Toolbox Tuesday

Southern California Climate Adaptation Framework & Housing ELement PaRcel (HELPR) Tool

December 8, 2020

10:00 am – 12:00 pm

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INNOVATING FOR A BETTER TOMORROW

Housekeeping

- Reminder to please mute your mics/phones
- Q&A at the end of each session
  - Questions may be entered using the chat
- Presentation materials will be shared with all participants following today's meeting
- Session is being recorded

Agenda – Session 1: SoCal Adaptation Framework

- **SB 379 & SB 1035 for Safety Elements**
  Governor's Office of Planning and Research (OPR)

- **SoCal Climate Adaptation Framework**
  SCAG Sustainability, Cambridge Systematics, ESA

- **Resources for Environmental Justice Elements**
  SCAG Sustainability

Local Adaptation Planning

State Policies, Guidance & Resources

SCAG TOOLBOX TUESDAY

NIKKI CARAVELLI

ASSISTANT PLANNER, GOVERNOR'S OFFICE OF PLANNING AND RESEARCH

Integrated Climate Adaptation and Resiliency Program

ICARP advances a climate-resilient California for all.

ICARP has a statutory directive to drive a cohesive, coordinated response to climate change impacts across local, regional and state efforts, **prioritizing equity** and integrating **mitigation with adaptation**, via:

1. The Adaptation Clearinghouse
2. The Technical Advisory Council

See 2020 Impact Report at opr.ca.gov/planning/icarp/

Safety Element: Climate Adaptation

SB 379 (Jackson, 2015) - requires safety element updates to address **climate vulnerability and adaptation**

- Timing: next update to the local hazard mitigation plan on or after January 1, 2017; or, by January 1, 2022 if no local hazard mitigation plan.
- OK to incorporate other plans by reference

SB 1035 (Jackson, 2018) - requires **review and update to flood, fire hazards, and climate adaptation** portions of the safety element

- Timing: following the next housing element update at least every 8 years.

Safety Element: Wildfire & Evacuation

SB 1241 (2012): Added new **wildfire mitigation and risk reduction** requirements for safety element, for jurisdictions in State Responsibility Area (SRA) and Very High Fire Hazard Severity Zone (VHFHSZ)

- Timing: next housing element update on or after 1/1/2014
- Fire Hazard Planning General Plan Technical Advisory published in 2015.
- Per AB 2911 (2018), OPR must updated by July 2020 to include land use strategies to address wildfire risks

AB 747 (2019): Requires analysis of evacuation routes and adequacy under a range of emergency scenarios

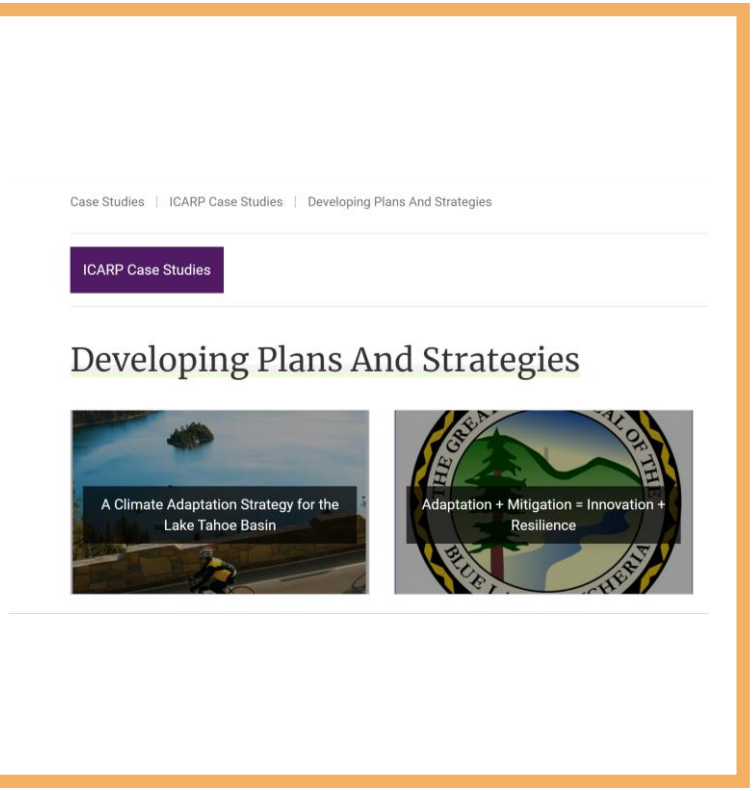
SB 99 (2019): Requires review, disclosure of developments with only one point of egress

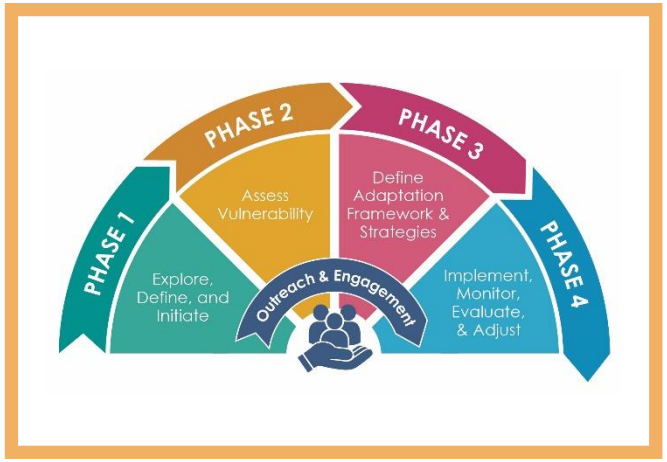
SB 379 Requirements

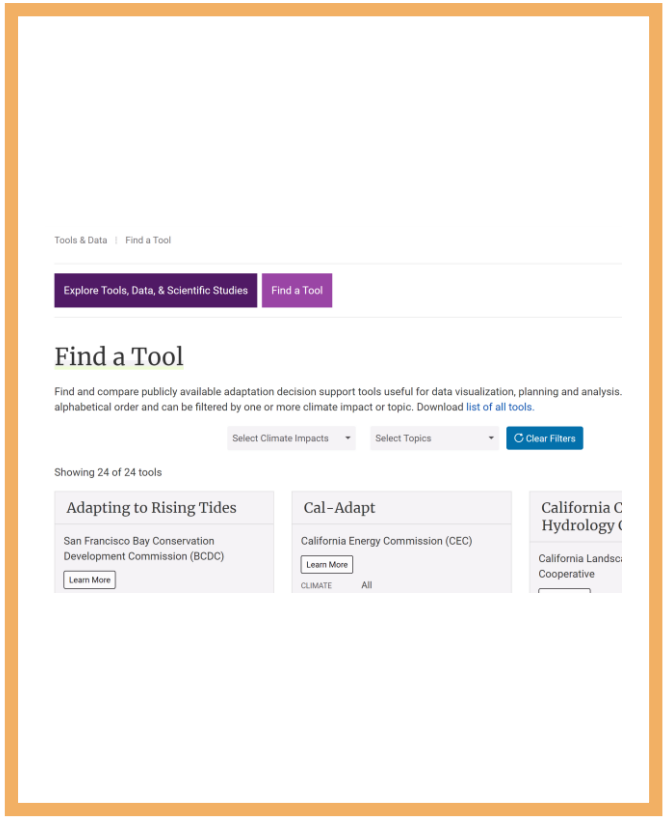
1. Review and update of the safety element as necessary in order to address climate adaptation and resiliency strategies OR
   - Jurisdictions can reference other planning documents to fulfill the climate adaptation planning requirement
2. Complete a vulnerability assessment
3. Develop adaptation and resilience goals, policies, and objectives; and
4. Develop feasible implementation measures

ResilientCa.Org

STATE ADAPTATION CLEARINGHOUSE



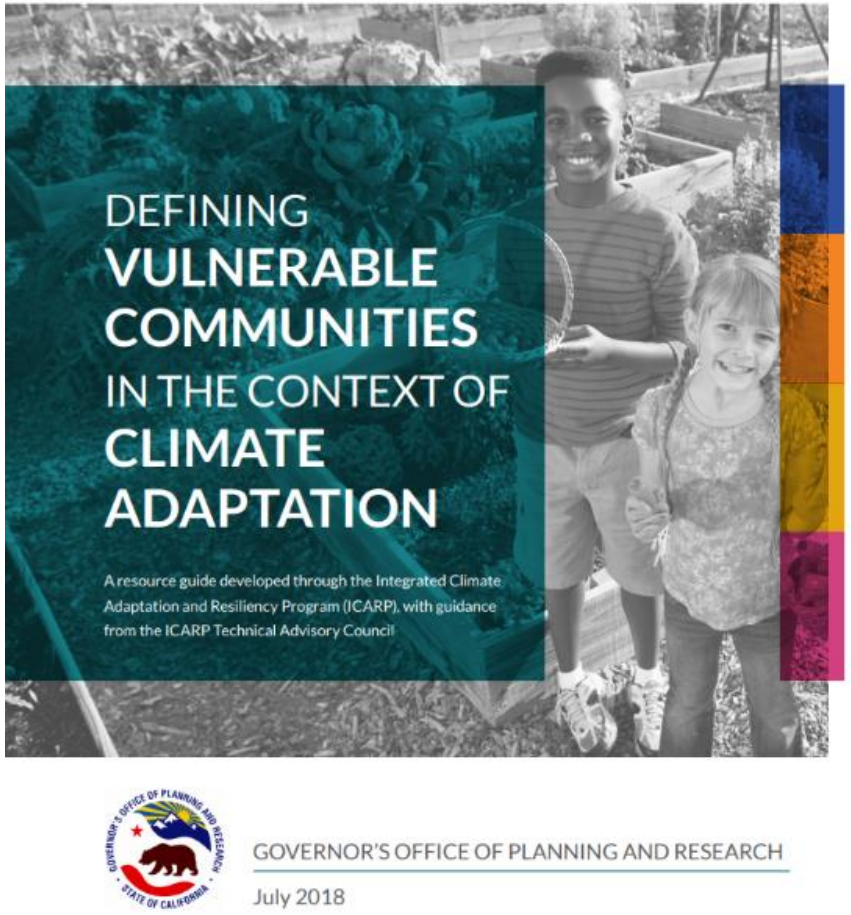




Resources: search ResilientCA.org

- OPR General Plan Guidelines (Chapter 4)
- State Adaptation Planning Guide
- Cal-Adapt.Org
- California's Fourth Climate Change Assessment
- OPR SB 379 Survey Report
- OPR Guide to Defining Vulnerable Communities in the Context of Climate Adaptation

Defining Vulnerable Communities



http://www.opr.ca.gov/planning/icarp/vulnerable-communities.html

Table 1: Comparison table: indicators currently available through statewide vulnerability assessment tools, organized by system factors

FACTOR	INDICATOR	CES (weighted index + map)	CCHVI (not an index)	HPI (weighted index + map)	ROI (weighted index)	SB 1000
Existing inequities, institutionalized racism, or exclusion: People facing disadvantage or discrimination often have lower socioeconomic status, which result in fewer resources for preparing, coping and recovering from climate impacts.	Educational attainment	■	■	■	■	■
	Employment	■		■	■	■
	Housing burdened low income households	■		■	■	■
	Income			■	■	■
	Linguistic isolation	■	■		■	■
	Poverty	■	■	■		■
	Race and Ethnicity		■		■	■
	Two parent household			■		
	U.S. Citizenship				■	
	Violent Crime Rate		■			■
	Voting			■	■	
Physical states or conditions that increase vulnerability: Older adults, young children, pregnant women, and people with chronic health conditions or mental illness are more susceptible to harm from effects of climate change.	Asthma emergency department visits	■				■
	Children		■			
	Cardiovascular disease					■
	Elderly		■			


cal-adapt
TOOLS
DATA
RESOURCES
BLOG
ABOUT
HELP
Exploring California's Climate Change Research
Cal-Adapt provides a view of how climate change might affect California. Find tools, data, and resources to conduct research, develop adaptation plans and build applications.
Annual Averages
Extreme Precipitation Events
Extreme Heat Days & Warm Nights
Cooling Degree Days & Heating Degree Days
Snowpack
Sea Level Rise - CalFloD-3D
Wildfire
Streamflow
Extended Drought Scenarios
Hourly Projections of Sea Level
Maps of Projected Change

Thank you!

GOVERNOR'S OFFICE OF PLANNING AND RESEARCH

Nikki Caravelli, Assistant Planner/State Adaptation Clearinghouse

Nikki.Caravelli@opr.ca.gov

Sign up for ICARP email updates

SoCal Climate Adaptation Planning Guide

Toolbox Tuesday Demonstration and Training

SCAG Sustainability Department, Cambridge Systematics, HereLA, and ESA

December 8, 2020

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SoCal Climate Adaptation Framework

- February 2019 Kickoff
- SB 1 Adaptation Planning Grant
- SCAG, Cambridge Systematics, with ESA, Here LA, and Urban Economics

- **Tools and Resources**
- **Outreach and Communications Strategies**
- **Planning Guidance and Model Policy Language**
- **Vulnerability mapping and assessment tools**
- **Transportation and land use scenarios and modeling**
- **Finance and Funding Guidance**

Today's Agenda – How to Use the Tools

1. Project Background
2. Policy Background of State Bills
3. Climate Change Impacts in the SCAG Region
4. SoCal Adaptation Planning Guide
5. Model Policy Language
6. Vulnerability Mapping and Assessment Tools
7. Adaptation Actions and Strategies
8. Transportation and Land Use Scenarios and Modeling
9. Finance and Funding Guidance
10. Outreach Tools
11. Questions and Discussion

Key State Bills – Safety & Climate

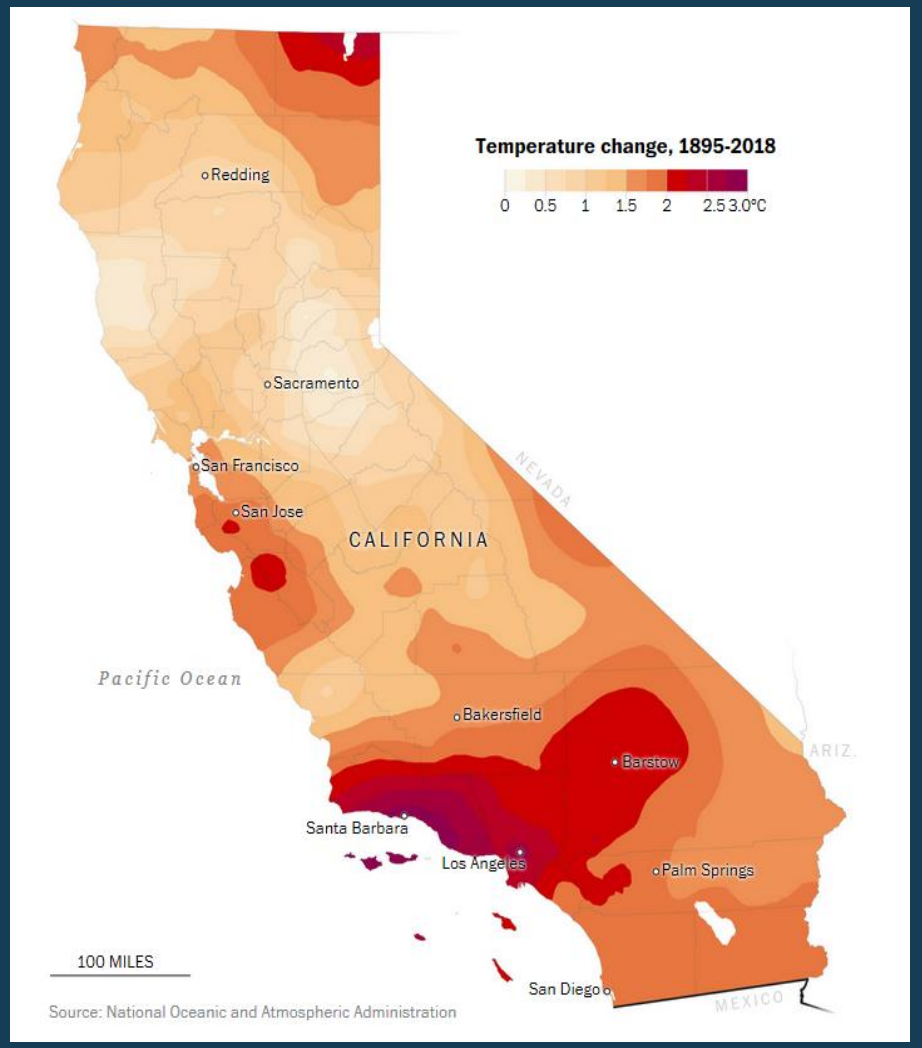
Senate Bill 379 – Safety Element of a General Plan and Local Hazard Mitigation Plan to address climate adaptation

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

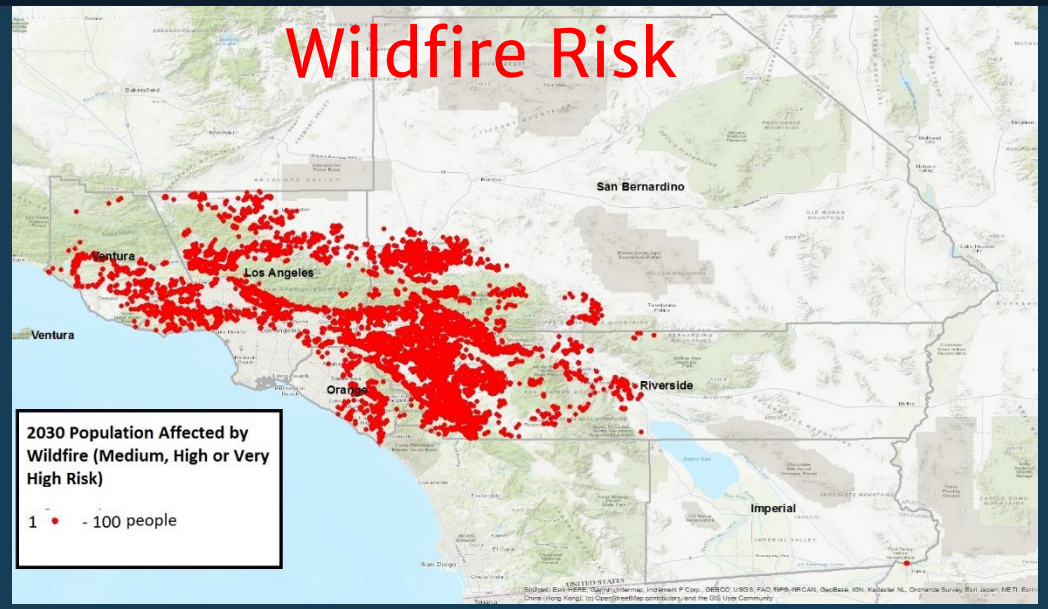
Climate Change Impacts in the SCAG Region

- *Extreme Heat*
- *Sea Level Rise/Coastal Flooding and Erosion*
- *Severe Storms/Wind*
- *Inland Flooding*
- *Drought*
- *Wildfire*
- *Air Quality and Vector Borne Diseases*
- *Landslides*
- *Pests and Ecological Hazards*



