Appendix C Outreach

Appendix C Outreach

Presentation Slide Deck from September 16, 2021, Climate Committee Meeting





Vulnerability Assessment

- Carmel-by-the-Sea is experiencing and will continue to experience
 - Stronger storms
 - Increased wildfire risk
 - Sea level rise
 - Extended drought conditions
 - Increased temperature





Vulnerability Assessment

- Identified gaps
- Opportunities to build on existing adaptation strategies



Priority Assets at Risk	Priority Hazards									
	Stronger Storms	Wildfires	Sea Level Rise	More Droughts	Increased Temperature	Fog changes	Ocean Warming			
Natural Assets										
Mission Trail Nature Preserve	YES	YES	×	YES	YES	x				
North Dunes			NO	YES	YES	X				
Urban Forest	YES	NO		YES	NO	X				
Marine Sanctuary	X			Х	X	X	X			
Carmel Beach	YES		YES			Х	Х			
Community										
Elderly population and people with disabilities	NO	NO		NO	NO					
Residents	YES	YES		YES	NO					
Visitors	NO	NO.					X			
Local Businesses	NO	NO	NO	YES	NO		X			
Service industry workers	NO	NO	NO		NO					
Second homes	YES	YES	NO							



Potential Adaptation Strategies Table

Structure

- Goals Broad statements describing community desires
- Policies Specific position statements that support the achievement of goals and serve as guides to the City when making decisions
- Actions Specific methods to implement and achieve policies and goals.





Potential Adaptation Strategies Table

- Action Sources
 - Carmel-by-the-Sea Vulnerability Assessment
 - State/Regional Plans
 - Safeguarding California Plan: 2018 Update, California's Climate Adaptation Strategy, California Natural Resources Agency
 - Southern California Adaptation Planning Guide
 - Appendix F General Plan and Local Coastal Plan Model Policies
 - Appendix B Matrix of Adaptation Strategies and Actions
 - Local Plans and Ordinances
 - Pacifica All-Electric Reach Code
 - Berkeley Existing Building Electrification Strategy



Safeguarding California Plan: 2018 Update

California's Climate Adaptation Strategy | January 2018





Principles for Implementable Actions

6 principles to consider when selecting adaptation actions

- 1. Measurable increase in resilience
- 2. Institutional structures
- 3. Funding
- 4. Engagement
- 5. Partnership
- 6. Equity



Photo by Adomas Aleno on Unsplash



Potential Adaptation Strategies Table

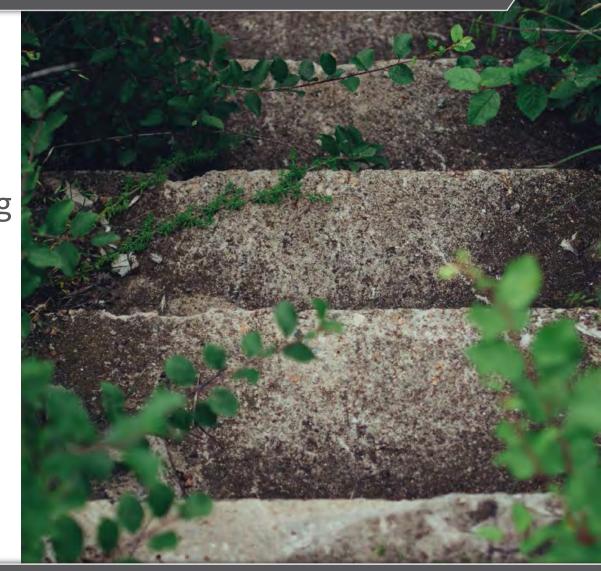
City of Carmel-by-the-Sea Potential Adaptation Strategies

Goal/Policy/Action	Climate Hazard	Asset	Potential Metric	Timeframe	Potential Lead	Cost	Source
Goal 1. A Healthy, Safe, and							
Resilient Community							
Policy 1.1. Provide effective							Adapted from the Southern
emergency preparedness and							California Adaptation
response following a climate-							Planning Guide, Appendix F -
related disaster							General Plan and Local Coastal
							Plan Model Policies
Action 1.1.1. Improve Emergency							
Preparedness. Incorporate climate							
change risk and impact							
considerations into Carmel CERT							Adapted from the Southern
programming and materials, to							California Adaptation
promote emergency preparedness							Planning Guide, Appendix B
at a neighborhood block-by-block scale.		Residents, Local Businesses, Second	# of block captains				Matrix of Adaptation
	All	Homes	formed	TBD	TBD	TBD	Strategies and Actions



Next Steps

- Collect comments from Climate
 Committee before the October meeting
- Refine the goals, policies and actions based on comments
- Present the refined list at the public workshop on November 18th



Thank you for your time!

Questions?





Extra Slides







Goals

ICARP

Adaptation Visions and Principles



City of Carmel-by-the-Sea Adaptation Goals



All people and communities respond to changing average conditions, shocks, and stresses in a manner that minimizes risks to public health, safety, and economic disruption and maximizes equity and protection of the most vulnerable.

Goal 1. A Healthy, Safe, and Resilient Community

Natural systems adjust and maintain functioning ecosystems in the face of change.

Goal 2. A Natural Environment Resilient to Climate Hazards

Infrastructure and built systems withstand changing conditions and shocks, including changes in climate, while continuing to provide essential services.

Goal 3. Resilient Infrastructure and Built Environment

Appendix C Outreach

Presentation Slide Deck from October 21, 2021, Climate Committee Meeting





Resources

- Summary of Comments and Responses
- Revised PotentialAdaptation Strategies





Comment Categories

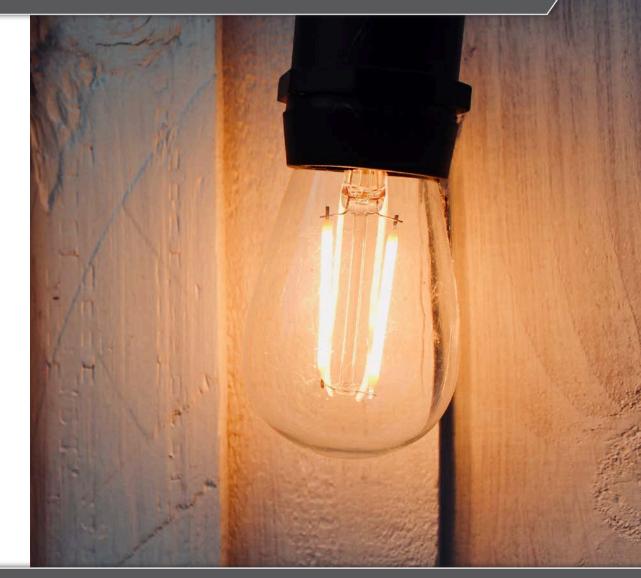
- Electrification
- Evacuation, traffic, and congestion
- Vulnerable populations
- Tree maintenance and Monterey Pines
- Stormwater runoff and wastewater





Electrification

- It is noted that members of the Climate Committee would prefer to move these types of strategies to the Climate Action Plan.
- Electrification actions will remain in the list of potential adaptation goals, policies, and actions for the public to weigh in on.





Evacuation, Traffic, Congestion

- New actions added
 - Action 1.1.5. Evacuation Access. Investigate potential congestion issues in the event of an evacuation and develop and maintain a list of residents who may have difficulty evacuating and provide evacuation options for residents with mobility challenges.
 - Action 1.1.6. Evaluate Evacuation Route Capacity. Evaluate evacuation route capacity, safety, and viability under a range of emergency scenarios and identify and implement mitigating actions.
 - Action 1.1.7. Evacuation Alternatives. Develop and employ evacuation alternatives and/or alternative emergency access routes in neighborhoods that have single ingress/egress.



Vulnerable Populations

- New actions added
 - Action 1.2.4. Social Support Network. Collaborate with the Carmel Foundation and other community-based organizations to develop an inventory of locations with isolated seniors and people with disabilities and develop a plan for a social support network to increase resilience to climate change.
 - Action 1.2.5. Back-up Power for Vulnerable Populations. Coordinate with 3CE, PG&E, and emergency management services to establish backup power and emergency grid shutdown protocols that protect the most vulnerable populations.



Tree maintenance and Monterey Pines

- Revised action 2.1.2.
 - Action 2.1.2. Increase Forest Resilience. Update the Forest Management Plan to:
 - 1. Review and consider modifications to the preferred urbanized tree species that would result in improved resilience in the context of the expected climate of the second half of the century, reduce wildfire hazard, and that takes into account aesthetics and the ecological benefits of natives or near-native (e.g., native species from the Southwestern US or Mexico would likely be preferred to European species).
 - 2. Include planting **and maintenance** guidelines to improve tree health, particularly in the public right-of-way
 - 3. Incorporate tree species that have greater drought and wildfire resistance
 - 4. In addition to drought-tolerant landscaping, include landscaping guidelines that reduce wildfire hazard on private property.
 - 5. Enhance carbon sequestration potential



Stormwater Runoff and Wastewater

- New actions added
 - Action 3.1.3. Reduce Stormwater Runoff. Reduce stormwater runoff through implementation of a stormwater diversion project to divert all dry weather flows and first flush runoff to the large sanitary sewer that runs along San Antonio Avenue, such that they can be directed to the Wastewater District.
 - Action 3.1.9. Wastewater Treatment. Collaborate with the Carmel Area Wastewater District (CAWD) to increase the facility's resilience to sea level rise and stronger storms, and incentivize reduction of water use in the community and transitioning to reclaimed water use for irrigation. Maintain staff/council personnel as liaisons to CAWD.



Next Steps

- Present the goals, policies, and actions at the November 18th public workshop
- Collect comments from the public
- Refine the goals, policies, and actions based on public and climate committee comments



Thank you for your time!

Questions?





Appendix C Outreach

Presentation Slide Deck from November 18, 2021, Public Workshop



CITY OF CARMEL-BY-THE-SEA

WORKSHOP

Climate Adaptation and Greenhouse Gas Reduction Strategies for Carmel

Climate Committee

November 18, 2021

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Workshop Agenda & Logistics

- Project Background
- Carmel Vulnerability to Climate Change
- Carmel Greenhouse Gas Reduction Goals
- Forum: Vision for the Future in Carmel
- Forum: Review of Potential Climate Adaptation and Greenhouse Gas Reduction Strategies

- Providing comments during the workshop
- Providing comments after the workshop

- Climate Action and Adaptation Project initiated during Fiscal Year 2019/2020
 - Action: reducing greenhouse gas emissions
 - Adaptation: Developing strategies to adapt to the changing climate
- Climate Committee formed in Fall 2019 with 8 members:
 - 2 Council members: Jeff Baron and Carrie Theis
 - 4 members of the public: John Hill, Michael LePage, Scott Lonergan, LaNette Zimmerman
 - 2 staff members: Agnes Martelet, Environmental Compliance Manager, Evan Kort, Associate Planner
- Consultants: Rincon Consultants, LSA Associates

Progress to Date

- Monthly presentation series to better understand climate threats and opportunities for action in Carmel
- Outreach to community groups and regional partners
- Climate Change Vulnerability Assessment
- Greenhouse Gas Inventories and Draft Forecast
- List of Potential Adaptation Strategies
- List of Potential Strategies to reduce Greenhouse Gas Emissions



Climate Change Vulnerability Assessment

Stronger Storms

Wildfires

Sea Level Rise

Drought

Increased Temperatures

Fog Changes

Ocean Warming



Climate Change Vulnerability Assessment

Stronger Storms

Wildfires

Sea Level Rise

Drought

Increased Temperatures

Fog Changes

Ocean Warming

More intense storms projected





Climate Change Vulnerability Assessment

Stronger Storms

Wildfires

Sea Level Rise

Drought

Increased Temperatures

Fog Changes

Ocean Warming

Large, severe wildfires will continue to occur in the Central Coast region





Climate Change Vulnerability Assessment

Stronger Storms

Wildfires

Sea Level Rise

Drought

Increased Temperatures

Fog Changes

Ocean Warming

Monterey County is projected to experience ~5 feet in sea level rise by 2100





Climate Change Vulnerability Assessment

Stronger Storms

Wildfires

Sea Level Rise

Drought

Increased Temperatures

Fog Changes

Ocean Warming

Dry years are projected to get drier and are likely to be followed by dry years





Climate Change Vulnerability Assessment

Stronger Storms

Wildfires

Sea Level Rise

Drought

Increased Temperatures

Fog Changes

Ocean Warming

Annual average maximum temp is projected to increase by 3.3°F by mid-century and 6.3 °F by end of the century.





