Southern California Regional Climate Adaptation Framework: Part 2 June 29, 2021





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Housekeeping



- 1. Meeting length: 2 hours
- 2. This meeting is being recorded
- 3. All participant lines will be muted
- 4. There will be a Q&A session at the end of each segment
- 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.





Welcome & Virtual Housekeeping

SoCal Climate Adaptation Framework: New Resources & Tools

SB 379 Guidebook: Compliance Curriculum for Local Jurisdictions

Climate Action & Adaptation Plan City of Long Beach

Upcoming Trainings & Events

SoCal Adaptation Framework *New Resources & Tools*

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Climate Change Impacts in the SCAG Region





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Sea Level Rise/Coastal Flooding and Erosion

Extreme Heat

- Severe Storms/Wind
- Inland Flooding

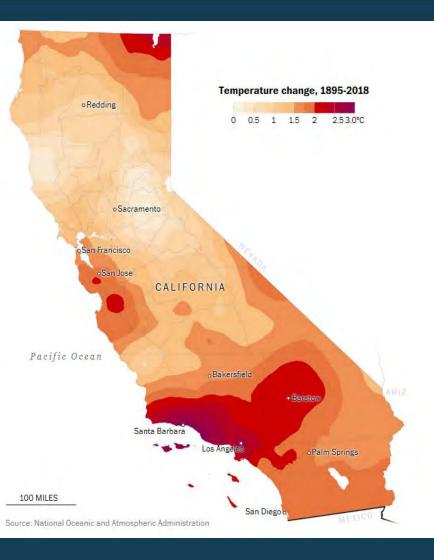
Drought

Wildfire

Air Quality and Vector Borne Diseases

Landslides

Pests and Ecological Hazards

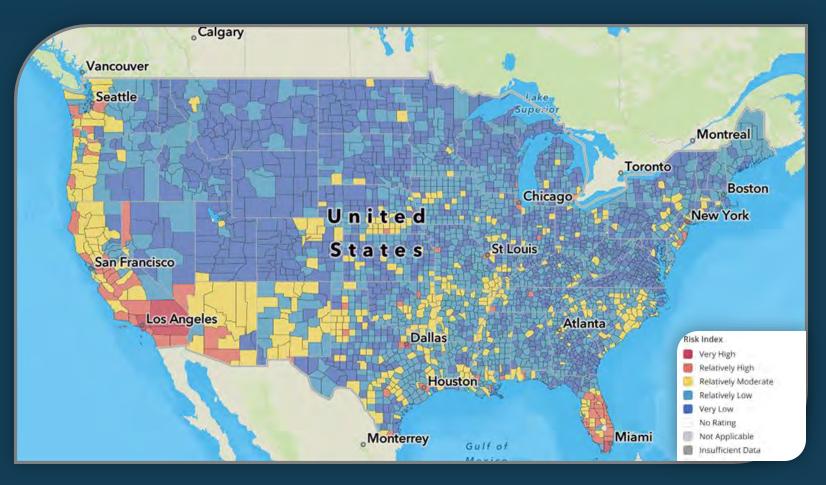




FEMA National Risk Index

SCAG.

- In October 2020, FEMA identified Southern California as one of the most vulnerable areas in the U.S. due to natural hazards
- Los Angles County is the most at-risk nationwide
- Riverside County and San Bernardino County are amongst the 10 highest at-risk counties in the U.S.





SoCal Climate Adaptation Framework:

- 2-year effort (February 2019 February 2021)
- SB 1 Adaptation Planning Grant
- SCAG, Cambridge Systematics, with ESA, Here LA, and Urban Economics

Includes:

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

Stakeholder Outreach



Local Jurisdiction Practitioners	Broader Group of Stakeholders	Elected Officials
 Two focus groups with 8 different jurisdictions Online survey tool to seek input from all jurisdictions Interviews with jurisdictions for case study analysis 	 Interviews with 8 CBOs Quarterly Climate Adaptation Working Group Meetings Two Public "Toolbox Tuesday" Trainings on SCAG's Climate Adaptation Framework & Tools Five Public Pop-Up Climate Talks Events 	 Subregional COG Presentations Presentation to SCAG's Energy & Environment Policy Committee Presentation to SCAG's Regional Council





Climate Talks Public Outreach



What is the Climate Talks Box?

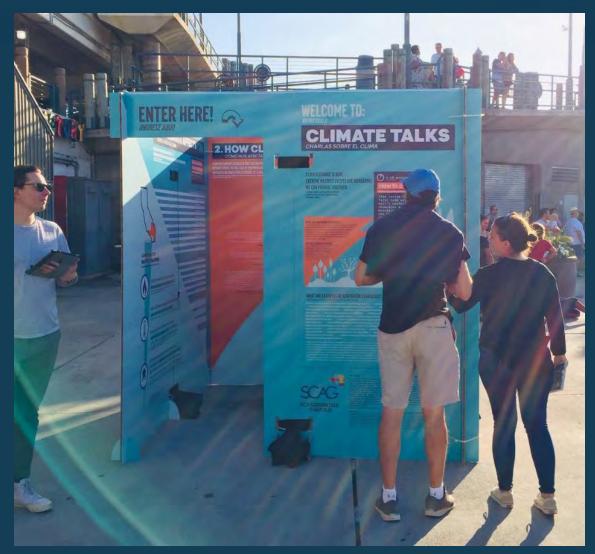
- Immersive pop-up experience Educate public about climate change & adaptation

Goal

Four different messaging strategies about climate change to understand what resonates

Messaging Strategies

- 1. Personal, monetary & health-related harm
- 2. Trusted leaders
- 3. California's natural resources
- 4. Regional impacts



Climate Talks Events





Redondo Beach Pier Summer Concert Series, 08/24/19

Taste of Baldwin Park, 08/29/19

Dell'allutat



Climate Resolve Keep LA Cool Day @ Hansen Dam, 09/07/19



Open Arts & Music Festival, 09/15/19



Urban Hive Market Long Beach, 09/28/19

Outreach Findings Highlights



Local Jurisdiction Practitioners	Broader Group of Stakeholders	Elected Officials
 Lack of dedicated staffing resources for climate planning 	 There is a general knowledge gap on climate change solutions 	 Health, socioeconomic, and racial equity considerations should be included in
 Activities should cross departments Uigh turnover and lack of 	 Linkages of community impacts from climate change can be challenging to convey 	regional policymaking addressing climate hazardsSCAG shall develop a
 High turnover and lack of champions or oversight is challenging 	 Maps of climate impacts are not the best means for conveying impacts; images 	regional resilience framework, a regional climate planning network, and partnerships to support
Jurisdictions need more tools and datasets to track	and statistics on local quality of life are	jurisdictions' climate
performance and would like to coordinate with counterparts	 The language of climate change and adaptation may not be familiar to several 	planning initiatives

audiences



SoCal Adaptation Planning Guide

Southern California Climate Adaptation Planning Guide



- 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 <u>Here</u>.

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.

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Policy gap analysis:

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



Communication Strategies Toolkit



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

WHAT IS CLIMATE ADAPTION?





Source: California's Fourth Climate Change Assessment, California Natural Resources Agency et al. 20

WILDFIRES

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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.

There may be 400% more extreme heat days by the end of the century

1 in 4 Californians live in a high-risk wildfire area

ource: Risk Assessment Memo, California Department of Forestry and Fire, 201

Model Policies for Local Coastal Programs & General Plans

Model policies organized by general plan element and climate hazard type

• Elements:

- Environmental Justice
- Circulation
- Land Use
- Safety
- Hazards:
 - Multiple hazards
 - Extreme heat
 - Air quality and human health
 - Other climate-related hazards

Land Use Element

Multiple Hazards

- Protect Natural Areas. Identify, map and establish land use designations and development standards that protect areas of significant habitat, biodiversity, carbon-sequestration, ecological integrity and those areas with high natural resilience to climate change to reduce loss of critical habitat, increase bio-diversity, mitigate climate change effects and protect ecological resources.
- Reduce Barriers to Use Williamson Act. Streamline provisions within the Community's zoning
 ordinance, including fees and internal routing for application approvals, to reduce barriers to use of
 the Williamson Act for preservation of agricultural lands and/or open space.
- Improve Access to Local Food Supplies. Allow for urban agriculture and community gardening in the community's General Plan and local zoning ordinance to improve access to local food supplies as climate change stresses may potentially disrupt global and regional food supplies.
- Implement Urban Agriculture Incentive Zones Act. Develop a local ordinance to implement the Urban Agriculture Incentive Zones Act (AB551) to increase available land for urban agriculture opportunities. Allowing for urban farming opportunities can improve food security and increase open and recreational space. The associated open space and activities, which could include communitygardens, can reduce mental stressors associated with climate change, impermeable surfaces that retain heat, and increase permeable surface for stormwater absorption and heat reduction.