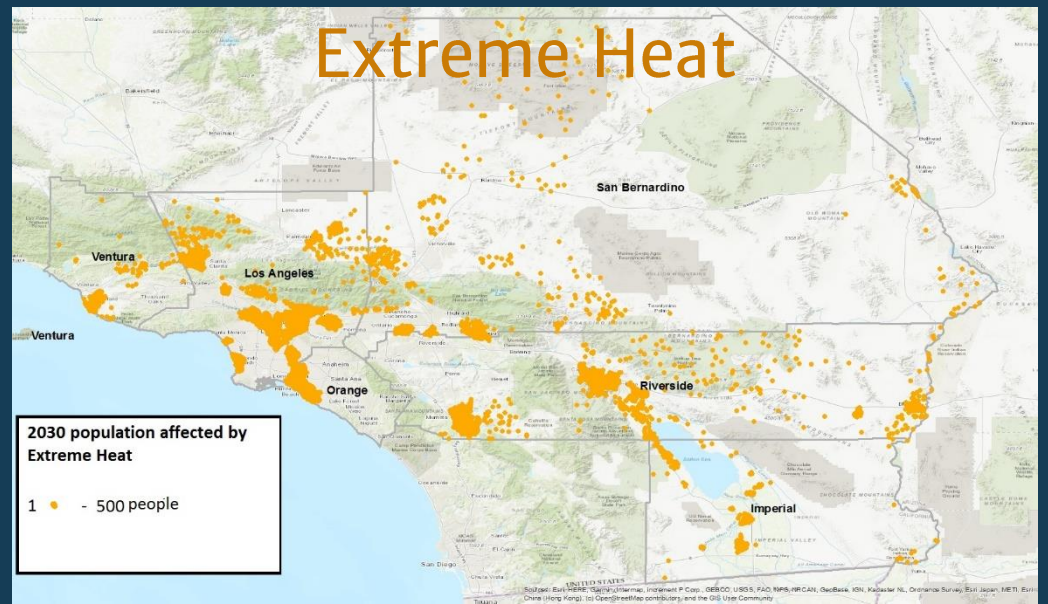
Widespread Impacts

Wildfire Risk

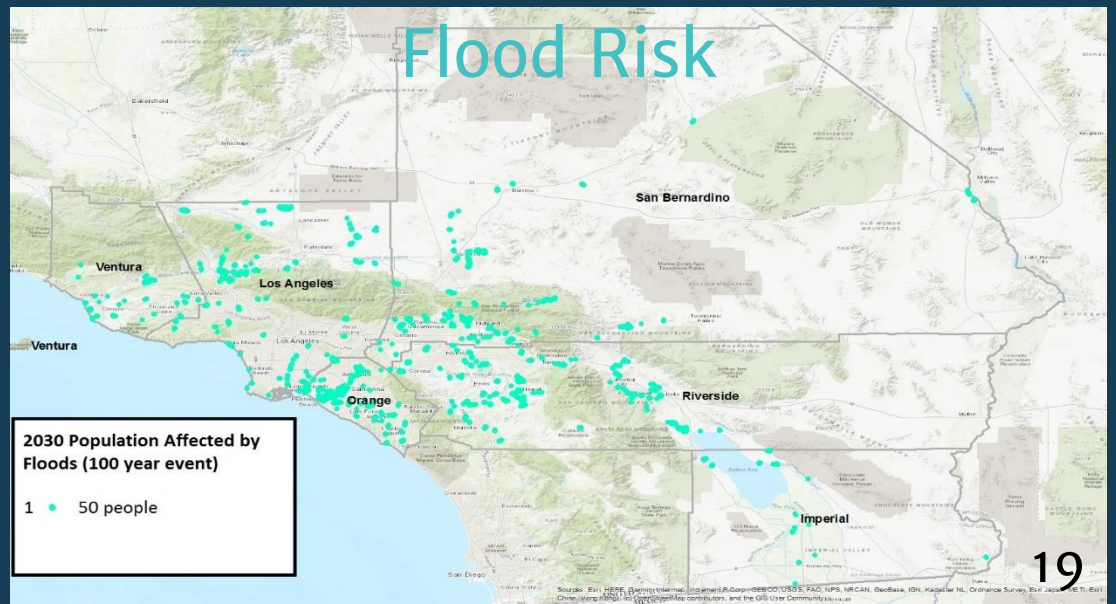


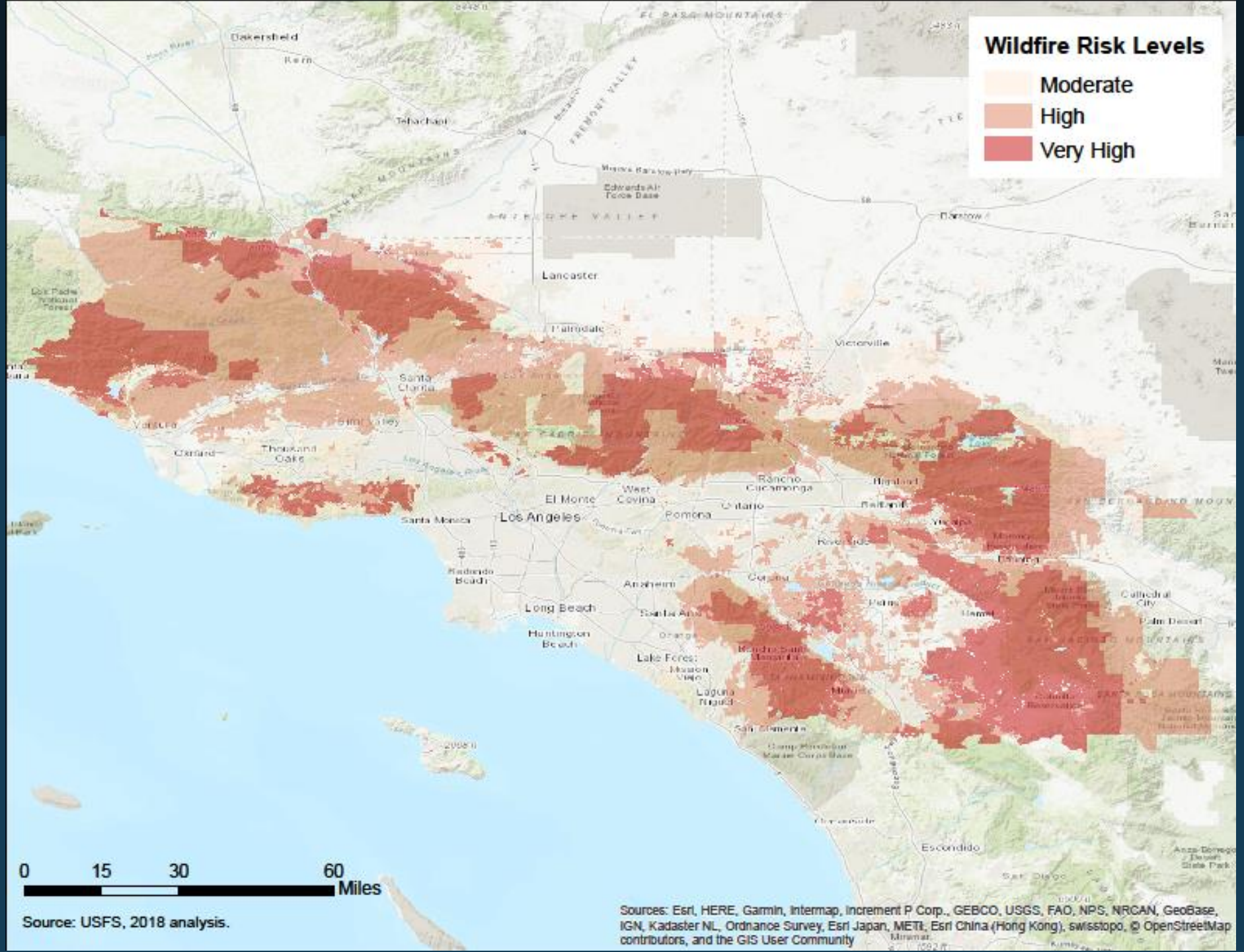
Sea Level Rise

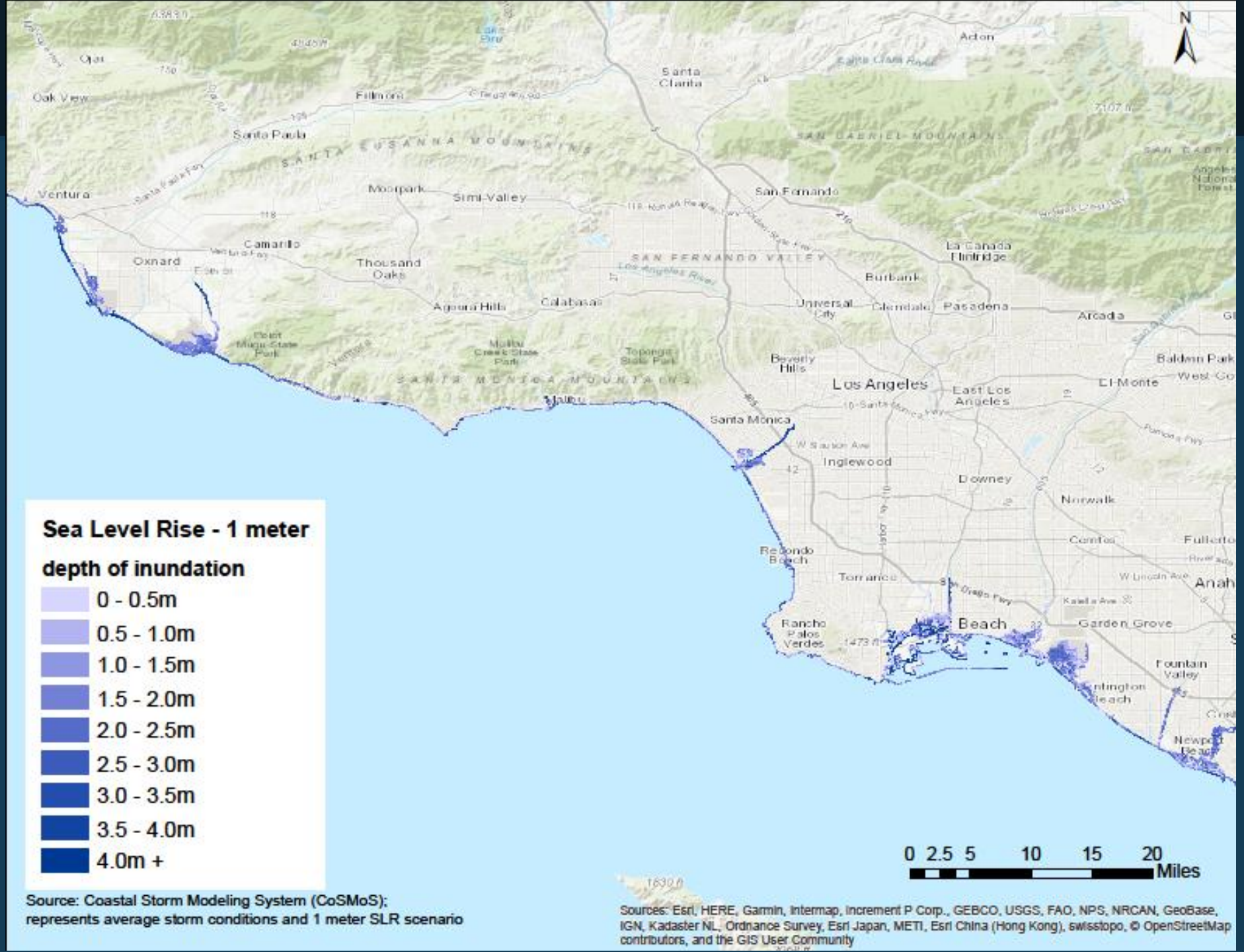
Extreme Heat

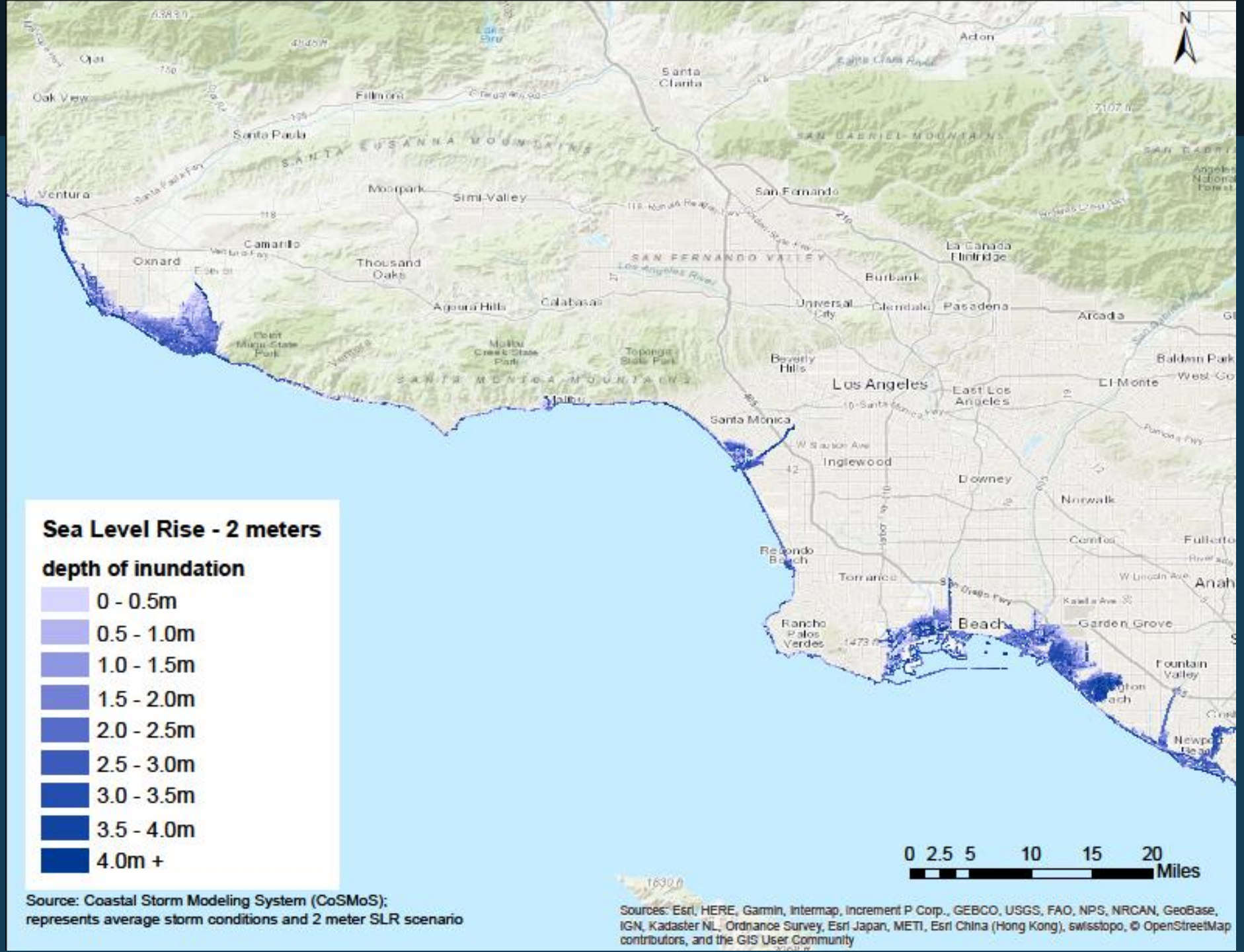


Flood Risk



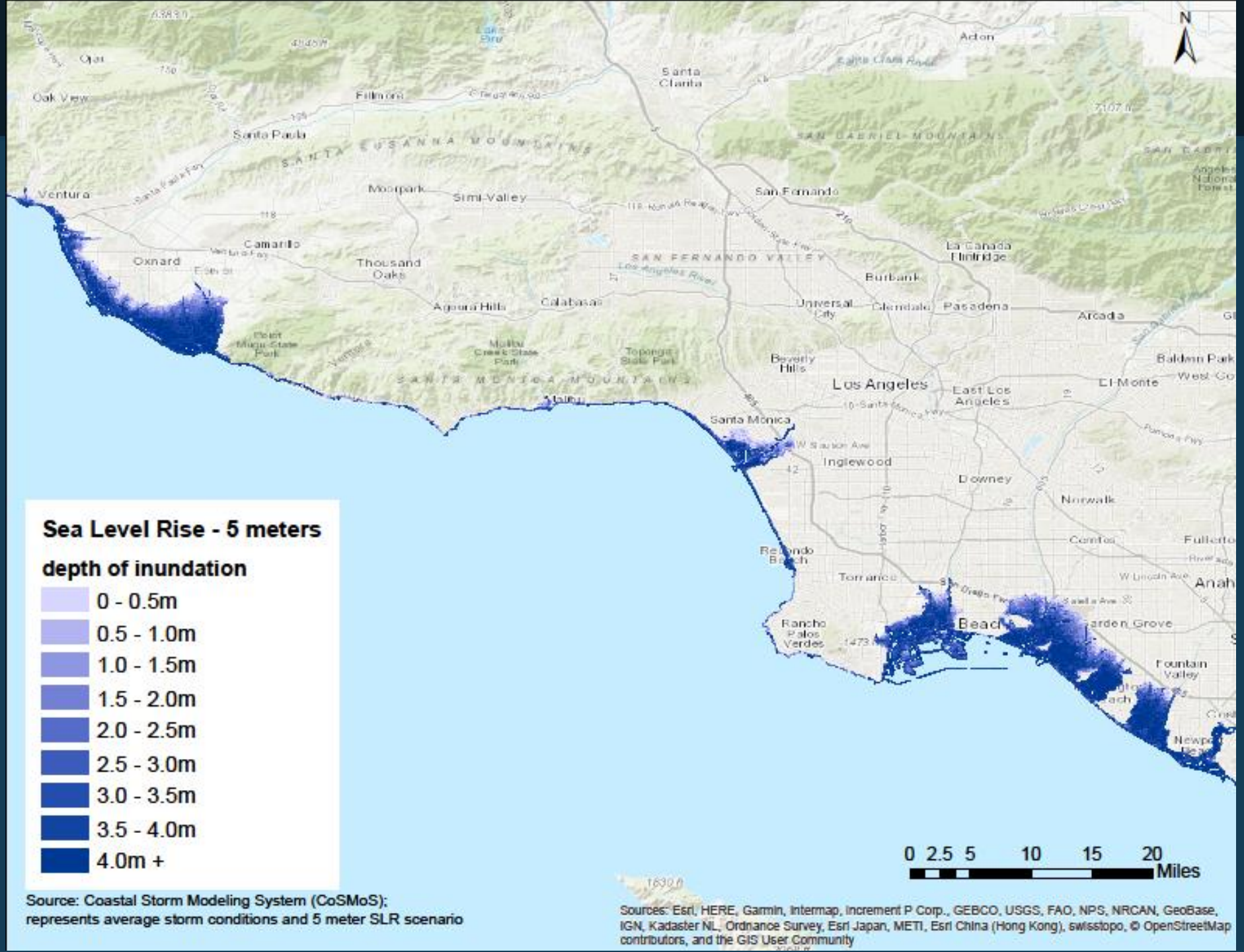

Wildfire Risk Levels
Moderate
High
Very High
Bakersfield
Kern
Tehachapi
Edwards Air Force Base
Lancaster
Palmdale
Victorville
Santa Clarita
Thousand Oaks
Oxnard
Ventura
El Monte
West Covina
Rancho Cucamonga
Ontario
Pomona
Los Angeles
Santa Monica
Redondo Beach
Long Beach
Anaheim
Santa Ana
Huntington Beach
Lake Forest
Laguna Niguel
Escondido
0 15 30 60
Miles
Source: USFS, 2018 analysis.
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Sea Level Rise - 1 meter
depth of inundation
0 - 0.5m
0.5 - 1.0m
1.0 - 1.5m
1.5 - 2.0m
2.0 - 2.5m
2.5 - 3.0m
3.0 - 3.5m
3.5 - 4.0m
4.0m +
N
0 2.5 5 10 15 20
Miles
Source: Coastal Storm Modeling System (CoSMoS);
represents average storm conditions and 1 meter SLR scenario
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community
Ventura
Oxnard
Camarillo
Thousand Oaks
Moorpark
Simi Valley
Santa Paula
Fillmore
Oak View
Santa Clarita
San Fernando
Burbank
Glendale
Pasadena
Arcadia
La Canada Flintridge
Los Angeles
Beverly Hills
Santa Monica
Malibu
Inglewood
Downey
Norwalk
El Monte
East Los Angeles
Torrance
Redondo Beach
Rancho Palos Verdes
Beach
Garden Grove
Fountain Valley
Anah
Agoura Hills
Calabasas
Universal City
SANTA SUSANNA MOUNTAINS
SAN FERNANDO VALLEY
SANTA MONICA MOUNTAINS
SAN GABRIEL MOUNTAINS