CBTS Assets to Consider

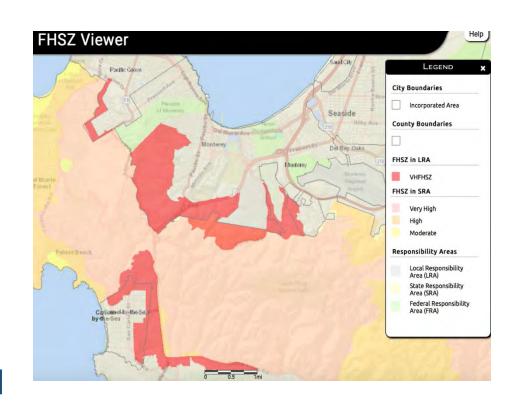
- Community
 - Elderly population and people with disabilities
 - Residents
 - Visitors
 - Local businesses and workers
- Natural Environment
 - Beach
 - Special Habitats and Open
 Spaces on land and in the ocean
 - Urban Forest

- Infrastructure and Built Environment
 - Utilities (incl. electricity, water, sewer, storm drainage)
 - Shoreline infrastructure (incl. access infrastructure and sea walls and revetments)
 - Critical community facilities
 - Downtown and residences



Vulnerabilities - Community

- Very High Fire Hazard Severity Zones (VHFHSZ) in Carmel
- Wildfire vulnerability can be reduced with better siting, landscape design, and building materials
- Lack of a plan for evacuating at-risk community members
- Lack of a plan to support at-risk workers and businesses





Vulnerabilities - Community

- Stronger storms could lead to localized flooding, which could isolate residents
- Increased temperature could lead to negative health impacts for older adults and individuals living with disabilities





Vulnerabilities – Natural Environment

- Increased tree stress due to increased heat, more variable water supply
- Open spaces with sensitive habitats will be impacted by stronger storms, hotter temperatures, drought, and wildfires
- Beach and dune loss from sea level rise
- Monterey Bay National Marine Sanctuary impacts from ocean warming and acidification
- Carmel's urban forest lacks age and species diversity





Vulnerabilities – Infrastructure

Utilities and Infrastructure:

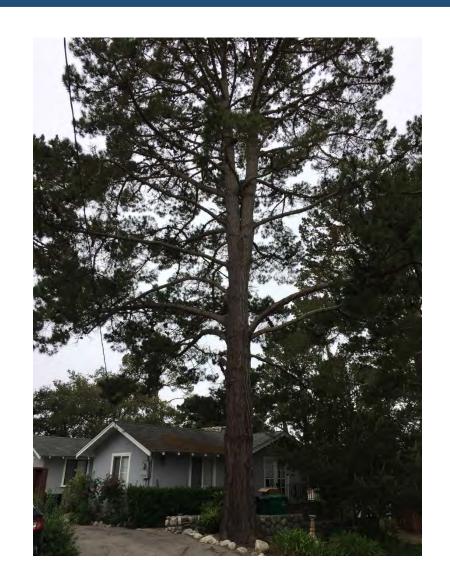
- Access and utility infrastructure along the coastline
- Coastal protection infrastructure: revetments, sand ramps, and sea walls. Sea walls undercutting due to erosion and retreat of surrounding sand stone. 10 hot spots with significant damage after major storms (1982-83)
- Storm drain system only designed to handle 10-year storms and in need of repairs
- CAWD wastewater facility will need to be relocated by 2062
- Power grid impacts of wildfires and storms





Vulnerabilities – Built Environment

- City Planning guidelines conflict with California fire codes in the VHFHSZ
- Lack of defensible space around homes
- Extreme heat may lead to increased use of air condition which could tax the electrical grid
- Lack of cooling infrastructure





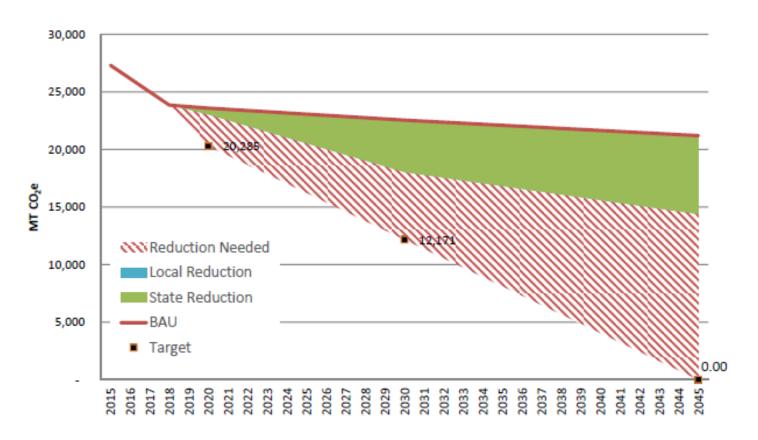
Climate Change Mitigation





Carmel Greenhouse Gas Reduction Goals

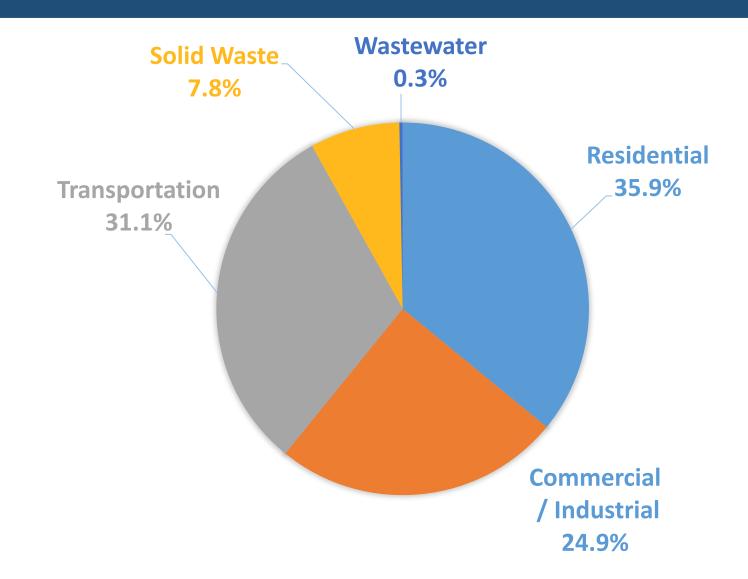
FIGURE 1: State and Local Reductions Comparison with Targets City of Carmel-By-The-Sea, 2015 - 2045



State measures and reduction goals are estimated based on the 2015 GHG Inventory and Population Forecasting by AMBAG. Targets are set based on CARB recommendations using the 2015 GHG Inventory as a baseline (2020 target = 15% reduction from 2015 emissions, 2030 target = 40% reduction from the 2020 target, 2045 target = net zero emissions).



Carmel 2018 GHG Emissions by Sector





- What aspects of Carmel help the community's resilience? What actions have the city and constituents taken to reduce their impact and adapt to climate change?
- What does a resilient Carmel community look like? What outcomes are we hoping to achieve?





Forum: Envision Sustainable Carmel in 2050

Mural



Potential Strategies for Adaptation and GHG Reduction

Structure:

- Goals –Broad statements describing community desires
- Policies / Measures Specific position statements that support the achievement of goals and serve as guides to the City when making decisions
- Actions –Specific methods to implement and achieve policies and goals.



Potential Adaptation Goals

Goal 1. A Healthy, Safe, and Resilient Community

Goal 2. A Natural Environment

Resilient to Climate Hazards

Goal 3. Resilient Infrastructure and

Built Environment



Policy 1.1. Provide effective emergency preparedness and response in anticipation of potential climate-related disasters.

Action 1.1.1 .Improve Emergency Preparedness by incorporating Climate Change risk in CERT programming

Action 1.1.2. Collaborate with Monterey Fire on inspection and outreach for fire risk reduction

Action 1.1.3. Publicize Local Evacuation Routes

Action 1.1.4. Maintain and Update Evacuation Plan

Action 1.1.5. Evacuation Access for residents with disabilities

Action 1.1.6. Evaluate Evacuation Route Capacity

Action 1.1.7. Evacuation Alternative

Action 1.1.8. Update City Planning Guidelines in the Fire Hazard Zones

Action 1.1.9. Development Standards in the Fire Hazard Zones.

Action 1.1.10. Increase Resistance to Wildfire Structural Damage.



Policy 1.2. Focus adaptation efforts and engagement on the most vulnerable populations.

Action 1.2.1. Establish a Resilience Hub.

Action 1.2.2. Limit the Impacts of Climate Change on the Most Vulnerable Populations.

Action 1.2.3. Educate the Community.

Action 1.2.4. Social Support Network.

Action 1.2.5. Back-up Power for Vulnerable Populations

•



Policy 1.3. Minimize health impacts of climate change.

Action 1.3.1. Partner with Monterey County Health Department.

Action 1.3.2. Initiate a Heat Pump Retrofit Program.

Action 1.3.3. Improve Resilience in Critical Facilities.

Action 1.3.4. Conduct a Feasibility Study for Existing Building Electrification.

Action 1.3.5. Improve Resilience in Housing Stock.

Action 1.3.6. Electrify Fireplaces.

Action 1.3.7. Identify Funding and Financing.



Policy 1.4. Increase Economic Resilience

Action 1.4.1. Support Displaced Workers.

Action 1.4.2. Establish Partnerships to Develop a Resilient

Economy.

Action 1.4.3. Business Resilience Outreach Program.



Forum: Adaptation Strategies for Community Resilience

- Did we miss anything?
- Which policies and actions should be prioritized for Community Resilience?



Forum: Adaptation Strategies for Community Resilience

Mural



Goal 2. A Natural Environment Resilient to Climate Hazards

Policy 2.1. Protect and restore climate-vulnerable habitat and ecosystems.

- Action 2.1.1. Increase Funding for Climate Adaptation.
- Action 2.1.2. Increase Forest Resilience and Update the Forest Management Plan
- Action 2.1.3. Update the Mission Trail Nature Preserve Master Plan to increase resilience
- Action 2.1.4. Increase Resilience of the North Dunes
- Action 2.1.5. Increase Resilience to Stronger Storms by sizing improvements for larger storms
- Action 2.1.6. Beach Sand Monitoring Program
- Action 2.1.7. Carmel Cove Sand Supply Analysis



Forum: Adaptation Strategies for Natural Environment Resilience

- Did we miss anything?
- Which policies and actions should be prioritized for Natural Environment Resilience?



Forum: Adaptation Strategies for Natural Environment Resilience

Mural



Goal 3. Resilient Infrastructure and Built Environment

Policy 3.1. Support greater resilience, redundancy, and reliability of local and regional infrastructure and the built environment.

Action 3.1.1. Evaluate Undergrounding Utilities in Fire Hazard Zones

Action 3.1.2. Increase Green Infrastructure.

Action 3.1.3. Reduce Stormwater Runoff.

Action 3.1.4. Storm Drain Repair Funding and Improvements.

Action 3.1.5. Retrofit Existing Critical Buildings and Related Infrastructure to handle Climate Hazards.

Action 3.1.6. Water Conservation.

Action 3.1.7. Bluff Structural Monitoring Program.

Action 3.1.8. Hire Coastal Engineer to evaluate coastal protection infrastructure.

Action 3.1.9. Wastewater Treatment.



Goal 3. Resilient Infrastructure and Built Environment

Policy 3.2. Incorporate climate change adaptation into relevant plans and standards.

Action 3.2.1. Develop a Guidance Project Checklist.

Action 3.2.2. Incorporate Climate Change Adaptation into Local Plans.

Action 3.2.3. Update Shoreline Management Plan.

Action 3.2.4. Multi-Jurisdictional Hazard Mitigation Plan.



Forum: Adaptation Strategies for Infrastructure Resilience

- Did we miss anything?
- Which policies and actions should be prioritized for Infrastructure Resilience?



Forum: Adaptation Strategies for Infrastructure Resilience

Mural



Greenhouse Gas Reduction Policies for the Built Environment

Goal 1/3: Increase Energy Efficiency in Existing Residential and Commercial Units

- Energy Efficiency education and recognition in the residential and commercial sectors.
- Increase participation in energy efficiency programs.
- Home / Business Energy Evaluations.
- Residential home / Commercial energy renovations.
 - Promote participation in green building programs.
 - Provide incentives to homeowners / businesses to convert to electrification.
 - Streamline the permitting process for energy efficiency retrofits.
 - Require green building programs for large commercial renovations



Greenhouse Gas Reduction Policies for the Built Environment

Goal 2/4: Increase Energy Efficiency in New Residential / Commercial Units

- Educate City staff and the community on future Title 24 compliance.
- Promote Tier 1 and Tier 2 Green Building Standards.
- Incentivize electrification in new residential/commercial units.
- Streamline the permitting process for Tier 1 and Tier 2 Green Building applications

Goal 9: Increase Clean Energy Use

- Incentivize solar panel installation for residential and small commercial.
- Promote energy storage systems installation with solar panels.
- Require large commercial renovations to install solar panels.
- Encourage residents and businesses to participate in the 3CE 100 percent renewable Program.



Forum: Greenhouse Gas Reduction Policies for the Built Environment

- Did we miss anything?
- Which policies and actions should be prioritized?



Forum: Greenhouse Gas Reduction Policies for the Built Environment

Mural

Greenhouse Gas Reduction Policies

Goal 5: Energy Efficiency Through Water Conservation

- Exceed State Water Efficiency Standards.
- Recycled water for certain types of commercial and multi-family landscaping.
- Grey Water Systems.
- Promote rainwater harvesting.

Goal 6: Decrease Energy Demand by Reducing the Heat Island Effect.

- Maintain the health of the Urban Forest Canopy.
- Modify codes to allow light reflecting surfaces on rooftops (cool roofs).
- Where feasible, use cool pavement options when repaving roadways.



Greenhouse Gas Reduction Policies

Goal 7: Decrease GHG Emission By Reducing VMT.

- Develop Bicycle Master Plan.
- Ride Sharing and Bike to Work Programs.
- Electric Vehicle Infrastructure.
- Neighborhood Electric Vehicles (NEV) and NEV Shuttles.
- Shuttle service between the Monterey Airport and destinations in the City.

Goal 8: Reduce Solid Waste

- Promote Zero Waste events.
- Promote home composting.
- Promote reusable containers rather than recyclables.
- Educate the community on use of City provided containers.



Forum: Greenhouse Gas Reduction Policies

- Did we miss anything?
- Which policies and actions should be prioritized?



Forum: Greenhouse Gas Reduction Policies

Mural



- Refine Strategy Tables based on feedback from the Workshop
- Develop cost ranges and implementation timelines, and identify primary implementation parties
- Finalize Climate Adaptation and Action Plans







CITY OF CARMEL-BY-THE-SEA

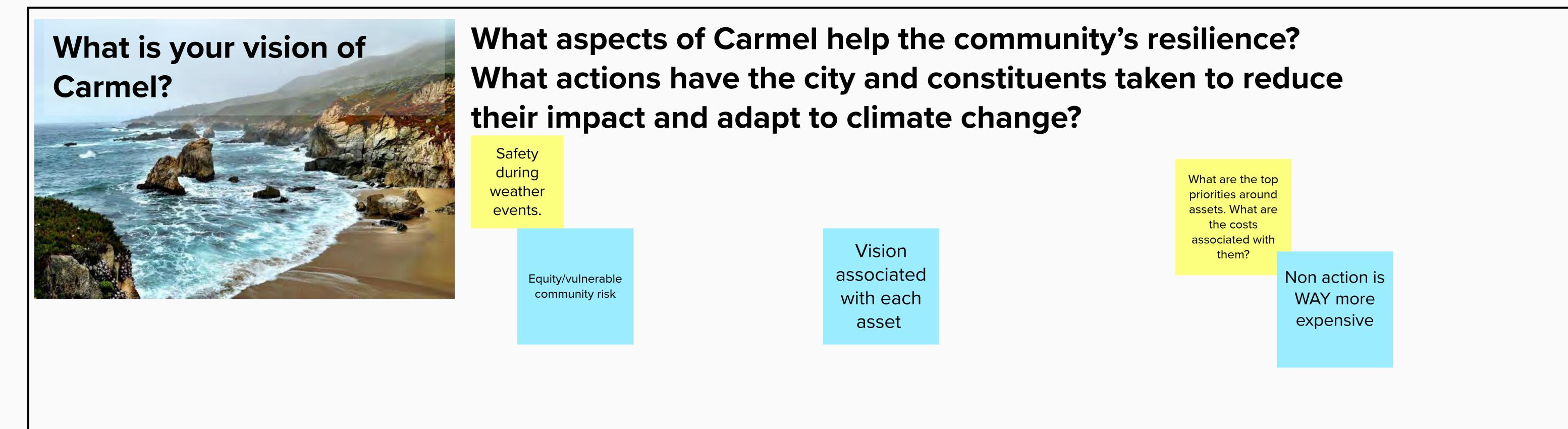
Thank you for participating!

