



Sea Level Rise Workshop Series

Venice Local Coastal Program

PUBLIC WORKSHOP #3

Sea Level Rise Workshop #3 | March 14, 2018

Venice Local Coastal Program

WORKSHOP SUMMARY

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WORKSHOP OVERVIEW

The City of Los Angeles Department of City Planning has initiated preparation of the coastal hazard component of the Local Coastal Program (LCP) for Venice, focusing on hazard adaptation planning for sea level rise. Sharing critical information with the community and soliciting input are part of the planning process.

In March 2018, the City conducted the third of four planned community workshops. This summary documents the workshop’s objectives, format, activities, and major themes from collected community input. Input received during the workshop is documented in the appendices.

The workshop was staffed by the City team for Venice and the consultant team supporting sea level rise planning for Venice including the following: Dudek, Moffat & Nichol, and Kearns & West.

WORKSHOP OBJECTIVES

The workshop focused on three objectives:

- Share conclusions of the vulnerability assessment and initial adaptation strategies.
- Provide opportunities for people to ask questions and get answers.
- Collect input and feedback.



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WHERE AND WHEN

Wednesday, March 14, 2018, 7:00-9:00 pm
 Westminster Avenue Elementary School
 1010 Abbot Kinney Boulevard, Venice 90291

OUTREACH AND ATTENDANCE

The City used multiple methods to inform community members about the workshop and encourage participation, as shown in the table below. Approximately 65 people attended.

Notification Methods
E-mail announcement in Spanish and English using Venice Local Coastal Planning Unit’s contact database
Announcement on Local Coastal Program Website (www.VeniceLCP.org)
Briefings with canal-area organizations
Customized email invitations to organizations with request to forward invitation to members and constituents
Outreach via City’s Public Affairs Office to local groups who have a presence on social media via the Planning Departments platforms (Planning4LA)
E-mail postings in Spanish and English on Nextdoor platform targeting 10 Venice LCP subareas
Distribution of flyers in Venice Canals zone to target sea level rise awareness
Coordination with Geography and Urban Studies faculty at Santa Monica City College for student involvement

FORMAT AND ACTIVITIES

There were several different activities at the workshop so that people would have the opportunity to obtain information, ask questions, and share feedback in a way that was comfortable for them. The workshop consisted of three components:

- Registration and Orientation



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- Presentation
- Round Robin Discussion Groups

A Spanish translator was present, offering translation through a headset and transmitter system. No attendees at this workshop required the use of the Spanish translation services.

Descriptions of the workshop components follow below.

Registration and Orientation

Participants were welcomed at the registration table and provided information about the workshop format. Project team members staffed the orientation tables and provided the following background information:

- Orientation Table #1: Local Coastal Program Update
- Orientation Table #2: Recap of November 2016 Sea Level Rise Workshop

Presentation

All participants convened for a presentation focused on the results of the vulnerability assessment, which was delivered by the project team. It started with a brief explanation of sea level rise projections and the sources of projected flooding in Venice. Vulnerability assessment conclusions were presented in the following six categories of community assets: infrastructure, property, cultural, civic, coastal amenities, and ecological. Potential adaptation planning concepts were also presented for each category. The presentation also introduced potential social vulnerability issues related to projected sea level rise hazards. Please refer to Appendix A for the presentation slides.

Round Robin Discussion Groups

Discussion groups provided a chance for community members to ask questions and obtain answers in a small group setting about the vulnerability assessment conclusions and sea level rise. It was also an opportunity for the project team to solicit input and feedback.

Each group participated in three 20-minute discussions facilitated by rotating pairs of project team members. The three rotations covered the following three categories of vulnerability assessment conclusions: 1) infrastructure and civic assets, 2) property assets, and 3) coastal amenities, cultural and ecological assets. All discussions groups engaged in conversation about all three categories.

The following questions guided the discussion groups in all rotations:

- What questions do you have about this topic? What do you want to know more about?
- Regarding this topic, what conclusions from the vulnerability assessment stand out for you and why?
- Do you have input for the team to consider as they develop specific adaptation measures for these assets between now and the next workshop?



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After completing the three rotations, the project team members asked the groups to discuss one final question:

- Of the social vulnerability issues related to sea level rise, what are you most concerned about?

Notes of the discussions were recorded on flip charts (see Appendix B).

Input Cards

All attendees received an input card on which to write comments (Appendix C). The input card included the same questions asked in the discussion groups. Participants could submit them at the workshop or mail them in later.

INPUT THEMES

The themes below represent topics frequently raised during the round robin discussion groups and on input cards. Understanding the breadth and depth of the discussions requires reviewing all of the input (see Appendices B and C).

The first three themes listed below were most prevalent in round robin discussion groups and input cards, and the last six were less common.

Primary Themes

Topics that frequently appear in input.

Pumping Stations and Tide Gates

Participants spoke often about stormwater pumping stations and tide gates. Some had questions about the locations and current functioning of the pumping stations and tide gates. Some expressed surprise at their vulnerability to sea level rise. Others expressed concern over the current state of this infrastructure, for instance, some stated that the tide gates at Washington Boulevard were leaking and needed repair. There was discussion about how sea level rise might affect the functioning of tide gates. Some participants suggested that the pump stations and tide gates should be upgraded now in anticipation of sea level rise.

Flooding Dynamics and Implications

Some people were surprised to learn that inland areas were susceptible to flooding. Mostly, people had questions about flooding. They asked about the definition of flooding and where flood waters came from. People asked questions about which areas would flood and what a person should do to prepare for flooding. Some asked if sea level rise would affect flood insurance and if federal assistance might be available for recovery after a flood. They asked questions about how it would affect emergency services, evacuation plans, power, and wastewater infrastructure.



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Prospects for Development Regulation Modifications

Many people had questions about how sea level rise might affect development in Venice. Some people asked questions about whether vulnerable areas would be off-limits to development or if building codes would be updated to ensure new buildings were better adapted to sea level rise. Others stated that they believed there should be no new development in vulnerable areas. Others suggested specific requirements to help buildings be more resilient to sea level rise.

Secondary Themes

Additional topics that were repeated in the input, but to a lesser extent.

- *Canals as a cultural asset:* Many people emphasized that the canals were a priority for protection. Some suggested digging the canals deeper to help reduce flooding. Others remarked that bringing back the original canals, which have since been covered, should be considered.
- *Protection of historic assets:* People wondered how the project team determined what qualified as a historic asset for the vulnerability assessment. They wondered if that categorization would have implications for how potential aid for adaptation measures would be prioritized. Others suggested structures or areas that should be considered as historical assets. People asked questions about what could be done to help historic buildings adapt to sea level rise.
- *Beach management:* Some people had concerns about the beach, and many saw it as an important public resource. Some questioned why the beach was being leveled, instead of being allowed to form dunes. Participants discussed the benefits of living coastlines. A few questions about the possibility of allowing the beach to migrate were raised.
- *Vulnerability of homeless people:* Some participants expressed concern that homeless people would be more vulnerable to displacement due to flooding from sea level rise and asked if plans existed to help the homeless. The potential for flooding of future homeless shelters sited in Venice was also raised.
- *Displacement risk:* Some discussions addressed the availability of affordable housing in Venice and potential displacement of low income residents from flooding. Related to displacement concerns were calls to preserve affordable housing.
- *Green infrastructure solutions:* A few participants said they would like to see more green infrastructure to store and clean water and provide habitat.



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Appendix A

Presentation Slides

Public Workshop #3

Sea Level Rise Vulnerability Assessment



Funded in part by CCC Grant LCP-14-09



Introducing the Team:

DUDEK



K E A R N S  **W E S T**

Hosted by the Department of City Planning and
funded in part by the California Coastal
Commission, Grant LCP-14-09



Purpose of Today's Workshop:

Share vulnerability assessment conclusions

Provide opportunities for the community to ask questions and get answers

Today's Workshop Format

Presentation

- Vulnerability Assessment- What it is, how it was conducted, and its conclusions
- Examples of adaptation concepts

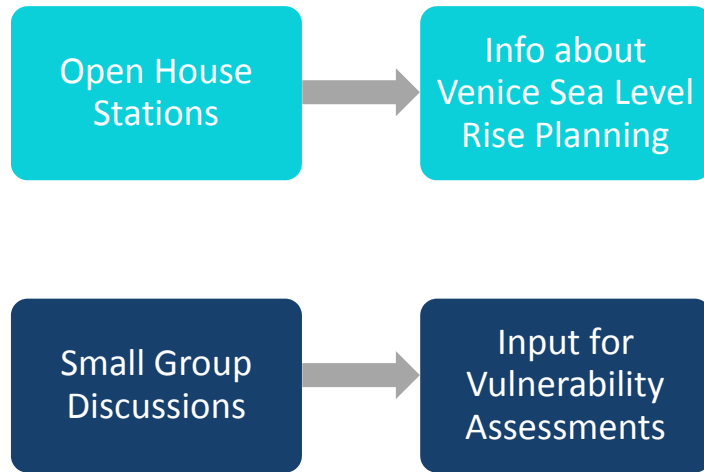
Round Robin Discussions

- Infrastructure and Civic Assets
- Property Assets
- Coastal Amenities, Cultural, and Ecological Assets

Wrap Up

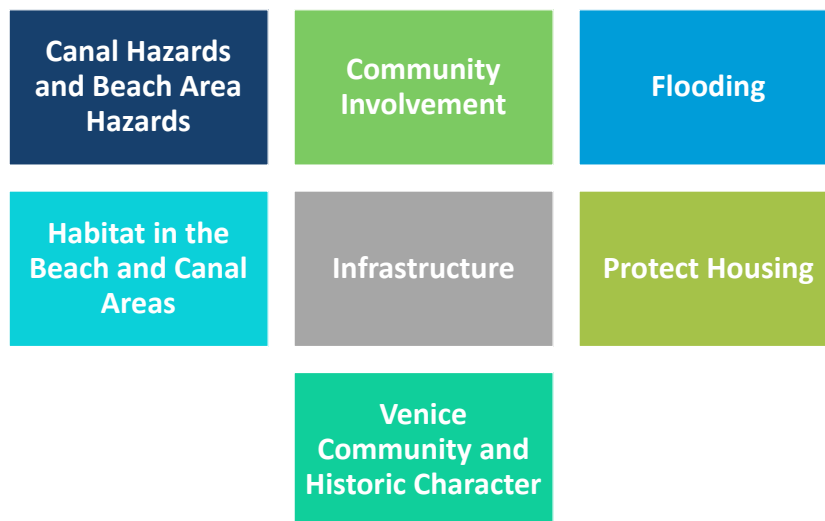
- Information on how to stay involved

November 2017 Workshop Recap



November 2017 Workshop Recap

Major Input Themes



Environmental Justice in the Coastal Act

AB 2616 (Burke, 2016)

Section 30604 (h) – When acting on a coastal development permit, the issuing agency, or the commission on appeal, may consider environmental justice or the equitable distribution of environmental benefits throughout the state.