Adaptation Strategies and Actions



- Over 275 actions
- Filter by climate change hazard type (e.g., extreme heat, air quality)
- Filter by asset type (e.g., vulnerable populations, public health)
- Strategies and actions can be incorporated into Climate Adaptation Plans or as implementation programs for the General Plan

Climate Change Hazard	Asset		Action
Inland Flood	Biodiversity and Habitat	Build or expand flood defenses	Construct "living levees" by creating gently-sloping upland, transition, and wetland habitats between the levee and river
Inland Flood	Biodiversity and Habitat	Design restoration of riparian corridors and wetlands in floodplains to be resilient to climate change	Choose plant species for restoration sites that are less vulnerable to flooding
Inland Flood	Biodiversity and Habitat	Design restoration of riparian corridors and wetlands in floodplains to be resilient to climate change	Establish transitional and upland habitat in restoration sites where feasible
Inland Flood	Biodiversity and Habitat	Design restoration of riparian corridors and wetlands in floodplains to be resilient to climate change	Require adaptive management plans for restoration/mitigation sites within floodplains to consider increased flooding potential

Project Checklists



limate Hazard	Screening Threshold Questions (If the answer to any of the following questions is "Yes", then the checklist for that hazard must be completed	Links or Sources of Information
Drought	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 No	Urban Water Management Plan applicable to the project's location
Extreme Heat	 Is the area where your project is located expected to experience more than 30 heat health days per year over the project lifetime? Yes No 	Maps based on California Heat Assessment Tool (CHAT): https://www.cal-heat.org/
Inland Flooding	 Is the project located in the 100-year or larger FEMA floodplain, otherwise known as the 1% annual chance flood? Yes No Using Cal-Adapt, will the project watershed be subject to an increase of extreme precipitation events? Yes No No 	FEMA Flood Maps: https://msc.fema.gov/portal/ho me
Landslides	 Is the project located in area of moderate or high susceptibility to landslide hazards? Yes	USGS landslide susceptibility map: https://maps.conservation.ca.gov/cg s/lsi/
Sea Level Rise/ Coastal Flooding	 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	Use detailed local SLR maps, if available. Alternatively, use Our Coast Our Future tool: http://data.pointblue.org/apps/ocot/c ms/index.php?page=flood-map
Wildfire	Is the project located in a high or very high fire hazard zone? Yes No	CalFIRE Maps - https://osfm.fire.ca.gov/divisions/wil dfire-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

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 ON 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.
- 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

- 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 <u>vulnerability</u> based on exposure and sensitivity
- b. Assess potential <u>consequences</u> 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

Project Checklists



Adaptation	Assessment
From the fol increase adapt	aptation Measures: lowing list of adaptation measures, identify those that the project will incorporate to ptive capacity to extreme heat. For all "no" answers provide additional explanatory including whether the measure is not applicable to the project.
Robustness	 Would project expand and maintain the urban tree canopy? (e.g., by increasing tree cover for large parking lots)
	2. Would the project expand the use of cool roofs and reflective building materials?
	3. Would the project use alternative vegetative solutions to alleviate urban heat island: for example, green walls and green roofs where trees are not possible?
	□ Yes □ No
	4. Would the project expand the use of cool, porous, high-reflectivity pavement or sustainable materials in pavements?
	□ Yes □ No
Resilience	5. Would the project use alternatives to grid-powered air conditioners for cooling, such as propane air conditioners, fans and cold water systems?
	□ Yes □ No
Adaptability	6. Would the project limit or remove impervious surfaces to help combat urban heat island effects?
	 Yes No No Does the project expand access to cooling centers for vulnerable populations to use during heat health events? Yes No
Redundancy	8. Would the project have at least 2 routes for emergency vehicle access to allow for emergency services/first responders to access people at project site in the event of an emergency?

- c. Assess project's <u>adaptive capacity</u>, based on the adaptation measures incorporated into its design
 - Suggested measures: customize to i. local needs
 - ii. Utilize the Strategy Matrix

Decision Tree Tool



	AGENCY I	NFO		
Select the County you represent	Riverside			
Select City you represent	Hemet			
Total	Population	Employment		_
County	2,429,222	896,201	811,649	2,906,153
City	125,684	37,793	49,159	129,274
	DAC	DAC	DAC	DAC Housing
DAC* Total	Population	Employment	Households	Units
County	493,455	306,399	142,808	590,336
City	21,694	10,451	8,024	22,314
Wildfire	Population	Employment	Households	Housing Units
County	615,144	215,618	207,610	743,358
City	26,256	7,895	10,269	27,006
-				
	DAC	DAC	DAC	DAC Housing
DAC Wildfire Affected	Population	Employment	Households	Units
County	13,941	12,840	11,228	16,847
City	561	649	107	577
· ·				
Sea Level Rise	Population	Employment	Households	Housing Units
County	-	-	-	-
City	-	-	-	-
	DAC	DAC	DAC	DAC Housing
DAC Sea Level Rise Affected	Population	Employment	Households	Units
County	-	-	-	-
City	-	-	-	-
,				
Flood	Population	Employment	Households	Housing Units
County	99,430	32,875	36,976	132,394
City	22,796	6,855	8,916	23,447
5.01	22,750	0,000	0,010	20,447
	DAC	DAC	DAC	DAC Housing
DAC Flood Affected	Population	Employment		Units
County	5,017	1,417	1,685	6,680
City	210	1,417	1,085	216

PROJECT IN	FO
Questions	Project
Which hazard category do you want to look for projects in?	Extreme_Heat
If selected "Other", please	
mention hazard name	
Asset protected in said project	Vulnerable_Populations
If selected "Other", please	
mention protected asset name	
you are interested in	
Desired strategy	Improve access to air conditioning and cooling centers by vulnerable populations
If selected "Other", please	
mention your desired strategem	
Action item interested in	Encourage partnerships between local emergency responders and local health departments to identify and reach vulnerable populations in need of access to cooling centers or personal cooling resources
If selected "Other", please mention your desired action item	



Project Tracking Tool

AGENCY INFO						
Select the County you represent	San_Bernardino			Population	Employment	Households
Do you represent a County Agency, a City			Country	2 250 662	000 000	700.005
Agency or Other Agency?	City		County	2,258,662	828,692	700,095
If selected Other Agency, please select			City	7,828	3,264	3,151
Agency Name from the list			City	7,828	3,204	5,151
If selected "Other", please mention the						
name of the agency you represent						
Select City you represent	Needles					
			_	PROJE	CT INFO	
Metrics	Project 1	Project 2	Project 3	Project 4	Project 5	Project 6
Climate Change Hazard combating through						
existing, planned or proposed projects (can	Extreme_Heat	Inland_Flood	Wildfire		Severe_Storms	
mention as many as you know)				Extreme_Heat	_Or_Wind	
Affected Population	7,828	708	1	7,828	Unknown	Unknown
Affected Employment	3,264	295	0	3,264	Unknown	Unknown
Affected Households	3,151	285	0	3,151	Unknown	Unknown
If selected "Other", please mention hazard						
name						
Asset protected in said project	Public Transit	Multiple Assets	Public Health	Vulnerable Pop	Buildings and Fa	acilities
If selected "Other", please mention						
protected asset name						
Scale of project (SED protected) by this						
effort (in % ??)	0.05	0.35	0.9	0.2		
Protected Population	391	248	1	1,566	Unknown	Unknown
Protected Employment	163	103	0	653	Unknown	Unknown
Protected Households	158	100	0	630	Unknown	Unknown
Additional Description						
Stage of the project	Construction	Proposed	Planning	Engineering/De	No Action	
Timeline						
Cost						
Funding	Partially funded	Unfunded	Partially funded	Fully funded	Unfunded	
Contact Info for PM						



