



CITY OF CARMEL-BY-THE-SEA CLIMATE COMMITTEE

Contact: 831.620.2000 www.ci.carmel.ca.us/carmel

All meetings are held in the City Council Chambers
East Side of Monte Verde Street
Between Ocean and 7th Avenues

REGULAR MEETING Thursday, January 20, 2022

3:30 PM

Governor Newsom's Executive Order N-29-20 has allowed local legislative bodies to hold public meetings via teleconference and to make public meetings accessible telephonically or otherwise electronically to all members of the public seeking to observe and to address the local legislative body. Also, see the Order by the Monterey County Public Health Officer issued March 17, 2020. The health and well-being of our residents is the top priority for the City of Carmel-by-the-Sea. To that end, this meeting will be held via teleconference and web-streamed on the City's website ONLY.

To attend via Zoom [https://ci-carmel-ca-us.zoom.us/j/93340805428? Meeting ID 93340805428](https://ci-carmel-ca-us.zoom.us/j/93340805428?MeetingID=93340805428), Passcode 669209; or to attend via telephone dial 1-312-626-6799. The public can also email comments to amartelet@ci.carmel.ca.us. Comments must be received 2 hours before the meeting in order to be provided to the committee. Comments received after that time and up to the beginning of the meeting will be added to the agenda and made part of the record.

CALL TO ORDER

PUBLIC APPEARANCES

Members of the public are entitled to speak on matters of municipal concern not on the agenda during Public Appearances. Each person's comments shall be limited to 3 minutes, or as otherwise established by the Chair. Matters not appearing on the agenda will not receive action at this meeting and may be referred to staff. Persons are not required to provide their names, and it is helpful for speakers to state their names so they may be identified in the minutes of the meeting.

ANNOUNCEMENTS

ORDERS OF BUSINESS

Orders of Business are agenda items that require Committee discussion, debate, direction to staff, and/or action.

1. Review the Carmel By-The-Sea Greenhouse Gas Inventory Update, Forecast, and Reduction Targets Technical Memorandum

2. Review the Revised List of Adaptation Strategies for Carmel
3. Provide an Update and Discuss Community Outreach Next Steps

FUTURE AGENDA ITEMS AND ADJOURNMENT

This agenda was posted at City Hall, Monte Verde Street between Ocean Avenue and 7th Avenue, outside the Park Branch Library, NE corner of Mission Street and 6th Avenue, the Carmel-by-the-Sea Post Office, 5th Avenue between Dolores Street and San Carlos Street, and the City's webpage <http://www.ci.carmel.ca.us> in accordance with applicable legal requirements.

SUPPLEMENTAL MATERIAL RECEIVED AFTER THE POSTING OF THE AGENDA

Any supplemental writings or documents distributed to a majority of the Climate Committee regarding any item on this agenda, received after the posting of the agenda will be available at the Public Works Department located on the east side of Junipero Street between Fourth and Fifth Avenues during normal business hours.

SPECIAL NOTICES TO PUBLIC

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the City Clerk's Office at 831-620-2000 at least 48 hours prior to the meeting to ensure that reasonable arrangements can be made to provide accessibility to the meeting (28CFR 35.102-35.104 ADA Title II).



CITY OF CARMEL-BY-THE-SEA

Climate Committee

Staff Report

January 20, 2022
ORDERS OF BUSINESS

TO: Climate Committee Members

SUBMITTED BY: Agnes Martelet, Environmental Compliance Manager

SUBJECT: Review the Carmel By-The-Sea Greenhouse Gas Inventory Update, Forecast, and Reduction Targets Technical Memorandum

RECOMMENDATION:

Review and provide comments on the Carmel By-The-Sea Greenhouse Gas Inventory Update, Forecast, and Reduction Targets Technical Memorandum provided by LSA Associates (consultant).

BACKGROUND/SUMMARY:

LSA has been updating the Greenhouse Gas (GHG) emissions inventory for Carmel to address some discrepancies associated with prior inventories and to incorporate an origin and destination analysis of the vehicle miles traveled (VMT) in the City. The GHG emissions inventory (Attachment 1) is the foundation of planning for future reductions and categorizes the major sources of GHG emissions produced over a single calendar year.

LSA also completed Business-As-Usual (BAU) and Adjusted-Business-As-Usual (ABAU) GHG emissions forecasts for 2030 and 2045 (Attachment 1). The forecasts allow the City to understand how emissions are expected to increase or decrease in the future. Based on these forecasts, LSA identified GHG reduction targets that will be the basis for developing strategies to meet State GHG reduction goals.

FISCAL IMPACT:

Costs of strategies to reduce GHG emissions have not yet been developed.

ATTACHMENTS:

Attachment 1: Carmel By-The-Sea Greenhouse Gas Inventory Update, Forecast, and Reduction Targets Technical Memorandum



MEMORANDUM

DATE: January 12, 2022

TO: Agnes Martelet, City of Carmel By-The-Sea

FROM: Michael Hendrix, LSA

SUBJECT: Carmel By-The-Sea Greenhouse Gas Inventory Update, Forecast, Reduction Targets (LSA Project No.CML2101)

The purpose of this technical memorandum is to present the Carmel By-The-Sea Greenhouse Gas (GHG) emissions inventory update, forecasts, and targets to the City for review and feedback. The GHG emissions inventory update, forecasts and targets presented in this memorandum will form the basis of our next steps in refining and quantifying the GHG reduction strategies for the City.

CARMEL BY-THE-SEA GHG EMISSIONS INVENTORY, FORECAST, AND TARGETS

1.1 GHG Emissions Inventory Update

GHG emissions inventories are the foundation of planning for future reductions. Establishing an inventory of emissions helps to identify and categorize the major sources of emissions produced over a single calendar year. A community inventory includes GHG emissions that result from the activities of city residents and businesses. The inventory identifies the major sources of GHG emissions resulting from activities in sectors that are specific to community activities.

The Association of Monterey Bay Area Governments (AMBAG) prepared community inventories for the years 2005, 2010, 2015, 2018, and 2019. The 2019 inventory is the most recent year for which data is available. Table A provides the sectors evaluated in the GHG inventories.

Table A: Community Sectors Evaluated in the Inventories

Community Sectors
Residential Energy (Electricity and Natural Gas)
Commercial/Industrial Energy (Electricity and Natural Gas)
On-Road Transportation
Solid Waste
Wastewater

AMBAG calculated GHG emissions using the available activity data (e.g., kilowatt-hours of electricity) in the State Energy Efficiency Collaborative (SEEC) ClearPath tools to convert activity data to emissions output using relevant emission factors.

1.1.1 *Vehicle Miles Traveled Analysis*

One of the issues that needs to be resolved is the drastic reduction in the GHG emissions associated with the on-road transportation sector in years 2010 and 2015. LSA met with AMBAG and City staff to discuss the issue. AMBAG stated that between 2010 and 2015 they updated the Monterey County Regional Travel Demand Model (RTDM) which resulted in a reduction to the vehicle miles traveled (VMT) allocated to the City. Another issue was that the RTDM allocated VMT based upon the City boundaries rather than determine VMT based upon vehicle trips origins or destinations.

AMBAG followed the International Council for Local Environmental Initiatives (ICLEI) protocols in developing the GHG inventories including the on-road transportation sector. Allocating VMT using the RTDM is an accepted practice.

However, the City has a unique tourist-based economy that attracts visitors from around the world and the City wanted to better understand the relationship between its tourist economy and the GHG emissions resulting from tourism. There are two motivations the City has in understanding the relationship between tourism and GHG emissions. First, there is concern that the on-road transportation sector in the GHG inventories is underestimated because of the way the RTDM allocates VMT and the City wants to know the GHG emissions from the on-road transportation sector based upon the origins and destinations of vehicle trips attributable to the City. Second, the City wants to provide GHG reduction strategies that will be effective for different types of vehicle trips including vehicle trips resulting from tourism, vacation homes, employee commutes, delivery services, and other local trips. This second motivation requires that the City not only know the origin and destination of the trip but also know the purposes of the vehicle trips.

There are several challenges in determining the origins and destinations of vehicle trips attributable to the City and its tourist economy as well as determining the types and purposes of vehicle trips. First there is not enough time to develop, calibrate, and run an origin/destination traffic demand model for the City. In addition an origin/destination traffic demand model would not completely capture the full length of a visitor trip traveling from San Francisco to Carmel or other origins outside of the region.

To address these concerns and limitations, LSA proposed to evaluate the different types of trips and logical origins of trips associated with tourism, vacation homes, employee commutes, deliveries, as well as local trips, determine the distance between the trip origin and the City for each trip type, estimate the number of vehicle trips per year using the RTDM, proportion the RTDM vehicle trips by trip type and estimate VMT using the trip distances for each trip type.