Section 30108.3 – “Environmental justice” means the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.

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Social Vulnerability & Environmental Justice

Social Vulnerability

- Socio-economic implications of sea level rise hazards & adaptation strategies

Environmental Justice

- AB 2616 amended Coastal Act (2016)
- Fair treatment of people of all races, cultures, and incomes
- Equitable distribution of environmental benefits

All asset vulnerabilities & adaptation options have socio-economic implications



Venice Vulnerability Assessment

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Social Vulnerability Index

2016 Social Vulnerability Index (SVI) based on census data

- 32 variables: education, housing, income, demography, etc..



SVI data from Agency for Toxic Substances & Disease Registry



SVI indicates socially vulnerable areas have lower physical exposure to SLR hazards.

But, SLR hazards could impact services & resources they depend on.

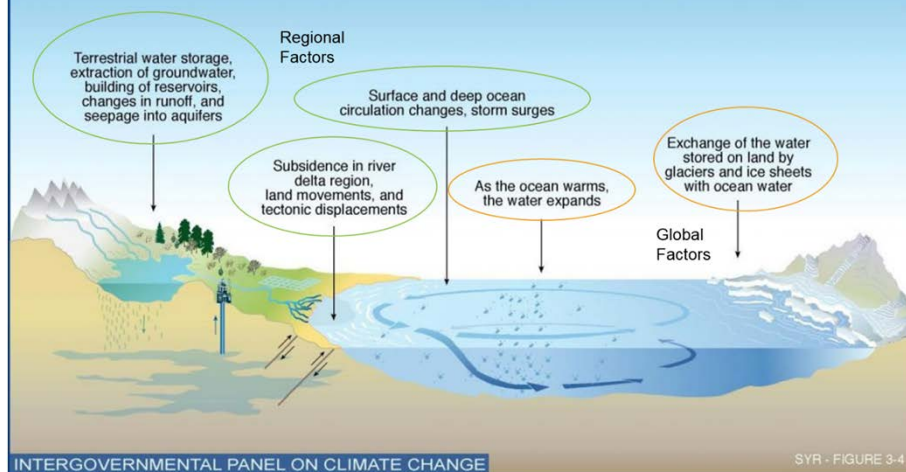
Guiding Questions for Planning Process

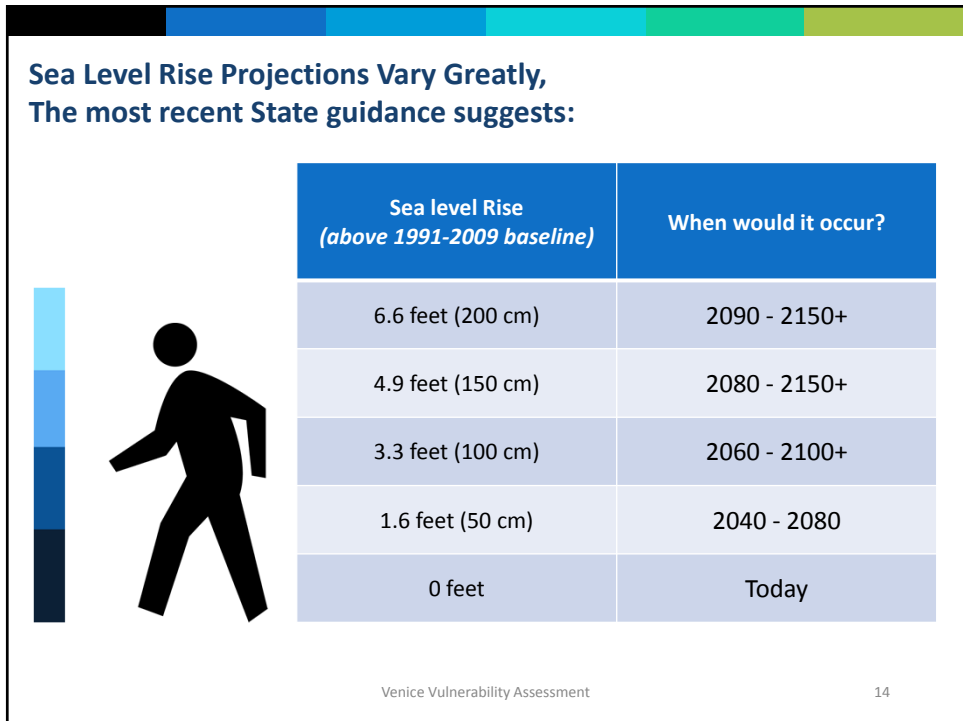
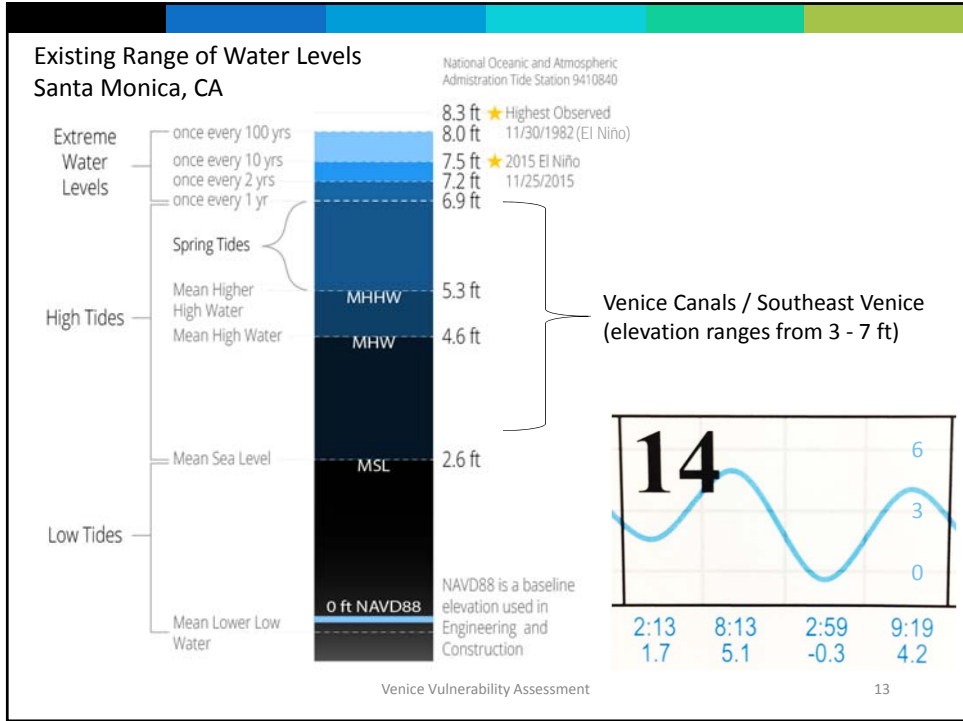
- How do the dynamic issues of gentrification, rent displacement and population growth affect Venice's vulnerability to sea level rise?
- How might tide gate failure, flood insurance, storm-related coastal flooding or other sea level rise issues affect displacement or community makeup?
- How will vulnerable populations be impacted by hazards and potential adaptation strategies?

Presentation Topics:

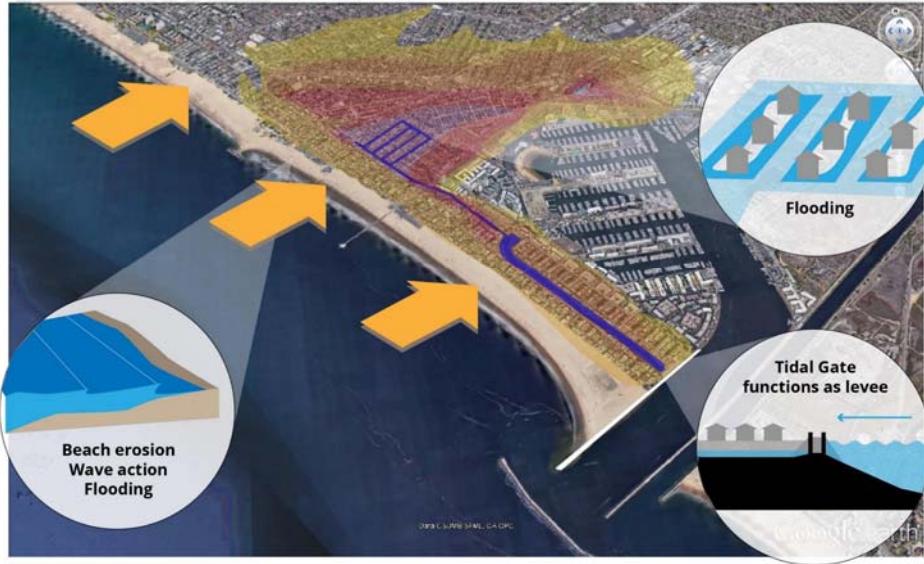
- Sea Level Rise & Projections
- Coastal Hazard Overview
- Vulnerability Assessment
 - What is it?
 - Methodology
 - Asset/Resource evaluations

What causes the sea level to change?