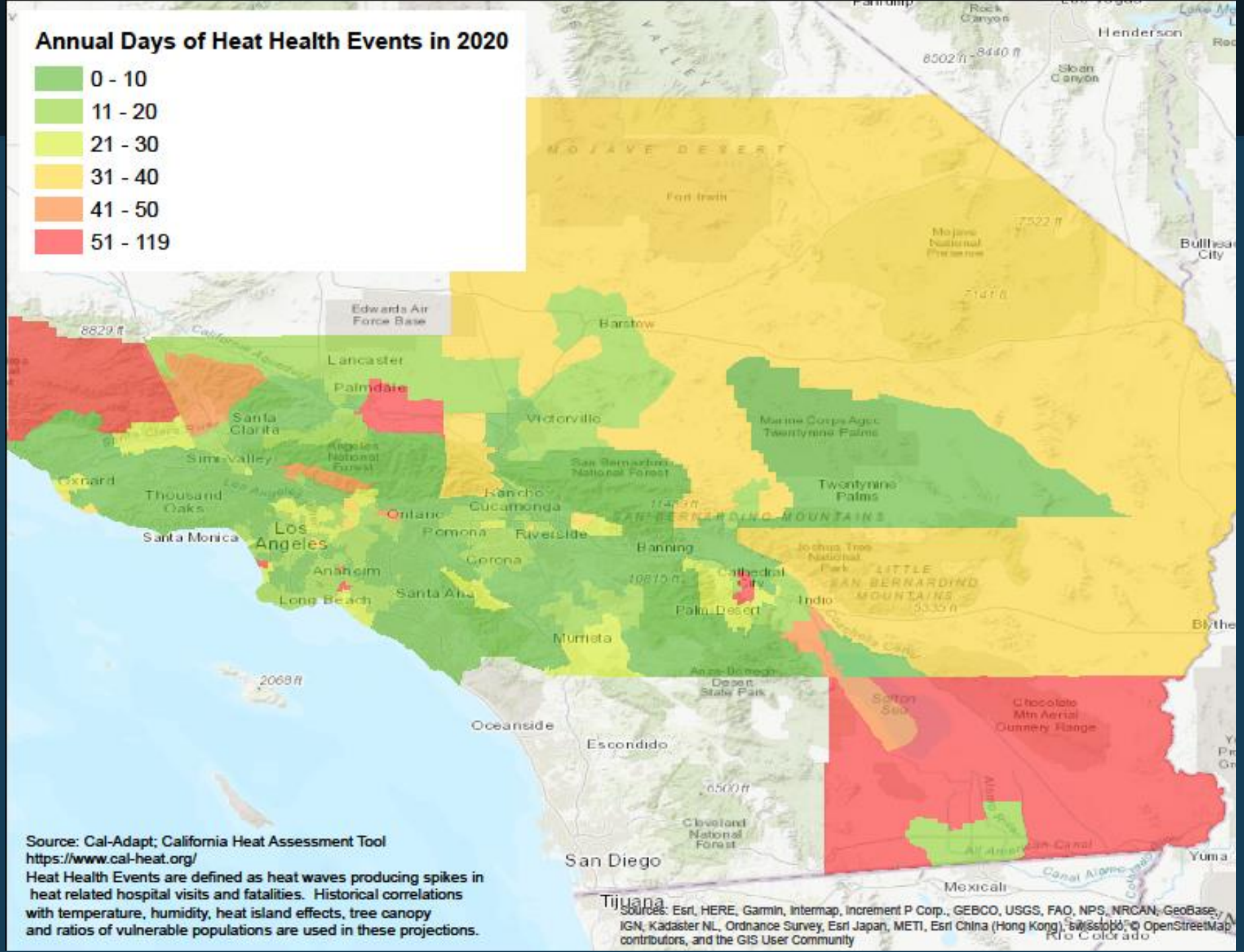
Source: Coastal Storm Modeling System (CoSMoS); represents average storm conditions and 2 meter SLR scenario

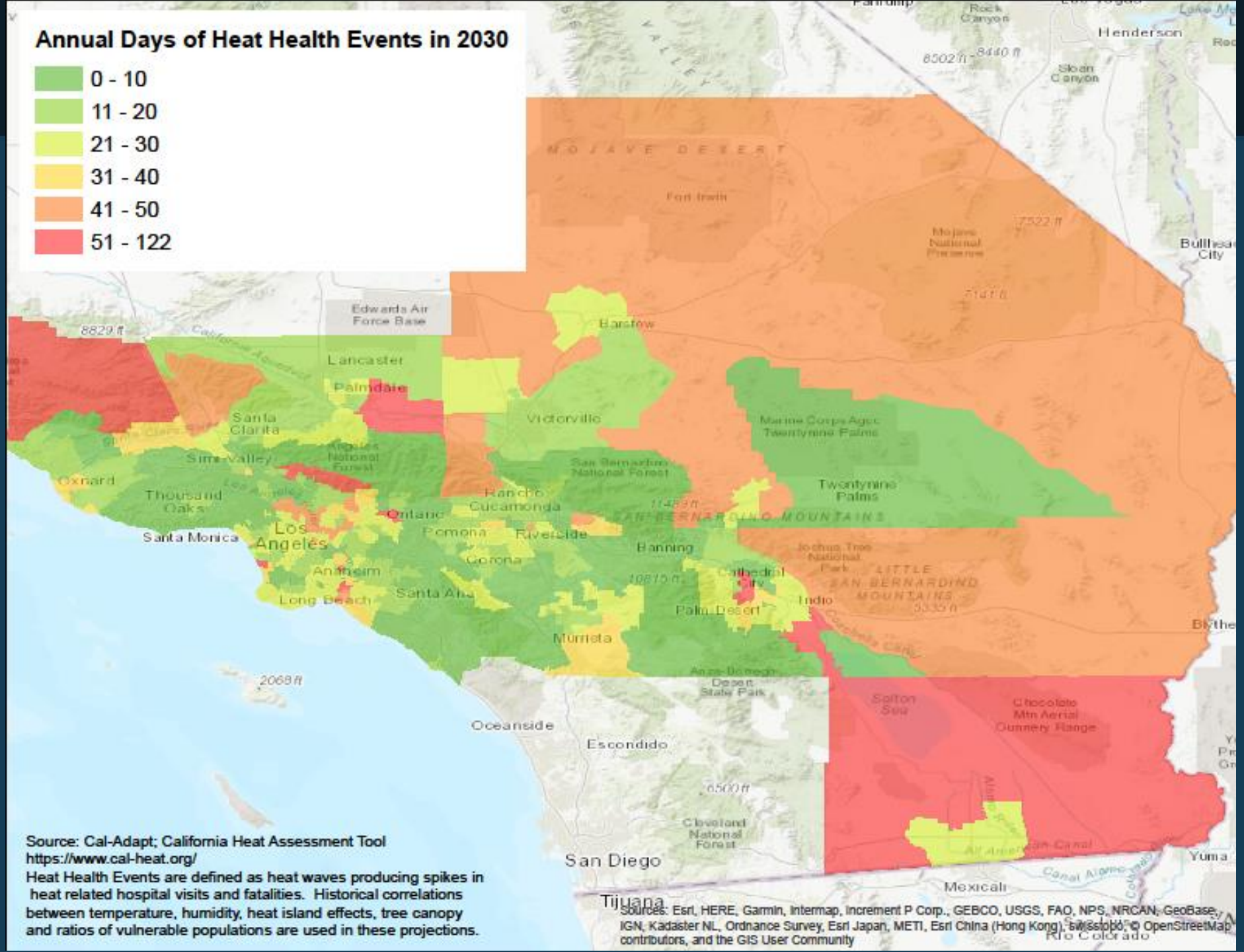
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

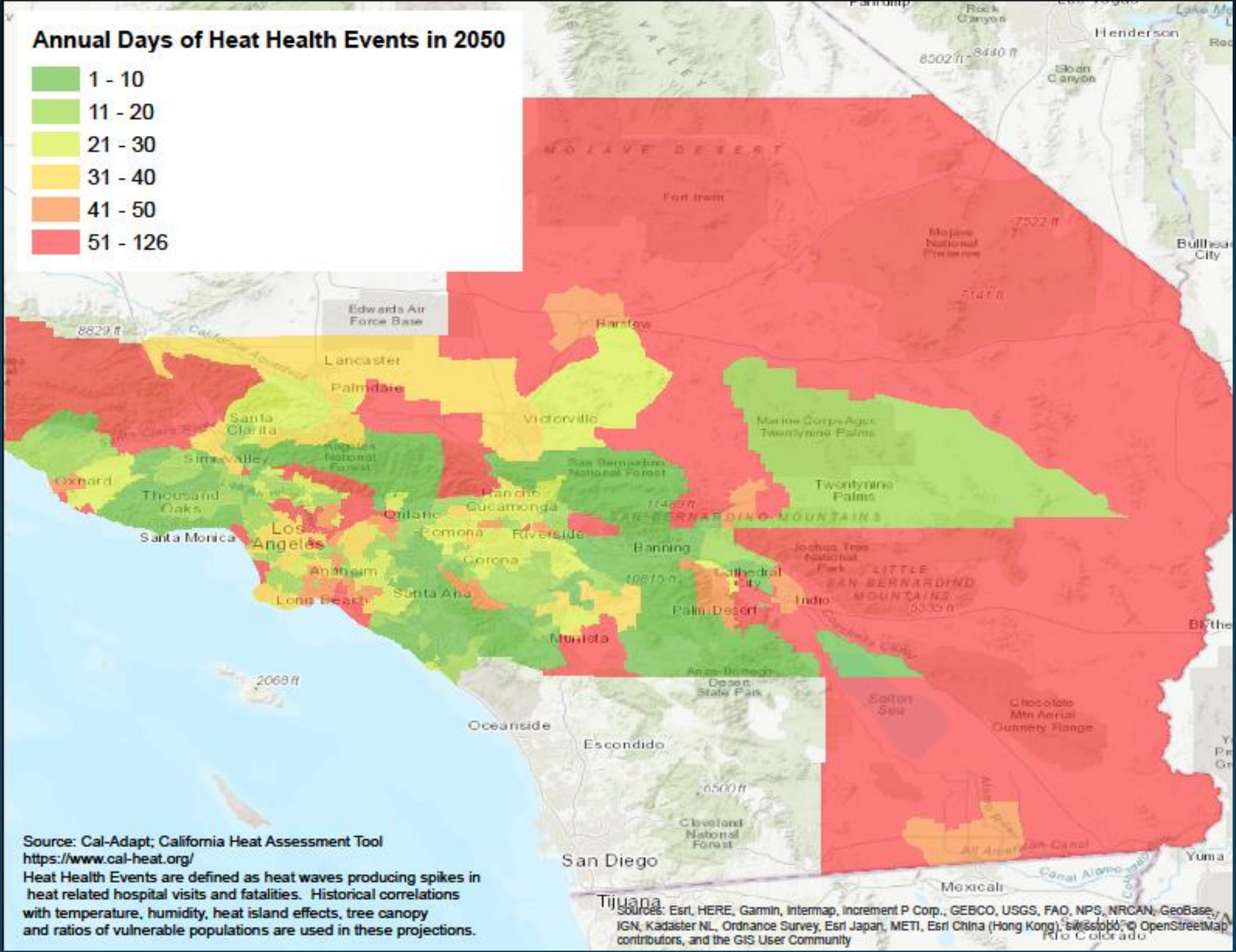


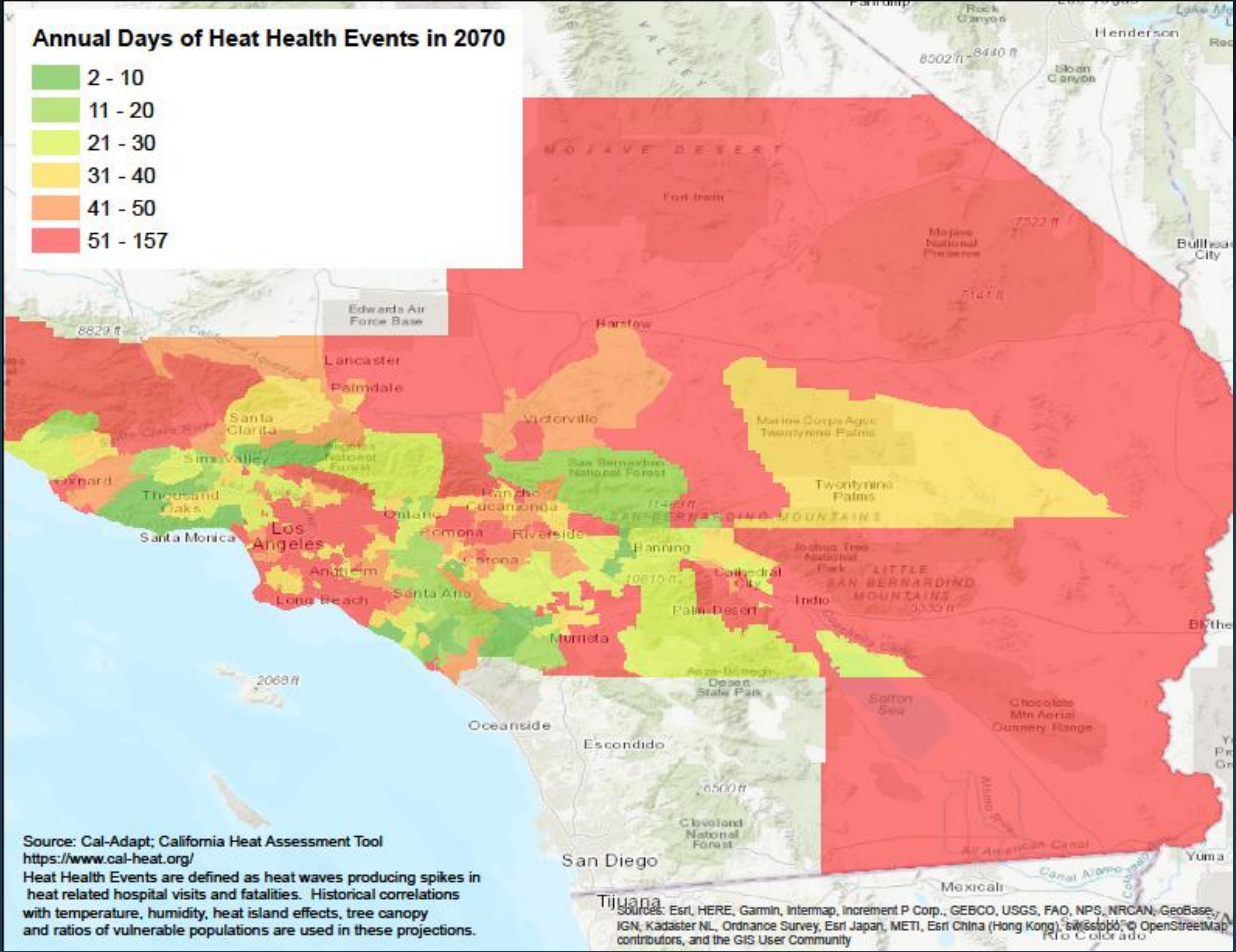
Source: Coastal Storm Modeling System (CoSMoS); represents average storm conditions and 5 meter SLR scenario

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community


Annual Days of Heat Health Events in 2020
0 - 10
11 - 20
21 - 30
31 - 40
41 - 50
51 - 119
Source: Cal-Adapt; California Heat Assessment Tool
https://www.cal-heat.org/
Heat Health Events are defined as heat waves producing spikes in heat related hospital visits and fatalities. Historical correlations with temperature, humidity, heat island effects, tree canopy and ratios of vulnerable populations are used in these projections.
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community
Henderson
Edwards Air Force Base
Barstow
Lancaster
Palmdale
Victorville
Santa Clarita
Simi Valley
Oxnard
Thousand Oaks
Los Angeles
Santa Monica
Ontario
Rancho Cucamonga
Pomona
Riverside
Corona
Anaheim
Santa Ana
Long Beach
Banning
Twentynine Palms
Palm Desert
Indio
Murrieta
Oceanside
Escondido
San Diego
Tijuana
Mexicali
Yuma


Annual Days of Heat Health Events in 2030
0 - 10
11 - 20
21 - 30
31 - 40
41 - 50
51 - 122
Source: Cal-Adapt; California Heat Assessment Tool
https://www.cal-heat.org/
Heat Health Events are defined as heat waves producing spikes in heat related hospital visits and fatalities. Historical correlations between temperature, humidity, heat island effects, tree canopy and ratios of vulnerable populations are used in these projections.
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community
Henderson
Edwards Air Force Base
Barstow
Lancaster
Palmdale
Victorville
Santa Clarita
Simi Valley
Oxnard
Thousand Oaks
Santa Monica
Los Angeles
Ontario
Rancho Cucamonga
Pomona
Riverside
Corona
Anaheim
Santa Ana
Long Beach
Banning
Twentynine Palms
Indio
Palm Desert
Murrieta
Oceanside
Escondido
San Diego
Tijuana
Mexicali
Yuma
Rio Colorado


Annual Days of Heat Health Events in 2050
1 - 10
11 - 20
21 - 30
31 - 40
41 - 50
51 - 126
MOJAVE DESERT
Fort Irwin
Henderson
Edwards Air Force Base
Barstow
Lancaster
Palmdale
Santa Clarita
Victorville
Simi Valley
Oxnard
Thousand Oaks
Rancho Cucamonga
Ontario
Los Angeles
Santa Monica
Pomona
Riverside
Banning
Corona
Anaheim
Santa Ana
Long Beach
Murrieta
Twentynine Palms
Cathedral City
Indio
Palm Desert
SAN BERNARDINO MOUNTAINS
LITTLE SAN BERNARDINO MOUNTAINS
Salton Sea
Chocolate Mtn Aerial Gunnery Range
Oceanside
Escondido
San Diego
Tijuana
Mexicali
Yuma
Source: Cal-Adapt; California Heat Assessment Tool
https://www.cal-heat.org/
Heat Health Events are defined as heat waves producing spikes in heat related hospital visits and fatalities. Historical correlations with temperature, humidity, heat island effects, tree canopy and ratios of vulnerable populations are used in these projections.
Sources: Esri, HERE, Garmin, Intermap, Increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community



Source: Cal-Adapt; California Heat Assessment Tool
https://www.cal-heat.org/
Heat Health Events are defined as heat waves producing spikes in heat related hospital visits and fatalities. Historical correlations with temperature, humidity, heat island effects, tree canopy and ratios of vulnerable populations are used in these projections.

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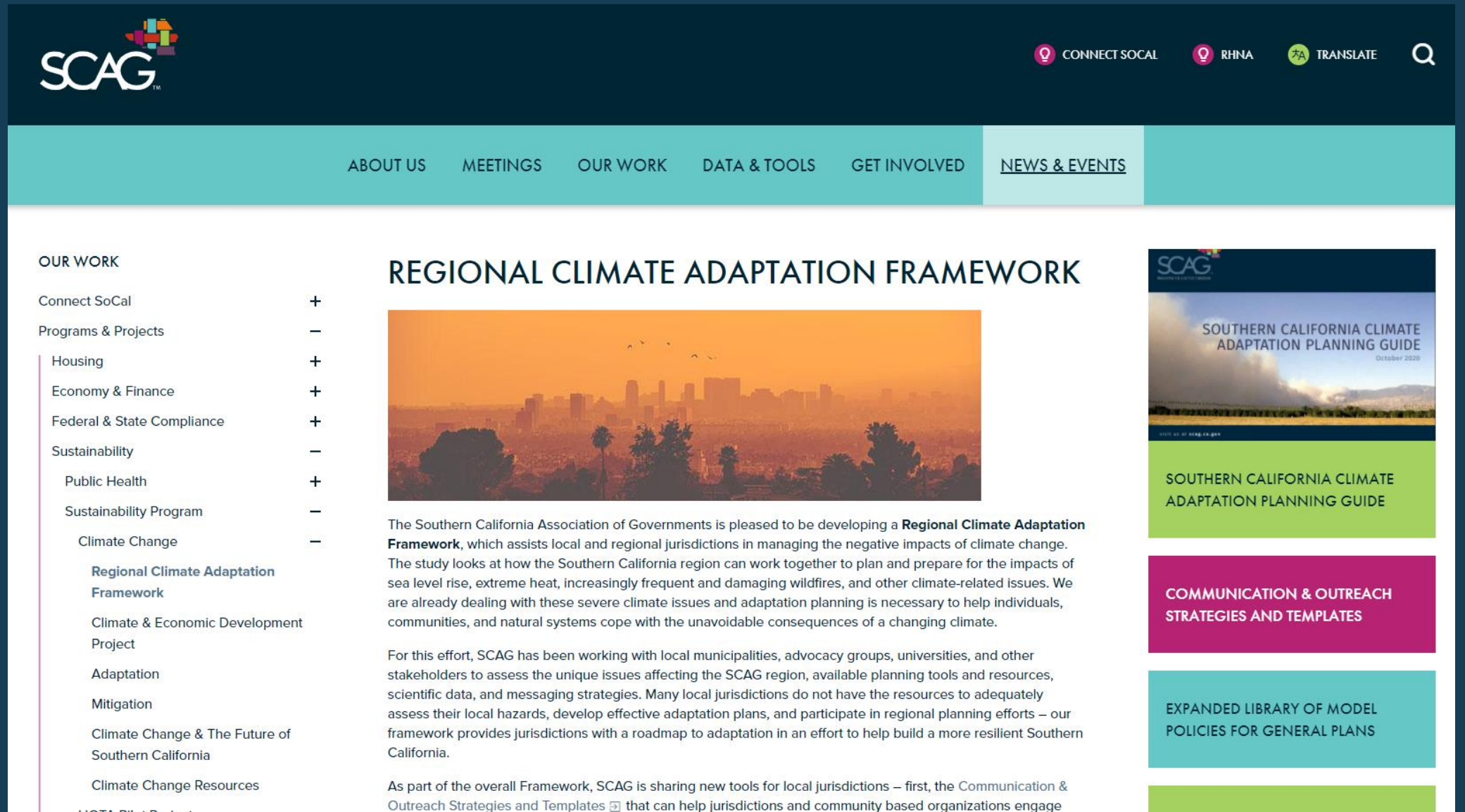
Four Phases of Climate Adaptation Planning

Project Website

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



SoCal Adaptation Planning Guide

Policy gap analysis:

- 44% of SCAG jurisdictions have adopted climate adaptation policies or are in the process of updating their policy documents.
- Only 14 cities and counties (7%) have adopted or drafted an updated safety element that addresses climate change

PHASE 1

Explore, Define, and Initiate

Figure 8

Steps in Phase 1

Step 1.3: Identify Community Climate Hazards and Critical Assets at Risk

Goal: Identify climate change hazards that could impact the community and populations and assets that are at-risk.