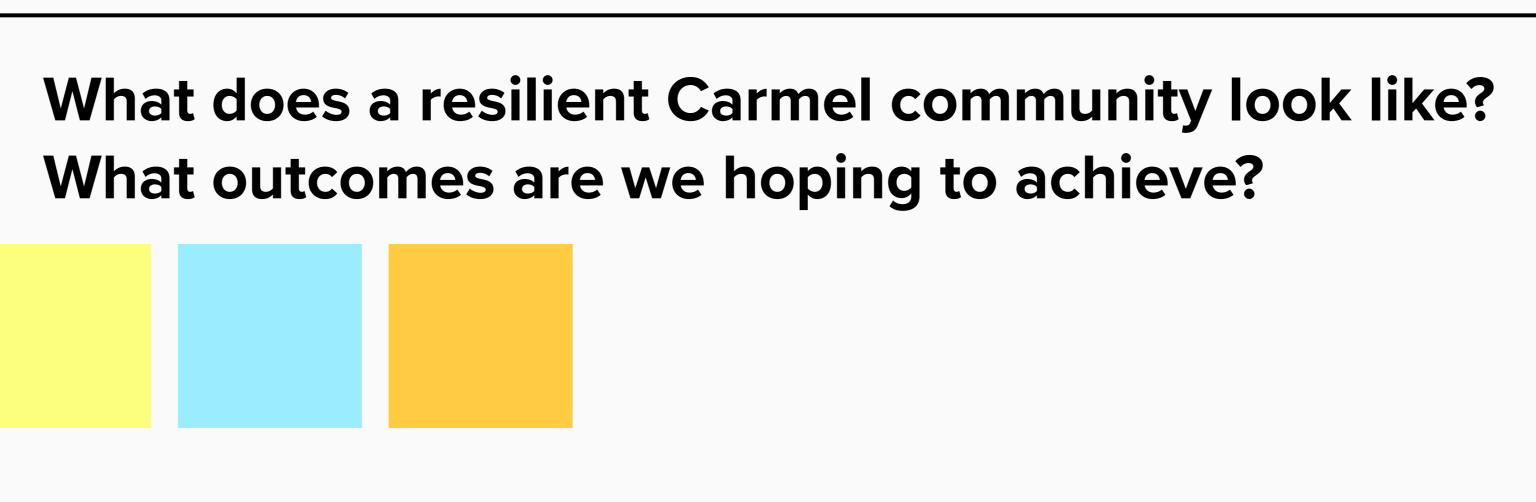
Contact for comments: amartelet@ci.carmel.ca.us

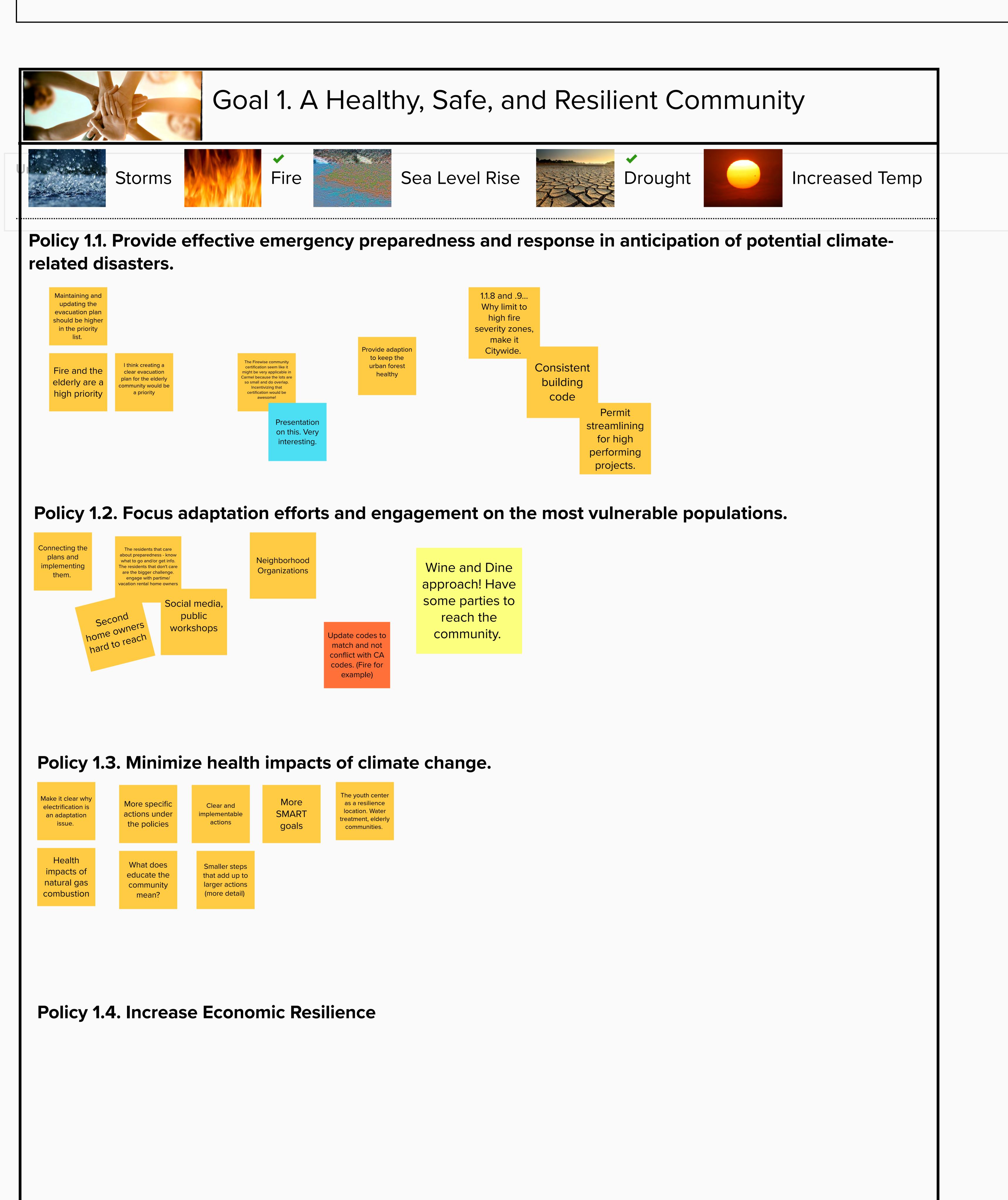


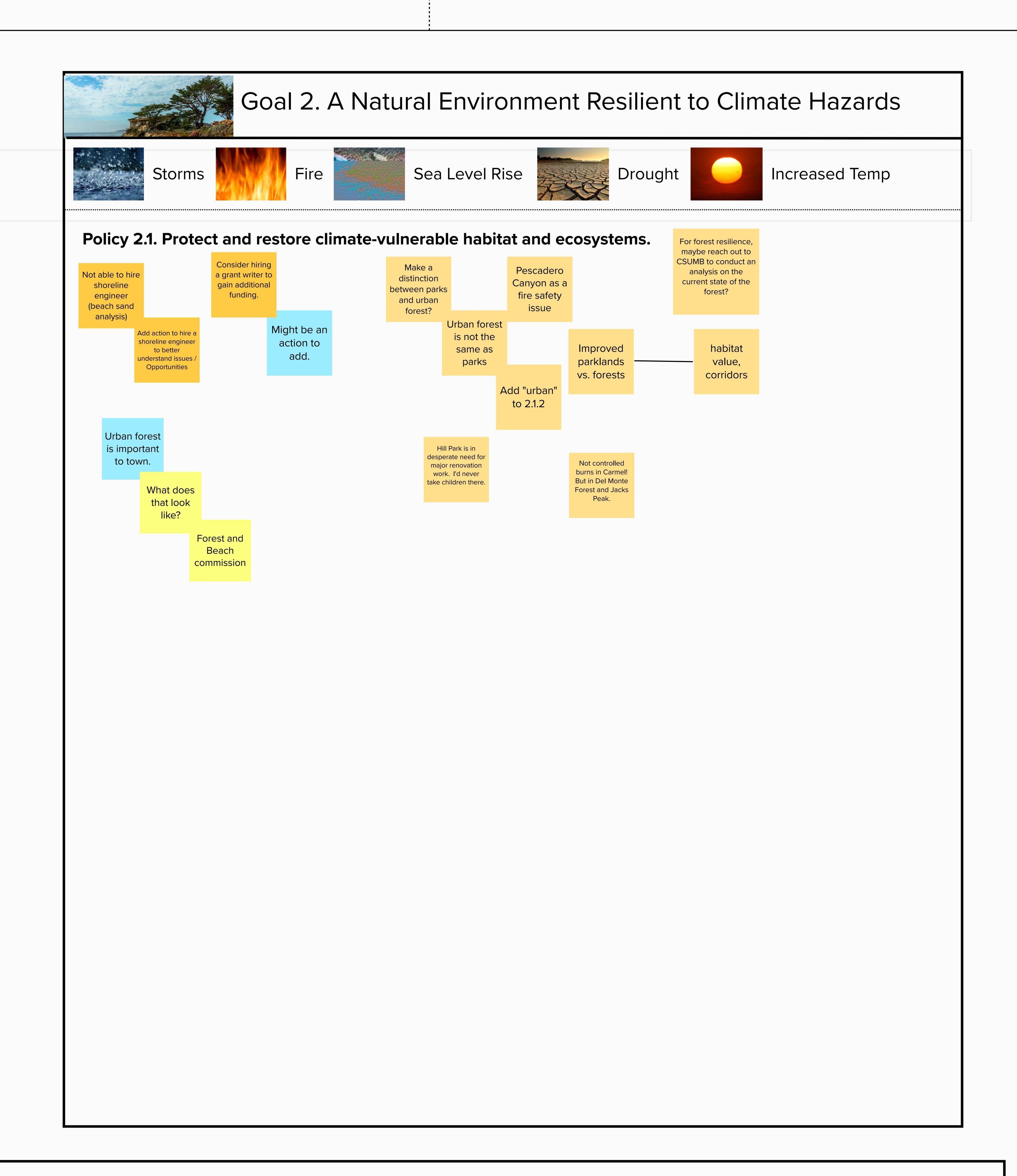
Appendix C Outreach

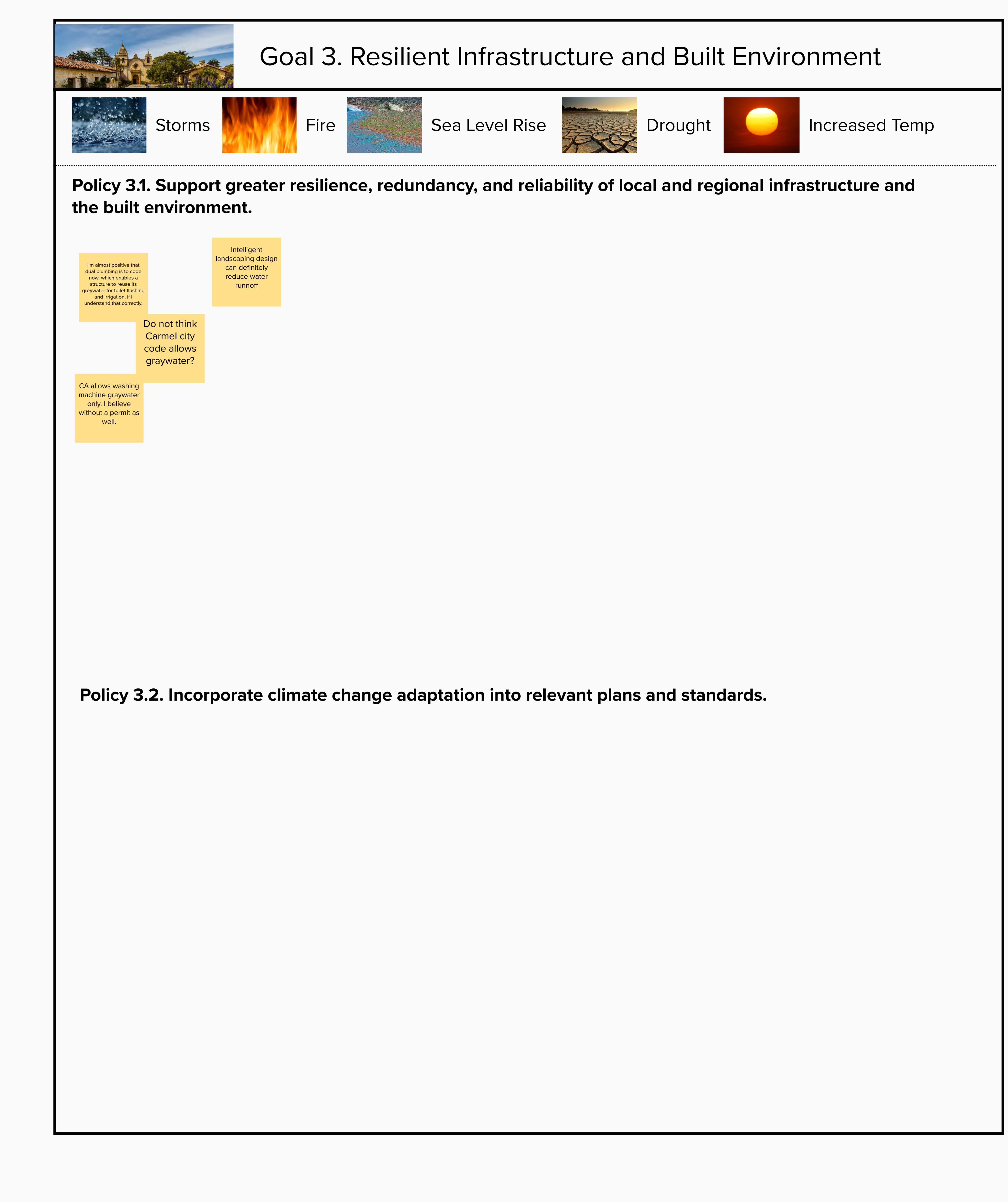
Interactive Activity Results from November 18, 2021, Public Workshop