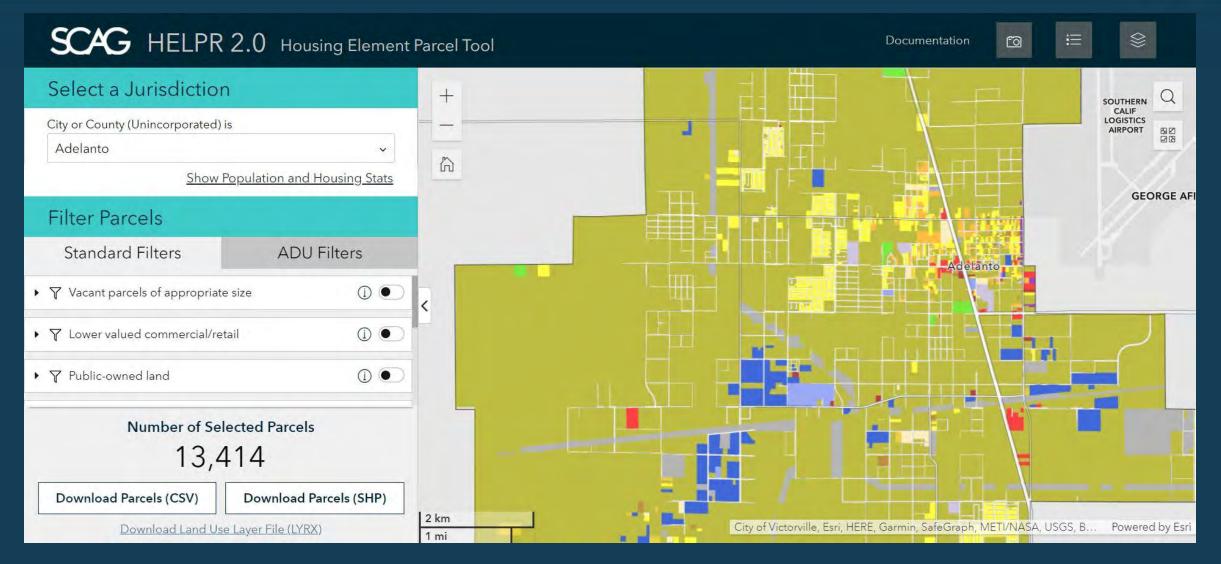
Senate Bill 379 – Safety Element of a General Plan and Local Hazard Mitigation Plan to address climate adaptation by January 2022

Senate Bill 1035 – Safety Element regular updates to address climate change as part of Housing Element and Local Hazard Mitigation Plan updates

Senate Bill 1000 – Environmental Justice Element to be prepared when two or more elements are updated and the city or county has a disadvantaged community

NEW RESOURCE: Housing Element Parcel Tool (HELPR) 2.0





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

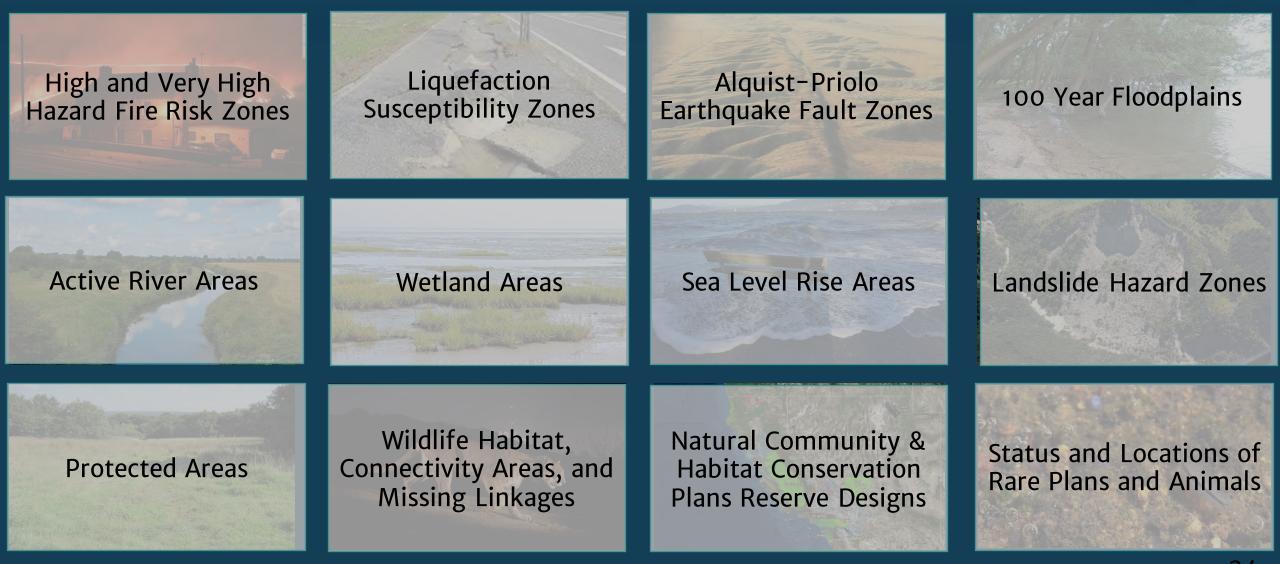
Selected Parcel Attributes in HELPR





Selected Environmentally Sensitive Areas







Climate Change Action Resolution – adopted January 7, 2021

- Regional Resilience Framework
- Climate Planning Network
- Regional Advanced Mitigation Program (RAMP)
- Accelerated Electrification
- Inclusive Economic Recovery Strategy
- Climate Adaptation & Mitigation Analysis and Strategies in the 2024 RTP/SCS
- Partnership Potential
 - Climate Action Plans
 - Urban Greening
 - Safety elements
 - Hazard mitigation infrastructure financing
 - Urban heat mitigation
 - Wildlife corridor restoration & greenway connectivity
 - EV permitting









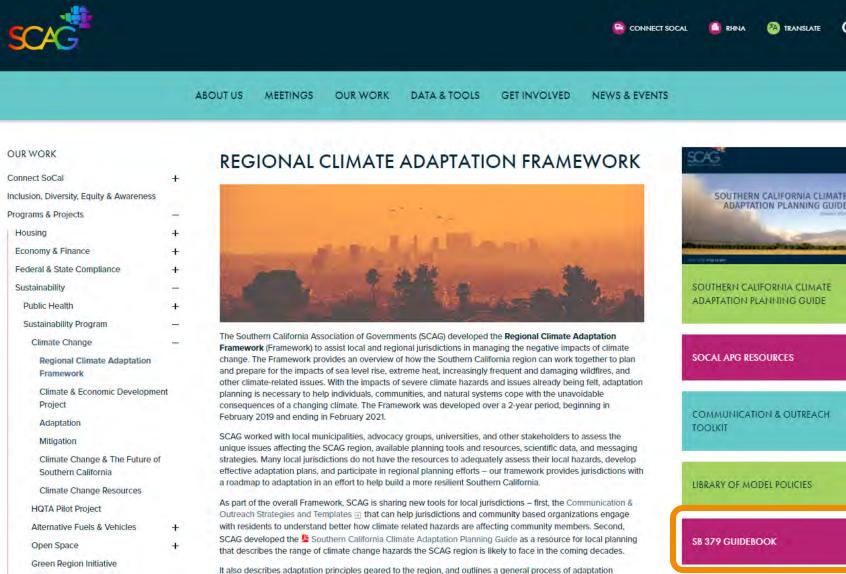




Project Website

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

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SB 379 Guidebook

Compliance Curriculum for Local Jurisdictions

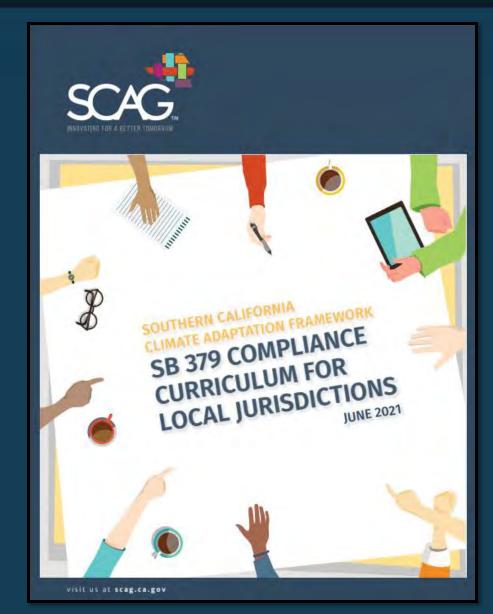
Emily Rotman SCAG Sustainability Department

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What is the SB 379 Guidebook?





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

Table of Contents

Section 1: Introduction and Background	
Section 2: Summary of SCAG's Adaptation Planning Resources	
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Section 5: Case Studies	



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.

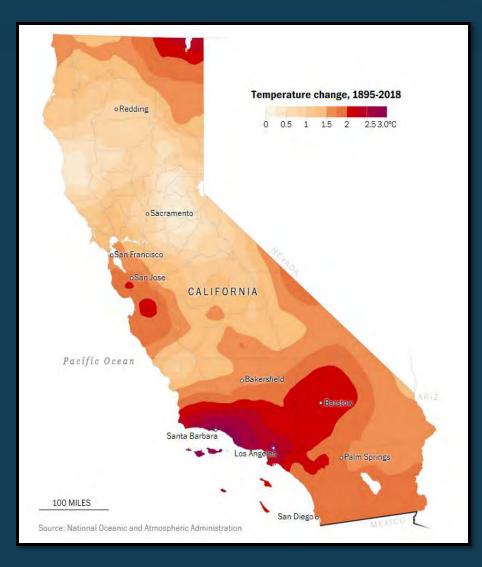
visit us at scag.ca.gov



What is SB 379?

