



Climate Action & Adaptation Plan

Recommendation to City Council for Plan Adoption & EIR Certification

May 19, 2022

Reminder: What is the Climate Action & Adaptation Plan (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

CAAP Status

- Development of a CAAP is a mitigation measure of the Land Use Element (LUE) Program EIR
- City Council confirmed the CAAP on January 5, 2021
 - Confirmed GHG reduction pathway for 2030
 - Directed staff to develop the EIR
- Staff has prepared a Subsequent Environmental Impact Report (SEIR) as required by the California Environmental Quality Act (CEQA)
- March 17th Study Session with Planning Commission
- Public review period for the Draft SEIR: March 18 - May 2, 2022
- Final SEIR and CAAP are before the Commission for Recommendation to City Council

CAAP Overview: What Will the CAAP Do?

The implementation of the CAAP will help Long Beach realize:

- 1 Low carbon, climate resilient buildings and neighborhoods
- 2 Safe and adaptable infrastructure
- 3 Protected and enhanced natural systems
- 4 A healthy, resilient and ready population
- 5 Residents and businesses with minimized carbon footprints

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



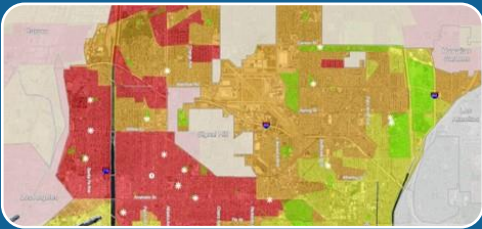
Mitigation

- 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

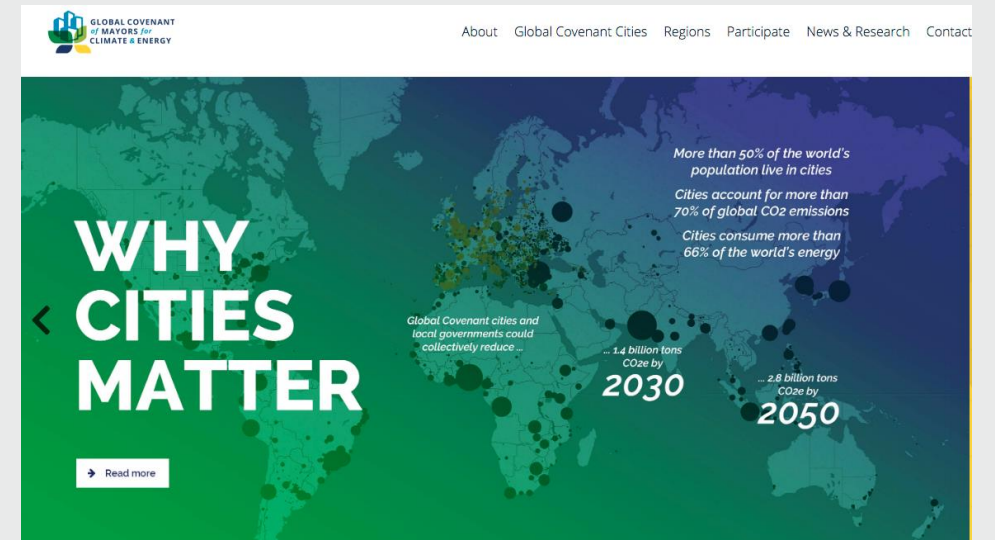
- State emissions reduction targets do not ensure that climate issues are equitably addressed
- CAAP helps address environmental justice & can help steer climate finance opportunities to communities most impacted by climate change

Why do we need a CAAP?

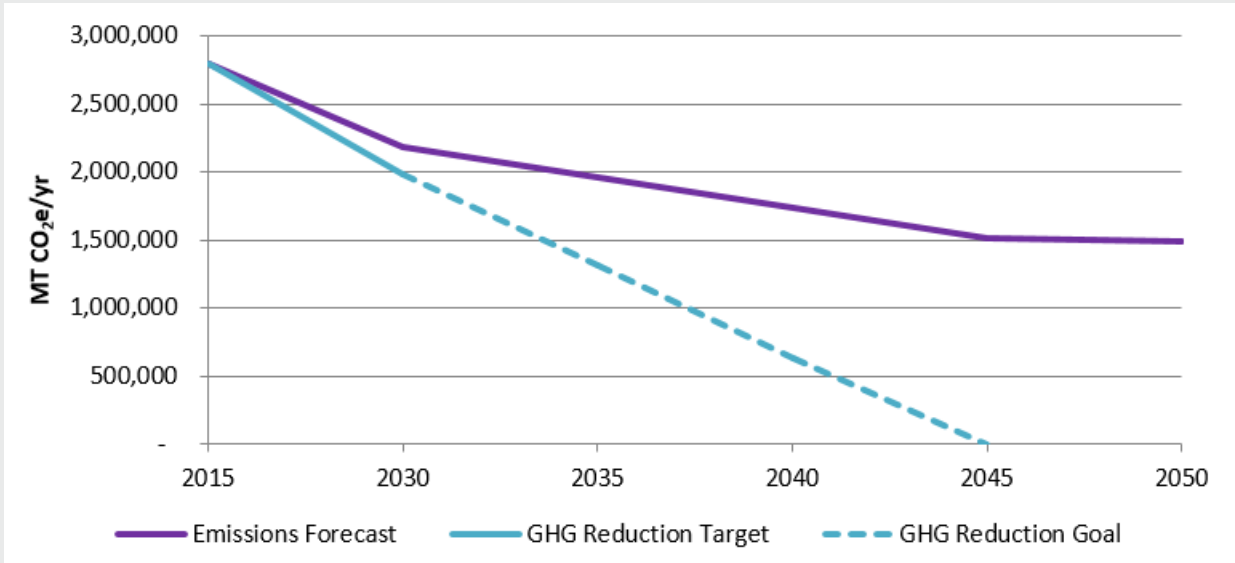
Target Year	State Target	Corresponding Legislation	City Status
2020	1990 GHG levels by 2020	AB 32, Global Warming Solutions Act (2006)	California met this target Statewide
2030	40% below 1990 levels by 2030	SB 32, Global Warming Solutions Act (2006)	The CAAP is a plan for Long Beach to meet this target 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

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)



Long Beach GHG Emissions Reduction Pathway



State:
192,659
MT CO₂e
equivalencies



41,623
Passenger
vehicles
driven for one
year



32,618
homes'
electricity use
for one year

Performance towards the City’s GHG reduction target will be monitored regularly and strategies adjusted as needed.

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
GHG Reductions Anticipated	363,250 MT CO ₂ e

2030 GHG Reduction Target by Service Population	
Business as Usual Target	3.34 MT CO ₂ e
Emissions Target Level (State)	3.04 MT CO ₂ e
Reduction Needed (State)	0.3 MT CO ₂ e (9% reduction/person)
Long Beach GHG Pathway	2.78 MT CO ₂ e
Reduction Needed (Long Beach GHG Pathway)	0.56 MT CO ₂ e (17% reduction/person)

CEQA Review for the CAAP

- CAAP is a “project” under CEQA (policy plan but no physical project)
- Provides program level analysis to assess possible impacts of CAAP actions and adaptation framework
- Does not environmentally clear any physical projects or improvements
- EIR also covers General Plan Safety Element updates to incorporate climate adaptation and resiliency pursuant to state law
- Subsequent EIR to the LUE PEIR
- No new significant impacts found under CEQA



San Francisco
Planning

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Compliance Checklist Table for Greenhouse Gas Analysis: Table 1. Private Development Projects

A. GENERAL PROJECT INFORMATION

Date:	Case No.:
Project Name:	
Project Address:	Block/Lot:
Standard to be met (Select one):	Date of site permit submittal (if applicable):
Compliance Checklist Prepared By:	Date:
Brief Project Description:	

B. COMPLIANCE CHECKLIST TABLE

Instructions: Complete the following table by determining project compliance with the identified adopted regulations and providing project-level details in the "Remarks" column. Projects that do not comply with an ordinance/regulation may be determined to be inconsistent with San Francisco's Greenhouse Gas Reduction Strategy, although compliance with most ordinances/regulations is not optional. (See next page)

1. Refer to the standard to be met per the San Francisco Green Building Code. See <http://sfplanning.org/administrative-bulletins> for latest "AB-093" to determine which standard your project is required to meet, if applicable.

