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September 9, 2020

Santa Cruz County Board of Supervisors  
701 Ocean Street, Room 500  
Santa Cruz, CA 95060

**Re: Santa Cruz County Public Safety Element/Coastal Hazards LCP Update on the September 15, 2020 Board of Supervisors' Agenda (Agenda Item 7)**

Dear Chair Caput and Honorable Supervisors:

Thank for you the opportunity to provide comments on the proposed amendments to the Local Coastal Program (LCP) regarding the coastal hazards component of the Public Safety Element update that you will be reviewing on September 15th. Although we realize that the Public Safety Element has many components, we are here focused on the coastal hazards component, comprised of proposed new LCP policies governing development along the County's beaches, bluffs, and shoreline. These areas help to define the County, and are very important not only to the community but to the many visitors that come to enjoy all that the area has to offer. These beach and shoreline areas are thus not only a huge part of the community's identity and its cultural fabric, but they are also a huge driver for the local economy. They are also under significant and growing threat, especially as a result of global climate change and sea level rise that threaten to ultimately lead to the loss of many of the County's important sandy beach areas in the relatively short term. The LCP's coastal hazards policies, and the way in which they address proposed development, are among the most important tools the County has to protect these areas. As a result, the update before you is critically important, and will help to define how the County addresses its vulnerabilities, especially as it relates to these critical resources, in this crucial time. In fact, decisions made now are almost assuredly going to have oversized consequences in the future.

Given the importance and sensitivity of the resources at stake, and also the degree of public infrastructure and private development along the shoreline that would be affected by the proposed policies, we have been active partners with your staff throughout the local process to date. That collaboration has focused on developing draft policies to help ensure development is sited and designed in a manner to minimize risks to life and property, and to limit shoreline armoring and require commensurate mitigation for its impacts, all within a framework of protecting beaches and related shoreline and park resources in light of sea level rise. A tall task indeed, and one where we very much appreciate the effort and approach of your staff, including being open to exploring different policy approaches that might be applied to the County's shoreline. Ultimately, we have many points of agreement as a result, including the idea of allowing for managed retreat as much as possible in the more rural areas of the County and of

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looking to shoreline management plans as a means of refining these policies in the future, but also in terms of trying to make sure that the risks of developing along an eroding shoreline are internalized by private landowners in such a way that the public is not forced to bear the brunt of the impacts that accrue to such development decisions, particularly with respect to the loss of the public's beaches and parks due to private shoreline armoring.

At the same time, while we have been open to the idea of a narrow 'exception area' where armoring and development that depends on it might be facilitated (specifically in blufftop areas where beaches are narrow or nonexistent and thus where such armoring would not be expected to lead to direct beach loss), we have been clear from the start that that is not something that is explicitly allowed by the Coastal Act (and not something allowed by the current LCP). Even so, we have explored ways that such a concept might best be proposed by the County in a manner that we might be able to support, including so that the County can make its best possible case to the Coastal Commission when the LCP amendment is considered. Unfortunately, however, we believe that the concept as it is currently embodied in the draft policies is simply overly broad. As it is currently structured in the proposed policies, the 'exception' area is essentially the entire more urbanized unincorporated shoreline, including areas such as Davenport on the north coast and La Selva Beach on the south coast, but also all of coastal Live Oak and most of south County south of Capitola. This is also the area with the most heavily used sandy beach and shoreline recreational access destinations in all of the unincorporated County. In other words, much of the proposed exception area is actually where protection of these beach and shoreline resources is the most important for public recreational access utility. Despite that, the proposed policies would allow new development, including redevelopment, in that area to rely on armoring. While we understand the desire to make it easier for private property owners to protect their homes and other development in this manner, and while we appreciate that the proposed policies would require property owners to also assume the risks of developing in harm's way in light of coastal hazards, and to mitigate for potential coastal resource impacts, this proposed construct is not allowed under the Coastal Act.

Coastal armoring has a series of impacts on shorelines, perhaps the most critical being that armoring directly leads to a loss of sandy beaches, particularly as the shoreline erodes and sea levels rise. The most obvious impact is that armoring occupies physical beach and shoreline space (e.g., a rock revetment set on the beach, such as is prevalent along the area between the Harbor and Pleasure Point), and the underlying area is not available for public use. But a sometimes less obvious impact might even be worse, namely the fact that beaches that would normally migrate inland in response to erosion have no place to go, and ultimately get squeezed between a rising sea and shoreline armoring. This phenomenon is often referred to as passive erosion, or 'coastal squeeze', and it is a reasonably foreseeable effect of any program that relies on continuing shoreline armoring, such as is being proposed. To be clear, and despite claims by some to the contrary, armoring is not an innocuous private property right of some sort, rather it directly leads to a loss of the *public's* beach and shoreline

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resources, and it is important in this debate that it is understood in that way. And, as is, much of the County's more urbanized shoreline is armored, and you are being asked today to make choices about whether continuing that trend takes the County in the right direction, weighing those public versus private costs and benefits. To be sure, these are difficult choices, including because allowing for continued armoring and reliance on same to protect development is also choosing to allow beaches to ultimately disappear, whereas choosing to allow beaches to migrate inland is choosing to remove and relocate development to more inland locations out of harm's way. Again, these are not easy decisions, including as they are often framed in terms of coastal property owner's needs – and to be sure coastal property owners have a vested interest in the outcome – but often missing from the debate are the *public's* needs as it relates to ensuring continued access to the County's sandy beaches and shoreline and park areas. While not completely mutually exclusive, it needs to be understood that armoring represents a choice that typically benefits those private interests at the expense of the public's interests.

With respect to allowing armoring, it remains our position that armoring is *not* allowed to be used to ensure stability and structural integrity for new development and redevelopment under the Coastal Act and the current LCP, and that *only* pre-Coastal Act structures (i.e., pre-January 1, 1977) that have not been redeveloped since then are entitled to protection from armoring, including because the Coastal Act and the LCP require new development and redevelopment to be stable without ever relying on armoring. These Coastal Act and LCP requirements directly respond to the above-described significant adverse impacts that armoring can have on beaches and the shoreline. At the same time, much of the urbanized County coastline is armored to protect private residential development, even though, in our experience, there are actually very few private residential structures in this area that pre-date the effective date of the Coastal Act. In fact, it is relatively clear that those pre-Coastal Act structures are the exception, and the rule is in fact a County shoreline fronted by much newer and/or much more recently and significantly modified homes. It is in this dichotomous context that the proposed policies find their way to your desk. And the task before you is to find a path forward that can be found consistent with the Coastal Act at the same time as recognizing the practical issues associated with an armored shoreline, something that makes the otherwise straightforward Coastal Act and current LCP requirements limiting shoreline armoring more complicated in practice.

