Public Safety and Hazard Management General Plan / Local Coastal Plan (GP/LCP) and County Code Amendments

Planning Commission October 10, 2018

This project involves updating several parts of the General Plan and the County Code addressing safety and hazards, including the long term hazard of sea level rise.

Which also involves updates to the County's Local Coastal Plan because it's combined with the General Plan in one document.

Background

- 2011 California Department of Housing and Community Development (HCD) Community Development Block Grant (CDBG) Disaster Recovery Initiative (DRI)
- 2015 Planning Commission
- 2015/2016 Housing Element Update
- 2016 Local Hazard Mitigation Plan (LHMP) Update
- 2015/2018 Sea Level Rise Policy Guidance
- Caltrans Division of Aeronautics Airport Land Use Planning Handbook

After the wildfires in 2008 and 2009 the Planning Department received a DRI grant to update the Safety Element of the General Plan addressing flooding, coastal bluffs and beaches, erosion, and fire hazards.

That project was considered by the Planning Commission in 2015 but based on the feedback received and updates to State planning laws the Planning Department decided to do additional work to address airport land use compatibility, coastal bluffs and beaches and address other issues.

Also, during this time other thing occurred that trigger an update of the Safety Element.

Lastly, the County's airport land use compatibility policies and regulations are outdated and not consistent with the State Aeronautics Act.

Project Description

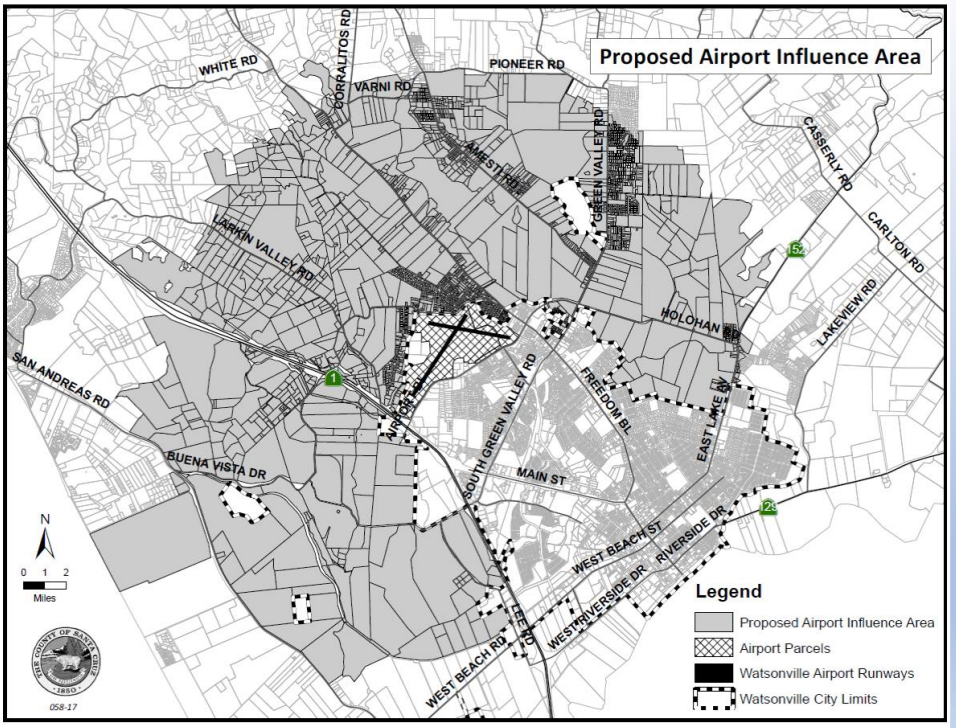
- Update of GP/LCP Public Safety Element and Implementing Santa Cruz County Code (SCCC) Regulations
- Update GP/LCP Noise Element and Implementing SCCC Regulations
- Update GP/LCP Land Use Element Airport Land Use Compatibility Policies Consistent with State Handbook and Implementing SCCC Regulations

The sections of the Public Safety Element and County Code that would be amended address seismic hazards, coastal bluffs and beaches, erosion, flood hazards, fire hazards.

The noise policies in the Safety Element would be moved to a stand-alone Noise Element. A new Santa Cruz County Code Chapter 13.15 Noise Planning would implement the policies of the Noise Element.

Policies addressing safety in the unincorporated area around the Watsonville Municipal Airport would be updated and consolidated in the Land Use Element to ensure consistency with the California Airport Land Use Planning Handbook. Santa Cruz County Code Chapter 13.12 would be amended to implement the policies and establish the Airport Combining Zone District as a new zoning overlay on properties near the Airport.