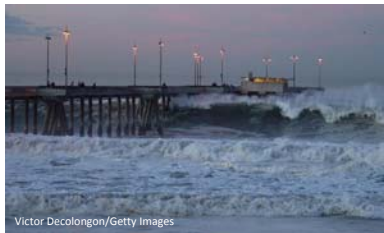




Venice Sea Level Rise Hazards Summary Diagram



Coastal Storm Hazards



CoSMoS 3.0 (Phase 2) used to represent coastal hazards (erosion wave runoff & flooding) from an extreme event combined with multiple sea level rise scenarios



<http://www.treasurenet.com/forums/general-discussion/82454-photo-trip-el-niño-january-1983-santa-monica-venice-beaches.html>

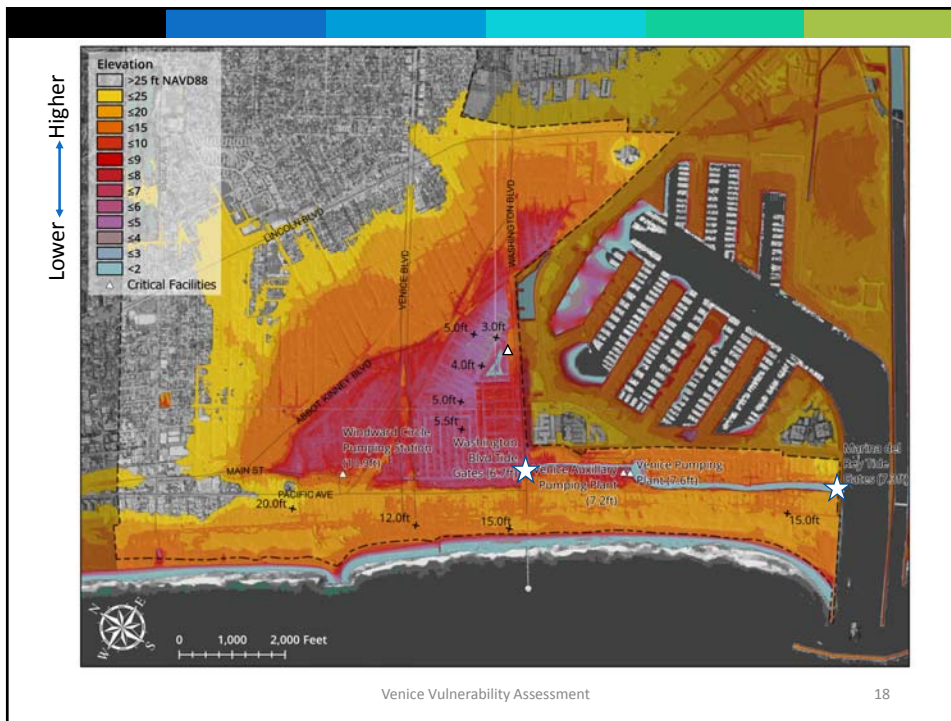
Inland Flood Hazards

Inland flood potential mapping considers a tide gate malfunction during a monthly high water level (6.5 feet), consistent with ESA's approach to assessing low-lying areas in the AdaptLA study.

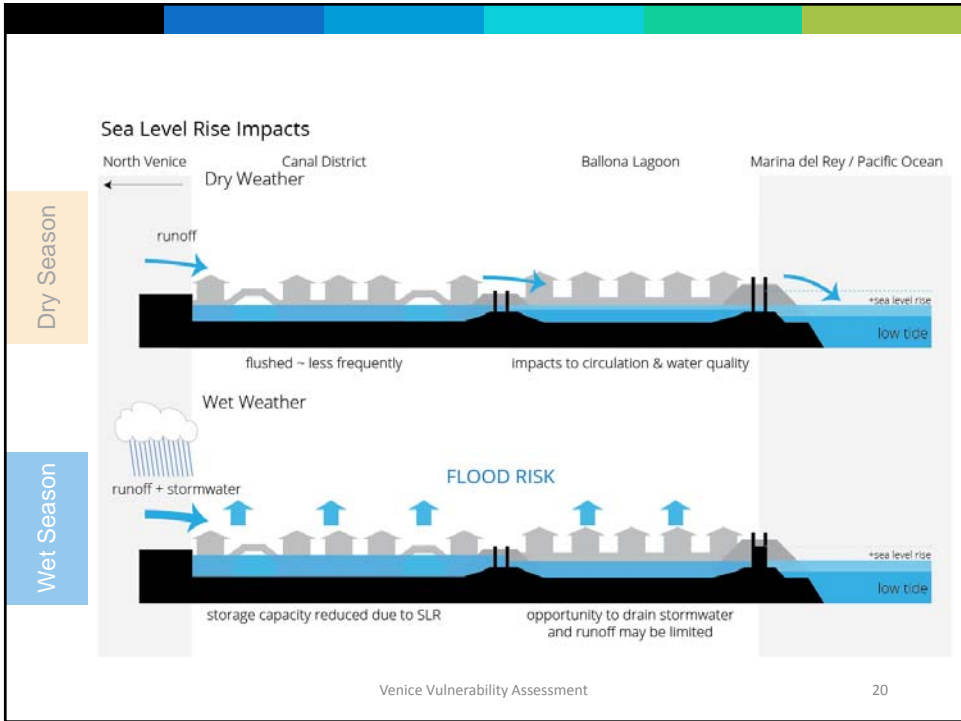
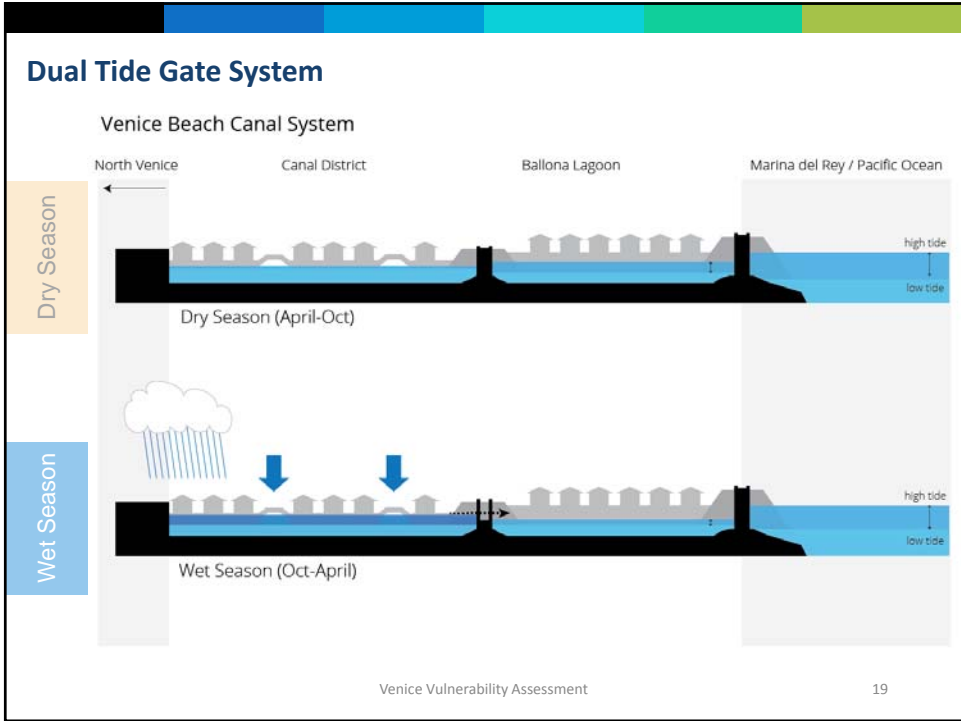


Multiple potential flood sources:

- Tidal flooding (tide gate malfunction)
- Extreme rainfall event coincides with high tide
- Coastal flooding (wave overtopping)



Venice Vulnerability Assessment



Vulnerability Assessment – What is this?

