CPOA QUESTIONS FOR MEETING WITH INTEGRAL CONSULTING AND THE COUNTY
RE: SEA LEVEL RISE (SLR) VULNERABILITY ASSESSMENT PROJECT, ON 10/16/25

Understandings from the Community Working Group which need to be confirmed:

1. **The planning horizon for the revised Local Coastal Plan (LCP) is the next 25 - 30 years, therefore the Vulnerability Study projected SLR should not exceed > 0.90 feet for Monterey Bay (Intermediate High scenario) or > 1.1 feet Statewide by 2050, with a probability of < 20% of occurrence. The County's LCP will need to be updated again by 2050, based on changing environmental conditions and the latest scientific research.**

The LCP Amendment will address both near term (2040-2060) and longer term (2080-2100) planning horizons in a phased adaptation approach with interim adaptation steps that can be taken earlier, and plan updates.
References: State of California Sea Level Rise Guidance, 2024 Science and Policy Update
California Coastal Commission, Sea Level Rise Policy Guidance, 2024 Update

2. **Triggers for phased-in Adaptation Strategies should be based on ACTUAL (observed) changes in SLR and coastal erosion, not predictions, as science regarding SLR is not precise and environment conditions may change.**

In other words, while triggers would not be based on time, they would be based on physical and measurable thresholds related to ongoing erosion and flooding as well as sea level rise amounts and related effects and impacts. While that is a practical approach for triggers, it is still necessary to identify the time horizons for projected sea level rise amounts and plan accordingly while building in flexibility. Various adaptation measures can involve long lead time to plan and implement (e.g. beach nourishment or other neighborhood shoreline adaptation projects) or can involve near-term planning action addressing ongoing erosion and flooding risks and anticipated future sea level rise impacts (e.g. coastal bluff setback requirements). A comprehensive planning approach that considers sea level rise projections, thresholds, and triggers is needed to adequately prepare and build in flexibility over time. Planning for uncertainty is necessary in case water levels rise faster than anticipated or frequency and intensity of impacts trigger thresholds sooner than anticipated.
References: State of California Sea Level Rise Guidance, 2024 Science and Policy Update
California Coastal Commission, Sea Level Rise Policy Guidance, 2024 Update

Please provide answers to the following questions raised by CPOA and coastal property owners prior to the 10/16/25 meeting at the Simpkins Center.

A. SCIENCE/METHODOLOGY:

1. What model was used by Integral Consulting to forecast potential impact and vulnerability of SLR? What other research and models are available? What does the latest scientific research show is the predicted Sea Level Rise (SLR) for the next 25 – 30 years?

Models used by Integral: TNC Coastal Resilience, FEMA BFEs in flood hazard areas and coastal high hazard areas, and other data sources
Other Models: Coastal Storm Modeling System (CoSMoS), and other NOAA and NASA models
Reference: State of California Sea Level Rise Guidance, 2024 Science and Policy Update, Appendix 4

2. Do the Felt Maps showing coastal erosion by neighborhood show the combined effects of SLR, and take account both land erosion and partial or full structure loss? How was the probability of potential structural damage/loss due to flood risk or erosion determined (Very Low – Very High)?

The Felt map has been a very useful tool for interaction and feedback between County staff, the consultant team and the Community Working Group. The Felt map has a layer showing model results for areas impacted by all hazards combined (coastal erosion, wave flooding, and lagoon flooding) for 0, 1, 2, 3, and 5 feet of sea level rise. There are two additional different layers showing buildings at risk. There is a layer showing buildings at risk from all hazards and 5 feet of sea level rise. For wave hazards, risk is related to total water level recurrence intervals at the first floor elevation. More frequent recurrence interval means higher risk. For erosion hazards, risk is related to proximity to the bluff top edge, relationship to the hazard zones, and length of time in the hazard zones over the various scenarios. For low-lying flood hazards, risk is related to elevation and known flood elevations. The color coding depicts the variation in risk level using these different criteria. The other risk layer shows buildings at risk from erosion hazards assuming protection afforded by existing armoring up to 3 feet of sea level rise. The mapping that will be published with the study will include additional scenarios and explanations of the various layers and how estimated losses are calculated.