First, LSA looked at tourists visiting Carmel-By-The-Sea. To do this LSA used several sources of information from the Carmel Chamber of Commerce and the Carmel Visitors Center including the Visit Carmel 2019 Annual Report,¹ and the Carmel Visitors Spending Report.²

These reports revealed that domestic tourists make of the majority (90.43 percent) of visitors and originated at the following locations:

- San Francisco Bay Area (41.95 percent with an average vehicle trip length of 110 miles),
- Salinas (39.79 percent with an average trip length of 27 miles),
- Los Angeles/Orange County (7.73 percent with an average trip length of 322 miles),
- Sacramento/Yolo County (5.31 percent with an average trip length of 190 miles),
- Fresno (2.21 percent with an average trip length of 157 miles), and
- New York/New Jersey/long Island (2.19 percent).

Salinas is a trip origin for a significant number of day visitors driving to Carmel-By-The-Sea. Visitors from San Francisco Bay Area, Los Angeles/Orange County, Sacramento/Yolo County, and Fresno also drove to Carmel-By-The-Sea; whereas visitors from New York, New Jersey and Long Island flew into San Francisco International Airport (SFO) and drove or took a tour bus to Carmel-By-The-Sea with an average vehicle trip length of 110 miles.

The reports also reveal that approximately 9.57 percent of all visitors are international tourists who originated from the following locations:

- China (38.35 percent),
- Canada (26.38 percent),
- Brazil (9.3 percent),
- United Kingdom (15.74 percent),
- France (5.65 percent), and
- Australia (4.65 percent).

All of the international visitors flew into SFO and most (89.73 percent) took a tour bus to Carmel-By-The-Sea. Each vehicle trip averaged 110 miles between SFO and Carmel-By-The-Sea.

Carmel Realty Company³ assisted in providing generic information on second homes and vacation homes within the City of Carmel-by-the-Sea, which resulted in an estimate of approximately 20 percent of vehicle trips result from the occupants of second homes with an average trip length of

¹ Carmel Visitors Center. Visit Carmel 2019 Annual Report. Website: https://www.carmelcalifornia.com/userfiles/file/Visit_Carmel_2019_Annual_Report_Final_LowRes.pdf (accessed December 2021)

² Carmel Chamber of Commerce. 2014. Carmel Visitor Spending Report. Website: <https://www.carmelchamber.org/carmel-visitor-spending-report/> (accessed December 2021)

³ <https://www.carmelrealtycompany.com/company-history.htm> (accessed December 2021)

120 miles between the origin of the trip and the second home/vacation home during the start and end of the visit. Vehicle trip lengths of the occupants of these homes during their stay in Carmel-By-The-Sea averaged 6.5 miles.

Commute Trips represented 38 percent of all vehicle trips in the City and averaged 27 miles per trip. Local trips—vehicle trips from local residents related to shopping, school, library and other local destinations—made up 6.5 percent of all vehicle trips in the City and averaged 6.5 miles.

Delivery services providing supplies to local businesses and construction sites within the City made up approximately 10 percent of all vehicle trips and averaged 27 miles.

Using the trip origins summarized above, a gross total of 134,607,473 VMT occurred in 2019. However, only local trips within the City are counted 100 percent. Vehicle trips with origins or destinations outside of the City are shared with the jurisdiction that the other end of the trip is located. The miles for these types of trips are multiplied by 0.5 to allocate half the trip length to Carmel-By-The-Sea. This results in a total of 67,439,064 VMT allocated to the City in 2019.

There is one final issue in estimating VMT using this method. Regional origin destination models are limited to the regional boundaries of the model. There is no origin destination model that would track vehicle trips between San Francisco, Los Angeles, Fresno and the City. Such an analysis would require a statewide origin destination model. Because of this, the VMT distribution is limited to the regional model boundaries. Reviewing the Monterey County RTDM boundaries, the VMT attributable to the City is 32,658,143 in 2019.

Using the protocols, the GHG emissions associated with the VMT within the Monterey County RTDM boundaries are considered Scope 1 emissions and are counted in the GHG inventory and target setting. The United States Environmental Protection Agency (U.S. EPA) describes Scope 1 emissions as direct sources (smoke stacks or tailpipes that release emissions within an organizational boundary) of GHG emissions.¹ This definition fits well for on-road transportation related emissions within the RTDM boundaries.

The City is also interested in influencing tourist-related emissions and wants to provide strategies customized to reduce the emissions from vehicle trips originating in locations outside of the regional model limits. The U.S. Community Protocol for Accounting and Reporting GHG Emissions (version 1.2)² describes Scope 3 emissions as indirect emissions not covered under Scopes 1 and 2. The GHG emissions associated with the remaining VMT (34,780,921) outside of the Monterey County RTDM boundaries are considered Scope 3 indirect emissions and the City will develop reduction strategies focused on reducing these emissions as well.

¹ U.S. EPA. 2020. Scope 1 and Scope 2 Inventory Guidance. Website: <https://www.epa.gov/climateleadership/scope-1-and-scope-2-inventory-guidance> (accessed January 2022).

² ICLEI. 2019. U.S Community Protocol for Accounting and Reporting GHG Emissions. Website: <https://urbandrawdown.solutions/resource-database/uscp-ghge-accounting-2019> (accessed January 2022).

Table B summarizes the activity data inputs for updating the 2019 GHG inventory using the revised VMT values.

Table B: 2019 Community GHG Inventory Data Inputs Used

Sector	2019 Data Input	Source
Electricity (KWh)		
Residential	2,493	3C&E
Commercial	2,928	
Natural Gas (Therms)		
Residential	7,194	PG&E
Commercial	5,073	
Transportation		
On-Road (VMT) Scope 1	32,658,143	AMBAG Model with Out of Model Adjustments
On-Road (VMT) Scope 3	34,780,921	
Solid Waste (tons/year)	1,527	GreenWaste Recovery
Wastewater (million gallons)	74	California American Water (CalAm)/ Carmel Area Wastewater

MT CO₂e = metric tons of carbon dioxide equivalent
 KWh: Kilowatt Hours
 VMT: Vehicle miles traveled
 PG&E: Pacific Gas & Electric AMBAG: Association of Monterey Bay Area Governments
 CARB: California Air Resources Board

1.1.2 2019 Greenhouse Gas Emissions Summary

The City’s total emissions in 2019 were 30,962 MT CO₂e. As shown in Table C, the on-road transportation sector was the largest contributor to emissions in the 2019 inventory, with 45.8 percent of the City’s total GHG emissions. Natural gas made up 43.2 percent followed by solid waste at 10.3 percent of total emissions. Electricity (0.5 percent), and wastewater (0.2 percent) comprised the rest of the emissions.

Table C: Communitywide GHG Emissions by Sector for 2019

Sector	2019 (MT CO ₂ e)	Percent of Total
On-road Transportation:		
Scope 1	14,173	45.8%
Scope 3	15,115	
Electricity		
Residential	63	0.5%
Commercial	92	
Natural Gas		
Residential	8,138	43.2%
Commercial	5,250	
Solid Waste	3,178	10.3%
Wastewater	68	0.2%
Total Scope 1 and Scope 2 Emissions	30,962	
Total with Scope 3 Emissions	46,076	100

Source: AMBAG and LSA 2021.
 MT CO₂e = metric tons of carbon dioxide equivalent

Figure 1 shows the 2019 GHG emissions by sector with energy (electricity and natural gas) divided between residential and commercial/industrial land uses. Figure 2 shows the proportion of electricity and natural gas in the energy sector.