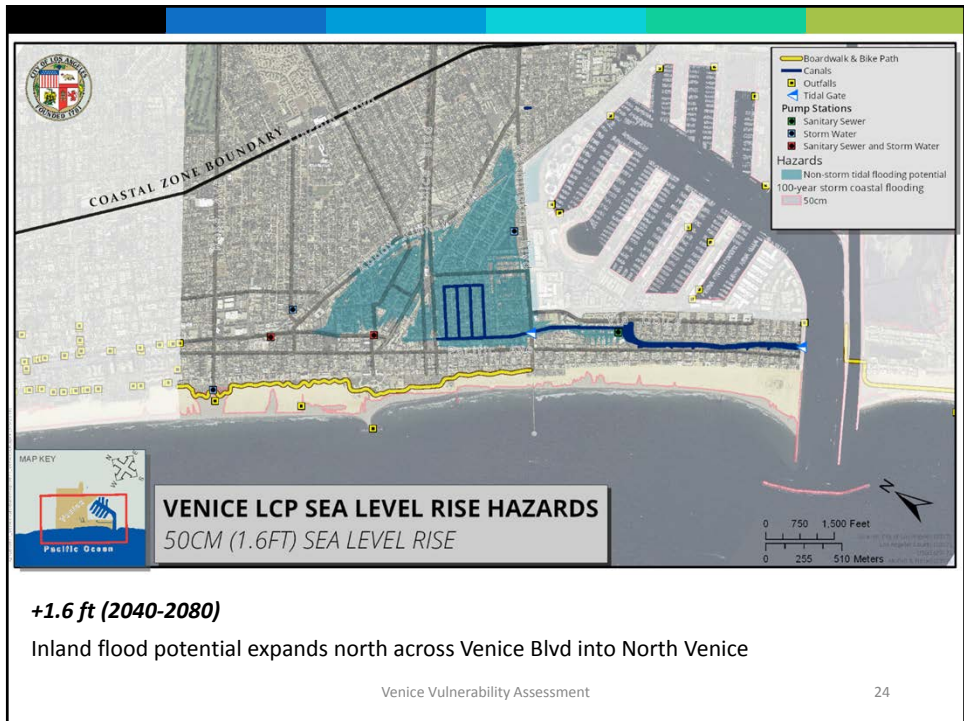
The Vulnerability Assessment identifies the **physical exposure** to resources and assesses vulnerability by looking at the **sensitivity** and **adaptive capacity** of each resource.

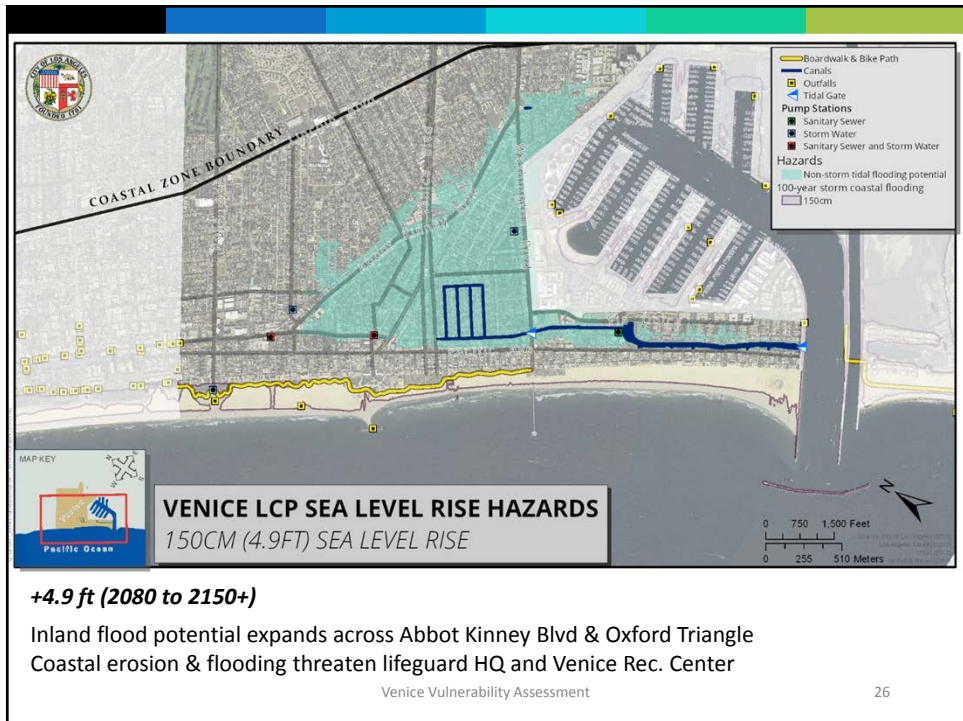
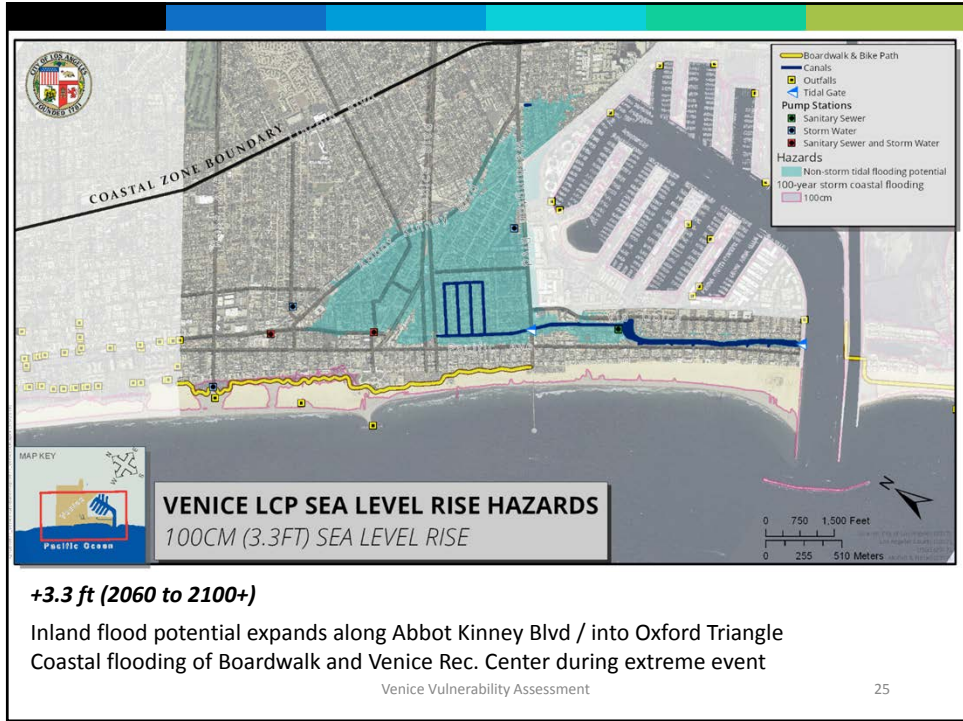
The Vulnerability Assessment informs the Local Coastal Plan Update by determining **potential consequences** and **sea level rise thresholds** for the Venice Community.

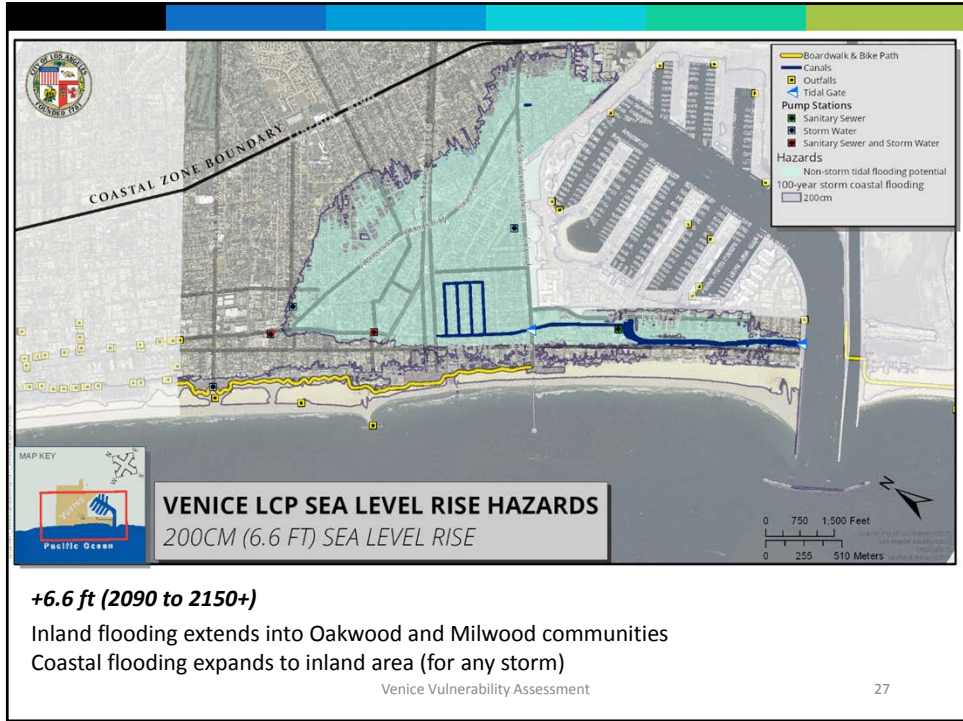
The Local Coastal Plan Update will include **adaptation strategies** to help mitigate potential consequences.