As such, and as we have communicated to County staff, we understand the reasons and rationale behind the proposed LCP policies, and have worked with them in an attempt to create a set of policies that respond to both objectives: protecting the public's beaches while also allowing some flexibility and adaptability given the County's shoreline development context. While we have made progress on this front, we continue to believe that the proposed policies deviate significantly from the above Coastal Act requirements, and would serve to identify most all of the County's prime beach and shoreline recreational areas for continued reliance on armoring, including for new and

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redevelopment, when that is prohibited by the Coastal Act and the existing LCP. We do not believe that the proposed policies are approvable in their current form.

At the same time, and as indicated, we remain hopeful that a practical solution that respects the Coastal Act and the public's beaches and shoreline areas is achievable, even with the proposed 'exception' area concept. Toward that end, and as we have shared with your staff, we believe that what is really needed at this point is a strategic refinement of the key concepts, and a set of simplified and clarified policies that can implement those concepts. As is, the proposed LCP Land Use Plan (LUP) coastal hazards policies (Chapter 6.4) include some 10 pages of introduction, and some 50 overlapping policies (some covering multiple pages themselves) and programs spanning another almost 20 pages, all of which is dense reading that in many cases suffers from some internal inconsistencies. That is not to fault your staff, as these kinds of issues tend to emerge from such a long planning process, where differing input points and changes along the way can serve to add complexity as opposed to clarity. At the same time, it is very important that such a critical tool in the County's adaptation arsenal is clear to all parties, including to facilitate its successful implementation in light of the resources at stake.

In that context, we suggest that the proposed policies be modified and refined in such a way as to recognize Coastal Act requirements as well as the nature of the County's built and natural shoreline environment, and to better protect and enhance the public's beaches and shoreline recreational areas while also ensuring that private development internalizes the actual costs of maintaining homes in an area subject to significant coastal hazard risks. We have attached a draft set of refined and simplified LUP policies that we believe do just that, and that build upon the concepts and key language in the County staff-proposed version. For example, if the County still intends to pursue an exception area, where armoring might be relied upon for new and redevelopment notwithstanding the Coastal Act, then that exception area should be limited to already developed areas with limited area to migrate inland that are already protected by armoring and where the geography and environment wouldn't appear to lend themselves to significant beach migration/creation. As discussed with County staff, the only unincorporated area that might meet that criteria appears to us to be generally along Opal Cliffs and portions of Pleasure Point, and thus that is our suggestion should the concept continue to be pursued.

Beyond that, though, we don't see how policies to allow armoring to protect new and redevelopment (even if limited to a 'one-time' allowance, as appears to be identified by at least some of the proposed policy text) are appropriate, and rather the objective there should be to find a way to transition from an armored shoreline to one where private property owners have internalized the risk for developing in a coastal hazard area without a reliance on armoring, and the public isn't forced to bear the brunt of the costs from armoring to protect such private development, including the loss of the public's finite and incredibly important sandy beaches. Of course, recognizing the difficulties of that transition, our suggestions allow for armoring to be retained in new development and redevelopment circumstances until such time as it can be safely removed in a way

that doesn't threaten adjacent primary development, and to further allow for reduced setbacks when there is limited private development space that can be located out of harm's way. We also believe that blufftop and shoreline-level development need to have separate prescriptions, including recognizing the differing nature of the coastal hazard threat and the impact on the beach and shoreline. To be clear, these policies would apply to structures that front existing and heavily used County beaches, and offer a path that protects these important public resources while also being responsive to the development patterns that line these beaches, and also the Coastal Act that regulates all of it.

**Thus, we strongly recommend your consideration of our proposed suggested LUP policies that are attached.** These are in draft form, and do not speak to the introduction to the LUP chapter (and that introduction would also need to have conforming changes made, as would implementing ordinances in LCP Implementation Plan (referred to as the County Code in your materials) Chapter 16.10), but we believe they capture as best as possible the key elements of the County staff-proposed version in what we believe to be a simpler and clarified manner. Importantly, they continue to suggest that the County's more rural shoreline areas adapt via managed retreat, and they continue to emphasize the need for further planning via shoreline management plans that can provide more detailed and specific LCP prescriptions to subsets of the County's coastline that share issues and attributes. In that sense, these policies are intended to act as a bridge to those shoreline management plans, wherein policies and directions can be further refined through that more specific planning by area. They also include the aforementioned exception area concept (albeit refined to a smaller area limited to Opal Cliffs/Pleasure Point), even though that is not what the Coastal Act would dictate, because we want the County to be able to put forward their best possible version of that concept. Bracketing that policy, importantly, these attached policies are in a form and of a content that we believe are both approvable under the Coastal Act, and that will form the general basis for our eventual recommendation to the Commission when the LCP amendment is considered. We had hoped to be able to spend a bit more time with your staff discussing how these draft suggestions could be incorporated into the staff-recommended version prior to Board consideration later this year, but we recently learned that this matter was headed to the Board for final consideration on September 15th, and we felt it was important to ensure that the Board and the public had the benefit of our thoughts given that condensed time frame. We hope that these suggestions are understood in that context. And we would be happy to spend more time working with County staff on the draft policies prior to further Board consideration should you agree that makes sense, as opposed to your taking action on September 15th.

In closing, we hope that this letter provides constructive feedback on the proposed coastal hazard policies, especially in the context of their ultimate review by the Coastal Commission for Coastal Act consistency, and we look forward to continuing to work with you and your staff on modifications designed to best achieve Coastal Act and LCP goals. To be sure, these are incredibly important planning and public policy decisions

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that will affect the County's shoreline for many years to come, especially as that shoreline changes as sea levels rise, and they demand thoughtful consideration. It is also critical that these decisions are based on an honest explanation and understanding regarding the various trade-offs that are in play with respect to armoring and the way such armoring affects the beach and shoreline. We believe it does a great public disservice when these trade-offs are not acknowledged and are not clearly identified, perhaps most importantly the fact that armoring by definition leads to a loss of sandy beach in most all cases, and other impacts to public coastal resources, and that private armoring to protect private homes has clear private benefits for that private landowner, but the corresponding costs to the commons and the public's beaches are borne by the public. And these costs are borne by *all* of the public, including inland County residents but also visitors to the area. The beaches belong to all of us and not just those fortunate enough to live right on top of them, and the policies should to be rooted in this reality as well.

Please do not hesitate to contact me if you have any questions or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin Kahn". The signature is fluid and cursive, with the first name "Kevin" and last name "Kahn" clearly distinguishable.