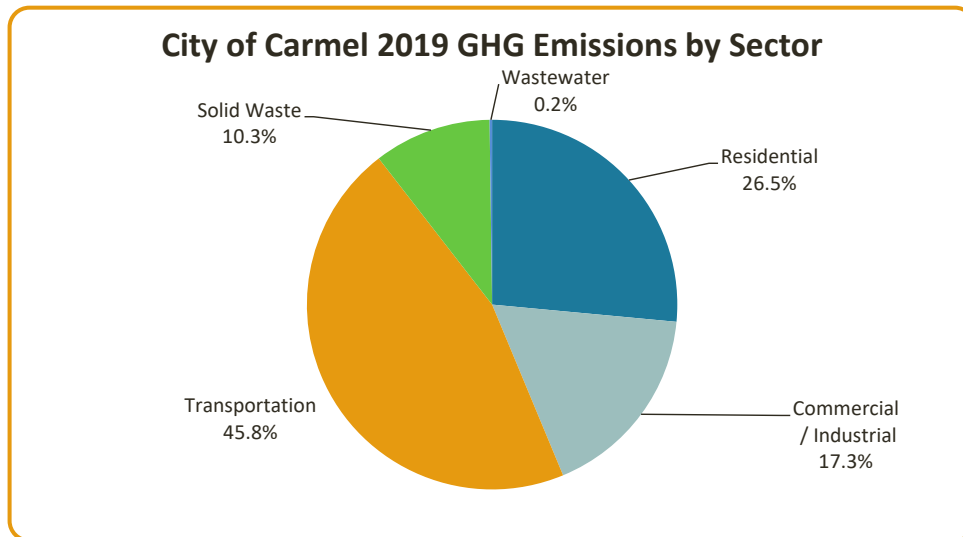


Figure 1: Communitywide GHG Emissions by Sector in 2019

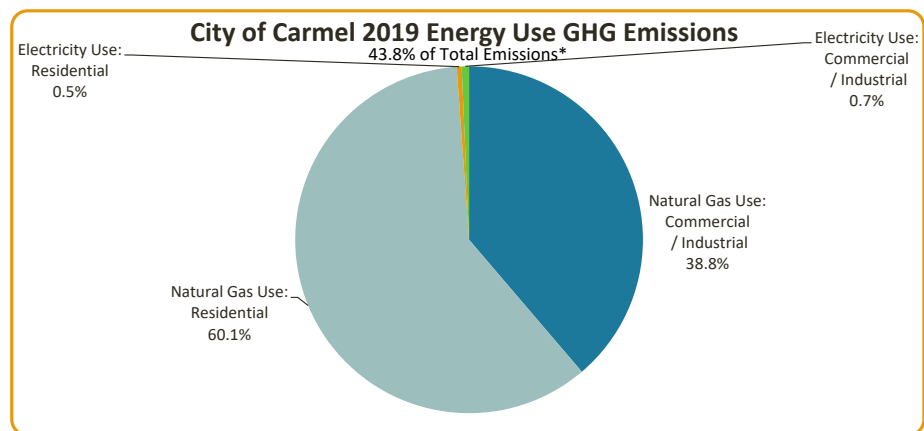


Figure 2: Energy Sector Emissions in 2019

Figure 3 breaks down the various sources of electrical generation by 3CE.

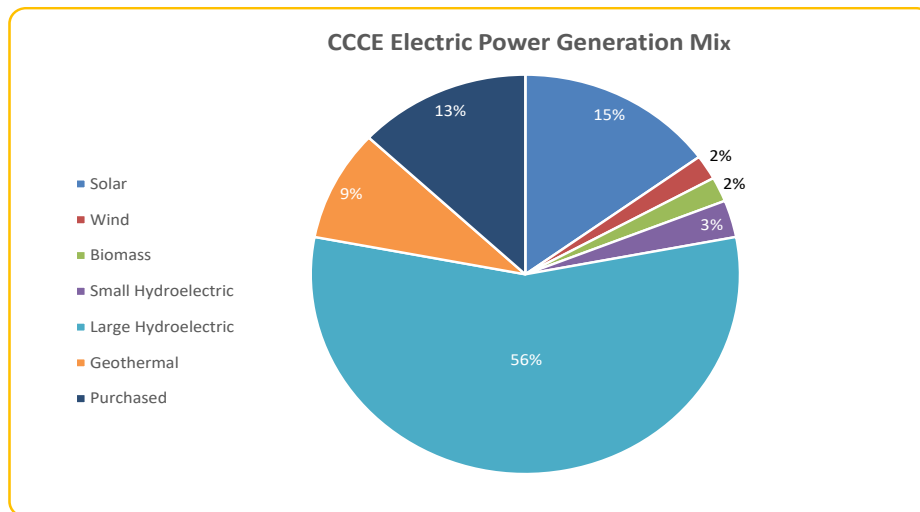


Figure 3: Sources of Electrical Power Generation

2.1 GHG Emissions Forecast

Forecasting future GHG emissions allows the City to understand how emissions are expected to increase or decrease in the future. Major changes in growth or land uses may affect how to best plan to reduce emissions in the future. GHG emissions are forecast using two scenarios: a Business-as-Usual (BAU) scenario and an Adjusted BAU (ABAU) scenario. The BAU scenario describes emissions based on projected growth in population and employment and does not consider policies that would reduce emissions in the future (that is, the policies and related efficiency levels in place in 2019 are assumed to remain constant through 2045). The City’s projected growth is estimated using data from the AMBAG’s adopted growth forecasts for Carmel By-The-Sea, which provides the City’s demographic growth indicators for the years 2030 and 2045. The growth rates for households, population, and employment were estimated based on the available data and used to estimate the growth in households, population, and employment into the year 2045. Table D shows the growth projections used to develop the emissions forecasts.

Table D: Growth Indicators for 2020, 2030, and 2045

Sector	Demographic Indicator	2020	2030	2020–2030 CAGR ¹ Percent	2045	2020–2045 CAGR Percent
Residential Energy	Households	3,437	3,442	0.0002	3,459	0.0064
Commercial/Industrial Energy	Jobs	3,556	3,674	0.0033	3,915	0.0040
N/A ²	Population	3,949	3,954	0.0001	3,984	0.0035
VMT, Solid Waste and Wastewater	Service Population (Population + Jobs)	7,515	7,628	0.0015	7,899	0.0020

Source: AMBAG, 2022 Regional Growth Forecast

¹ CAGR = Compound annual growth rate.

² Not applicable. Population data are shown for informational purposes but are not used for forecasting any sector.

The Adjusted BAU scenario describes emissions based on projected growth and considers policies that will achieve GHG reductions in the future. By evaluating the two scenarios, the City can evaluate the effect that existing policies may have on future emissions and determine which local measures would provide additional reductions.

Two future years are forecast for each scenario: 2030 and 2045. The 2030 forecast year is consistent with the goals identified in the Senate Bill (SB) 32, and the corresponding Scoping Plan, which identifies Statewide GHG reduction targets for 2030.

The 2030 BAU emissions are estimated to be 29,445MTCO₂e. By 2045, emissions are estimated to decrease to 27,471MT CO₂e. Table E shows the BAU emissions for different sectors. Table D shows a positive compounded annual growth rate (CAGR) of 0.0001 to 0.0033, which is extremely modest growth. Table E BAU shows a modest reduction in GHG emissions (a modest negative percent change). This modest reduction of emissions within the BAU forecasts is due to changes over time as people purchase newer automobiles and appliances. The BAU forecasts include 2019 levels of efficiency and as older vehicles and appliances are replaced, efficiencies of the new vehicles and appliances are an improvement compared to the older versions.

Table E: Business As Usual (BAU) Forecast Emissions

Sector	2019 (MT CO ₂ e)	2020 (MT CO ₂ e)	Percent Change 2019– 2020	2030 (MT CO ₂ e)	Percent Change 2019– 2030	2045 (MT CO ₂ e)	Percent Change 2019– 2045
On-road							
Transportation							
Scope 1:	14,173	14,117	-0.4%	13,316	-5%	12,582	-11%
Scope 3:	15,115	15,055		14,201		13,418	
Electricity							
Residential	63	63	-0.6%	60	-5%	56	-11%
Commercial	92	91		87		82	
Natural Gas							
Residential	8,138	8,122	-0.2	7,759	-4%	7,239	-11%
Commercial	5,250	5,193		4,961		4,628	
Solid Waste	3,178	3,175	-0.09	3,033	4%	2,830	-11%
Wastewater	68	62	-0.1	59	-5%	55	-12%
Total (Scope 1)	30,962	30,824		29,445		27,471	
Total (Scope 3)	46,076	45,878	-0.04	43,646	-5%	40,889	-11%

Source: LSA 2021

MT CO₂e = metric tons carbon dioxide equivalent

The City's ABAU emissions are estimated to be 30,287 MT CO₂e in 2020, 23,013 MT CO₂e in 2030, and 19,013 MT CO₂e in 2045. Table F shows the change in emissions from 2018 to 2045 under the ABAU scenario. Due to the stringent State regulations related to transportation (vehicle efficiency and low carbon fuel standards) and energy sectors (renewable energy portfolio standard and requirements for a portion of the natural gas supply to be renewable natural gas), emissions are expected to decrease significantly over time.

Table F: Community Adjusted Business As Usual (ABAU) Forecast Emissions

Sector	2019 (MT CO ₂ e)	2020 (MT CO ₂ e)	Percent Change (2019–2020)	2030 (MT CO ₂ e)	Percent Change (2019–2030)	2045 (MT CO ₂ e)	Percent Change (2019–2045)
Transportation							
Scope 1							
Scope 3	14,173	13,679	-3.5%	10,407	-26.6%	8,708	-38.6%
	15,115	14,646		11,105		9,285	
Electricity							
Residential	63	61	-3.0%	47	-25.4%	39	-38.1%
Commercial	92	89		68		57	
Natural Gas							
Residential	8,138	8,122	-0.2%	6,138	-24.6%	5,010	-38.4%
Commercial	5,250	5,193		3,935		3,203	
Solid Waste	3,178	3,077	-3.0%	2,372	-25.4%	1,958	-38.3%
Wastewater	68	66	-2.9%	46	-32.4%	38	-44.1%
Total (Scope 1)	30,962	30,287	-2.2%	23,013	-25.7%	19,013	-38.6%
Total (Scope 3)	46,076	44,933		34,118		28,298	

Source: LSA forecasts for the City Of Carmel By-The-Sea, 2021.
MT CO₂e = metric tons carbon dioxide equivalent

3.1 Reduction Targets

3.1.1 Statewide GHG Reduction Goals

The State has set goals for reducing statewide GHG emissions by 2030 and 2045 through Assembly Bill (AB) 32, Senate Bill (SB) 32, SB 100, and Executive Order (EO)-B-55-18. The State has also provided guidance to local jurisdictions as “essential partners” in achieving the State’s goals by identifying a 2030 GHG emissions target 40 percent below 1990 levels. Additionally, continued reduction goals should be implemented beyond the 2030 target to keep the State on a path toward Statewide climate neutrality by 2045.