3. Potential Adaptation Strategies (such as shoreline protection devices, groins, sand replenishment, off shore reefs, or managed retreat) should be planned based on ACTUAL not PREDICTED SLR, as environmental conditions and the rate of SLR may change.

See response above regarding triggers.

4. Need to evaluate the impact of the Harbor on downstream sand migration. Divert Sand from Harbor dredging to allow downcoast sand flow (is it feasible?). Under what authority?

The impact of the Harbor will be evaluated.

B. <u>SHORELINE PROTECTION:</u>

1. The Coastal Act currently provides for CDPs for new shoreline armoring for existing structures. How will County decide who is entitled to shoreline protection in the future? The terms and conditions of existing CDPs for shoreline protection granted in perpetuity should not be altered.

The standard of review for a local CDP for a shoreline protection structure is the County's Local Coastal Program (LCP) or a future update of the LCP. The Coastal Act may be an additional standard of review or may become the standard of review in other situations such as an appeal or the project is located in the Coastal Commission's jurisdiction.

2. Will existing shoreline protection need to be removed in the near term? Under what statutory authority? Will revetment rocks be replaced with vertical seawalls?

There are no current plans or requirements to remove or replace existing permitted shoreline protection structures. This is not addressing potential issues involving shoreline protection that is unpermitted, hazardous, or a public nuisance and what may be required to resolve those issues.

3. Will coastal property owners be allowed to maintain and repair their existing shoreline protection devices? Will they be required to have a "Monitoring, Maintenance & Repair Plan" according to the conditions of their CDP? It does not make sense to have a cumulative limit (50%) on any repairs to shoreline protection, since it is often the same sections or rocks which repeatedly need to be repaired.

The permitting process related to maintenance and repair of any existing shoreline protection structure depends on factors that can vary from site to site. The permit history and status of the structure, the location and condition of the structure, the scope of work, monitoring, maintenance and repair plans that may or may not exist for the structure, and the agency having jurisdiction, would all influence the permit process and what could be allowed and permitted for any individual site. There are numerous examples of projects involving maintenance and repair of shoreline protection structures that have been permitted.

4. Is the proposal for a uniform seawall along Opal Cliffs still a consideration? At 1 feet of SLR, many of the homes along Pleasure Point Dr. and Opal Cliffs have been identified as being at "Risk" of suffering damages due to cliff erosion. Consider new uniform seawall from 41st to Capitola City border, with horizontal pathway at 10' above median high tide, and at least two new easements for public vertical access. This will provide for safer public access even at moderate high tides.

As a neighborhood scale adaptation strategy, this idea will be considered.

5. Can those homes along the bluffs and beaches insert caissons to support their foundation in place?

This question involves site-specific and project specific considerations. For an existing home on a bluff, such a proposal may be considered a shoreline protection structure and therefore be subject to related standards of review for shoreline protection structures. For existing structures on the beach, such proposals are often related to elevation of the structure as a flood mitigation measure and there are numerous examples of these types of projects on the beach.

C. <u>NEW DEVELOPMENT/RE-DEVELOPMENT/REPAIRS/REMODELING:</u>

1. Will new development or re-development be allowed in coastal hazard zones? Under what conditions?

There are numerous examples of development and redevelopment that have been permitted in coastal hazard zones when consistent with the LCP, including both Land Use Plan (LUP) policies and Implementation Plan (IP) regulations. Currently, and under any future LCP provisions, projects would continue to be permitted if found consistent with all policies and regulations.

2. How will the set-back for coastal bluffs be calculated now or in the near future?

There is an existing procedure for calculating the coastal bluff setback when it is required for a project. The procedure has been in place for a long time and the County has not changed the procedure. Any future updates and refinements to the procedure as part of a LCP Amendment must be internally consistent with the existing LCP or any related LCP amendment and the Coastal Act.

3. How can structures on the beach be protected or elevated?

There are numerous examples of projects on the beach that have been permitted based on designs to avoid, minimize, and mitigate the risks from storm wave flooding and landsliding.

4. If a structure is damaged during a storm surge, will the property owners be allowed to make repairs?

There are existing provisions in Santa Cruz County Code Chapter 16.10.070(H)(4) regarding damaged structures from storms and other causes.