Airport Land Use Compatibility

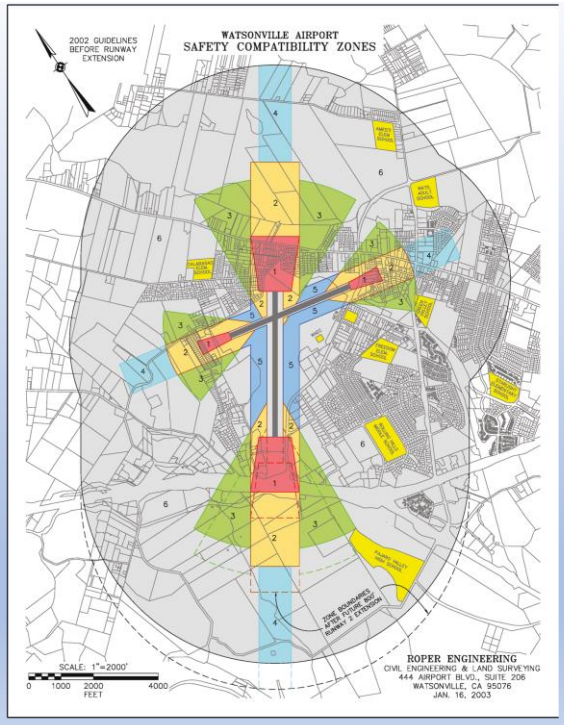


This slide shows the area around the Watsonville Municipal Airport which is owned by and located in the City of Watsonville. The city limits are indicated by the thick black and white dashed line.

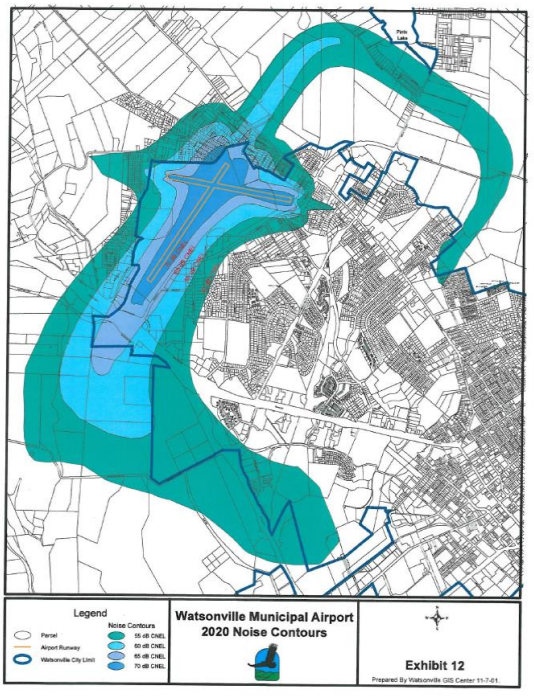
The shaded parcels outside the city limits in the unincorporated area of the County are all located within 2 miles of the boundaries of the airport defined as the Airport Influence Area.

These are the parcels that would be rezoned with a new overlay zone on top of the existing zoning that indicates the parcels are located in the Airport Influence Area.

This is one of several maps of the airport the County is required to adopt according to the State Aeronautics Act. We would use this map during the permit process to identify properties required to record an acknowledgement on the deed regarding the presence of aircraft approaching and taking off from the airport.



This is a map of the safety zones around the airport runways. The County Code would be amended to either allow or prohibit certain land uses in each of these zones based on the different levels of risk in each of the zones.



This is a map of noise levels around the airport runways and flight path showing relative noise levels along the typical take-off and landing loop. This map would be used during the permit process to require extra noise insulation on projects within all the blue shaded areas.

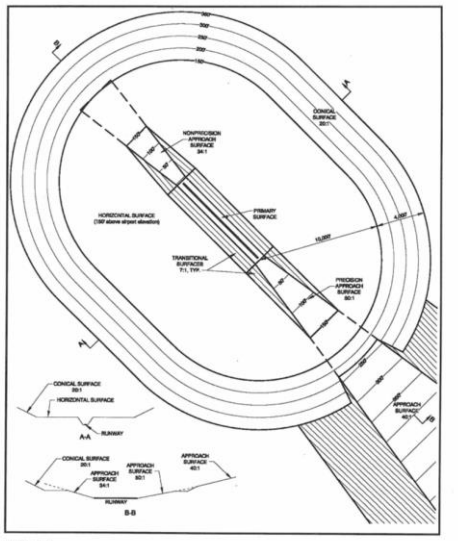


FIGURE 3C
Example of Civil Airport Airspace Protection Surfaces – FAR Part 77

This is a map depicting generic imaginary airspace surfaces.

This a two dimensional map so it is hard to see but the surfaces create a kind of bowl-shaped area of airspace around and above the runways that must be kept clear of any obstructions.

Buildings, towers, or trees are not allowed to penetrated any of the imaginary surfaces.

In general this does not present a problem for buildings that meet existing regular height limits in the code.

