

Coastal Hazards Local Coastal Program Update Community Workshop – May 15, 2025

Summary of Results

Introduction and Background

The City of Carmel-by-the-Sea hosted a community workshop on May 15, 2025 at City Hall. The workshop objectives were to 1) provide the community with background information on seasonal and long-term projected beach changes; 2) provide the community with information on strategies the City can take to mitigate the impacts of storm events and sea level rise on coastal erosion, beach width, beach access, and infrastructure; and 3) receive feedback from community members on preferred adaptation strategies.

Workshop Format

The purpose of the workshop was to educate community members on the project and to receive feedback from the community. Approximately 20 community members attended the workshop. EMC Planning Group and Integral Consulting gave a 30-minute presentation on beach width changes and sea level rise. Following the presentation, attendees moved into Breakout Group 1 where they used the workshop handout to answer questions about existing conditions and their observations and experiences at Carmel Beach. Following Breakout Group 1, EMC Planning Group and Integral Consulting gave a 30-minute presentation on adaptation strategies. Following the presentation, attendees moved into Breakout Group 2 where they used the workshop handout to answer questions about preferred short-term, mid-term, and long-term adaptation strategies.

The feedback and questions received are summarized below and will be used to help the City identify preferred adaptation strategies.

Breakout Group – Round 1

Existing Conditions

- 1. Where do you typically access Carmel beach?
 - 4th Street
 - Del Mar Parking Lot Sand Ramps
 - 8th Street
 - 9th Street



- 10th Street
- 11th Street
- 12th Street
- 13th Street
- Stairs south of Martin Way
- 2. What accessways are currently closed or damaged?
 - 4th Street
 - Del Mar Parking Lot sand ramps a concern
 - 8th Street stairs
 - 8th Street sand ramp damage
 - 12th Street stairs
- 3. What activities do you typically enjoy at Carmel Beach?
 - Walking on beach and on Scenic walking path
 - Surfing
 - Dog walking
 - World class volleyball playing
 - Photography
 - Driving along Scenic
 - Smash ball
 - Kelp restoration activities
 - Visiting the beach in general main attraction
 - Exploration with children
 - Tide pooling and coves
 - Removing golf ball trash
 - Walking entire length of beach with friends
 - Relaxing
 - Watching the ocean
 - Walking in the water
 - Scuba diving
- 4. What are your **priorities** for Carmel Beach (*i.e., maintain a wide sandy beach; sand color; surf quality; protect Scenic Road pathway, protect Scenic Road*).
 - Maintain certain vertical access points
 - Prioritize certain stairways

CITY OF CARMEL-BY-THE-SEA

- 13th Street stairs are key and have not been problematic
- 8th Street sand ramp is an issue
- Managing stormwater runoff
- Focus on major storm events
- Retain uniqueness of Carmel beach
- Keep riprap boulders covered with sand
- Maintain safe access at bottom of stairs
- Maintain wide, sandy beach
- Maintain/protect Scenic Road and walking path
- Maintain a beach created by natural processes
- Kelp restoration
- Allow coastal retreat and beach migration inland
- 5. Write a few observations you have about Carmel Beach in the winter (*Example: Loss of sandy beach at 10th Street*):
 - Surfing (better spring surfing due to sand distribution)
 - Large rock exposure
 - Limited beach access in winter
 - More interesting in the winter with exposed rocks
 - Easier to walk along the shoreline on hard packed beach sand
 - Reflect on natural processes during winter
 - Scenic Road prevents erosion and protects infrastructure
 - Scenic Road provides access to people with limited mobility
 - First storm event leaves black staining on beach
 - Copper gutters contribute to water pollution
 - Fecal matter runoff issue
 - Outfalls result in scouring of sand
 - Pescadero Canyon stays wet and smelly
 - Beach experiences erosion cycles
 - Enjoy the cycle of sand loss

CITY OF CARMEL-BY-THE-SEA

- Sand moves offshore
- Damage to stairs and sand slopes
- Some sections of revetments experience overtopping
- Increased cliff erosion along unarmored dunes
- Less kelp washing ashore with first winter storms
- 6. Write a few observations you have about Carmel Beach in the summer:
 - Sandy beach
 - Heavy beach use by tourists
 - More trash
 - Major international tourist attraction
 - Integral to Carmel's identity
 - Tremendous draw at sunset
 - Proud of how clean volunteers keep beach despite how busy the beach is
 - People of all income levels can enjoy beach
 - More gradual beach slope
 - Beach widths in the north (below Pebble Beach golf course) were historically the widest and are now reduced approximately 50% compared to 2015
 - Revetment formerly covered between 8th Street and 11th Street is now exposed year round



Breakout Group – Round 2

Preferred Adaptation Strategies

What vulnerability concerns you? (i.e., Impacts to Scenic Road, utility infrastructure, access, loss of sandy beach, etc.)