Kevin Kahn  
Central Coast District Supervisor  
California Coastal Commission

Enclosure: Coastal Commission Staff Draft Suggested LUP Chapter 6.4 Policies

cc: Kathy Molloy, Santa Cruz County Planning Director  
Jeff Gaffney, Santa Cruz County Parks Director  
David Carlson, Santa Cruz County Resource Planner

### **Policy 6.4 Overall Coastal Hazards Objective**

Protect and enhance bluff, shoreline, offshore, and sandy beach recreational areas for public use and enjoyment while ensuring all development (including private structures and public infrastructure) are safe from coastal hazards as much as possible both now and in the future. Ensure that otherwise allowable development is sited, designed, and conditioned to minimize risks to life and property, to avoid being subject to coastal hazards to the maximum degree possible, and where development cannot entirely avoid coastal hazards, to appropriately mitigate for all adverse impacts to coastal resources, including to bluff, shoreline, offshore, and sandy beach recreational areas.

#### **Policy 6.4.1 Definitions**

While other LCP definitions are also applicable in this Chapter, the following definitions take precedence to the extent there is any internal inconsistency or ambiguity with other LCP definitions as they may relate to the policies of this Chapter:

**Coastal Hazards.** Coastal hazards include, but are not limited to, episodic and long-term shoreline retreat and coastal erosion, high seas, ocean waves, storms, tsunamis, coastal flooding, landslides, bluff and geologic instability, and the interaction of same, and all as impacted by sea level rise.

**Existing Structure.** A structure in existence prior to the effectiveness of the Coastal Act (i.e., development legally authorized and built prior to January 1, 1977) and that has not been redeveloped since.

**Development.** As used in these policies, “development” and “new development” are synonymous, and defined per Coastal Act Section 30106. In addition, as used in these policies, development shall include construction of entirely new structures (whereby these policies apply to the entire new structure), additions to existing structures which do not amount to redevelopment, as defined below (whereby these policies apply to the addition itself and anything altered to accommodate same on the existing structure), and redevelopment (whereby the entire structure shall be considered new development subject to all applicable policies).

**Redevelopment.** A structure shall be considered redeveloped, whereby the structure is no longer considered an existing structure and instead the entire structure and all development on the site must be made to conform with all applicable LCP policies, when such development consists of: (1) alteration (including interior and/or exterior remodeling and renovations, demolition or partial demolition, etc.) of 50% or more of the major structural components (including exterior walls, floor and roof structures, and foundations) of such development; (2) additions and alterations to such development that lead to more than a 50% increase in floor area for the development; or (3) additions and alterations to such development that costs 50% or more of the market value of the existing structure before construction. Changes to floor area and individual major structural components and the costs of such changes are measured cumulatively over time from January 1, 1977.

**Recurring Damage Property.** A property shall be considered a recurring damage property if any portion of the development’s major structural components (including exterior walls, floor and roof structures, and foundation) are subject to coastal hazards in a frequency and/or magnitude at which such major structural components must be significantly altered (including renovation and/or replacement) to abate those coastal hazards. For purposes of this definition, “exterior wall major structural components” shall include exterior cladding and/or framing, beams, sheer walls, and studs; “floor and roof structure major structural components” shall include trusses, joists, and rafters; and “foundation major structural components” shall include any portion of the mat foundation, retaining walls, columns, and grade beams.

**Shoreline Armoring Exception Area.** As shown on LUP Figure xxx, and comprised of ocean-

fronting properties between Soquel Point to the City of Capitola border.

**Shoreline Protective Devices.** Shoreline protective devices are synonymous with “armoring” and “shoreline armoring” and “coastal armoring”, and include structures along the ocean-land interface that are used to protect development against coastal hazards, including but not limited to seawalls, riprap/rock revetments, gunite/shotcrete, sheet piles, breakwaters, groins, bluff retention devices, retaining walls, pier/caisson foundation (or other form of atypical deep foundation) and/or wall systems.

#### **Policy 6.4.2 Coastal Hazards Analysis**

Development in areas potentially subject to coastal hazard risks shall include a coastal hazards analysis that shall be based upon current best professional practices and best available science, including reasonably foreseeable projections of sea level rise (such as those identified and recommended for use by state agencies including the California Coastal Commission and the Ocean Protection Council). Such analysis shall demonstrate that the development will be consistent with all applicable coastal hazards policies.

Unless otherwise specified, the time horizon to use in the required coastal hazards analysis for residential and commercial development is at least 75 years, and for critical public infrastructure (e.g., significant public roads, public utility infrastructure, etc.) at least 100 years. The time horizon used in the analysis shall only be used for coastal hazards evaluation purposes, with the actual life of the development to be as established through the CDP and/or as dictated by actual physical conditions (e.g., the actual life of the development has been reached if it is destroyed/deemed unsafe for occupancy due to coastal hazards).

#### **Policy 6.4.3 Blufftop Development Standards**

Development on blufftops, including within 150 feet of the blufftop edge, shall be subject to all of the following:

- 1. Minimum Required Setback.** All development shall be set back a sufficient distance from the blufftop edge to avoid coastal hazard risks to the maximum degree possible while ensuring stability and structural integrity in light of potential erosion and other coastal hazards. Such minimum required setback shall be the distance necessary for all development (including any decks, fences, and other ancillary development) to stay inland of a line that identifies the future predicted location of the blufftop edge accounting for both expected erosion and a bluff stability factor of safety (i.e., a minimum factor of safety against sliding of 1.5 (static) and 1.2 (pseudostatic,  $k = 0.15$ )) over the required time horizon. This setback line shall factor in both historical erosion as well as the potential for accelerated erosion due to sea level rise and other climate change impacts, and shall not factor in the effect of any existing or proposed shoreline protective devices. In addition to the minimum required setback, the setback shall be increased as necessary in order to otherwise protect life and public safety and/or to better address potential coastal resource concerns (e.g., protection of public shoreline, offshore, and sandy beach recreational access areas, natural landforms, public views, etc.). In no event shall the minimum required setback be less than 25 feet from the blufftop edge.
- 2. Setback Exceptions.** Exceptions to the Minimum Required Setback shall be limited to the following cases:
  - a. Public Improvement Exception.** Development related to public recreational access (e.g., stairways, paths, overlooks, ramps, etc.) and critical public infrastructure improvements (e.g., improvements to significant public roads, public utility infrastructure, etc.) may be allowed in the bluff setback area if no possible alternative means of providing such improvements exist, and they are sited and designed to protect and enhance coastal resources, avoid the need for shoreline



armoring to the maximum degree possible, and minimize bluff erosion to the maximum degree possible.