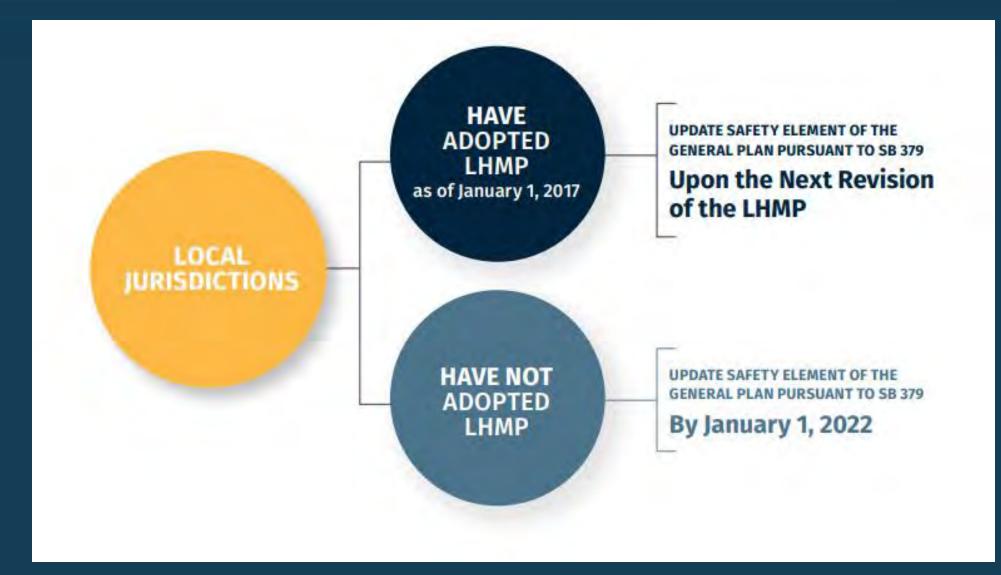
- Law passed in 2015, builds upon AB 162 (flood) and SB 1241 (fire)
- Key legislation for implementation of State's climate adaptation goals under Safeguarding California
- Applies to all cities and counties in California
- Requires <u>climate adaptation and</u> <u>resilience strategies to be</u> <u>incorporated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

<u>January 1, 2022</u>



What is the timeline for complying with SB 379?





What are the statutory requirements of SB 379?



1. V<u>ulnerability</u> <u>assessment</u>

 Identifies the risks that climate change poses to the local jurisdiction and the geographic areas at risk from climate change impacts 2. <u>Set of</u> <u>adaptation and</u> <u>resilience goals</u>, <u>policies, and</u> <u>objectives</u>

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



 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 <u>an existing plan</u> <u>or document that substantially</u> <u>fulfills the objectives and</u> <u>requirements of SB 379</u> (e.g., an adopted local hazard mitigation plan, climate adaptation plan, or similar)

How do you use the SB 379 Guidebook?





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



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
☑ Identify Existing Documents	☑ SCAG GRI
for SB 379 Compliance	2 SoCal CAF General Plan and Vulnerability Assessment Gap Analyses
Identify Intra- and Interdepartmental Stakeholders	Local General Plan, Local Hazard Mitigation Plan (LHMP), Climate Action or Adaption Plan (CAP/CAAP) if available
Timeline to Meet SB 379 Requirements	A 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 <u>Step 1.2</u>.

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

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OUTREACH & ENGAGEMENT CONSIDERATIONS The scoting phase presents an upportunity to shape and define how public engagement will be implemented for the immainder of the process. Meaningful lengagement – 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. Tease is essential to building a califion 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 equilable emgagement 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



CONDUCT OUTREACH & ENGAGEMENT

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 SoCol APG for best practices, tools, and resources that can assist in creating an equitable engagement strategy for Phase 1 that is inclusive, effective, and endurine.

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 Resource

6	that include Climate Adaptation	Local General Plan, Local Hazard Mitigation Plan (LHMP), Climate Action or Adaptation Plan (CAP/CAAP) if available
	Goals, Strategies, Policies, etc.	☑ 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 Gui
		☑ 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 Adoptation 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 juvisdiction, 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 suffreeability 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 to required as part of 58.379, and your terminuities are you

equired as part of 58.379, and your communities are your est experts. Please reference page 102 of the SoCol APG for est 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

Resources

Things to Prepare

are

List of Existing Policies and/or Plans that include Climate Adaptation Goals, Strategies, Policies, etc.

- Icocal 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

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What is included in the guidebook?



STEP 3.3: PREPARE ADAPTATION STRATEGIES

Things to Prepare	Resources
☑ A List of Adaptation Strategies that Address the Vulnerability Assessment	2 SoCal APG
	Matrix of Adaptation Strategies and Actions
	Library of Model Policies (General Plans, Local Coastal Programs)
	☑ 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 first.

Snapshot of Matrix of Adaptation Strategies

×.,	4	P		0
	Climate Change Hazard	Asset	Strategy	Action
	Multale Heards	Valuerable Populations	Leaved public putriesch and induction to applicywaters, bucketaar, and the general public	Perfair with major encloses that manage outcome workers to sugment training, including maximum of also path under chade and net chasis constraints from poor sit quality, thering on Path 116, and vector bony Jackets accodures.
	Station manage	Variable Repartment	Econol public outwash and education to policymakers, busitesses, and the general public	Pertain with aprovidured employers to make sure vortex: have advocate protection from extreme conditions and thet hearing and able varing conditions are maintened.
1	Multiple Hocerds	Vurnendie Populations	dentify and posted (pressured as publication to character effects)	The USE prior option in prior entropy of a standard measures of the investment of the prior of the standard measurement of the standard measur
	Waters faced	Voltamable Regulations	dantify and protect communities vulnerable to climate effects	None planning and intervention programs on megidial feads that connectly experience activitian environmental injuntoe or alter a class opportionals burdles of activitial autoconstitution models.

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 string 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 are

Snapshot of Library of Model Policies



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

	Climate Change Rasard	Asset	Strategy	Action
i	Multiple Haperia	Table Resident	takend apply support will exception to policymakers, bischesses, and the general public	Partners with index enougher that manage authors worked to aspine the only introduce anarymete of advocate wefar, stands, and test branks, protection from poor 41 autobs the mining on best rates, and vector-bern disease available.
	Multiple Health	Valenska Prisateurs	Based subic pulpershard exception to bolicymies: buinemer, and the general subic	Perform with gal to fund involved to make pure working they sets, which protection from extraine conditions and that neeting and safe environg conditions are instrumed.
I	Multiple Health	Volnerable Rossilitors	constrained in the second seco	Pacificite obstance with the generatives of adaptation requires in contrast the with single and burliard from climate relation reading with the access to require the receiver and incorporate environmental adulty with rective grade for local adaptation.
	Huta k Hoards	Warmaha Papalatore	called and project communities where the number of the second sec	Pocas planning and information organize or neighborhoods tried currently experience active or environmental injustice or lines a large participant course tailed in of potential public health equality

What is included in the guidebook?



The implementation actions you choose should be suited following in your implementation measures to comply wit	to your local circumstances, but you must specifically address the th SB 379.	• Guid
Required by SB379	SCAG Resources	
Feasible methods to avoid or minimize climate change impacts associated with new uses of land.	 ☑ Matrix of Adaptation Strategies and Actions ☑ Project Checklists for Climate Adaptation ☑ HELPR 	of th
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.	 ☑ Project Checklists for Climate Adaptation ☑ Adaptation Infrastructure Impacts and Resilience Project Tracker ☑ Decision Tree Toolkit for Local Governments ☑ HELPR 	Best Required by \$8379
The designation of adequate and feasible infrastructure located in an at-risk area.	 ☑ Library of Model Policies (General Plans, Local Coastal Programs) ☑ Matrix of Adaptation Strategies and Actions ☑ Project Checklists for Climate Adaptation 	Feasible methods to avoid impacts associated with ne
Guidelines for working cooperatively with relevant local, regional, state, and federal agencies.	☑ SoCal APG ☑ SoCal CAF Outreach toolkit	The location, when feasible facilities outside of at-risk not limited to, hospitals an emergency shelters, emerg
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.	 Library of Model Policies (General Plans, Local Coastal Programs) Matrix of Adaptation Strategies and Actions Principles and Metrics for SCAG Jurisdictions 	emergency communication construction methods or o damage if these facilities a The designation of adequai infrastructure located in a
STEP 4.2: MONITOR	·····	Guidelines for working coo local, regional, state, and f
You can find more information on this step in the SoCal Al 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 vulnerabil You can reference this step of the SoCal APG, the Principle and Metrics for Local Jurisdictions, as well as the Adaptati Infrastructure Impacts and Resilience Project Tracker whe updating the safety element pursuant to SB 379. STEP 4.3: EVALUATE	BEST PRACTICES TO CONSIDER WHEN PREPARING IMPLEMENTATION MEASURES V Foster local political buy in v ses Seek sustained commitment ion	The identification of nature be used in adaptation proj plan shall use existing natu ecosystem processes, or th features and ecosystem pro- alternatives for considerat

Consider your jurisdiction's partners.

