SB 1000 in that both involve assessing vulnerabilities of local communities and developing general plan goals, policies, and objectives to address those vulnerabilities. Similar to SB 379 (see Section 1.3), there are three major statutory components of SB 1000:

- Identify **objectives and policies to reduce the unique or compounded health risks in disadvantaged communities** by means that include, but are not limited to, the reduction of pollution exposure, including the improvement of air quality, and the promotion of public facilities, food access, safe and sanitary homes, and physical activity.
- Identify **objectives and policies to promote civic engagement** in the public decision-making process.
- Identify objectives and policies that **prioritize improvements and programs that address the needs of disadvantaged communities**.

4.3 | Summary of SB 1000 Resources

CALIFORNIA ENVIRONMENTAL JUSTICE ALLIANCE'S SB 1000 IMPLEMENTATION TOOLKIT

The California Environmental Justice Alliance (CEJA) is a statewide, community-led alliance working to advance environmental, health, and social justice and co-sponsored the SB 1000 bill. In October 2017, CEJA prepared a SB 1000 Implementation Toolkit that provides guidance on implementing SB 1000. The toolkit describes the EJ planning process, identifying Disadvantaged Communities, strategies for community engagement, considerations for developing goals, objectives, and policies, sample case studies, and potential funding sources.

Section 5 of the toolkit describes the SB 1000 requirement to develop the eight EJ-related goals and objectives (these are listed out in the toolkit as well as #1 in Section 4.2 above).

SB 1000 EJ Goals and Objectives

Table 5-1 SB 1000 Goals, Objectives, and Policies

Goals	Objectives and Policies
5.9 / Reduce Impacts of Climate Change	<ul style="list-style-type: none">Minimize greenhouse gas emissionsIncrease renewable energy and accessPromote energy efficiencyDevelop extreme heat adaptation plansPromote flood-resistant development and retrofitsSupport increased resilience for transportation, particularly for persons with limited mobilityPrioritize disproportionately-vulnerable populationsImplement measures to reduce risks to fire hazardsDevelop preventive and protective strategies against climate change impacts

California Environmental Justice Alliance. (October 2017). SB 1000 Implementation Toolkit. Retrieved from <https://ceja.org/2017/10/03/sb-1000-toolkit-release/>

- Climate change is an environmental justice issue
- Reducing climate vulnerabilities (as intended by SB 379) can help to reduce community health risks and promote environmental justice (as intended by SB 1000)
- Both SB 1000 and SB 379 involve assessing local community vulnerabilities and developing general plan goals, policies, and objectives
- **Section 4** of the Guidebook includes overview information on SB 1000 and resources to update general plans to address environmental justice

Section 5: Examples of SB 379 Compliance

Section 5 of the Guidebook highlights case studies of SB 379-compliant vulnerability assessments, safety elements, and other approaches across the SCAG region:

- General Plan Safety Element
- Local Hazard Mitigation Plan
- Climate Action/Adaptation Plan
- Vulnerability Assessment
- SB 1000 EJ Element

5.3: Climate Action/Adaptation Plan: City of Long Beach, Proposed Climate Action and Adaptation Plan (November 2020)



The City of Long Beach proposed Climate Action and Adaptation Plan (CAAP) includes an assessment of the City's climate vulnerabilities and objectives and strategies, titled "actions," to reduce city-wide GHG emissions and adapt and increase resilience to climate risks, such as sea level rise, flooding, extreme heat, poor air quality, and drought. Each climate action and adaptation "action" description includes a list of implementation actions, co-benefits, and an equity strategy.

These components comply with SB 379 under Option 2, which requires an existing CAP/CAAP to include (i) a vulnerability assessment, (ii) a set of adaptation and resilience goals, policies, and objectives, and (iii) set of feasible implementation measures. The City Council confirmed the plan in January 2021 and it is anticipated to be adopted by Fall 2021.

Shown to the right is a sample of Sea Level Rise and Flooding adaptation objectives and actions from the "Adaptation Actions" chapter of the proposed CAAP.

Visit the *City of Long Beach: Climate Action And Adaptation Plan (CAAP)* website to view the complete proposed CAAP.

Sea Level Rise and Flooding Adaptation Objectives and Actions

FLD Sea Level Rise + Flooding
Goal: Long Beach understands and is prepared for its future flood risk

OBJECTIVES	NO.	ACTIONS
Short-Term Actions to begin	FLD-1	Update and align Floodplain Regulations as necessary
City plans and policies are forward-looking and ensure projects and investments account for projected sea level rise and flooding impacts	FLD-2	Incorporate sea level rise language into citywide plans, policies, and regulations
	FLD-3	Establish a Flood Impact Review Program
	FLD-4	Incorporate adaptation into City base regulations
	FLD-5	Update the City's existing Stormwater Management Plan
Clear and sufficient information is on hand to identify and prioritize near-term adaptation needs and fund	FLD-6	Conduct climate beach stabilization study
	FLD-7	Review and conduct studies of combined residential flooding and increased severity of tidal waves on watershed flooding
Adaptation strategies are implemented to protect vulnerable shoreline areas and wastewater infrastructure	FLD-8	Enhance dunes
	FLD-9	Inventory and flood proof vulnerable sewer pump stations
Resilient systems are large-scale	FLD-10	Identify and prioritize critical infrastructure
Vulnerable infrastructure is elevated or relocated	FLD-11	Elevate marine towers
Long-term actions: Long-term adaptation strategies are selected and implemented based on additional research and community adaptation preferences, and prioritize near-term solutions wherever possible	FLD-12	Expand beach nourishment
	FLD-13	Construct long dune/walkway
	FLD-14	Install smart beachside
	FLD-15	Install street/culverts
	FLD-16	Install/upgrade parking lots
	FLD-17	Install/upgrade existing seawalls
Additional long-term adaptation options are evaluated using the best available science	FLD-18	Investigate feasibility of managed retreat
	FLD-19	Evaluate feasibility of storm surge barrier at Alamitos Bay

FLD-1 Update and Augment Floodplain Regulations as Necessary
Review and update Floodplain Regulations as necessary to take climate or provide floodproofing standards for development in areas designated as vulnerable to flooding in the future based on climate change projections.

Implementation Lead: Planning and Building
Priority: High
Potential Cost Level: Low

Description: The City will update and augment, as necessary, Floodplain Regulations that address the fact that sea level rise will increase the height of floodwaters and the impact extent of flooding in Long Beach. Regulations will include sea level rise flood elevation requirements aligned to current science. Future updates to the ordinance will be informed by the latest projections and local impact monitoring. Long-term updates may consider managed retreat or relocation and other non-structural measures to reduce its vulnerability requirements by either meeting or exceeding flood elevation construction standards, even when they are not required by FEMA or a City Building Code.

Floodplain regulations will encourage building seawall being and/or working in the protection to design or create buildings to reduce damage from existing and future floods and potentially reduce long-term flood insurance costs. Overall implementation of the action would improve the ability of the city's flood-prone neighborhoods to withstand and recover quickly from coastal flooding.

The Local Coastal Program will also be amended as needed.

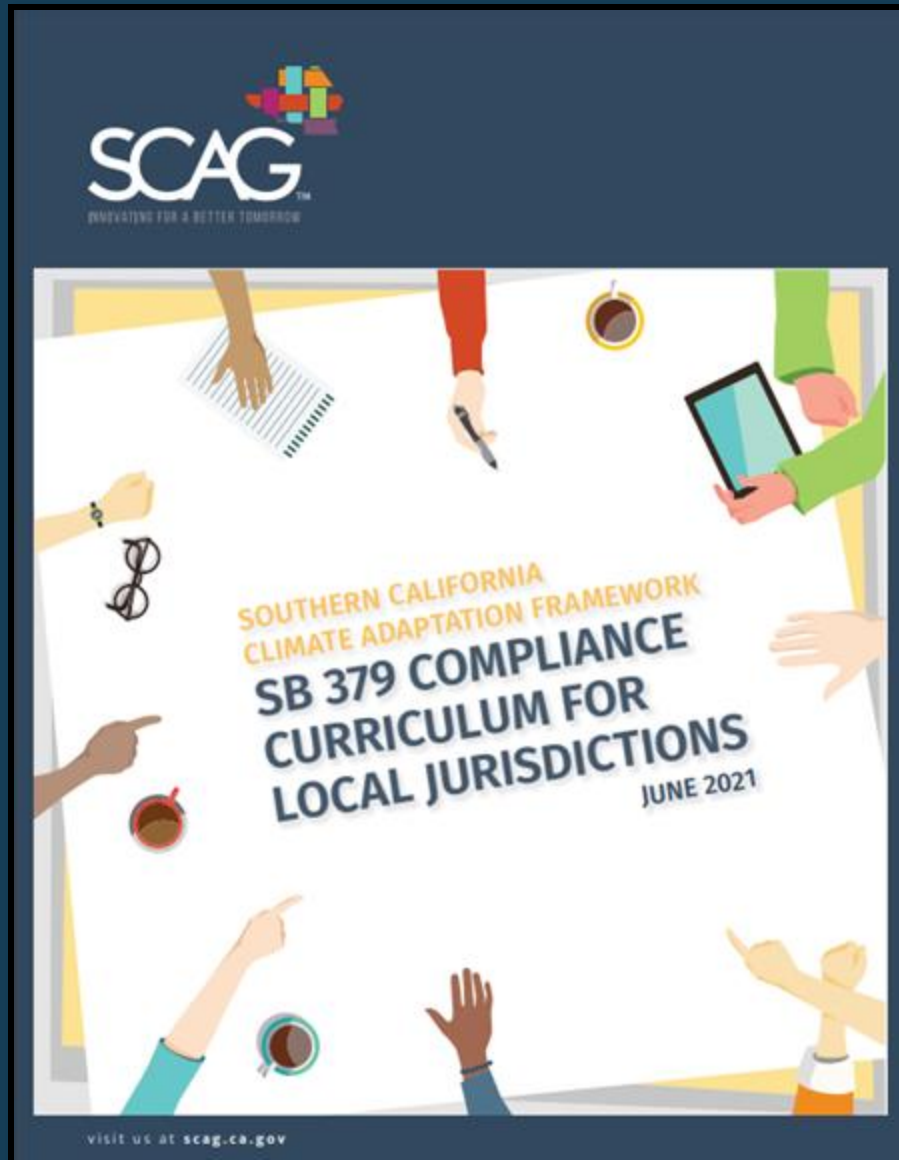
Equity Strategy: Increase risk and/or mitigation assistance programs for building or retrofitting to a higher flood protection standard, with an emphasis on areas with social vulnerability in climate change, as defined by the Long Beach Vulnerability Assessment and other relevant information.