Vulnerability Assessment Methodology

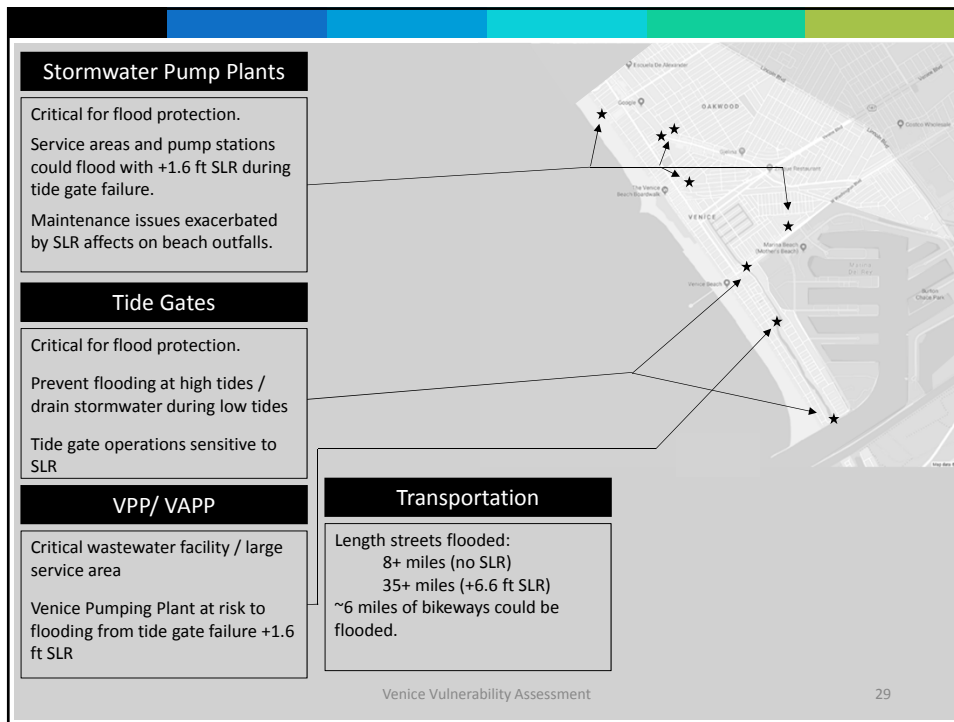
- 1) Establish inventory of coastal resources
communities, property, habitat, infrastructure
- ↓
- 2) Assess physical exposure to sea level rise
sea level rise + coastal hazards
- ↓
- 3) Analyze Vulnerability
exposure / sensitivity / adaptive capacity







Property	Cultural	Civic	Coastal Amenities	Ecological
<p>Assets evaluated:</p> <ul style="list-style-type: none"> • Tide gates • Wastewater • Stormwater • Transportation • Utilities (water & power) • Coastal protection 				
<p>Infrastructure</p>				



Property Cultural Civic Coastal Amenities Ecological

Exposure: High exposure for infrastructure within inland low lying areas

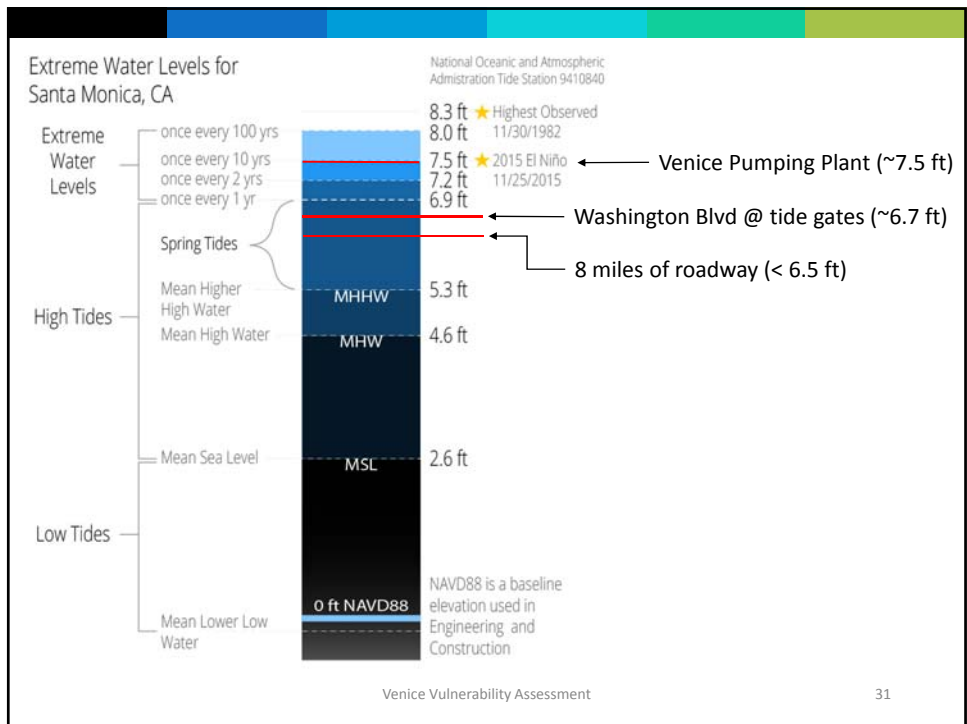
Sensitivity: physical vs functional

- Physical – damage resulting from flooding, erosion or wave impact
 Example: Coastal protection sensitive to physical damage, leads to functional impact
- Functional – service or operation provided by asset is impaired
 Example: Tide gates – function/operation highly sensitive to SLR

Adaptive Capacity: limited / improvements needed to build in added capacity

Adaptation Strategies:

- Pump station to service Canals area? Flood protection vs Habitat trade off
- Improve redundancy & resiliency



Infrastructure Cultural Civic Coastal Amenities Ecological

Exposure

- High for inland low-lying areas - flood potential exists today
- Lower for coastal storm flooding / 6.6 ft SLR (2090 – 2100+)

Sensitivity

- Highly sensitive to flooding / cost of damage / disruption to community

Adaptive capacity

- Temporary flood proofing (sand bags/elevate valuables): flooding <1 ft deep
- Limited adaptive capacity for flooding > 1 ft

Adaptation Strategies:

- Infrastructure upgrades
- Raise finish floors
- Emergency plan
- Resiliency

Property

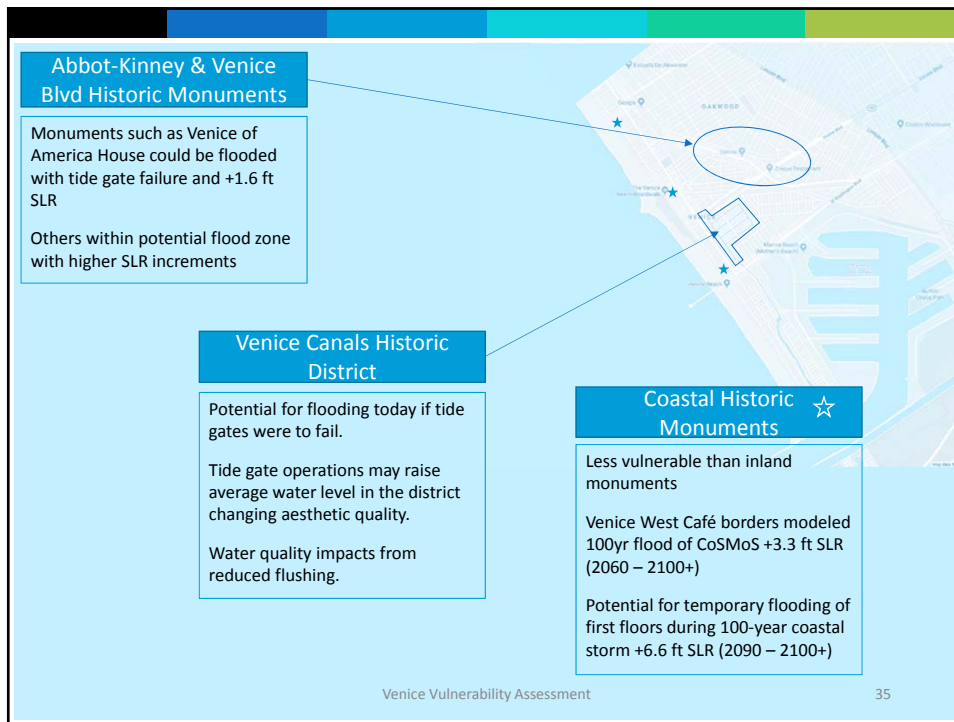


Infrastructure Property Cultural Civic Coastal Amenities Ecological

Cultural

Assets evaluated:

- Venice Canal Historic District
- Kinney-Tabor House
- Venice Branch Library
- Venice Division Police Station
- Sturdevant Bungalow
- Venice City Hall
- Venice of America House
- *Venice West Café*
- *Warren Wilson Beach House*
- *Venice Arcades*



Infrastructure Property Civic Coastal Amenities Ecological

Cultural

Exposure

- High for Canals district & resources near Abbot Kinney & Venice Blvd
- Lower for coastal storm flooding / 3.3 ft SLR (2060 – 2100+)

Sensitivity

- Highly sensitive to flooding / cost of damage / restoration

Adaptive capacity

- Temporary flood proofing (sand bags/elevate valuables): flooding <1 ft deep
- Limited options to preserve historic character

Adaptation Strategies:

- Infrastructure upgrades (Protect)
- Flood proofing
- Resiliency

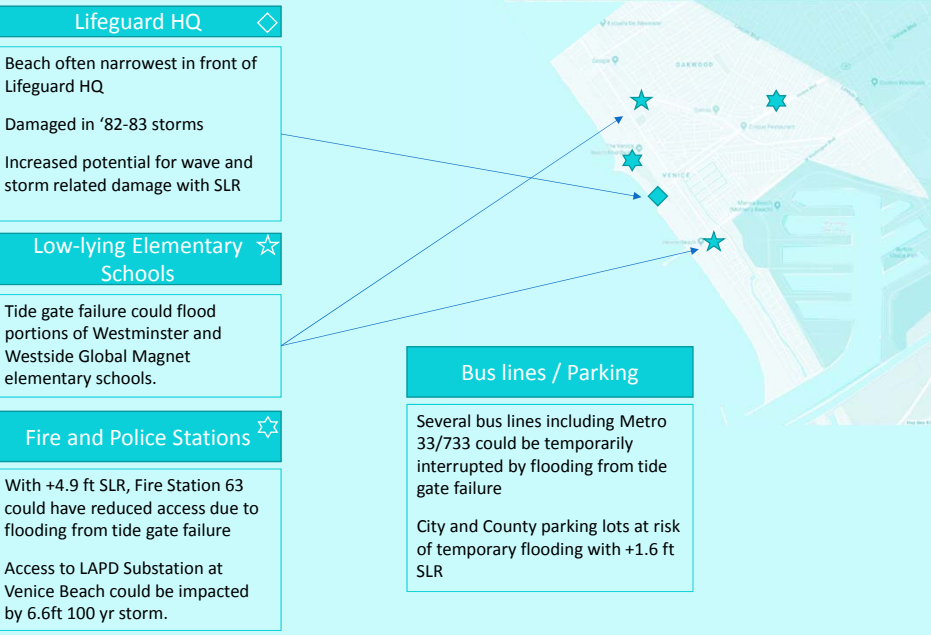
Infrastructure Property Cultural Coastal Amenities Ecological



Assets evaluated:

- Bus Lines
- Parking Lots
- Lifeguard HQ & Towers
- Low-Lying Schools:
 - Coeur d'Alene
 - Westminster
 - Westside Global Awareness Magnet
- LAPD Venice Substation
- LA Fire Station #63

Civic



Lifeguard HQ ◇

Beach often narrowest in front of Lifeguard HQ

Damaged in '82-83 storms

Increased potential for wave and storm related damage with SLR

Low-lying Elementary Schools ☆

Tide gate failure could flood portions of Westminster and Westside Global Magnet elementary schools.