5. Will property owners be allowed to rebuild "in kind" due to losses from fire or earthquakes?

There are provisions in 16.10.070(H)(4) allowing rebuilding in kind due to these kinds of losses.

D. PROPERTY RIGHTS/VALUE/USEFUL LIFE OF STRUCTURES:

1. How are the property rights of home owners weighed against the public right of access?

Such cases weighing these issues are rare in Santa Cruz County and very site and fact specific. A short answer would be there is never any easy answer when these questions come up.

2. How will the potential useful life of my coastal property be determined?

The County does not regulate the useful life of a structure. Existing regulations require coastal bluff setback calculations based on a geologic timeline of only 100 years or flood mitigation based on flood risk. Structures may be damaged at any time, they may become threatened by erosion, or they may deteriorate. As a result of any of these conditions, a structure may be declared unsafe, or threatened, or uninhabitable at any time in the future.

3. What statutory authority may require property owners to remove their shoreline protection and relocate structures? How will property owners be compensated for lost property value?

The County is not proposing to require property owners to remove their shoreline protection structures or relocate structures being protected at this time. This is not addressing shoreline protection or the structure being protected that may be unpermitted, hazardous, or a public nuisance and what may be required to resolve the issues of any individual case.

4. Why does it appear that a different set of standards have been applied to new shoreline armoring along West Cliff Drive but not East Cliff Dr?

There are similarities and differences between the two neighborhood areas. A similarity between the two neighborhoods is shoreline protection of publicly accessible coastal bluff neighborhoods at the Pleasure Point Parkway and shoreline protection and reconstruction of the eroded public sidewalk on West Cliff Drive. The two neighborhoods are different regarding the amount of private development between the first through public road and the coast along East Cliff Drive and the lack of private development between West Cliff Drive and the coast.

E. PUBLIC ACCESS:

1. How can we assure continued safe public access to the beaches and coastline while still protecting viable structures?

The County would like to address both of these interests with the community.

2. Adaptation Strategies should strive to ensure safe public access and to preserve the coastline.

Agreed

3. Existing shoreline protection devices should be inspected regularly to ensure they are stable, sustainable and do not pose a risk to public safety or access.

Yes, and what if the shoreline protection structure is not stable, is not sustainable, or poses a risk to public safety or access? These are also valid questions that need to be addressed with the community.

4. Potential loss of coastal access and beach width should be evaluated during seasonal use (April – September). Impact on public safety in terms of access for surfers should also be evaluated.

The study will present data on beach widths that can be evaluated at different areas along the shoreline without ignoring data from half the year.

F. FIINANCIAL IMPACT:

1. What is the potential financial impact on public infra-structures (roads, sewers, electricity, gas, water, public rest rooms and recreational facilities)? How will the County and State Parks plan for changes and where?

The study will present analysis of estimated financial impacts. State Parks has completed a plan for changes at Seacliff State Beach see the Seacliff Resilience website.

2. What is the estimated potential financial impact of lost property taxes and income from coastal properties? An economic study needs to include lost vacation rental income and access.

The study will present analysis of estimated financial impacts.

3. The recent economic impact analysis completed by "Save the Waves" in collaboration with Integral Consulting published in the Sentinel (9/18/25) appears to be over-stated and includes all surf related income throughout the County of Santa Cruz, including the City of Santa Cruz and Capitola. This economic impact analysis should only include the potential lost sales tax revenue in the unincorporated areas of the County.

The study is focused on the unincorporated part of the County.

4. What is the estimated financial impact on coastal businesses and tourism?

The study will present analysis of estimated financial impacts.

CPOA Comments & Concerns (which have been previously shared with the Integral Consulting Team):

