

Climate Vulnerability Assessment & Adaptation Plan

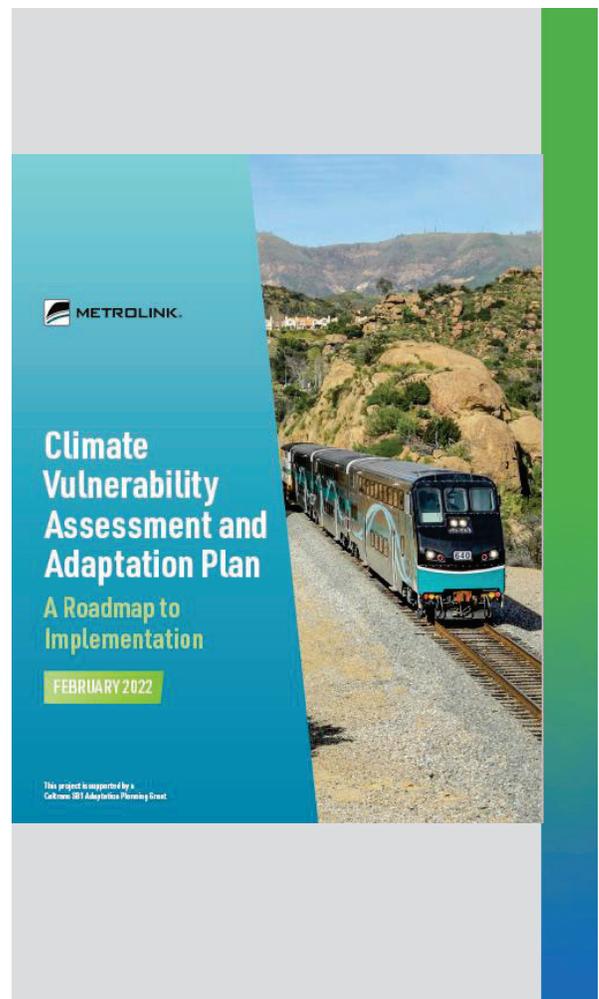
SCAG Regional Council
June 5, 2025



METROLINK

AGENDA

- 1 Project Purpose and Approach
- 2 Vulnerability Assessment Outcomes
- 3 Adaptation Strategies
- 4 CVA Dashboard



Project Purpose & Considerations

- Identify sections of network most vulnerable to future climate change and extreme weather events
- Identify climate-adaptation strategies to address the vulnerabilities and a roadmap for implementation
- Collaborate with new and existing partners through an external stakeholder group on both climate resilience and emergency management
- Consider the most vulnerable, disadvantaged, and transit-dependent populations;
- Align with key SCRRA initiatives including the Transit Asset Management Plan, the Strategic Business Plan, the Fleet Management Plan, The State of Good Repair plan and the Climate Action Plan