Do not be afraid to build something new

lance on more detailed requirements ne law and associated resources practices for critical Steps

Required by SB379	SCAG Resources
Feasible methods to avoid or minimize climate change mpacts associated with new uses of land.	Matrix of Adaptation Strategies and Actions Project Checklists for Climate Adaptation HELPR
The location, when feasible, of new essential public acilities outside of at-risk areas, including, but out limited to, hospitals and health care facilities, smergency shelters, emergency command centers, and mergency communications facilities, or identifying construction methods or other methods to minimize lamage if these facilities are located in at-risk areas.	Project Checklists for Climate Adaptation Adaptation Infrastructure Impacts and Resilience Project Tracker Decision Tree Toolkit for Local Governments HELPR
The designation of adequate and feasible infrastructure located in an at-risk area.	☑ Library of Model Policies (General Blane, Local Constal Pargemm) ☑ Matrix of Ada ☑ Project Chect
Guidelines for working cooperatively with relevant local, regional, state, and federal agencies.	BEST PRACTICES TO CONSIDER WHEN Socal CAF Out PREPARING IMPLEMENTATION MEASURES
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.	 Library of Mi Matrix of Ada, Principles and 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

STEP 4.3: E\

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

How are SB 379 and SB 1000 related?



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, aleady 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 E DI 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 or 007 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.

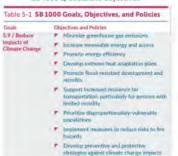
4.3 | Summary of SB 1000 Resources

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 El-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



California Environmental Justice Alliance. (October 2017). SB 1000 implementation Tustik Retrieved from: https://califo.org/2017/09/16-000-iookist-relevan/

- 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

What are some 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/CARP 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.

Southern California Association of Governments

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Sea Level Rise and Flooding Adaptation Objectives and Actions Sea Level Rise + Flooding

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SB379 Guidebook

Where to access the SB 379 Guidebook



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

REGIONAL CLIMATE ADAPTATION FRAMEWORK



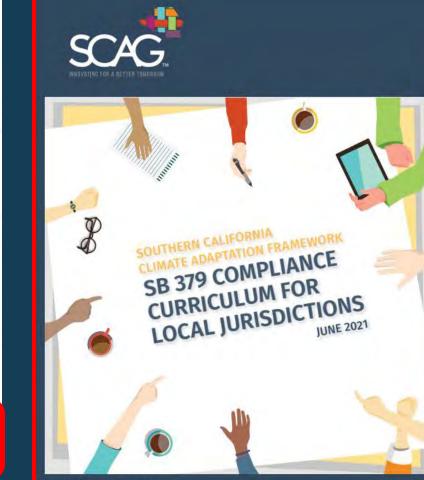
The Southern California Association of Governments (SCAG) developed the **Regional Climate Adaptation Framework** (Framework) to assist local and regional jurisdictions in managing the negative impacts of climate change. The Framework provides an overview of how the Southern California region can work 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 2-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.







Upcoming Workshop

- LARC Local Climate Adaptation Planning Workshop June 30, 2021 from 9am-12pm
- Register online at: <u>https://www.laregionalcollaborati</u> <u>ve.com/events/2021/6/30/2021-</u> <u>forum-adaptation</u>

Technical Assistance

- SCAG Local Information Services Team (LIST)
 - 1-on-1 technical assistance on general plan safety element updates
- SCAG Regional Data Platform & HELPR Tool
 - Risk and vulnerability assessment data and mapping resources
- If interested, please reach out to adaptation@scag.ca.gov

Thank You!

Questions? adaptation@scag.ca.gov

Kimberly Clark, clark@scag.ca.gov Lorianne Esturas, esturas@scag.ca.gov Emily Rotman, rotman@scag.ca.gov www.scag.ca.gov





Long Beach Climate Action & Adaptation Plan

SCAG Toolbox Tuesday - SB 379 Compliance

June 29, 2021



- ✓ 52 square miles
- ✓ 470,000 residents,
- 2nd most diverse city in the country
- Ranked on World's most livable city list in 2008, 2013 & 2014
- ✓ 2016 ranked 10th most walkable

S City and 10th most bike

Long Beach Climate Action & Adaptation Plan (CAAP) Status

- City Council confirmed the CAAP on January 5, 2021 • Confirmed GHG reduction pathway for 2030
- Staff is preparing a Subsequent Environmental Impact Report (EIR) and anticipates bringing the CAAP forward for adoption in 2021
- Early implementation actions underway



What is the CAAP?

A plan to:

- Reduce communitywide greenhouse gas emissions (GHG), while preparing for the impacts of climate change
- Improve public health, foster economic opportunity, & advance social equity
- Meet policy commitments & state GHG reduction mandates

How?

- Establish a framework for creating or updating policies, programs, practices, and incentives to reduce the City's GHG footprint
- Ensure the community and physical assets are better protected from the impacts of climate change
- Informed by technical studies of climate stressors and communitywide vulnerabilities



Why do we need a CAAP?

Target Year	State Target	Corresponding Legislation	City Status
2020	1990 GHG levels by 2020	AB 32, Global Warming Solutions Act (2006)	California met this target Statewide
2030	40% below 1990 levels by 2030	SB 32, Global Warming Solutions Act (2006)	The CAAP is a plan for Long Beach to meet this target by 2030
2045	Carbon neutrality by 2045	Executive Order B-55-18 of 2018	Aspirational for Long Beach
2050	80% below 1990 levels by 2050	Executive Order S-3-05 of 2005	CAAP's plan horizon is to 2030

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Other Relevant Legislation

- SB 375 (Sustainable Communities)
- AB 691 (Sea Level Rise)
- SB 1000 (Environmental Justice in Local Land Use Planning)
- SB 379 (Climate Adaptation in Safety Elements)
- SB 100 (Carbon-free Electricity by 2045)
- AB 341 (Commercial Recycling), SB 1383 & AB 1826 (Organics Diversion)



About Global Covenant Cities Regions Participate News & Research Contact



Why do we need a CAAP?

City leadership needed for city-scale mitigation, climate adaptation, & equity beyond what could be achieved by State emissions reduction efforts alone



Mitigation

Implementation occurs at both city and state level (siting EV charging stations and updating building codes & zoning to incentivize electrified buildings, for example, require local leadership)
CAAP identifies local GHG reduction measures for implementation



Adaptation

- State emissions reduction target does not prepare Long Beach for the impacts of climate change that are happening today
- CAAP helps increase resilience for current and future threats (extreme heat, poor air quality, sea level rise, etc.)



Equity

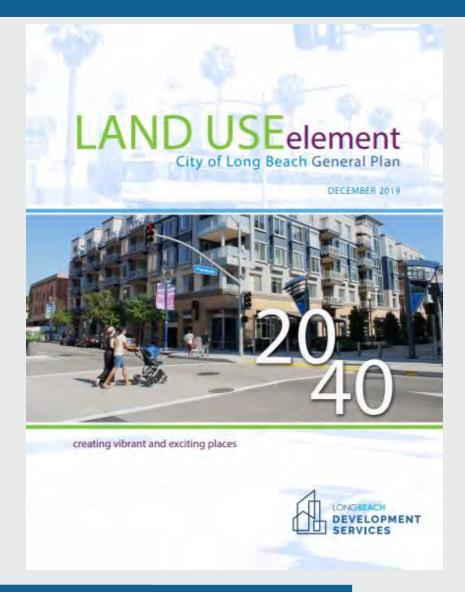
- State emissions reduction targets do not ensure that climate issues are equitably addressed
- CAAP helps address environmental justice & can help steer climate finance opportunities to communities most impacted by climate change



Why do we need a CAAP?