Materials to Prepare

- Identification of capacity for adaptation planning
- Project budget estimate
- List of core project team members, and members of advisory body
- List of technical resources

The California APG provides detailed guidance on identifying climate change hazards and community assets at-risk. A brief summary of the guidance is provided here.

As described in the California APG, the goal of Phase 1 is to gain a preliminary understanding of climate change effects on the community to help support project scoping. To inform the detailed vulnerability assessment in Phase 2, identify the climate-related hazards expected to impact the community, as well as the types of community assets potentially at risk from those hazards. These climate-related hazards and community assets will be refined during Phase 2 as a result of stakeholder and community outreach efforts. *See Jurupa Valley example.*

Identify Current and Future Climate-related Hazards

Climate-related hazards can be organized into the following categories, described in more detail in the Background and Setting chapter:

- Extreme Heat
- Sea-level Rise/Coastal Flooding and Erosion
- Severe Storms/Wind
- Inland Flooding
- Drought
- Wilfire
- Air Quality and Vector Borne Diseases
- Landslides
- Pest and Ecological Hazards

Additional Tools and Resources for identifying Vulnerable Communities:

- Vulnerable Populations: CalEnviroScreen 3.0 is an online screening tool that identifies communities that are disproportionately burdened by and vulnerable to various sources of pollution based on existing pollution burden and environmental effects as well as population-based disparities.
- Disadvantaged Communities: Locate disadvantaged communities as defined by CalEPA for the purposes of funding projects pursuant to SB 535 using the SB 535 Online Mapping Application of Disadvantaged Communities based on CalEnviroScreen criteria.
- The SB 1000 Toolkit includes guidance and resources for identifying disadvantaged communities.
- Planning and Investing for a Resilient California: The Vulnerable Populations Appendix identifies vulnerable populations and explains why these populations may be disproportionately impacted by climate change. The Equity Checklist includes a list of questions that can be used to guide a planning phase or decision-making process with the intent of ensuring equitable community engagement and more equitable outcomes for vulnerable populations.
- The Regional Resilience Toolkit offers guidance regarding identifying disadvantaged communities. Additionally, the Stakeholder Identification and Stakeholder Mapping Worksheets in Appendix B are intended to facilitate the identification of vulnerable communities and key stakeholders within the communities that should be included in the planning process.
- California Heat Assessment Tool is an online mapping tool that identifies population groups by census tracts that are particularly vulnerable to heat events.
- The California Healthy Places Index (HPI) is an online mapping tool that reports on community conditions related to health outcomes. Data can be displayed at the census tract level, city, county and other boundaries. The Healthy Places Index allows users to see how existing conditions for health intersect with areas of climate hazards. The HPI Policy Guide includes strategies designed to improve health while also building climate resilience.

PHASE 2

Assess Vulnerability

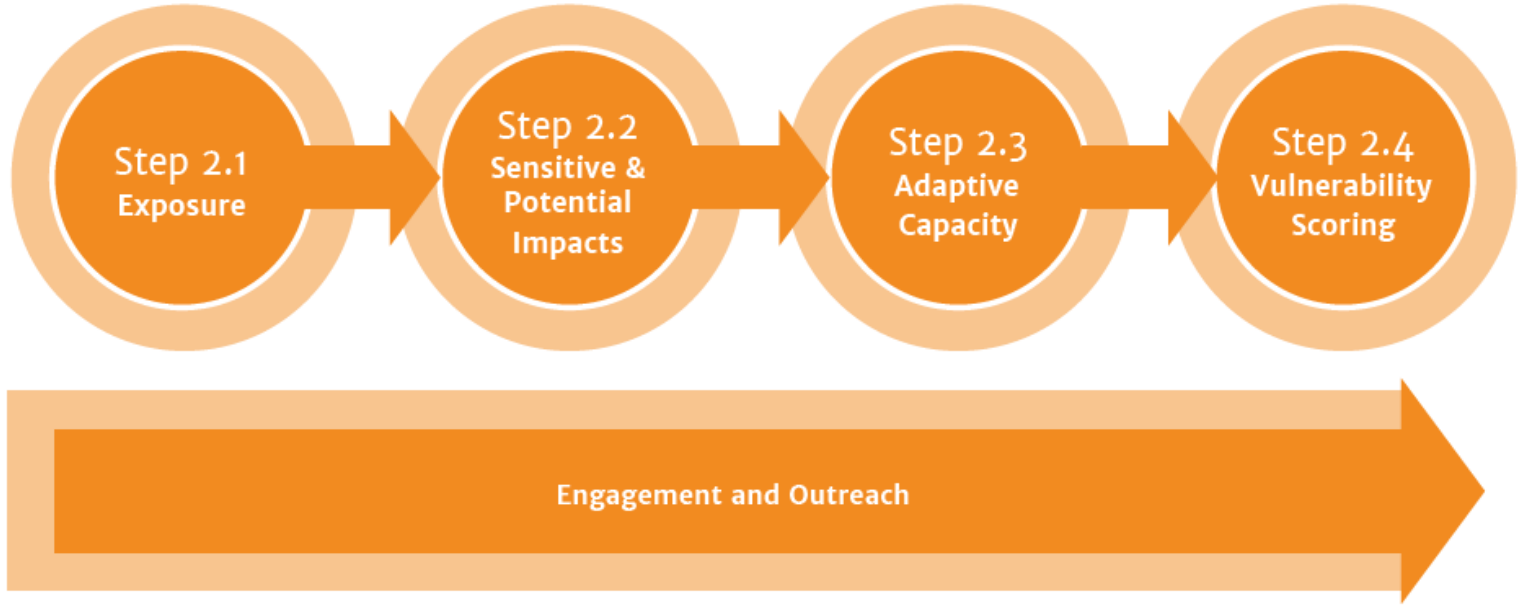


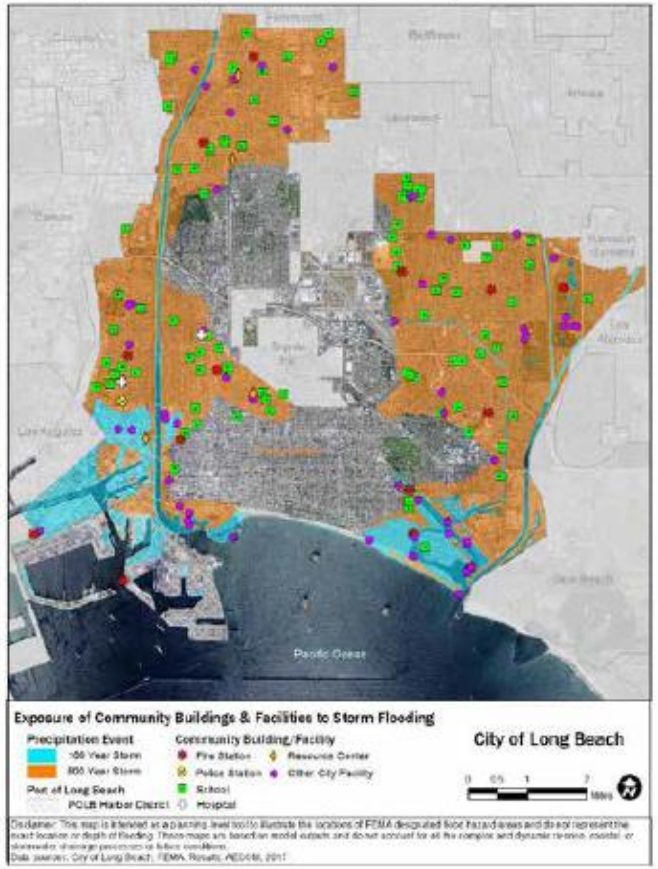
Figure 2.1 – Steps in Phase 2

Example of Exposure Map overlain with Community Assets

CITY OF LONG BEACH

Climate Change Vulnerability Assessment Results (2018)

Figure 10: Exposure of Buildings and Facilities to Riverine Flooding



PHASE 3

Develop and Prioritize Strategies

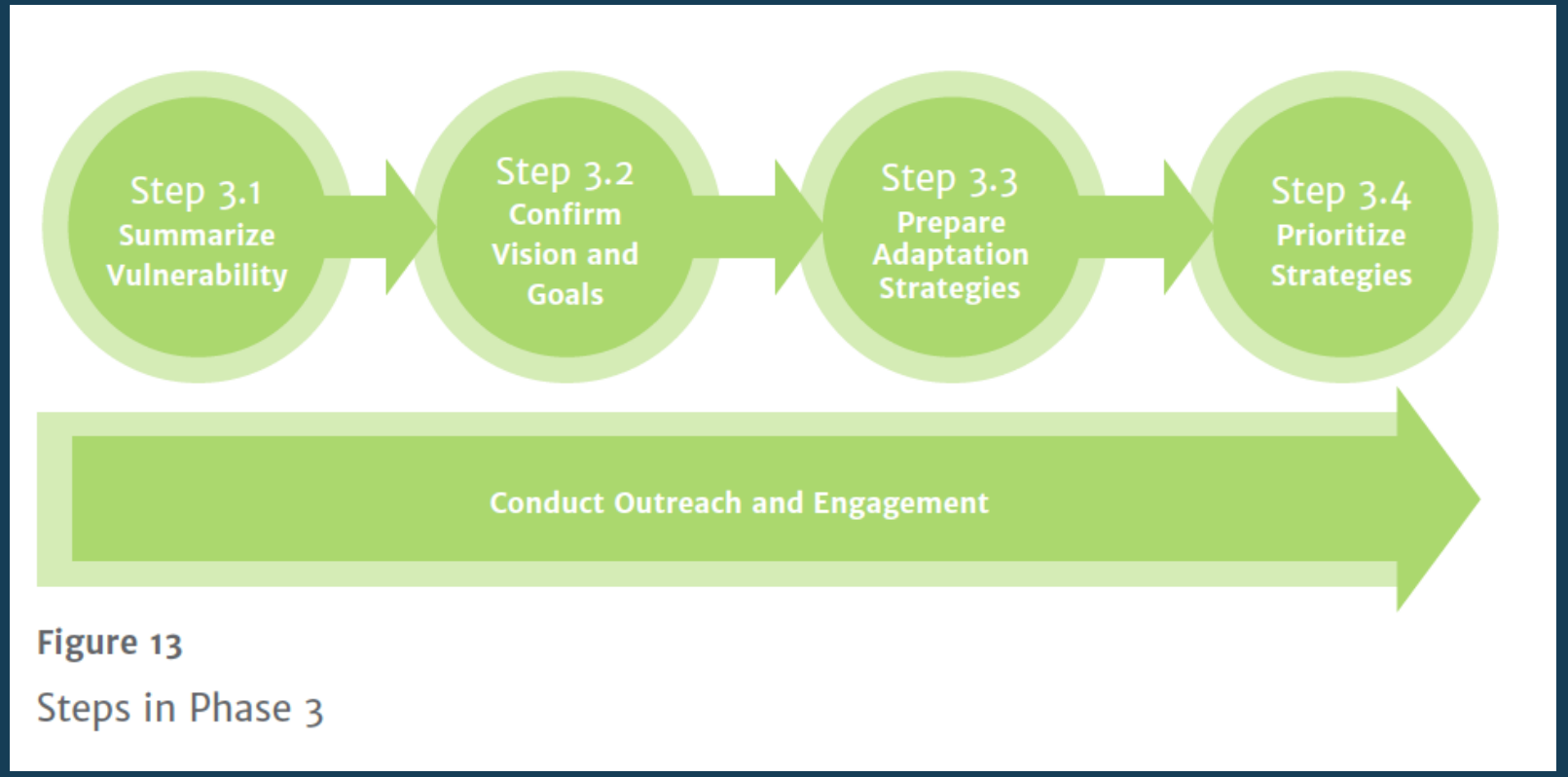


Figure 13

Steps in Phase 3

Step 3.3: Prepare Adaptation Strategies

In addition to the California APG there are many useful

Goal: Develop ada
strategies to addr
community's vuln
climate change ha

Materials to prepare

A list of adaptation strategies that address the problem statements developed in Step 3.1.

The problem statements or issue stat
in Step 3.1 can be useful in identifyin
strategies needed to increase resilien
most critical assets. The California AP
on how to draft a strategy to support
objectives developed in Step 3.2, and
vulnerabilities and problem statemen
3.1. As explained in the California AP
strategies should be developed within
appropriate to the planning context –
program being developed or updated
plan safety element, climate action o
local hazard mitigation plan, or other
terminology used by the strategies sh
with the policy/planning document w
reside. *See Step 4.1 on creating an imple*

	A	B	C	D
1	Climate Change Hazard	Asset	Strategy	Action
81	Inland Flood	Buildings and Facilities	Account for climate change impacts when designing and approving future projects and retrofitting existing projects	Require accounting of flood risk in all applications for new development flood prone areas. Ensure that all applications for new development account for projected precipitation changes and provide adequate protection or design accommodations.
82	Inland Flood	Multiple Assets	Adapt river and reservoir management to accommodate changing precipitation patterns	Dredge river channels to increase flood capacity
83	Inland Flood	Multiple Assets	Adapt river and reservoir management to accommodate changing precipitation	Coordinate with water districts to explore reservoir management and operations options for improving river flood management in anticipation of changing precipitation patterns
84	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
85	Inland Flood	Multiple Assets	Build or expand flood defenses	Upgrade or rebuild existing levees, flood walls, or other flood defenses along creeks and rivers to increase flood capacity of the channel
86	Inland Flood	Wastewater Treatment	Build or expand flood defenses	Increase the resiliency of wastewater plants and systems to flooding and severe weather.
87	Inland Flood	Stormwater	Design and utilize green infrastructure to provide adaptation benefits	Prioritize low-impact development (IID) stormwater practices in areas where storm sewers may be impaired by high water due to flood waters.
88	Inland Flood	Stormwater	Design and utilize green infrastructure to provide adaptation benefits	Where possible, use pervious pavement (e.g., for bicycle and pedestrian pathways) to increase water infiltration.
89	Inland Flood	Buildings and Facilities	Design buildings and facilities to minimize vulnerability to flood hazards	Elevate the first floor up to elevations above target flood levels accounting for projected precipitation changes.
90	Inland Flood	Buildings and Facilities	Design buildings and facilities to minimize vulnerability to flood hazards	Modify building design standards so that the second floor is above the target flood level and contains flood-sensitive features, while the first floor is used for parking and/or storage and is designed to be durable and resilient to flood damage. Target flood level
91	Inland Flood	Multiple Assets	Design buildings and facilities to minimize vulnerability to flood hazards	Raise buildings and roads by placing fill to rebuild the grades at higher elevations. Rebuild all connecting roads, trails, and utilities to slope up to the new grade. Elevation should account for projected precipitation changes.
92	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
93	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
94	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
			Design restoration of riparian corridors and	Restore riparian corridors, soft-bottomed streambeds, and seasonal flood basins that

Instructions | Strategies and Actions | Sources

SoCal Adaptation Planning Guide

PHASE 4

Implement, Monitor, Evaluate, and Adjust

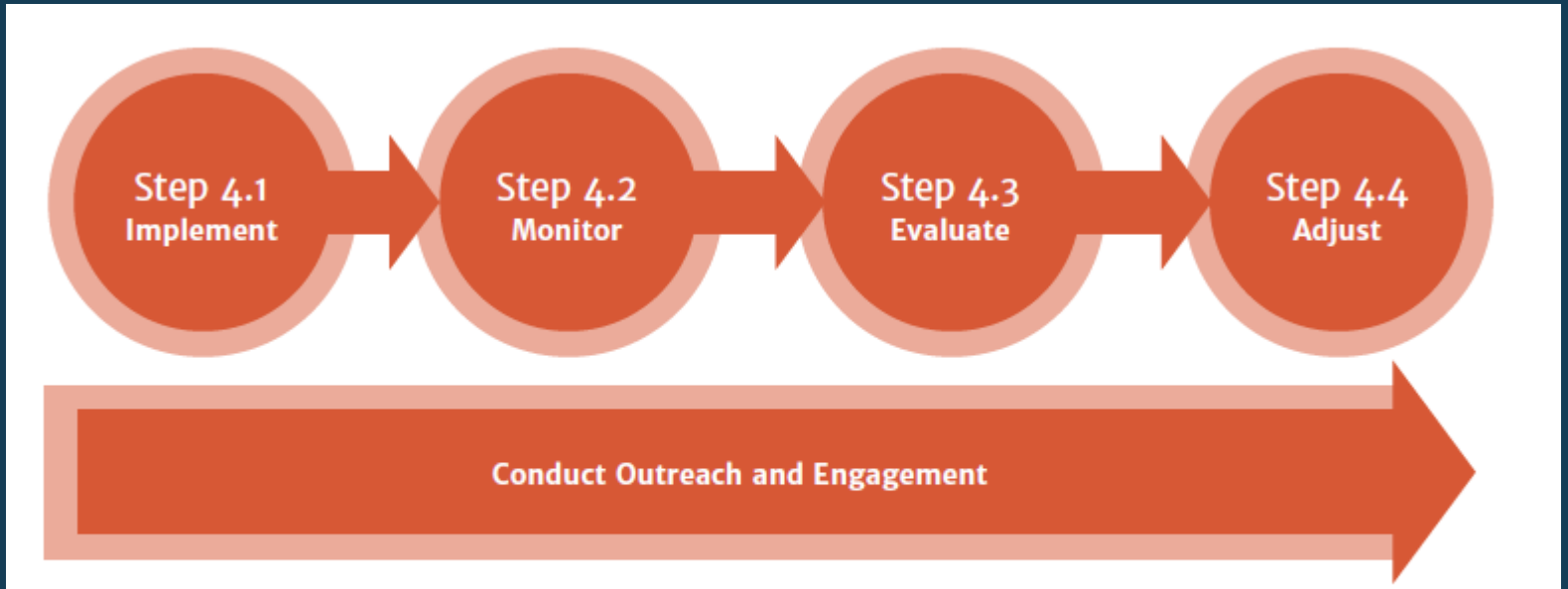


Figure 14

Steps in Phase 4

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

Climate Adaptation Model Policies for General Plans
November 2020

Safety Element

Multiple Hazards

- **Identify Local Transit Agency's Role in Providing Evacuation Assistance.** Incorporate in the Local Hazard Mitigation Plan and any local emergency response plans, the role of the local transit agency(s) in providing evacuation assistance based upon the duration and severity of events related to climate change impacts.
- **Consider Vulnerability of Agricultural Operations as part of Climate Change Planning Process.** If the community includes agricultural uses, include vulnerability of agricultural operations as part of the climate change and/or adaptation planning process including assessments of climate, physical environment, farm-level factors and socio-economic forces.
- **Engage Stakeholders from the Agriculture Sector in Climate Change Planning Process.** If the community includes agricultural uses, ensure that all stakeholders, including industry specialists, farm operators, and other community groups are identified and engaged in all planning and policy development related to climate change and/or adaptation.
- **Encourage the Use of Williamson Act in the Zoning Ordinance.** Adopt provisions within the Community's zoning ordinance to encourage the use of the Williamson Act for preservation of agricultural lands and/or open space. The Williamson Act encourages the preservation of land for open space, forestry and agricultural operations through an easement and reassessment of the property. This can aid in carbon sequestration, protection of food supply, inland floodplain protection, or sensitive habitats to offset costs and provide additional land to mitigate climate change impacts.
- **Implement a Policy of Retreat.** Implement a policy of retreat for areas at-risk for repeated damage due to climate change hazards, such as areas of high subsidence, extreme wildfire risk, and floodplains to allow for natural modification of the landscape and reduction in risk to property and life.
- **Develop an Inclusive Public Outreach and Engagement Strategy.** As climate change and its associated

Safety Elements in Model Policies

- Download Model Policy language from:
  - https://scag.ca.gov/sites/main/files/file-attachments/generalplanmodelpolicies_climate_adaptationframework.pdf
  - https://scag.ca.gov/sites/main/files/file-attachments/lcp_model_policies_climateadaptationframework.pdf
- General Plan Model Policies:
  - Safety Element– page 8
  - Housing Element – page 13
- Local Coastal Plan Model Policies:
  - Examples of safety element and sea level rise – page 4

Project Checklists

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

Climate 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 ☐	FEMA Flood Maps: https://msc.fema.gov/portal/home
Landslides	• Is the project located in area of moderate or high susceptibility to landslide hazards? Yes ☐ No ☐	USGS landslide susceptibility map: https://maps.conservation.ca.gov/cgs/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 ☐ No ☐	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	• Is the project located in a high or very high fire hazard zone? Yes ☐ No ☐	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

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

Project Checklists

Adaptation Assessment

Project Adaptation Measures:
From the following list of adaptation measures, identify those that the project will incorporate to increase adaptive capacity to extreme heat. For all "no" answers provide additional explanatory information, including whether the measure is not applicable to the project.