Airport Land Use Compatibility

- New Land Use Element Section 2.25 Airport Land Use Compatibility
- Relocate Sections 3.18 and 3.19 from Circulation Element
- Airport Influence Area
- Safety Zones
- Airspace obstructions
- Airport Combining Zone District

To summarize,

A new section would be added to the Land Use Element Section 2.25 Airport Land Use Compatibility.

Some existing policies would be updated and relocated from the Circulation Element to the Land Use Element.

The Airport Influence Area would be established within 2 miles of the boundaries of the Watsonville Municipal Airport.

The map of Safety Zones around the airport would be updated.

The map of imaginary surfaces would be updated addressing airspace obstructions.

County Code Chapter 13.12 would be updated and renamed Airport Combining Zone District to implement the policies.

It must be emphasized these are all existing requirements that already apply to properties within the Airport Influence Area pursuant to the State Aeronautics Act and the County is required to update the General Plan and County Code in

compliance with State law.

Noise Element

- Background information
- Noise standards unchanged
- New noise contour maps
- New Noise Planning Ordinance

A new Noise Element would be create by moving the noise policies out of the Safety Element.

It would include background information on noise and the County's approach to noise control.

The noise standards in the existing tables would not change.

State planning law requires the Noise Element to include noise contour maps of noise levels around highways and major streets.

The mapping information is a long range planning tool but also would be used in the permit process to identify proposed developments that may need extra sound insulation to meet building code requirements for interior noise levels.

There would be a new noise ordinance. The County has a noise ordinance in Chapter 8.3 of the County Code that addresses offensive noise and is used by the Sheriff's office to handle noise calls. This project would create a new Noise Planning ordinance address noise in the land use permitting process.

Noise Planning

- 13.15 Noise Planning
- Land use permit process
- Noise measurement
- Exemptions
- Mechanical units
- Project review
- Rail vibration

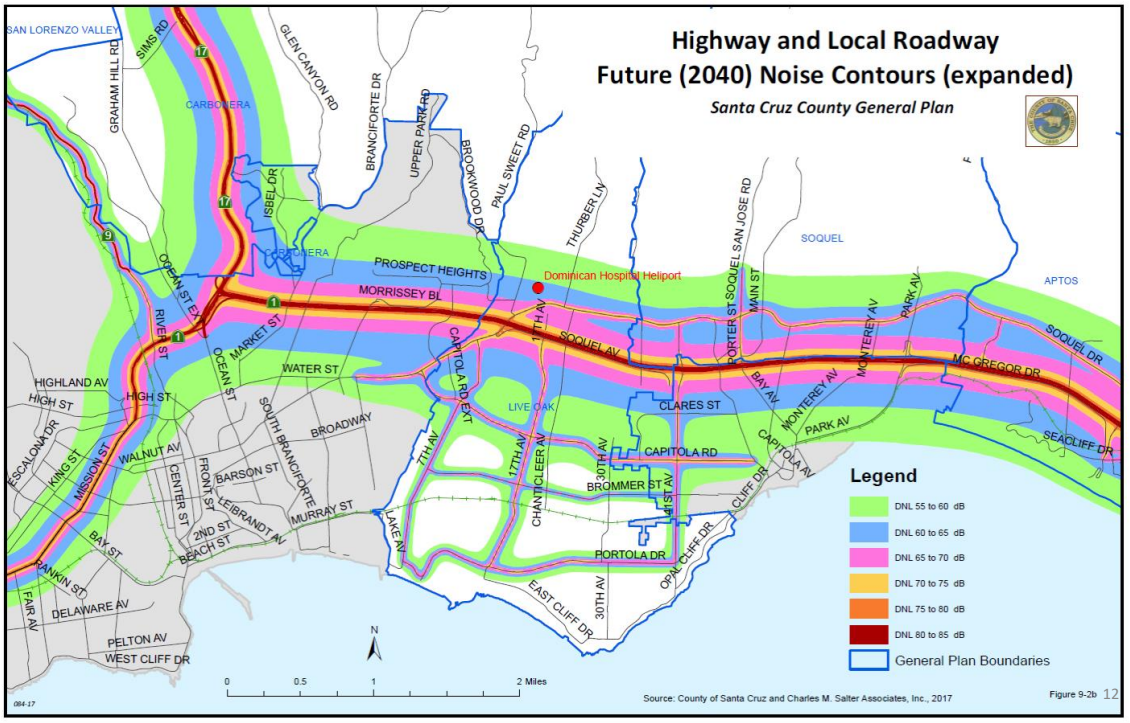
The new Santa Cruz County Code Chapter 13.15 Noise Planning establishes the locations where sound level measurement would be taken.

Lists exempt activities, including construction noise.

It establishes standards for emergency generators, air conditioners and other mechanical units.

It establishes standards and procedures for project review of noise generating land uses, and it addresses protection of new development from existing noise.