CAAP is a mitigation measure of the General Plan Land Use Element (LUE)

- The General Plan Land Use Element (LUE) was adopted in December 2019
- GHG emissions associated with implementation of the LUE (e.g., citywide vehicle trips, electricity usage)
- City shall adopt a CAAP within approximately 36 months of adoption of the LUE & implement CAAP reduction measures (MM GHG-1)





CAAP Community Outreach (June 2018 - present)

# of Estimated Attendees	10,260
# of Sign-ins	1,395
Events	67

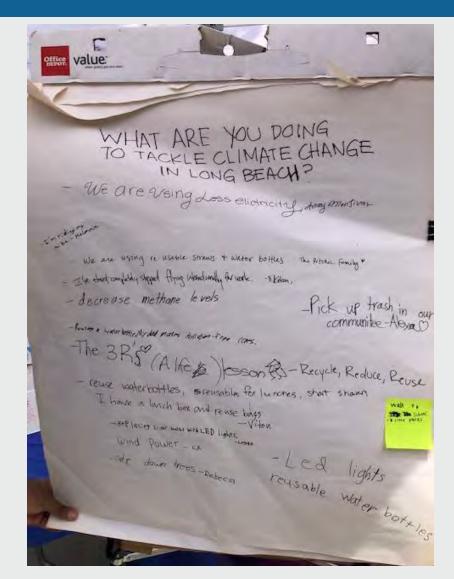






Community Outreach & Engagement Approaches

- Climate change vulnerability assessment
- Preliminary engagement strategy developed
- Equity assessment to refine engagement strategy
- Multi-faceted communications strategies
- Meeting people where they are
- Relationship and partnership building
- Trying different things
- Co-learning from and with community
- Iterating

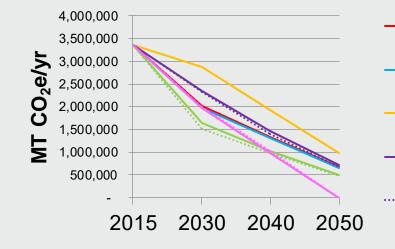




Scientific Working Group with Equity Focus

CAAP Scientific Working Group Members:

- George Ban-Weiss, USC
 Expertise: Urban Heat Island
- Suzanne Dallman, CSULB
 Expertise: Water Supply
- Katharine Davis-Reich, UCLA
 Expertise: Downscaled Climate Models
- David Eisenman, UCLA
 Expertise: Public Health
- Scott Epstein, SCAQMD
 Expertise: Air Quality
- Timu Gallien, UCLA
 Expertise: Water Resources
- Kim Hatch, LBCC • Expertise: Weather Monitoring
- Lily House-Peters, CSULB
 Expertise: Social and Environmental Resilience
- Aaron Klemm, CSU Chancellor's Office
 Expertise: Energy Systems
- Rob Lempert, RAND
 Expertise: Climate Risk
- Jerry Schubel, Aquarium of the Pacific
 Expertise: Oceans and Coastal Impacts
- Dean Toji, CSULB
 - Expertise: Environmental Justice
- Christine Whitcraft, CSULB
 - Expertise: Urban Ecosystems





 Option A - mass emissions
 Option B - mass emissions
 Option C - per capita
 Option D - per capita
 Option D - per service population

> Extraction in the City of Long Beach AECOM prepared this Memorandum (memo) to help the City of Long Beach understand Mecycle
> emissions associated with oil and ass existion containing around the city boundary. The

Technical Memorandum on Lifecycle Emissions of Oil & Gas

emissions associated with oil and gas extraction operations occurring within the city boundary. This analysis can provide a more holetic view of the City's contribution to global greenhouse gas (GHG) emissions, well complements the previous analysis of the sity's GHG emissions previded through the more traditional production, and consumption-based inventories.

The mamo is organized into 6 sections that address the following goals:

- 1. To understand the GHG footprint of gas and oil operations in Long Beach,
- To understand how the carbon internally of thase operations in Long Beach compares with oil extraction elsewhere in California and internationally.
- 3. To give an overview of what happens to the oil and gas that is extracted in Long Beach,
- 4. To describe how of and gas operations in Long Beach are regulated by the State,
- To provide descriptions of best practices in technological interventions to minimize illuspair emissions from gas and oil operations, and
- To give a high-level overview of recommendations to transition away from gas and or activity over time

The memo does not include a cost or cust effectiveness analysis, quantitisation of the potential interpole GMO reductions, or an essessment of the recommendations' impact on the city's of and gas economy is g, revenue, employment).

Executive Summary

In 2015, 13.3 million barries of clude or and 5.1 million McF of natural gas were extracted in Long Beach. The iteCycle emissions resulting from this energy production total 6.3 million metric turn of carbon bloode equivalent IMT CO₂e1, which is 2.7 times greater than the sity's 201h production-based GHG emissions



CAAP Engagement with the Latino Community

- Festivals, events in the Park
- Partnership with
 Latinos in Action
 - o Tabling
 - o Raffles
 - Strategizing
 with CBO staff
 - Membership meeting
 - Bingo
 - Examples from Latin America
 - Extended Q&A





Key Action Spotlights A - Installation of photocatalytic roofing tiles

Mexico City

A hospital building called the Torre de Especialdades in Mexico City has a façade that is covered with special tiles coated with titanium dioxide. This pigment can act as a catalyst for chemical reactions that are activated by sunlight. The reactions convert smog into other substances such as calcium nitrate and water.

¿ Qué puede hacer la Ciudad para ayudar a la comunidad a prepararse para el calor extreme

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QUE Tengu mas control con la Renters

las inunda



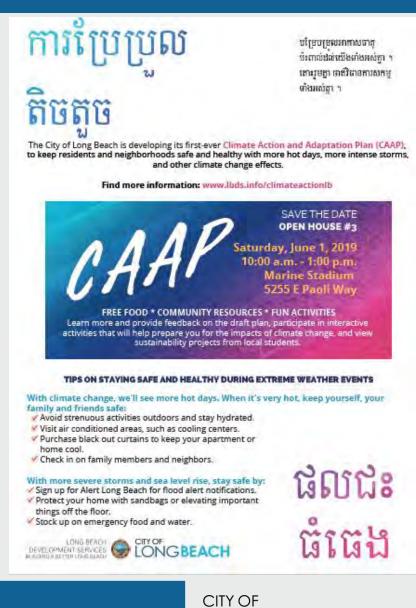




CAAP Engagement with the Cambodian Community

- Largest Cambodian population outside Cambodia
- Tabling at Cambodian health and neighborhood fairs
- Early conversations with Cambodian organizations
- Presentations at UCC business assistance workshops
- Cambodian New Year
- City's Neighborhood Services staff member
- Khmer TV
- Videos
- Ground-truthing your translation





LONGBEACH

Students & Young People

- Student groups
- School district
- Science classes
- Science fair
- Art
- Youth leadership initiatives







Framing the Problem

2015 Power Outage Downtown during Heat Wave



9:08 PM - 7 Jun 2017 from Long Beach, CA

Mid-Morning Friday as 3,723 Downtown **Residents Remain in the Dark**

2017 Flooding During Intense Storm





Kristina Rodgers @kristibrodgers @LongBeachPost waterfront property in East Long Beach 🥹 6:06 PM - Jan 22, 2017 ♥ 421 ♥ 299 people are talking about this

2018 Coastal Storm



Public transit resumes in Long Beach after 3 day power outage



ces a manhole cover back on the street on Saturday, July 18, 2015. (KABC)

By ABC7 com staff

LONG BEACH, Calif. (KABC) - Power was restored to more than 90 percent of downtown Long Beach Saturday morning after a series of underground electrical vault fires caused a widespread outage

The restored electricity allowed Long Beach Transit's transit and visitor information center to reopen, but customers should expect some minor delays due to street closures

Less than 200 people are still without power, according to Southern California Edison. An SEC and a 200 customers were without power Friday morning



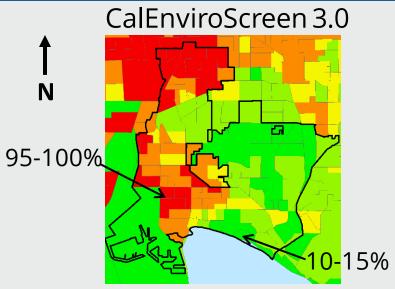
LBPD North Division

One of many rescues today found by a LB Sergeant & rescued by LB Fire @lbfd personnel. Passenger was in a wheelchair 10:14 PM - Jan 22, 2017 ♥ 42 ♀ 22 people are talking about this

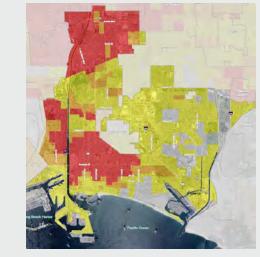
Long Beach Climate Change Vulnerability Assessment. longbeach.gov/lbds/plan ning/caap/

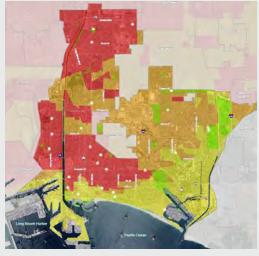


CAAP Vulnerability Assessment



Extreme Heat Vulnerability Social Vulnerability to Climate Change



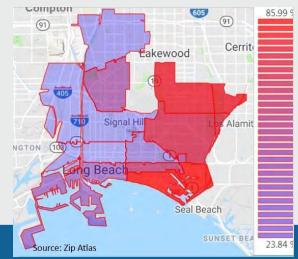


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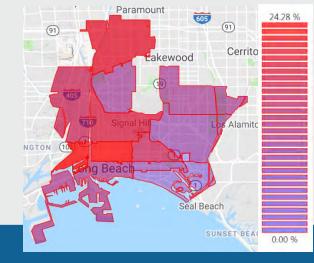
LONGBEACH