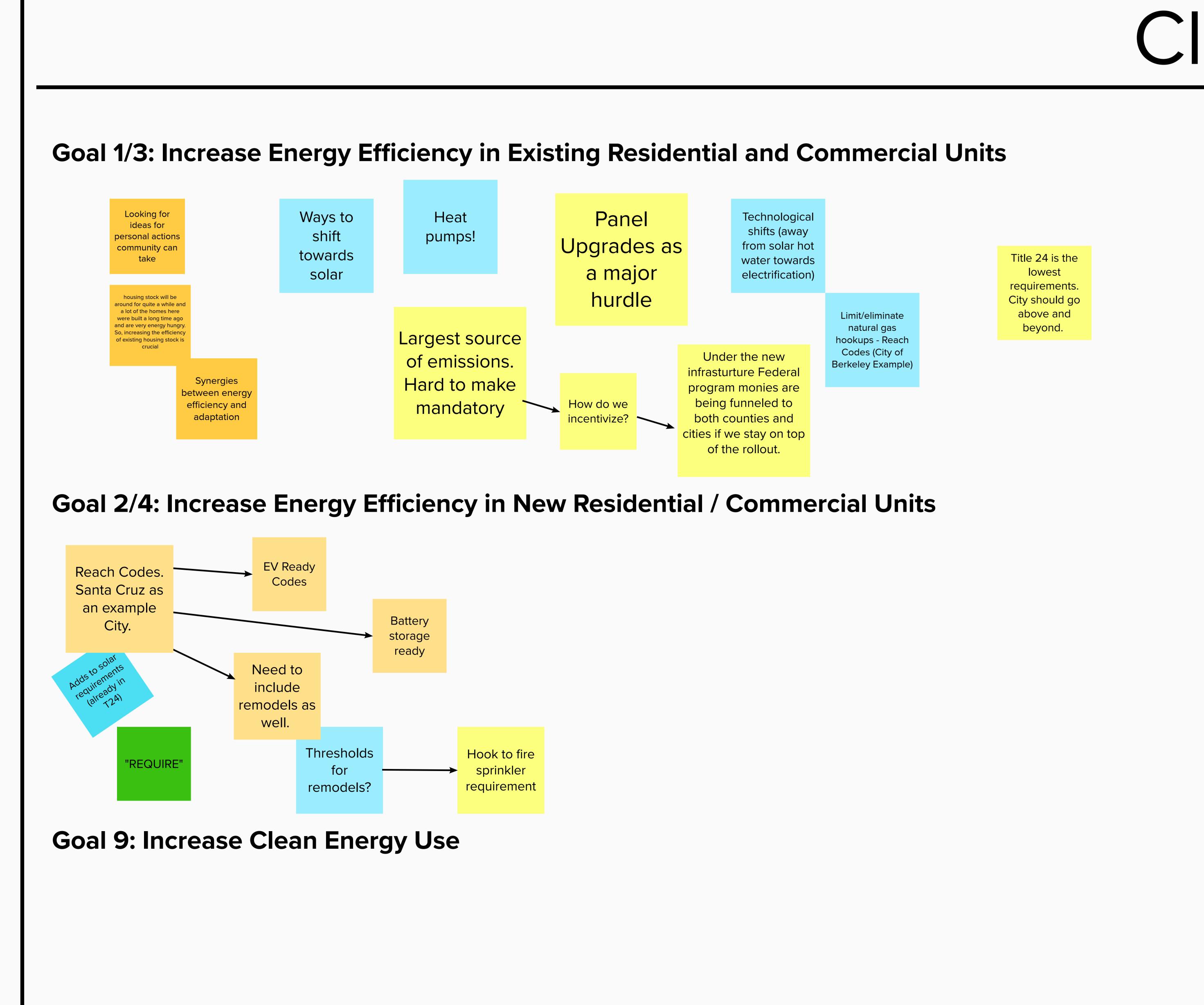


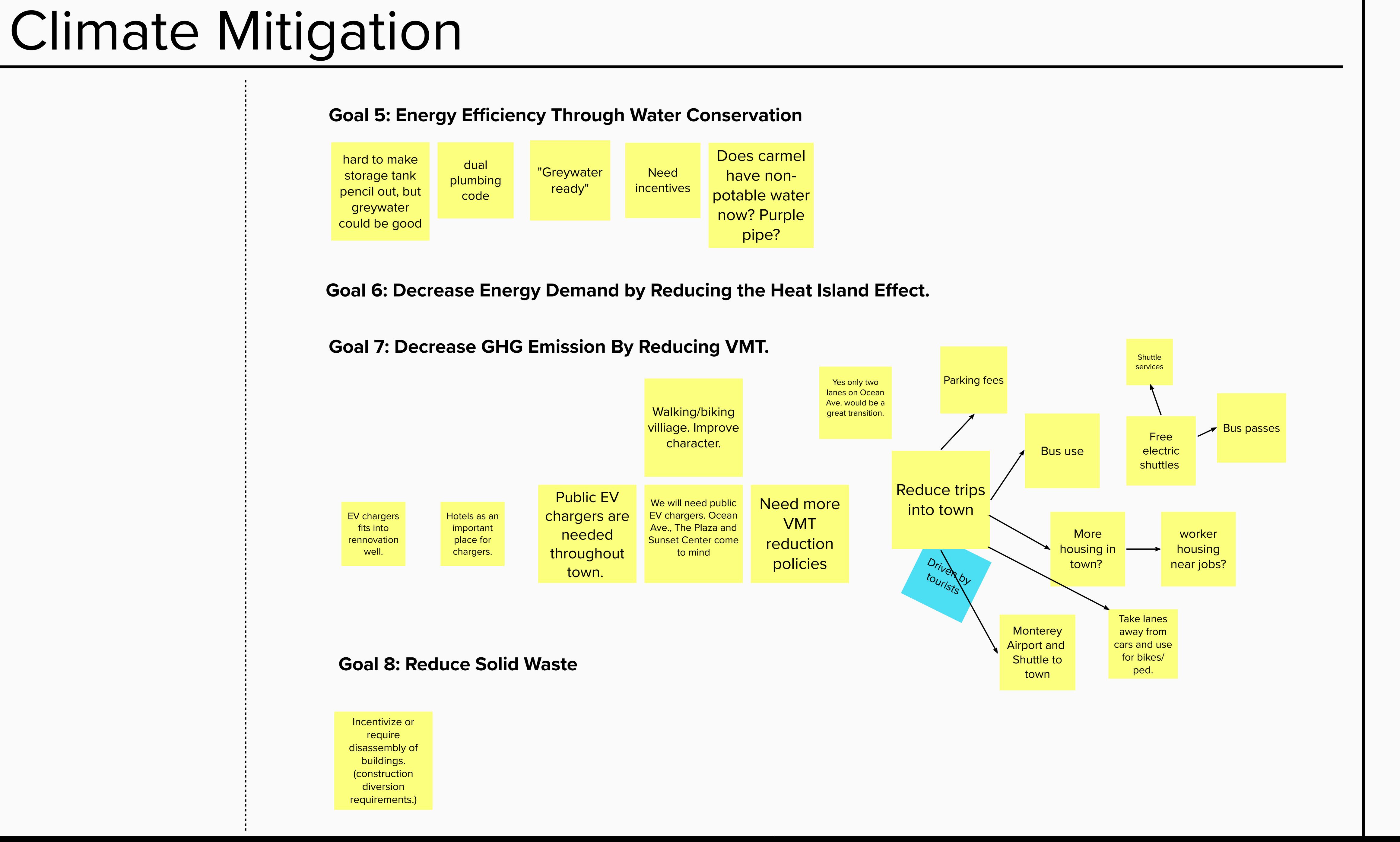




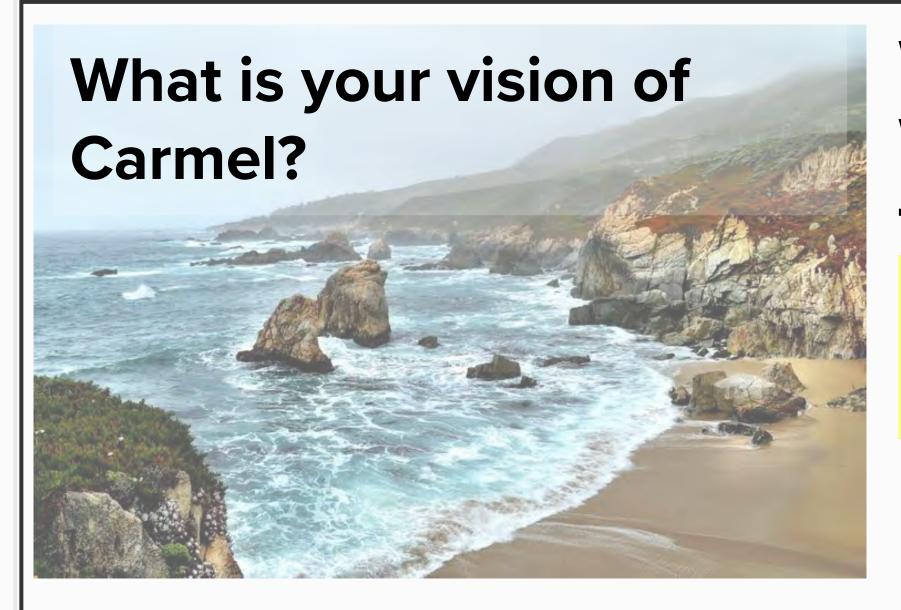








Unnamed area



What aspects of Carmel help the community's resilience? What actions have the city and constituents taken to reduce their impact and adapt to climate change?

Safety during weather events.

Equity/vulnerable community risk

Vision
associated
with each
asset

What are the top priorities around assets. What are the costs associated with them?

Non action is WAY more expensive



Goal 1. A Healthy, Safe, and Resilient Community



Storms



Fire



Sea Level Rise

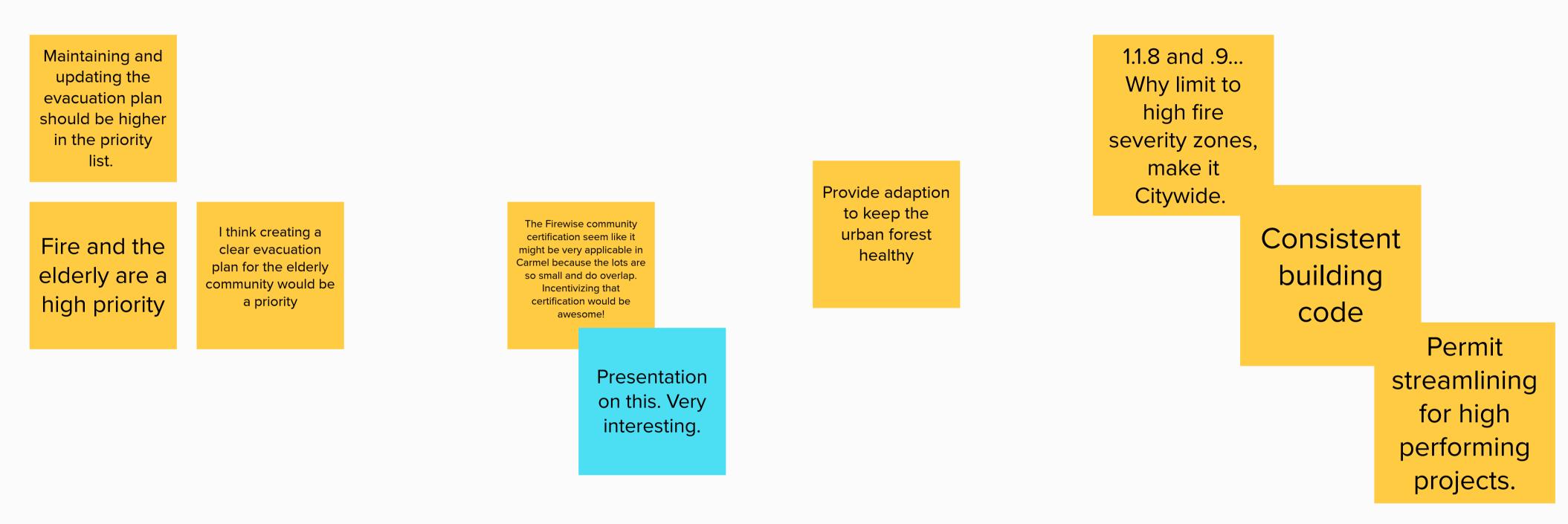


Drought



Increased Temp

Policy 1.1. Provide effective emergency preparedness and response in anticipation of potential climaterelated disasters.



Policy 1.2. Focus adaptation efforts and engagement on the most vulnerable populations.



Policy 1.3. Minimize health impacts of climate change.

Make it clear why electrification is an adaptation issue.

More specific actions under the policies

Clear and implementable actions

More **SMART** goals

The youth center as a resilience location. Water treatment, elderly communities.

Health impacts of natural gas combustion

What does educate the community mean?

Smaller steps that add up to larger actions (more detail)

Urban forest

is not the

same as

parks

Hill Park is in

desperate need for

major renovation

work. I'd never

take children there.

Pescadero

Canyon as a

fire safety

issue

Add "urban"

to 2.1.2

Improved

parklands

vs. forests

Not controlled

burns in Carmel!

But in Del Monte

Forest and Jacks

Peak.

For forest resilience,

maybe reach out to

CSUMB to conduct an

analysis on the

current state of the

forest?

habitat

value,

corridors

Policy 2.1. Protect and restore climate-vulnerable habitat and ecosystems.