- b. Limited Development Space Exception.** If there is insufficient space to accommodate both reasonable development (for residential purposes, meaning at least a 1,000 square-foot house) and the Minimum Required Setback, then a reduced setback may be allowed provided the development: 1) shall not place life or property in danger or imminent threat; 2) shall be no closer to the blufftop edge than adjacent legal development on up- and downcoast properties; 3) shall be no closer than 15 feet from the blufftop edge; 4) shall not be protected by shoreline protective devices; 5) shall not adversely impact coastal resources; and 5) shall be consistent otherwise with all other applicable LCP policies.
- 3. Existing Shoreline Protective Devices.** Blufftop development proposed on sites protected by an existing shoreline protective device shall be prohibited unless the device is removed and the area associated with it is restored to natural conditions as part of the project. Such immediate removal and restoration shall not be required where removal would endanger public improvements or existing principal structures on adjacent sites to the degree that these improvements/structures would qualify for armoring under this LCP. In such cases, blufftop development shall only be approved subject to requirements that: 1) the existing shoreline protective device shall be removed and the affected area restored as soon as such removal and restoration can be accomplished without endangering public improvements and/or existing principal structures on adjacent sites (e.g., as adjacent sites redevelop, as adjacent sites are conditioned for future removal, etc.); 2) the existing shoreline protective device shall be modified to reduce its coastal resource impacts (e.g., restacking/removing riprap/rock revetments so as to open up additional beach space, contouring seawalls to improve public views, paying commensurate mitigation fees, etc.) without extending its useful life; and 3) and subject to bonding sufficient to cover such removal and restoration in the future.

#### **Policy 6.4.4 Bluff Face Development Standards**

Development on coastal bluff faces (i.e., the bluff area between the blufftop edge and the base of the bluff) shall be prohibited, except for: native bluff landscaping; public recreational access improvements (e.g., stairways, paths, overlooks, ramps, etc.) and critical public infrastructure (e.g., significant public roads, public utility infrastructure, etc.) where no possible alternative means of providing such improvements exist; and shoreline protective devices appropriately authorized by the LCP and/or the Coastal Act. All such allowable bluff face development shall be sited and designed to protect and enhance coastal resources, avoid the need for shoreline armoring, and minimize bluff face erosion to the maximum degree possible. If such bluff face development is protected by armoring, then such development shall only be approved if the armoring is modified to reduce its coastal resource impacts (e.g., restacking/removing riprap/rock revetments so as to open up additional beach space, contouring seawalls to improve public views, etc.).

#### **Policy 6.4.5 Shoreline Development Standards**

Development on shoreline areas (i.e., development that is seaward of the base of coastal bluffs and/or at or near the shoreline sandy beach/ocean elevation (i.e., “shoreline development”) shall be subject to all of the following:

- 1. Minimum Required Setback.** All development shall be set back a sufficient distance from the ocean to avoid coastal hazard risks to the maximum degree possible while ensuring stability and structural integrity in light of potential erosion and other coastal hazards. Such minimum required setback shall be the distance necessary for all development (including any decks, fences, and other ancillary development) to stay inland of a line that identifies the future predicted location of the shoreline accounting for wave uprush from a 75 or 100-year storm (as applicable depending on the

proposed use) plus sea level rise and other climate change impacts. This setback line shall factor in both historical erosion as well as the potential for accelerated erosion due to sea level rise and other climate change impacts, and shall not factor in the effect of any existing or proposed shoreline protective devices. The setback shall be increased as necessary in order to otherwise protect life and public safety and/or to better address potential coastal resource concerns (e.g., protection of public shoreline, offshore, and sandy beach recreational access areas, natural landforms, public views, etc.).

2. **Setback Exceptions.** Exceptions to the Minimum Required Setback shall be limited to the following cases:
  - a. **Public Improvement Exception.** Development related to public recreational access (e.g., stairways, paths, overlooks, ramps, etc.) and critical public infrastructure improvements (e.g., improvements to significant public roads, public utility infrastructure, etc.) may be allowed in the shoreline setback area if no possible alternative means of providing such improvements exist, and they are sited and designed to protect and enhance coastal resources, avoid the need for shoreline armoring as much as possible, and minimize beach encroachment as much as possible.
  - b. **Limited Development Space Exception.** If there is insufficient space to accommodate both reasonable development (for residential purposes, meaning at least a 1,000 square-foot house) and the Minimum Required Setback, then a reduced setback may be allowed provided the development: 1) shall not place life or property in danger or imminent threat; 2) shall be located as far inland as possible; 3) shall be no closer to the ocean than adjacent legal development on up- and downcoast properties; 4) shall not encroach on any additional sandy beach area; 4) shall not be protected by shoreline protective devices (including piers/caissons and elevation); 5) shall not adversely impact coastal resources; and 5) shall be consistent otherwise with all other applicable LCP policies.
  - c. **Takings Exception.** If there is no space available to accommodate any development even with a reduced setback, a reasonable development (for residential purposes, meaning at least a 1,000 square-foot house) may nevertheless be allowed to avoid a potential taking of private property provided the development: 1) shall meet all of the requirements for a limited development space reduced setback except that it is allowed protection via piers/caissons and elevation (but not allowed protection by other shoreline protective devices); 2) shall be elevated the minimum amount necessary to provide elevated living space for the next 20 years; 3) shall use the minimum number and size/depth of piers/caissons possible; 4) shall leave the area below the lowest horizontal portion of the elevated living space unenclosed and unused for any development needs, with the exception of appropriately designed unenclosed parking and/or outdoor storage (e.g., boat storage) if consistent with the shoreline protective device requirements of subsection 3 below; 5) shall be no higher than the maximum allowable height standard or 15 feet above the lowest horizontal portion of the elevated living space, whichever is lower; 6) shall verify that it can be served by adequate public infrastructure and utility services for at least 20 years; and 7) has not already been so elevated pursuant to these requirements (i.e., the shoreline development 'takings exception' provisions pursuant to this subsection can only be applied one time per site).
3. **Existing Shoreline Protective Devices.** Shoreline development proposed on sites protected by an existing shoreline protective device shall be prohibited unless the device is removed and the area associated with it is restored to natural conditions as part of the project. Such immediate removal and restoration shall not be required where removal would endanger public improvements or existing principal structures on adjacent sites to the degree that these principal structures would qualify for armoring under this LCP. In such cases, shoreline development shall only be approved subject to requirements that: 1) the existing shoreline protective device shall be removed and the affected area

restored as soon as such removal and restoration can be accomplished without endangering public improvements and/or existing principal structures on adjacent sites (e.g., as adjacent sites redevelop, as adjacent sites are conditioned for future removal, etc.); 2) the existing shoreline protective device shall be modified to reduce its coastal resource impacts (e.g., restacking/removing riprap/rock revetments so as to open up additional beach space, contouring seawalls to improve public views, paying commensurate mitigation fees, etc.) without extending its useful life; and 3) and subject to bonding sufficient to cover such removal and restoration in the future. In addition to these requirements, takings exception cases shall also ensure that all armoring (other than the pier/caisson elevation structure itself) at and fronting the site shall be removed and reconstructed/relocated as far inland as possible, including under the elevated structure, so as to provide adequate protection for the next twenty years for roads and infrastructure serving the project.