Source: OEHHA

Percentage of White Residents



Percentage of Children under Age 10

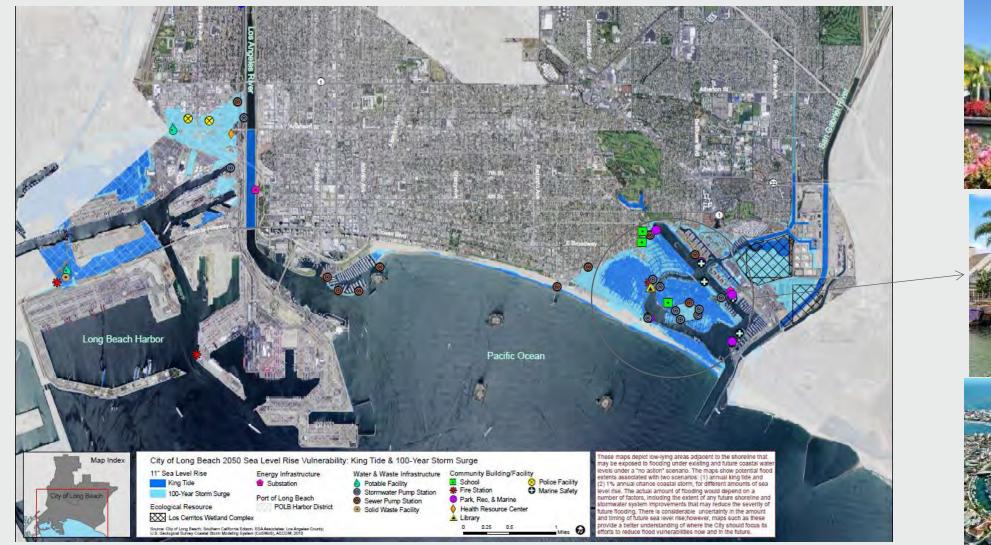


Ensuring Inclusion of Historical Context

Long Beach is very diverse, which can be a source of strength, vibrancy, and resilience. However, it also has racial and economic disparities that are manifested spatially across the city. Low income people and communities of color are more likely to live in areas with poor air quality, in regions with little green space, and along the Los Angeles River channel where urban flood risk may increase. This geography of differentiated risk is due to socioeconomic inequality caused by historic racial and economic injustices, such as discrimination in education, housing, employment, education, local political representation, and access to resources. Low income communities of color were historically excluded from neighborhoods with less environmental pollution, and still today in Long Beach, low income communities of color are concentrated in the portions of the city with the worst air quality and environmental health metrics.

These structural inequalities not only increase the risks that people will suffer climate-related impacts, they also reduce their ability to cope with and respond to climate stressors. Low income residents are also more likely to live in housing with substandard insulation, inefficient air conditioning, or no air conditioning at all, and to be cost-burdened renters without alternative housing choices. As temperatures increase, they will need to spend more of their limited income on utility bills. Low income seniors and children with limited mobility are particularly at risk during heat waves. Flooding is more disruptive for low income residents, who are less likely to have low deductible insurance or emergency savings to cover the costs of repairs.

Vulnerability Assessment: Sea Level Rise 2050











Mitigation

Adaptation



EQUITY STRATEGY: Identify and implement ways to maximize cost savings and other water conservation benefits for low-income and drought-vulnerable communities.



SB 379 and SB 1000

- SB 379 requires local governments to include climate adaptation and resiliency strategies, including a vulnerability assessment and implementation measures, in the Safety Element
- SB 1000 requires local governments to identify environmental justice communities and address environmental justice in their General Plans

AECOM

Climate Change Vulnerability Assessment Results

Long Beach Climate Action and Adaptation Plan FINAL | November 12, 2018



EH-2 Veg	hance and Expand Orban Forest Cover and getation Id and enhance urban forest cover and vegetation to mitigate urban heat island tions.
	ct: Neighborhood Services Bureau; Public Works Department; City of Long Beach Office of Sustainability
Partners:	Long Beach Parks, Recreation, and Marine; Conservation Corps of Long Beach; local community/neighborhood groups and stakeholders
Timolino:	Short

Potential Cost Level: Low to Medium

Description

Co-benefits: ✓ Increased carbon sequestration ✓ Improved energy conservation

Enhanced wildlife habitat.

Increased natural stormwater management

Enhanced aesthetic and property values

Increased access to green spaces

Increased creation of green jobs

Improved air quality

The City will increase the urban forest and expand and enhance vegetation citywide to reduce the urban heat island effect. The City will build upon the Urban Forest Management Plan, with attention to reducing urban heat island conditions. The City will prioritize neighborhoods that are mosts. Inpacted by extreme heat and poor air quality and that have higher vulnerability because they lack a sufficient amount of urban forest and green space or have fewer resources to limit exposure to heat (e.g., shelter, air conditioning). Emphasis is placed on selecting drought-tolerant plants or California natives, which require less water and offer multiple benefits.

Urban forest cover and vegetation can serve an important role inclimate change adaptation by lowering temperatures and providing shade and evaporative cooling. This is important because extreme heat is projected to increase in Long. Beach, leading to intensification of the urban heat island effect, which could exacerbate heat-related illnesses and infrastructure deterioration.

Implementing Actions

EH-3.1: Update the Urban Forest Management Plan with a focus on prioritizing reduction of urban heat island conditions through both increased urban forest and enhanced vegetation.

EH-3.2: Identify tree planting opportunities in subwatershed areas with the lowest urban forest cover to minimize stormwater runnff and help protect the area from flooding during intense storm events.

EH-3.3: Identify and prioritize the planting of drought-tolerant or California native trees to enhance and expand urban forest cover and vegetation.

EH-3.4: Identify and involve community stakeholders in the planning process to inform urban forest cover needs and priorities.

EH-3.5: Evaluate the cost of water and other infrastructure to provide ongoing maintenance for trees, and seek ways to meet those costs through the City's budget process, Capital improvement Program, grants and other funding or financing opportunities.

EH-3.6: Incorporate tree planting into partnerships with different groups, such as students involved in group courses to design neighborhood adaptation approaches to extreme heat.

Equity Strategy

Prioritize the enhancement and expansion of urban forest cover in neighborhoods that are the most impacted by extreme heat and poor air quality and that lack urban forest coverage and green space.

CITY OF LONG BEACH PROPOSED CLIMATE ACTION AND ADAPTATION PLAN - NOV 2020



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GHG Inventory

Long Beach 2015		Other Transportation	On-road Diesel
Jurisdictional Production Inv	ventory	3%	Vehicles 20%
Emissions at a Glance			
	Transportation	1.100	road
	44.5%		icles 7%
		-	
G			
2,799,123			
MT CO ₂ e			
init conc			
	Waste		
	6.3%		. L
Stationary Energy	0.070		Wastewater Treatment
49.2%			2%
Manufacturing Industries			
Institutional 29%			
Buildings 22%		Solid Waste Disposed in	2
		Landfills 98%	/
Energy Industries			
Residential Fugitive			

Buildings

31%

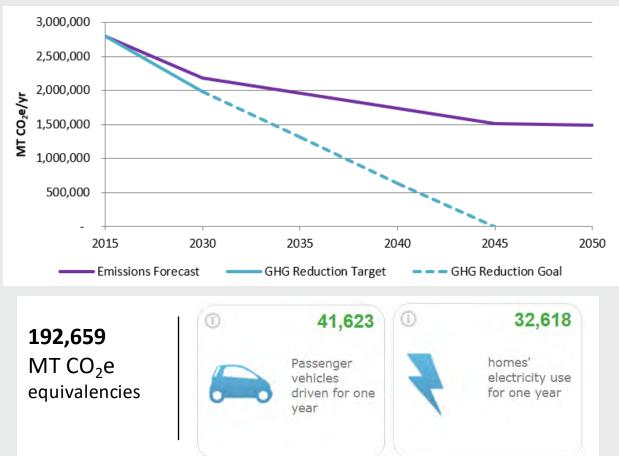
Emissions

2%

Sector	MT CO2e	% of Total
Stationary Energy	1,377,291	49.20%
Transportation	1,244,981	44.48%
Waste	176,850	6.32%
Total	2,799,123	100.00%
Per Capita	6.0	