CAAP Consistency Checklist

- CAAP is designed to be a qualified climate action plan pursuant to CEQA (*State CEQA Guidelines* Section 15183)
- All future project subject to CEQA in Long Beach will have to complete the CAAP checklist
- Projects consistent with the LUE and CAAP checklist will be eligible to streamline project-level GHG analysis under CEQA thanks to consistency with the program level strategies of the LUE and CAAP
- Extensive technical analysis conducted for this EIR to show what actions new projects will have to incorporate to demonstrate that future development takes on a “fair share” of the GHG reductions needed citywide to meet state reduction targets
- Projects not consistent will still have to complete project-level GHG analysis

Checklist Example: Building Energy

Building Energy

1. TIER 1: Zero-Carbon Electricity

For all projects except heavy industry (but including light industrial projects), the project must utilize 100% zero-carbon electricity on-site. The project must comply with one of the following options:

1. Install on-site renewable energy systems or participate in a community solar program to supply 100% of the project's estimated energy demand to the maximum extent feasible.
2. Participate in Southern California Edison at the Green Rate level (i.e., 100% carbon-free electricity) for all electricity accounts associated with the project until which time SCE provides 100% carbon-free electricity for all accounts by default.
3. A combination of #1 and #2 above such that 100% of the project's electricity is zero-carbon.

Supports CAAP Measures: BE-1, BE-2, BE-3

Describe which project consistency options from the leftmost column you are implementing.

OR,

Describe why this action is not applicable to your project.

OR,

Describe why such actions are infeasible and identify the alternative measure proposed as a replacement strategy (provide additional documentation as described below)

☐ Project Complies

☐ Not Applicable

☐ Project Does Not Comply

☐ Alternative Measure Proposed

2. TIER 1: MUNICIPAL PROJECTS ONLY: Reduce Energy Use and Supply the Project with Renewable Electricity

The Project must incorporate the following design elements to the maximum extent feasible:

1. Incorporate strategic energy management programs to reduce building energy demands.
2. Energy efficiency design features to reduce electricity and

Describe which project consistency options from the leftmost column you are implementing.

OR,

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OR,

Describe why such actions are infeasible and identify the alternative measure proposed as a replacement strategy (provide additional

☐ Project Complies

☐ Not Applicable

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☐ Alternative Measure Proposed

Checklist Example: Transportation

10. TIER 1: Incorporate Pedestrian Infrastructure

The project must incorporate pedestrian infrastructure into its design:

1. Pedestrian facilities and connections to public transportation consistent with the City's Mobility Element, CX3 Pedestrian Plan, and any other relevant governing plan
2. Increase sidewalk coverage to improve pedestrian access
3. Improve degraded or substandard sidewalks
4. Maximize shade for pedestrians through tree planting and maintenance
5. Incorporate best practices to ensure pedestrian infrastructure is contiguous and links externally with existing and planned pedestrian facilities; best practices include high-visibility crosswalks, pedestrian hybrid beacons, and other pedestrian signals, mid-block crossing walks, pedestrian refuge islands, speed tables, bulb-outs (curb extensions), curb ramps, signage, pavement markings, pedestrian-only connections and districts, landscaping, and other improvements to pedestrian safety
6. Minimize barriers to pedestrian access and interconnectivity, such as walls, landscaping buffers, slopes, and unprotected crossings

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Public Participation

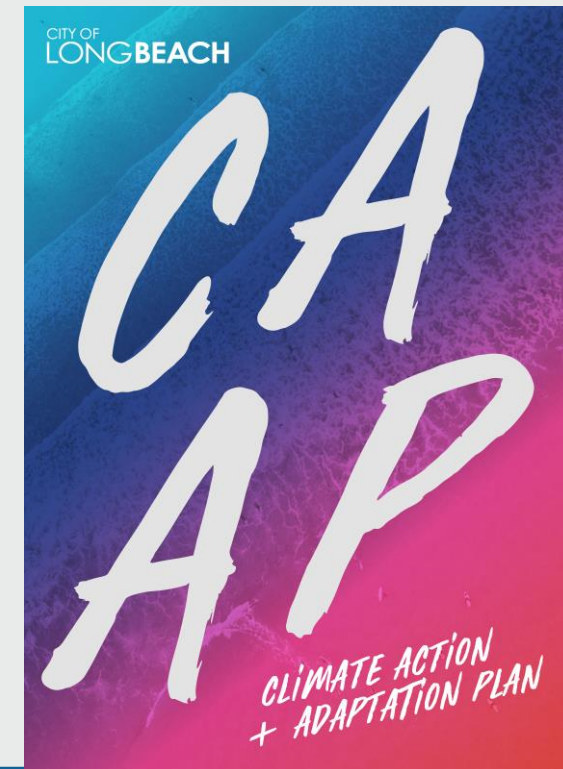
- 10,000+ residents engaged in developing the CAAP
- SEIR process
 - Native American Tribal Consultation July 2021
 - Scoping Meeting 9/1/21
 - Draft SEIR Comment Period 3/18/22-5/2/22
 - 7 comments received
 - 3 state and local government agencies
 - 4 interested parties
 - All comments responded to in Final SEIR



Recommendation

Recommend that the City Council adopt a Resolution approving and adopting a Subsequent Environmental Impact Report (EIR-03-21) to the General Plan Land Use Element and Urban Design Element Program Environmental Impact Report (PEIR) (PEIR-SCH# 2015051054), in accordance with the provisions of the California Environmental Quality Act (CEQA) Section 15164 of the CEQA Guidelines, and making certain CEQA Findings and Determinations relative thereto, including a finding that the adopted General Plan Land Use Element PEIR Mitigation Monitoring and Reporting Program shall apply; and that no new or different mitigation measures are required; approving the Climate Action and Adaptation Plan (2205-02); and

Recommend that the City Council adopt a resolution authorizing the Director of Development Services to submit Policy and Ordinance amendments, as necessary to the California Coastal Commission for its review, approval and certification to obtain a finding of conformance with the City's Certified Local Coastal Program (LCPA22-001).