Robustness	1. **Would project expand and maintain the urban tree canopy?** (e.g., by increasing tree cover for large parking lots) ☐ Yes ☐ No ____ 2. **Would the project expand the use of cool roofs and reflective building materials?** ☐ Yes ☐ No ____ 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 ____ 7. **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?** ☐ Yes ☐ No ____

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

Vulnerability Mapping and Assessment Tool

- ArcGIS Online and ESRI StoryMaps web-based tools
- Overlay risks with demographics in your community
- Select areas of interest
- Explore scenarios and model results

	Layer	Geography	Key Fields	Use	Source
Main layers	Sea Level Rise, 1m, avg storm conditions	Extent of inundation	Depth of inundation	Vulnerability mapping	COSMOS
	Wildfire Risk	Extent of risk	Level of risk	Vulnerability mapping	Urban Footprint interpolation of USFS and CalFire
	Extreme Heat Health Impacts	Census tract	Annual days of HHE	Vulnerability mapping	Cal-Heat
	Flood Risk	Extent of inundation	100 yr flood plain, base flood plain	Vulnerability mapping	FEMA
	Stranded Zones SLR	TAZ	Stranded, partially stranded	Stranded Zones Analysis	Cambridge Systematics analysis
	Stranded Zones wildfire	TAZ	Stranded, partially stranded, extreme detour percentage	Stranded Zones Analysis	Cambridge Systematics analysis
	Relocation scenarios, phase 1	TAZ	Pop, HH, Emp added and removed for each scenario	Scenario Relocation Summary	Cambridge Systematics analysis
	Detailed SPZ intersect of vulnerability	SPZ	SLR, Wildfire risk categories, Flood risk		
	Relocation scenarios, phase 2	TAZ	Pop, HH, Emp added and removed for each scenario	Scenario Relocation Summary	Cambridge Systematics analysis
	Relocation scenarios, phase 1	dot density	Pop, HH, Emp added and removed for each scenario	Scenario Relocation Summary	Cambridge Systematics analysis
	Relocation scenarios, phase 2	dot density	Pop, HH, Emp added and removed for each scenario	Scenario Relocation Summary	Cambridge Systematics analysis
Other layers	SLR, 0.5 m	Extent of inundation	Depth of inundation	Vulnerability mapping	COSMOS
	SLR, 1.5 m	Extent of inundation	Depth of inundation	Vulnerability mapping	COSMOS
	SLR, 2 m	Extent of inundation	Depth of inundation	Vulnerability mapping	COSMOS
	SLR, 5m	Extent of inundation	Depth of inundation	Vulnerability mapping	COSMOS
	Wildfire Risk	Extent of risk	Level of risk	Vulnerability mapping	CalFire

Decision Tree Tool

AGENCY INFO	
Select the County you represent	Riverside
Select City you represent	Hemet

Total	Population	Employment	Households	Housing Units
County	2,429,222	896,201	811,649	2,906,153
City	125,684	37,793	49,159	129,274

DAC* Total	DAC Population	DAC Employment	DAC Households	DAC Housing 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 Wildfire Affected	DAC Population	DAC Employment	DAC Households	DAC Housing 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 Sea Level Rise Affected	DAC Population	DAC Employment	DAC Households	DAC Housing 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

DAC Flood Affected	DAC Population	DAC Employment	DAC Households	DAC Housing Units
County	5,017	1,417	1,685	6,680
City	210	18	89	216

PROJECT INFO	
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

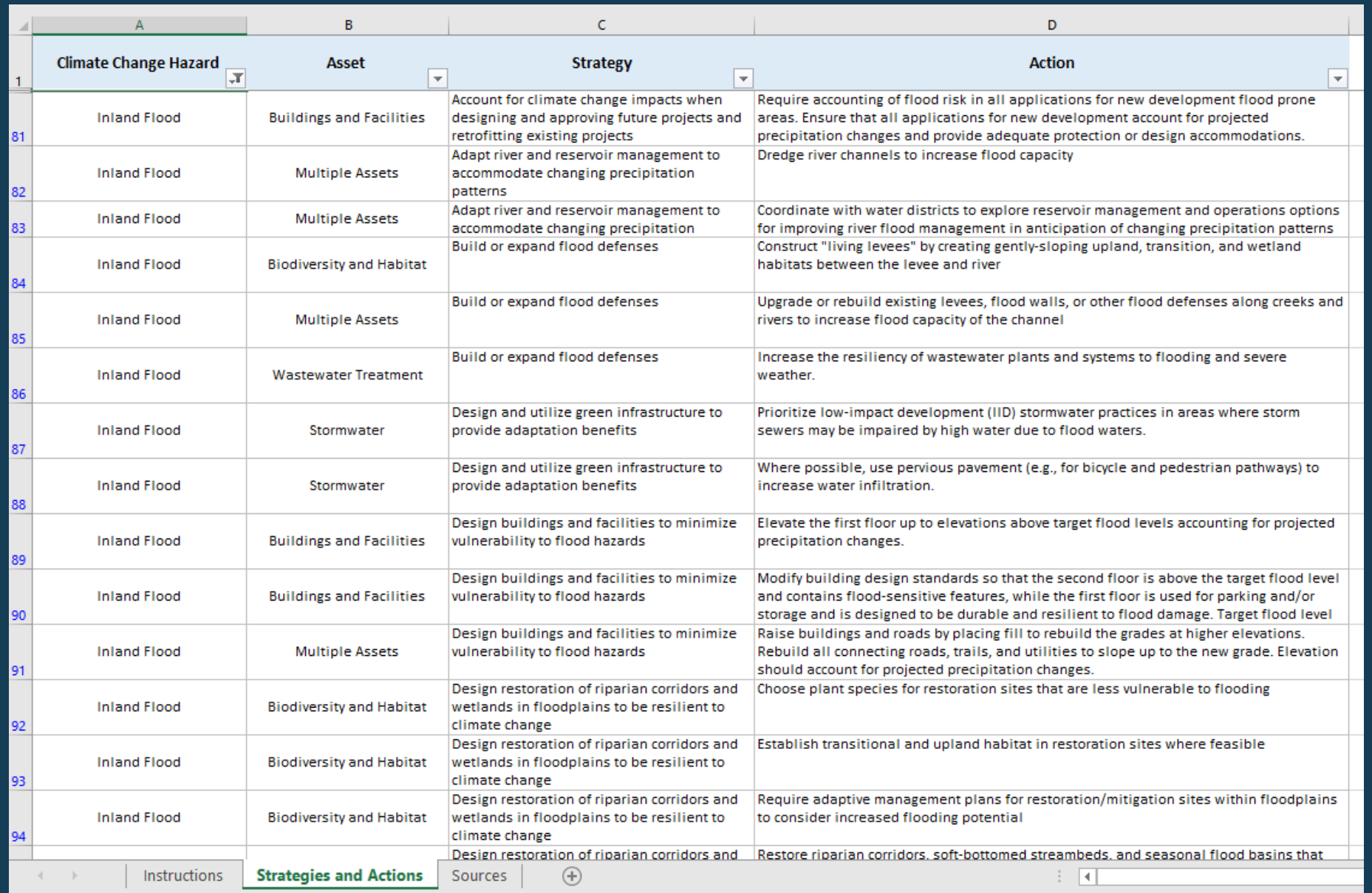
				AGENCY INFO		
Select the County you represent	San_Bernardino			Population	Employment	Households
Do you represent a County Agency, a City Agency or Other Agency?	City		County	2,258,662	828,692	700,095
If selected Other Agency, please select Agency Name from the list			City	7,828	3,264	3,151
If selected "Other", please mention the name of the agency you represent						
Select City you represent	Needles					

				PROJECT 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 mention as many as you know)	Extreme_Heat	Inland_Flood	Wildfire	Extreme_Heat	Severe_Storms _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 Facilities	
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						

Adaptation Strategies and Actions

- Excel Spreadsheet
- 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

Strategies and Actions Spreadsheet Tool



	A	B	C	D
1	Climate Change Hazard	Asset	Strategy	Action
81	Inland Flood	Buildings and Facilities	Account for climate change impacts when designing and approving future projects and retrofitting existing projects	Require accounting of flood risk in all applications for new development flood prone areas. Ensure that all applications for new development account for projected precipitation changes and provide adequate protection or design accommodations.
82	Inland Flood	Multiple Assets	Adapt river and reservoir management to accommodate changing precipitation patterns	Dredge river channels to increase flood capacity
83	Inland Flood	Multiple Assets	Adapt river and reservoir management to accommodate changing precipitation	Coordinate with water districts to explore reservoir management and operations options for improving river flood management in anticipation of changing precipitation patterns
84	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
85	Inland Flood	Multiple Assets	Build or expand flood defenses	Upgrade or rebuild existing levees, flood walls, or other flood defenses along creeks and rivers to increase flood capacity of the channel
86	Inland Flood	Wastewater Treatment	Build or expand flood defenses	Increase the resiliency of wastewater plants and systems to flooding and severe weather.
87	Inland Flood	Stormwater	Design and utilize green infrastructure to provide adaptation benefits	Prioritize low-impact development (IID) stormwater practices in areas where storm sewers may be impaired by high water due to flood waters.
88	Inland Flood	Stormwater	Design and utilize green infrastructure to provide adaptation benefits	Where possible, use pervious pavement (e.g., for bicycle and pedestrian pathways) to increase water infiltration.
89	Inland Flood	Buildings and Facilities	Design buildings and facilities to minimize vulnerability to flood hazards	Elevate the first floor up to elevations above target flood levels accounting for projected precipitation changes.
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94	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
			Design restoration of riparian corridors and	Restore riparian corridors, soft-bottomed streambeds, and seasonal flood basins that

Instructions | Strategies and Actions | Sources

Adaptation Strategies

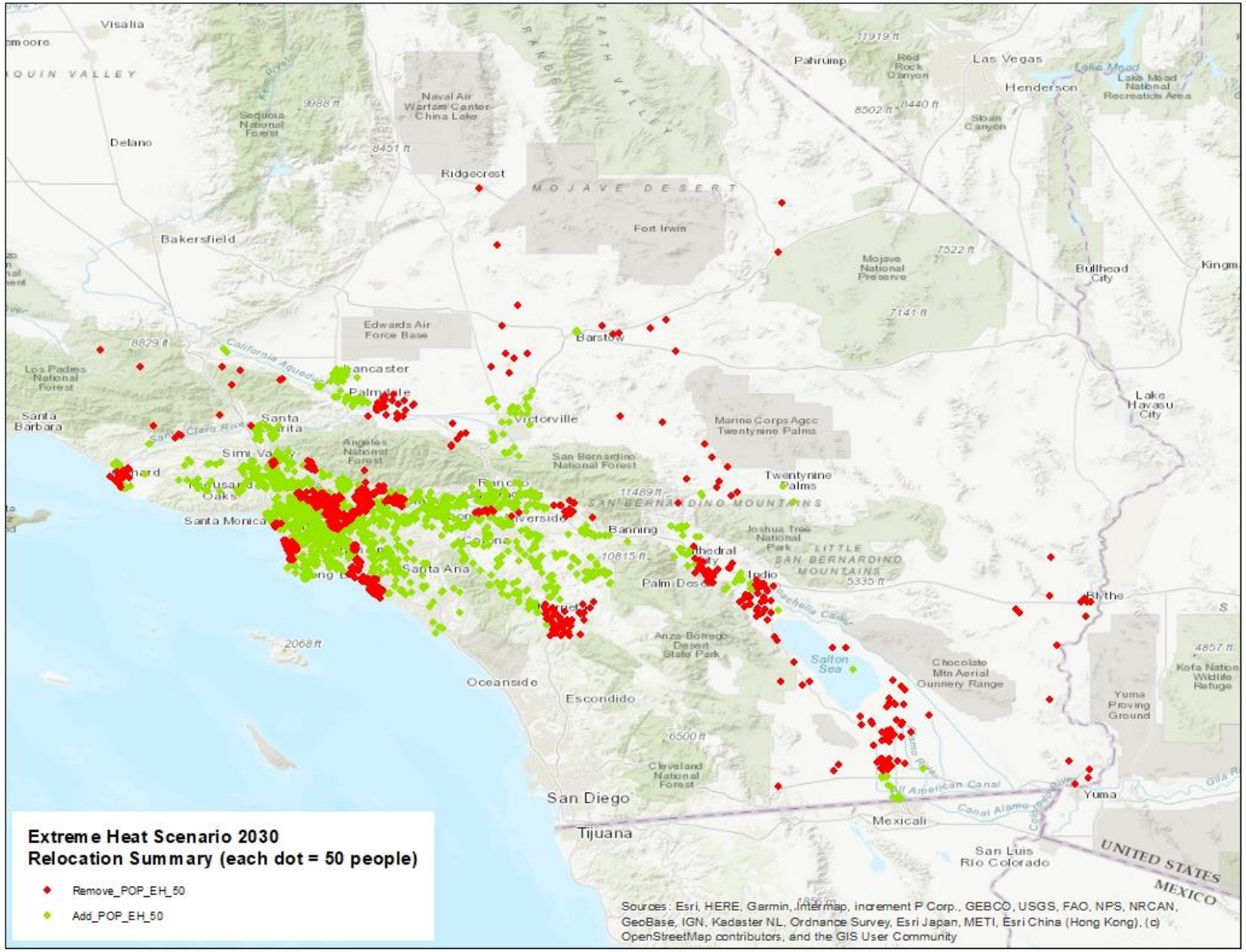
Key Strategies and Actions

	Wildfire	Extreme Heat Health Impacts	Sea Level Rise	Inland Flooding
Primary strategy	Preventative controlled burns	Increase tree canopy coverage	Strategically placed sea walls	Expand/ reinforce levees
Other strategies	Harden structures	Expand cooling centers	Pumping stations	Natural buffers
	Rezoning	Expand health care facilities	Rezoning	Rezoning
	Firebreak walls	White roofs	Natural Buffers	
		Reduce impervious surfaces		

Extreme Heat Scenario Development and Modeling

- Data from CHAT tool: Annual Days of Heat Health Events
  - More complex than temperature forecast data
  - Heat Health Events defined as heat waves which cause spikes in mortality and hospital visits
  - Sensitive to ratios of elderly and vulnerable populations, hospital beds, cooling centers, tree cover, etc.
- "Business as usual" relocation scenario starts relocating demographics once 30 days per year of heat health events reached at 1% per day
  - E.g., 35 days per year = 5% relocated; 50 days = 20% relocated, 70 days = 40% relocated
- "Mitigation" scenario reduces relocation through increased tree cover, cooling centers, hospital beds, etc.

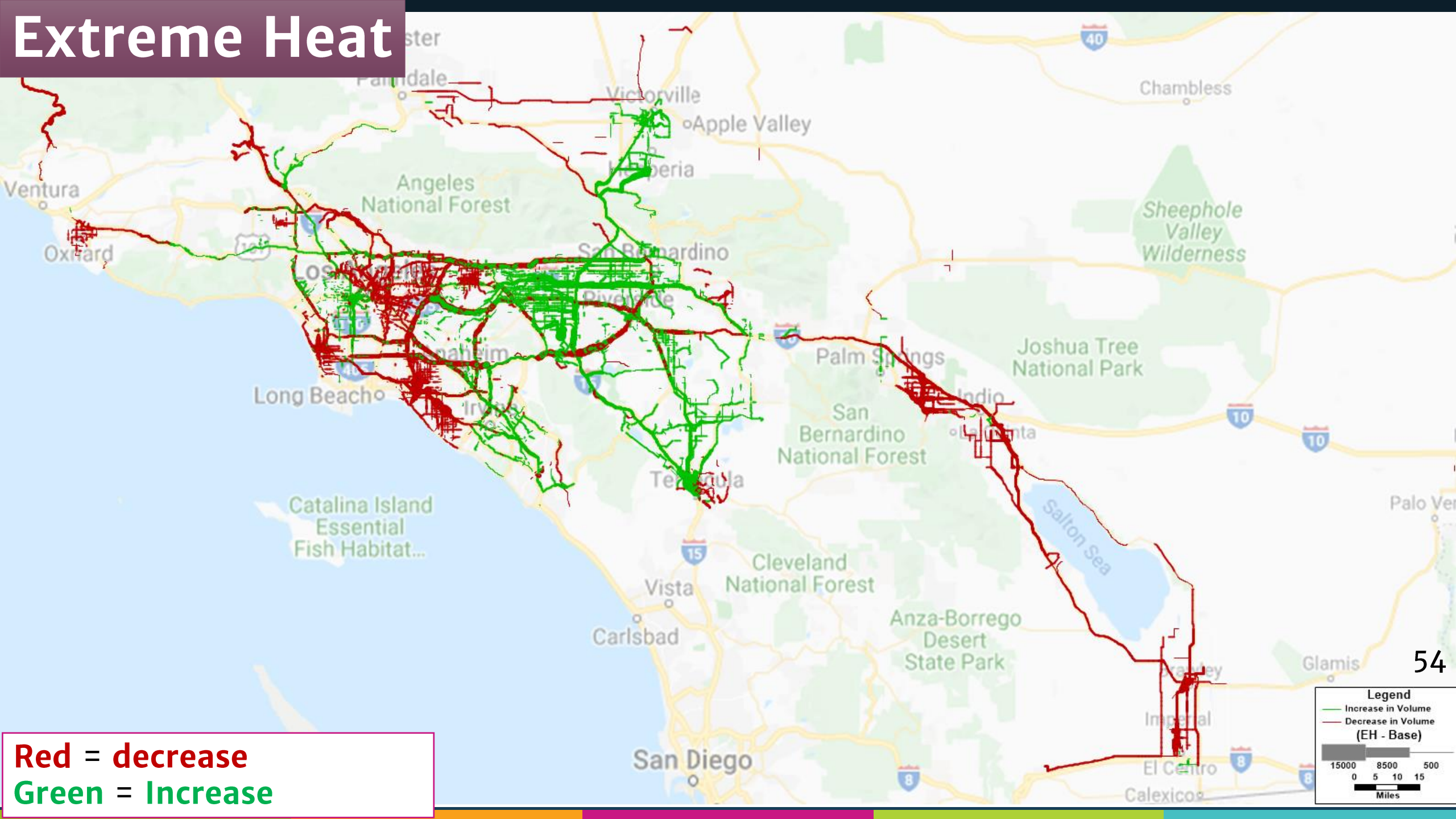
Extreme Heat 2030 – "Business as Usual" Scenario