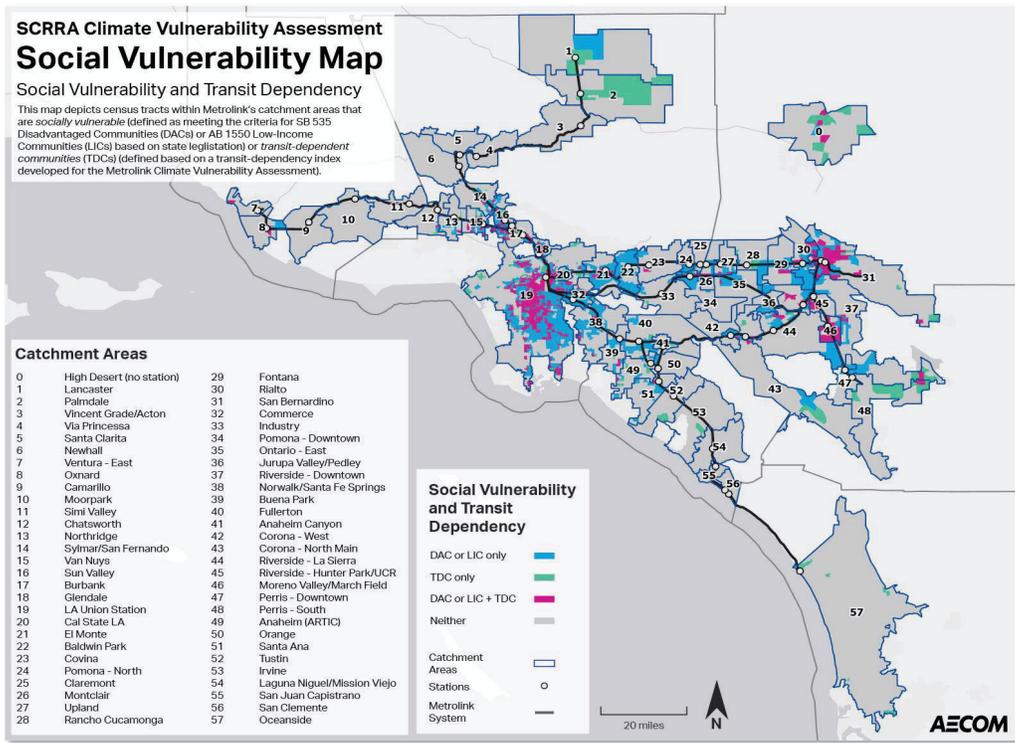
METROLINK 3

Project Stakeholders

- Diverse group of stakeholders: member agencies, local municipalities, not for profit and regional climate groups
- Data sharing with LA Metro and OCTA from their Climate Action/Adaptation Plan and Defense Against Climate Change project
- Three meetings to get feedback on key project components including vulnerabilities and adaptation strategies

Stakeholder Group
BNSF Railway Company (BNSF)
California Department of Transportation (Caltrans)
City of Los Angeles
Climate Resolve
Los Angeles County
Los Angeles Department of Transportation (LADOT)
Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC)
Los Angeles – San Diego – San Luis Obispo Corridor Agency
North County Transit District (NCTD)
Orange County Transportation Authority (OCTA)
Public Health Alliance of Southern California
Riverside County Transportation Commission (RCTC)
San Bernardino County Transportation Authority (SBCTA)
Southern California Area Government (SCAG)
Union Pacific Railroad (UPRR)
Ventura County Transportation Commission (VCTC)
Emergency Preparedness Focus Group
City of Covina Emergency Management
City of Lancaster Emergency Management
Los Angeles County Office of Emergency Management
NCTD
Orange County Sheriff's Department
OCTA
RCTC
San Bernardino County Office of Emergency Services
SBCTA
VCTC
LA Metro

Social Vulnerability



Social Vulnerability

Rank	Socially Vulnerable (DAC or LICs)		Transit Dependent		Both Socially Vulnerable and Transit Dependent	
	Catchment Area	% of HHs	Catchment Area	% of HHs	Catchment Area	% of HHs
1	Sun Valley	91%	Glendale	34%	Lancaster	44%
2	Baldwin Park	87%	Burbank North South DT	29%	Glendale	38%
3	Van Nuys	86%	Sun Valley	28%	Van Nuys	36%
4	Commerce Montebello Commerce	86%	San Bernardino Depot DT	26%	Hunter Park UCR	35%
5	Lancaster	86%	Van Nuys	26%	Burbank North South DT	34%
6	Rialto	83%	La Union Station	25%	San Bernardino Depot DT	32%
7	Glendale	83%	Hunter Park UCR	21%	La Union Station	30%
8	Cal State La	82%	Rialto	21%	Sun Valley	28%
9	Anaheim	82%	Moreno Valley	18%	High Desert	24%
10	El Monte	82%	Commerce Montebello Commerce	17%	Perris South	22%