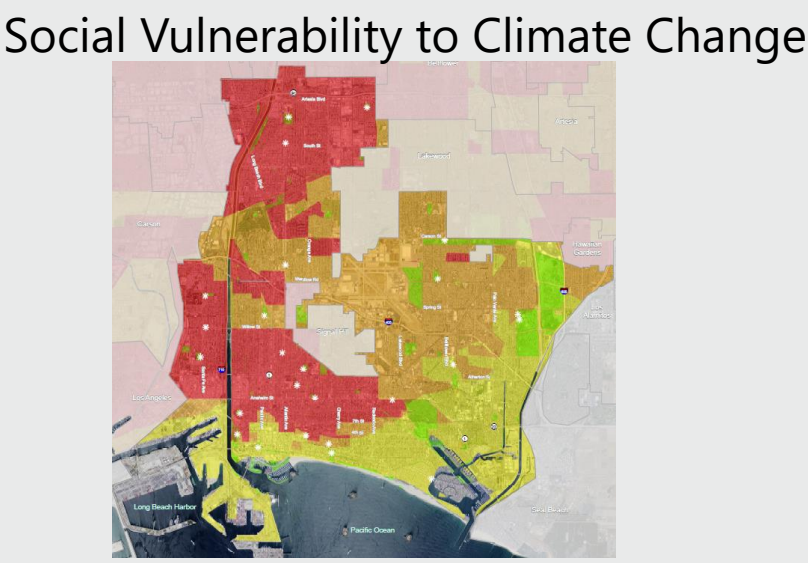
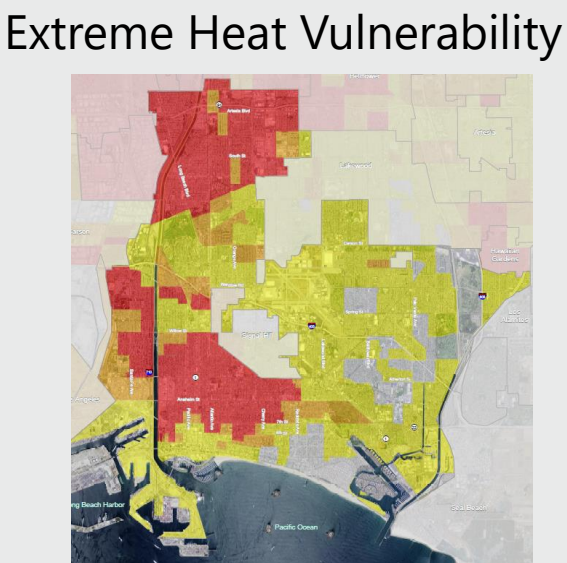
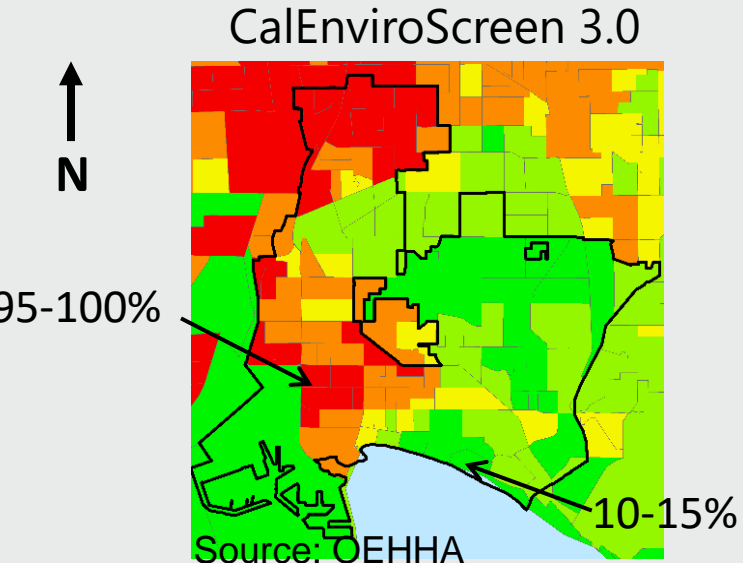


Thank you

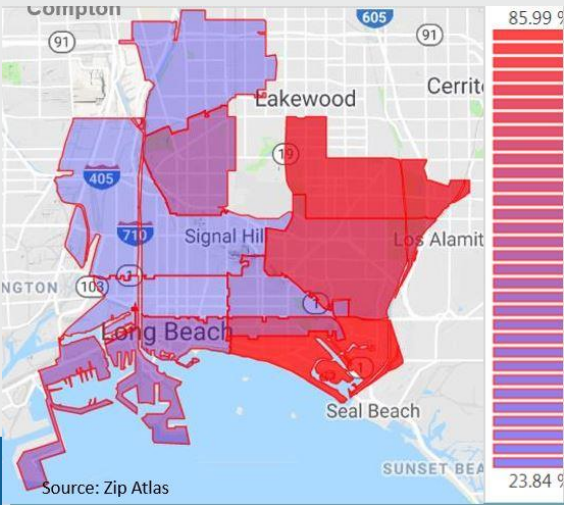
Alison Spindler-Ruiz
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The following are resource slides for Q&A

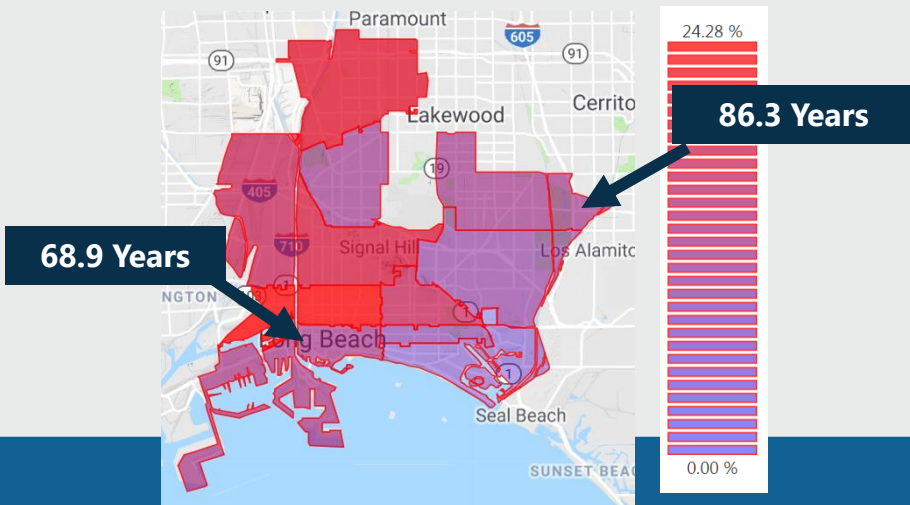
Climate Change in the Environmental Justice Context