#### **Policy 6.4.6 Shoreline Armoring Standards**

Shoreline protective devices shall only be allowed if they meet all of the criteria below:

- 1. Allowable Armoring.** The shoreline protective device is: (1) required to serve a coastal-dependent use; or (2) to protect a public beach or an existing principal structure that was present in roughly the same form as exists today on January 1, 1977 (and that has not been changed in a way that constitutes redevelopment) and that is in danger from erosion (i.e., would be unsafe to use or occupy within two storm seasons).
- 2. Least Damaging Alternative.** The shoreline protective device is the least environmentally damaging possible alternative that meets the tests for allowable armoring above. Hard armoring (such as seawalls, etc.) shall only be allowed if soft alternatives (such as beach nourishment, vegetative planting, and drainage control, etc.) cannot meet the above least environmentally damaging possible alternative criteria, and if limited as much as possible to avoid coastal resource impacts.
- 3. Design Standards.** All shoreline protective devices shall be sited and designed to avoid coastal resource impacts to the maximum possible extent, including by reducing the footprint of the structure as much as possible, and designing for sea level rise conditions expected over the life of the protected development. Riprap shall be prohibited (and shall be removed in all cases where armoring is allowed pursuant to this chapter and existing riprap is present) unless riprap is the least environmentally damaging possible alternative.

Bluff face and/or base of bluff armoring devices shall be vertical or semi-vertical seawall-type devices that have been designed to appear as and emulate natural bluff landforms in the vicinity in terms of integral mottled color, texture, and undulation to the maximum degree possible. Protruding elements (e.g., corners, edges etc.) shall be contoured in a non-linear manner designed to evoke natural bluff undulations. Drainage and related elements, including expected drainage staining over time, shall be camouflaged (e.g., randomly spaced, hidden with overhanging or otherwise protruding sculpted concrete, etc.) so as to be hidden or inconspicuous as seen from the top of the bluffs and the beach and shoreline area. All camouflaging elements (including the color, texture, and undulations) shall be maintained throughout the life of the armoring device.

Unless required to be removed per applicable blufftop and shoreline development policies, all allowable armoring shall include public recreational access trails and related access features built into the project. At a minimum, a public access promenade that is at least 5 to 10-feet wide that is appropriate for the shoreline context shall be incorporated at an appropriate elevation that will provide for maximum access utility unless equivalent promenade is provided and maintained on the blufftop above, and informal trails shall be incorporated at lower elevations as needed to facilitate shoreline level lateral and other public access (e.g., to allow lateral shoreline navigation at higher

tides). Other access features (e.g., benches, picnic tables, bicycle parking areas, interpretive and directional signs, trash/recycling facilities, doggie mitt stations, etc.) shall be provided at a level commensurate with expected use. ADA connections to all such promenades and ADA-compatible siting and design of all such related access features shall be required. Such promenades shall include vertical connections from inland accessways and roads to it at appropriate junctures. Permittees shall be responsible for ongoing repair and maintenance of such elements in their approved and/or required states.

4. **Mitigation.** All shoreline protective devices shall be accompanied by proportional mitigation for all unavoidable coastal resource impacts, including with respect to impacts on shoreline sand supply, sandy beaches, public recreational access, public views, natural landforms, and water quality. At a minimum, the effects of the device with respect to retention of shoreline sand generating materials, the loss of beach/shoreline area due to its footprint, and passive erosion shall be evaluated and appropriately mitigated. Proportional in-lieu fees may be used as a tool for impact mitigation if in-kind options (such as developing new public access facilities commensurate to offset the access impacts identified) are not possible, and if such in-lieu fees are deposited in an interest bearing account managed by the County and used only for public recreational shoreline area access improvements within the same general vicinity as the impacted area for which mitigation is being required. All evaluation methodologies, including related to potential in-lieu fees and offsetting improvements, shall be in a form and content approved by the California Coastal Commission or its Executive Director. Impact mitigation shall be evaluated and required in 20-year increments, and CDP permittees shall be required to apply for CDP amendments prior to expiration of each 20-year mitigation period for the County to evaluate what impacts shoreline protection is continuing to have on coastal resources beyond those already accounted and mitigated for during the prior 20-year mitigation period. Based on this evaluation, the CDP amendment shall include mitigation for coastal resource impacts associated with retention of the shoreline protective device beyond the preceding 20-year mitigation period. The application shall also include consideration of alternative possible mitigation measures in which the permittee can modify the shoreline protective device to lessen its impacts on coastal resources going forward.
5. **Monitoring.** The shoreline protective device shall be regularly monitored by a civil engineer and/or engineering geologist familiar and experienced with coastal armoring structures and processes. Monitoring reports shall be required to be provided to the County and the Coastal Commission's Executive Director by May 1st of every fifth year (to allow for monitoring of effects from the previous winter) for as long as the shoreline protective device remains authorized, and such reports shall at a minimum cover all aspects of the armoring reevaluation and repair and maintenance provisions specified below.
6. **Armoring Reevaluation.** For existing shoreline protective devices that are proposed to be reconstructed, expanded, and/or replaced (where, at a minimum, 50% or more replacement constitutes replacement of the entire structure), and in addition to the other requirements of this policy, the CDP application shall include a reassessment of the need for the device, the need for any repair or maintenance of the device, and the potential for removal based on changed conditions and circumstances, including whether such device meets the criteria of this policy. The CDP application shall at a minimum include an evaluation of: the age and condition of the existing principal structure being protected (or evaluation of the coastal-dependent use being served or public beach being protected, if applicable); changed geologic site conditions including but not limited to changes relative to erosion and sea level rise; and impacts to coastal resources.
7. **Armoring Duration.** The shoreline protective device shall only be authorized until the time when the existing principal structure that is protected by such a device: (1) is no longer present; (2) no

longer requires armoring; or (3) is redeveloped. Permittees shall be required to submit a CDP application to remove the authorized shoreline protective device within six months of a determination by the County or the Coastal Commission's Executive Director that the shoreline protective device is no longer authorized to protect the structure it was designed to protect because the structure is no longer present or no longer requires armoring. In the case of coastal redevelopment, removal of the authorized shoreline protective device and restoration of the affected area shall be required as part of construction of the redeveloped structure.