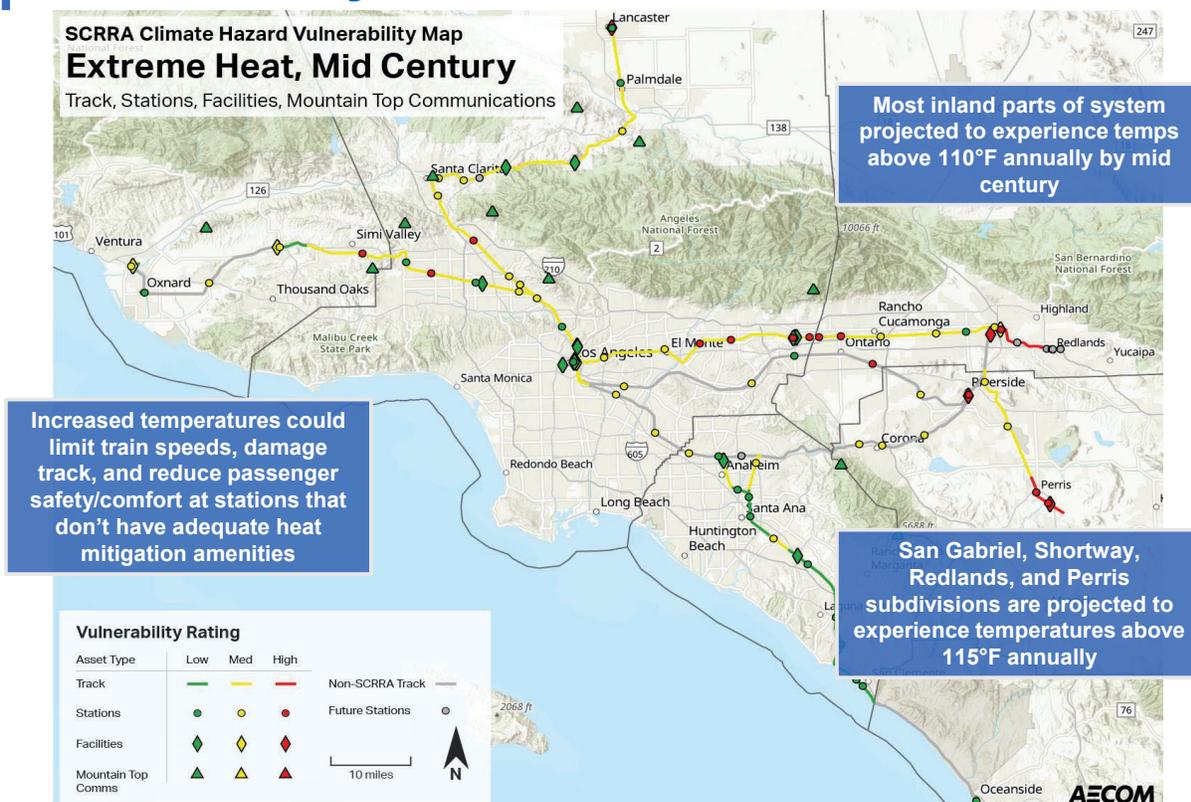
Top Catchment Areas by Percent of Households

Climate Vulnerability Assessment

- Identified Vulnerability (Exposure and Sensitivity) of key assets types to climate hazards:
 - Track
 - Bridges
 - Tunnels
 - Stations
 - Facilities
 - Signals
 - Communications Infrastructure
 - Culverts

<p>Extreme Precipitation</p> 	<p>Storm damage to and/or temporary inundation of bridges, rail lines, stations, or other facilities</p>
<p>Sea Level Rise and Storm Surge</p> 	<p>Erosion and temporary flooding, leading to permanent inundation of rail lines or other facilities</p>
<p>Wildfire</p> 	<p>Damage to or destruction of rail lines, communications infrastructure, or other facilities; power outages</p>
<p>Extreme Heat</p> 	<p>Rail buckling, mandatory vehicle speed reduction orders, unhealthy platform temperatures, power outages</p>
<p>Drought</p> 	<p>Long-term damage to track and/or facility foundations, or to natural systems that prevent flooding/heat</p>
<p>Landslides (Secondary Impact)</p> 	<p>Washing out of rail lines, destruction of track and other facilities, derailment</p>
<p>Earthquakes (Non-climate hazard)</p> 	<p>Damage or destruction of track, bridges, tunnels, stations, or other facilities</p>