Percentage of White Residents



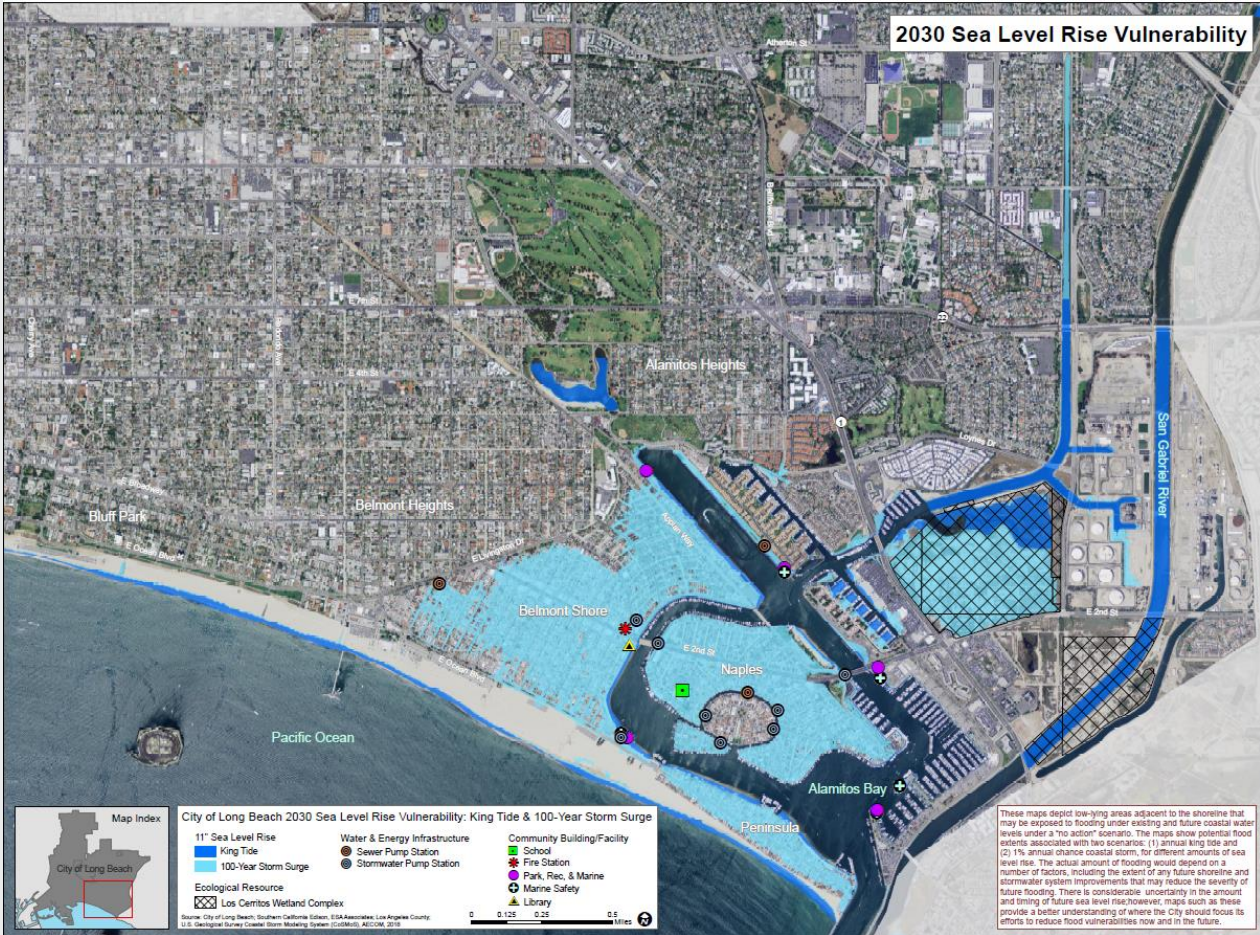
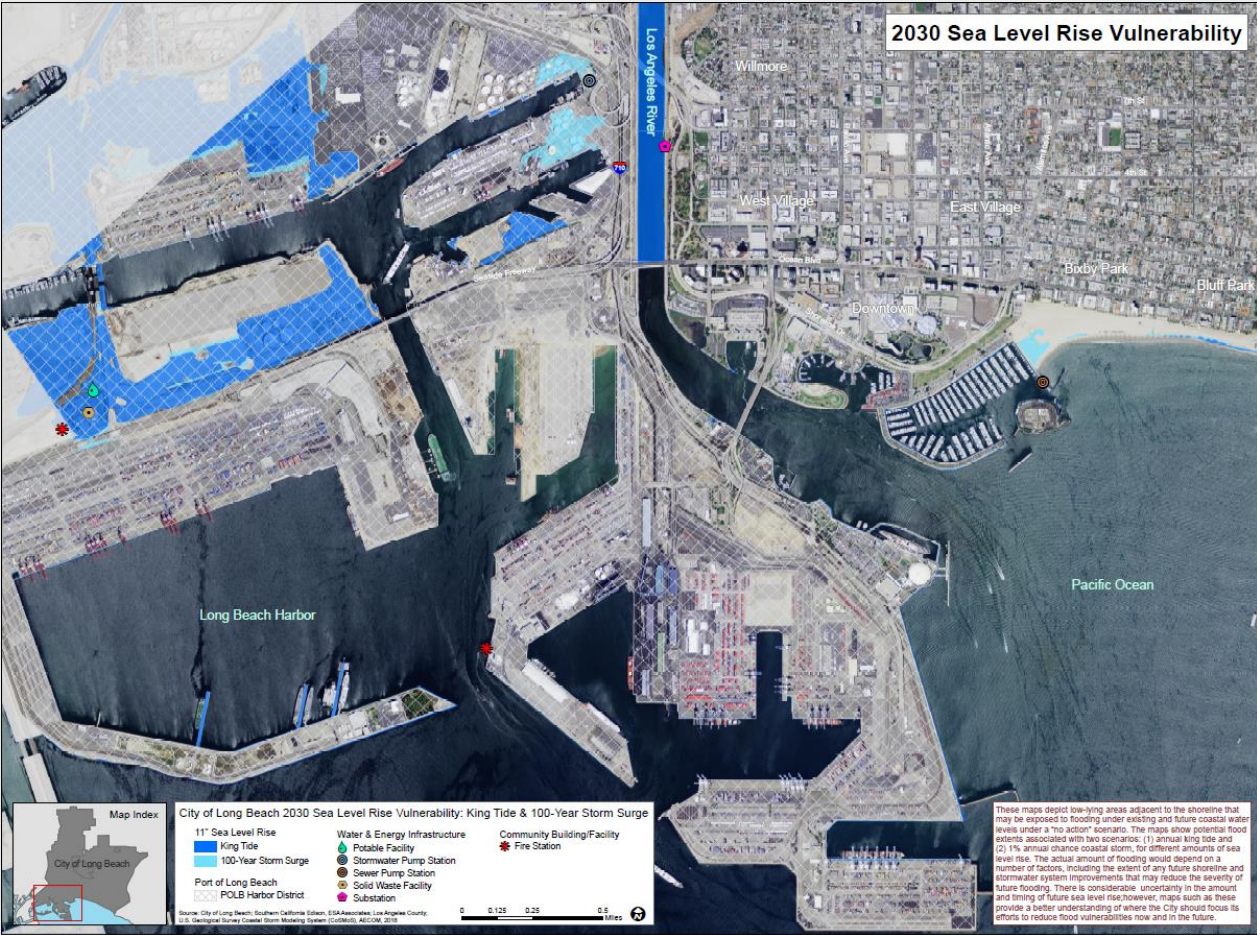
Percentage of Children under Age 10



Life Expectancy at Birth

East Side:	86.3 years
- West Side:	68.9 years
Difference	17.4 years


Near-Term Sea Level Rise Impacts (2030)



Climate Change is Already Impacting Long Beach

2015 Weeklong Power Outage in Downtown Long Beach during Heat Wave

Public transit resumes in Long Beach after 3 day power outage



A crew worker places a manhole cover back on the street on Saturday, July 18, 2015. (KABC)

By ABC7.com staff

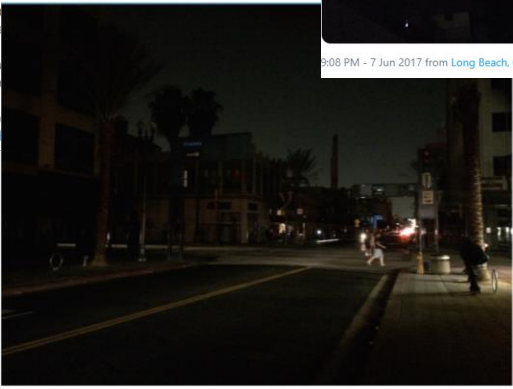
Saturday, July 18, 2015

LONG BEACH, Calif. (KABC) -- Power was restored Saturday morning after a series of underground electrical fires.