And it requires acknowledgement of potential impact from rail vibration.



Similar to the airport noise contours, this is the map of noise levels around the major highways and streets in the County.

A noise consultant to the County measured representative noise levels along these routes as a basis for constructing the contours on the overall map.

Again this map would be used during the permit process to require extra noise insulation on projects within all the shaded areas except the lime green shaded area.

Public Safety Element

- State Planning Law
- Climate Change
- LHMP and CAS
- Clarifying language and update Notice of Geologic Hazards (Geologic Hazards Ordinance)
- Update Coastal bluffs and beaches policies (Geologic Hazards Ordinance)
- Update erosion policies (Grading and Erosion Control Ordinances)
- Update flood hazard policies (Floodplain Regulations)
- Update fire hazard polices (County Fire Code)
- Relocate air quality policies
- Add environmental justice policies
- CEQA

I'm going to stay on this slide for a while to summarize all the updates to the Safety Element, then move on to more detailed information on the coastal bluffs and beaches policies.

The introduction to the updated Safety Element would add an explanation of requirements of state law and the triggers for when a Safety Element must be revised, which are the update of Housing Element and the update of the Local Hazard Mitigation Plan.

The goals of the Safety Element would be updated to address climate change.

The Local Hazard Mitigation Plan and the Climate Action Strategy would be incorporated by reference and key conclusions would be highlighted.

The update would add clarifying language regarding technical reviews that we do during the permit process. It would also update the Notice of Geologic Hazards that is recorded on property deeds to address acceptance of risk, liability release, and indemnification. These updates would also be reflected in an update of Chapter 16.10 of the County Code the Geologic Hazards Ordinance.

There would be significant revision to section on coastal bluffs and beaches

addressing sea level rise which will be discussed in more detail later in the presentation.

Updated erosion policies would lower the amount of land clearing allowed without a permit from 1 acre to ¼ acre and clarify the definition of certain types of grading activities as regular grading, agricultural grading, and specialized grading activities which includes cannabis activities. The policies would be reflected in updates of the Grading and Erosion Control Ordinances, Chapters 16.20 and 16.22, respectively.

The flood hazard policies would be updated to address climate change and sea level rise and the Floodplain Regulations in the County Code would be moved from the Geologic Hazards Ordinance to a new stand alone Ordinance, Chapter 16.13 based on the State Model Floodplain Management Ordinance.

Fire hazard polices would be updated to be consistent with existing State law. This includes removing a lot of detailed information from some of the policies because the same information is included in the County Fire Code which is update on a there year cycle. We don't need to make any changes to the Fire Code which will be updated next year.

The existing air quality policies would be moved from the Conservation and Open Space Element to the Public Safety Element.

State planning law also requires the Safety Element to include environmental justice policies and those would be added as a new section.

The last thing on the list is not really related to the Safety Element but it is part of Title 16 of the County Code. Chapter 16.01 would be updated to adopt the State CEQA Guidelines as amended from time to time which would automatically keep our local CEQA Guidelines up to date.

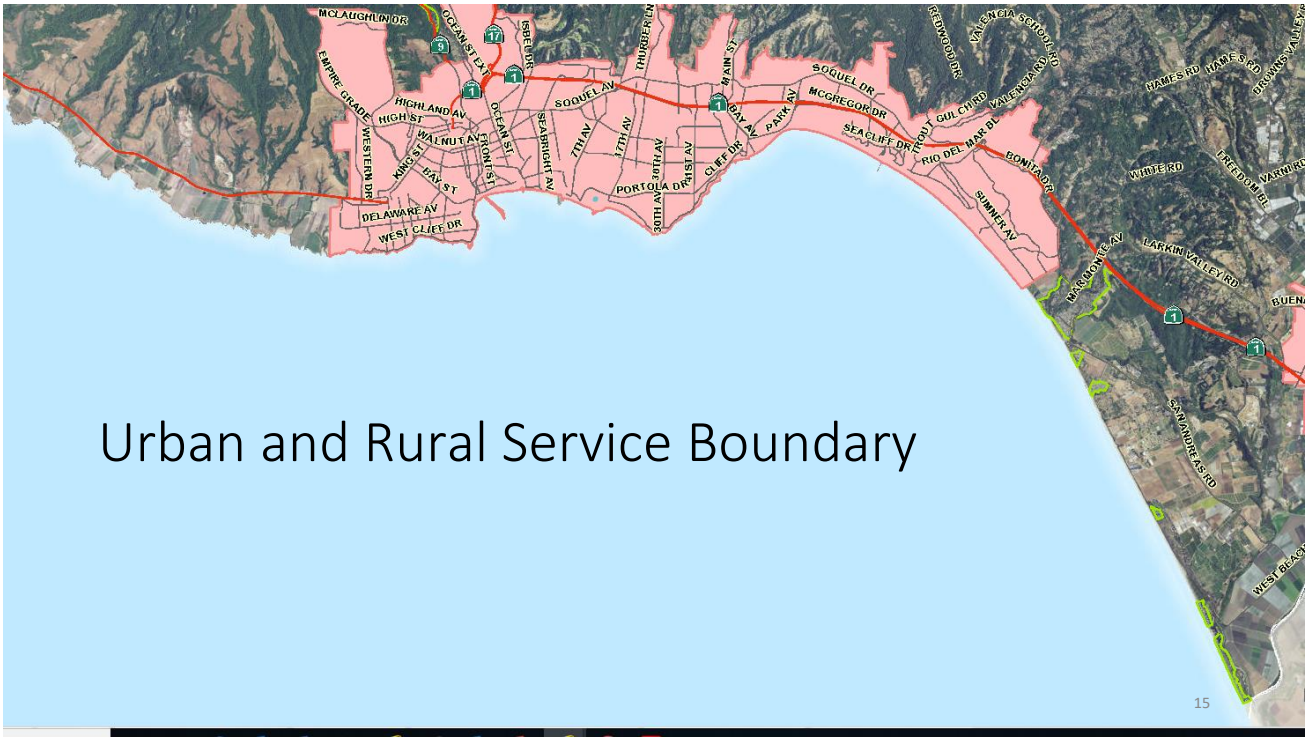
Public Safety Element
Coastal Bluffs and Beaches

