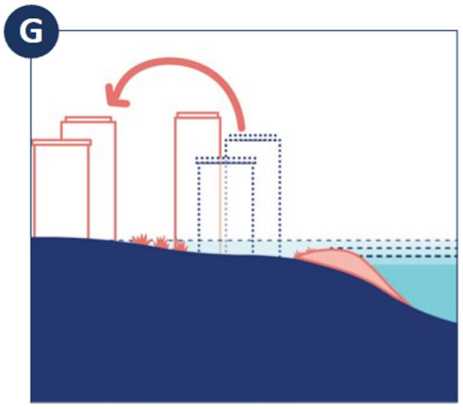
STRATEGY G - HIGHER SEA LEVEL RISE - ALIGN WITH WATERSHEDS

Advances shoreline adaptation while working with natural inland flooding patterns to floodproof some buildings and infrastructure to move others away from the highest risk areas

Draft Waterfront Adaptation Strategies

The Port of San Francisco, in partnership with the U.S. Army Corps of Engineers and San Francisco city agencies, has developed seven Draft Waterfront Adaptation Strategies based on over five years of public engagement. Draft Adaptation Strategies are ready for public feedback, with a goal of reaching a Draft Waterfront Adaptation Plan (Tentatively Selected Plan) by summer 2023. Learn more at **sfport.com/wrp/waterfront-adaptation**.

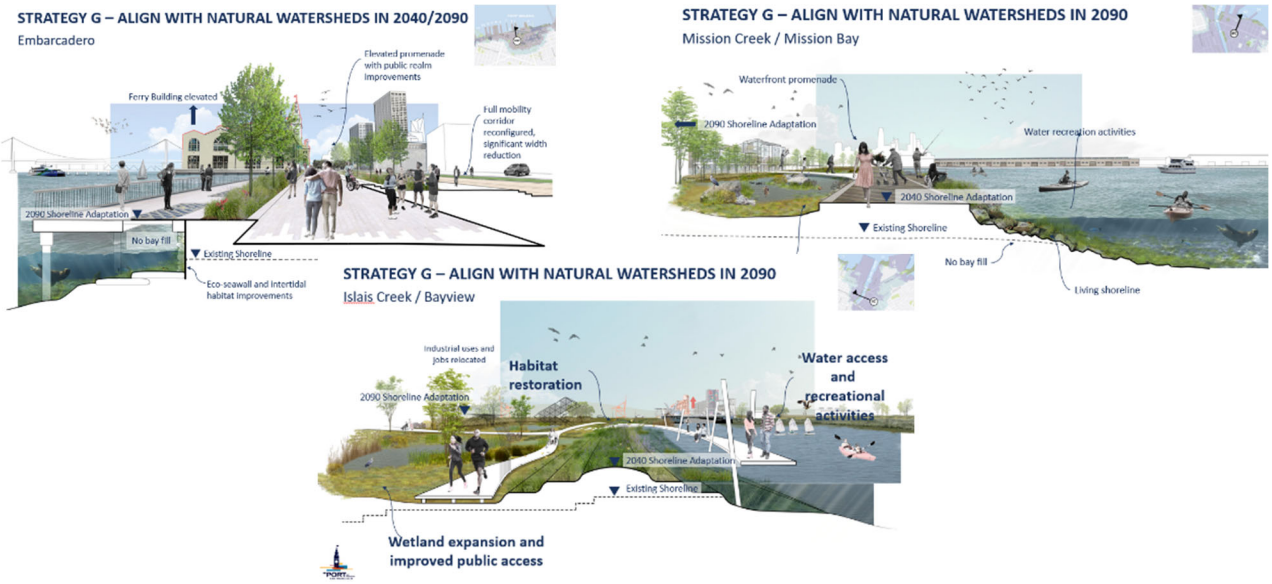


Strategy G – Higher Sea Level Rise – Align with Watersheds

Strategy G advances shoreline adaptation while working with natural inland flooding patterns to floodproof some buildings and infrastructure and move others away from the highest risk areas. This strategy addresses the flood risk associated with 3.5 feet of sea level rise in 2040 and up to 7 feet in 2090.