Co-benefits:

- ✓ Coordinate regulations with energy building code requirements
- ✓ Reduced flood insurance rates, potentially of 1 to 40 percent

Implementing Actions:
FLD-1.1: Update Chapter 14.41 Building Code of Long Beach Municipal Code and to create new regulations, if necessary, to require all future sea level rise conditions, referencing FEMA standards and other relevant guidance as appropriate.
FLD-1.2: Develop resilient design standards to be incorporated into the Flood Protection Code (FPC) Building Code and the FPC to include provisions as they become available.
FLD-1.3: Create other building code regulations (e.g., setbacks, building height) as consistent with flood-prone standards throughout the Floodplain Ordinance.
FLD-1.4: Pursue FEMA grant program opportunities for adopting public safety to flood objects and other resilience investments.
FLD-1.5: Educate the public about resilience, including 20 property owners meeting to assess and develop their properties, including risk, grant programs, and potential insurance premium benefits.
FLD-1.6: Design flood protection assistance programs for low-income communities affected by flooding impacts in historic.

SB 379 Guidebook Walk-through: Phases 0 - 2



SOUTHERN CALIFORNIA CLIMATE ADAPTATION FRAMEWORK SB 379 COMPLIANCE CURRICULUM FOR LOCAL JURISDICTIONS JUNE 2021

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ABOUT SCAG

SCAG is the nation's largest metropolitan planning organization (MPO), representing six counties, 191 cities and more than 19 million residents. SCAG undertakes a variety of planning and policy initiatives to encourage a more sustainable Southern California now and in the future.

VISION

Southern California's Catalyst for a Brighter Future

MISSION

To foster innovative regional solutions that improve the lives of Southern Californians through inclusive collaboration, visionary planning, regional advocacy, information sharing, and promoting best practices.

visit us at scag.ca.gov








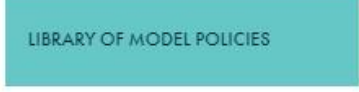
Steps for successful adaptation planning and SB 379 compliance

- Engage with your jurisdictional community members
- Attune planning staff to the voices of your community
- Approach climate change conversations on a personal level
 - *What words and values resonate with your community?*
 - *What effects of climate change have you felt?*
 - *What communication strategies encourage you to take climate action?*

Things to Prepare	Resources
<ul style="list-style-type: none">• Public outreach plan• Public outreach materials• Communication materials on SB 379	<ul style="list-style-type: none">• SoCal APG• SoCal CAF Outreach Toolkit: Community Capacity Building Workshop Templates

Phase 0 Resources: SoCal APG & Outreach Toolkit



<p>OUR WORK</p> <ul style="list-style-type: none"> Connect SoCal + Inclusion, Diversity, Equity & Awareness Programs & Projects - <ul style="list-style-type: none"> Housing + Economy & Finance + Federal & State Compliance + Sustainability - <ul style="list-style-type: none"> Public Health + Sustainability Program - <ul style="list-style-type: none"> Climate Change - <ul style="list-style-type: none"> Regional Climate Adaptation Framework Climate & Economic Development Project Adaptation Mitigation Climate Change & The Future of Southern California Climate Change Resources HQTA Pilot Project Alternative Fuels & Vehicles + Open Space + Green Region Initiative Green Buildings Energy + Water Solid Waste Sustainability Resources + 	<h2 style="text-align: center;">REGIONAL CLIMATE ADAPTATION FRAMEWORK</h2>  <p>The Southern California Association of Governments (SCAG) developed the Regional Climate Adaptation Framework (Framework) to assist local and regional jurisdictions in managing the negative impacts of climate change. The Framework provides an overview of how the Southern California region can work together to plan and prepare for the impacts of sea level rise, extreme heat, increasingly frequent and damaging wildfires, and other climate-related issues. With the impacts of severe climate hazards and issues already being felt, adaptation planning is necessary to help individuals, communities, and natural systems cope with the unavoidable consequences of a changing climate. The Framework was developed over a two-year period, beginning in February 2019 and ending in February 2021.</p> <p>SCAG worked with local municipalities, advocacy groups, universities, and other stakeholders to assess the unique issues affecting the SCAG region, available planning tools and resources, scientific data, and messaging strategies. Many local jurisdictions do not have the resources to adequately assess their local hazards, develop effective adaptation plans, and participate in regional planning efforts – our framework provides jurisdictions with a roadmap to adaptation in an effort to help build a more resilient Southern California.</p> <p>As part of the overall Framework, SCAG is sharing new tools for local jurisdictions – first, the Communication & Outreach Strategies and Templates that can help jurisdictions and community based organizations engage with residents to understand better how climate related hazards are affecting community members. Second, SCAG developed the Southern California Climate Adaptation Planning Guide as a resource for local planning that describes the range of climate change hazards the SCAG region is likely to face in the coming decades.</p> <p>It also describes adaptation principles geared to the region, and outlines a general process of adaptation planning that can be applied by any agency, no matter where they fall across the spectrums of funding, available resources, knowledge of vulnerabilities, and planning sophistication. It provides member agencies, including towns, cities, counties and subregional organizations with a compendium of tools, resources, and best practices to efficiently advance their adaptation planning using the best resources available.</p> <div style="text-align: center;">  <p>The project was funded by the Caltrans Adaptation Planning grant program.</p> </div>	 <p style="text-align: center;">SOUTHERN CALIFORNIA CLIMATE ADAPTATION PLANNING GUIDE</p>     
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<https://scag.ca.gov/climate-change-regional-adaptation-framework>

Phase 0 Resources: SoCal APG



SOUTHERN CALIFORNIA CLIMATE ADAPTATION PLANNING GUIDE

October 2020

visit us at scag.ca.gov

California Adaptation Planning Guide

CHAPTER 3

The Adaptation Planning Process

The SoCal APG recommends stepping through a four-phase process to comprehensively plan for climate adaptation at the local level, consistent with the California APG, and illustrated in Figure 6. This section describes a series of steps associated with each of the four phases, identifies tools and resources that can assist in completing each step, and portrays relevant examples that illustrate each step.

Integral to the SoCal APG's four phases is public engagement, an essential component that applies to the entire process from inception to implementation. The recommended approach for public engagement is described at the beginning of this section with specific engagement strategies identified at the end of each of the four phases.

The SoCal APG frequently references the California APG and the Regional Resilience Toolkit, described below.



Figure 6
Four Phases
of Adaptation
Planning

Phase 0 Resources: Communication & Outreach Toolkit

- Public Workshop Templates
- Meeting Materials
- Individual & Group Activities
- Translated into Chinese, Korean, Spanish and Vietnamese



 **WILDFIRES**

Trouble breathing due to air quality outside

Damage to nature near me

Traffic due to road closures

Ash coming down where I live

We may not realize the ways that climate change affects our daily lives. As a group, color in the boxes for effects that you or people close to you have experienced.