Fire and Police Stations ☆

With +4.9 ft SLR, Fire Station 63 could have reduced access due to flooding from tide gate failure

Access to LAPD Substation at Venice Beach could be impacted by 6.6ft 100 yr storm.

Bus lines / Parking

Several bus lines including Metro 33/733 could be temporarily interrupted by flooding from tide gate failure

City and County parking lots at risk of temporary flooding with +1.6 ft SLR

Venice Vulnerability Assessment 38

Infrastructure Property Cultural Coastal Amenities Ecological

Exposure

- High exposure to inland flooding for parking lots, bus lines, and Westminster Elementary
- Sustained coastal or inland flooding could affect service areas.

Sensitivity

- Emergency services highly sensitive to loss of access
- Schools considered highly sensitive resource

Adaptive capacity

- Lifeguard towers highly mobile
- Civic centers such as schools have limited resources to adapt

Civic


Adaptation Strategies:

- Emergency planning
- Infrastructure upgrades (Protect)
- Relocation

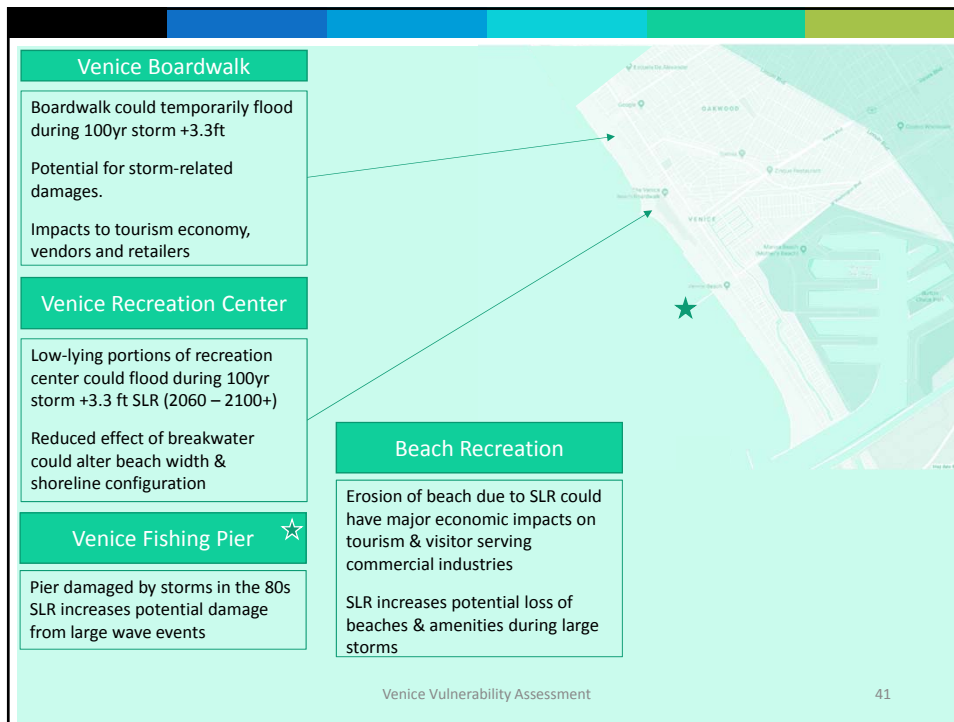
Infrastructure Property Cultural Civic Ecological

Assets evaluated:

- Venice Beach Recreation Center
- Oakwood Recreation Center
- Venice Beach Boardwalk
- Venice Fishing Pier
- Beach Recreation



Coastal Amenities



Infrastructure Property Cultural Civic Ecological

Exposure

- Beachfront amenities could experiences damage from extreme storms (>3.3ft+ of sea level rise / 2060 - 2100)
- Beach Recreation could be affected by erosion of 50ft (short term) to 300ft (long term)

Sensitivity

- Beach recreation sensitive to storm frequency and chronic erosion
- Recreation Centers important resource for Venice and LA Region, therefore sensitive to loss of capacity or damage

Adaptive capacity

- Repairs and nourishment may be expensive but can restore full functionality

Adaptation Strategies:

- Resiliency
- Living Shoreline
- Relocation

Coastal Amenities


Infrastructure Property Cultural Civic Coastal Amenities

Assets evaluated:

- Sandy Beach Habitat
- Ballona Lagoon Marsh Preserve
- Canals Habitat Area
- Coastal Rocky Nesting Habitat

Ecological





Sandy Beach Habitat

Beach erosion could range from 0 - 100 ft with +1.6ft and 100-350 ft with +6.6 ft.

Includes protected species (Snowy Plover, Least Tern, Grunion)

Ballona Lagoon Marsh Preserve

Sensitive to changes in salinity from tide gate operations

Vulnerable to "coastal squeeze"

Loss of vital intertidal habitat

Canals Ecological Sensitive Habitat

Less intertidal habitat than Ballona Lagoon, relatively more mudflat

Potential effects on Water Quality from reduced flushing

Increase in subtidal habitat

Coastal Rocky Nesting Habitat

Recovering CA Brown Pelican Nesting Area (CNDBB)

Loss of habitat with SLR

Potential for relocation to Marina jetties

Venice Vulnerability Assessment

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Infrastructure	Property	Cultural	Civic	Coastal Amenities
<p>Exposure</p> <ul style="list-style-type: none"> Erosion of 50 feet (short term) to 300 feet (long term) of beach Water quality and tidal flow of canals likely affected by tide gates <p>Sensitivity</p> <ul style="list-style-type: none"> Endangered Species such as CA Snowy Plover at critically low habitat for nesting Plant species within canals area limited migration area causing loss of habitat (Coastal Squeeze) <p>Adaptive capacity</p> <ul style="list-style-type: none"> Habitat can be restored Large beach allows for increase in future restored/protected habitat <p>Ecological</p> <p>Adaptation Strategies:</p> <ul style="list-style-type: none"> Restoration Relocation of protected beach areas 				

Discussion Groups		
<ol style="list-style-type: none"> Find the table corresponding to the number on your nametag The facilitator will guide the discussion and take notes, and the project team member will answer questions A new facilitator and subject matter expert will rotate to your table until your group has discussed all three topics 		
Infrastructure and Civic Assets	Property Assets	Coastal Amenities, Cultural and Ecological Assets

Tips for Productive Discussions

- Let one person speak at a time
- Help to make sure everyone gets equal time to give input
- Keep your input concise so others have time to participate
- Actively listen to others and seek to understand their perspectives
- Offer ideas to address questions and concerns raised by others

Next Steps

- "THANK YOU" EMAIL | ONLINE INPUT FORM
- FINALIZE VULNERABILITY ASSESSMENT
- NEXT WORKSHOP on ADAPTATION
- VISIT: VENICELCP.ORG



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Appendix B

Input from Discussion Groups

Infrastructure and Civic Assets

Table 1

- What can be done with Oceanfront Walk?
- CCC wants to provide access to the beach
- Issue of timing/ aging with structures in relation to sea level rise
- Mitigation measures
 - Development requirements (elevated structures)
- Why are permits being issued at all for residential/commercial development?
 - City might need to adopt phased approach based on sea level rise
 - City should provide financing to save Venice
- Venice more exposed than other coastal communities in LA Basin
 - Biggest storms come from the west
- What if we add quakes and tsunamis to sea level rise analysis.
 - Tsunami would raise water level significantly
 - Quakes could cause liquefaction

Table 2

- Where could the public go in case of flooding?
 - Meeting points might be a type of adaptation strategy.
- What can City do today to improve/strengthen infrastructure before sea level rises?
 - City has list of required improvements/cost but no timeline yet
 - Coordination between County (Harbor and beaches) and City
- City has Tech. Advisory Committee (various Depts) to analyze and coordinate efforts on sea level rise in Venice
- Is City prepared to assist the homeless population in Venice?
 - Flooding would be dynamic (based on tides) and presumably homeless population would be able to get away
- What can be done to prevent flooding from oceanfront? – earth berms