3.1.2 Community Targets

In Carmel-by-the-Sea, the State’s target of 40 percent below 1990 levels by 2030 amounts to a reduction of 12,174 metric tons of CO₂ equivalent in annual emissions by 2030 compared to the BAU forecast (see Table G).

Under the ABAU scenario, Carmel-by-the-Sea would need to reduce its emissions by 5,742 MT CO₂e by 2030 to meet the State target. The City needs to implement additional strategies and measures to adhere to these State GHG reduction goals.

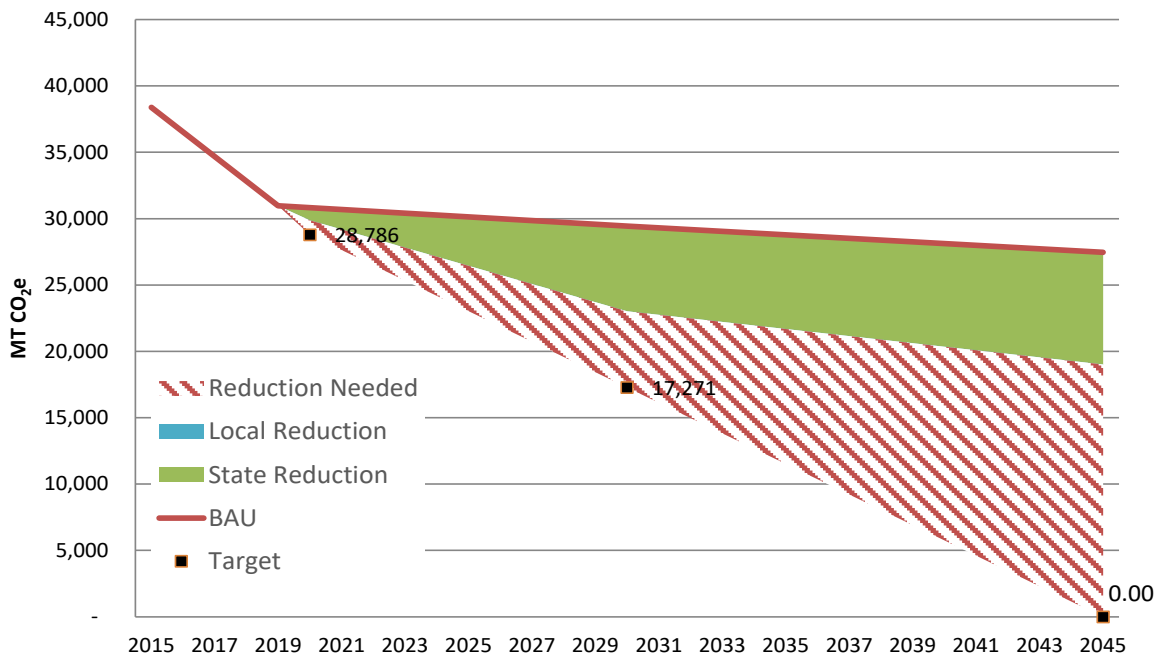
Table G: GHG Reduction Targets By Year

Sector	1990	2019	2030	2045
BAU Emissions (MT CO ₂ e)	28,786 ¹	30,962	29,445	27,471
ABAU Emissions (MT CO ₂ e)	N/A	N/A	23,013	19,013
State-Aligned Target	N/A	N/A	40% below 1990 levels of emissions	Carbon Neutral
State-Aligned Emissions Goal (MT CO ₂ e)	N/A	N/A	17,271	0
Reductions from ABAU needed to meet the State-Aligned Target (MT CO ₂ e)	N/A	N/A	5,742	19,013

Source: Compiled by LSA 2022
 MT CO₂e = metric tons carbon dioxide equivalent
 N/A = Not Applicable
¹ 1990 levels of emissions approximated as 25 percent below the updated 2018 inventory of GHG emissions

Figure 4 depicts the BAU and ABAU forecasts, reduction targets, and additional GHG emission reductions required to meet the reduction targets.

City of Carmel-By-The-Sea, 2015 - 2045



ABAU: adjusted business as usual
 BAU: business as usual
 MT CO₂e = metric tons of carbon dioxide equivalent

Figure 4: Community Emissions Inventory, Forecasts, and Targets



CITY OF CARMEL-BY-THE-SEA

Climate Committee

Staff Report

January 20, 2022
ORDERS OF BUSINESS

TO: Climate Committee Members

SUBMITTED BY: Agnes Martelet, Environmental Compliance Manager

SUBJECT: Review the Revised List of Adaptation Strategies for Carmel

RECOMMENDATION:

Review the revised list of adaptation strategies for Carmel.

BACKGROUND/SUMMARY:

Rincon Consultants assembled a Draft List of Adaptation Strategies that was first reviewed by the Climate Committee at their September meeting. Committee members and the public have provided feedback on the proposed policies and actions included in the adaptation strategies at the Committee's September and October meetings, and at the Committee's November Public Workshop. Additionally, the proposed strategies were also reviewed by City staff in the Planning, Police, and Public Works Departments. A summary of comments received and responses is included in Attachment 1.

Based on the feedback received, the List of Adaptation Strategies was revised and is included in Attachment 2. In this revised List of Adaptation Strategies, Rincon Consultants assigned initial timelines, order-of-magnitude cost ranges, and implementation leads to each of the proposed actions. This revised list will be the basis for the Climate Adaptation Report and will be used to identify projects to include in the 5-year Capital Improvement Program.

FISCAL IMPACT:

Cost ranges to implement the actions included in the List of Adaptation Strategies are included in Attachment 2.

ATTACHMENTS:

Attachment 1: Comments Received and Responses
Attachment 2: Revised List of Adaptation Strategies

Attachment 1

Comments Received at the Climate Committee Public Workshop

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 small and do overlap. Incentivizing that certification would be awesome!	General comment. No action required, action 1.1.10 addresses exploring the feasibility of and gaining firewise community 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. 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	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 feasibility 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 the bigger challenge. engage with parttime/vacation rental home owners. Second home owners hard to reach. Social media, public workshops, home owner associations.	Addressed. Updated action below to include outreach to second home owners through community groups. 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.
11/18/2021	Unknown	Workshop Mural	1.2 Neighborhood organizations (support for engagement)	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 prioritize disadvantaged/marginalized communities including the elderly and individuals with disabilities.
11/18/2021	Unknown	Workshop Mural	1.2 update codes to match and not conflict with CA codes (fire for example)	No action required. Action 1.1.9 addresses codes.
11/18/2021	Unknown	Workshop Mural	1.2 Wine and Dine approach, have some parties to reach the communities.	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	Workshop Mural	1.3 Health impacts of natural gas combustion	No action needed. To be discussed in plan development (narrative).

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Date	Commenter	Mode	Policy Comment	Response
11/18/2021	Unknown	Workshop Mural	1.3 More specific actions under the policies	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	Workshop Mural	1.3 What does educate the community mean?	Addressed. Changed to "Engage the Community."
11/18/2021	Unknown	Workshop Mural	1.3 clear and implementable actions	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 during implementation. Examples will be added to the Adaptation Strategy Report.
11/18/2021	Unknown	Workshop Mural	1.3 More SMART goals	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.
11/18/2021	Unknown	Workshop 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. 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 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 length and fire fuel reduction is already being conducted in the canyon to the extent feasible.
11/18/2021	Unknown	Workshop Mural	2.1 Improved parklands vs. forests - habitat value, corridors	No update needed. Addressed in actions 2.1.1. and 2.1.7.

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Date	Commenter	Mode	Policy Comment	Response
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	<p>Added CSUMB as potential collaborators:</p> <p>Action 2.1.2. Increase Urban Forest Resilience. Update the Forest Management Plan to:</p> <ol style="list-style-type: none"> 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 <p>Update of the Plan should include collaboration with stakeholders, such as the Monterey Pine Forest Watch and California State University, Monterey Bay.</p>
11/18/2021	Unknown	Workshop Mural	2.1 Urban forest is important to town. What does that look like? Forest and beach commission	<p>Urban forest addressed in action below:</p> <p>Action 2.1.2. Increase Urban Forest Resilience. Update the Forest Management Plan to:</p> <ol style="list-style-type: none"> 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 <p>Update of the Plan should include collaboration with stakeholders, such as the Monterey Pine Forest Watch and California State University, Monterey Bay.</p>
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	<p>3.1 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.</p> <p>Do not think Carmel City code allows graywater.</p> <p>CA allows washing machine graywater only. I believe without a permit as well.</p> <p>Intelligent landscaping design can definitely reduce water runoff</p>	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 Calgreen (CA Building Code). The City code is silent on greywater.