Phase 1: Explore, Define, and Initiate



Phase 1 – Step 1.1: Determine Motivation & Scope

Begin with an audit of existing sustainability, adaptation, and resilience efforts by your local jurisdiction

- Review existing adaptation documents (SCAG GRI Adaptation Indicator)
- Determine which SB 379-compliance pathway you fall under
 - Safety element update required
--> continue to Step 1.2: Teams & Resources
 - Existing adaptation document(s) which satisfy SB 379 requirements
--> skip to Phase 4, Step 4.3: Evaluate

Things to Prepare	Resources
<ul style="list-style-type: none"> • Identify existing documents for SB 379 compliance • Identify intra- and interdepartmental stakeholders • Timeline to meet SB 379 requirements 	<ul style="list-style-type: none"> • SCAG Green Region Initiative • SoCal CAF General Plan and Vulnerability Assessment Gap Analyses • Local General Plan, Local Hazard Mitigation Plan (LHMP), Climate Action or Adaption Plan (CAP/CAAP) if available

Step 1.1 Resources: Green Region Initiative - Adaptation

Adaptation STORYMAPS BY THE SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

- Introduction
- Adaptation Planning
- SB 535 Disadvantaged Communities
- Consolidated Maps
- Resources

Adaptation Policy

GRI V3.5 Adoption category

Because of Senate Bill (SB) 379, jurisdictions are now required by law to address climate change adaptation within the Safety Element of General Plans by January 1, 2022, or when they next update their local hazard mitigation plan. Upon conducting a gap analysis of adaptation policies to determine SB 379 compliance across the SCAG region, SCAG found that a majority of jurisdictions have not considered climate change impacts in their policy documents, while several jurisdictions have either drafted or adopted adaptation policies. A three-tiered ranking system was developed based on the status of adaptation planning and the degree to which policies addressed various climate change risks, from "acknowledgement of climate risks" to "adopting a stand-alone plan or general plan that addresses numerous relevant climate risks."

Additional adaptation planning resources can be found through SCAG's Southern California details by gap

LEGEND

Policy

- No adaptation efforts
- Acknowledges climate risk
- Drafted stand-alone plan
- Adoption of stand-alone plan

LEGEND

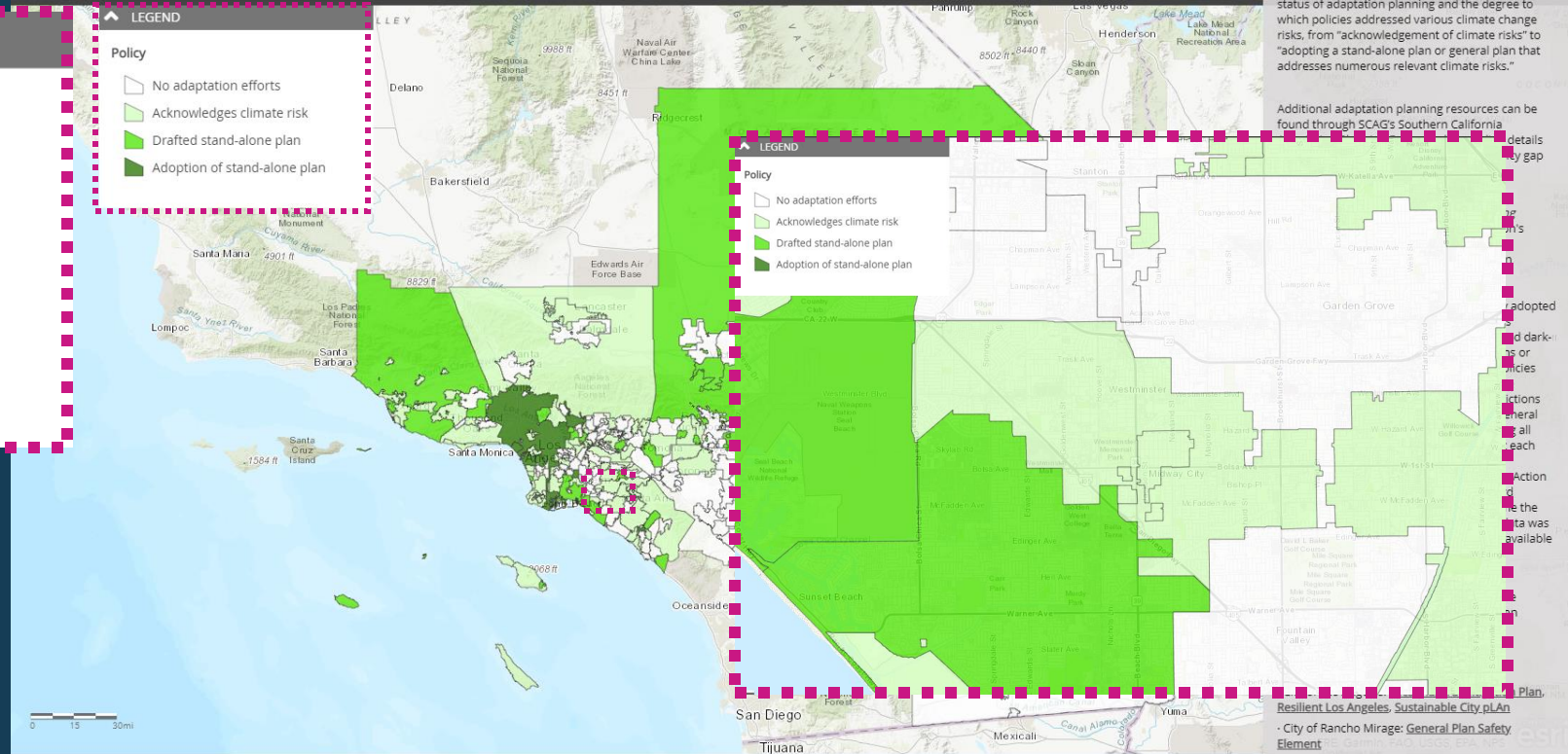
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<https://maps.scag.ca.gov/gri/adaptation/>

Resilient Los Angeles Sustainable City Plan
 - City of Rancho Mirage: General Plan Safety Element

Step 1.1 Resources: SoCal CAF General Gap Analyses



Jurisdictional Ranking - Integration of Climate Adaptation Policies



- Based on the research results, 84 cities and 4 counties in the SCAG region have adopted climate adaptation policies or are in the process of updating their policy documents. This corresponds to 44 percent of the total number of SCAG cities, counties and tribal governments. These cities and counties were ranked as platinum, gold, or silver based on the degree to which their policies addressed various climate change risks. Most were ranked silver (the lowest ranking) because climate change impacts were acknowledged in their planning documents as a risk but adaptation strategies or policies to address the risk were not identified.
- Only 14 cities and counties in the SCAG region have adopted or drafted an updated safety element that addresses climate change. This corresponds to 7 percent of the total number of SCAG cities, counties and tribal governments.

The policy gap analysis describes the criteria used to rank each city and county, and provides a summary of results by county. The results are summarized in a report titled Gap Analysis of Climate Adaptation Policies in the SCAG Region (available on the SCAG website) and in an interactive web map located [Here](#).

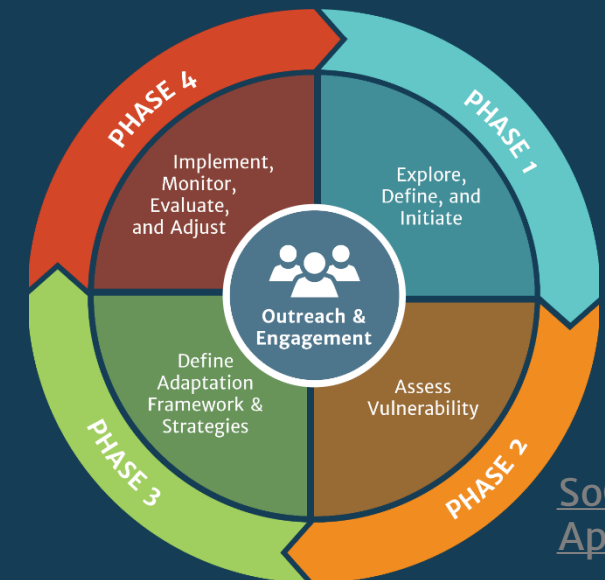
Existing Resources for Adaptation Planning

There are a multitude of existing frameworks and guidance documents that are useful for climate change adaptation planning. Appendix A describes those that provide the most value to SCAG member agencies, selected based on their currency and their relevance to the region's geography, natural resources, and demographics. Many are resources developed by the State of California, which has made a concerted effort in recent years to provide planning assistance to state agencies and to local and regional governments that are faced with the challenge of adapting their communities to climate change impacts.

Many of these resources are referenced in the following section on The Adaptation Planning Process, which as a whole aligns closely with the phases and steps used by the California APG.