Table 3

- Concerns: Tide Gates, Winward Circle, Flood in 2017
 - Canal leakage (Priority), Cument BOE study update
- Question: Groundwater impact with Sea Level Rise?
 - USGS doesn't include groundwater
 - Basin is currently not pumped
- Concern: Maintenance Bldg City/County – has funding from County to upgrade
 - Parks, Boardwalk are on higher ground
 - We should look at how coastal infrastructure is maintained
 - 2008 study on as SLR from NOAA
- Methane Zone today in ULCD area
 - How does SLR affect it?
- Weight of development on ground and SLR?
- *Pump station malfunction and inundation
- How can protect hist.?
 - SLR rising first floor
- Staging and Adaptation: Parlor Loop

- Consider immersing, SLR storage with new development
 - Road diets vs. emerging evacuation routes
 - Tsunami studies? Tsunami and SLR?
 - Tunnels
- How has sea level changed in the past 50 years
 - 8 inches over the past decades
- Suggestion: Illustrations throughout community might be important to show where water level will be in the next decades
- Breakwater

Table 4

- How does the tidal at marina work vis a vis tides
- Rumor pump station at Kinney Circle, has salt water Del and Venice? Or sea water?
- Will plumbing wastewater be resilient to salt water?
- Will all this impact property value?
 - Think it will go down, banks may not lend due to SLR
- Do something about the canals to protect
- What adaptation strategies are we
- Will VAAP move more water?
- How does the pump system work today?
- How will soils be impacted by groundwater subsidence? How will the soil change?
- How will the methane buffer zone be impacted by SLR?
- How are we vulnerable to methane?
- Research/rebate incentives for swales and other ways to absorb water
- Surprise to learn about the tide gate reliance and over all vulnerable
- How are other cities dealing with this issue?
- Bldg code
- Major (Non-incremental) improvements
- Introduce water into the system so it takes stress of the system
- Keep charm and choose mechanical to keep what we know
- Human error on the canal, will property values increase if we introduce water
- More to do with runoff, perm pav etc.

Table 5

- If tide gates are working what level of SLR would it overtop?
- Tide gates history: Current 1ft/day leak in Washington Gate. (Not functional currently).
- 1.6 ft SLR over Washington Gate
- Currently have disaster conditions
- Can/Should people be able to build it?
- Access for emergency ingress/egress
 - Flood limiting end access
 - Flood limiting access and electricity, people with limited access and have special needs
- What is the definition of flooding?
 - What's the water level/Flood depth
 - Predicted impacts to wastewater infrastructure

- What happens to
- Impact of SLR/Flooding on power (communication assistance)
- Look at parking lots/beach parking (visitor serving (ccc conflict/dune restoration))
- Mitigation for property and infrastructure, make it less likely to flood
 - Protect what's there, remove the threat, lessen the impact
- No development in haz zone
- Decentralize infrastructure: waste water power
- Considerations of buoyancy, air bubbles and things popping up
- Methane zone: What happens to the house as it wasn't designed to be held down
 - Infrastructure/housing could float

Table 6

- Where is Venice pumping plant?
- Green infrastructure trees/plants to suck up water and help ecological habitat
- Community solar (redundancy for infrastructure systems) back up infrastructure
- Does Winward have a back up?
- Do many approaches
- Rain water catchment systems (larger scale)
- Decentralize infrastructure
 - How to ensure the progression of projects
 - What if things get worse, stay ahead of things. How to adapt to changing predictions
 - Changing predictions
 - Trigger based planning
- New Development/building requirements stilts/grad?
- Raised porches in Oakwood to adapt to local
- Storm drain system (40's) was supposed to empty in beach but in sand- bacteria issues on beach: testing today
- Height limits will need to respond to new development standards.
- No minimum number of units? Why not?
- Policy and zoning tied to mitigation and SLR
- Dig the old canals that we filled
 - Multiple benefits
- Pump station currently floods
- Should people be allowed to build in flood prone areas?
- Align incentives with goals (goals can be in conflict) re: infrastructure
- Who pays for adaptation?
- Loss of thatcher maintenance yard
- Percent of perm surfaces require
 - Arid lands institute – groundwater mapping?

Property Assets

Table 1

- What are property assets?
- Is the flooding due to flood gates?

- Why aren't tide gates automatic?
 - Would this matter with sea level rise?
- How much have we studied groundwater?
- Long-term and short term-flood gates
- Has there been restrictions on developing in vulnerable areas?
- Pumping
- Save us!
- Groundwater mitigation
- Vulnerable
 - Distribute vulnerable populations throughout city so they don't experience it worse – systemic issues
 - Disadvantaged community is getting booted out
- Homeless
 - Are there global examples? Look at the Netherlands
 - Animal shelters
- Explain property assets better
- If the city has a dense area of property assets, does the city take it more seriously
- Washington and Wilson apartments had to sump pump before construction
- How effective are the pumps that we have?

Table 2

- Are the canals the only entry point for flooding?
- Could we see an animation of how flood water moves through?
- Does it make sense to look only at Venice or for regional considerations?
- Does elevation have impact on water flow?
- What should a person in low lying areas do?
- How is flood insurance and flood plain mapping changing?
- How will this study address these SLR changes?
- Are there any financial incentives for people to relocate /reuse due to risk – unsustainability?

Table 3

- Will there be a priority of one asset over another?
- What is the current infrastructure in place to prevent “first flooded”?
- The Washington Gate is leaking, repairs have not been made.
- Water flowing up from Windward traffic circle
- What entity do we work for?
- Where would the flood peak?
- What are we doing about Washington?
- What will we do to pump water out?
- Could digging the canals deeper reduce flooding?
- Are there any cities we are using as a template?
 - Why not?
- Where do we pump the water to?
- Do tunnels still exist next to Windward? – bar
- Will there be restrictions on future building?

- Will new buildings be based on adaptive measures?

Table 4

- How will the bldg. code and zoning code change to adjust and protect home?
 - Infrastructure and private property discussions overlap
 - Turn a negative to a positive re: SLR
 - Property value will decrease if we do nothing
- We love our community, hold onto it forever.
- Preserve original community
 - Ocean Park Villa
- We don't want to get flooded and will do what is necessary to protect.
- Local/ Pool for insurance for Venice
- VA – Emergency planning for SLR
 - Hold town hall meeting
- Drain to canals, water quantity
- Brooks drain to ocean
- Water quality: second outlet for canal
- Look at previous studies for canal water in the 1980s

Table 5

- Need to think about inland flooding with adaption strategies.
- How long has the tide gate system been in place?
- What is the max SLR?
- Will the tide gate fail?
- Based on current zoning, max built, what effect will that have on urban run and flooding with SLR?
- More analysis of salt water intrusion on groundwater

Table 6

- How will they help with rebuilding after flooding?
- How will help with historic property, save the resource.
- I live in flood area; shocking how bad things
- Green infrastructure
 - Help existing eco-system
- Raise streets
- Increase pump station/gates capacity
- Sunny -day floor – pump station inverse; cleans traps
- Storm drain maintaining program
- Community solar as a back up system for pump stations
- Fear; is this certain
- Conflict/relationship between adaptation and causation
- Large development is impacting infrastructure
- Tie zoning and infrastructure to SLR and adaptation
- Where are emer

Coastal Amenities, Cultural, and Ecological Assets

Table 1

- Is the city considering the tourism and economic assets?
- Where will the City get the money to pay for adaptations?
- What does it mean to be historic? Does it mean more money?
- You've already designated areas to be preserved! Or how will it be prioritized?
- Adaptation measures should recognize climate change and not contribute to it.
- City should coordinate.

Table 2

- What are the adaptation strategies you are considering for the canals?
- Can we even just get pumps upgraded now?
- Maybe there can be a task force that addresses structures.
- Get systems to function at double or triple capacity now.
- Could floodgates be reinforced
- The problem is not keeping water out, it's getting rid of it when it gets in.
- LA is slow when it comes to public works projects
- Has anyone talked about introducing more water into Venice as it used to have?
- Where will funding come from?
- How good are the predictions? Studies keep showing previous predictions were optimistic.

Table 3

- What commitment is there to the Old Lifeguard Tower?
- Why is the County leveling the Beach, instead of letting it gain its own rhythm?
- Will the Canals increase in salinity?
- The State plan did not show canal flooding as yours does.
- Are you looking at breakwater pumping?
- City needs to repair gates
- Would like more information on your data and studies

Table 4

- Historical in Oakwood – preserved as a historic community, consideration, Ocean tract Villa
- ID areas but no incentives to consider in adaptation strategies
- Ecological: least tern also found in canal area to be considered
- Coastal Amenities: Living shorelines, beach nourishment as a resource/strategy
 - Possible solutions
 - Tax breaks as an incentive for historic structures
 - Mitigation for pumping station in adaptation strategies

Table 5

- What questions do you have coastal amenities and cultural and eco assets? What more do you want to know?
 - SLR adaptations will apply the same way
 - Please include the potential historical cont. as cultural resources
 - The first priority is the canals – 2 residents

- To also consider walkstreets, dwn't, beaches, to treat all areas the same.
- The pacific electric red car bridge
- Specific mitigation measures, what adaptation strategies are there?
 - To consider before/after
- *Follow up on nesting "Least tern"

Table 6

- What questions do you have about coastal amenities, cultural and eco assets?
 - What we should be doing to plan?
 - Is there a strategy on what to do?
 - What criteria is being used for historic?
 - Beach is an important resource, how to prepare?
 - Fallout is a concern, not just sea level rise
- Are we looking at storm surge in the assessment? What funding is going to be allocated?
 - Adaptation strategies, Policy → funding
- #2 Question
 - Concern where ecological assets – least tern, snowy
 - Solutions for historical structures?
 - Green infrastructure, would like to see more of this
- #3 Question – speedway, pay attention to this area
 - Is beach allowed to migrate?