Vulnerability Assessment - Extreme Heat



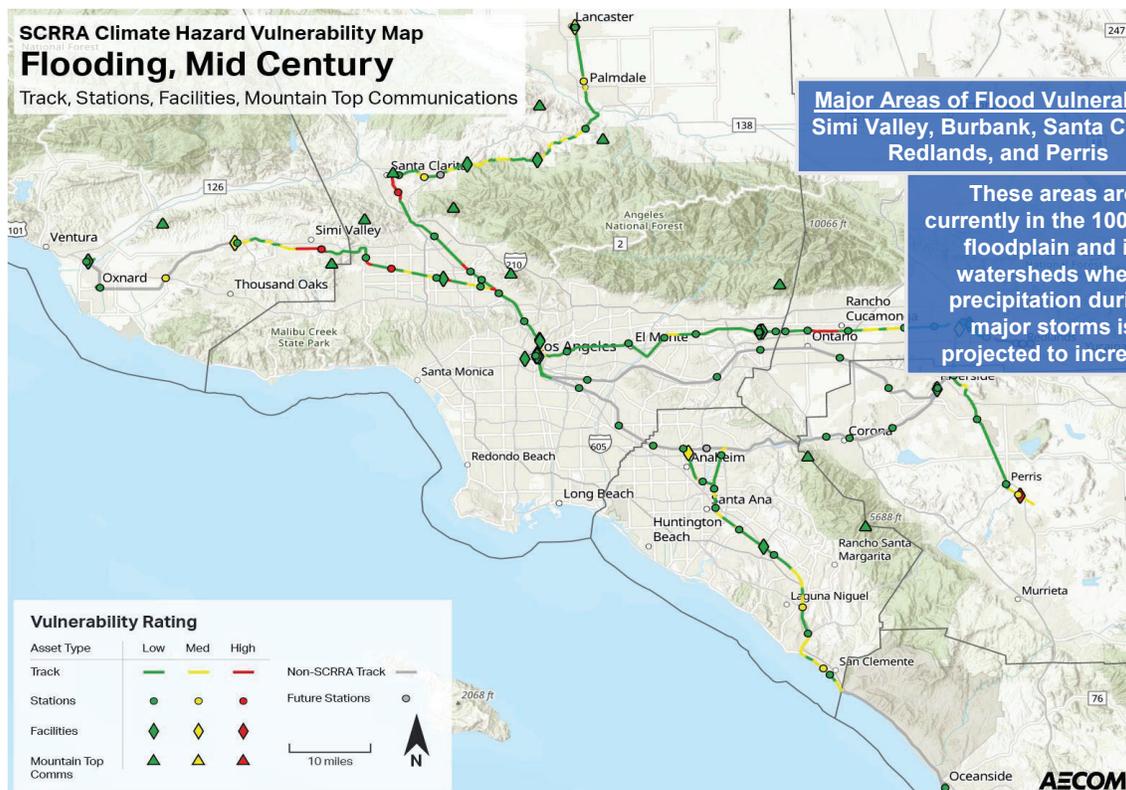
Vulnerability Assessment - Wildfire



Assets with highest vulnerability are mountain top communication towers

Ventura & Valley subdivisions have highest exposure as they run through wildland areas, but overall sensitivity is low

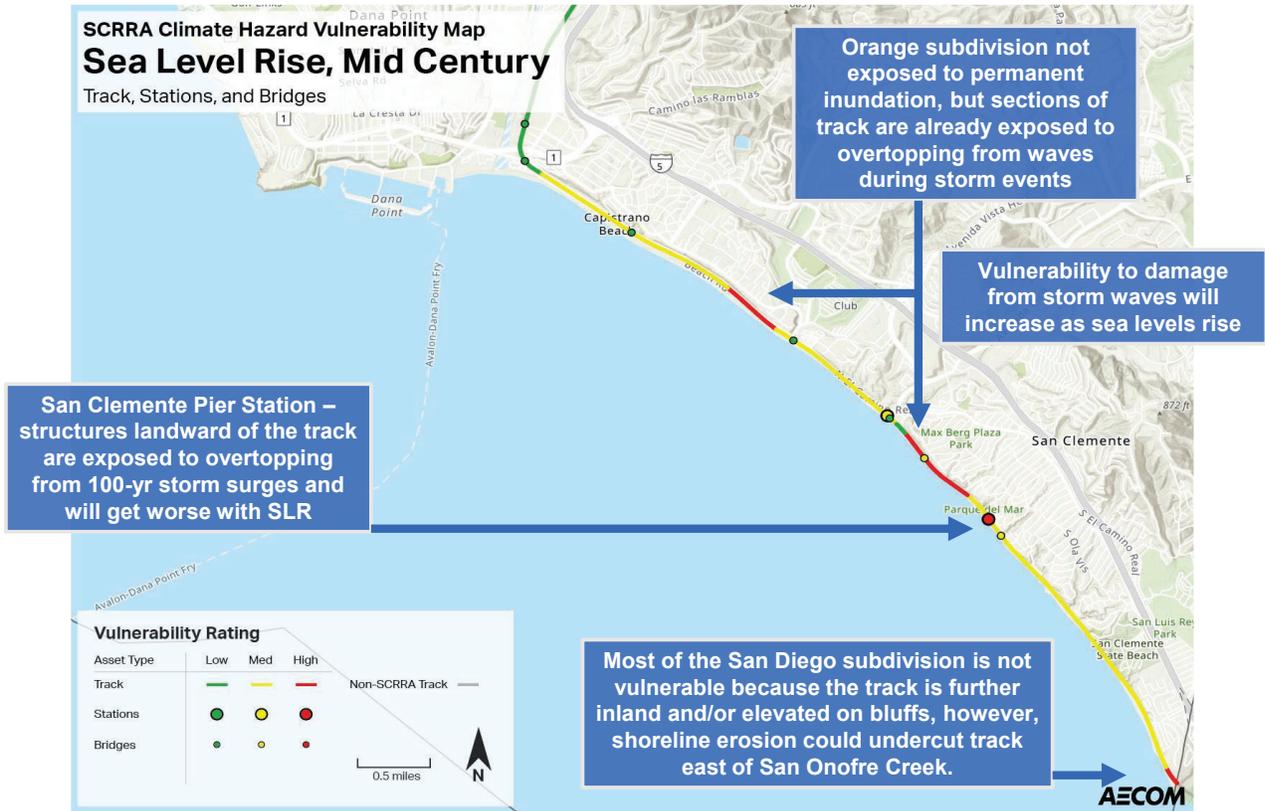
Vulnerability Assessment - Flooding



Major Areas of Flood Vulnerability: Simi Valley, Burbank, Santa Clarita, Redlands, and Perris