Policy gap analysis:

- 44% of SCAG jurisdictions have adopted climate adaptation policies
- 14 cities and counties (7%) updated safety element for climate change



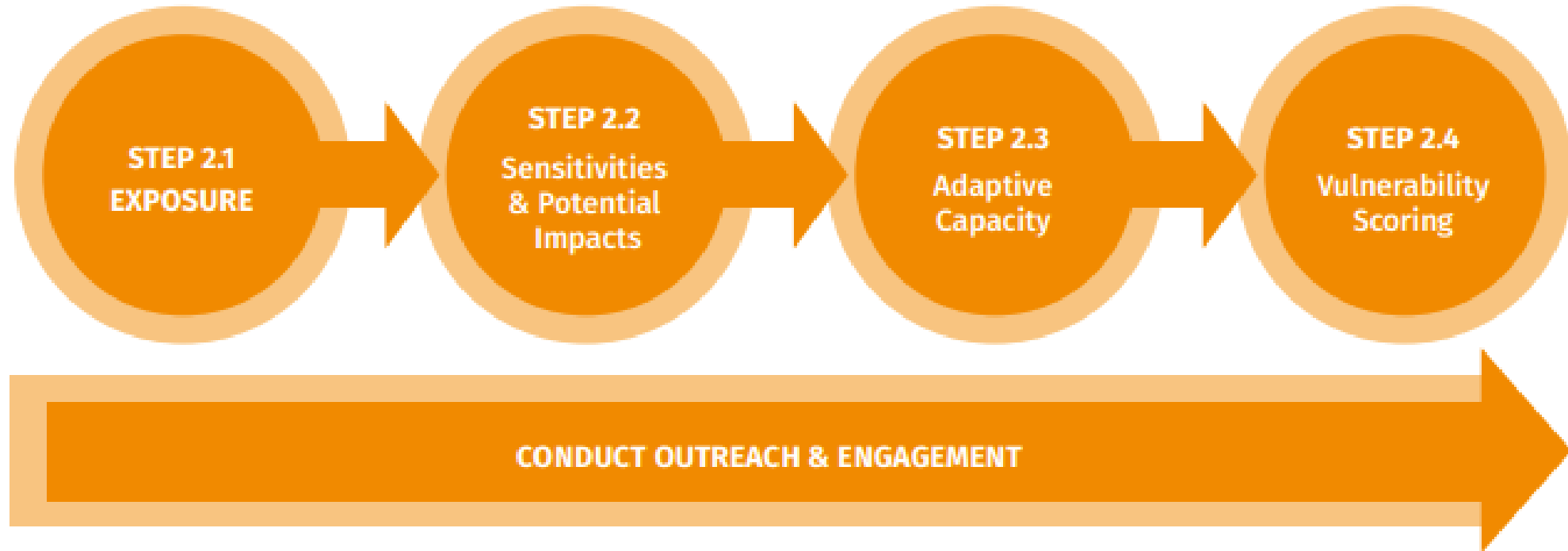
Phase 1 – Step 1.2: Assemble Project Team(s) & Resources



Phase 1 – Step 1.3: Identify Community Climate Hazards & Critical Assets at Risk



Phase 2: Assess Vulnerability



Phase 2 – Step 2.1: Identify Climate Hazard Exposure

Understand the impacts of climate hazards to your jurisdiction and surrounding geographic area







- Review existing efforts to assess climate vulnerabilities (CAF Gap Analysis)
- Review climate hazards & assets susceptible to climate impacts

Thing to Prepare	Resources
<ul style="list-style-type: none">• List of existing policies and/or plans that include climate adaptation goals, strategies, policies, etc.	<ul style="list-style-type: none">• Local General Plan, Local Hazard Mitigation Plan (LHMP), Climate Action or Adaptation Plan (CAP/CAAP) if available• SoCal CAF General Plan and Vulnerability Assessment Gap Analyses• SoCal CAF Adaptation Infrastructure Impacts and Resilience Project Tracker

Step 2.1 Resources: Adaptation Infrastructure Impacts and Resilience Project Tracker: Project Checklists



**TABLE 1
PROJECT SCREENING THRESHOLDS FOR CLIMATE HAZARDS (FOR PROJECT PROPONENT TO COMPLETE)**

Climate Hazard	Screening Threshold Questions <i>(If the answer to any of the following questions is "Yes", then the checklist for that hazard must be completed)</i>	Links or Sources of Information
 Drought	<ul style="list-style-type: none"> Would project consume water resources in its construction or operation and if so, are the water sources supplying the project at risk from drought? Yes <input type="checkbox"/> No <input type="checkbox"/> 	Urban Water Management Plan applicable to the project's location
 Extreme Heat	<ul style="list-style-type: none"> Is the area where your project is located expected to experience more than 30 heat health days per year over the project lifetime? Yes <input type="checkbox"/> No <input type="checkbox"/> 	Maps based on California Heat Assessment Tool (CHAT): https://www.cal-heat.org/
 Inland Flooding	<ul style="list-style-type: none"> Is the project located in the 100-year or larger FEMA floodplain, otherwise known as the 1% annual chance flood? Yes <input type="checkbox"/> No <input type="checkbox"/> Using Cal-Adapt, will the project watershed be subject to an increase of extreme precipitation events? Yes <input type="checkbox"/> No <input type="checkbox"/> 	FEMA Flood Maps: https://msc.fema.gov/portal/home
 Landslides	<ul style="list-style-type: none"> Is the project located in area of moderate or high susceptibility to landslide hazards? Yes <input type="checkbox"/> No <input type="checkbox"/> 	USGS landslide susceptibility map: https://maps.conservation.ca.gov/cgs/lsi/
 Sea Level Rise/ Coastal Flooding	<ul style="list-style-type: none"> Is the project in a SLR vulnerability zone, or will any infrastructure or resources that the project relies upon be affected by SLR (e.g., beaches, groundwater)? Yes <input type="checkbox"/> No <input type="checkbox"/> 	Use detailed local SLR maps, if available. Alternatively, use Our Coast Our Future tool: http://data.pointblue.org/apps/ocof/cms/index.php?page=flood-map
 Wildfire	<ul style="list-style-type: none"> Is the project located in a high or very high fire hazard zone? Yes <input type="checkbox"/> No <input type="checkbox"/> 	CalFIRE Maps - https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/

Template for incorporating climate change adaptation elements into local project approval process:

- Residential and commercial development
- Infrastructure projects

Two-step process:

1. Suggested screening thresholds for 6 hazards
2. Detailed checklist for each hazard

Step 2.1 Resources: Adaptation Infrastructure Impacts and Resilience Project Tracker: Project Checklists



Extreme Heat Checklist

Over the coming decades the SCAG region can expect longer and hotter heat waves. Average maximum temperatures are projected to increase around 4-5 degrees F by the mid-century, and 5-8 degrees F by the late-century. Extreme temperatures are also expected to increase in duration and intensity.


Exposure

1. **Historical exposure:** Has the site historically experienced extreme heat events? (Provide supporting evidence; If yes, please describe past events or conditions: e.g., long heat spells, hot nights, etc.)

Yes No Basis for conclusion:

2. **Future Conditions over Project Lifetime:**

- Extreme heat events are expected to increase in duration and/or intensity.
- Extreme heat events are not expected to increase in duration and/or intensity.
- Extreme heat events are expected to remain about the same.
- Unknown.

3. **Identify data source(s) or map(s)/modeling used for assessing past and future exposure of the asset** 
(check all that apply):

- California Heat Assessment Tool (CHAT) found at <https://www.cal-heat.org/>
- Cal-Adapt
- Site Specific Modeling (please provide date and source of information):

Sensitivity

1. **Human Health:** Using the CHAT (www.cal-heat.org), determine the Heat Vulnerability Index (HVI) for the census tract where the project is located: _____.

Areas with HVI values over 50 are considered highly vulnerable to heat-related health impacts.

2. **Physical Asset:** Assess sensitivity to the climate hazard based on the following criteria:

- Low Sensitivity:** Climate hazard would have little or no impact on the asset's physical components or how the project functions.
- Moderate Sensitivity:** Climate hazard would have an impact on the project's physical components and/or its functionality, but the project would recover quickly once hazard subsides. The project would retain some ability to function while exposed.
- High Sensitivity:** Climate hazard would have a significant impact on the project/asset(s) physical components and/or its functionality, and the project would not recover quickly once the hazard subsides. The project would lose major functionality while exposed.