- 8. Repair and Maintenance.** The shoreline protective device shall be repaired and maintained as necessary to ensure that it continues to exist in its approved and/or required state (including CDP requirements pertaining thereto), particularly in relation to ensuring the continued utility and function of the design standard requirements above. Repair and maintenance of a shoreline protective device that is not protecting an existing structure (or any structure that is ineligible for armoring under this Chapter) shall: 1) be limited to the minimum amount of maintenance needed to maintain the functionality of the device, but in no case shall include its expansion or extend its useful life; and 2) be accompanied by a Removal and Restoration Plan pursuant to Policy 6.4.8 that documents how the structure and device will be removed and the affected area restored within 5 years of approval of the repair and maintenance.
- 9. Emergency Authorization.** In cases of emergency, an emergency shoreline protective device may be approved on a temporary basis, and only under the condition that the device is required to be removed unless a regular CDP is approved for retention of the structure. In such cases, a complete CDP application shall be required to be submitted within 60 days following construction of the temporary emergency shoreline protective device, unless an alternate deadline is authorized by the Planning Director for good cause, including continued good faith efforts toward submittal of such application. Any such temporary emergency shoreline protective device shall be sited and designed to be the minimum necessary to abate the identified emergency, and to be as consistent as possible with all LCP shoreline protective device standards, including in terms of avoiding coastal resource impacts to the maximum possible extent. Mitigation for impacts will be required through the regular CDP process, including mitigation commensurate with the duration of impacts caused by the emergency temporary device. The County shall notify the Executive Director upon receipt of a request for an emergency shoreline protective device within the County's CDP jurisdiction.

#### **Policy 6.4.7 Drainage and Landscaping**

All development in areas subject to coastal hazards risks shall require: the removal of nonnative and invasive plants and replacement with native bluff plants at least in the area located within 10 feet of the blufftop edge on blufftop development sites (and all non-coverage areas on development sites located seaward of the blufftop edge, where replanting shall not occur on sandy beach) including as the blufftop edge location changes over time; a drainage system that ensures that no drainage will flow over the coastal bluff and/or seaward of the blufftop edge (including water from landscaping and irrigation), that drainage is collected and either accommodated on site or otherwise directed inland to inland drainage systems, and that such drainage does not contribute to coastal bluff or other shoreline erosion and/or adverse coastal resource impacts; provisions for ongoing repair and maintenance of all drainage and landscaping in their approved and/or required states; and property owners to be responsible for the costs of repair and/or restoration associated with any off-site impacts caused by drainage and landscape development on the site.

#### **Policy 6.4.8 Removable/Relocatable Development Requirements**

All development in areas subject to coastal hazard risks shall be sited, sized, designed, constructed, and otherwise developed in a manner that allows for it to be easily removable/relocatable if threatened in

such a manner as to require extraordinary measures, including shoreline armoring, to respond to coastal hazards risks.

**Policy 6.4.9 Density and Use Intensity Calculations**

For blufftop development, all areas seaward of the blufftop edge (including but not limited to bluff faces, sandy beach areas, and areas subject to the public trust), shall not be used for determining net lot area for density/use intensity calculation purposes, including in terms of allowable numbers of units and mass/scale considerations (e.g., allowed floor area ratio, lot coverage, etc.). For shoreline development, net lot area shall be considered to be 2,000 square feet for these same purposes.

**Policy 6.4.10 Coastal Hazard Risk Disclosure**

All approvals for development that is subject to coastal hazard risks shall require the property owners of all affected properties to record deed restrictions against all such properties prior to issuance of coastal permits for the development wherein the property owners acknowledge and agree, on behalf of themselves and all successors and assigns, that:

1. **Coastal Hazards.** The site is subject to coastal hazards, including but not limited to episodic and long-term shoreline retreat and coastal erosion, high seas, ocean waves, storms, tsunamis, tidal scour, coastal flooding, landslides, bluff and geologic instability, and the interaction of same, and all as impacted by sea level rise.
2. **Risk Assumption.** The property owners assume and accept the risks to themselves and their properties of injury and damage from such coastal hazards in connection with the permitted development.
3. **Liability Waiver.** The property owners unconditionally waive any claim of damage or liability against the County and the California Coastal Commission, and the officers, agents, and employees of each, for injury and/or damage in connection with the permitted development.
4. **Indemnification.** The property owners indemnify and hold harmless the County and the California Coastal Commission, and the officers, agents, and employees of each, with respect to the County's and/or Coastal Commission's approval of the development against any and all liability, claims, demands, damages, costs, expenses, and amounts paid in settlement arising from any injury and/or damage in connection with the permitted development. In addition, the CDP permittee(s) shall be required to reimburse the County and/or the Coastal Commission in full (within 60 days of being informed by the County and/or the Commission of the amount) for all costs/fees that are incurred in connection with the defense of any action brought by a party other than the permittee(s) against the County/Coastal Commission, their officers, employees, agents, successors and/or assigns challenging the approval or issuance of the CDP, the interpretation and/or enforcement of CDP terms and conditions, or any other matter related to the CDP. The County and the Coastal Commission retain complete authority to conduct and direct the defense of any such action against the County/Coastal Commission, their officers, employees, agents, successors and/or assigns.
5. **Property Owner Responsibility.** That any adverse effects to property caused by the permitted development shall be fully the responsibility of the property owners, including any cost associated with abatement and/or future relocation/removal of structures due to coastal hazards.
6. **Hazard/Flood Insurance.** That the property owners may be subject to higher hazard/flood insurance rates due to coastal hazard risks and issues.
7. **GHADs/CSAs.** That a Geologic Hazard Abatement District (GHAD) and/or County Service Area (CSA) and/or similar entity may be formed in the future by the County (and/or another public agency and/or a private group) to address coastal hazards and coastal shoreline resource protection

along the shoreline and related area of which the properties are a part, and assessments may be proposed as part of such efforts for the abatement of coastal hazards and the protection of coastal shoreline resources, including most importantly public shoreline, offshore, and sandy beach recreational access areas.

- 8. Future Adaptation.** That development on the affected properties, including shoreline protective devices on- or off-site protecting such properties, may be required to be modified in the future to address coastal hazards up to and including removal or relocation (in whole or in part) consistent with future LCP Shoreline Management Plan(s) applicable to the particular location.
- 9. Infrastructure Limitations.** That public funds may not be available in the future to repair, maintain, and/or continue to provide infrastructure and related services to the property (e.g., roads and utilities), and that the occupancy of structures may be prohibited if such services are no longer available to serve the development, including where sewage disposal and/or water systems are rendered inoperable.
- 10. Relocation/Removal Evaluation Triggers.** That the development shall be required to be relocated/removed and the site restored in response to certain defined triggers, including when deemed unsafe, when subject to public trust, when within 10 feet of the blufftop edge, when within 10 feet of the mean high-tide line, when no longer served by necessary utilities/infrastructure, when repeated damage would require significant alteration to major structural components, when coastal hazards would necessitate shoreline armoring, and/or as part of armoring repair/maintenance if not entitled to armoring.
- 11. Public Rights.** That approval of CDPs shall not constitute a waiver of any public rights that may exist on the affected properties. A CDP permittee shall not use any CDP approval as evidence of a waiver of any public rights that may exist on the affected properties now or in the future.
- 12. Armoring Waiver.** That shoreline armoring shall not be constructed to protect the development approved pursuant to the CDP, including in the event that the development is threatened with damage or destruction from coastal hazards in the future. The property owners hereby waive, on behalf of themselves and all successors and assigns, any rights to construct such armoring that may exist under applicable law. The only allowable shoreline armoring for the site is that that is allowed by, and subject to the terms and conditions of, the CDP.