- Sand ramp issues and near-term emergency access issues. Should the ramp be built in a different area?
- Armoring will end the beach
- Dilemma between the natural beach and processes versus infrastructure and the built environment
- Need to know more about the geology under the dunes
- Concern that the beach winterizing program stopped
- Impacts to Scenic Road
- Impacts to utility infrastructure
- Impacts to access
- Loss of sandy beach
- Loss of natural processes and naturalness
- Using armoring to preserve infrastructure at the risk of losing the beauty of the natural process
- Saltwater intrusion
- Impacts to sea life (ecosystem)



Indicate your level of support for the following adaptation strategies:

Short-term Strategies (5-20 years)

Strategy	Comments (<i>optional</i>)	Strongly Disagree (-2)	Disagree (-1)	Neutral (0)	Agree (1)	Strongly Agree (2)	Total Responses	Weighted Average
Vegetation and landscaping to reinforce/protect terrace soil	-South of 8 th Street	0% 0	10% 1	10% 1	10% 1	70% 7	10	1.40
Dune Restoration	-Particularly at Del Mar Dunes and potentially North Dunes -Consider aiding wind- driven dune replenishment through acacia removal that blocks sand drift	0% 0	0% 0	22.22%	0% 0	77.78% 7	9	5.67
Beneficial reuse of sand	-Insignificant -Focus on keeping existing sand	11.1% 1	0% 0	11.1% 1	22.22% 2	55.56% 5	9	4.11
Living shorelines – utilize driftwood expanded dunes	-Ocean Avenue	11.11% 1	11.11% 1	22.22% 2	0% 0	55.56% 5	9	3.11
Beach nourishment of upland dune ramps	-Focus on keeping existing sand	10% 1	10% 1	10% 1	20% 2	50% 5	10	2.90
Beach nourishment	-Prefer to keep existing sand quality - Only with the same sand	22.22% 2	0% 0	44.44% 4	22.22% 2	11.11% 1	9	1.67
Sacrificial Berm	-Unsightly and not likely effective	20% 2	10% 1	40% 4	10% 1	20% 2	10	2.40
Sand Management/Harvesting	-This was beneficial in the past	10% 1	10% 1	20% 2	10% 1	50% 5	10	2.20



Continue Monitoring and	-Until overtopping	0%	0%	20%	30%	50%	10	3.20
Maintenance of Existing	destroys protective	0	0	2	3	5		
Seawalls	value							
	-Establish trigger							
	points to cease							
Integrate wave deflectors	-At select stairs with	0%	0%	20%	60%	20%	10	3.20
into access improvements	best chance of long-	0	0	2	6	2		
	term survival							

Mid-term Strategies (10-30 years)

Strategy	Comments (optional)	Strongly Disagree (-2)	Disagree (-1)	Neutral (0)	Agree (1)	Strongly Agree (2)	Total Responses	Weighted Average
Replace rock revetments with seawalls	-If kept to scale of existing seawalls -Opportunity cost a concern as there are other adaptation priorities	25% 2	25% 2	25% 2	12.5% 1	12.5% 1	8	-0.38
Wave tripping low structure on bedrock	-Impact on natural beauty of scoured bedrock that will be increasingly visible is a concern -Consider nearshore reef first	0% 0	25% 2	25% 2	37.5% 3	12.5% 1	8	1.50
Raise crest and redesign of seawalls	-Only as an approach for select seawall sections to align protective capability with the obsolescence of a larger coastal bluff	14.29% 1	14.29% 1	42.86% 3	28.57% 2	0% 0	7	2.00