- Comply with State planning law
- Start to plan for future sea level rise
- Sea Level Rise Policy Guidance

State planning law also requires the Safety Element to be updated to address climate change and resiliency which in our case includes, but is not limited to, the impact of sea level rise along the coast.

What we are sure to see in the future however is higher tides and inundation of coastal areas, more intense and more frequent wave impacts and storm surges, and accelerated erosion of coastal bluffs and beaches.

For this first update to address sea level rise we referenced the Coastal Commission's recently published Sea Level Rise Policy Guidance and separate Residential Adaptation Policy Guidance, and we have been working with staff in the local Coastal Commission office on the updates.

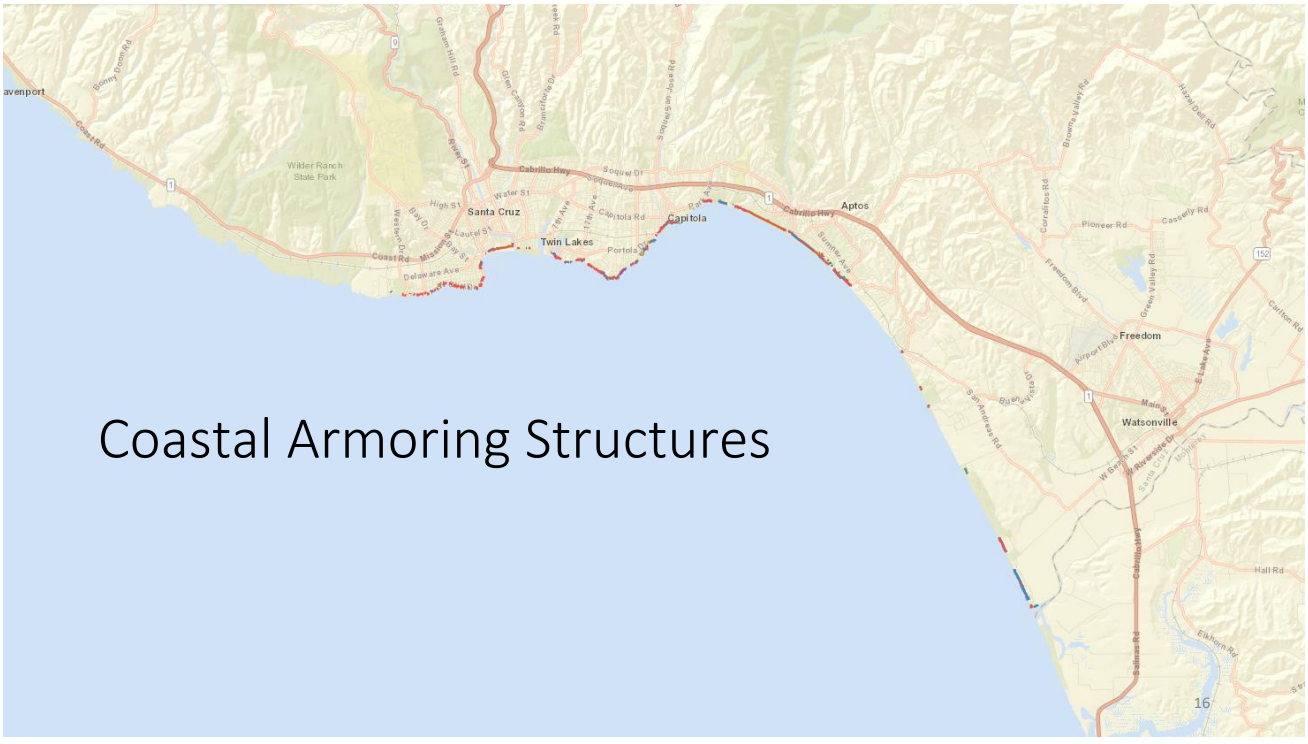


The overall approach we came up recognizes local circumstances that the County's coastline is divided into urbanized areas and rural areas as shown non this map. The urbanized areas are shaded. It also shows smaller, isolated areas outlined in light green along the south county coast that also have urban levels of development and services.