Extreme Heat Health Events 2030 "Business as Usual" Scenario

		Base				Extreme Heat				Numeric Difference				Difference			
Code	County	Trips	VMT	VHT	VHD	Trips	VMT	VHT	VHD	Trips	VMT	VHT	VHD	Trips	VMT	VHT	VHD
1	Imperial	524,487	6,755,364	120,182	3,519	464,631	6,225,064	110,087	2,874	**(59,856)**	(530,300)	(10,095)	(645)	-11%	-8%	-8.40%	-18.34%
2	Los Angeles	22,544,031	234,673,126	7,195,893	2,251,895	22,416,901	233,736,930	7,212,870	2,287,800	**(127,130)**	(936,196)	16,978	35,905	-1%	0%	0.24%	1.59%
3	Orange	8,097,287	79,600,042	2,091,159	549,667	8,074,927	79,553,716	2,099,833	559,164	(22,360)	(46,327)	8,673	9,497	0%	0%	0.41%	1.73%
4	Riverside	6,293,669	77,764,585	1,994,026	575,835	6,347,084	78,077,313	2,078,758	652,601	**53,416**	312,727	84,732	76,766	1%	0%	4.25%	13.33%
5	San Bernardino	5,560,880	75,639,862	1,572,418	210,823	5,676,502	76,634,464	1,616,612	234,797	**115,622**	994,602	44,194	23,973	2%	1%	2.81%	11.37%
6	Ventura	2,180,683	19,718,820	465,617	88,599	2,166,273	19,541,435	463,005	89,838	(14,409)	(177,385)	(2,612)	1,239	-1%	-1%	-0.56%	1.40%
	Total	45,201,037	494,151,800	13,439,295	3,680,338	45,146,319	493,768,921	13,581,166	3,827,073	(54,718)	(382,878)	141,871	146,735	-0.12%	-0.08%	1.06%	3.99%

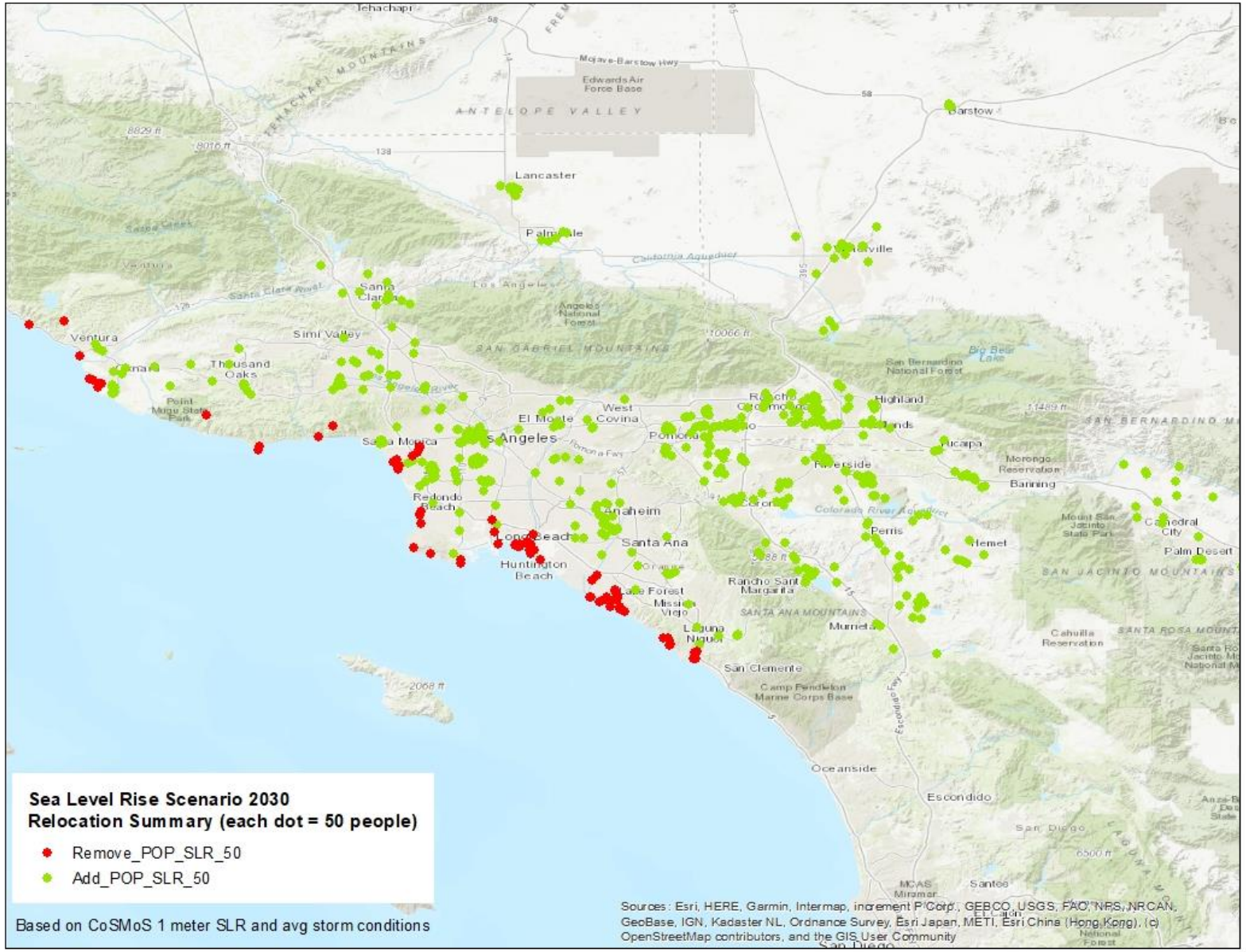
Extreme Heat



54

Red = **decrease**
Green = **Increase**

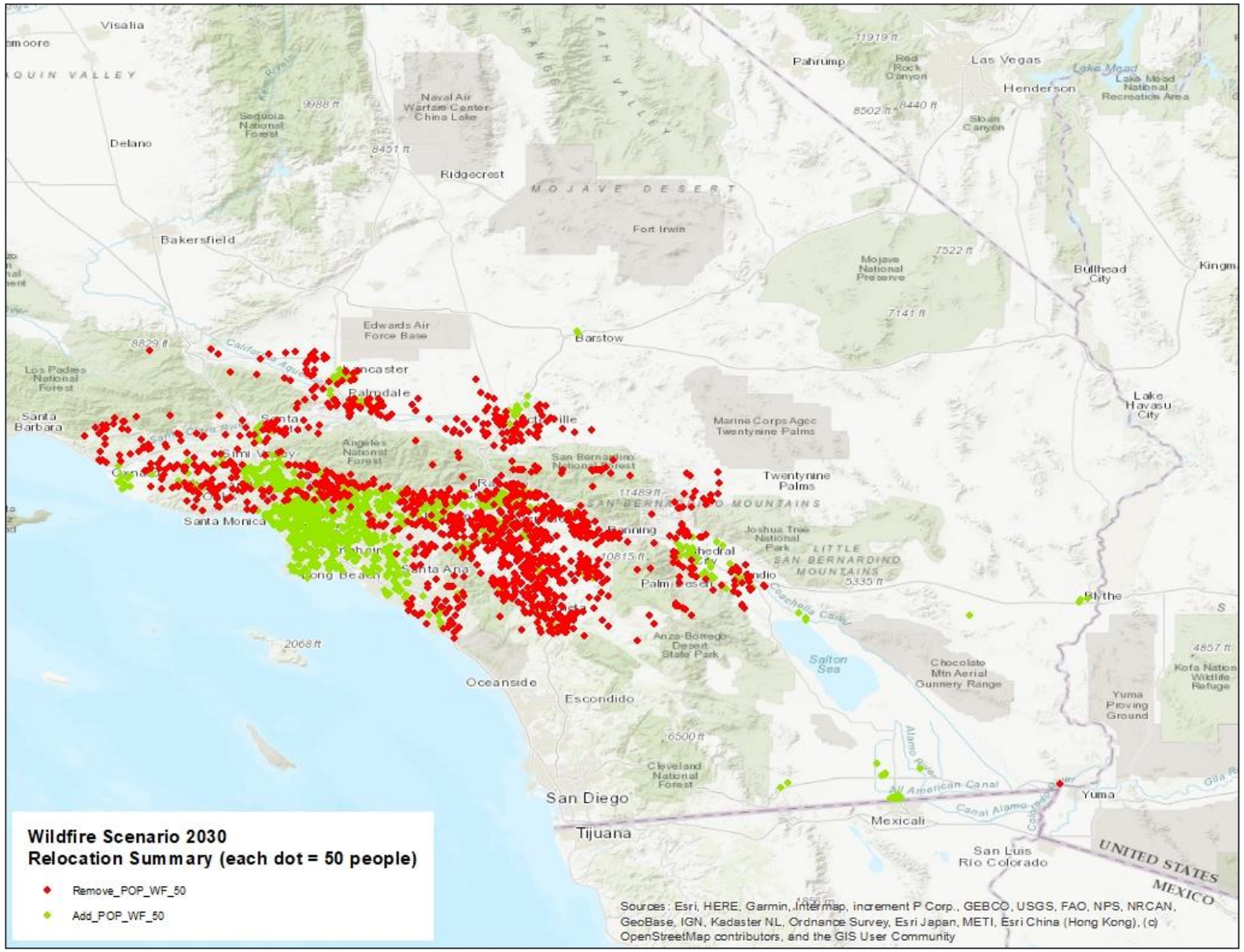
Sea Level Rise 2030 – "Business as Usual" Scenario



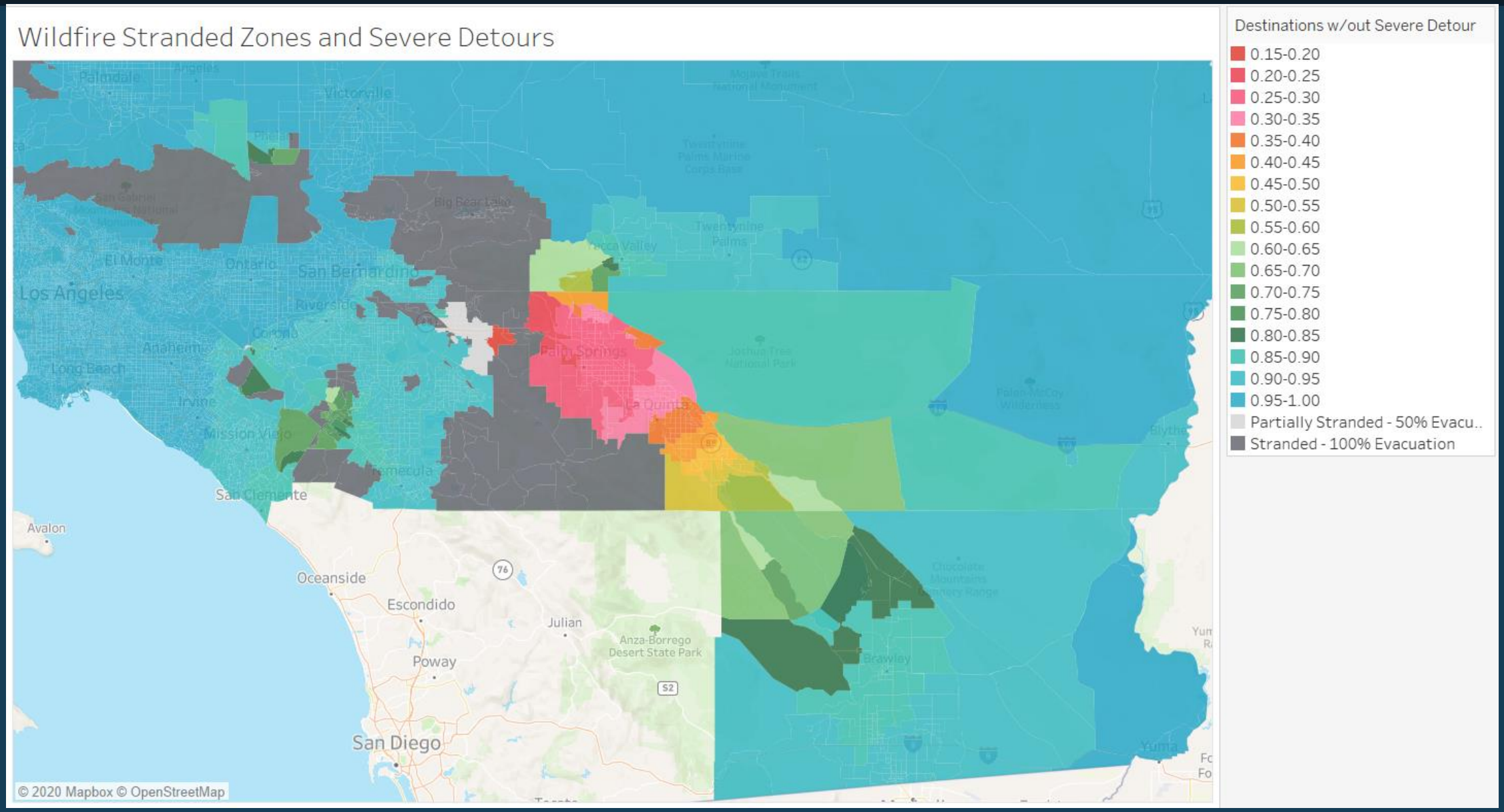
Sea Level Rise Events 2030 "Business as Usual" Scenario

		Base				Sea Level Rise				Numeric Difference				Difference			
Code	County	Trips	VMT	VHT	VHD	Trips	VMT	VHT	VHD	Trips	VMT	VHT	VHD	Trips	VMT	VHT	VHD
1	Imperial	524,487	6,755,364	120,182	3,519	522,838	6,726,450	119,652	3,479	(1,649)	(28,914)	(530)	(40)	0%	0%	-0.44%	-1.14%
2	Los Angeles	22,544,031	234,673,126	7,195,893	2,251,895	22,534,716	233,902,147	7,279,139	2,350,402	(9,315)	(770,979)	83,246	98,507	0%	0%	1.16%	4.37%
3	Orange	8,097,287	79,600,042	2,091,159	549,667	8,191,865	78,894,779	2,083,734	555,020	94,577	(705,263)	(7,425)	5,353	1%	-1%	-0.36%	0.97%
4	Riverside	6,293,669	77,764,585	1,994,026	575,835	6,311,715	77,438,304	1,999,881	587,010	18,046	(326,281)	5,856	11,176	0%	0%	0.29%	1.94%
5	San Bernardino	5,560,880	75,639,862	1,572,418	210,823	5,576,604	75,692,642	1,578,361	215,759	15,724	52,780	5,943	4,936	0%	0%	0.38%	2.34%
6	Ventura	2,180,683	19,718,820	465,617	88,599	2,172,050	19,660,788	478,095	102,192	(8,633)	(58,032)	12,478	13,593	0%	0%	2.68%	15.34%
	Total	45,201,037	494,151,800	13,439,295	3,680,338	45,309,788	492,315,111	13,538,862	3,813,862	108,751	(1,836,689)	99,567	133,524	0.24%	-0.37%	0.74%	3.63%

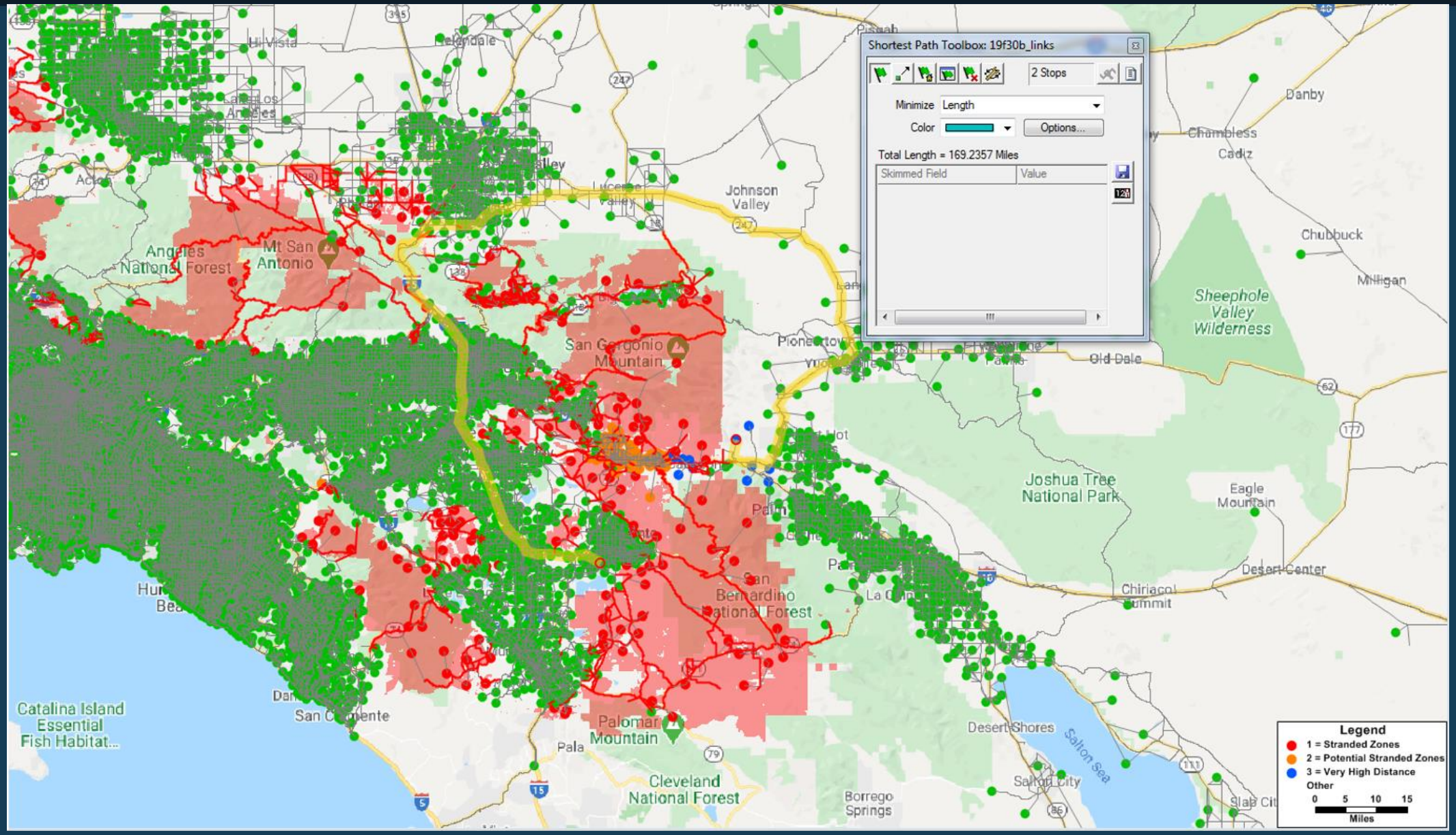
Wildfire Scenario 2030 – "Business as Usual" Scenario



Stranded Zones Analysis for Wildfire Scenario



Severe Detour Analysis for Wildfire Scenario



Funding

Finding adequate funding to implement adaptation strategies is an ongoing challenge. As mentioned at the end of Chapter 1, the most significant source of funding is from integrating climate adaptation into existing local agency expenditures. In terms of new funding, there are state and federal grant programs currently available to support both adaptation planning and strategy implementation.

Additional funding programs are likely to emerge in coming years as more and more communities experience the impacts of climate change. Over time, communities should develop a layered funding strategy that uses local investments to leverage regional, state, and federal grants, and loans, as well as private sector investments. The variety of tools that local agencies can utilize to generate adequate funds are summarized in the table below.

Table 4.1: Local Revenue Sources for Climate Adaptation

Revenue Source	Applicability to Climate Adaptation	Revenue Potential	Ease of Authorization
Financing Districts[1]			
Benefit Assessments[2]	NARROW: Must provide direct benefit to assessed parcels	LIMITED: But critical to leverage funding from directly benefitting property owners	MODEST: Majority district property owner approval weighted by assessment[3]
Community Facilities District Special Tax (Mello Roos)	MODEST: Wide range of facilities & services; but must benefit taxed parcels		MODEST: 2/3 district property owners[3], or 2/3 voter approval if more than 12 voters in district
Property Tax Increment[4]	BROAD: Facilities (no services), environ-menttal mitigation	LIMITED in the short run; INCREASING over time with new development	SIMPLE: Governing board approval subject to majority protest by property owners
Local/Regional Public Enterprises			
Water, Sewer & Refuse Charges	NARROW: Must support enterprise operations	MODERATE to SIGNIFICANT: Depends on climate adaptation priorities relative to other enterprise needs	SIMPLE: Governing board approval subject to majority protest by ratepayers
Sea & Airport Revenues			SIMPLE: Governing board approval

Outreach Overview

What is the Climate Talks Box?