**Policy 6.4.11 Relocation/Removal and Restoration Requirements**

Development that is subject to coastal hazard risks shall be removed (and/or relocated to a portion of the property that meets applicable coastal hazards avoidance criteria) and the affected area restored to a natural condition if: (1) a government agency with legal jurisdiction has issued a final order, not overturned through any appeal or writ proceedings, determining that the structure is currently and permanently unsafe for occupancy or use due to damage or destruction from waves, flooding, erosion, bluff retreat, landslides, or other hazards related to coastal processes, and that there are no feasible measures that could make the structures suitable for habitation or use without the use of shoreline protective devices; (2) the development encroaches onto public trust land (including as the public trust migrates), unless the Coastal Commission determines that the encroachment is legally permissible pursuant to the Coastal Act and authorizes it to remain, and including any applicable leasing approval from the State Lands Commission or other designated trustee agency; (3) the blufftop edge (for blufftop development) or the mean high-tide line (for shoreline development) has migrated to within 10 feet of the structure; (4) site ingress/egress, access and utilities are no longer available to serve the development due to coastal hazard risks; (5) the development constitutes a recurring damage property; (6) coastal hazards are affecting the structure in a frequency and/or magnitude at which the structure requires the protection afforded by shoreline armoring, but does not meet the criteria for such armoring; and/or (7) as

part of the 5-year repair and maintenance provisions applicable to a shoreline protective device that is protecting a structure not entitled to armoring under this Chapter (see also Policy 6.4.6). All development subject to coastal hazards, including development where armoring is not removed as part of the project, shall include these restrictions as conditions of CDP approval, including all blufftop, bluff face, and shoreline development, and shall require bonding sufficient to cover such relocation/removal and restoration.

If relocation/removal is required, a Relocation/Removal and Restoration Plan (RRR Plan) shall be submitted to the County for review and approval. No removal activities shall commence until the RRR Plan and all other required plans and permits, including any necessary CDPs, are approved. The Plan shall specify that in the event that any portion of the development falls onto the bluff face, beach, shoreline, or into the ocean before it is removed/relocated, the property owners responsible for the development will remove all recoverable debris associated with the development from these areas and lawfully dispose of the material at an approved disposal site. If it is determined that separate permits, including CDPs, are required in order to authorize such activities, the permit/CDP applications shall be submitted as soon as immediately possible, including all necessary supporting information to ensure such applications are complete.

The RRR Plan shall clearly describe the manner in which such development is to be removed and the affected area restored so as to best protect coastal resources, and shall be implemented immediately upon County approval of required and related permit applications, as may be required.

Such immediate removal and restoration as it relates to shoreline protective devices shall not be required where removal would endanger public improvements or existing principal structures on adjacent sites to the degree that these improvements and structures would qualify for armoring under this LCP. In such cases, the existing shoreline protective device shall be removed and the affected area restored as soon as such removal and restoration can be accomplished without endangering public improvements and/or existing principal structures on adjacent sites (e.g., as adjacent sites redevelop, as adjacent sites are conditioned for future removal, etc.); 2) the existing shoreline protective device shall be modified to reduce its coastal resource impacts (e.g., restacking/removing riprap/rock revetments so as to open up additional beach space, contouring seawalls to improve public views, paying commensurate mitigation fees, etc.) without extending its useful life; and 3) and subject to bonding sufficient to cover such removal and restoration in the future.

**Policy 6.4.12 Land Division in Areas Subject to Coastal Hazard Risks**

Land division (including but not limited to resubdivision, creation of new lots, lot consolidation, and lot line adjustments) shall only be allowed in areas subject to coastal hazard risks if the resultant lot configuration provides for stable and safe building sites capable of being served by stable, safe, and appropriate infrastructure and related services on each lot as measured over at least a 100-year timeframe without any reliance of shoreline armoring, or if the intent and outcome of such division is to ensure the entirety of the resultant lots are protected for open space, habitat protection, and/or public recreational access purposes.

**Policy 6.4.13 Highway 1**

The public access and recreation utility of Highway 1 in the north coast between the County/City of Santa Cruz border in the south and the County/San Mateo County border in the north shall be provided in a manner that best protects coastal resources. The County shall develop, in coordination with Caltrans, the Coastal Commission, north coast residents and businesses, and other interested stakeholders, a Shoreline Management Plan for this segment of coast in conformance with Policy 6.4.15 to identify long-term solutions and visions for this corridor. The plan shall identify ways to ensure the corridor is safe from coastal hazard impacts with the least amount of impact on agricultural land,



wetlands, and beaches, with all impacts on these and other coastal resources appropriately and proportionally mitigated.

**Policy 6.4.14 Potential Takings Analysis**

Where full adherence to all LCP provisions, including for setbacks and other coastal hazard avoidance measures, would preclude a reasonable economic use of property in such a way as to result in an unconstitutional taking of private property without just compensation, the County or Coastal Commission (if on appeal) may allow some form of development that provides for the minimum economic use necessary to avoid an unconstitutional taking of private property without just compensation. There is no taking that needs to be avoided if the proposed development constitutes, creates, or is expected to lead to a nuisance, or is otherwise prohibited pursuant to other background principles of property law (e.g., public nuisance, public trust doctrine, etc.). Continued use of an existing structure or other development, including with any permissible repair and maintenance, may provide a reasonable economic use. If development is allowed pursuant to this policy, it must be consistent with all LCP provisions to the maximum possible extent.

**Policy 6.4.15 Shoreline Armoring Exception Area Standards**

Blufftop development within the Shoreline Armoring Exception Area shall be consistent with all provisions specified above except that such development may rely on existing and/or proposed shoreline protective devices. Such development shall only be allowed if the proposed development, along with any required mitigations, enhances coastal resources and provides a coastal resource improvement over the existing baseline. Policy 6.4.15 shall expire on, and be of no further force and effect after, January 1, 2040, at which time all new blufftop development in this area shall either be reviewed against the policies of a Coastal Commission-certified LCP Shoreline Management Plan applicable to the area, or, if no such Shoreline Management Plan has been approved by the Coastal Commission, by all other Coastal Hazards policies of the LUP. Policy 6.4.15's effectiveness shall be stayed pending Coastal Commission action on such Shoreline Management Plan so long as the County has submitted a full LCP amendment application sufficient to allow it to be filed by Commission staff by January 1, 2039.