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Date	Commenter	Mode	Policy	Comment	Response
9/23/2021	Jill Petker	Email		<p>1.1.6 Defensible Space: I think we should get serious about this. 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, I think we should let 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 2.1.2, point 4.</p> <p>1.3.4 Building Electrification: Just curious, why is it important to remove natural gas from buildings? Is this seen as a fire hazard, 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).</p> <p>3.1.2 Resilience of Utilities: I'm not sure what this strategy means.</p> <p>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 I think is water-permeable 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.</p>	<p>Defensible space will be addressed as part of the plan implementation. Specifically, the action below addresses incorporating defensible space design in landscaping guidelines.</p> <p>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.</p> <p>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 (required by A building code in new homes with gas) require electricity to operate, as well as a functioning gas system, and will not work during gas or electric outages. Heat pumps offer the most efficient heating and cooling systems, in one, which gas furnaces can't offer (it is also more expensive to have two separate systems (heating + cooling) instead of one. Induction cooking also helps in heat waves as it does not heat up the whole room/house, but only the bottom of the pot/pan directly using magnets (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 natural disasters. (https://www.sierraclub.org/articles/2019/10/electrification-for-climate-resiliency)</p> <p>3.1.2. Updated the wording slightly to increase clarity</p> <p>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-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.</p> <p>Reconciling planting trees and shrubs with wildfire risk to be addressed as part of implementation for action 2.1.2</p> <p>Action 2.1.2. Increase Urban Forest Resilience. Update the Forest Management Plan to:</p> <ol style="list-style-type: none"> 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
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	No action required. Undergrounding utilities is included in action 3.1.1
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		CRA meeting		Support for burying power lines and wondering how feasible it is.	No action required. Undergrounding utilities is included in action 3.1.1, where feasibility will be explored
9/23/2021	Wanda Vollmer	CRA meeting		Regarding the power lines, I volunteer San Carlos street as test street. :)	No action required. Undergrounding utilities is included in action 3.1.1
9/23/2021	Susan Bjerre	CRA meeting		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 (including potential funding) will be explored. Yes, PG&E 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		<p>Dear Jeff,</p> <p>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 umbrella of supporting climate change. I believe the pollution from the smoke that gets into our atmosphere in town especially when we have these devastating 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.</p> <p>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.</p>	No action required. Wood burning smoke/natural gas issues addressed in action 1.3.4 and 1.3.6.

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Date	Commenter	Mode	Policy Comment	Response
10/15/2021	Michael DeLapa	Email	<p>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:</p> <ol style="list-style-type: none"> 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, upzoning, 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	<p>I'm particularly pleased that the bluffs are now getting the attention they deserve. I used to say that, while many of the non-profits were "Friends of...." there were no "Friends of the Bluffs" for obvious reasons - the hazard is too great for resident volunteers. The bluffs are the workhorses of shoreline protection, and Carmel depends upon their resiliency in the era of climate change.</p> <p>I'm glad that the suggestion is for the Forest and Shoreline Management Plans to be updated, and I hope that new plans become better integrated into the day-to-day operations of the City than the first emanations. I know that Mayor Potter believes that too much money is spent on studies that end up collecting dust on shelves, but if they are incorporated into the everyday structure of staff responsibilities, they can make a difference in future outcomes. They can also save the City a lot of money, since getting it right today is much cheaper than paying to get it done tomorrow. I remember being impressed with how the Santa Cruz Climate Action Plan was woven into everything that every department brought to the City Council or to the commissions in their department reports and recommendations which made the likelihood of success much higher.</p> <p>I know that grant applications are onerous when the City is short-staffed, but it seems that it will be crucial that funding sources be identified and used if the huge price tag on protecting Carmel from climate change vulnerabilities is to be achieved. In looking at creating defensible space which is probably the greatest challenge of all in Carmel where roofs come within 3' to 5' of touching, and buildings are about 10-15' apart, I think that accessing the big pockets of the Grants Clearinghouse's federally-funded grant program that the California Fire Safe Council maintains might go a long way to help reassure people that action on climate adaptation challenges in at least the high risk fire hazard zone is feasible since the City's budget is always so tight and staffing so limited. With an ignition zone of 5' being a real issue in Carmel in keeping an adequate clearance around buildings, the 30' defense zone is daunting. There are, of course, so many residents who have decks and stairs that are attached to their homes, and with so many properties being second homes, outside maintenance often leaves much to be desired.</p>	<p>Mostly general (implementation) comments that do not require action. Funding will be addressed in the plan (narrative).</p> <p>Added a new action about hiring a grant writer: Action 1.4.4. Hire a Grant Writer. Hire a grant writer to ensure implementation of the City's adaptation strategy.</p>
11/22/2021	Nikki Nedeff	Email	<p>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 Monterey Pine Forest habitat. For example, in an effort to plant what seemed like a good idea at the time, Torrey pines were planted by Caltrans along 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?!</p>	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.

Attachment 1

Date	Commenter	Mode	Policy	Comment	Response
11/18/2021	Joyce Stevens	Email		<p>Mr. Chairman and Members of the City of Carmel by the Sea Climate Committee:</p> <p>I'm Joyce Stevens, a founding member and past president of Monterey Pine Forest Watch. Our group came together in 1992 in order to facilitate 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 Peninsula 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.</p> <p>Huge development projects were in the works and the threat of pitch canker reared its ugly head right after we formed our group. As you may know there are only 5 populations of native Monterey Pines in the world...3 on the coast of California and 2 on two small islands off the coast of Baja California. Our forest is the oldest of the California stands. It is the largest and also the most impacted by human activity. In concert with the California Native Plant Society and the California Department of Fish and Game, we sponsored a scientific ecological assessment of the Peninsula forest and put on two symposia to highlight its findings and to take a look at the threat of pitch canker and it's implication for the native forest. Fortunately our forest has done what natural systems do best. It has developed resistance on its own to this fungal disease and the consequences for the native forest have been blessedly inconsequential.</p> <p>As the Climate Committee and Carmel authorities grapple with the threat of Climate Change on Carmel and its urbanized Monterey Pine forest, we hope you will include our group and use it as a resource. Carmel's forest is in special category, as Carmel was the only municipality locally to embrace it at its inception. In fact its visionary founders and residents were intent upon preserving it and living in harmony with the beautiful forest. And Carmel can play an important role in safeguarding the local native forest which surrounds it.</p> <p>We have accumulated an enormous amount of scientific information during our most active period and are proud to have contributed to the preservation of over 1200 acres of native forest habitat, most lately at Aguajito. And we published a book in 2011 entitled Coastal California's Living Legacy, The Monterey Pine Forest. We want to be involved and share our experience, insights and information with you because we love our beautiful Monterey Pines and all the life they support!</p> <p>Sincerely, Joyce Stevens</p>	<p>Updated action 2.1.2 to include explicit collaboration with stakeholder groups such as MPFW.</p> <p>Action 2.1.2. Increase Urban Forest Resilience. Update the Forest Management Plan to:</p> <ol style="list-style-type: none"> 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 <p>Update of the Plan should include collaboration with stakeholders, such as the Monterey Pine Forest Watch and California State University, Monterey Bay.</p>