- **CPOA supports a "triggered Based" or phased-in approach to adaptation strategies for those areas at greatest risk. This will help both the County and the Property Owners to plan for the future.**
- **Coastal Property Owners should be allowed to continue to protect their structures and property with shoreline protection devices (seawalls, revetment rocks, etc.), as long as those structures are stable, safe and sustainable. In some cases, new shoreline protection such as a Uniform Seawall across Opal Cliffs may be necessary to improve safe public access. Other locations may also be considered.**
- **All coastal property owners with existing shoreline armoring should have an approved Monitoring, Maintenance & Repair Plan (MMRP), if required by their Coastal development Permit (CDP), and be allowed to have their shoreline armoring inspected and repaired to ensure it is stable and safe. This process should be streamlined, and all property owners should be allowed to repair their shoreline armoring.**
- The Sea Level Rise (SLR) estimates in the Integral Study still appear to be based on the Statewide averages and not Monterey Bay, as presented on Table F-8 in the Sea Level Rise Guidance Policy draft of 2024 and the Ocean Protection Council Report. According to the Ocean Protection Council and the Coastal Commission's Sea Level Rise Policy Guidance (July 24, 2024) table F-8, **projected SLR for Monterey Bay is 0.6 feet to 0.9 feet by 2050 and 1.4 feet to 4.6 feet by 2100 (Intermediate Low to Intermediate High Scenarios).**
- **The California Coastal Commission (CCC) has no statutory authority other than what is specified in the Coastal Act or SB272 to REQUIRE that all coastal jurisdictions and property owners address the worst-case scenarios 4-5 (4.6 – 4.9 feet of SLR by 2100) in their LCPs or CDPs.**
- **The planning horizon for the Revised LCP is the next 25 – 30 years (up to 2050 or 2060), and the study should only include projected SLR of 1.0 – 1.5 feet. Anything beyond that is speculative and uncertain.**
- On most of the coastline along East Cliff Dr. between Twin Lakes - Moran Lakes region, there is a natural seasonal migration of sand, which can be as much as 15 vertical feet in some locations. The sand goes away in October and does not return until late April. These are the winter months when there are more frequent storms, which move sand down the coast to Moss Landing. To base the model of sand levels and beach width during the **Winter Months** with or without armoring, using the Intermediate high scenario of 4.9 feet of SLR (Statewide) or 4.6 feet of SLR (Monterey Bay), is like taking the worst or the worst-case scenarios and does not reflect public use or recreational access, which occurs mostly during the Spring and Summer months (April - September). **So instead of using the Winter month sand levels, it was proposed Integral use the seasonal average, taking into account the average median high and low tides.**
- Those structures identified potentially at risk with 1-5 feet of sea level rise, should take into account both land erosion and partial or full structure loss. For planning purposes, our recommendations for revisions to the County's LCP should only take us to 2050, and the projected SLR for Monterey Bay is only 0.9 feet as opposed to 1.4 feet of SRL (Statewide average). This will help in the short-term planning. However, even at this level of SLR there will be the need for Adaptation Strategies to mitigate coastal erosion and guarantee continued safe public access to the beaches. The LCP can still address longer range risks and adaptation strategies, but since the rate of SRL may change, further revisions to the LCP will be needed beyond 2050.
- It will be easier to defend the shorter-term projections (next 25 – 30 years) of SLR than to create panic over the possibility of a 5 foot SLR by 2100, which by the way has a probability of less than 20% according to the OPC Study (Intermediate High Scenario).
- The model used by Integral Consulting for the Vulnerability Assessment Study is apparently based on research and modeling which was developed in 2014. A lot has changed since then. What research and other models have been developed for Coastal Vulnerability Assessments since then, and how do they compare to the model and research used by Integral in this project?
- The Felt Maps shown at the last Community Working Group Meeting on May 1, 2025, were confusing and combined multiple events such as bluff/beach erosion, storm surge, sea level rise and other coastal hazards. The probability of each event needs to be shown separately, and not combined effect.
- The planning horizon for the SLR/Coastal erosion maps should be 2050 – 2060, next 25 to 35 years, which is consistent with the time frame for the revised Local Coastal Plan for Santa Cruz County.
- The Felt Maps should show three separate SLR scenarios (Low Intermediate, Intermediate, and High Intermediate) with the probability of each scenario clearly indicated.
- SLR and Coastal Erosion projections beyond the 2050 – 2060 planning horizon are entirely speculative, with very low probability and confidence levels. The LCP will need to be revised before 2060, based on actual SLR, coastal erosion, climate and weather changes.
- If SLR is not as much as predicted 0.6 – 0.9 feet for Monterey Bay by 2050, then many of the triggers for adaptation strategies will not be activated.
- The terms and conditions of existing CDPs for shoreline protection granted in perpetuity shall not be altered.