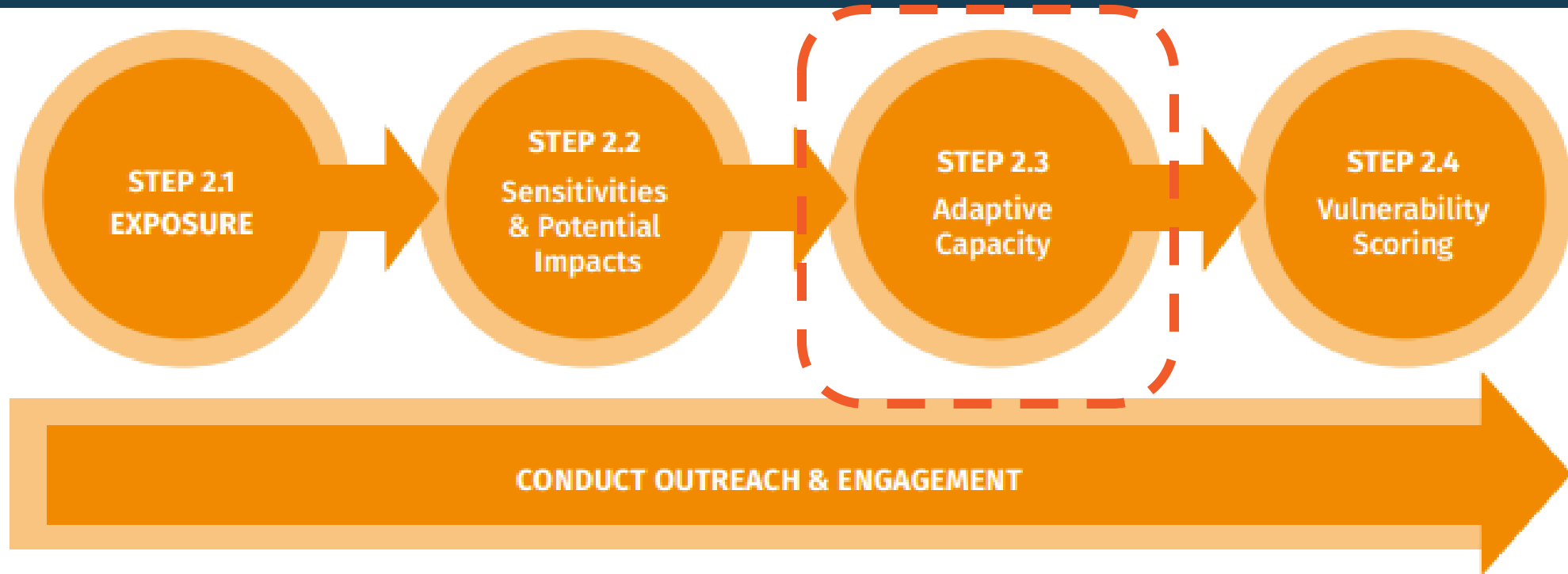
- For each hazard of potential concern:
- a. Assess project's vulnerability based on exposure and sensitivity
 - b. Assess potential consequences based on:
 - I. Estimated level of asset damage
 - II. Level of disruption of asset service or function
 - III. Cost to replace and/or repair and cost of losing the service/function of the asset

Understand the historical and potential climate change impacts

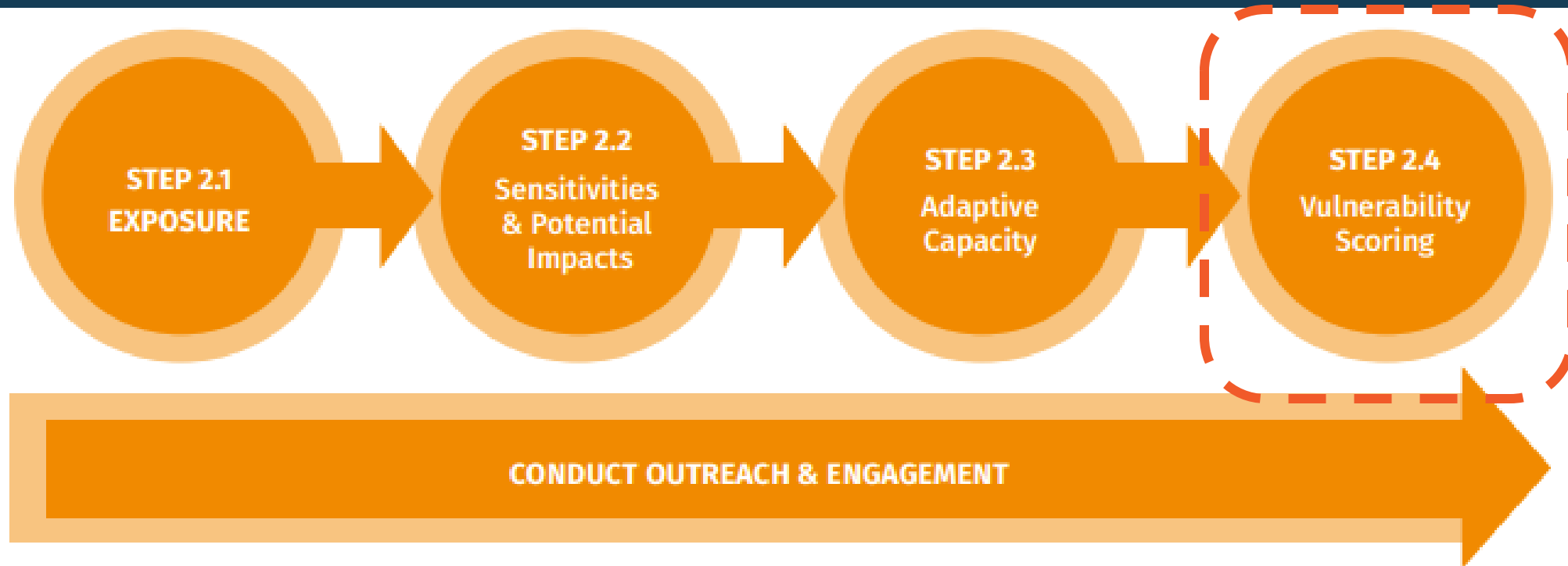
- Review existing efforts to assess climate vulnerabilities (CAF Gap Analysis)
- Review climate hazards & assets susceptible to climate impacts
 - Hazards: Seismically-induced, Flooding, Wildfire
 - Data Resources: Federal, state, regional, and local

Things to Prepare	Resources
<ul style="list-style-type: none">• Identify community populations and assets sensitive to climate change hazards• List of historic and potential future climate impacts• List of climate impacts of greatest concern	<ul style="list-style-type: none">• Local General Plan, Local Hazard Mitigation Plan (LHMP), Climate Action or Adaptation Plan (CAAP) if available• SoCal CAF General Plan and Vulnerability Assessment Gap Analyses• <u>Housing Element Parcel Tool (HELPR)</u>

Phase 2 – Step 2.3: Characterize Adaptive Capacity



Phase 2 – Step 2.4: Prioritize Climate Change Vulnerabilities

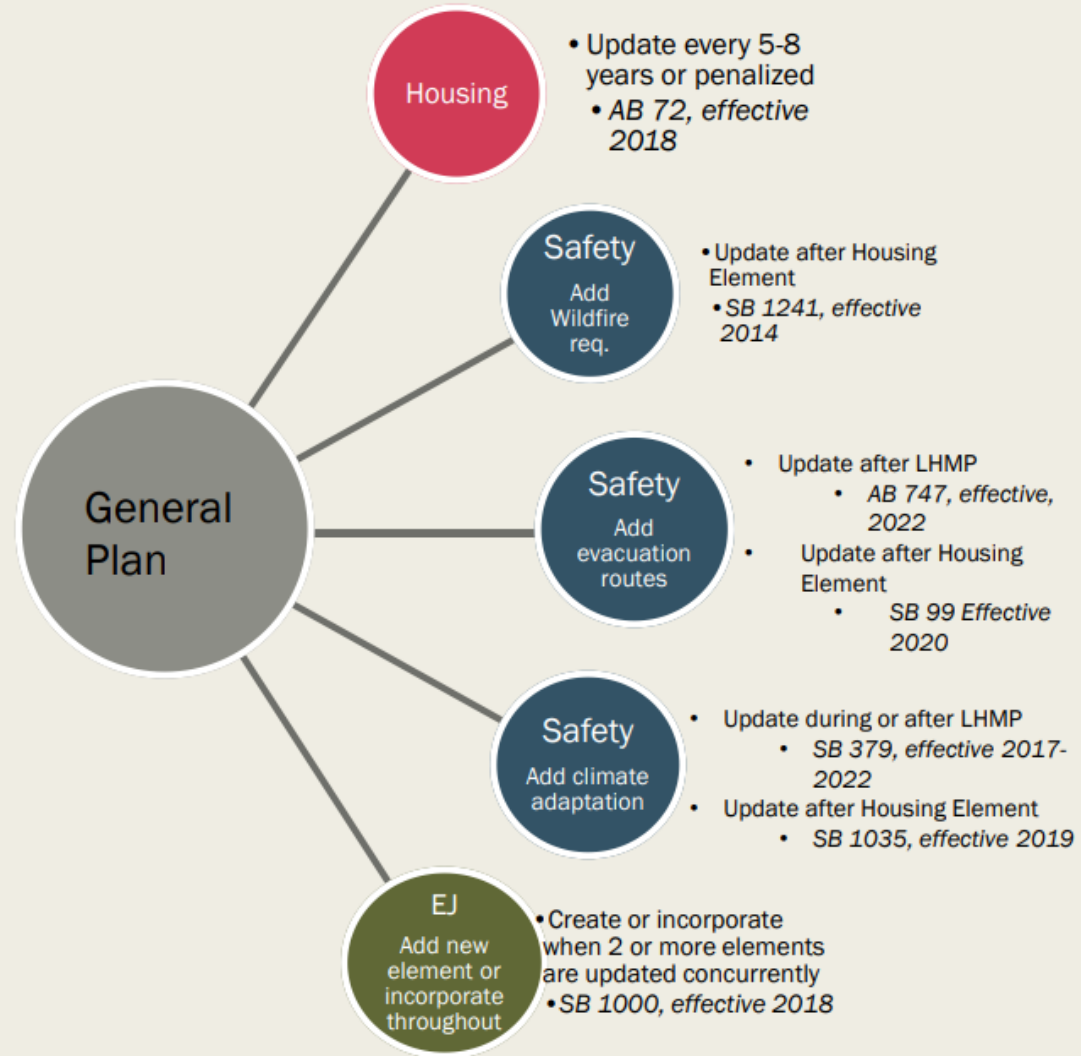


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Recent Changes Affecting General Plan Elements