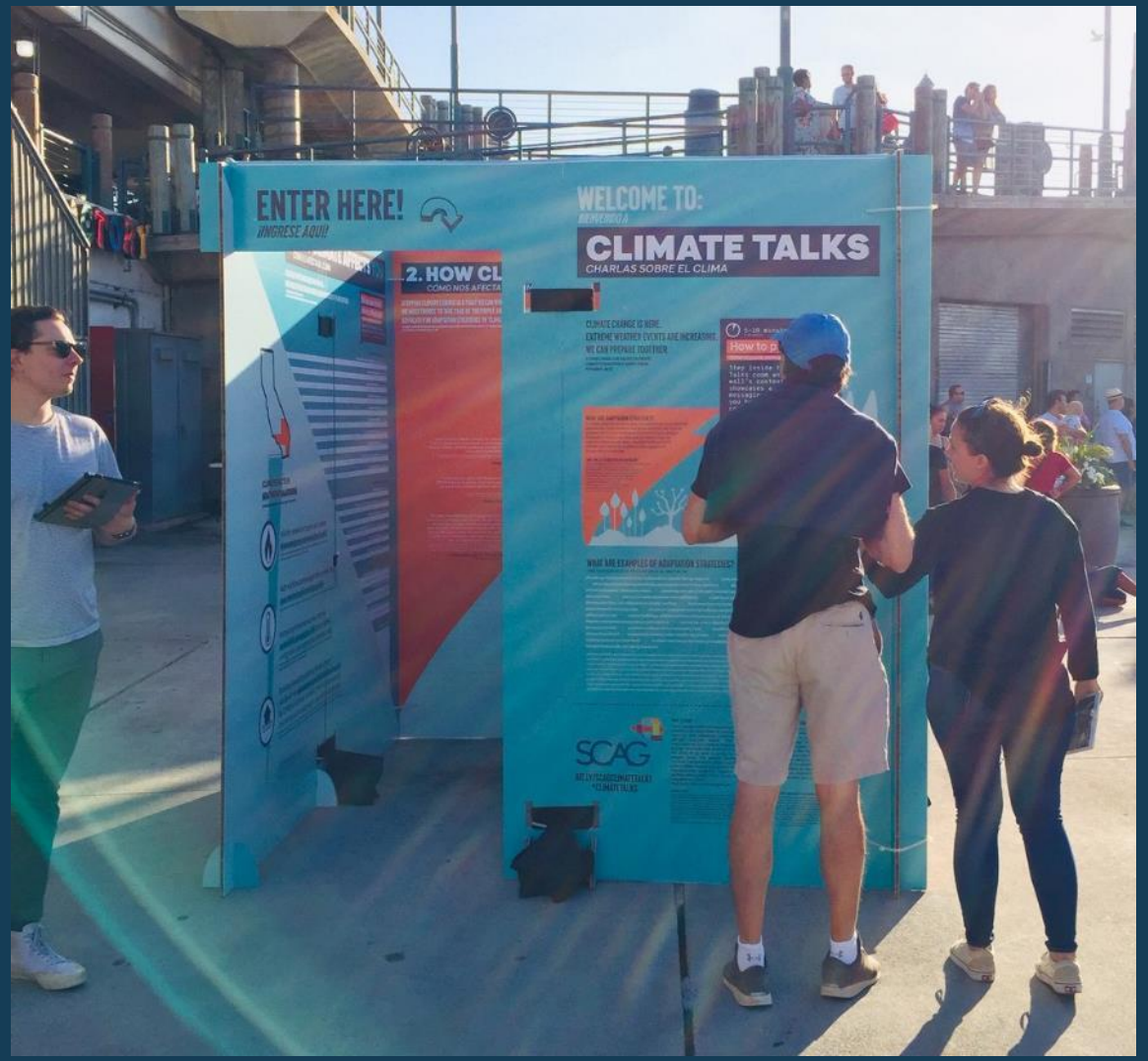
An immersive pop-up experience, crafted with sustainable materials, educating the public about climate change and climate adaptation strategies.

Goal

Test four different messaging strategies about climate change to understand what resonates with people who live in the SCAG region.

Messaging Strategies

1. How climate change causes personal, monetary & health-related harm
2. How trusted leaders are speaking about climate change
3. How climate change is affecting California's natural resources
4. How climate change will affect the region surrounding the pop-up



Events

Redondo Beach Pier Summer Concert Series, 08/24

Taste of Baldwin Park, 08/29

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

Open Arts & Music Festival, 09/15

Urban Hive Market Long Beach, 09/28

Outreach Workshop Templates

WHAT IS INCLUDED IN THE WORKSHOP TEMPLATE

This workshop template includes three customizable components:

1. A presentation slide deck tailored to SCAG jurisdictions who would like to engage constituents in a conversation about climate adaptation and/or mitigation.
2. Materials for an interactive activity, in both group and individual formats.
3. Corresponding meeting announcements and invites that you can change for your event

All template components provide you with a flexible base. Add to and change them as you see fit.

HOW TO USE THIS TEMPLATE

1. Read through this Guide to help orient yourself to the materials included, messaging strategies, and best practices as you craft your communications approach.
2. Open up the presentation slide deck in either InDesign or PowerPoint and start to move things around, add your content, and customize the presentation as you see fit.
3. Modify the template invitations/notices and send them to your constituents to announce your upcoming workshop.
4. Print out the final materials or project them digitally at your workshop to start the conversation!

Communication Strategies

1) Make it personal

Use a personal "risk-based" messaging strategy that identifies the monetary costs and health impacts of climate change for your constituency.

- This strategy ranked as the most effective during SCAG's community outreach.
- Use facts that can apply to an individual's or family's life and phrase the risk so that the effects are tangible. A utility bill increasing by hundreds of dollars is an experience that is easy to grasp; it is much more difficult to grasp a change in millions of dollars to a government's budget.
- ***As an example, we have included four such facts in the "How the Climate Affects You" section of the slide deck.***

2) Localize and concretize

Use a before and after visualization of a familiar and beloved resource.

- In this strategy, you can direct your audience's feelings of attachment towards a place, into collective support. Use a visual (photographs, videos, renderings) to show the before and after effects of our changing climate. This allows attendees to see the effects for themselves.
- A good subject is nearby nature that has been affected by extreme weather events.
- As an additional note, the literature shows that conservative audiences respond more favorably to changes that are framed as the "past & present," whereas liberal audiences preferred a "present & future" framing.
- ***See the examples in the "How the Climate Affects California" section of the slide deck.***

3) Map the risk

Use a chronological map to show the proximity of risk and change over time.

- This strategy uses mapping visualization to help participants understand the future effects of climate change.
- It is important to keep in mind that map-reading is a special skill. Aid participant understanding by ensuring your visualizations are focused on your immediate locality, and that familiar landmarks are called out .
- Connecting the familiar (local places) to the hard-to-grasp (future climate effects) builds a kind of support grounded in personal affection.
- ***See the examples in the "How Climate Changes at Home" section of the slide deck.***

4) Bring in a trusted advisor:

Use the words and stature of someone your community already trusts.

- This strategy requires the identification of a leader or authority figure with whom your community has a rapport and finding a values-based message that will resonate with them.
- This can occur as quotes, a video message, or an in-person appearance. The literature says this strategy can work especially well with older, and more conservative constituencies.
- However, appropriate advisor selection can align this strategy with a wide range of ideologies. Notably, this strategy was reported as slightly less impactful than the other strategies explained here.
- ***See the examples in the "How the Climate Affects Us" section of the slide deck.***

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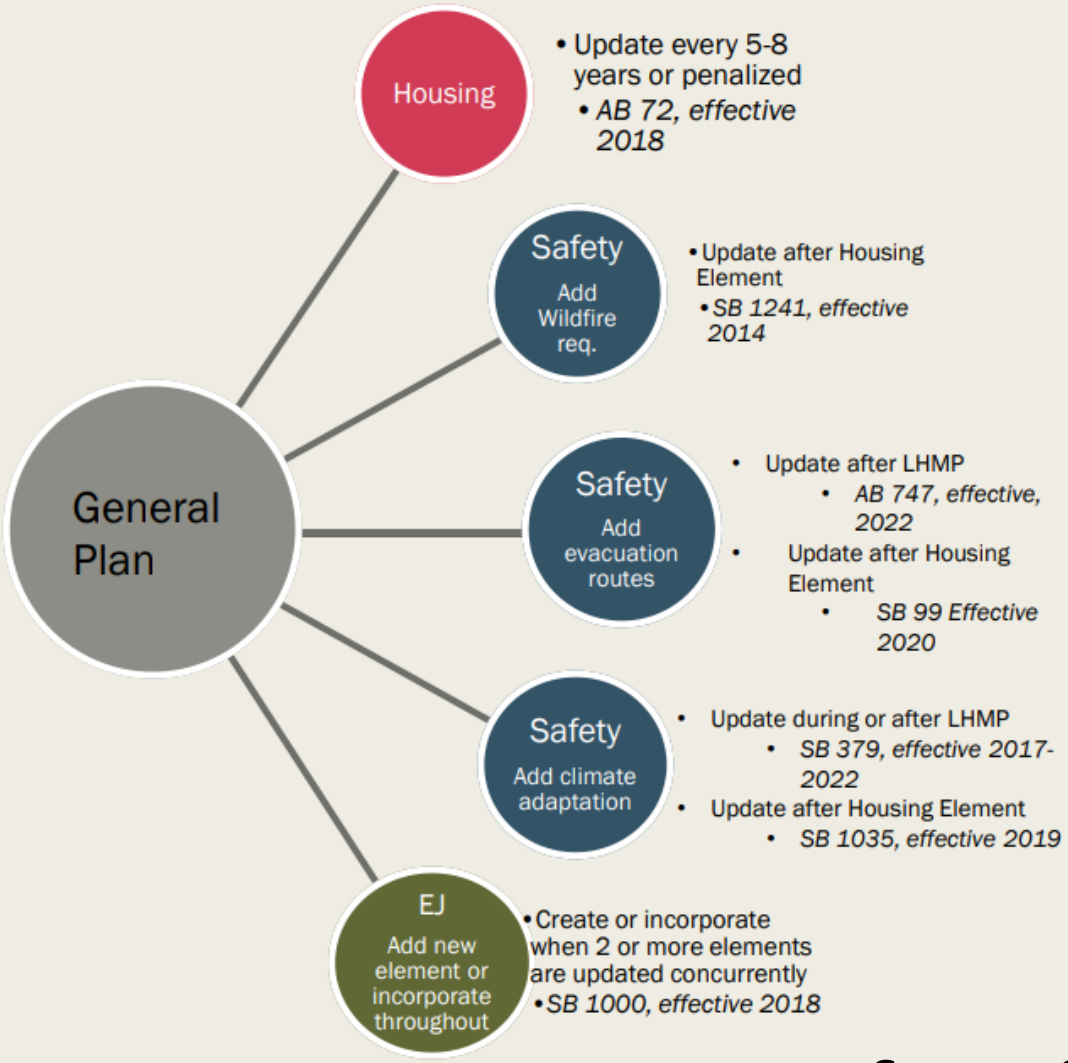
Recent Changes Affecting General Plan Elements



Source: OPR

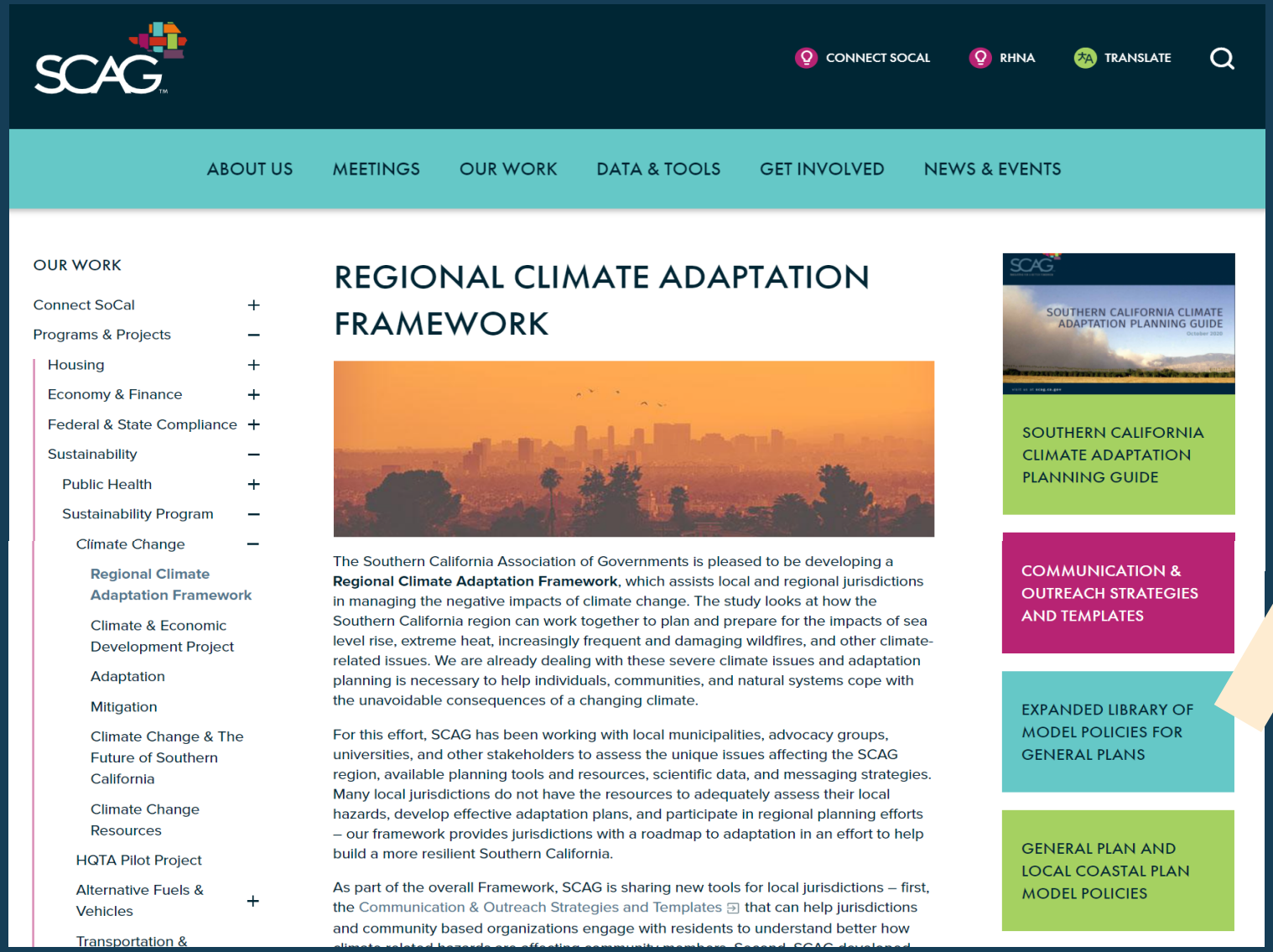
Refer to the State's SB 535 Disadvantaged Communities guidance to identify if DACs in your community:

https://oehha.ca.gov/calenviroscreen/sb535

Environmental Justice Element Resources

- Requirement: *An environmental justice element, or related goals, policies, and objectives integrated in other elements, that identifies disadvantaged communities within the area covered by the general plan of the city, county, or city and county, if the city, county, or city and county has a disadvantaged community*
- Guidance and Tools:
  - OPR General Plan Guidelines & Environmental Justice Model Policies
    - https://opr.ca.gov/docs/20200706-GPG_Chapter_4_EJ.pdf
  - California Environmental Justice Alliance SB 1000 Toolkit
    - https://caleja.org/2017/09/sb-1000-toolkit-release/#form
  - SCAG Expanded Library of General Plan Model Policies:
    - Air Quality
    - Built Environment
    - Circulation & Transportation
    - Environmental Justice
    - Health
    - Housing
    - Land Use
    - Natural Systems
    - Noise
    - Open Space & Conservation
    - Public Facilities
    - Safety

Additional Model Policies for General Plan Updates



EXPANDED LIBRARY OF MODEL POLICIES FOR GENERAL PLANS

https://bit.ly/SCAGClimate

(case sensitive)

Housing ELement PaRcel (HELPR) Tool

Toolbox Tuesday Demonstration

Kevin Kane, PhD

Program Manager, Demographics & Housing Policy

December 8, 2020

www.scag.ca.gov

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SCAG's Housing Element Update Support

Yikes! My housing element update is due in under a year! There are a lot of new laws coming down from Sacramento, and some of them even resulted in my huge new RHNA number!

- SCAG has a fairly sophisticated data operation from a long history of local outreach and regional planning
- The clock for effective technical assistance is ticking...
  - August workshop survey: 52% indicate staff/consultant work already underway
- SCAG objectives: update, refine, curate, and deploy available data sets
  - Time savings
  - Link with HCD guidelines to help smooth review process
  - *Link with Connect SoCal objectives*

Ultimately the housing element update is a jurisdiction's responsibility to complete and HCD's responsibility to evaluate.

SCAG's Housing Element Update Support

SCAG's Technical Assistance flyer

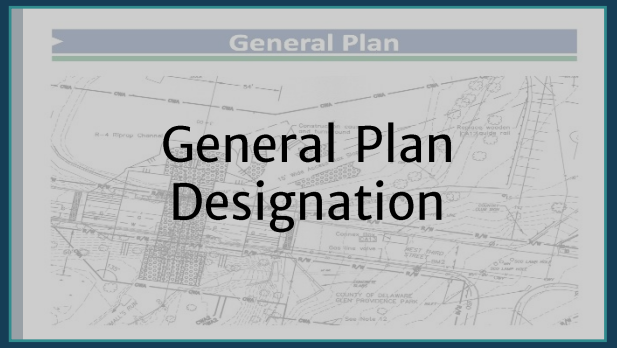
- Pre-certified local housing data
  - Data and a report for each jurisdiction
  - ADU affordability analysis
  - Pre-approved by HCD
- www.scag.ca.gov/housing-elements
- Housing ELement PaRcel Tool (HELPR)
  - 2019 Annual Land Use Update
  - Housing-specific attributes and filters
  - ESRI-powered web mapping application allows for 3 levels of analysis:

Basic – Refined – Advanced

Selected Parcel Attributes in HELPR

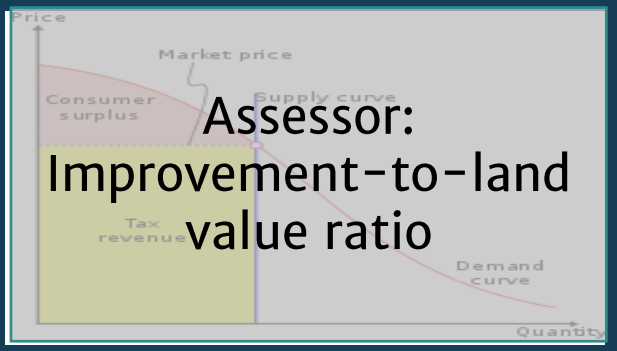
Existing Land Use

Zoning Designation



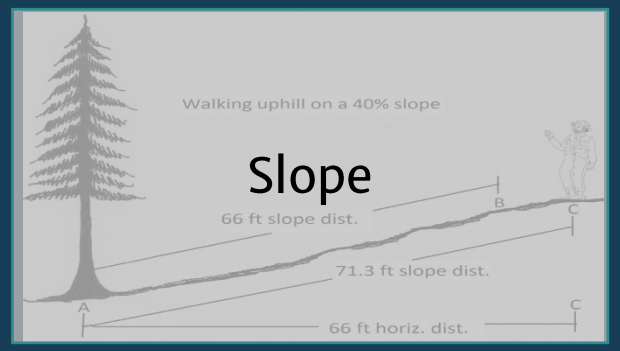
General Plan Designation

Specific Plan Designation



Assessor: Improvement-to-land value ratio

Parcel size (acres)



