RSAP Planning Practitioner Workshop

Session C. Vulnerability Assessment: Required Flood Hazards and Min Assets

Led By: Michelle Orr

This session will provide an opportunity to explore and discuss:

1. What is considered in a plan's **vulnerability assessment**?
2. What **flood hazards and minimum assets** are included?
3. How does this align with **existing local efforts** on these topics?

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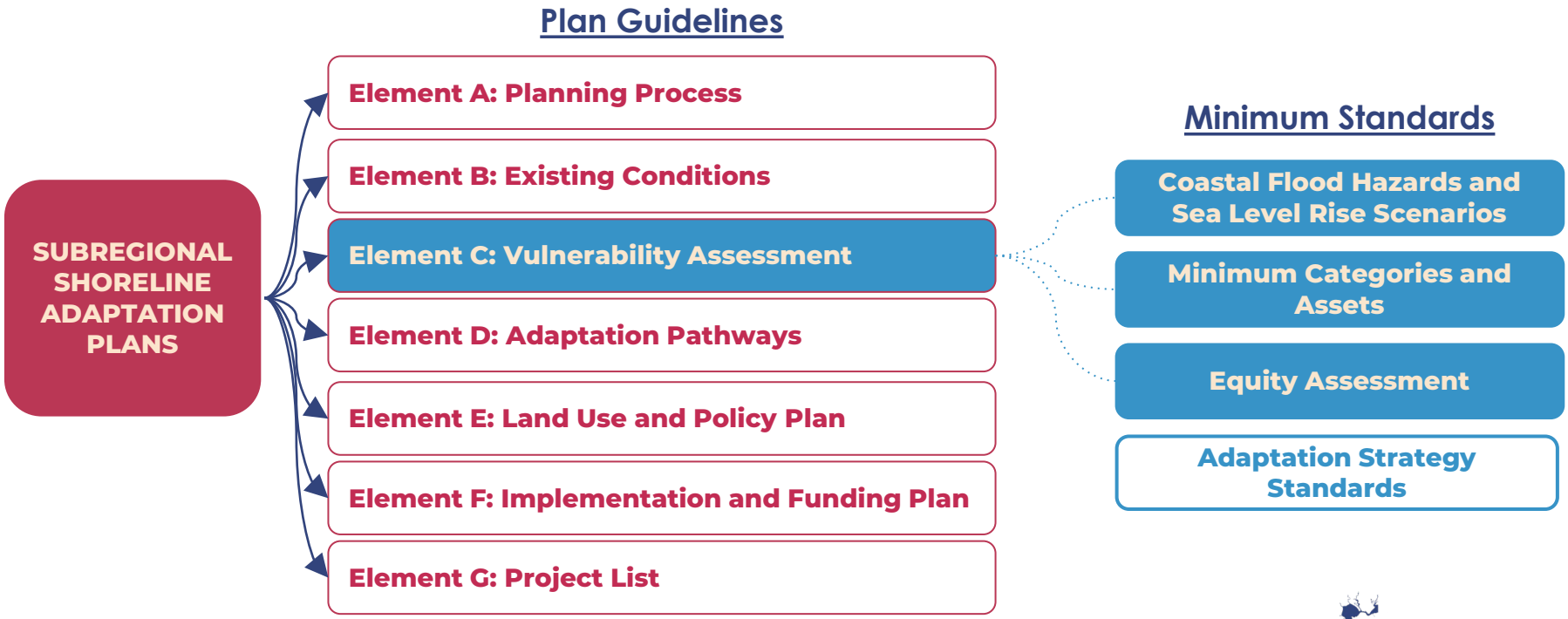
What must be considered in a Plan's Vulnerability Assessment?