The restored electricity allowed Long Beach Transit to resume service, but customers should expect some minor delays.

Less than 200 people are still without power, according to city officials. About 200 customers were still without power as of Saturday morning.

LONG BEACH POST



UPDATE: Long Beach Power Outage Continues Mid-Morning Friday as 3,723 Downtown Residents Remain in the Dark

Jul 17 2015 9:34 AM

Shells @Dollpowerx

Power outage rn #LongBeach 🤔



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

2017 Flooding during intense storm in Long Beach

AstroTurin @AstroTurin

The 710 freeway in #longbeach #storm #losangeles #california January 22, 2017



22.4K views

4:30 PM - 22 Jan 2017



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



LBDP North Division @LBPDNorth

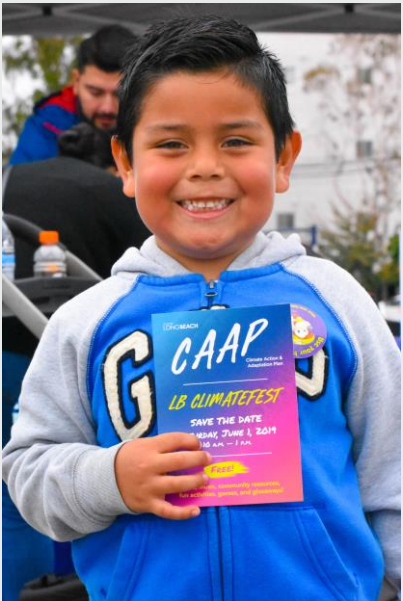
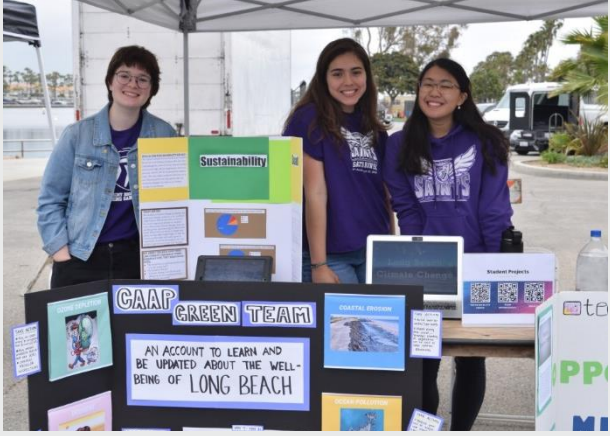
One of many rescues today found by a LB Sergeant & rescued by LB Fire @lbfd personnel. Passenger was in a wheelchair.

10:14 PM - Jan 22, 2017

42 22 people are talking about this

CAAP Community Outreach (2018 - 2019)

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

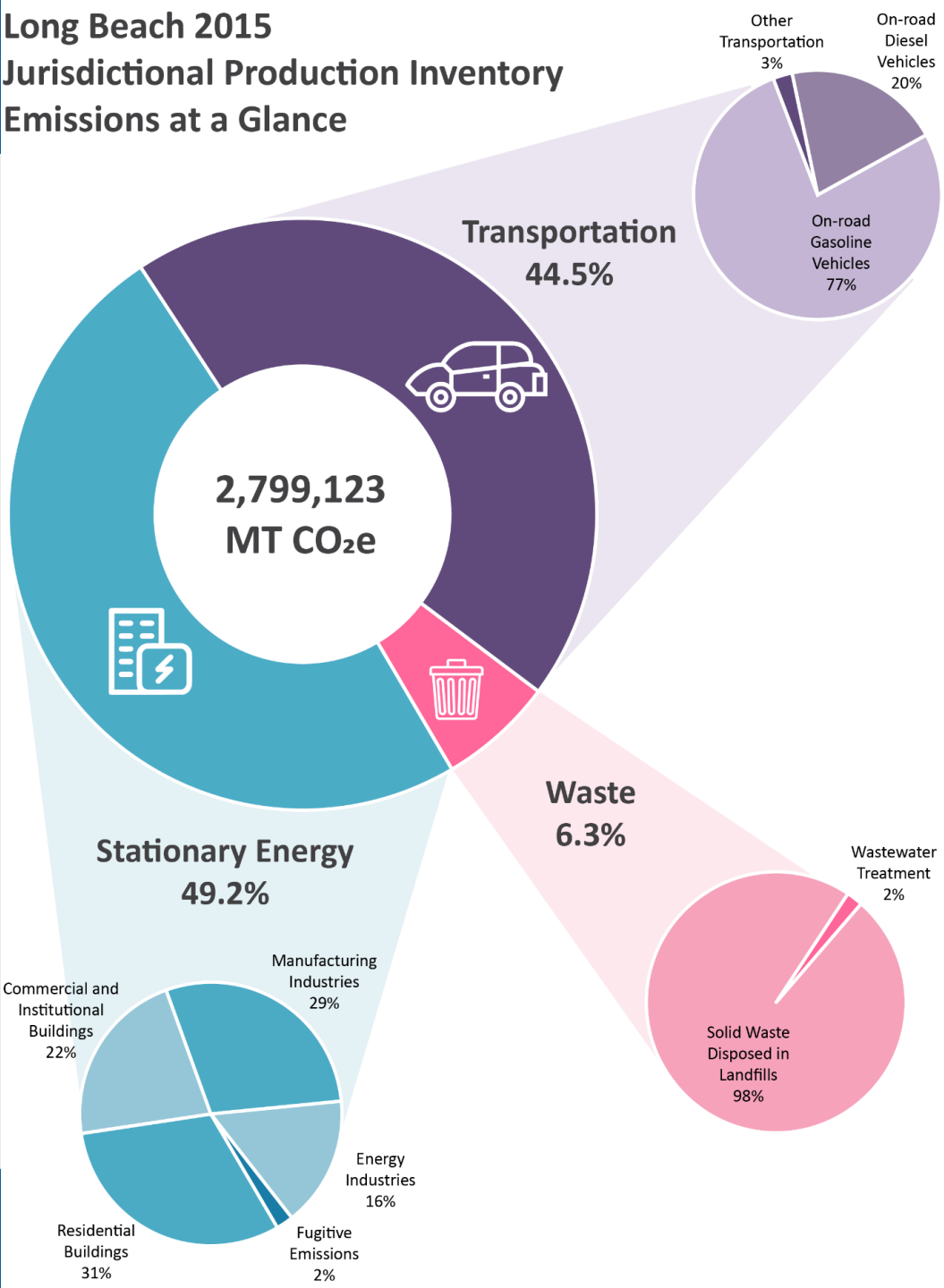


GHG Inventory

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	--

- Port waterborne activity not considered for GHG target-setting purposes because the City does not have direct authority to dictate emissions reductions for the Port.
- Airplane emissions from Long Beach Airport not considered for GHG target-setting purposes because the City has limited control as these emissions are federally regulated.

Long Beach 2015 Jurisdictional Production Inventory Emissions at a Glance



Quantified Emissions Reduction Measures

2030 GHG Reduction Needed: 192,659 MT CO₂e

Action	2030 MT CO ₂ e/year*
Buildings	247,700
SCE Carbon-Free Electricity	188,960
Local Solar	3,880
Municipal Renewable Electricity	13,120
Reduced Oil Production	41,740

Action	2030 MT CO ₂ e/year*
Transportation	30,480
Port Clean Trucks Program	25,250
Enhanced VMT Reduction	5,230
Waste	85,070
Commercial Recycling	45,340
Commercial Organics Diversion	39,730
Total	363,250

*Estimates were developed based on standard GHG inventory protocols and methods.