	retreat/relocation section e.g. 8 th to 11 th St section of Scenic Road							
Wave cut terrace augmentation	-Need more info -Impact on natural beauty of scoured bedrock that will be increasingly visible is a concern -Consider nearshore reef first	0% 0	33.33% 2	50% 3	16.67% 1	0% 0	6	2.17
Raise riprap	-Displaces beach and unsightly	37.5% 3	12.5% 1	12.5% 1	25% 2	12.5% 1	8	0.88
Infill Seawalls	-Need more info -Only as an approach for select seawall sections to align protective capability with the obsolescence of a larger coastal bluff retreat/relocation section e.g. 8 th to 11 th St section of Scenic Road	16.67% 1	0% 0	16.67% 1	66.67% 4	0% 0	6	2.00
Soil nail wall or tie back to protect bluff terrace	-Unsightly	33.33% 3	22.22% 2	11.11% 1	11.11% 1	22.22% 2	9	0.89
Nearshore reefs	-Assuming no negative impacts on natural replenishment during summers. Should also consider impact on surfing.	10% 1	0% 0	30% 3	20% 2	40% 4	10	1.60



-Give this serious		
consideration; may		
provide ecosystem		
(e.g. reef/kelp) and		
recreation (e.g.		
surfing) benefits that		
would aid permitting		
and funding		

Long-term Strategies (30+ years)

Strategy	Comments (optional)	Strongly Disagree (-2)	Disagree (-1)	Neutral (0)	Agree (1)	Strongly Agree (2)	Total Responses	Weighted Average
Maintain Existing Seawalls	-Until overtopping destroys	0% 0	11.11% 1	33.33% 3	22.22% 2	33.33% 3	9	0.78
Build new Seawalls	-Only if other solutions don't work -Hastens beach destruction -Cost prohibitive as they continue to be damaged	55.56% 5	11.11% 1	22.22% 2	0% 0	11.11% 1	9	1.11
Transportation Realignment (pedestrian path)	-lf needed	0% 0	0% 0	20% 2	40% 4	40% 4	10	0.80
Retreat/Relocation (Scenic Road)	-If needed -Beach preservation -Creates opportunities for coastal bluff enhancement that benefits the broad community and visitors	10% 1	0% 0	20% 2	30% 3	40% 4	10	3.20



Additional/General Comments:

- Low-cost nature-based solutions good for short term
- Restore kelp which also helps with beach erosion
- Consider artificial reefs
- Focus on beach access and reduce number of access points and use cost as a consideration
- Driftwood berms and working with natural materials
- Sand matching could be a challenge for nourishment
- Study excess sand volumes for future movement
- Impact of large storms a concern
- Use pragmatic and proven solutions
- What is effective in similar communities?
- Cremated remains in concrete balls to form artificial reefs an innovative idea
- Harvest kelp canopy to prevent storm destruction
- Solutions are complicated and expert recommendations are needed
- How does the city define the "best" solution. Best for whom?
- Focus on actions that preserve top priorities
- Different strategies have co-benefits and co-deficits
- Evaluate if sand replenishment if realistic for Carmel
- What actions can be taken now to be proactive?
- Support mostly nature-based solutions. Fighting against nature typically doesn't work.



- Engineered decisions need to be deeply researched by engineers/scientists. Ex. seawalls and rip rap and offshore reefs. What are the unintended consequences?
- Be careful what we do in the oceans.
- Recognize Carmel Cares involvement in keeping beach pristine
- Would offshore reefs positively or negatively impact surf/sand supply?
- Seems crazy to not take action if it won't harm the environment/habitats.
- Balance human interests with costs and risks.
- Major projects undertaken to protect homes should be funded in part by those homeowners.
- Concern with long-term success of solution(s)
- Use of proper material (sand size/type)
- Do not care about Scenic Road impacts
- Relocate infrastructure
- Need to have a dedicated access ramp down to the beach to get equipment down to implement projects
- Make sure appropriate seawalls exist to prevent widespread erosion

Reflection

1. How much did you know about coastal hazards and adaptation strategies before tonight?

```
I didn't know anything – 0
```

I knew a little – 5

I was well versed in adaptation strategies - 4

2. Do you feel like you have a better understanding of adaptation strategies after tonight's workshop?



Much better – 4

A little better – 5

I do not feel like I have a better understanding - 0

3. What would you like to know more about?

- I would like to know more about what other coastal towns with similar beaches are doing.
- Need to learn more about costs and probability of negative consequences of the interventions being considered.
- What is the range of high tide that coincides with modeled SLR? Can this help prioritize projects?
- What is the responsibility of the City to provide access to homes on Scenic Road?
- What more natural adaptation strategies can happen now that would buy time for studying more engineered strategies?
- What are the costs of the various adaptation strategies?
- Technical references and comparative projects / plans for other coastal cities both for adaptive measures and transition strategies for moving from one adaptation to the next.