Strategy G would be the most transformative to parts of the waterfront over the long term. It would enable the City to rely more on natural drainage rather than large pumping systems. For several decades, it would mostly defend the existing shoreline, except on Port working land which would be adapted to flooding. This strategy emphasizes the public's feedback that we work with nature to address past environmental harms. This approach would begin to restore historic natural watersheds at the creeks.

Over the long term, it would establish new open spaces and wetlands, but would require relocating or adapting some buildings and jobs. It would entail big changes to transportation infrastructure and have a substantial construction impact but provide a wider breadth of adaptation options for future generations.



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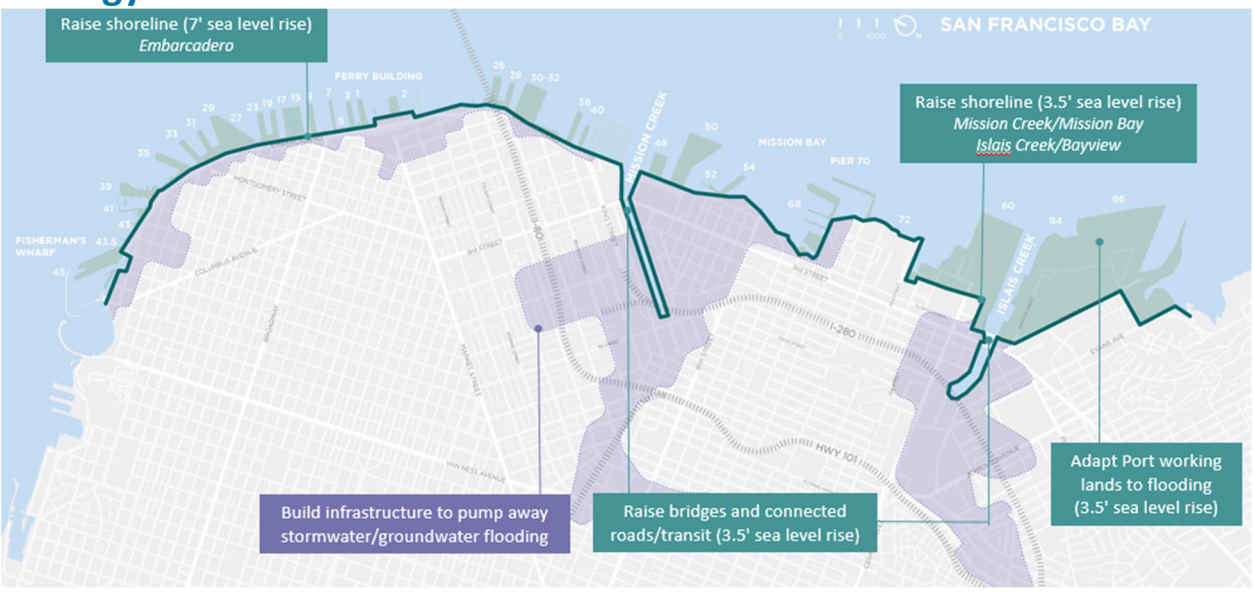
Strategy G Flood Defenses in 2040



Strategy G 2040 Flood Defenses Across the Waterfront

Islais Creek / Bayview

- Elevate the bay and creek shorelines to defend against 3.5 feet of sea level rise.
- Consolidate Port operations inland and adapt to flooding, connecting to water via piers, allowing improved shoreline open space and habitat.
- Raise bridges, roads, and transit connecting to Third and Illinois Streets over the creek channel.
- This strategy requires developing a comprehensive set of land use tools and policies to gradually vacate this zone, which could include voluntary buyouts, rezoning, grants, loans and incentives, and other assistance programs.