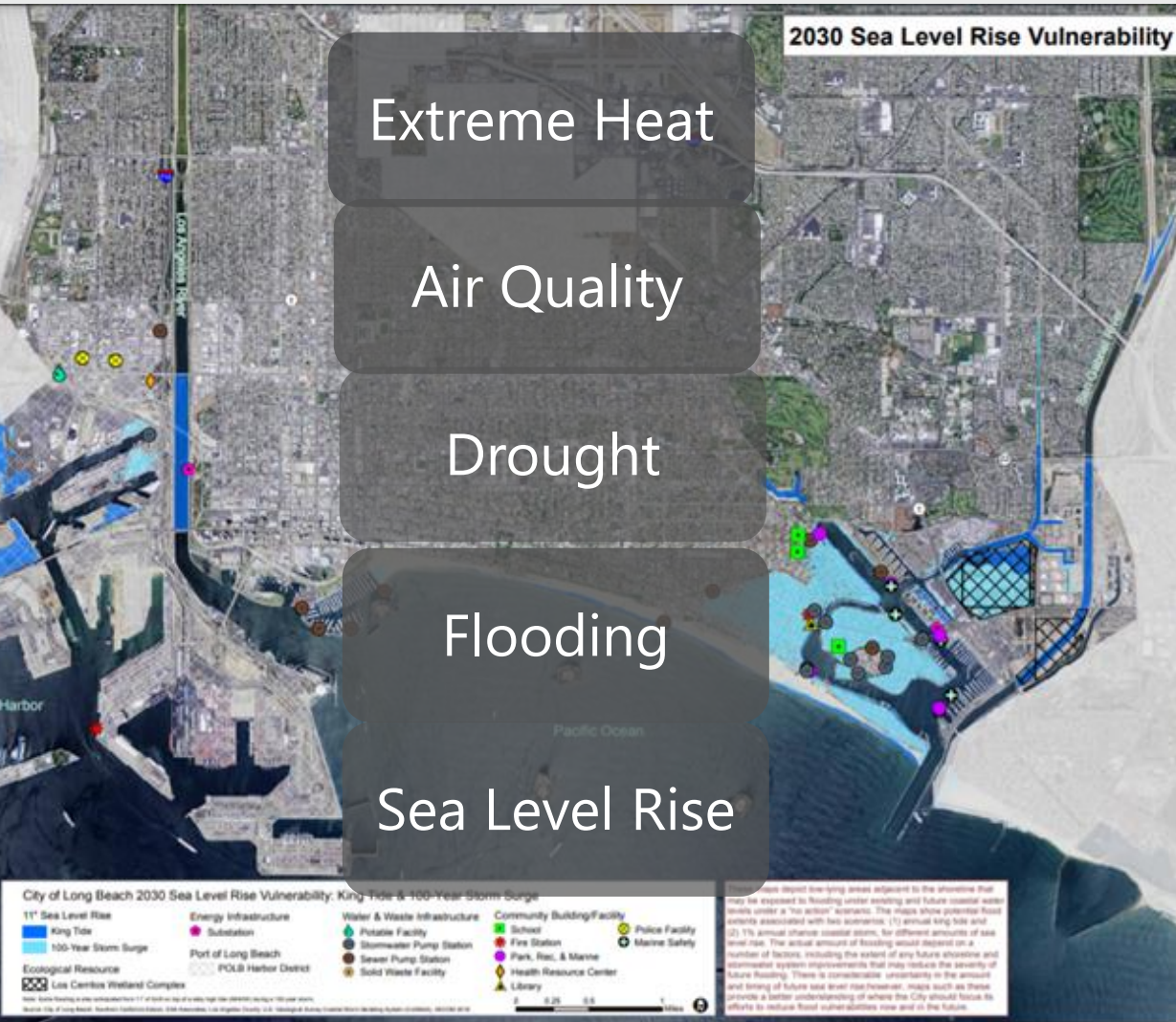
Mitigations towards Low Carbon Buildings & Neighborhoods

THEME	SECTOR/ STRESSOR	ACTION	ACTION NUMBER
Low carbon, climate resilient buildings and neighborhoods	Building + Energy	● Increase use of solar power including by promoting community solar and microgrids	● BE-2 BE-3
	Building + Energy	● Develop a residential and commercial energy assessment and benchmarking program and provide energy efficiency financing, rebates, and incentives for building owners	● BE-4 BE-5
	Building + Energy	● Perform municipal energy and water audits	● BE-6
	Building + Energy	● Update building codes to incentivize electric new residential and commercial buildings	● BE-7
	Air Quality	● Incentivize installation of photocatalytic tiles	● AQ-1
	Drought	● Continue development and implementation of water use efficiency programs and implement additional water conservation programs	● DRT-1
	Extreme Heat	● Increase presence of cool roofs and cool walls	● EH-1
	Extreme Heat	● Enhance and expand urban forest cover and vegetation	● EH-3