Housing Element Parcel Tool (HELPR) 2.0



SCAG HELPR 2.0 Housing Element Parcel Tool

Documentation   

Select a Jurisdiction

City or County (Unincorporated) is
Adelanto

[Show Population and Housing Stats](#)

Filter Parcels

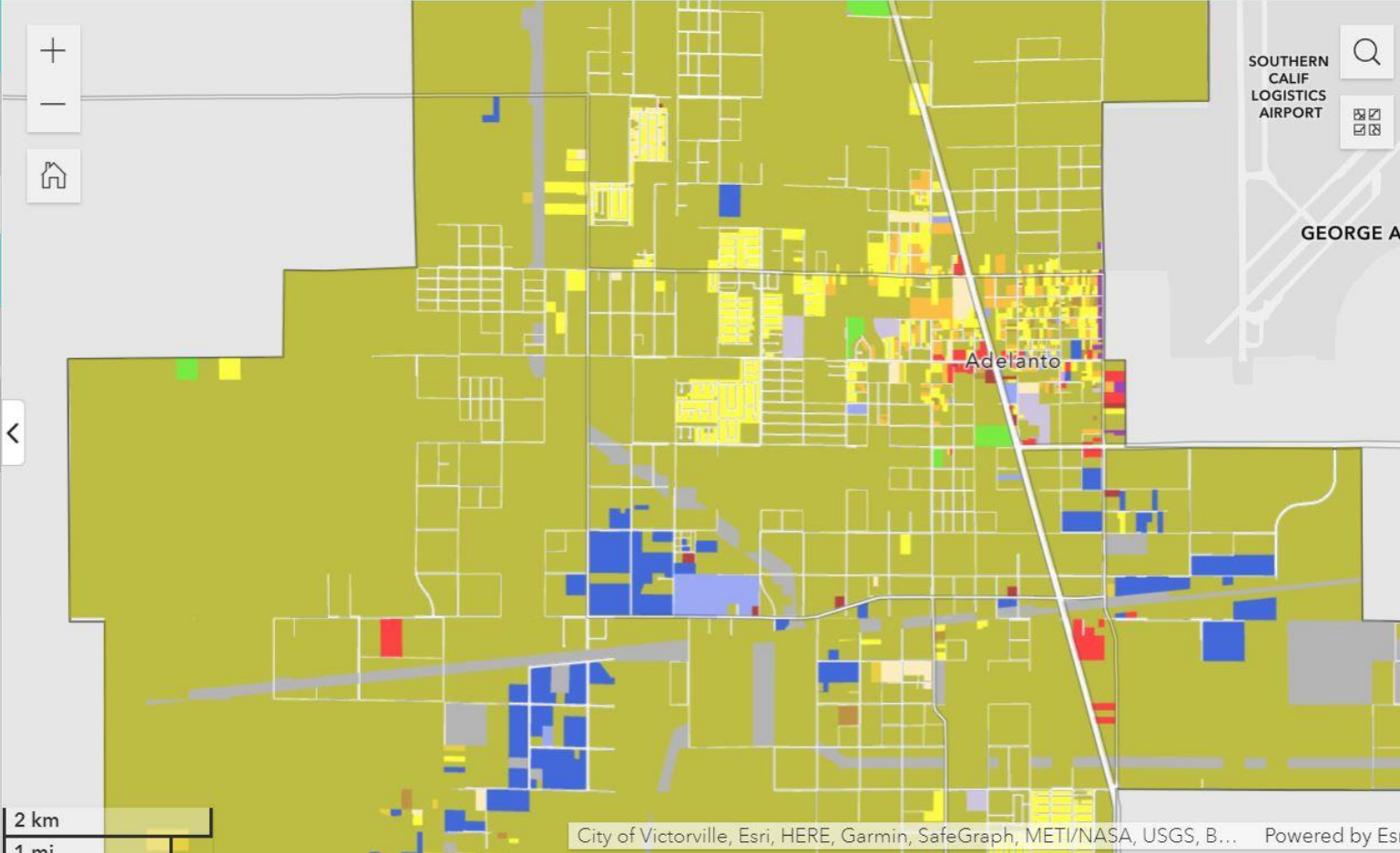
Standard Filters **ADU Filters**

- Vacant parcels of appropriate size
- Lower valued commercial/retail
- Public-owned land

Number of Selected Parcels
13,414

[Download Parcels \(CSV\)](#) [Download Parcels \(SHP\)](#)

[Download Land Use Layer File \(LYRX\)](#)



City of Victorville, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, B... Powered by Esri

<https://maps.scag.ca.gov/helpr/>

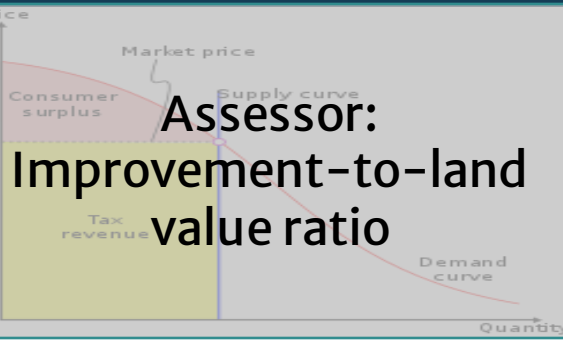
Selected Parcel Attributes in HELPR

Existing Land Use

Zoning Designation

General Plan Designation

Specific Plan Designation



Parcel size (acres)

Slope

Building footprint area

Brownfield/superfund designation

Priority growth/constraint area

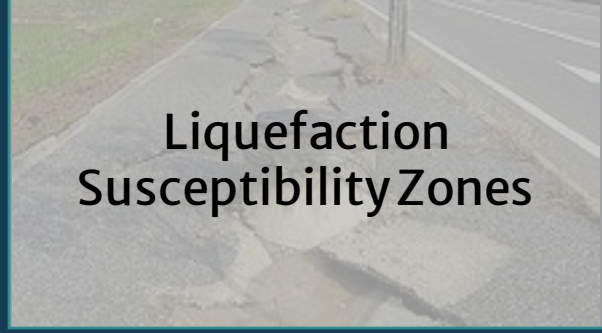
Environmental justice/opportunity areas

Proximity to grocery/healthcare/open space

Selected Environmentally Sensitive Areas



High and Very High
Hazard Fire Risk Zones



Liquefaction
Susceptibility Zones



Alquist-Priolo
Earthquake Fault Zones



100 Year Floodplains




Active River Areas




Wetland Areas



Sea Level Rise Areas



Landslide Hazard Zones



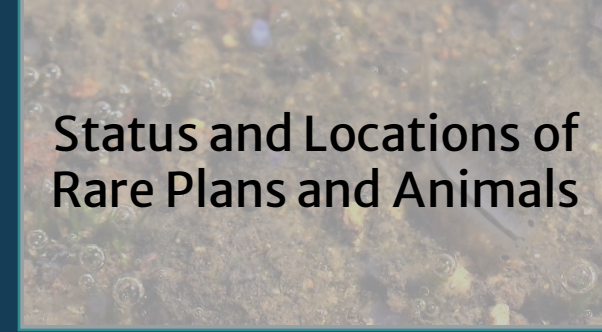
Protected Areas



Wildlife Habitat,
Connectivity Areas, and
Missing Linkages



Natural Community &
Habitat Conservation
Plans Reserve Designs



Status and Locations of
Rare Plants and Animals

Selected Environmentally Sensitive Areas

- SCAG selected layers based on guidance from partner agencies, as well as recommendations from The Nature Conservancy
- Impacted parcels can be filtered out for environmentally sensitive areas
- Factors are common considerations in CEQA and support conservation strategies in Connect SoCal
- Additional layers will be forthcoming in later releases