Make a

distinction

between parks

and urban

forest?

Consider hiring

a grant writer to

gain additional

funding.

Might be an

action to

add.

Not able to hire

shoreline

engineer

(beach sand

analysis)

Urban forest

is important

to town.

Add action to hire a

shoreline engineer

to better

understand issues

Opportunities

What does

that look

like?

Forest and

Beach

commission



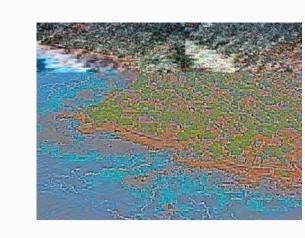
Goal 3. Resilient Infrastructure and Built Environment



Storms



Fire



Sea Level Rise



Drought



Increased Temp

Policy 3.1. Support greater resilience, redundancy, and reliability of local and regional infrastructure and the built environment.

I'm almost positive that
dual plumbing is to code
now, which enables a
structure to reuse its
greywater for toilet flushing
and irrigation, if I
understand that correctly.

Intelligent
landscaping design
can definitely
reduce water
runnoff

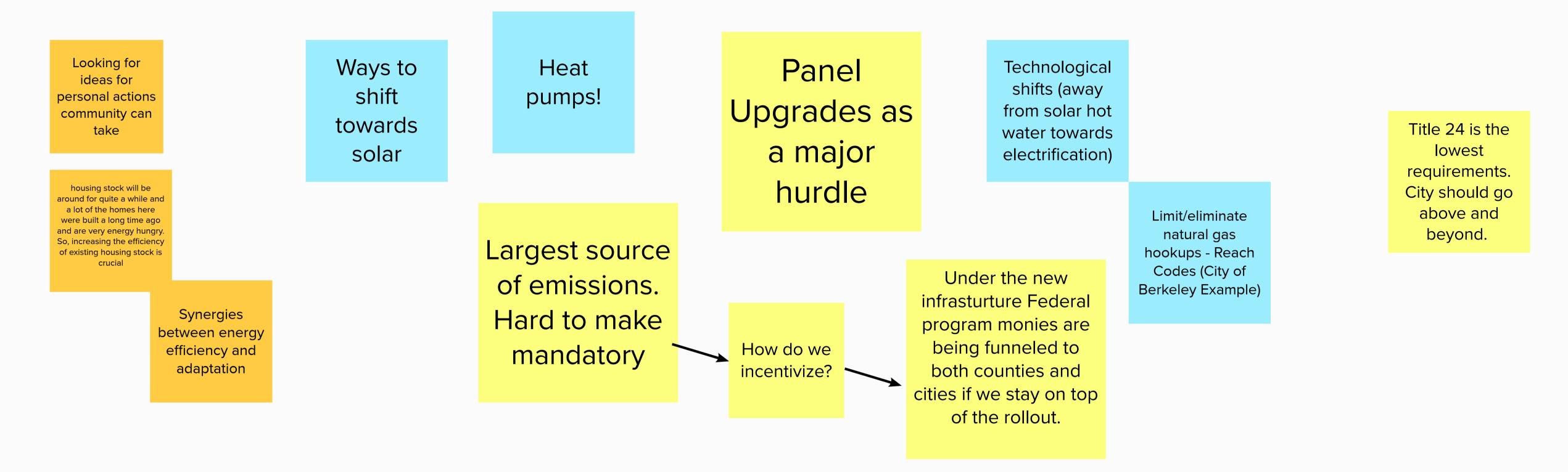
Do not think Carmel city code allows graywater?

CA allows washing machine graywater only. I believe without a permit as well.

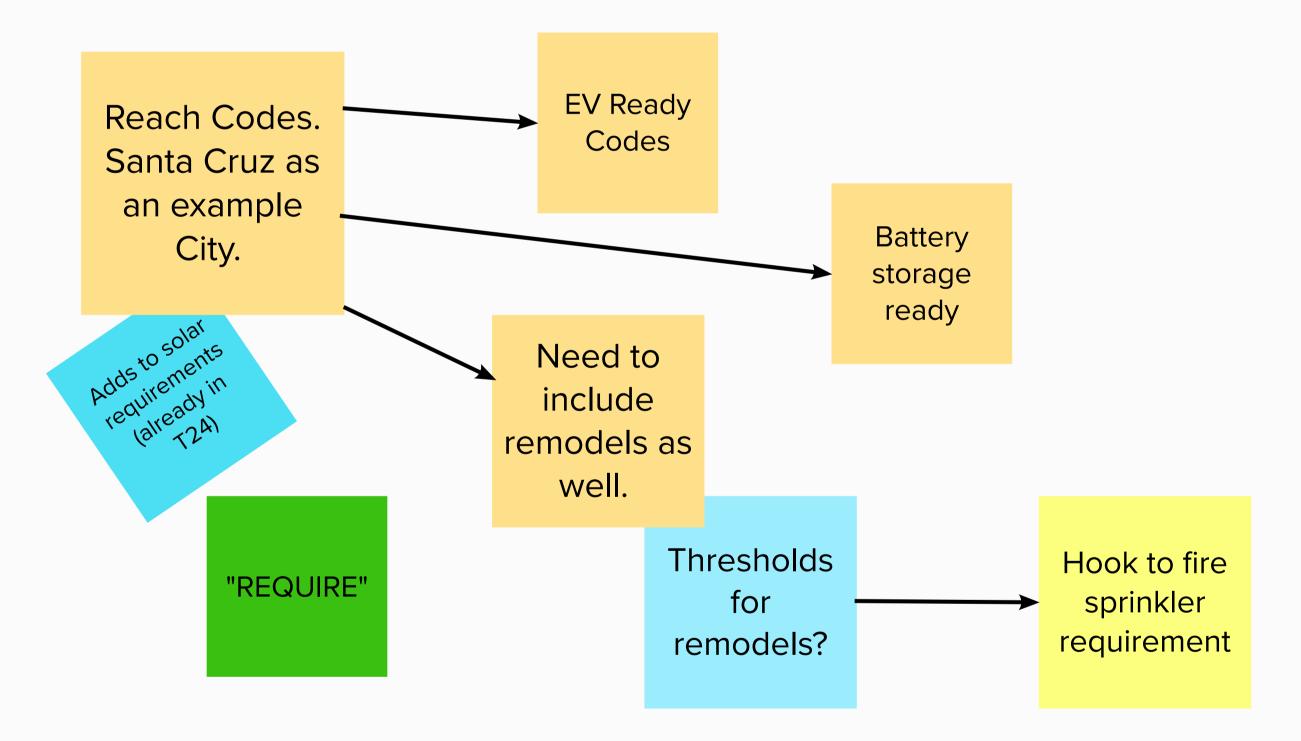
Policy 3.2. Incorporate climate change adaptation into relevant plans and standards.

Climate Mitigation

Goal 1/3: Increase Energy Efficiency in Existing Residential and Commercial Units



Goal 2/4: Increase Energy Efficiency in New Residential / Commercial Units



Goal 9: Increase Clean Energy Use

Goal 5: Energy Efficiency Through Water Conservation

hard to make storage tank plumbing code

"Greywater greywater could be good

"Greywater ready"

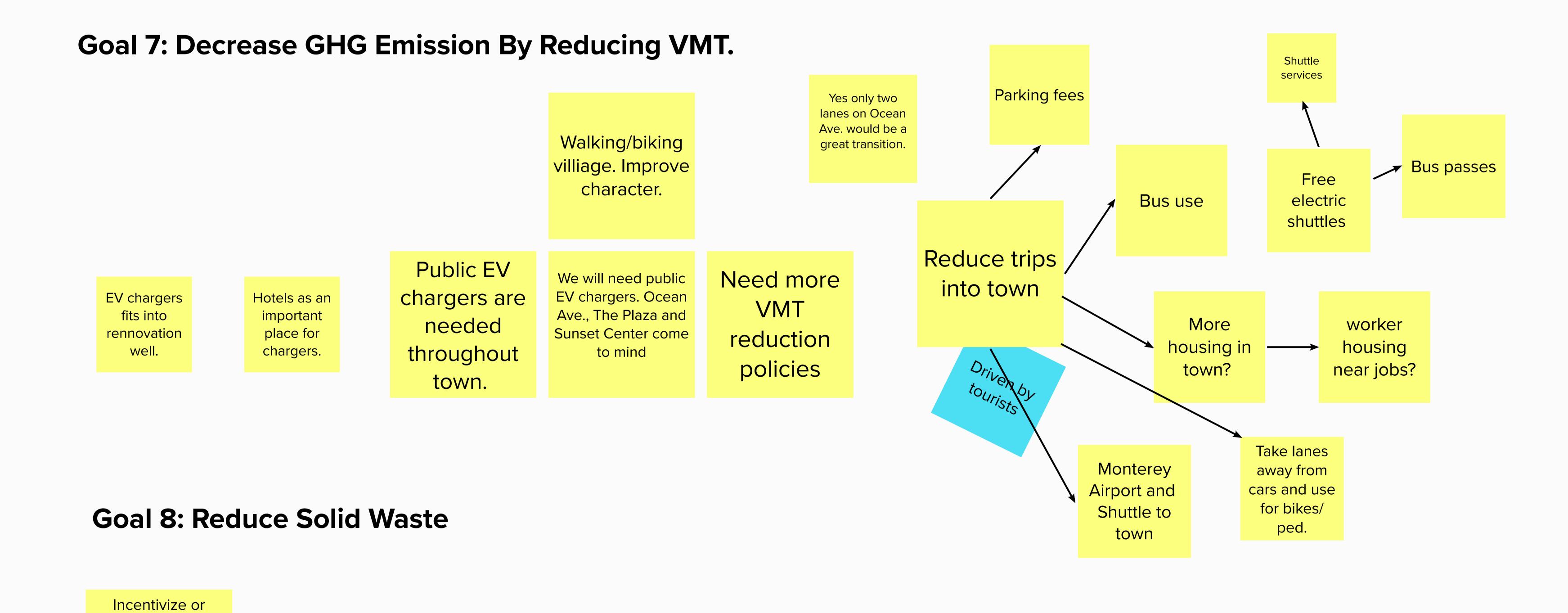
"Greywater ready"

"Need incentives

Need incentives

potable water now? Purple pipe?

Goal 6: Decrease Energy Demand by Reducing the Heat Island Effect.



Appendix C Outreach

Presentation Slide Deck from January 20, 2022, Climate Committee Meeting





Agenda

- Progress to date
- Comments from 11/18/21 Public
 Workshop & how they were addressed
- Additions to the Adaptation Strategy
 - Timeframe, lead, costs
- Next Steps
- Questions/Discussion





Progress to Date

- Draft Adaptation Strategy developed (Aug)
- Updated Draft Adaptation Strategy based on Climate Committee comments (Sept/Oct)
- Revised Draft Adaptation Strategy shared at 11/18/21 public workshop
- Adaptation Strategy refined based on comments from public workshop
 - Timeframe, lead, and costs added to Adaptation Strategy





11/18/2021 Public Workshop Comment Categories

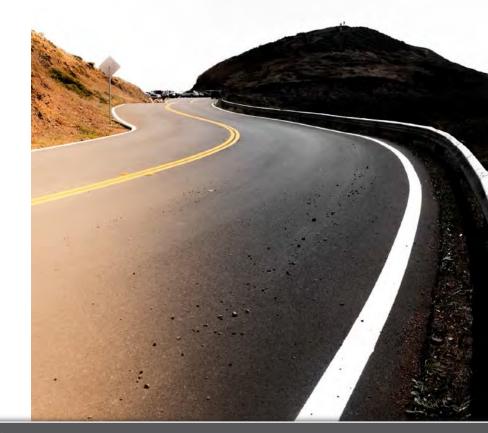
- Evacuation and senior residents
- Apply updated City Planning Guidelines and Development Standards citywide (not just in the VHFHSZ)
- Support for more partnerships in engagement efforts
- Need for a grant writer
- Desire for more specific actions
- Support for policies/actions already in place (e.g., evacuation, vulnerable communities, Firewise Community certification, and more)





Evacuation and Senior Residents

- A clear evacuation plan for seniors in the community was suggested.
- Action 1.1.1 revised:
 - Action 1.1.1. Maintain and Update Evacuation Plan. Maintain and update an Evacuation Plan every 8 years at a minimum to account for all types of emergencies. The plan should focus on the most vulnerable groups including the elderly community.





Planning Guidelines and Development Standards

- It was suggested that City Planning Guidelines and Development Standards apply citywide rather than only in the Very High Fire Hazard Severity Zone (VHFHSZ)
- Actions revised:
 - Action 1.1.8. Update City Planning Guidelines. Update the City's municipal code to maintain consistency with current California codes (California Building Code Chapter 7 and California Residential Code R337) throughout the City.
 - Action 1.1.9. Development Standards. Evaluate City's development standards for consistency with best practices for reducing wildfire risk for both new and existing development, including but not limited to incorporating defensible space design in landscaping guidelines.



More Partnerships for Engagement

- Many additional potential outreach partnerships and ideas for new outreach methods suggested.
- Examples of Actions revised:
 - Action 1.1.3. Collaborate with Monterey Fire. Collaborate with Monterey Fire on its inspection and outreach efforts to reduce fire risks. Continue to coordinate with the CERT program and reach out to new potential outreach partners such as local businesses, community groups, and utilities to help distribute information to increase resident and homeowner awareness and knowledge of how to prepare for emergencies.
 - Action 1.2.3. Engage the Community. Ensure the community knows about the
 resilience hub and how to access it by sharing updates across city and community
 channels. Partner with the CERT program and block captains, and community
 groups, to prioritize disadvantaged/marginalized communities including the elderly
 and individuals with disabilities.



Grant Writer

- Action added
 - Action 1.4.4. Hire a Grant
 Writer. Hire a grant writer to
 ensure implementation of the
 City's adaptation strategy.





Desire for More Specific Actions

- Actions are specific while still leaving room to refine based on new information received during the implementation process.
- Specific examples of potential projects will be included under select actions in the Carmel Climate Change Adaptation Plan.