Minimizing the Carbon Footprint of Residents and Businesses

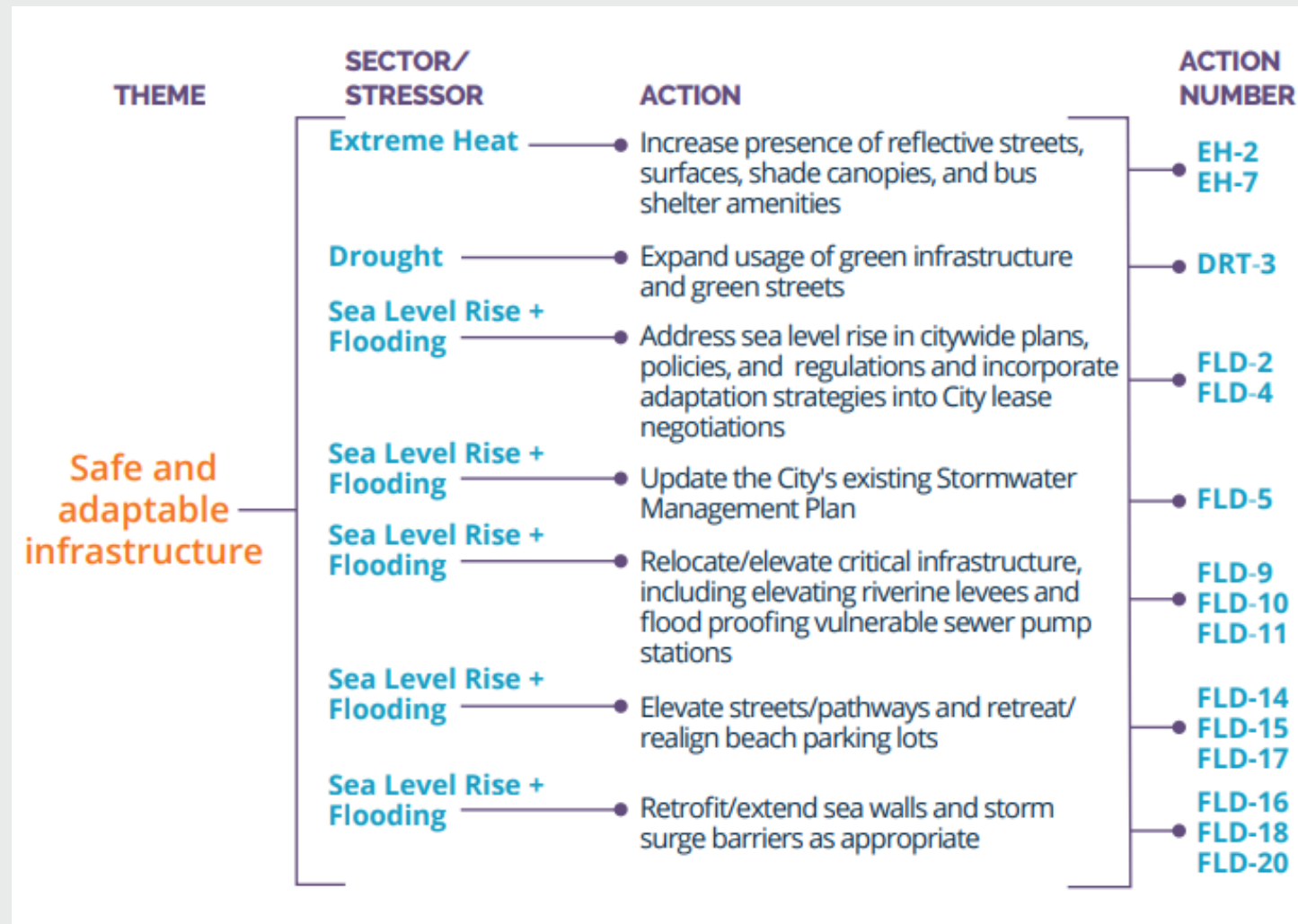
THEME	SECTOR/ STRESSOR	ACTION	ACTION NUMBER
Residents and businesses with minimized carbon footprint	Transportation	Expand and improve pedestrian and bikeway infrastructure citywide	T-2 T-3
	Transportation	Implement the San Pedro Bay Ports Clean Trucks Program	T-4
	Transportation	Increase access to additional electric vehicle charging stations	T-5
	Transportation	Increase employment and residential development along primary transit corridors and increase frequency of public transit and access to multimodal transportation	T-1 T-6
	Transportation	Increase density and mixing of land uses and update the Transportation Demand Management Ordinance to require strategies that encourage multimodal transportation use	T-7 T-8 T-9
	Building + Energy	Provide access to renewably generated electricity	BE-1
	Building + Energy	Implement short-term measures to reduce emissions related to oil and gas extraction	BE-8
	Waste	Increase recycling in multifamily and commercial development, in compliance with state law	W-1
	Waste	Develop an organic waste collection program and identify organics processing options such as composting, mulching or anaerobic digestion	W-2 W-3 W-4
	Air Quality	Support sustainability planning efforts at the Long Beach Airport and San Pedro Bay Ports and support LBUSD school bus electrification	AQ-3 AQ-5 AQ-6
	Air Quality	Electrify local, small GHG emitters such as lawn and garden equipment, outdoor power equipment, and others	AQ-4

Adaptations Towards A Healthy, Resilient and Ready Population



THEME	SECTOR/ STRESSOR	ACTION	ACTION NUMBER
A healthy, resilient and ready population	Extreme Heat	Install additional water fountains and undertake other actions to increase public access to water	EH-4
	Extreme Heat	Identify future vulnerability potential for power outages related to extreme heat and develop plans to prevent outages	EH-5
	Extreme Heat	Enhance and expand accessibility to cooling centers	EH-6
	Extreme Heat	Improve beach and coastal transit access during extreme heat events	EH-6
	Air Quality	Encourage urban agriculture practices that reduce air quality pollution	AQ-2
	Air Quality	Increase monitoring and regulation of the oil extraction and refining process	AQ-7
	Drought	Enhance outreach and education related to water conservation	DRT-2
	Drought	Expand use of recycling water and grey water for non-potable use	DRT-4
	Sea Level Rise + Flooding	Update the floodplain ordinance	FLD-1
	Sea Level Rise + Flooding	Establish a flood impacts monitoring program	FLD-3
	Sea Level Rise + Flooding	Investigate feasibility of managed retreat in the longer term	FLD-19

Safe and Adaptable Infrastructure



Adaptations that Protect and Enhance Natural Systems

THEME	SECTOR/ STRESSOR	ACTION	ACTION NUMBER
Protected and enhanced natural systems	Drought	● Incorporate increased rainfall capture and other actions to maximize local water supplies and offset imported water	● DRT-5
	Sea Level Rise + Flooding	● Review and conduct studies on the effects of combined riverine/coastal flooding and increased severity of rainfall events on watershed flooding	● FLD-7
	Sea Level Rise + Flooding	● Conduct a citywide beach stabilization study, enhance dunes, expand beach nourishment based on study findings	● FLD-6 FLD-8 FLD-12 FLD-13

Checklist Example: Waste

Waste

5. TIER 1: Recyclable Materials Recycling

The project must comply with all state and local requirements for recycling, also including but not limited to, Chapter 8.60 Solid Waste, Recycling, and Litter Prevention and Organic Waste Disposal Reduction in the City's Municipal code. The project must also:

1. Comply with all Mandatory Construction & Demolition (C&D) Recycling Program Requirements, including Section 18.67.100.
2. Provide substantial storage, collection, and loading of recyclables in a manner that is convenient and safe for all users of the building. Ensure there are sufficient sizes and amount of collection containers for recyclables. Containers must be kept clean, be clearly labeled, and are co-located next to any other solid waste receptacles. Ensure sufficient pick up of collection containers to meet the needs of the occupants.
3. Ensure that all projects include space for multi-stream collection containers in any location where a solid waste container is traditionally housed. This includes both outdoor

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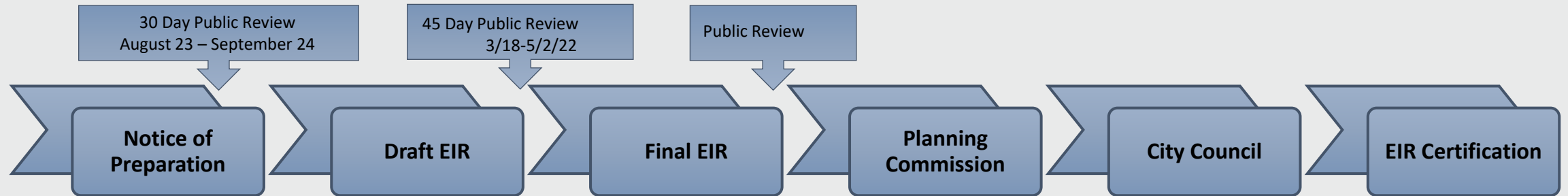
☐ Not Applicable

☐ Project Does Not Comply

☐ Alternative Measure Proposed

CEQA Process Timeline

CAAP EIR



Early CAAP Implementation: Vehicle Miles Traveled (VMT) Adoption

CAAP Action T9- Implement SB 743

- New state law established Vehicle Miles Traveled (VMT) as the method for determining transportation impacts, for environmental purposes
- Aligns with updated General Plan and draft Climate Action & Adaptation Plan
- City adopted VMT methodology in June 2020

The Move to VMT Analysis...