Outside environmentally sensitive areas ⓘ

Parcel inside/outside fire hazard area
1 Selected

Parcel inside/outside 3ft sea-level rise inundation area
1 Selected

Parcel inside/outside FEMA 100 year flood plain
1 Selected

Parcel inside/outside Alquist-Priolo earthquake fault zone
1 Selected

Parcel inside/outside liquefaction susceptibility zone
1 Selected

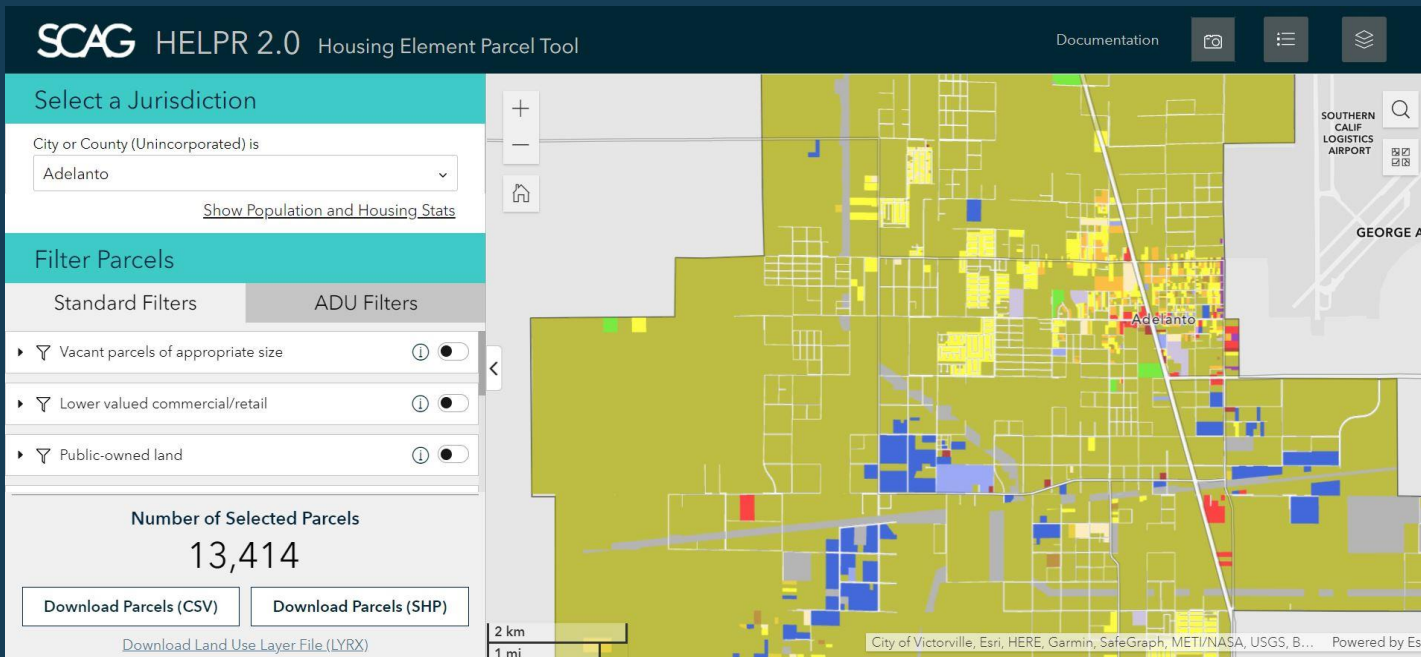
Parcel inside/outside landslide hazard zone
1 Selected

Parcel inside/outside California protected area
1 Selected

Parcel inside/outside active river or wetland area
1 Selected

Parcel inside/outside wildlife habitat
1 Selected

Housing Element Parcel Tool (HELPR) 2.0

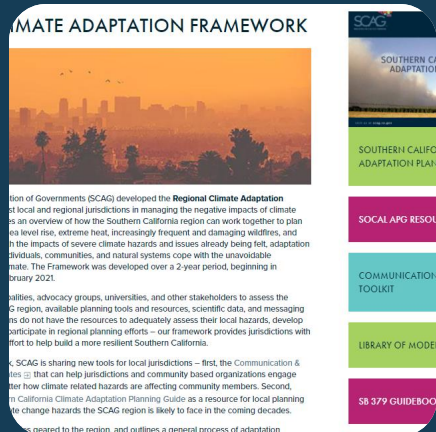


HELPR Tool URL –
<https://maps.scag.ca.gov/helpr>

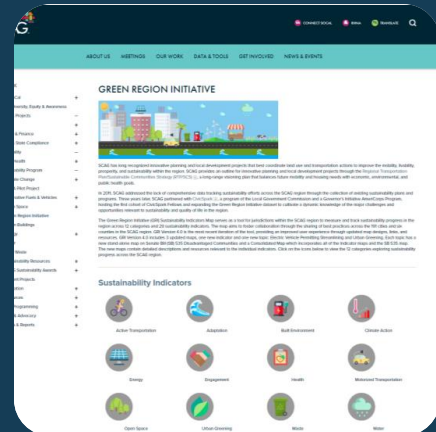
Recorded Demo –
https://youtu.be/mYDL_xKtG-4?t=4195

ArcGIS REST Services Directory –
https://maps.scag.ca.gov/scaggis/rest/services/HousingElements/Environmental_Constraints_additional/MapServer

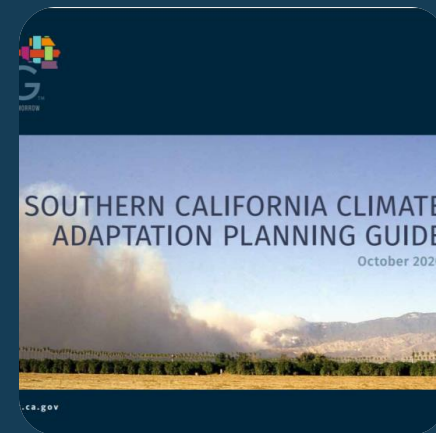
Regional Resources for SB 379 Compliance