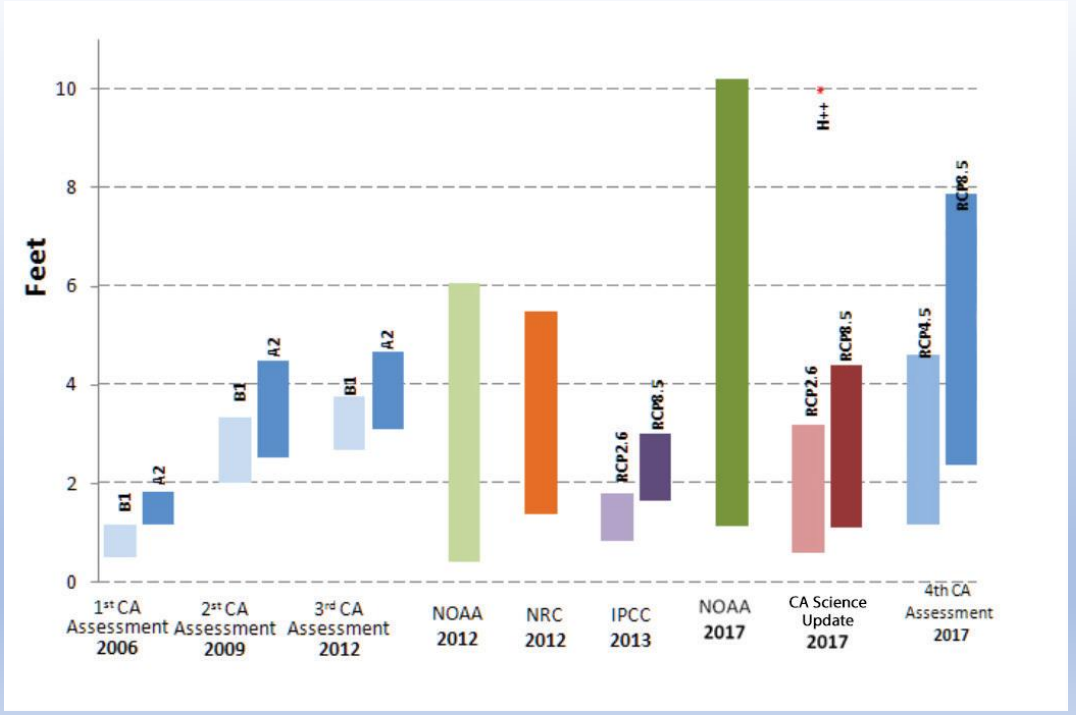
The urbanized areas are largely built out and contain a wide variety of existing conditions, making it very difficult to retreat in the face of sea level rise.

Rural areas are largely undeveloped with larger parcels which could accommodate a retreat policy more easily.

The policies that apply within the urban area have to be flexible enough to deal with the variety of situations we encounter in coastal permit applications and they have to acknowledge that existing development in the urbanized area will likely be around for a very long time as sea level rises.



On this map of the Coastal Commission's coastal armoring database for the County you can see that most of the urbanized areas of the county have some sort of coastal armoring shown shaded while the rural areas remain largely unarmored.



This is a summary of various studies attempting to project future sea levels. It shows the variability in the projections because of uncertainty about what will happen in the future.

For our local purposes we needed to select an amount of sea level rise to plan for in the design of projects.

We chose three feet as an appropriate amount because it falls with the range of most of the projections. This would be the amount that would be added to the base flood elevation requirement for houses on the beach. It would also be used to estimate an increased amount of future coastal bluff erosion.

The next few slides will show different areas of the coast and the variety of underlying geologic conditions that combine to create a wide variety of situations we see in coastal permit applications.

The more erosion resistant Santa Cruz Mudstone makes up the bluffs along the rural north coast.

The mudstone eventually transitions to the Purisima Formation which forms the bluffs through the City of Santa Cruz.

At the City/County boundary near the yacht harbor the Purisima Formation disappears beneath the sand.

To build the new coastal armoring structure at Twin Lakes Beach required digging down to embed the foundation in the Purisima Formation bedrock.