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 emergency preparedness and response in anticipation of potential climate-related disasters							
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 and persons with disabilities.	All	Elderly Population and People with Disabilities, Residents, Service Industry Workers		Near-term (1-2 years); Mid-term (3-5 years); Long-term (5-10 years)	Police & Fire	\$	Adapted from the Southern California Adaptation Planning Guide, Appendix F - General Plan and Local Coastal Plan Model Policies
Action 1.1.2. Improve Emergency Preparedness. Incorporate climate change risk and impact considerations into Carmel CERT programming and materials to promote emergency preparedness at a neighborhood block-by-block scale.	All	Residents, Local Businesses, Second Homes	# of block captains formed	Near-term	Police & Fire	\$	Adapted from the Southern California Adaptation Planning Guide, Appendix B Matrix of Adaptation Strategies and Actions
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.	Wildfire	Residents, Local Businesses, Second Homes		Near-term	Police & Fire	\$	Carmel-by-the-Sea Vulnerability Assessment (July 2021)
Action 1.1.4. Publicize Local Evacuation Routes. Publicize both City and Monterey County evacuation routes for the community on the City's website, and in the newsletter and brochures. Target additional outreach to the most vulnerable such as seniors and people with disabilities in the event of a wildfire or other disaster.	All	Elderly Population and People with Disabilities, Residents		Near-term	Police & Fire	\$	Carmel-by-the-Sea Vulnerability Assessment (July 2021)
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. Evaluate options to provide evacuation, such as a shuttle service, for residents with mobility challenges.	All	Elderly Population and People with Disabilities, Residents		Mid-term	Police & Fire	\$\$	Adapted from Safeguarding California Plan: 2018 Update (page 108)
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.	All	Elderly Population and People with Disabilities, Residents, Service Industry Workers		Mid-term	Police & Fire	\$\$	Assembly Bill 747 Requirement
Action 1.1.7. Evacuation Alternatives. Develop and employ evacuation alternatives, such as a gathering facility, and/or alternative emergency access routes in neighborhoods that have single ingress/egress.	All	Elderly Population and People with Disabilities, Residents, Service Industry Workers		Mid-term	Police & Fire	\$\$	Senate Bill 99 Requirement
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.	Wildfire	Residents, Local Businesses, Second Homes		Near-term	Community Planning & Building	\$\$	Carmel-by-the-Sea Vulnerability Assessment (July 2021)
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 and permitting the use of fire resistant building materials that may conflict with current Design Guidelines.	Wildfire	Residents, Local Businesses, Second Homes		Near-term	Community Planning & Building	\$\$	Carmel-by-the-Sea Vulnerability Assessment (July 2021)
Action 1.1.10. Increase Resistance to Wildfire Structural Damage. Work with local community groups to publicize the Firewise Community Certification program (e.g., on the City website and in the newsletter and brochures) and encourage resident involvement.	Wildfire	Residents, Second Homes		Mid-term	Police & Fire	\$	Carmel-by-the-Sea Vulnerability Assessment (July 2021)
Policy 1.2. Focus adaptation efforts and engagement on the most vulnerable populations.							
Action 1.2.1. Establish a Resilience Hub. Ensure that a resilience hub, such as the Youth Center or Public Library, is available during extreme heat events, poor air quality, severe weather events, and other highly hazardous conditions for use by the community. Provide the following essential resources in the resilience hub(s): health programming and resources, food, refrigeration, charging stations, basic medical supplies, and other emergency supplies. Electrified heating and cooling paired with backup power sources like battery storage provides redundancy and continues services in the event of a power outage.	All	Elderly Population and People with Disabilities, Residents, Service Industry Workers		Near-term	Public Works / Police & Fire / Library	\$\$	Adapted from the Southern California Adaptation Planning Guide, Appendix B Matrix of Adaptation Strategies and Actions
Action 1.2.2. Limit the Impacts of Climate Change on the Most Vulnerable Populations. Develop a framework to define equity in Carmel-by-the-Sea and ensure adaptation approaches are equitably developed and implemented.	All	Elderly Population and People with Disabilities, Residents, Service Industry Workers		Mid-term	Community Planning & Building	\$	Inspired by the City of Berkeley Existing Building Electrification Strategy
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.	All	Elderly Population and People with Disabilities, Residents, Service Industry Workers		Near-term	Library / City Hall / Police Department	\$	Adapted from the Southern California Adaptation Planning Guide, Appendix B Matrix of Adaptation Strategies and Actions
Action 1.2.4. Social Support Network. Collaborate with the Carmel Foundation and other community-based organizations (e.g., Carmel Residents Association) 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.	All	Elderly Population and People with Disabilities		Mid-term	Police Department / CERT / Community Planning & Building	\$	Adapted from the Southern California Adaptation Planning Guide, Appendix B Matrix of Adaptation Strategies and Actions
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.	All	Elderly Population and People with Disabilities		Long-term	Police & Fire / Public Works	\$\$\$	Adapted from the Southern California Adaptation Planning Guide, Appendix B Matrix of Adaptation Strategies and Actions
Policy 1.3. Minimize health impacts of climate change.							
Action 1.3.1. Partner with Monterey County Health Department. Coordinate with Monterey County Health Department to develop and enhance disaster and emergency early warning systems to incorporate objective data and information for potential health threats such as heat-illness, and illnesses complicated by low air quality due to climate change hazards.	All	Elderly Population and People with Disabilities, Residents, Local Businesses, Service Industry Workers		Near-term	Police & Fire	\$	Adapted from the Southern California Adaptation Planning Guide, Appendix B Matrix of Adaptation Strategies and Actions
Action 1.3.2. Initiate a Heat Pump Retrofit Program. Create a program to aid property owners in converting to heat pumps, which provide water heating and space heating in addition to cooling and can improve indoor air quality.	Wildfire, Increased Temperature	Elderly Population and People with Disabilities, Residents, Local Businesses, Service Industry Workers	# of heat pumps installed	Mid-term	Community Planning & Building	\$\$	Inspired by the City of Berkeley Existing Building Electrification Strategy
Action 1.3.3. Improve Resilience in Critical Facilities. Invest in sustainable backup power sources to provide redundancy and continued services for critical facilities, including City Hall, Carmel Police Department, Carmel Fire Department, the Libraries, and assisted living facilities, in the event of a power outage triggered by a climate event.	All	Elderly Population and People with Disabilities, Residents	# critical facilities with sustainable backup power sources.	Mid-term	Public Works	\$\$\$	Adapted from the Southern California Adaptation Planning Guide, Appendix B Matrix of Adaptation Strategies and Actions

Attachment 2

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

Goal/Policy/Action	Climate Hazard	Asset	Potential Metric	Timeframe	Potential Lead	Cost	Source
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.	Wildfire, Increased Temp	Elderly Population and People with Disabilities, Residents		Mid-term	Public Works	\$\$	Inspired by the City of Berkeley Existing Building Electrification Strategy
Action 1.3.5. Improve Resilience in Existing Building Stock. Develop a program for identifying funding and incentives to weatherize homes and commercial buildings that addresses severe weather protection, energy efficiency, indoor air quality improvements, and other housing improvements.	All	Elderly Population and People with Disabilities, Residents		Long-term	Community Planning & Building	\$\$	Adapted from the Southern California Adaptation Planning Guide, Appendix F - General Plan and Local Coastal Plan Model Policies (City of Placentia policy) Passive House Principles
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.	All	Elderly Population and People with Disabilities, Residents, Second Homes		Long-term	Community Planning & Building	\$\$	Inspired by the City of Pacifica All-Electric Reach Code
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 building electrification, weatherization, and battery backups.	All	Elderly Population and People with Disabilities, Residents, Local Businesses		Near-term	Community Planning & Building / Police & Fire / Public Works	\$	N/A - added to increase feasibility of above actions.
Policy 1.4. Increase Economic Resilience							Adapted from the Southern California Adaptation Planning Guide, Appendix B Matrix of Adaptation Strategies and Actions
Action 1.4.1. Support Displaced Workers. Work in partnership with the Monterey County Workforce Development Board and the Carmel Chamber of Commerce to establish education and training partnerships for workers displaced or negatively impacted by climate change or climate adaptation policies.	All	Service Industry Workers, Local Businesses		Mid-term	Community Planning & Building / City Hall	\$\$	Adapted from the Southern California Adaptation Planning Guide, Appendix F - General Plan and Local Coastal Plan Model Policies
Action 1.4.2. Establish Partnerships to Develop a Resilient Economy. Partner with the County of Monterey Economic Development Department, Carmel Chamber of Commerce, and the Monterey County Workforce Development Board, to develop more integrated strategies for protection of jobs, economic sustenance, and for the protection of vulnerable populations more at-risk of temporary or permanent job dislocation due to climate change.	All	Service Industry Workers, Local Businesses		Mid-term	Community Planning & Building / City Hall	\$	Adapted from the Southern California Adaptation Planning Guide, Appendix F - General Plan and Local Coastal Plan Model Policies
Action 1.4.3. Business Resilience Outreach Program. Collaborate with businesses in the city to better understand shared climate risks and identify opportunities to advance shared climate resilience priorities. Partner with the Carmel Chamber of Commerce and Visit Carmel to pilot and implement a local business resilience initiative to build small business capacity before a time of crisis by increasing the awareness of, and preparedness for, business continuity risks faced by the city's local businesses, providing a toolkit of intervention to help local businesses manage risks and enhance business resilience, and conducting outreach campaigns to engage leaders from the business, government, and community sectors to enhance preparedness for economic resilience.	All	Service Industry Workers, Local Businesses		Long-term	Community Planning & Building / City Hall	\$\$	Adapted from Gateway Cities Climate Adaptation Model General Plan Language (December 2018)
Action 1.4.4. Hire a Grant Writer. Hire a grant writer to ensure implementation of the City's adaptation strategy.	All	All		Long-term	City Hall	\$\$\$	Suggested at the 11/18/2021 public meeting
Goal 2. A Natural Environment Resilient to Climate Hazards							
Policy 2.1. Protect and restore climate-vulnerable habitat and ecosystems.							Adapted from the Southern California Adaptation Planning Guide, Appendix B Matrix of Adaptation Strategies and Actions
Action 2.1.1. Increase Funding for Climate Adaptation. Earmark Capital Improvement Program (CIP) funding for design, permitting, and implementation of adaptation projects and strategies, such as those in the 2021 Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) and Integrated Regional Watershed Management Program (IRWMP).	All	Urban Forest, Mission Trail Nature Preserve, North Dunes, Carmel Beach, Water Supply		Near-term	Public Works	\$\$	Carmel-by-the-Sea Vulnerability Assessment (July 2021)
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.	Drought, Increased Temp, Wildfire	Urban Forest		Near-term	Public Works Forestry Division / Forest and Beach Commission	\$\$	Carmel-by-the-Sea Vulnerability Assessment (July 2021)
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 wildfire 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.	All	Mission Trail Nature Preserve		Long-term	Community Planning & Building and Public Works	\$\$	Carmel-by-the-Sea Vulnerability Assessment (July 2021)
Action 2.1.4. Increase Resilience of the North Dunes. Continue maintenance and monitoring at the North Dunes to determine how the changing climate will affect dune habitats. Implement enhancement efforts to improve resilience of the North Dunes.	All	North Dunes		Ongoing	Community Planning & Building and Public Works	\$\$	Carmel-by-the-Sea Vulnerability Assessment (July 2021)
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.	Stronger Storms	Mission Trail Nature Preserve	# of projects sizing improvements to handle larger storms.	Near-term	Public Works	\$\$	Carmel-by-the-Sea Vulnerability Assessment (July 2021)
Action 2.1.6. Beach Sand Monitoring Program. Reinstate beach sand monitoring program described in the Shoreline Management Plan.	Sea Level Rise	Carmel Beach		Near-term	Public Works	\$\$	Carmel-by-the-Sea Vulnerability Assessment (July 2021)
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.	Sea Level Rise	Carmel Beach		Long-term	Community Planning & Building and Public Works	\$\$	Carmel-by-the-Sea Vulnerability Assessment (July 2021)