Additions to the Adaptation Strategy

Timeframe	Potential Lead	Cost
Near-term (1-2		\$-Low (<\$50K); \$\$-
years); Mid-term (3-		Medium (\$50K -
5 years); Long-term		\$100K); \$\$\$-High
(5-10 years)		(>\$100K)
Near-term and		
Ongoing	Police & Fire	\$

10



Next Steps

- Prepare Adaptation Report January -February
- Share Adaptation Report with Climate Committee in March
- Present Adaptation Report to Commissions and City Council for feedback and approval April - May



Thank you for your time!

Questions?





Appendix C Outreach

Response to Comments Received From September 2021 to January 2022

Commenter	Comment	Response
Scott Lonergan	Reducing polluted runoff from going into the Bay (even if just in the form of investigation). Might be able to use Rio Park as	
	a settling pond to capture some urban runoff	Action 3.1.3. Reduce Stormwater Runoff. Reduce stormwater runoff through implementation of a stormwater diversion project to divert all dry weather flows and flist flush runoff to the large sanitary sewer that runs along San Antonio Avenue, such that they can be directed to the Wastewater District.
Scott Lonergan Scott Lonergan	Electrification, how will these be reconciled with CAP, maybe adaptation plan is not the place for these sorts of actions. 3.2.2. consider including traffic congestion/pedestrian (add here or create new item)	The electrification actions will remain in the list of potential adaptation strategies to share with the public, but it is noted that some Climate Committee Members would prefer to move these types of strategies to the Climate Action Plan. Updated policy below to include investigation of congestion issues in the event of an evacuation. Additional evacuation policies added. More
		transportation (including active and public transportation) will be included in the Climate Action Plan. Action 1.1.5. Evacuation Access. Investigate potential congestion issues in the event of an evacuation and develop and maintain a list of residents who may
		have difficulty execusting and provide execustion options for residents with mobility challenges. Action 1.1.6. Evaluate Evacutation Route Capacity. Evaluate evacuation route capacity, safety, and viability under a range of emergency scenarios and identify and implement mitigating actions.
		and implement imagening accounts. Action 1.1.7. Evacuation Alternatives. Develop and employ evacuation alternatives and/or alternative emergency access routes in neighborhoods that have single ingress/segress.
Scott Lonergan	2.1.2. including planning AND maintenance	Added "maintenance" to action 2.1.2. Action 2.1.2. Increase Forest Resilience. Update the Forest Management Plan to:
		1. Review and consider modifications to the preferred urbanized tree species that would result in improved resilience in the context of the expected climate of the second half of the century, reduce widtlife hazard, and that takes into account eathericts and the ecological benefits of natives or near-native (e.g. native species from the Southwestern US or Mexico would likely be preferred to European species). 2. Bicutoel pointing and maintenance guidelines to improve tree health, particularly in the public right-of-way 3. Bicorporate tree species that have greater drought and widdire resistance 4. Bi addition to drought-tolerant landscaping, include landscaping guidelines that reduce widdire hazard on private property. 5. Enhance cannon sequestration operations.
Linda Smith + Scott Lonergan	Suggest re-writing Action 2.1.2. Action 2.1.2. Increase Forest Resilience. Update the Forest Management Plan to:	Action 2.1.2. updated to reflected recommended changes.
	 Review and consider modifications to the preferred urbanized tree species that would result in improved resilence in the context of the expected clinate of the seconds red for the entury, reduce widlifier hearar, and that takes into account aesthetics and the ecological benefits of natives or near-native e.g. native species from the Southwestern US or Mexico would likely be preferred to European species. Include planting and maintenance guidelines to improve tree health particularly in the public right-of-way In addition to drought-folerant inadrosping, include landscaping guidelines that reduce widtfire hazard on private property. Enhance carbon sequestration potential 	Action 2.1.2. Increase Forest Resilience. Update the Forest Management Plan to: 1. Review and consider modifications to the preferred urbanized tree species that would result in improved resilience in the context of the expected climate of the second half of the century, reduce wildfire hazard, and that takes into account aesthetics and the ecological benefits of natives or near-native (e.g. attained particularly in the process of the process of the process of the ecological benefits of natives or near-native (e.g. 2. Ideouted planting and maintenance guidelines to improve tree health, particularly in the public right-of-way 3. Ideocropract tree species that have greated rought and wildfire resistance 4. If addition to drought-tolerant landscaping, include landscaping guidelines that reduce wildfire hazard on private property. 5. Ethanica cathon sequestration potential
Salmeh Moghimi	Wood-burning smoke falls under the umbrella of supporting climate change and should be considered as it contributes to air nollution and GHG emissions	Action 1.3.6., shown below, is maintained in the list of potential adaptation strategies to address the health risk of wood-burning fire places.
	as possessoria un un un emissionis	Action 1.3.6. Electrify Fireplaces. Explore the feasibility of incentivizing electric fire places and induction ranges for existing and new development. Develop outreach materials explaining the health, environmental, and potential cost benefits of switching to electric fire places and induction ranges.
Jeff Baron	more likely to be the Planning commission, for one, and failing that, the city council, though the Forest and Beach commission does manage some (other) aspects of the environment. My fear is that if the climate committee begins to take	
	on items that are outside of our specific purview, it will begin to dilute the strength of the climate change message that we are endeavoring to deliver.	Action 1.3.6. Electrify Fireplaces. Explore the feasibility of incentivizing electric fire places and induction ranges for existing and new development. Develop outreach materials explaining the health, environmental, and potential cost benefits of switching to electric fire places and induction ranges.
John Hill	Action 1.1.7. add "neighborhoods within" before "Carmel-by-the-Sea	Recommended changes made to Action 1.1.7. (now 1.1.10.) Action 1.1.10. Increase Resistance to Wildfire Structural Damage. Evaluate the feasibility of gaining Firewise Community Certification in neighborhoods within Carmel-by-the-Sea.
John Hill	Action 1.3.2. Replacing cooling with "water heating and space heating" and heating with "cooling"	Recommended changes made to Action 1.3.2. Action 1.3.2. Initiate a Heat Pump Retrofit Program. Create a program to aid homeowners in converting to heat pumps, which provide water heating and space heating in addition to cooling and can improve indoor air quality.
John Hill	Action 1.3.4. add "reducing or" before eliminating and words like "incentivize" instead of require. Softer language would be better.	Recommended changes made to Action 1.3.4. Action 1.3.4. Oncount a reasibility study for Estising Building Electrification. Perform an electrification feasibility study/existing building analysis in order to understand the potential for, and associated costs of, electrification retrofitting, including heat pumps, on-site energy generation, and battery storage, in the City of Carmel-by-the-Sea and establish a plan for reducing or eliminating natural gas from existing buildings and building resilience to potential electrical grid shutoffs.
		Recommended changes made to Action 3.2.5 from "require" to "provide incentives" (this is the only action that included the term "require") (now 3.1.5.) Action 3.1.5. Retrofit Existing Critical Buildings and Related Infrastructure. Provide incentives to ensure that all first responder and municipal facilities are properly retrofited for existing and future climate change hazards including sea-level rise elated flooding and erosion, increased wind/storm events, an increase in high heat days, and/or wildfire depending upon location and risk factors.
John Hill	Action 1.3.6. add "and induction ranges" after electric fire places	Recommended changes made to Action 1.3.6. Action 1.3.6. Electrify Fireplaces. Explore the feasibility of incentivizing electric fire places and induction ranges for existing and new development. Develop outreach materials explaining the health, environmental, and potential cost benefits of switching to electric fire places and induction ranges.
John Hill	Action 2.1.1 add "for downtown and" before in the Mission Trail	Recommended changes made to Action 2.1.5 made broader by saying designing projects in the city (rather than just downtown or Mission Trail), Action 2.1.5. Increase Resilience to Stronger Storms. When designing projects in the city, including those recommended in the Mission Trail Stream Stability Study, size improvements to handle larger storms consistent with best available climate change projections.
John Hill	Action 2.1.4. Reword second sentence to: "Coordinate with CAL FIRE, Carmel, and the Monterey Fire Departments to"	Recommended changes made to Action 2.1.3. Action 2.1.3. Increase Resilience of the Mission Trail Nature Preserve. Update the Mission Trail Nature Preserve Master Plan to consider the potential impacts of climate change and to reduce widfire risk for neighboring private properties. Coordinate with CAL FIRE and the Monterey Fire Departments to incorporate Best Practices into an annual maintenance plan, including cost estimates for implementation and revenue sources for implementation.
John Hill	Action 3.1.1 (and maybe others) be clearer about whether we are talking about city owned buildings or all buildings (could provide incentives for residential and commercial buildings too.	Action 3.1.1. removed as it was reduntant with 1.3.3.
John Hill	3.1.2 and 3.1.4 are redundant - can combine	Policies 3.1.2. and 3.1.4. combined. Now 3.1.1. Action 3.1.1. Underground Utilities in Fire Hazard Zones. Determine the feasibility of undergrounding power lines in the Mission Trail Nature Preserve and designated evacuation routes.
Jeff Baron Jeff Baron	Would like to see more details for each action. Concerns with banning gas fire places	More details not added to action list but can be provided for select measures in the report development phase. Electrification actions are kept in the list of potential adaptation strategies sheet, but it has been noted that some Climate Committee members prefer not
Jeff Baron	1.1.3. publicize evacuation routes, not evacuation plans, issues with publicizing plans because it all depends on the type of hazard/event what evacuation will be possible. Only 1 or 2 main way out, big issue here.	to include these types of actions in the adaptation report Recommended Changes made to Action 1.1.3. Political report Action 1.1.3. Publicize Local Evacuation Routes. Publicize both City and Monterey Country evacuation routes for the community, especially among the most vulnerable, in the event of a violifier or other disaster. Action 1.1.4 Maintain and Update Evacuation Plan. Maintain and update an Evacuation Plan every 8 years at a minimum to account for all types of emergencies.
Jeff Baron	1.2 - more emphasis. Carmel foundation - serves the elderly	Evacuation concern addressed with new policy Action 1.1.5. Feacuation Access. Investigate potential congestion issues in the event of an evacuation and develop and maintain a list of residents who may have difficulty evacuating and provide evacuation options for residents with mobility challenges. Action 1.1.6. Evaluate Evacuation Route Capacity, Evaluate evacuation route capacity, safety, and viability under a range of emergency scenarios and identify and implement minigeting actions. Action 1.1.7. Evacuation Alternatives. Develop and employ evacuation alternatives and/or alternative emergency access routes in neighborhoods that have single ingress/gergess. Two new actions added to address vulnerable populations.
		Action 1.2.4. Social Support Network. Collaborate with the Carmel Foundation and other community-based organizations to develop an inventory of locations with isolated seniors and people with disabilities and develop a plan for a social support network to increase resilience to climate change. Action 1.2.5. Back-up Power for Vulnerable Populations. Coordinate with 3CE, PG&E, and emergency management services to establish backup power and
Jeff Baron	Goal 3 issue with water and sewer system, make sure city takes an active role. The City has one seat on water board and	Action 1.2.5. Back-up Power for vulnerable repulsations. Locioninate with 3LL, Publ., and emergency management services to establish power and emergency grid authorism protected that protect the most vulnerable populations. New action added related to wastewater treatment.
zen boton	ooal a state with water an a sewer system, mase stare city seads an active role. Ine Lity in as one seat on water board and wastewater district elector—use these better. Evaluate Carmel's own drought risk/SLR rather than relying on these larger districts (CAVID etc.) Call out relationships in the plan.	Action 3.1.9. Wastewater Treatment. Collaborate with the Carmel Area Wastewater District (CAWD) to increase the facility's resilience to sea level rise and stronger storms, and incentivize reduction of water use in the community and transitioning to reclaimed water use for irrigation. Maintain staff/council
Jeff Baron	Suggest moving Action 1.1.2, 1.1.5, 1.1.6, 1.1.7 (fire prevention strategies) to Goal 3, since Policy 1.1 says " following a climate-related disaster"	personnel as liaisons to CAWD. Fire prevention actions are maintained under Goal 1 and Policy 1.1. because these are related to emergency preparedness as well as response following a disaster. See updated Policy 1.1. language below.
		Policy 1.1. Provide effective emergency preparedness and response in anticipation of potential climate-related disasters