GHG Targets

City Emissions Targets vs. Forecasts 2015-2050



GHG Reduction Targets		
2030 GHG Target	3.04 MT CO ₂ e/Service Population	
Business as Usual Forecast	2,176,931 MT CO ₂ e	
Target Level	1,984,272 MT CO ₂ e	
GHG Reductions Needed	192,659 MT CO ₂ e	
2045 GHG Goal	Net-carbon Neutrality	
Business as Usual Forecast	1,513,047 MT CO ₂ e	
Target Level	0 MT CO ₂ e	
GHG Reductions Needed	1,513,047 MT CO ₂ e	
2020 CLLC Deduction Torr	at hy Couries Douvlation	
2030 GHG Reduction Targ	get by Service Population	
Business as Usual Target	3.34 MT CO ₂ e	
Emissions Target Level	3.04 MT CO ₂ e	
Reduction Needed	0.3 MT C0 ₂ e	



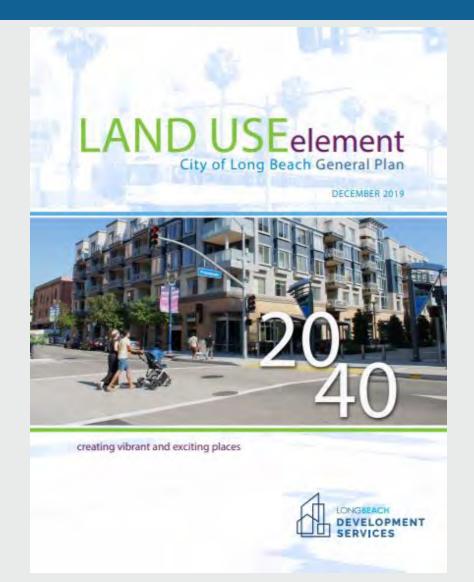
CAAP Implementation Chapter

Governance	 Set up a governance structure that integrates climate action into operations and internal culture, public engagement & financial decision-making processes Dedicate staff to advance CAAP policies and programs
City Leadership	 Commit to demonstrating leadership Ensure CAAP implementation benefits those most impacted by climate change such as through job creation Collaborate with public agencies and community organizations
Funding & Investment	 Integrate mitigation and adaptation considerations in the allocation of existing funds, specifically through the annual budget process and Capital Improvement Program Pursue new funding sources and identify other financing mechanisms



CAAP Implementation - Development Services

- Update plans, policies, and codes for consistency with CAAP adaptation and mitigation objectives and actions
- Monitor GHG emissions toward reduction target
- Streamline CEQA analysis of future development projects





Current Safety Element Updates - Climate Adaptation & Resiliency

- Incorporate climate adaptation & resiliency and identify new information related to flood and fire hazards
 - SB 1035 (2018) requires the Safety Element be reviewed and updated upon each revision of the Housing Element no less than once every eight years to address climate adaptation and resiliency and identify new information related to flood and fire hazards
- Establish a set of comprehensive goals, policies, and objectives for the protection of the community from the risks of flooding
 - AB 162 (2007) requires the Safety Element to identify information regarding flood hazards and to establish a set of comprehensive goals, policies, and objectives for the protection of the community from the risks of flooding
- Include climate adaptation & resiliency strategies, including a vulnerability assessment and implementation measures
 - SB 379 (2015) requires local governments to include climate adaptation and resiliency strategies, including a vulnerability assessment and implementation measures, in the Safety Element
- Establish evacuation routes
 - AB 747 (2019) requires the Safety Element to be reviewed and updated as necessary to identify evacuation routes and their capacity, safety, and viability under a range of emergency scenarios
 - SB 99 (2019) requires the Safety Element to be reviewed and updated to include information identifying residential developments in hazard areas that do not have at least two emergency evacuation routes



- Preparing Subsequent Environmental Impact Report (EIR)
- Staff anticipates bringing the CAAP forward for adoption in 2021



Thank you

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Jennifer Ly Jennifer.Ly@LongBeach.gov (562) 570-6368





Call for Applications #4: Civic Engagement, Equity & Environmental Justice





Since 2005, the Southern California Association of Governments (SCAG) has provided resources and direct technical assistance to local jurisdictions via the Sustainable Communities Program (SCP).

The 2020/21 SCP provided local jurisdictions with three opportunities to access funding and resources to meet the needs of their communities, address recovery and resiliency strategies considering COVID-19, and support regional goals.

SCAG will release a fourth Call for Applications for programs and projects centered on **Civic Engagement, Equity & Environmental Justice** in Fall 2021.

SCP Call 4 Goals + Objectives

Goals

- Center and prioritize racial and social equity
- Address the pervasive and deep inequities experienced in historically disinvested communities
- Include a wide range of eligible activities
- Support the development of plans to close the gap of racial inequities
- Support the goals in SCAG's Equity Early Action Plan, Connect SoCal, SCAG's Public Participation Plan

Objectives

- Focus support in SCAG's Communities of Concern and SB 535 Disadvantaged Communities
- Support local planning efforts focused on eliminating barriers to civic engagement
- Build community capacity, trust, and sustainable relationships with stakeholders
- Prioritize community identified and implemented projects

Eligible Project Types



- Civic Engagement and Racial Equity
 - Arts, Culture and Design
 - Safety and Community
 - Local Campaigns and Organizing
 - Parks, Green, Open and Public
 Space
 - Climate Action and Resilience
 - Community Healing and Repair

- Equity and Environmental Justice
 - AB 617 Implementation
 - Resilient Communities
 - SB1000 EJ Elements/Policies
 - Connect Communities

*subject to change upon feedback



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SCP Call 4 Timeline*



Listening Sessions



Tuesday, July 13th 11:30am — 1:00pm

Thursday, July 15th 5:00pm – 6:30pm

Interested? Please <u>RSVP</u>!

Have questions? Please contact Anita Au, Senior Regional Planner <u>au@scag.ca.gov</u> (213) 236-1874

Assistance and Trainings for EV Permit Streamlining





www.scag.ca.gov

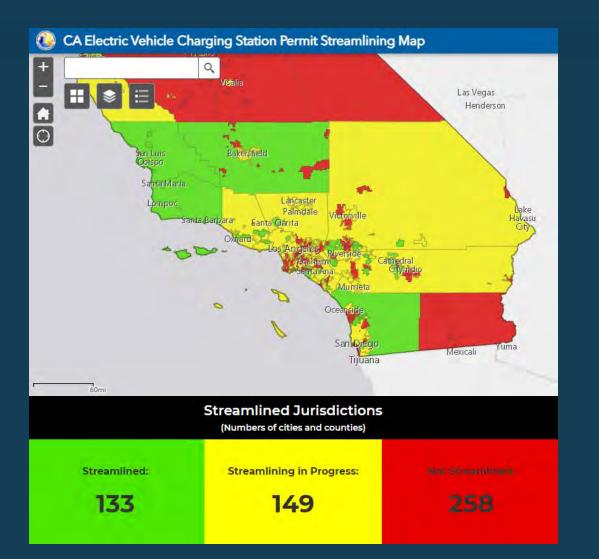
CA ZEV Goals & EVCS Permit Streamlining



- <u>California's Zero-Emission Vehicle (ZEV) Goals</u>
 - 5 million passenger ZEVs on the road by **2030**
 - Light-duty car sales will be 100% ZEV by **2035**
 - Drayage trucks & off-road vehicles will be 100% ZEV by 2035
 - Medium and heavy–duty vehicles will be 100% ZEV by 2045
- <u>Assembly Bill 1236 (Chiu, 2015)</u>
 - Requires all cities and counties to develop an expedited, streamlined process for permitting all electric vehicle charging stations (EVCS)
 - Also requires: online permitting checklist, online permitting application including electronic signatures, administrative approval of EVCS, approval limited to health and safety concerns, permits not subject to association approval, limited to one deficiency notice



Status of EVCS Permit Streamlining in Southern California



- Permitting costs and delays are major barriers to quickly deploying charging infrastructure
- Permit streamlining translates to new jobs, cleaner air, and less work for city/county staff
- Uneven implementation across the state and region
- Go-Biz streamlining map available at <u>https://business.ca.gov/industri</u> es/zero-emission-vehicles/plugin-readiness/

AB 1236 Training Opportunity!





- SCAG provides trainings and assistance for local jurisdictions on AB 1236 and permit streamlining for electric vehicle charging infrastructure
- For questions, information, resources, or to set up a training, please reach out to <u>CleanCities@scag.ca.gov</u>

Thank You!

Questions? CleanCities@scag.ca.gov

Emily Rotman rotman@scag.ca.gov

www.scag.ca.gov





Upcoming Events

LARC Public Forum Local Climate Adaptation

in LA County

June 30, 2021 9:00 am - 12:00 pm SCAG Energy & Environment Committee

> July 1, 2021 9:30 am — 11:30 am



Questions?

adaptation@scag.ca.gov

www.scag.ca.gov