Attachment 2

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

Goal/Policy/Action	Climate Hazard	Asset	Potential Metric	Timeframe	Potential Lead	Cost	Source
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.							
Adapted from the Southern California Adaptation Planning Guide, Appendix B Matrix of Adaptation Strategies and Actions							
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, designated evacuation routes, and in other high priority areas in the Very High Fire Hazard Severity Zone.	Wildfire	Water Supply, Sanitary Sewer System, Power Grid, Overhead Communication, PG&E/Communication Underground Lines-gas, cable		Near-term	Community Planning & Building and Public Works	\$\$\$	Carmel-by-the-Sea Vulnerability Assessment (July 2021)
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-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.	Stronger Storms, Increased Temp	Urban Forest, Storm Drain System	Change in impervious surface coverage.	Near-term	Public Works	\$\$	Adapted from the Carmel-by-the-Sea Vulnerability Assessment (July 2021)
Action 3.1.3. Reduce Stormwater Runoff. Reduce stormwater runoff through implementation of stormwater diversion projects that reduce pollution problems caused by more frequent and intense storms and more extreme flooding events.	Stronger Storms	Storm Drain System, Carmel Beach		Long-term	Public Works	\$\$\$	Suggested by Climate Committee Members
Action 3.1.4. Storm Drain Repair Funding and Improvements. Earmark Capital Improvement Program (CIP) funding for design, permitting and implementation of storm drain repairs. Include strategies in the 2021 Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) for potential regional funding. Upsize Storm Drain Master Plan (SDMP) improvements, especially when making repairs in the lower reaches of watersheds, to handle larger storms.	Stronger Storms	Storm Drain System		Near-term	Public Works	\$\$\$	Carmel-by-the-Sea Vulnerability Assessment (July 2021)
Action 3.1.5. Retrofit Existing Critical Buildings and Related Infrastructure. Conduct an evaluation of all first-responder and municipal facilities to determine retrofits that may be needed for long-term resilience to 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.	All	Emergency Response Facilities – Fire station, EOC, PD, PW, City Hall, etc., Hospital and Emergency Medical Care Facilities		Long-term	Public Works	\$\$\$	Adapted from the Southern California Adaptation Planning Guide, Appendix F - General Plan and Local Coastal Plan Model Policies
Action 3.1.6. Water Conservation. Partner with the Monterey Peninsula Water Management District to reduce water demand and increase water recycling, such as stormwater capture and grey water reuse, through education and outreach. Provide information and incentives for residential water use reduction.	Drought	Water Supply		Near-term	Community Planning & Building and Public Works	\$	Carmel-by-the-Sea Vulnerability Assessment (July 2021)
Action 3.1.7. Bluff Structural Monitoring Program. Implement bluff structural monitoring program and do follow-up monitoring post-storm to identify additional footing stability issues.	Sea Level Rise	Carmel Beach		Mid-term	Public Works	\$\$	Carmel-by-the-Sea Vulnerability Assessment (July 2021)
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.	Sea Level Rise	Carmel Beach, Shoreline Access Infrastructure, Seawall and Revetments		Near-term	Public Works	\$\$\$	Carmel-by-the-Sea Vulnerability Assessment (July 2021)
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. Maintain staff/council personnel as liaisons to CAWD.	Sea Level Rise, Stronger Storms	Water Supply, Storm Drain System		Near-term, Ongoing	Community Planning & Building and Public Works	\$	Suggested by Climate Committee Members
Policy 3.2. Incorporate climate change adaptation into relevant plans and standards.							
Adapted from the Southern California Adaptation Planning Guide, Appendix B Matrix of Adaptation Strategies and Actions							
Action 3.2.1. Develop a Guidance Project Checklist. Develop a guidance project checklist for building and site adaptation measures. The checklist, included with permit applications, should serve to provide education to permit applicants on modifications to site plans and structures that can improve a project's resilience to existing and potential future climate change hazards.	All	Residents, Local Businesses, Second Homes	# of projects implementing adaptation measures.	Mid-term	Community Planning & Building	\$\$	Adapted from the Southern California Adaptation Planning Guide, Appendix F - General Plan and Local Coastal Plan Model Policies
Action 3.2.2. Incorporate Climate Change Adaptation into Local Plans. Prioritize the update of local plans, including the Climate Change Vulnerability Assessment, Local Coastal Program, General Plan, Mission Trails Nature Reserve Master Plan, Del Mar Master Plan, Shoreline Management Plan, and drought planning to promote climate change resilience as new information is available.	All	All		Mid-term	Community Planning & Building / Public Works	\$\$	Adapted from the Southern California Adaptation Planning Guide, Appendix F - General Plan and Local Coastal Plan Model Policies
Action 3.2.3. Update Shoreline Management Plan. Update Shoreline Management Plan and Local Coastal Program based on results of Sea-level Rise Vulnerability Study.	Sea Level Rise	Carmel Beach		Long-term	Community Planning & Building and Public Works	\$\$	Carmel-by-the-Sea Vulnerability Assessment (July 2021)
Action 3.2.4. Multi-Jurisdictional Hazard Mitigation Plan. Maintain a comprehensive list of projects, based on existing plans and gaps identified in the Vulnerability Assessment, to provide to Monterey County during updates to the Monterey County Multi-Jurisdictional Hazard Mitigation Plan in 2021 and beyond.	All	All		Near-term	Community Planning & Building, Police, and Public Works	\$	Carmel-by-the-Sea Vulnerability Assessment (July 2021)



CITY OF CARMEL-BY-THE-SEA

Climate Committee

Staff Report

January 20, 2022
ORDERS OF BUSINESS

TO: Climate Committee Members

SUBMITTED BY: Agnes Martelet, Environmental Compliance Manager

SUBJECT: Provide an Update and Discuss Community Outreach Next Steps

RECOMMENDATION:

Committee members should provide updates on any recent outreach efforts since the community workshop in November and discuss community outreach next steps.

BACKGROUND/SUMMARY:

At the Committee's August meeting, the community outreach list was reviewed and updated to determine stakeholders that should be involved in the adaptation strategy development phase of the project. The revised list is provided in Attachment 1.

Climate Committee members should provide an update on any outreach conducted since the Public Workshop on November 18, 2021 and should discuss community outreach next steps.