Slope

Building footprint area

Brownfield/superfund designation

Priority growth/constraint area

Environmental justice/opportunity areas

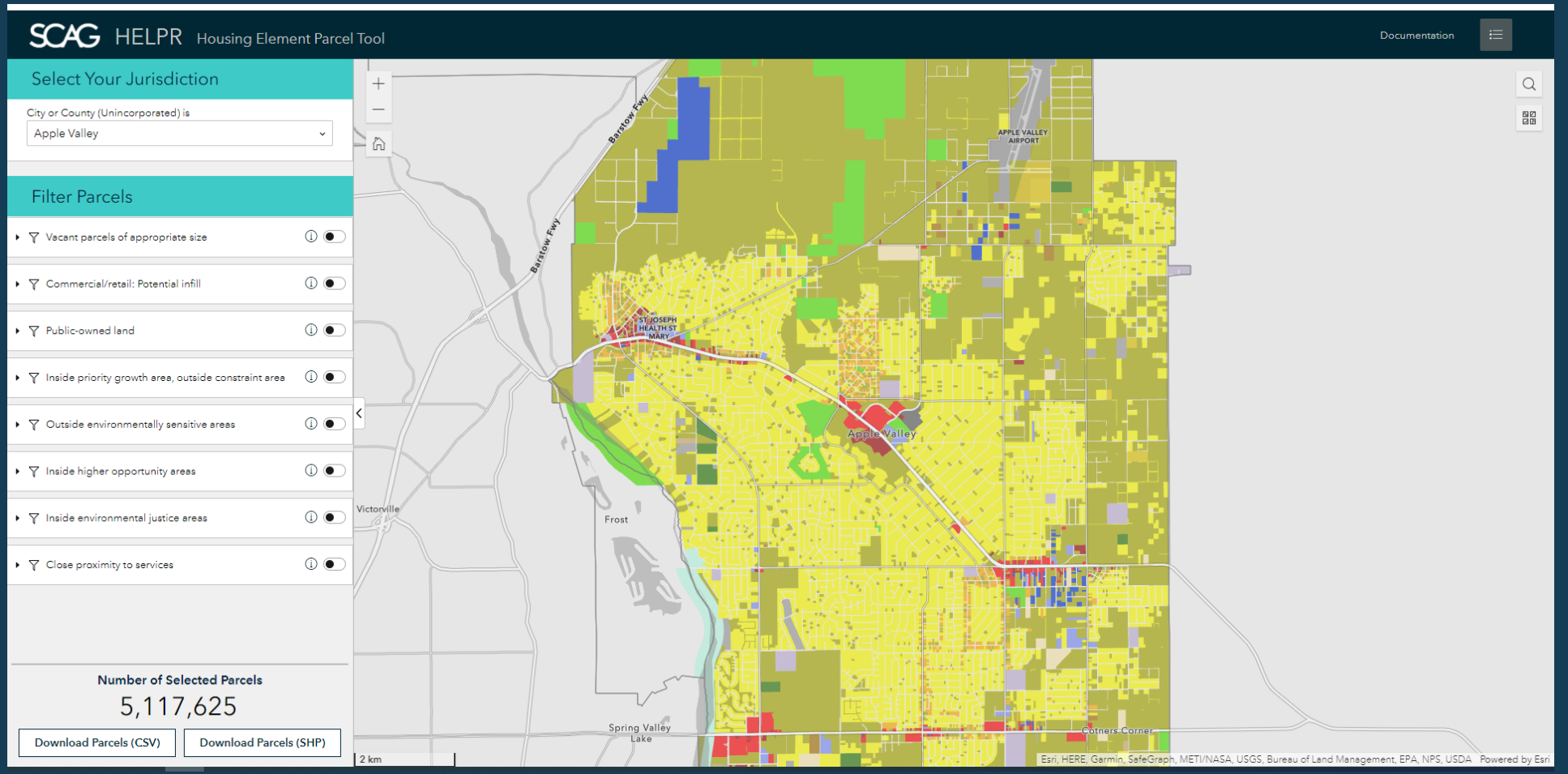
Proximity to grocery/heathcare/open space

How to explore sites using HELPR

1. Basic filtering
   - 8 pre-made site screening filters
2. Refined filtering
   - Refine filter options across several additional attributes
3. Advanced analysis
   - Using Excel, desktop GIS, or other platform
   - Additional attributes available
   - Rudimentary ADU capacity calculation

Word cloud of HELPR's data dictionary

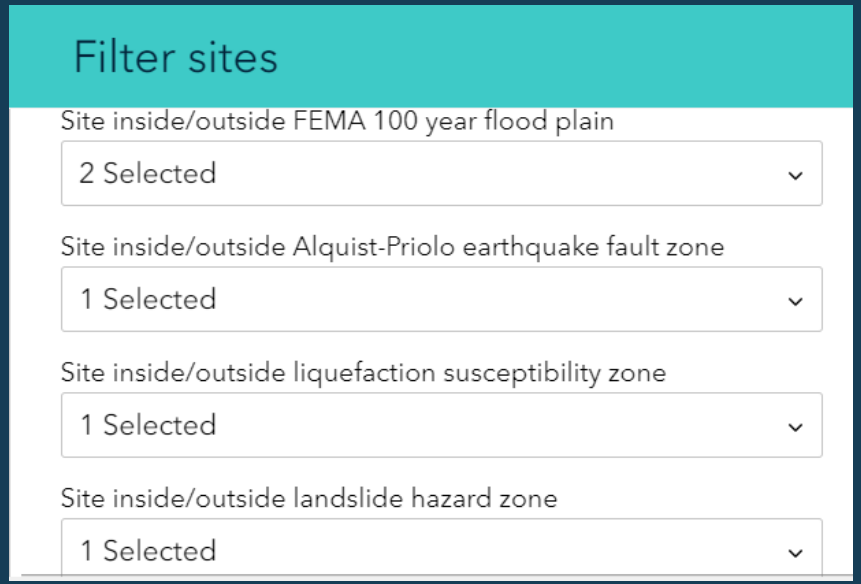
HELPR Demonstration



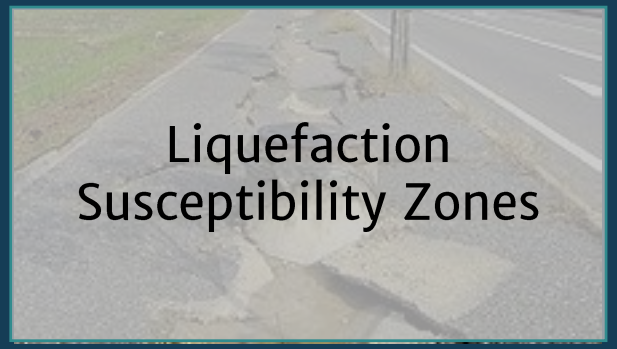
http://maps.scag.ca.gov/helpr

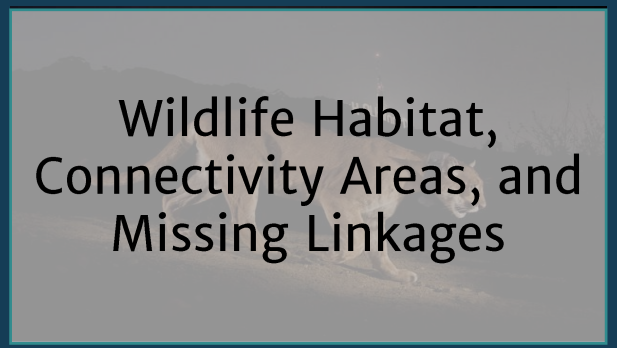
Selected Environmentally Sensitive Areas

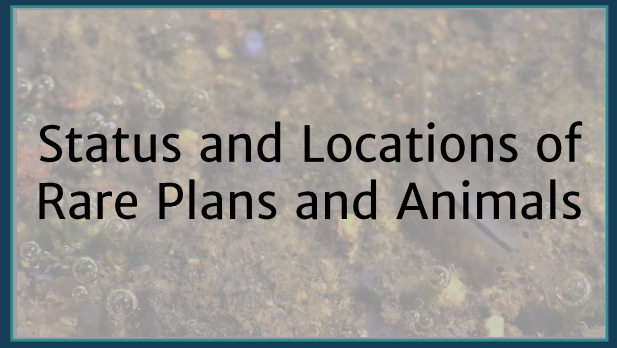
- SCAG selected layers based on guidance from partner agencies, as well as recommendations from The Nature Conservancy
- Impacted parcels can be filtered out for environmentally sensitive areas
- Factors are common considerations in CEQA and support conservation strategies in Connect SoCal
- Layers will be available within the tool for visualizing in the next update *(coming soon)*
- Additional layers will be forthcoming in later releases



Selected Environmentally Sensitive Areas







maps.scag.ca.gov/helpr/?page=page_0

SCAG HELPR Housing Element Parcel Tool

Documentation

Select Your Jurisdiction

City or County (Unincorporated) is

- All -

Filter Parcels

Outside environmentally sensitive areas

Parcel inside/outside fire hazard area

1 Selected

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

1 Selected

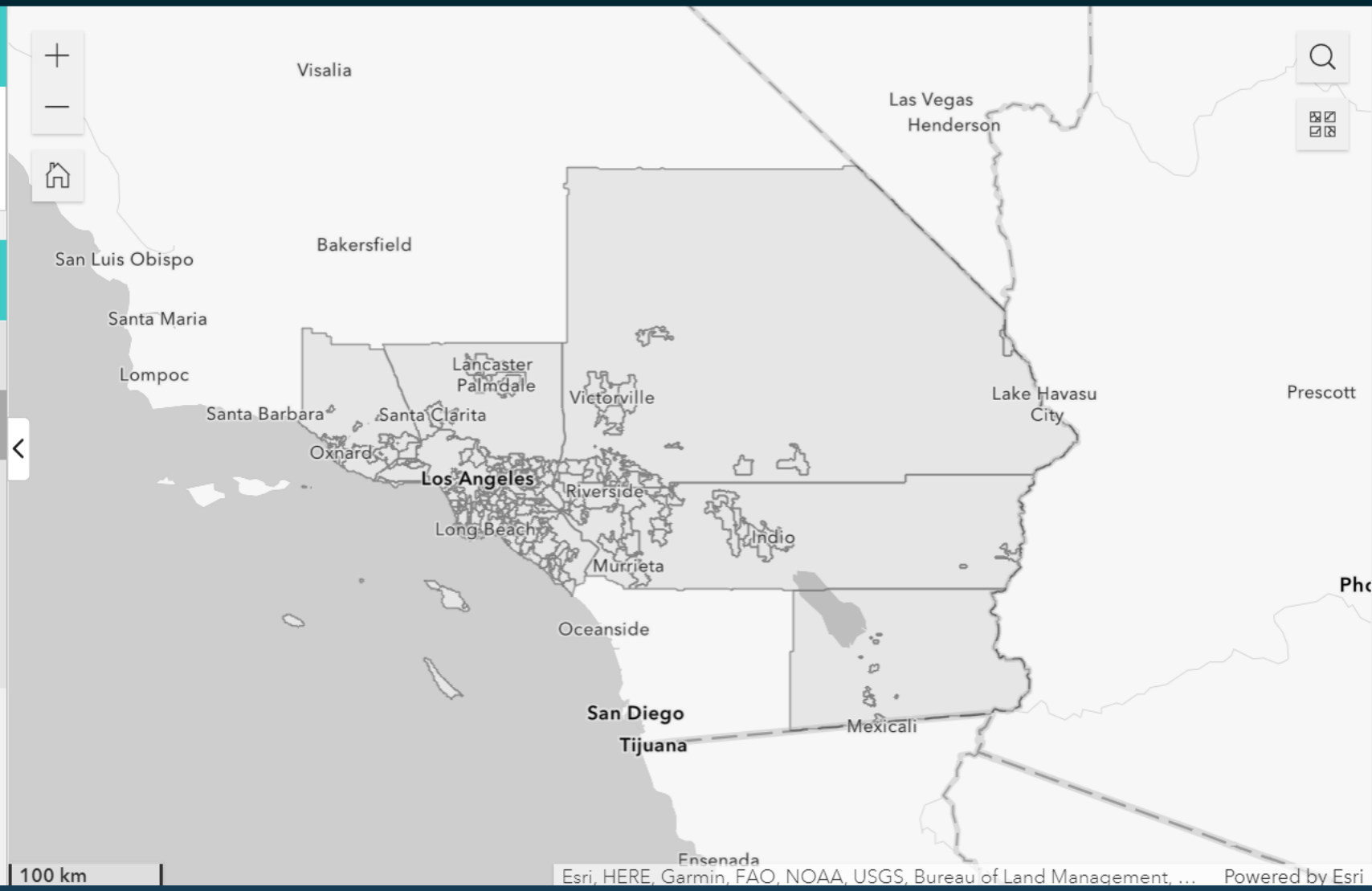
Parcel inside/outside FEMA 100 year flood plain

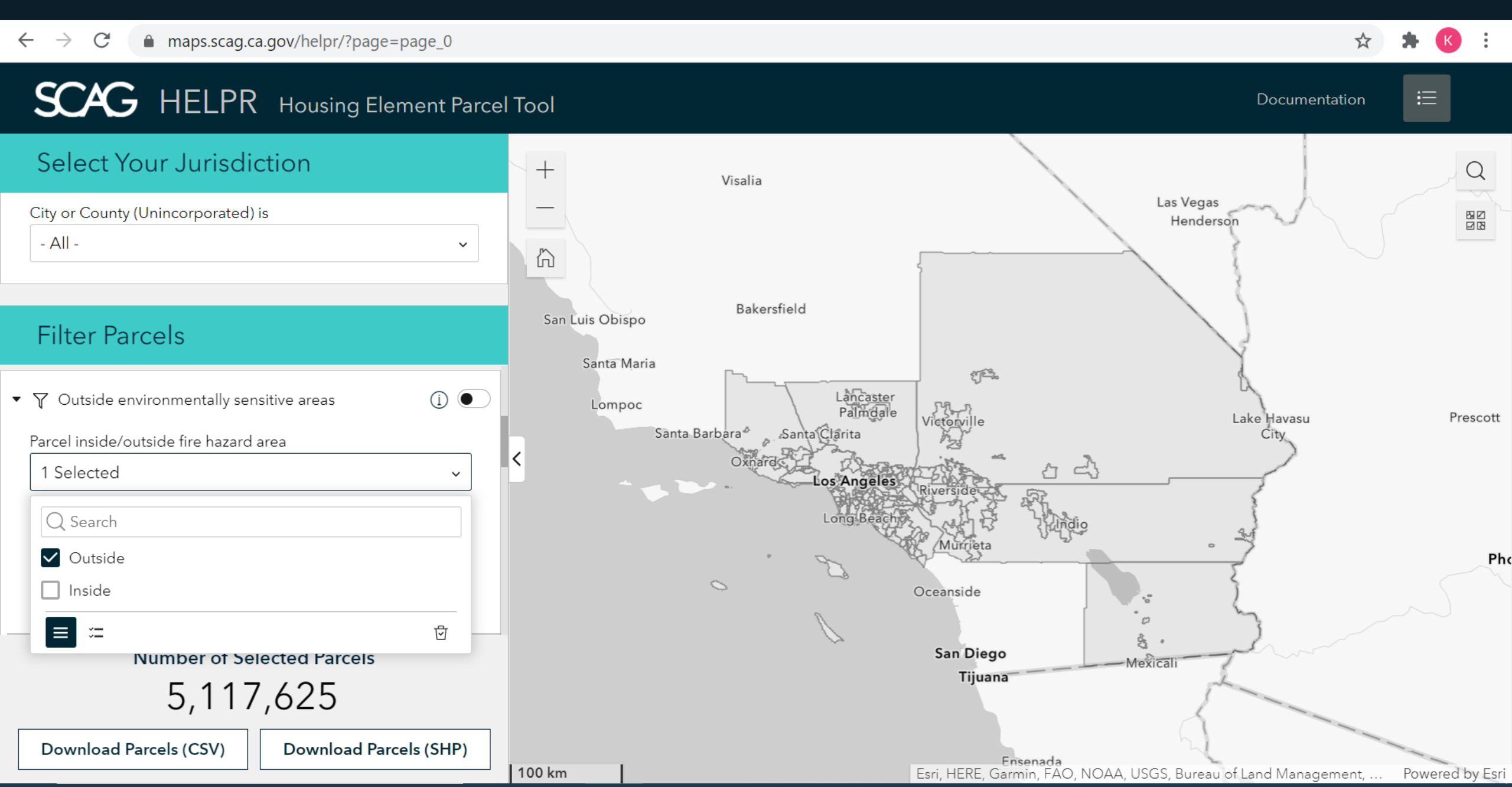
1 Selected

Number of Selected Parcels

5,117,625

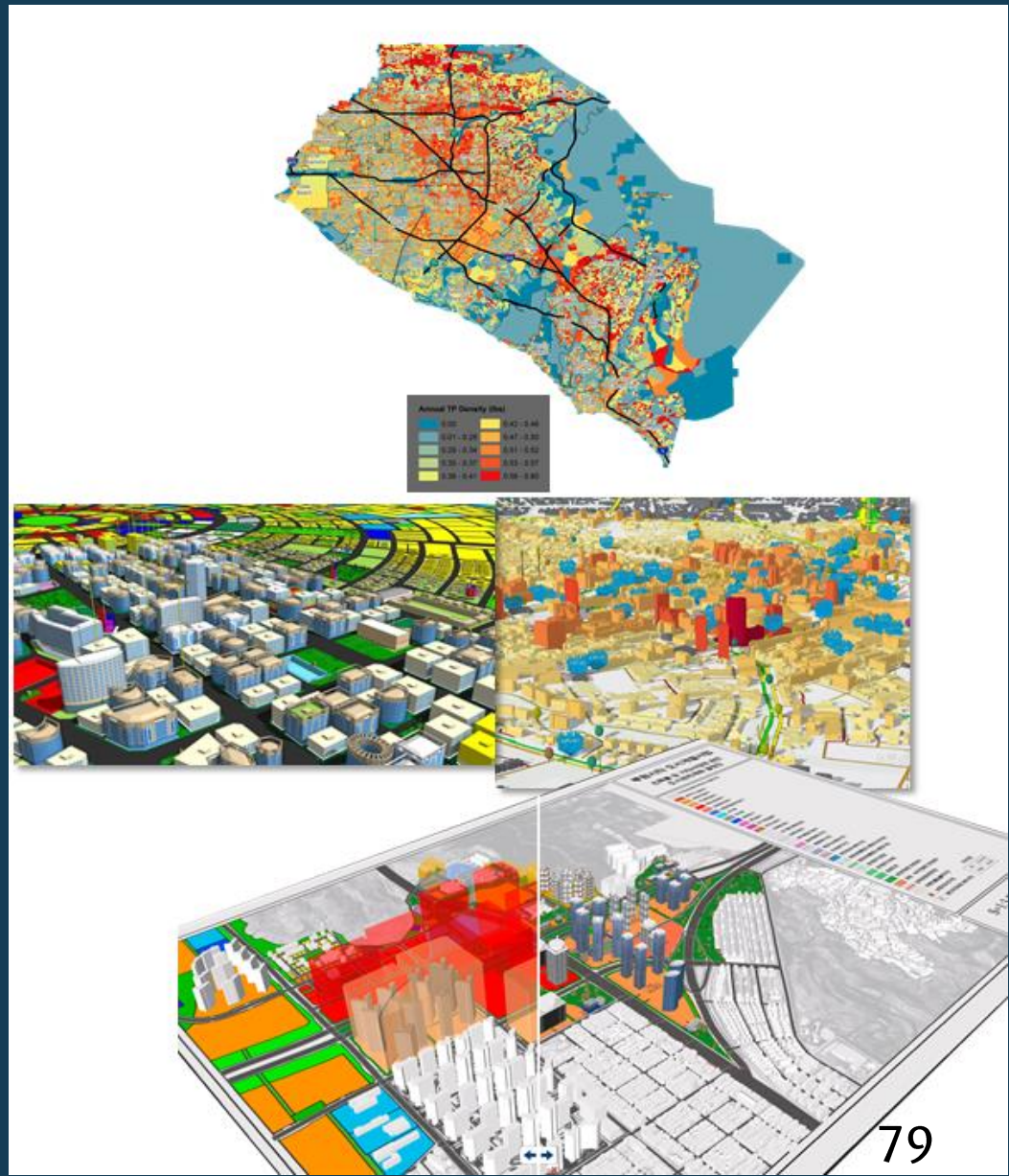
Download Parcels (CSV) | Download Parcels (SHP)




maps.scag.ca.gov/helpr/?page=page_0
SCAG HELPR Housing Element Parcel Tool
Documentation
Select Your Jurisdiction
City or County (Unincorporated) is
- All -
Filter Parcels
Outside environmentally sensitive areas
Parcel inside/outside fire hazard area
1 Selected
Search
Outside
Inside
Number of Selected Parcels
5,117,625
Download Parcels (CSV)
Download Parcels (SHP)
Visalia
Las Vegas
Henderson
Bakersfield
San Luis Obispo
Santa Maria
Lompoc
Lancaster
Palmdale
Victorville
Lake Havasu
City
Prescott
Santa Barbara
Santa Clarita
Oxnard
Los Angeles
Riverside
Long Beach
Indio
Murrieta
Oceanside
San Diego
Tijuana
Mexicali
Ensenada
100 km
Esri, HERE, Garmin, FAO, NOAA, USGS, Bureau of Land Management, ...
Powered by Esri

Regional Data Platform (RDP)

- The HELPR app is powered by the Regional Data Platform
- Sites/parcels you download through the HELPR app can be brought into other Esri tools and applications for further analysis, visualization, and reporting using the complimentary software licenses provided to every jurisdiction through the RDP
- In partnership with SCAG's General Plan Technical Assistance Program, support and training resources will be provided through the RDP to compliment this and future applications
- Esri and SCAG will continue to make capabilities like this available to you through 2021 to support other aspects of General Plan updates, like Safety and Environmental Justice



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