These areas are currently in the 100-year floodplain and in watersheds where precipitation during major storms is projected to increase

Vulnerability Assessment – Sea Level Rise



Climate Adaptation Strategies



Climate Vulnerability- Stations

Station	Subdivision	County	Score
Sea Level Rise (Mid-Century)			
San Clemente Pier	San Diego	San Diego	10
Flooding (Mid-Century)			
Simi Valley	Ventura	Ventura	10
Santa Clarita/Newhall	Valley	Los Angeles	10
Northridge	Ventura	Los Angeles	10
Extreme Heat (Mid-Century)			
Sylmar/San Fernando	Valley	Los Angeles	12
Simi Valley	Ventura	Ventura	12
Northridge	Ventura	Los Angeles	12
Claremont	San Gabriel	Los Angeles	12
Pomona (North)	San Gabriel	Los Angeles	12
East Ontario	Los Angeles	San Bernardino	12
San Bernardino Downtown	San Bernardino	Riverside	12
Baldwin Park	San Gabriel	Los Angeles	12
Covina	San Gabriel	Los Angeles	12
Montclair	San Gabriel	San Bernardino	12
Upland	San Gabriel	San Bernardino	12
Riverside Downtown	Redlands	San Bernardino	10
Perris-South	Perris Valley	Riverside	10
Perris Downtown	Perris Valley	Riverside	10
Wildfire Landslides/Mudslides, Seismic (Mid-Century).			
No stations have high vulnerability to wildfires, landslides or earthquakes.			

Climate Adaptation Plan - Stations

Extreme Heat Strategies

- Plant shade trees/drought tolerant plants in parking lot
- Install shade structures on platform
- Add seating under shade structures
- Install misters
- Install hydration stations



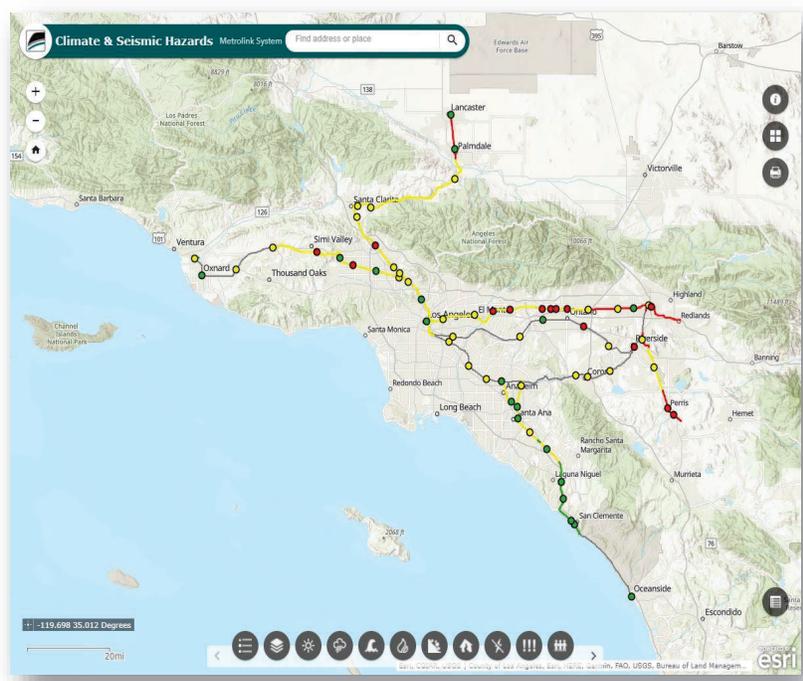
Review of SCORE Projects

- Reviewed 5 projects for potential climate vulnerabilities and identified potential adaptation strategies.
- Demonstrates how CVA outputs (vulnerability assessment and strategy toolkit) can be applied at the project level.



Interactive Vulnerability Dashboard

- Displays vulnerability assessment results.
- Ensure outputs can be easily explored/ accessed by Metrolink staff and departments



Demo of CVA Dashboard

- [Climate & Seismic Hazards \(arcgis.com\)](#)

METROLINK 17



Climate Vulnerability Adaptation Plan

- [Full Report](#)
- [Summary Report](#)

**THANK
YOU**