- Encourages more sustainable, compact development patterns
- Aims to reduce GHG emissions and improve air quality
- Prioritizes multimodal mitigation measures over vehicular roadway improvements



Early CAAP Implementation: SB 1383 & Organics Processing

CAAP Actions W2 and W3 implemented through SB 1383

- Reducing short-lived climate pollutants through organic waste diversion and surplus food recovery
- City adopted compliance updates in December 2021
- Helps implement W-2 and W-3 of the CAAP
 - CAAP Waste Action 2 (W2): Develop an organic waste collection program for City-serviced accounts
 - CAAP Waste Action 3 (W3): Partner with private waste haulers to expand organic waste collection community-wide

Early CAAP Implementation: New Housing Near Transit

Transit-focused housing (CAAP Actions T6 and T8)

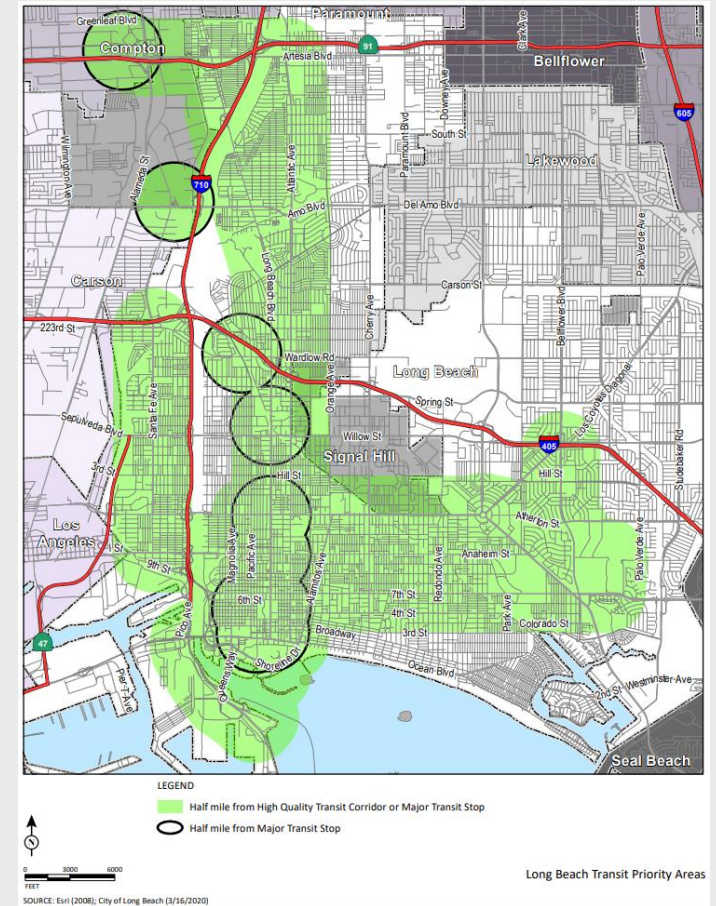
- Reduce Greenhouse Gas (GHG) by reducing Vehicle Miles Traveled (VMT)
- Most likely in mixed use corridors and Downtown/ Midtown areas, near highest quality transit

UPLAN & ACZIP

- UPLAN and ACZIP rezoning in North and Central Long Beach to design zoning regulations that provide better access to quality jobs and housing near transit

Inclusionary Housing Requirement & Enhanced Density Bonus

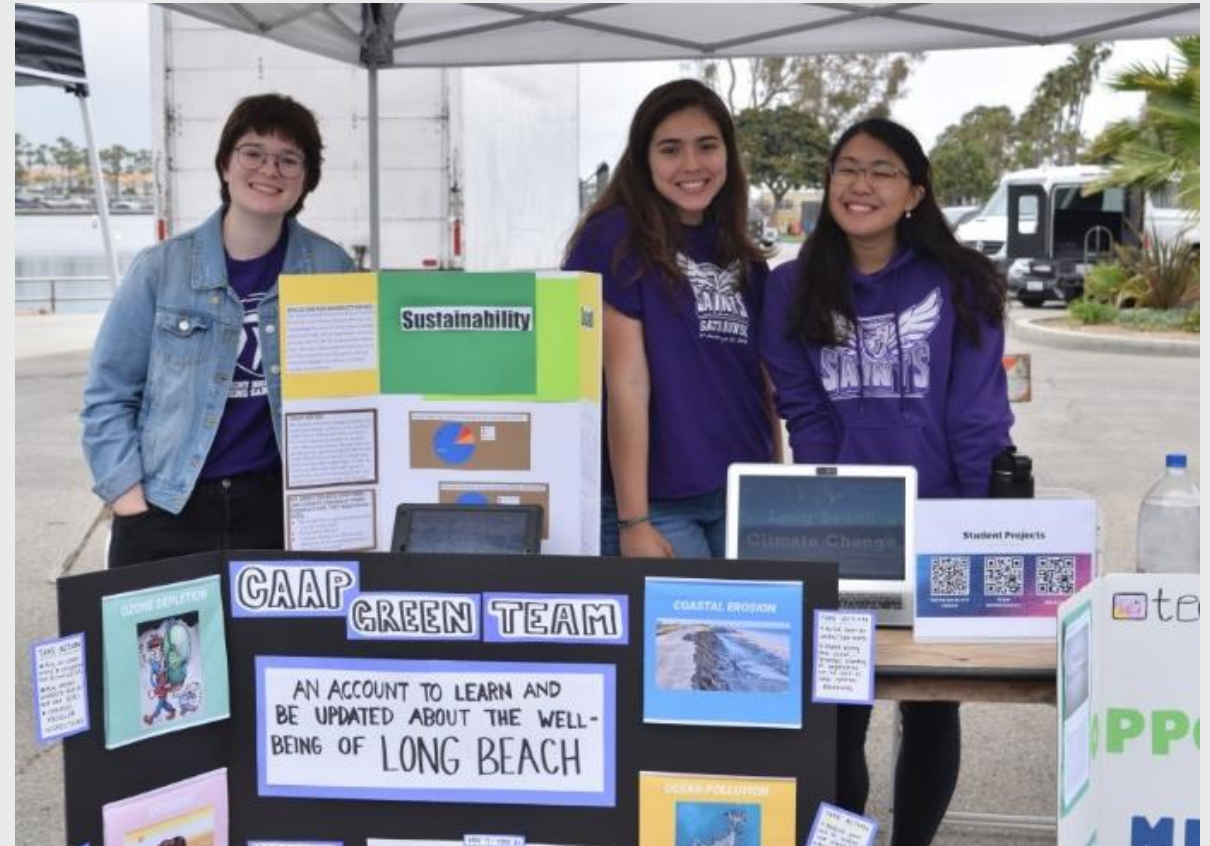
- Two critical strategies adopted in 2021 to ensure affordable housing is included as part of market-rate developments to the maximum extent feasible



Long Beach Transit Priority Areas

Early CAAP Implementation: Climate Ambassador Program

- Engage youth in climate action and environmental education
- Funding received through AB 32 and PGWIN
- Application closed March 4th
- Will be used to inform Youth Climate Corps programs



Early CAAP Implementation: Youth Climate Corps

- \$5 million from State of California
- Approved by City Council Nov. 9 2021
- Support youth in Long Beach to engage in green workforce development
- Programs slated to start July 2022



CAAP Implementation

Governance

- Set up a governance structure that integrates climate action into operations and internal culture, public engagement, and financial decision-making processes
- Dedicate staff to advance CAAP policies and programs

City Leadership

- Commit to demonstrating leadership in mitigation actions
- 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 Monitoring & Reporting (Chapter 8)

- Once adopted, CAAP is designed to be a living document/plan
- Multi-pronged approach for implementation monitoring and reporting:
 - ✓ GHG inventories:
 - a. Production-based community-wide GHG inventories every 2 years
 - Tracks total GHG emissions from all sources within the community
 - Using ICLEI protocol as recommended by CARB and used across the world
 - Informs whether we are on track and if plan updates are necessary
 - b. On the alternating years, a municipal GHG inventory
 - ✓ Performance metrics for individual CAAP actions to inform
 - ✓ Reporting tool: CAAP dashboard
 - ✓ Plan Updates as necessary