Social Vulnerability

Table 1

- Schools
- People who don't speak English or are handicapped
- Senior homes
- Homes for disabled
- Clinics and hospitals
- Evacuation system – prioritization
- Incorporate SLR and flooding into earthquake safety

Table 2

- It seems the most vulnerable to sea level rise are the highest income.
- Best to talk about how to prevent
- It's more about tradeoffs and prioritization after it happens, who do you help?
- The homeless shelters must prepare now

Table 3

- Homeless population who tend to gather near the canals vulnerable
- Building a homeless shelter in the Venice Blvd median doesn't make sense because of the sea level rise exposure shown on the maps. This median for an open space/flood storage/wetland type of use would be preferred.

Table 4

- Use public access station
- Preserve affordable housing
- Venice Listerv
- Preserve the Mello Act

Table 5

- Are there nursing homes?
- The disruption of community to include those who do not have resources to (get back on their feet) – disruption of work in event of disaster.
- What about the homeless – what is the strategic plan?
- Federal flood insurance in preparation of – maps need to be broader, not as specific.

Table 6

- Homeless, lack of affordable housing
- Displacement, no other place to go
- High cost of utilities
- Schools work to bring community together
 - Could make more/stronger ties, both physically and social
- Economic pressure: Pace program ex. That pushed people out
 - When space becomes more limited, people will be pushed
- Affordable housing trust fund – Code enforcement violation fees for retrofit funds that will keep social diversity



CALIFORNIA
COASTAL
COMMISSION

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Appendix C

Completed Input Cards



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Input Form

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Infrastructure and Civic Assets

1. What questions do you have about infrastructure and civic assets? What do you want to know more about?
 WHAT WOULD ~~BE~~ THE INFRASTRUCTURE CHANGES BE?
 WOULD THE COUNTY CHANGE CONSTRUCTION SIGHTS OR
 THE CANAL
2. Regarding infrastructure and civic assets, what conclusions from the Vulnerability Assessment stand out for you and why?
 THE CANALS!
3. Do you have input for the team to consider as they develop specific adaptation measures for infrastructure and civic assets between now and the next workshop?

Property Assets

1. What questions do you have about property assets? What do you want to know more about?
 WOULD IT AFFECT PROPERTY PRICES?
2. Regarding property assets, what conclusions from the Vulnerability Assessment stand out for you and why?
 PROPERTY VALUE!
3. Do you have input for the team to consider as they develop specific adaptation measures for property assets between now and the next workshop?
 INSTALLING,

MORE PUMPING STATIONS!



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2. Regarding coastal amenities, cultural and ecological assets, what conclusions from the Vulnerability Assessment stand out for you and why?
3. Do you have input for the team to consider as they develop specific adaptation measures for coastal amenities, cultural and ecological assets between now and the next workshop?

Social Vulnerability

1. Of the social vulnerability issues related to sea level rise, what are you most concerned about?

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 Venice LCP@lacity.org
 200 N. Spring St. Rm 763
 Los Angeles CA, 90012

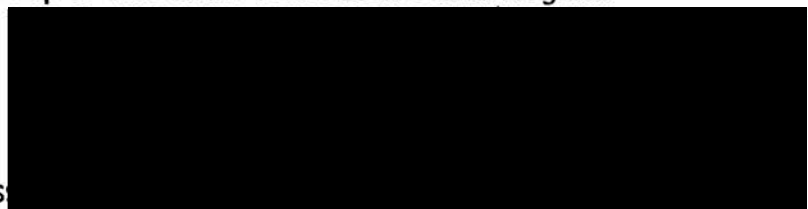
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What could be built as a long-term secondary flood mitigation apparatus to help mitigate effects of a major flood event in the canal zone (the most vulnerable area in Venice). In short, perhaps a pump system to assist with

2. Regarding infrastructure and civic assets, what conclusions from the Vulnerability Assessment stand out for you and why?

The canals are obviously in need of special consideration
gravity flow back out of the lock systems.

3. Do you have input for the team to consider as they develop specific adaptation measures for infrastructure and civic assets between now and the next workshop?

Elaborate on "resiliency" measures

Property Assets

1. What questions do you have about property assets? What do you want to know more about?

how does federal assistance impact homeowners in the event of a major flood.

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Coastal Amenities, Cultural and Ecological Assets

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increase waste water capacity for more pumping flood capacity

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Big waves

Tide gate

options for solution

Infrastructure and Civic Assets

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Infrastructure and Civic Assets

1. What questions do you have about infrastructure and civic assets? What do you want to know more about?

1) WHY DOES THE COUNTY FLATTEN THE BEACH?

2. Regarding infrastructure and civic assets, what conclusions from the Vulnerability Assessment stand out for you and why?

3. Do you have input for the team to consider as they develop specific adaptation measures for infrastructure and civic assets between now and the next workshop?

WOULD LIKE TO SEE WHAT OTHER (GLOBAL) COMMUNITIES HAVE DONE & ARE DOING ABOUT SIMILAR CIRCUMSTANCES / FLA, NYC, AMSTERDAM

Property Assets

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A) WOULD LIKE TO HEAR POSSIBLE SOLUTIONS ... KNOWING THE PROBLEMS = GOOD, SOLVING THEM = BETTER.



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Coastal Amenities, Cultural and Ecological Assets

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Social Vulnerability

1. Of the social vulnerability issues related to sea level rise, what are you most concerned about?

WAAA SEEMS AS THOUGH WE HAVE TO MAKE PLANS FOR THE CANALS NOW - MOST VULNERABLE

Please use the space below to provide additional input, ideas, questions, and considerations for sea level rise planning in Venice.

STOP FLATTENING THE BEACH. LET IT DEV. DUNES & "GREENERY".

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Beach recreation good for economy

Coastal Amenities, Cultural and Ecological Assets

1. What questions do you have about coastal amenities, cultural and ecological assets? What do you want to know more about?

*What can be done to protect these ammnities.
Is it impossible to prevent damage?*

2. Regarding coastal amenities, cultural and ecological assets, what conclusions from the Vulnerability Assessment stand out for you and why?

3. Do you have input for the team to consider as they develop specific adaptation measures for coastal amenities, cultural and ecological assets between now and the next workshop?

Social Vulnerability

1. Of the social vulnerability issues related to sea level rise, what are you most concerned about?

The economic impact.

Please use the space below to provide additional input, ideas, questions, and considerations for sea level rise planning in Venice.

k *city planning*
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Infrastructure and Civic Assets

1. What questions do you have about infrastructure and civic assets? What do you want to know more about?
Does our storm drain system operate in reverse?
(ie, 'Sunny Day Flooding'?)
2. Regarding infrastructure and civic assets, what conclusions from the Vulnerability Assessment stand out for you and why?
Venice already has systems in place: pump stations & tide gates. Increase redundancy by adding community solar to support energy for their operation. Make pumps & gates stronger/bigger. Raise some areas (do even parks)
3. Do you have input for the team to consider as they develop specific adaptation measures for infrastructure and civic assets between now and the next workshop? We should think about bringing the old Venice canals back - design them for sea level rise issues, way to clean water, support ecological habitat, recreation, tourism.

Property Assets

1. What questions do you have about property assets? What do you want to know more about?
Want to make sure any public dollars spent are equitably distributed & do not go to single family owners only for instance.
2. Regarding property assets, what conclusions from the Vulnerability Assessment stand out for you and why?
Portions of Venice are inland and most vulnerable (Venice Windward Circle for instance) - didn't know that.
3. Do you have input for the team to consider as they develop specific adaptation measures for property assets between now and the next workshop?
Need to tie zoning policy (height/density) to adaptation/mitigation solutions.
1) Raise height in Venice for bldgs.
2) Provide density minimums if you build, you must provide certain # of units - our PL spread-out policy not working!!



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Coastal Amenities, Cultural and Ecological Assets

1. What questions do you have about coastal amenities, cultural and ecological assets? What do you want to know more about?

We need Green Infrastructure: trees that hold water, planting also that cleans/spreads water, can be used for food.

2. Regarding coastal amenities, cultural and ecological assets, what conclusions from the Vulnerability Assessment stand out for you and why?

We need to adapt, protect, adjust our thinking change is coming & we have to be ready.

3. Do you have input for the team to consider as they develop specific adaptation measures for coastal amenities, cultural and ecological assets between now and the next workshop?

Need to protect lower income folks, support social & economic diversity

Social Vulnerability

1. Of the social vulnerability issues related to sea level rise, what are you most concerned about?

Public space on the beach is for everyone & we can't lose this!!

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Coastal Amenities, Cultural and Ecological Assets

1. What questions do you have about coastal amenities, cultural and ecological assets? What do you want to know more about?

*What can I do (politically? Individually?)
Where will the incursions be? When? Publicity of these events - Predictions*

2. Regarding coastal amenities, cultural and ecological assets, what conclusions from the Vulnerability Assessment stand out for you and why?

At what point, stage, incursion height will pumps be activated?

3. Do you have input for the team to consider as they develop specific adaptation measures for coastal amenities, cultural and ecological assets between now and the next workshop?

Any value in the tunnels from Venice Pier to walled-up port in the basement of townhouse bar? (A prohibition era

Social Vulnerability

1. Of the social vulnerability issues related to sea level rise, what are you most concerned about? *adaptation to low.*

I just heard concern for the large homeless housing project being proposed... "more stress on area"... loss of water absorption - Area of

Please use the space below to provide additional input, ideas, questions, and considerations for sea level rise planning in Venice.

*Dell Ave, Venice Housing Corporation
Becky Dennison*

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