Jeff Baron	Policy 1.3.4 belongs in the CAP, not this document (concern about access to enough power generation to be part of a micro grid. More education needed before taking it further—concerns about batteries as well.)	- The electrification actions will remain in the list of potential adaptation strategies to share with the public, but it is noted that some Climate Committee Members would prefer to move these types of strategies to the Climate Action Plan.
		Modified Action 1.3.7. to address resilience concerns regarding power generation. Action 1.3.7. Identify Funding and Financing, Work with partners like 3CE and PG&E to identify and promote potential resilience opportunities and accessible funding and financing mechanisms to pay for home electrification, weatherization, and battery backups.
Jeff Baron	Policy 1.3.6 also does not belong in this document	The electrification actions will remain in the list of potential adaptation strategies to share with the public, but it is noted that some Climate Committee Members would prefer to move these types of strategies to the Climate Action Plan.
Jeff Baron	Policy 1.4-like this but it will be a sell-especially 1.4.1, and 1.4.2., and 1.4.3 (people that work in Carmel don't live in the City—needs more exploration of who is responsible—maybe not the City)	Noted, this could be a good policy to focus more discussion around in the plan, and it will be important to identify a lead (likely not the City).
Jeff Baron	Action 2.1.1 seems to refer to 2.1.4. Recommend keeping the policy unchanged, have the "overall funding action" first, and then three actions, one corresponding to MTNP, the urban forest, and the North Dunes. Consider adding one for the beach itself	Actions were reorganized as recommended. A new action for Carmel Beach was not created, but two actions (previously 3.2.9, and 3.2.11) regarding Carmel Beach were moved to this section.
	rsen	Action 2.1.6. Beach Sand Monitoring Program. Reinstate beach sand monitoring program described in the Shoreline Management Plan.
		Action 2.1.7. Carmel Cove Sand Supply. Reach out to local researchers (e.g., California State University Monterey Bay) or other sources to conduct Carmel Cove sand supply dynamics analysis.
Jeff Baron	Action 3.1.1. Encourage Energy Generation. Text seems to imply PV and other green systems, but that's biased towards green energy and implies discounting of generators, which probably have an important part in this action.	Action 3.1.1. removed as it was reduntant with 1.3.3.
Jeff Baron	Action 3.1.2 - Updating the GP is not strong enough. "allocating monetary resources" is stronger, and probably belongs in more policies than just this one. Money should be more prominent in the report, I think, as should policies that require more than a simple GP update. In general, actions 3.1.2, 3.1.3, and 3.1.4, should refer to the same "type of thing" (like	Action 3.1.2 updated to include feasibility study, which would include cost. Reference to GP updates removed because it is too specific (and there are many more updates that will be required). In addition, Action 2.1.1. is to increase adaptation funding.
	comment above about Action 2.1.1.) rather than being more	Action 3.1.1. Underground Utilities in Fire Hazard Zones. Determine the feasibility of undergrounding power lines in the Mission Trail Nature Preserve and designated evacuation routes.
		designate evacuation (via Action 2.1.1. Increase Funding for Climate Adaptation. Earmark Capital Improvement Program (DP) funding for design, permitting, and implementation of adaptation projects, including areas stability usudy projects. Include strategies in the 2021 Multi-arisdictional Hazard Mitigation Plan (MJHMP) and Integrated Regional Varieties Management Program (IWMMP) for potential regional funding.
Jeff Baron	Action 3.2.2. and 3.2.1 overlap. Both are good but overlap should be removed and actions more fleshed out.	Actions combined to eliminate overlap and a new action to reduce stormwater runoff was developed.
		Action 3.1.2. Increase Green infrastructure. Modify CIP project design and review approach to consistently evaluate the potential for green infrastructure to be incorporated in CIP projects in the public right-of-way and on public lands. Identify and develop a green infrastructure pilot project that will reduce runoff volume and capture and infiltrate stormwater, based on projected changes in precipitation amounts due to climate change, and incorporates tree and shrub planting to increase carbon sequestration in the city.
		Action 3.1.3. Reduce Stormwater Runoff. Reduce stormwater runoff through implementation of a stormwater diversion project to divert all dry weather flows and first flush runoff to the large sanitary sewer that runs along San Antonio Avenue, such that they can be directed to the Wastewater District.
Jeff Baron	Action 3.2.3. and 3.2.4. closely related, might be better to have one action related to the storm drain, with a few sentences underneath it.	Actions combined as recommended.
	uicemeati t.	Action 3.1.4. Storm Drain Repair Funding and Improvements. Earnack Capital Improvement Program (CIP) funding for design, permitting and implementation of storm drain repairs. Include strategies in the 2021 Multi-ursdictional Hazard Miligation Plan (MIHMP) for potential regional funding. Upsite Storm Drain Master Plan (Soft) improvements, especially when making repairs in the lower reaches of watersheds, to handle largest storms.
Jeff Baron	Action 3.2.9,3.2.10,3.2.1, and 3.2.12, aren't "infrastructure" though 3.2.10 and 3.2.12 might be. Recommend moving these to the natural environment section, with a nod to the revetments etc. in the section of "infrastructure"	Actions previously labeled 3.2.9 and 3.2.11 were moved to the natural environment section, the rest remain in the infrastructure section as they refer to coastal infrastructure.
Jeff Baron	Don't see anything related to CAWD. Nor to regional roads (possible evacuation routes) or to regional electrical infrastructure or to waste management. Should be added.	Actions related to CAWD, evacuation, and electrical infrastructure are included. Waste management actions should be included in the Climate Action Plan.
		Action 3.1.9. Wastewater Treatment. Collaborate with the Carmel Area Wastewater District (CAWD) to increase the facility's resilience to sea level rise and stronger storms, and incentivize reduction of water use in the community and transitioning to reclaimed water use for irrigation. Maintain staff/council personnel as liaisons to CAWD. Action 1.1.5. Evacuation Access. Investigate potential congestion issues in the event of an evacuation and develop and maintain a list of residents who may have difficulty evacuating and provide evacuation options for residents with mobility challenges.
		Action 1.1.6. Evaluate Evacutaion Route Capacity. Evaluate evacuation route capacity, safety, and viability under a range of emergency scenarios and identify and implement mitigating actions.
		Action 1.1.7. Evacuation Alternatives. Develop and employ evacuation alternatives and/or alternative emergency access routes in neighborhoods that have single ingress/egress.
		Action 3.1.1. Underground Utilities in Fire Hazard Zones. Determine the feasibility of undergrounding power lines in the Mission Trail Nature Preserve and designated evacuation routes.
Jeff Baron	Would prefer if the policies and actions and goals more closely resembled the vulnerability matrix - it would be easier to track from that document to this one.	The spreadsheet addresses all priority assets at risk identified in the vulnerability assessment (as described in the introduction tab of the adaptation strategy spreadsheet). At this stage, the policies, actions, and goals will not be reorganized given budget and timeline constraints, but can be organized differently for the report. To be discussed with the Committee.
LaNette	Big jump – who's doing what?	After the public workshop - a final list of adaptation actions will be developed and timeframe, lead agency/group, and cost will all be determined. The City will not be responsible for doing everything, but rather for coordinating with other agencies/groups.
LaNette	1.4.1 workers – service workers are a huge asset to the City – no discussion currently on the impacts of climate change on them. Chamber of Commerce can be very helpful here.	Chamber of Commerce added as potential lead for actions related to service workers (1.4.1., 1.4.2., 1.4.3.).
LaNette	1.2. more on vulnerable populations	Two new actions added to address vulnerable populations.
		Action 1.2.4. Social Support Network. Collaborate with the Carmel Foundation and other community-based organizations to develop an inventory of locations with isolated seniors and people with disabilities and develop a plan for a social support network to increase resilience to climate change.
		Action 1.2.5. Back-up Power for Vulnerable Populations. Coordinate with 3CE, PG&E, and emergency management services to establish backup power and emergency grid shutdown protocols that protect the most vulnerable populations.
Carrie	Resilience Hub (Youth Center?) Police Chief could be a good resource, this might be a continuum, rather than a new action.	Added the Youth Center to Action 1.2.1 (Establish a Resilience Hub).
Carrie	Incentivize rather than mandate	Mandate and require have been replaced with incentivize (Action 3.2.6.), and reduce was added to Action 1.3.4.
		Action 1.3.4. Conduct a Feasibility Study for Existing Building Electrification. Perform an electrification feasibility study/existing building analysis in order to understand the potential for, and associated costs of, electrification retrofitting, including heat pumps, on-site energy generation, and battery storage, in the City of Carmel-by-the-Sea and establish a plan for reducing or eliminating natural gas from existing buildings and building resilience to potential electrical grid shutoffs.
		Recommended changes made to Action 3.2.6 (now numbered 3.1.5.) from "require" to "provide incentives" (this is the only action that included the term "require") Action 3.1.5. Retrofit Existing Critical Buildings and Related Infrastructure. Provide incentives to ensure that all first responder and municipal facilities are properly retrofitted for existing and future climate change hazards including sea-level rise related flooding and erosion, increased wind/storm events, an increase in high heat days, and/or wildfire depending upon location and risk factors.

Date Commenter	Mode	Policy Comment	Response
11/18/2021 Unknown	Workshop Mural	1.1 Maintaining and updating the evacuation plan should be higher in the priority list	Addressed. Moved to the top of the list.
11/18/2021 Unknown	Workshop Mural	1.1 Fire and the elderly are a high priority	General comment. No action required.
11/18/2021 Unknown	Workshop Mural	1.1 I think creating a clear evacuation plan for the elderly community would be a priority	Addressed by including more detail to Action 1.1.1: Action 1.1.1. Maintain and Update Evacuation Plan. Maintain and update an Evacuation Plan every 8 years at a minimum to
			account for all types of emergencies. The plan should focus on the most vulnerable groups including the elderly community.
11/18/2021 Unknown	Workshop Mural	1.1 The Firewise community certification seem like it might be very applicable in Carmel because the lots are so	General comment. No action required, action 1.1.10 addresses exploring the feasibility of and gaining firewise community
		small and do overlap. Incentivizing that certification would be awesome!	certification.
11/18/2021 Unknown	Workshop Mural	1.1 Provide adaptation to keep the urban forest healthy	No action required. Adaptation to keep the urban forest healthy included: Action 2.1.2. Increase Urban Forest Resilience. Update the Forest Management Plan to:
			1. Review and consider modifications to the preferred urbanized tree species that would result in improved resilience in the
			context of the expected climate of the second half of the century, reduce wildfire hazard, and that takes into account aesthetics and the ecological benefits of natives or near-native (e.g. native species from the Southwestern US or Mexico would likely be
			preferred to European species).
			2.Include planting and maintenance guidelines to improve tree health, particularly in the public right-of-way 3.Incorporate tree species that have greater drought and wildfire resistance
			4.Ih addition to drought-tolerant landscaping, include landscaping guidelines that reduce wildfire hazard on private property.
			5.Enhance carbon sequestration potential Update of the Plan should include collaboration with stakeholders, such as the Monterey Pine Forest Watch and California State
			University, Monterey Bay.
11/18/2021 Unknown	Workshop Mural	1.1 1.1.8 and 1.1.9 why limit to high fire severity zones, make it citywide	Addressed. Updated to make the actions citywide.
			Action 1.1.8. Update City Planning Guidelines. Update the City's municipal code to maintain consistency with current California codes (California Building Code Chapter 7 and California Residential Code R337) throughout the City.
			Action 1.1.9. Development Standards. Evaluate City's development standards for consistency with best practices for reducing
			wildfire risk for both new and existing development, including but not limited to incorporating defensible space design in landscaping guidelines.
11/18/2021 Unknown	Workshop Mural	1.1 Consistent building code	General comment. No action required, action 1.1.9 addresses consistent codes.
11/18/2021 Unknown	Workshop Mural	1.1 Permit streamlining for high performing projects	This comment seems related to new construction - streamline permits for projects that meet GHG reduction/adaptation goals.
			Could be an option, but sometimes difficult to actually make permit process easier. Need to discuss feasbility with Planning.
11/18/2021 Unknown	Workshop Mural	1.2 Connecting the plans and implementing them	General comment. No action required. The City will ensure that plans are connected and implemented.
11/18/2021 Unknown	Workshop Mural	1.2 The residents that care about preparedness - know what to go and/or get info. The residents that don't care are	Addressed. Updated action below to include outreach to second home owners through community groups.
		the bigger challenge. engage with parttime/vacation rental home owners. Second home owners hard to reach. Social media, public workshops, home owner associations.	Action 1.1.3. Collaborate with Monterey Fire. Collaborate with Monterey Fire on its inspection and outreach efforts to reduce fire risks. Continue to coordinate with the CERT program and reach out to new potential outreach partners such as local
			businesses, community groups, and utilities to help distribute information to increase resident and homeowner awareness and
11/18/2021 Unknown	Workshop Mural	1.2 Neighborhood organizations (support for engagement)	knowledge of how to prepare for emergencies. Addressed. Updated action 1.2.3
			Action 1.2.3. Engage the Community. Ensure the community knows about the resilience hub and how to access it by sharing updates across city and community channels. Partner with the CERT program and block captains, and community groups, to
			updates across city and community channels. Partner with the CERT program and block captains, and community groups, to prioritize disadvantaged/marginalized communities including the elderly and individuals with disabilities.
44 40 (2024 11 1			
11/18/2021 Unknown 11/18/2021 Unknown	Workshop Mural Workshop Mural	 1.2 update codes to match and not conflict with CA codes (fire for example) 1.2 Wine and Dine approach, have some parties to reach the communities. 	No action required. Action 1.1.9 addresses codes. Addressed. Updated action below to include outreach with the support of restaurants and other community groups.
			Action 1.1.3. Collaborate with Monterey Fire. Collaborate with Monterey Fire on its inspection and outreach efforts to reduce
			fire risks. Coordinate with the CERT program, home owner associations, restaurants, and other community groups to help distribute information to increase resident and homeowner awareness and knowledge of how to prepare for emergencies.
11/18/2021 Unknown	Workshop Mural	1.3 Make it clear why electrification is an adaptation issue	No action needed. To be discussed in plan development (narrative).
11/18/2021 Unknown 11/18/2021 Unknown	Workshop Mural Workshop Mural	Health impacts of natural gas combustion More specific actions under the policies	No action needed. To be discussed in plan development (narrative). General comment. No action required. Actions are as specific as feasible while leaving room to refine based on new information
			during implementation. Examples will be added to the Adaptation Strategy Report.
11/18/2021 Unknown 11/18/2021 Unknown	Workshop Mural Workshop Mural	What does educate the community mean? clear and implementable actions	Addressed. Changed to "Engage the Community." General comment. No action required. The City will ensure the actions are clear and implementable.
11/18/2021 Unknown	Workshop Mural	1.3 Smaller steps that add up to larger actions (more detail)	General comment. No action required. Actions are as specific as feasible while leaving room to refine based on new information
11/18/2021 Unknown	Workshop Mural	1.3 More SMART goals	during implementation. Examples will be added to the Adaptation Strategy Report. No action required. Actions are where the specifics come into play (not the goals). Measurable actions will include metrics and
			general time-frame will be added and included in the plan.
11/18/2021 Unknown	Workshop Mural	1.3 The youth center as a resilience location. Water treatment, elderly communities	No action needed. Youth center called out as resilience location in action 1.2.1. Water treatment addressed in action 3.1.9. Elderly communities are addressed throughout actions under policy 1.1
11/18/2021 Unknown	Workshop Mural	2.1 Add action to hire a shoreline engineer to better understand issues/opportunities	Hiring a coastal engineer is addressed in the action below:
			Action 3.1.8. Hire Coastal Engineer. Hire coastal engineer with experience in planning for climate change to conduct: 1. Conduct research and prepare a Sea-Level Rise Vulnerability Study to further assess the risks to the city's coastal assets,
			including the beach, sea walls, revetments, bluffs, stairs and access, public bathrooms, parking areas, drainage infrastructure,
			and utilities. 2. Determine adaptation measures and Local Coastal Program policy options, including but not limited to:. a) Mostly natural,
			unarmored North Dunes area; b) mostly armored bluffs along Scenic Roach south of 8th Avenue; c) Unarmored dunes along
			private property between 8th Avenue and Del Mar Parking Lot; d) Armored private properties on the bluffs at the north end of the City (Pescadero Canyon area).
			3. Evaluate feasibility and phasing, the use of thresholds for when different elements of these strategies are implement. For
			example, maintaining armory or other defenses up to a point, but then if a threshold is reached, embracing a new bluff line and different adaptive measure. Consider applying an adaptive pathways approach which establishes trigger thresholds for different
			adaptive measures based on the severity of the impact from flooding and erosion associated with sea-level rise.
11/18/2021 Unknown	Workshop Mural	2.1 Consider hiring a grant writer to gain additional funding (potential new action)	Addressed. Added the following action: Action 1.4.4. Hire a Grant Writer. Hire a grant writer to ensure implementation of the City's adaptation strategy.
11/10/2021 -	Workshop Mural	2.4 Males a distinction between males and subset for the County is not the summary of the County in the County	Addressed Added Northern
11/18/2021 Unknown	worksnop Mural	2.1 Make a distinction between parks and urban forest? Urban forest is not the same as parks. Add "urban" to 2.1.2	Addressed. Added "urban" Action 2.1.2. Increase Urban Forest Resilience. Update the Forest Management Plan to:
			1. Review and consider modifications to the preferred urbanized tree species that would result in improved resilience in the
			context of the expected climate of the second half of the century, reduce wildfire hazard, and that takes into account aesthetics and the ecological benefits of natives or near-native (e.g. native species from the Southwestern US or Mexico would likely be
			preferred to European species). 2. Include planting and maintenance guidelines to improve tree health, particularly in the public right-of-way
			3. Incorporate tree species that have greater drought and wildfire resistance
			4 Ih addition to drought-tolerant landscaping, include landscaping guidelines that reduce wildfire hazard on private property. 5 Enhance carbon sequestration potential
			Update of the Plan should include collaboration with stakeholders, such as the Monterey Pine Forest Watch and California State
			University, Monterey Bay.
11/18/2021 Unknown	Workshop Mural	2.1 Pescadero Canyon as a fire safety issue	General comment. No action needed. To be considered in narrative/implementation of the plan. This has been discussed at
11/18/2021 Unknown	Workshop Mural	2.1 Improved parklands vs. forests - habitat value, corridors	length and fire fuel reduction is already being conducted in the canyon to the extent feasible. No update needed. Addressed in actions 2.1.1. and 2.1.7.
11/18/2021 Unknown	Workshop Mural	2.1 For forest resilience, maybe reach out to CSUMB to conduct an analysis on the current state of the forest	Added CSUMB as potential collaborators:
			Action 2.1.2. Increase Urban Forest Resilience. Update the Forest Management Plan to: 1. Review and consider modifications to the preferred urbanized tree species that would result in improved resilience in the
			context of the expected climate of the second half of the century, reduce wildfire hazard, and that takes into account aesthetics
			and the ecological benefits of natives or near-native (e.g. native species from the Southwestern US or Mexico would likely be preferred to European species).
			2.Include planting and maintenance guidelines to improve tree health, particularly in the public right-of-way
			3. Incorporate tree species that have greater drought and wildfire resistance 4. In addition to drought-tolerant landscaping, include landscaping guidelines that reduce wildfire hazard on private property.
			5.Enhance carbon sequestration potential
			Update of the Plan should include collaboration with stakeholders, such as the Monterey Pine Forest Watch and California State University, Monterey Bay.
11/18/2021 Unknown	Workshop Mural	2.1 Urban forest is important to town. What does that look like? Forest and beach commission	Urban forest addressed in action below:
11/10/2021 UHKHOWN	workshop Murai	or poil forest is important to town. What does that look like? Forest and beach commission	Action 2.1.2. Increase Urban Forest Resilience. Update the Forest Management Plan to:
			 Review and consider modifications to the preferred urbanized tree species that would result in improved resilience in the context of the expected climate of the second half of the century, reduce wildfire hazard, and that takes into account aesthetics
			and the ecological benefits of natives or near-native (e.g. native species from the Southwestern US or Mexico would likely be
			preferred to European species).
			 Include planting and maintenance guidelines to improve tree health, particularly in the public right-of-way Incorporate tree species that have greater drought and wildfire resistance
			4.fn addition to drought-tolerant landscaping, include landscaping guidelines that reduce wildfire hazard on private property. 5.Enhance carbon sequestration potential
			$Update\ of\ the\ Plan\ should\ include\ collaboration\ with\ stakeholders, such\ as\ the\ Monterey\ Pine\ Forest\ Watch\ and\ California\ State$
			University, Monterey Bay.
11/18/2021 Unknown	Workshop Mural	2.1 Hill Park is in desperate need for major renovation work. I'd never take children there	No action necessary. Though Forest Hill Park could use renovation - it is not directly connected to adaptation.
11/18/2021 Unknown	Workshop Mural	2.1 No controlled burns in Carmel! But in Del Monte Forest and Jacks Peak.	General comment. No action required (the strategy does not mention controlled burns in the City.