**Policy 6.4.16 Shoreline Management Plans**

The County shall develop comprehensive Shoreline Management Plans (SMPs) organized by appropriate geophysical conditions designed to protect and enhance public shoreline, offshore, and sandy beach recreational areas for public use and enjoyment while also recognizing that these same areas (and public infrastructure and private development within and adjacent to them) affect and are affected by coastal hazards.

Each SMP shall apply to a specific County shoreline area that shares common characteristics, including characteristics related to both the built and natural environments, where the intent is to provide a prescriptive blueprint and vision for each such area (and all County shoreline areas overall) that can appropriately respond to coastal hazards in a way that protects and enhances the County's shoreline for public use and enjoyment. As such, the SMPs shall be required to be certified as part of the LCP, and are intended to provide enforceable direction for new development as well as any development approved pursuant to this chapter that is conditioned to comply with the requirements of a future SMP.

The County shall work with all affected property owners, residents, visitors, the Coastal Commission, and other interested parties in developing the SMPs. Overall, each SMP shall identify the short, medium, and long-term goals for the specified area, both in terms of hazard reduction and maintenance and enhancement of public access and environmental resources as sea level rises, and shall include the management actions necessary to achieve these objectives. Each plan shall identify the priorities for shoreline management, including policy approaches, LCP overlay zoning districts, design requirements, specific projects to be implemented, and so on, along with the relevant timelines, phasing, and action

triggers necessary to adapt to changes in coastal hazards due to sea level rise. Management actions shall account for both existing and future development.

Each SMP shall include the following components and address the following topics:

- **Existing and Future Conditions.** Describe the relevant shoreline area in terms of its resources and constraints. Identify baseline conditions in terms of existing public and private development; shoreline, sandy beach, and offshore public access and recreational areas; and environmental resources. Include an assessment of beach widths throughout tidal and seasonal ranges. Additionally, analyze how conditions are expected to change as coastal hazards (including short and long-term erosion and flooding) are exacerbated by sea level rise. Describe how the presence or absence of development and shoreline armoring would impact conditions over the long-term, particularly how such development would or would not allow for natural migration of beaches over time and impact public use and availability of the shoreline. Identify areas where beaches would likely be able to persist if able to migrate as sea levels rise versus those areas where the geology is such that it is unlikely to allow for the continued presence of beaches.
- **Goals and Actions.** Describe the overall vision for the area over the short, medium, and long-term horizon. This vision shall relate to the opportunities and constraints identified above, and shall include specific goals and actions for protection of public access and coastal resources and minimization of coastal hazard risks. SMPs shall provide requirements for adapting existing and future development, including public and private structures, community infrastructure, coastal accessways, and other shoreline area development to meet specific goals in line with the overall vision of the SMP. Strategies shall include but are not limited to sediment management, beach nourishment, green infrastructure, shoreline armoring, elevation of development, structural modifications, and removal of development. Additionally, the SMP shall identify the timeline over which different options may be used, including how different strategies would be phased over time, and shall explicitly define triggers for when different adaptation options would need to be implemented. The SMPs shall also describe the policy options (land use and zoning requirements, development approval conditions, deed restrictions, design guidelines etc.), specific projects, and funding mechanisms necessary to ensure adaptation actions are carried out.
- **Sandy Beach Areas.** SMPs for areas where public beach access is likely to be limited and eventually lost due to the presence of development that prevents natural beach formation shall focus on strategies that will result in the removal of development to allow for natural beach migration processes. SMPs for these sandy beach areas shall include the following:
  - **Minimum Sandy Beach Widths.** An analysis of the minimum width of sandy beach necessary to maintain optimum public recreational access and habitat function. This analysis shall include considerations of daily tidal range, seasonal erosion, and short term, storm driven erosion when determining optimum beach widths. Additionally, the analysis shall assess the types of adaptation strategies, including but not limited to sediment management, beach nourishment, and removal of development, along with appropriate triggers for when different adaptation strategies should be implemented to ensure that minimum sandy beach widths are maintained over time as sea levels rise.
  - **Sandy Beach Monitoring.** The SMP shall establish a program to monitor the width of the beach as well as recreational access, sandy beach use, and habitat values throughout the year and over time. The monitoring program shall identify and track locations, times, and durations throughout the year when the sandy beach is too narrow to be adequate for public recreation and/or lateral access. Such monitoring will ensure that the minimum beach width established through the analysis above is adequate for maintaining public access and coastal resource values and will

provide the necessary information for when adaptation triggers are met, as described below.

- **Sandy Beach Adaptation.** Each SMP shall identify the suite of actions and programs that will be implemented over time to maintain sandy beach utility. The SMP shall also include explicit triggers for sediment management, beach nourishment, structure removal, and/or alternative strategies that are designed to ensure that the identified minimum sandy beach width is maintained. The SMP shall identify “maintenance” triggers for when beach nourishment or related strategies to protect sandy beach areas should occur as well as “adaptation” triggers for when new adaptation strategies will have to be implemented in order to preserve beach recreational access as sea levels rise and erosion worsens.
- **Alternative Access Areas.** SMPs for areas where geologic conditions will limit the ability of sandy beaches to persist (even without the presence of development and shoreline armoring) shall identify options to allow for alternative types of shoreline access. Such options may include, but are not limited to, vertical access to rocky shorelines or to the water, lateral access along bluffs or as part of shared vertical seawalls, viewing platforms, and parks. SMPs shall identify preferred locations for such features and tools for ensuring such features are constructed (e.g. conditions of development, design requirements for shoreline armoring, acquisition of easements or other areas, removal of structures). Additionally, SMPs shall identify and describe how such features should be adapted and modified over time as sea levels rise to ensure access is maintained over time.
- **Funding Opportunities.** Identification of potential funding opportunities to support short, medium, and long-term adaptation options. This shall include funding for implementation of specific adaptation projects (e.g. sediment management, beach nourishment, green infrastructure, habitat restoration), construction of public access features, the purchase of deed restrictions, easements, or similar interests, and structural buyouts and related opportunities for acquisition and removal of structures encroaching within the established sandy beach area. Potential funding opportunities may include in-lieu fees (including those generated from mitigation for shoreline armoring per Policy 6.4.6), grants, or other state or federal funds. Opportunities to integrate adaptation strategies with other planning processes (e.g. Local Hazard Mitigation Plans, Capital Improvement Plans, Climate Action Plans) in order to leverage such funding options shall also be explored.
- **GHADs/CSAs.** Identification of measures necessary to support creation of Geologic Hazard Abatement Districts, County Service Areas, or other similar entities involving one or more sections of the coastline, as a preferred mechanism for implementation of SMP requirements.

In addition, the County shall also develop an overall County SMP that addresses all of the same requirements of the individual SMPs, but that takes into account cumulative and overall consequences of potential actions taken, including so as to inform the individual SMPs and to identify potential regional minimum requirements and/or mitigation strategies.