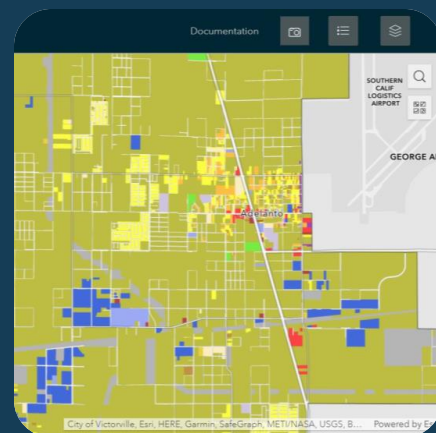
SoCal Climate Adaptation Framework



Green Region Initiative



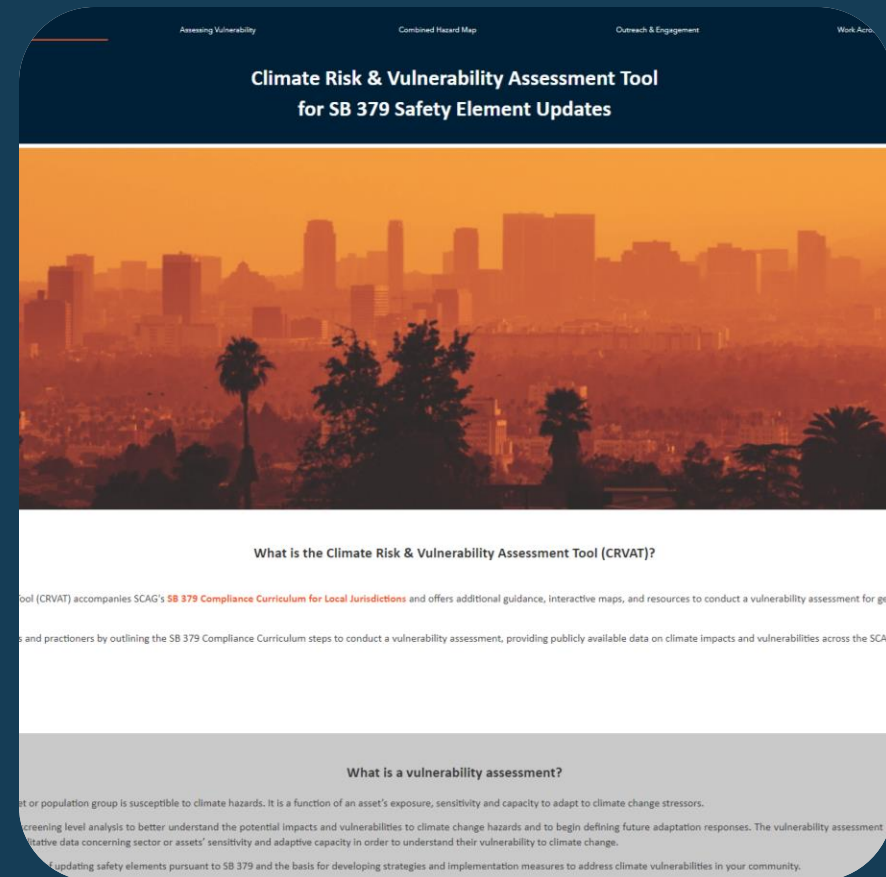
SoCal Climate Adaptation Planning Guide



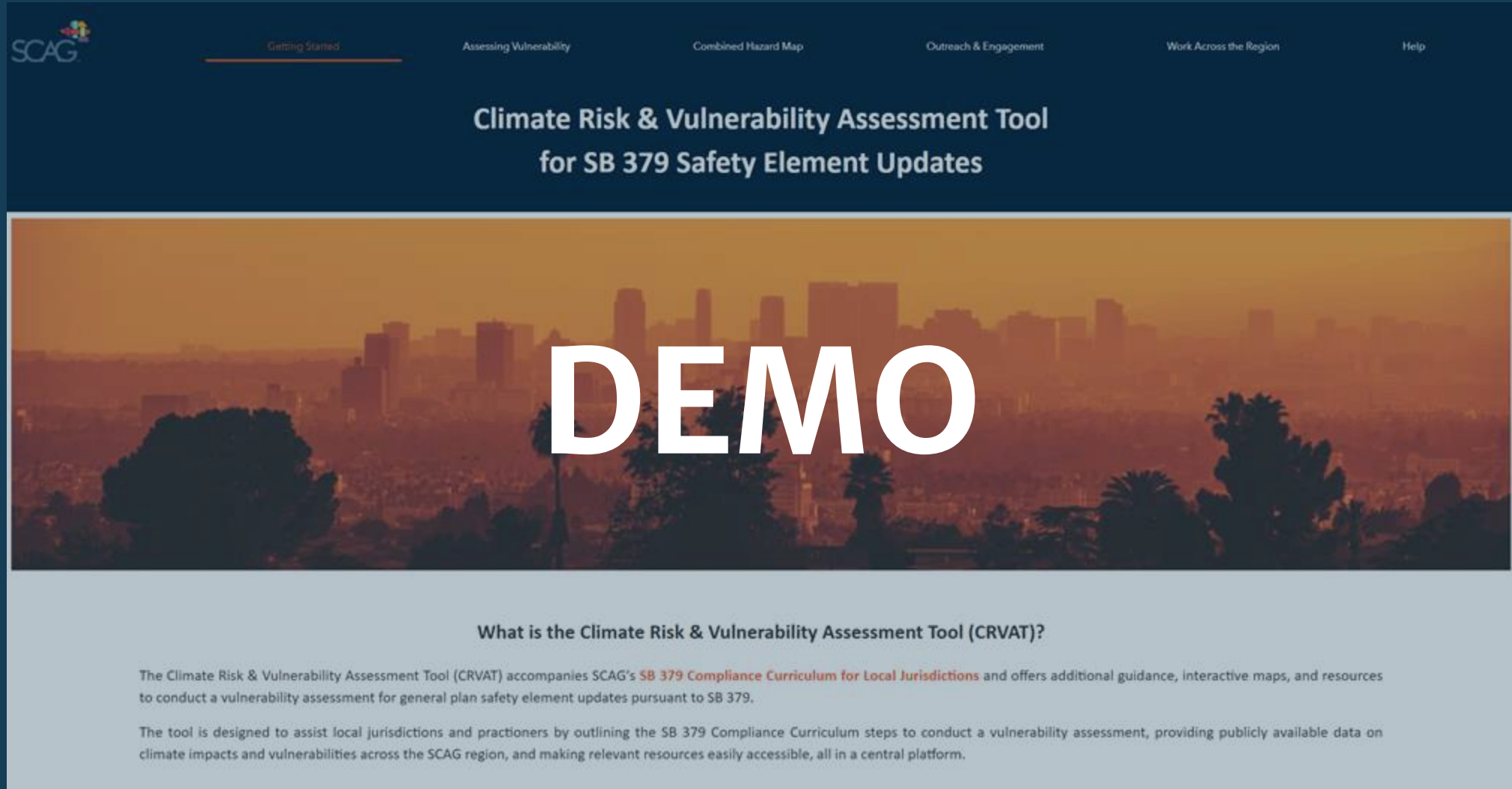
Housing Element Parcel Tool

NEW!

Climate Risk & Vulnerability Tool (CRVAT)



Climate Risk & Vulnerability Assessment Tool (CRVAT)



SCAG

Getting Started Assessing Vulnerability Combined Hazard Map Outreach & Engagement Work Across the Region Help

Climate Risk & Vulnerability Assessment Tool for SB 379 Safety Element Updates

DEMO

What is the Climate Risk & Vulnerability Assessment Tool (CRVAT)?

The Climate Risk & Vulnerability Assessment Tool (CRVAT) accompanies SCAG's [SB 379 Compliance Curriculum for Local Jurisdictions](#) and offers additional guidance, interactive maps, and resources to conduct a vulnerability assessment for general plan safety element updates pursuant to SB 379.

The tool is designed to assist local jurisdictions and practitioners by outlining the SB 379 Compliance Curriculum steps to conduct a vulnerability assessment, providing publicly available data on climate impacts and vulnerabilities across the SCAG region, and making relevant resources easily accessible, all in a central platform.


<https://maps.scag.ca.gov/climate/>

Accessing the CRVAT

OUR WORK


- Connect SoCal +
- Inclusion, Diversity, Equity & Awareness
- Programs & Projects -
 - Housing +
 - Economy & Finance +
 - Federal & State Compliance +
 - Sustainability -
 - Public Health +
 - Sustainability Program -
 - Climate Change -
 - Regional Climate Adaptation Framework**
 - Climate & Economic Development Project
 - Adaptation
 - Mitigation
 - Climate Change & The Future of Southern California
 - Climate Change Resources
 - HQTA Pilot Project
 - Alternative Fuels & Vehicles +
 - Open Space +
 - Green Region Initiative
 - Green Buildings
 - Energy +
 - Water
 - Solid Waste
 - Sustainability Resources +

REGIONAL CLIMATE ADAPTATION FRAMEWORK




The Southern California Association of Governments (SCAG) developed the **Regional Climate Adaptation Framework** (Framework) to assist local and regional jurisdictions in managing the negative impacts of climate change. The Framework provides an overview of how the Southern California region can work together to plan and prepare for the impacts of sea level rise, extreme heat, increasingly frequent and damaging wildfires, and other climate-related issues. With the impacts of severe climate hazards and issues already being felt, adaptation planning is necessary to help individuals, communities, and natural systems cope with the unavoidable consequences of a changing climate. The Framework was developed over a two-year period, beginning in February 2019 and ending in February 2021.


SCAG worked with local municipalities, advocacy groups, universities, and other stakeholders to assess the unique issues affecting the SCAG region, available planning tools and resources, scientific data, and messaging strategies. Many local jurisdictions do not have the resources to adequately assess their local hazards, develop effective adaptation plans, and participate in regional planning efforts – our framework provides jurisdictions with a roadmap to adaptation in an effort to help build a more resilient Southern California.

As part of the overall Framework, SCAG is sharing new tools for local jurisdictions – first, the Communication & Outreach Strategies and Templates that can help jurisdictions and community based organizations engage with residents to understand better how climate related hazards are affecting community members. Second, SCAG developed the  Southern California Climate Adaptation Planning Guide as a resource for local planning that describes the range of climate change hazards the SCAG region is likely to face in the coming decades.


It also describes adaptation principles geared to the region, and outlines a general process of adaptation planning that can be applied by any agency, no matter where they fall across the spectrums of funding, available resources, knowledge of vulnerabilities, and planning sophistication. It provides member agencies, including towns, cities, counties and subregional organizations with a compendium of tools, resources, and best practices to efficiently advance their adaptation planning using the best resources available.



The project was funded by the Caltrans Adaptation Planning grant program.



SOUTHERN CALIFORNIA CLIMATE ADAPTATION PLANNING GUIDE
October 2020



SOUTHERN CALIFORNIA CLIMATE ADAPTATION PLANNING GUIDE

SOCAL APG RESOURCES

COMMUNICATION & OUTREACH TOOLKIT

SB 379 GUIDEBOOK

CLIMATE RISK & VULNERABILITY ASSESSMENT TOOL

LIBRARY OF MODEL POLICIES



<https://scag.ca.gov/climate-change-regional-adaptation-framework>



We'd love to hear from you!

- Which resources would you like to learn more about?
 - *How can we best assist with the resources shared today?*
 - *Can we connect you with other resources?*
- Other questions and feedback?
- If you are interested in 1-on-1 technical assistance, please reach out to LIST@scag.ca.gov

Tell us how we did!

Take a quick 2-minute survey to help us improve future Toolbox Tuesdays!



Thank you!

Questions?



Lorianne Esturas, esturas@scag.ca.gov

For 1-on-1 technical assistance, please reach out to list@scag.ca.gov

www.scag.ca.gov