Near 14th Avenue and Sunny Cove the Purisima reappears and disappears again beneath the sand.

You also see a variety of armoring from concrete to rip rap to gabion baskets protecting the more erodible layer of Marine Terrace Deposits above the Purisima Formation.

At Moran Lake is an example of the extensive rip rap armoring along the coast.

And the recently constructed Pleasure Point seawall that protects East Cliff Drive with the same type of protection on some the adjacent private properties.

The relative tall Opal Cliffs consist of Purisima Formation at the bottom with a layer of Marine Terrace deposits at the top.

And again a variety of existing coastal protection including concrete, gunite, and rip rap in various states of repair.

The bluffs along Beach Drive also consist of Purisima Formation but its not as strong in this location and bluffs are inclined at lower angle.

This photo shows several of the so called bunker homes against the bluff at the end of Beach Drive.

Many bluff top homes in this area are protected by retaining walls holding up their back yards at the top of the bluff.

This photo shows good setbacks for structures at the Seascape Resort where the bluffs consist of old sand dunes of the Aromas Formation behind a wide sandy beach.

This photo shows a typical south county situation where you have ag fields combined with pockets of residential development and you can see a little bit of the rolling hills of the old sand dune deposits.

Finally we get to the younger sand dunes that the Pajaro Dunes development sits on.

You can see signs of the rip rap revetment buried beneath the sand along the front of all of these homes.

Proposed Amendments

- Redevelop Existing Structure
- Reconstruction of Damaged Structure
- New Armoring
- New Structure on Vacant Lot

To explain the proposed amendments involving coastal bluff and beaches policies I'll compare existing policy and the proposed amendments as they apply to the different types of coastal permit applications the Planning Department reviews in these locations.

Development Activities

Coastal Bluff

- Project involves 65% or more of major structural components within 5-year period
- Increase habitable space by 50% or 500 square feet, whichever is greater
- Any addition in seaward direction

Beach

- Cost of project is 50% or more of value of structure
- Any addition in seaward direction

The proposed policy and code amendments would apply to projects that exceed the threshold of development activities. These are existing thresholds and would not change as a result of these amendments.

There are different thresholds for structures on coastal bluffs and beaches. The reason for this is that beaches are also designated flood zones and we need to use FEMA standards in flood zones.

There is also a long list in the definition of development activities but these are the most relevant parts of the definition that apply to most projects.

For a structure on a coastal bluff the threshold is modification or reconstruction of 65 percent of the major structure components within any consecutive five year period.

The Planning Department uses an established methodology for making these determinations.

The threshold also includes an increase in habitable square footage of up to 50%, or any addition in a seaward direction.

On the beach the threshold is modification, reconstruction, or addition the cost

of which equals or exceeds 50 percent of the value of the structure before the start of construction or before damage to the structure occurs.

If a project meets or exceeds any of these thresholds it is subject to geologic review and meeting the requirement I will talk about next, if it does not meet the threshold generally it is not subject to geologic review.

Redevelop Existing Structure

Existing

- Setback 25 feet or 100 years
- Elevate
- Based on existing site conditions

Proposed

- Setback 25 feet or 75 years
- Elevate
- Expanded deed language
- Urban/Rural approach
- Include Sea Level Rise
- Exceptions/takings analysis
- Improve existing armoring
- Mitigation fees

Improvements to an existing structure is the most common type of coastal permit applications on coastal bluffs and beaches.

If a project on a coastal bluff exceeds the threshold the structure has to be setback at least the minimum distance if not more if feasible.

The calculation of the coastal bluff setback would be changed to 25 feet minimum or the amount necessary to ensure a stable building site for 75 years of projected coastal bluff erosion, instead of 100 years. The change to 75 years is an attempt to reduce the expectation the structure will remain safe from erosion. The expectation is that when the structure or the site becomes unsafe the structure is expected to be removed, replaced, or redeveloped.

If a project on the beach exceeds the threshold it has to be elevated the required amount based on FEMA mapping of flood levels and the extra amount required by the County.

The expanded deed language would reinforce this and puts property owners on notice of possible future actions the County could take should the structure become threatened by erosion. The deed language would also include an acceptance of risk, liability waiver, and indemnification of the county in case of legal action connected to issuing the permit.

In the urban area the setback would be calculated as it is currently done countywide, based on existing site conditions including consideration of the degree of protection provided by an existing armoring structure.

In the rural areas the effect of an existing armoring structure in reducing erosion would not be considered when projecting future erosion rates and calculating the required setback. This change would result in requirements for greater setbacks in rural areas compared to urban areas. Because the rural sections of the coast are largely unarmored the immediate effect of this change would be minimal but the long term effect will protect rural sections of the coast from development that is dependent on armoring structures.

There would be new requirements to consider future sea level rise when calculating coastal bluff erosion rates and when elevating structures on the beach. This means projects would have to be designed considering greater coastal bluff erosion rates and higher flood levels on the beach.