11/18/2021 Unknown	Workshop Mural 3	flushing and irrigation, if I understand that correctly. Do not think Carmel City code allows graywater. CA allows washing machine graywater only. I believe without a permit as well.	Dual plumbing is a voluntary measure for non-residential uses when non-potable water is available. Greywater for washing machines is also allowed as a voluntary measure for residential. Both included in Caligreen (CA Building Code). The City code is silent on greywater.
9/23/2021 Jili Petker	Email	Intelligent landscaping design can definitely reduce water runoff 1.16 Defensible Space: Hinkin we should get serious bout Hiss. No one is going to be able to have 100 feet of defensible space — there would be almost no trees in the city. But certainly within the first 5 or maybe 20 feet, Hinkin we should get homeowners remove trees even if they don't meet the current size criteria. I wouldn't go so far as to require the removal of plants within the first 5-20 feet, but I don't think the city should stop anyone who wants to. This is related to 2.12, point 4. 1.3.4 Building Electrification: Just curious, why is it important to remove natural gas from buildings? Is this seen as a first harard, or is this just a recognition that eventually there may be no more natural gas supplies (at least without fracking, which I'm vehemently opposed to). 3.1.2 Resilience of Utilities: I'm outs we hast this strategy means. 3.2.2 Green Infrastructure: How do we reconcile planting more trees and shrubs with wildfire risk? I'm glad to see rain capture, gray water recycling, and what think is vaner-per-meable surfacing on the list. I'm also glad to see solar energy on the list, but why just for city buildings? Should we facilitate solar energy for private buildings? I haven't tried, so I don't know how difficult it is to get approval for solar panels.	Defensible space will be addressed as part of the plan implementation. Specifically, the action below addresses incorporating defensible space design in landscaping guidelines. Action 1.1.9 Development Standards. Evaluate Cilry's development standards for consistency with best practices for reducing wildfure risk for both new and existing development, including but not limited to incorporating defensible space design in landscaping guidelines. Electrification - this was discussed in the meeting and will be addressed in the adaptation strategy narrative. Heat pump water heaters can use electricity from rooftop or community solar to heat water and store it for over 24 hours, while modern gas water heaters (quired by A building code in new homes with gas) require electricity to pereit, as well as structioning gas systems, and will not work during gas or eletric outages. Heat pumps offer the most efficient heating and cooling systems, in one, which gas furnaces can toffer (it is also more expensive to have two separes systems (heating) exploring the control of the polypan directly using magnits (not flames). This is twice as efficient as gas. Storms and other manifestations of climate change are expected to be catastrophic to California's gas infrastructure. The gas system take 30 times longer to restore than the electric system after and advantages. The store of the polypan directly using magnits (not flames). This is twice as efficient as gas. Storms and other manifestations of climate change are expected to be catastrophic to California's gas infrastructure. The gas system take 30 times longer to restore than the electric system after actual disasters, (thery-/lowwa-sirractlukor-/gar/ciles/2019/10/electrification of-climate-resiliency) 3.1.2. Updated the wording slightly to increase clarity Action 3.1.2. Increase Green Infrastructure. Modify Capital improvement Program (CIP) project design to consistently evaluate the potential for green infrastructure to be incorporated in CIP projects; in the public right-
9/23/2021 Fran Vardamis	CRA meeting	Wouldn't burying the electric lines be a big step in avoiding fires and blackouts during inevitable climate-change disasters. An urban forest with electric/communication wires strung among the vulnerable trees is a recipe for eventual disaster, both from downed lines sparking and from blackouts. Buried wires is something the city can and should do	
9/23/2021 Nancy Twomey	CRA meeting	What about addressing water quality and litter as part of storm drain upgrades?	No action required. Water quality and trash capture are already addressed in the City's stormwater program and ASBS requirements. Projects to reduce stormwater quality impacts are in the City's Storm Drain Master Plan.
9/23/2021 9/23/2021 Wanda Vollmer 9/23/2021 Susan Bjerre	CRA meeting CRA meeting CRA meeting	Support for burying power lines and wondering how feasible it is. Regarding the power lines, I volunteer San Carlos street as test street. :) Does PG&E have any motivation to contribute to the cost of burying power lines?	No action required. Undergrounding utilities is included in action 3.1.1, where feasibility will be explored No action required. Undergrounding utilities is included in action 3.1.1 No action required. Undergrounding utilities is included in action 3.1.1, where feasibility (including potential funding) will be explored. Ver, PGE& does have motivation to underground utilities.
9/23/2021	CRA meeting	Might the City conduct a survey of Carmel homeowners to gauge interest in burying power lines?	Addressed. Action 3.1.1 updated: Action 3.1.1. Underground Utilities in Fire Hazard Zones. Determine the feasibility of, and community support for, undergrounding power lines in the Mission Trail Nature Preserve and designated evacuation routes.
9/24/2021 Salmeh Moghimi	Email	Dear left, Thanks again for this environmental gathering and discussing the issues that are so relevant to climate change and our town. I am however confused that regulating wood-burning smoke does not fall under this umbrells of supporting climate change. Leftieve the pollution from the smoke that gets into our atmosphere in town especially when we have these deveatating fires that are also creating smoke is an environmental issue. Also the fact that Covid is a respiratory disease, cleaner air is better for everyone. We all know wood-burning smoke is toxic and that's been already addressed. So when we speak about adapting and changing our ways, I feel it starts with things we as individual carmel residents can do too. Carmel's landscape of homes are very close to one another for this kind of activity to be left without any kind of regulation. Being part of the environmental committee, I hope you consider this. You we're kind enough to mention that I can raise this concern to another panel of people. Can you please let me know who they are.	No action required. Wood burning smoke/natural gas issues addressed in action 13.4 and 13.6.
10/15/2021 Michael DeLapa	Email	If Carmel is similar to other cities in Monterey County whose greenhouse gas inventories we've examined — and of course we would need to look a lot closer at Carmel's actual data to know for sure — the City's three most important climate mitigation strategies are: 1) Transportation policies that facilitate transition from gas cars to EVs; 2) Building policies that facilitate transition from natural gas to electric (appliances, heating, etc.) in both commercial and residential buildings 3) Land use policies that support infill, uproning, and mixed use to facilitate walking, biking, and public transportation (buses).	No action required. This is a mitigation comment.
11/15/2021 Georgina Armstrong	Email	I'm particularly pleased that the bluffs are now getting the attention they deserve. Lused to any that, while many of the non-porfists were Friends of	
11/22/2021 Nikki Nedeff	Email	My only suggestion about the proposed update to the Forest Management Plan is to recommend that substitute species not have to potential to invade into Montreey Pine Forest habitat. For example, in an effort to plant what seemed like a good idea at the time, Torrey pines were planted by Caltrana lang Highway 1 in Marina, and also at Rancho Canada golf course years ago. Torrey pines are now aggressively colonizing rare Maritime Chaparral habitat in Marina and have jumped Carmel Valley Road and are invading the native pine forest below Jacks Peak. Who knew this would be a problem? I	No action required. This is more of an implementation comment (very detailed). See row below for details on inclusion of explicit collaboration with stakeholder groups such as MPFW during update of the Forest Management Plan.
11/18/2021 Joyce Stevens	Email	Mr. Chairman and Members of the City of Carmel by the Sea Climate Committee: I'm Joyce Stevens, a founding member and past president of Monterey Pine Forest Watch. Our group came together in 1992 in order to facilities better understanding of our beautiful native Monterey Pine Forest, in the face of increasing threats from development. Not only does our local forest give the Perinaula its fundamental character, but it has long been of interest to a worldwide industry of forest products based on Monterey Pine, as it serves as the most important genetic repository for this industry. It serves as the most important genetic repository for this industry. It serves as the most important genetic repository for this industry. It serves as the most important genetic repository for this industry. It serves as the most important genetic repository for this industry. It serves as the most important genetic repository for this industry. It is a serve of the control of the	

City of Carmel-by-the-Sea Potential Adaptation Strategies

Background

Carmel-by-the-Sea (City) is currently experiencing, and will continue to experience, climate change impacts, including stronger storms, increased wildfire risk, sea level rise, extended drought conditions, and increased temperature. The City developed a Climate Adaptation Plan to increase resilience of the community and assets in Carmel-by-the-Sea. In September 2019, a Climate Committee was convened to develop and guide the preparation of the Climate Adaptation Plan. The City published a Climate Change Vulnerability Assessment in July 2021. The Vulnerability Assessment characterizes climate hazards that will impact the community and City-owned assets, describes the community's major climate vulnerabilities, and identifies work that has already been done by the City to improve resilience.

This workbook provides the City's Climate Adatpation Goals, Policies and Actions to take to improve the resilience of its community members, natural environment, infrastructure and built environment. The adaptation goals, policies, and actions were developed to address all priority assets at risk in the City's Vulnerability Assessment. The **All Goals, Policies & Actions** tab shows all adaptation goals, policies and actions developed. The **Near-Term, Mid-Term**, and **Long-Term** tabs provides actions to be completed in the near term, mid-term, and long-term, respectively (organized by goal and policy) to support implementation.

Definitions

Goals: Broad statements describing community desires. The Carmel-by-the-Sea adaptation goals are modeled after the Adaptation Vision and Principles developed by the California Governor's Office of Planning and Research (OPR) Integrated Climate Adaptation & Resiliency Program (ICARP). Each goal is focused on increasing the resilience of one of the following broad asset categories: community, natural assets, and infrastructure and the built environment.

Policies: Specific position statements that support the achievement of goals and serve as guides to City Council, Planning Commission, and city staff, when making decisions.

Actions: Specific methods to implement and achieve policies and goals.