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Minimum Standards

Coastal Flood Hazards and Sea Level Rise Scenarios

Required coastal flood hazards:

- **Tidal inundation**
- **100-year storm**
- **Shallow Groundwater**

Recommended coastal flood hazards:

- Compound Bay/fluvial flooding
- Nearshore wave height
- And more

Table X. Sea Level Rise Scenario Requirements

Sea Level Rise Scenario[24]			*Vulnerability Assessment*	*Adaptation Pathways*	*Additional details*
2050	INT	1ft	R	R	**Near-Term (present to 2050):** While the range of the OPC intermediate to high scenarios runs from .8 ft to 1.3ft, the RSAP guidelines only require 1 foot of SLR in the near-term scenario. This is because there is less uncertainty about sea level rise in the near term and regional data is not granular enough such that differences of 0.2-0.5ft warrant three distinct scenarios.
2100	INT	3.1 ft	R	R	**Mid-Term (2050 – 2100):** OPC recommends conducting a Vulnerability Assessment on all three of the 2100 scenarios. For adaptation pathways, the 2100 intermediate (INT) scenario is the minimum required for development according to the Adaptation Strategy and Pathways standards. However, jurisdictions are encouraged to use the intermediate-high or high scenario if it is appropriate for the jurisdiction. The 2100 HIGH scenario is required to be completed using a qualitative approach.
	INT-HIGH	4.9 ft	R		
	HIGH	6.6 ft	R	R	
2150	INT	6.1 ft			**Long- Term (2100-2150):** For Vulnerability Assessment, formal quantitative risk analysis for long-term scenarios is optional but encouraged. For Adaptation Pathways, a qualitative description of adaptation pathways is optional but encouraged.
	INT-HIGH	8.3 ft			
	HIGH	11.9 ft			

Sea level rise projections come from the Ocean Protection Council Updates SLR Guidance (2024)

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Minimum Standards

Minimum Categories and Assets

Minimum Categories and Assets							
	Topic Area	Category	Asset/Service	Data Sources*	Data**	Element B	Element C
R	Community Health & Well-Being	Populations	Vulnerable Populations	Social and Contamination Vulnerability (BCDC 2023)	✓		
			Population Demographics	US Census	✓	✓	✓
		Community Services	Health Care Facilities (OSHPD)	Health Care Facilities (OSHPD)	✓	✓	✓
			Cultural Resources	*Recommend local source*		✓	✓
			Tribal Resources	*Recommend local source*		✓	✓
R	Bay Ecosystem Health & Resilience	Existing Baylands Habitats	• Subtidal • Intertidal flats • Tidal marshes • Diked Baylands, Other Marsh • Diked Baylands, Open Water • Diked Baylands, Non-aquatic • Beaches • Rocky Intertidal • Estuarine-terrestrial Transition zones • Adjacent uplands – undeveloped or lightly developed • Eelgrass • Creeks & Channels draining to Bay	Baylands Habitat Map 2020 (SFEI 2024) Eelgrass Habitat Suitability Model Explorer- Current Conditions	✓	✓	✓
		Baylands Habitat Resilience Characteristics, Services, and Functions	• Habitat resilience characteristics (qualitative) • Ecosystem services and functions (qualitative)	SFBJV 2022 Restoring the Estuary Baylands Resilience Framework (SFEI) Baylands Goals Project (1999 and 2015 update) SF Bay Shoreline Adaptation Atlas (SFEI	✓	✓	✓

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What is "Vulnerability" process laid out in the Vulnerability Assessment?

Vulnerability = **Exposure** + **Sensitivity** + **Adaptive Capacity** + **Consequence**

Guideline C1 requires all Minimum Categories and Assets have an exposure analysis for all required Coastal Flood Hazards

Guideline C2 requires jurisdictions to identify priority assets, including:

- Locally important
- Regionally important
- Exposed in 1ft SLR scenario

Subset of assets undergo a more detailed VA including sensitivity, adaptive capacity, and consequence that become priority areas for adaptation

Element C: Vulnerability Assessment Guidelines

C1. Describe the **exposure** of people, assets, and services to coastal flood hazards across minimum sea level rise scenarios.

C2. Conduct a **vulnerability assessment** for high priority areas and summarize vulnerability to current and future hazards.

C3. Identify and **describe reaches** that cover the entirety of the planning area, based on existing conditions, exposure, and vulnerability.

C4. Identify **priority action areas** based on vulnerability.

How does this approach to VA reflect what you currently do?

- Please **share local examples** of what you have already done – struggled with or succeed with – in terms of Vulnerability Assessments for SLR
- Please let us know if you have **questions or something is unclear** in our guidelines and standards
- Please let us know how we can **clarify or improve this language** or process for local planners

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