The proposed amendments would include a policy allowing exceptions. The policy describes conditions under which an exception to a standard such as the 75 year setback could be granted.

The proposed amendments would require reevaluation of existing armoring structures at the time a home is redeveloped. The goal is to achieve reasonable improvements of degraded armoring structures with basic maintenance and repair, and look for opportunities to make improvements that would increase coastal access or improve how the armoring looks, or remove armoring that is ineffective without expanding any existing armoring.

Lastly, The proposed amendments would create mitigation fees related to armoring structures that would be used by the Parks Department to maintain and improve coastal access in general.

Reconstruction of Damaged Structures

Existing

- >50% Damaged by coastal hazards
  - Meet applicable setbacks or
  - Provide 100-year protection
  - Elevate on the beach
- >50% Fire damage: Allow
- Abatement Process

Proposed

- >65% Damage by coastal hazards
  - Meet applicable setback
- >50% Damage on beach
  - Elevate
- >65% Fire damage: Allow
- Repetitive loss
- Abatement process
- Expanded deed language

For consistency, the proposed amendments would apply the same threshold to damaged structures as we apply to redevelopment of existing structures. The threshold would go from 50% to 65%.

In general, structures that sustain less than 65 percent damage could be reconstructed but we would still encourage those structures to relocate landward if feasible.

For houses that sustain >65% damage from coastal hazards, such as bluff erosion or wave impact, the option of providing 100-year protection in the form of armoring in order to rebuild would go away. If the structure cannot meet at least the minimum coastal bluff setback based on existing site conditions it could not be rebuilt. These are structures that are damaged because they are in the most vulnerable locations and this is a policy decision to not allow these structures to be rebuilt, unless they can meet the minimum setback.

Structures on the beach are treated different because there is no coastal bluff setback. In general, reconstructed structures on the beach would have to be elevated and the threshold for this requirement would remain at >50% damage, consistent with FEMA requirements.

Fire damaged structures that don't meet the required coastal bluff setback

could be rebuilt in kind but the proposed amendments would encourage relocation landward if feasible.

Under the proposed amendments a structure that sustained smaller amounts of damage repetitively over a certain period of time that added up to exceeding the threshold would become subject to the same requirements.

The abatement process would remain the same which allows the County to take legal action in situations where the structure needs to be repaired or removed and the owner doesn't do it on their own.

And in all cases there would be a requirement to record the expanded deed language.

New Armoring

Existing

- Existing Structures Threatened by Erosion
- Unprotected Vacant Lots that threaten adjacent development
- Consider Feasible Alternatives
- Consider Public Access, Sand Supply, Erosion, Aesthetics
- Mitigate impacts
- Monitoring and Maintenance

Proposed

- Include sea level rise
- Mitigation fees
- Expanded deed language
- Future Shoreline Management Plan

Current policy on analysis of new coastal armoring structures would not change except future sea level rise would be considered in the design.

Coastal armoring is allowed where necessary to protect existing structures threatened by erosion, or to protect vacant lots where adjacent development is threatened.

The proposed policy amendments would add the mitigation fees that would go to the Parks Department.

The expanded deed language would be required.

And the proposed policy amendments would introduce the idea of future shoreline management plans in the urban area or sub areas the would outline a more comprehensive and integrated approach to coastal armoring and potentially achieve multiple benefits such improving coastal access, improving visual quality, and protecting both private property and public infrastructure.

New Structure on Vacant Lot

Existing

- Setback 25 feet or 100 years, whichever is greater
- Elevate on beach
- Based on existing site conditions
- No armoring

Proposed

- Setback 25 feet or 75 years whichever is greater
- Elevate on beach
- Based on existing site conditions
- No armoring
- Include Sea Level Rise
- Exceptions/takings analysis
- Expanded deed language

For a new structure on a vacant lot the expected design life, or the period during which the building site is expected to be safe from coastal bluff erosion would be reduced from 100 years to 75 years.

New structures on the beach would be required to be elevated per FEMA and County requirements.

New armoring structures are not allowed in conjunction with a new house on a vacant lot except where both adjacent lots are already protected.

The proposed amendments would require the calculation of the setback to include future sea level rise.

There would be the possibility of an exception to the setback if necessary but in no case would the minimum 25 foot setback requirement be reduced.

And these projects would include the expanded deed language.

Recommendation

Recommendation

- Conduct a public hearing on the proposed amendments to the General Plan / Local Coastal Program and Santa Cruz County Code; and
- Adopt the attached resolution (Exhibit A) recommending that the Board of Supervisors approve the CEQA Negative Declaration (Exhibit B) and adopt the proposed General Plan / Local Coastal Program Amendments (Exhibits C through G) and adopt the proposed amendments to the Santa Cruz County Code (Exhibits H through N).