Mission Creek / Mission Bay

- Elevate the bay shorelines to defend against 3.5 feet of sea level rise.
- During extreme events, temporary closure structures would be placed on both sides of Third and Fourth Street bridges over the creek to reduce inland flooding.

Embarcadero

- Build a coastal flood defense system at the existing shoreline to defend against 7 feet of sea level rise.
- Reconfigure the Embarcadero roadway. This strategy would require no bay fill, but have the most impact on the Embarcadero Roadway, requiring a reduction in width.
- Raise the Ferry Building at its existing location.
- Provide a moderate sized pedestrian promenade.
- Build pump stations to manage stormwater and groundwater flooding.

STRATEGY G - HIGHER SEA LEVEL RISE - ALIGN WITH WATERSHEDS

Advances shoreline adaptation while working with natural land flooding patterns to floodproof some buildings and infrastructure and move others away from the highest risk areas

Strategy G Flood Defenses in 2090

Strategy G 2090 Flood Defenses Across the Waterfront

Islais Creek / Bayview

- Over several decades, gradually vacate limited areas near Islais Creek Channel (no residential areas impacted).
- Although no residential areas would be affected, the equity implications of relocating industrial uses and the jobs they support must be addressed.
- Widen and extend the creek channel Westward beyond I-280.
- In vacated areas, establish floodable open space zone that provides recreation, stormwater infiltration and improved habitat.
- Modify zoning codes to support land-use changes and the relocation of some industrial jobs.
- Invest in public access improvement along the creek with natural areas and recreational spaces.
- Provide protection for up to 7 feet of sea level rise at outer edge of floodable zone.

Mission Creek / Mission Bay

- Allow water to come into the Mission Bay area as sea levels rise to 7 feet or more. Mission Bay would be transformed to a floodable district, with significant changes to all urban systems. Housing would not be relocated or removed but will need accommodations to deal with flooding and access.
- Manage streets and open spaces as floodable natural areas.
- Flood-proof or elevate buildings and infrastructure.
- Connect buildings with elevated walking and biking paths.
- Raise the roadway for cars and public transportation and reroute some transportation inland.

Embarcadero

- Shoreline adaptations would be built to defend against up to 7 feet of sea level rise in 2040, so no long-term actions would be needed.

STRATEGY G - HIGHER SEA LEVEL RISE - ALIGN WITH WATERSHEDS

Advances shoreline adaptation while working with natural land flooding patterns to floodproof some buildings and infrastructure and move others away from the highest risk areas

Overview of All Seven Draft Waterfront Adaptation Strategies

Adaptation Strategies are different ways for the City to create a resilient, sustainable, and equitable waterfront for the next 100 years. Each one is a combination of construction projects and policy changes that will guide such decisions as where, when, and how high to build flood defense and how and when to adapt key buildings and infrastructure to ensure continued operations of City services.

Draft Waterfront Adaptation Strategy Summary				
Strategies		**+1.5' Sea Level Rise**	**+3.5' Sea Level Rise**	**+7' Sea Level Rise**
A – No Action	No Action			
B – Nonstructural Option	Nonstructural Option	✓	✓	✓
C – Lower Sea Level Rise	Lower Projected Sea Level Rise	✓		
D – Lower Sea Level Rise – Adaptable		✓	✓	
E – Hold the Line	Higher Projected Sea Level Rise	✓	✓	✓
F – Manage the Water		✓	✓	✓
G – Align with Watersheds		✓	✓	✓

The Port Wants to Hear from You!

Public feedback on the Draft Waterfront Adaptation Strategies will inform further strategy development, with a goal of reaching a Draft Waterfront Adaptation Plan (Tentatively Selected Plan) by summer 2023.

There is no single approach to adaptation that will meet the needs of San Francisco along the entire waterfront. The different risks, topography, and historic development of the waterfront means that we will need to use a combination of approaches. The intent is not to choose one but to use the best ideas from all of them to create a Draft Waterfront Adaptation Plan.

Visit **sfport.com/wrp/our-waterfront** for more information about upcoming community events.