FISCAL IMPACT:

N/A

ATTACHMENTS:

Attachment 1: Community Organizations and Regional Partners to Engage

Community Organizations and Regional Partners to Engage

City of Carmel-by-the-Sea Climate Project

September 16, 2021

	ORGANIZATION	Topic (s)	Contact Persons	Committee Lead	Previously Contacted?	Contact for Strategy Outreach?
	Utilities					
1*	Carmel Area Wastewater District	Sewer system Wastewater Treatment Facility	Barbara Buikema, Daryl Lauer	Jeff Baron, Agnes Martelet	Y	<send draft report>
2	Central Coast Community Energy (was Monterey Bay Community Power)	Energy supply	Dan Bertoldi J.R. Killigrew	Evan Kort, Agnes Martelet	Y	<send intro letter soon; combine with CCCE, CC, MPWMD>
3	Cal Am	Water supply		Michael LePage		
4	Monterey Peninsula Water Management District	Water supply	Stephanie Locke	Michael LePage	Y	<send intro letter soon; combine with CCCE, CC, MPWMD>
5	GreenWaste Recovery	Waste management and recycling	Jim Moresco	Carrie Theis, Agnes Martelet		<send draft report>
6	Monterey Regional Waste Management District	Waste management and recycling	Tim Flanagan	Carrie Theis	Y	<send draft report>
7	PG&E	Energy supply	Jeana Arnold Teri Vetere	Carrie Theis, Jeff Baron	Y	<send draft report>

	ORGANIZATION	Topic (s)	Contact Persons	Committee Lead	Previously Contacted?	Contact for Strategy Outreach?
Professional Organizations						
1	California AIA	Built environment resilience	Libby Barnes	John Hill	Y	<send draft report> then solicit recs.
2	Chamber of Commerce	Local business, tourism	Jenny McMurdo	Carrie Theis	Y	On agenda for presentation to board at retreat in November.
3	Monterey County Association of Realtors	Sea Level Rise Wildfire risk	Scott Dick, Ben Beasley	Scott Lonergan, LaNette Zimmerman	Y	Keep informed re. progress in interested areas (point of sale mandates, disclosure requirements, etc.) then make plans as needed.
4	Visit Carmel	Visitors / local business	Amy Herzog	Carrie Theis	Y	Presenting climate change concept to Visit Carmel at their October meeting on October 14 th .
5	Sunset Center	Resilience	Beth Bowman (chair Wayne Moon)	LaNette Zimmerman		<send intro letter soon; combine with CCCE, CC, MPWMD>

	ORGANIZATION	Topic (s)	Contact Persons	Committee Lead	Previously Contacted?	Contact for Strategy Outreach?
	Local Community Groups					
1	Carmel Residents Association	Community resilience Climate action	Fred Bologna Nancy Twomey	Jeff Baron	Y	Meeting on September 23. More TBA.
2	Carmel Rotary Club	Community resilience Climate action	Susan Prest	Carrie Theis, Jeff Baron	Y	Announcement before the workshop. Meeting after the workshop.
3	Carmel Lions Club	Community resilience Climate action	Heidi Mozingo	Carrie Theis		In process of reaching out to Heidi. Possible workshop.
4	Friends of Carmel Forest	Urban forest	Ramie Allard	Scott Lonergan		<send draft report> (not much to do here other than ensure public process for draft forestry report)
5	Friends of MTNP	Wildfire risk Sensitive habitats	Karen Ferlito Greg D'Ambrosio	Scott Lonergan	Y	Email outreach strategy currently; on the lookout for areas of interest and/or further outreach.
6	Del Monte Forest Conservancy	Wildfire risk		Scott Lonergan	Y	Scott to reach out to determine DMFC efforts in this area.
7	Landwatch	Transportation, housing	Mike DeLapa	Jeff Baron	Y	X
8	Sustainable Carmel	Climate action	Ellen Gannon	Agnes Martelet		Try to reengage
9	Church auxiliaries	Community resilience		LaNette Zimmerman	Y	<send intro letter soon; combine with CCCE, CC, MPWMD> Possible shelter etc.
10	Heritage Society	Community resilience	Karl Iverson	Michael LePage		X
11	Carmel Women's Club	Community resilience Climate action	Nancy Twomey	Jeff Baron		X

	ORGANIZATION	Topic (s)	Contact Persons	Committee Lead	Previously Contacted?	Contact for Strategy Outreach?
	City Departments					
1	Police	Emergency preparedness Transportation	Brian Uhler	Agnes Martelet	Y	<send draft report> then start to reach out in earnest
2	Fire	Emergency preparedness	Carmyn Priew	John Hill	Y	<send draft report> then start to reach out in earnest
3	Forestry Division (PW)	Urban forest Sensitive habitats	Sara Davis	Agnes Martelet	Y	<send draft report> then start to reach out in earnest
4	Public Works	Storm Drain Master Plan	Bob Harary	Agnes Martelet	Y	<send draft report> then start to reach out in earnest
5	Library	Historic events	Katie O'Connell	Evan Kort	Y	

	ORGANIZATION	Topic (s)	Contact Persons	Committee Lead	Contacted?	Contact for Strategy Outreach?
City Commissions						
1	Forest & Beach Commission	Sea Level Rise Urban forest Sensitive habitats Climate action	Sara Davis	Scott Loneragan	Y	Meeting announcement at 11/11/2021 meeting. Add commissioners to email distribution list. TBD
2	Planning Commission	Built environment resilience Climate action	Brandon Swanson	Michael LePage		Meeting announcement at 11/10/2021 meeting. Add commissioners to email distribution list. X
3	City Traffic Safety Committee	Transportation	Bob Harary	Agnes Martelet	Y	<send draft report> then start to reach out in earnest

	ORGANIZATION	Topic (s)	Contact Persons	Committee Lead	Contacted?	Contact for Strategy Outreach?
Federal / State / Regional Agencies						
1	AMBAG	Climate Action Transportation	Amaury Berteaud	Agnes Martelet	Y	Constant outreach underway.
2	USGS	Sea Level Rise	Patrick Barnard	Agnes Martelet	Y	<remove>
3	CalFire	Wildfire risk and resilience Urban forest management	John Reynolds	John Hill	Y	<send draft report> then solicit recs.
4	CA Department of Insurance	Wildfire risk / home insurability	Ricardo Laura	John Hill	Y	<remove>
5	Fire Safe Council for Monterey County	Michael Emmett		John Hill	Y	
6	California Coastal Commission	Sea Level Rise		Jeff Baron, Agnes Martelet		<send intro letter soon; combine with CCCE, CC, MPWMD>
7	IRWMP Group	Water supply Watershed / storm water projects		Michael LePage		
8	Monterey County (OES)	Resilience planning	Kelsey Scanlon	Agnes Martelet	Y	Already involved. Potential partner. Keep well informed.
9	Monterey County	Sustainability Climate Action	Ashley Paulsworth	Agnes Martelet	Y	Already involved.
10	Monterey Bay National Marine Sanctuary (NOAA)	Marine Sanctuary impacts Carmel Beach	Karen Grimmer	Agnes Martelet	Y	<send intro letter soon; combine with CCCE, CC, MPWMD>
11	Transportation Agency of Monterey County	Transportation		Jeff Baron		<send intro letter soon; combine with CCCE, CC, MPWMD>
12	MST	Transportation		Jeff Baron		<send intro letter soon; combine with CCCE, CC, MPWMD>
13	US Navy / Coast Guard	Coastal impacts		Carrie Theis		<send report>

	ORGANIZATION	Topic (s)	Contact Persons	Committee Lead	Contacted?	Contact for Strategy Outreach?
	Educational Groups					
1	Carmel High School Environmental Club	Internships Climate Action partnership / Green Schools	Ellen Gannon	LaNette Zimmerman Scott Lonergan	Y	Brainstorm educational outreach strategies.
2	Stevenson, York, Santa Catalina	Climate Action partnership / Green Schools		LaNette Zimmerman Scott Lonergan	Y	
3	Youth Center	Climate Action partnership / Green Schools		LaNette Zimmerman, Scott Lonergan		
4	CSUMB	Internships Climate Action partnership / Green Schools		LaNette Zimmerman, Scott Lonergan	Y	
5	MPCC	Internships Climate Action partnership / Green Schools		LaNette Zimmerman, Scott Lonergan		
6	MIISS	Climate Action partnership / Green Schools		LaNette Zimmerman, Scott Lonergan	Y	
7	NPS	Climate Action partnership / Green Schools	Ann E. Rondeau (ret.) (pao@nps.edu)	LaNette Zimmerman, Scott Lonergan		

	ORGANIZATION	Topic (s)	Contact Persons	Committee Lead	Contacted?	Contact for Strategy Outreach?
Regional Non-Profit Organizations						
1	Monterey Bay Aquarium	Marine Sanctuary impacts Climate Action Support		Carrie Theis		<send report, then have conversation>
2	Ecology Action	Climate Action Support	Kirsten Liske	Agnes Martelet		<presentation at 10/21 Climate Committee mtg>
Other Stakeholders						
1	Pebble Beach Company	Emergency response routes, Fire danger (also see their response re. Bluffs / Seawalls / Beach Regional transportation)	Mike Niccum	Carrie Theis		Carrie to contact soon; work on common points of interest.
2	Principals Involved in 1983 response; authors of the CBTS Shoreline Management Plan	Bluffs / Seawalls / Beach	Greg D'Ambrosio (past Assistant City Administrator); David Shonman (Coastal Biologist)	Evan Kort, Scott Lonergan	Y	
3	Cities with similar challenges (e.g. PG, Monterey, Seaside, Pacifica, Del Mar, Malibu)			Jeff Baron, Carrie Theis		Start looking at other reports. Ask consultants ASAP for list of cities that are most relevant.