Waterfront Plan Update
Resilience Subcommittee
March 29, 2017 Meeting Notes

Subcommittee Members Present: Mike Buhler, Pia Hinckle, Aaron Hyland, Earl James, Peter Summerville, John Tobias, Dilip Trivedi
Absent: Grant Ballard

Other Working Group Members Present: Linda Fadeke-Richardson, Ellen Johnck, Stewart Morton, Alice Rogers

Advisory Team Members Present: Max Lowenstein, Justin Semion, Bill Tremayne

Port Staff: Carol Bach, Anne Cook, Diane Oshima, Diana Bartram

Agency Staff: Mark Palmer and James Slattery (SF Environment), Andrea Jorgensen and Lisa Starliper (DEM), Diana Sokolove, Paul Maltzer and Maggie Wenger (SF Planning)

1. Welcome & Meeting Goals

Chair Pia Hinckle welcomed attendees, introductions were made, and the following meeting goals were discussed.

- Review and discuss policy ideas for 3 resilience topics
- Roll forward anything we don't complete to the April 19th Meeting
- April 19th meeting also will include Social Cohesion and Equity
- The Subcommittee likely will take a hiatus after the April 19th meeting so staff can further study policy ideas discussed, and integrate them with other Port, City, and regional resilience planning efforts and the work of the Land Use and Transportation Subcommittees

2. Acceptance of February 1, 2017 Draft Meeting Notes

- The meeting notes were accepted; no changes

3. Discussion of March 1, 2017 Designing for Resilience Workshop

- Staff incorporated most relevant workshop ideas into the resilience policy ideas that will be discussed at this meeting. Staff will provide a more detailed report at the April 19th meeting, including which ideas will be further discussed in one or more of the three Subcommittees.

4. Review and Discussion of Resilience Policy Ideas and Guidance.

Resilience – the capacity of the Port to maintain its function and vitality in the face of natural or human-caused disruptions or disasters – is a new subject for the Waterfront Land Use Plan ("Waterfront Plan"). Although the 1997 Waterfront Plan touched on some policy issues often included in resilience policies today (e.g. preservation of important characteristics and functions of the San Francisco Waterfront, diversity and equity) it did so with a relatively light touch. The Waterfront Plan also preceded current understandings about the nature and extent of the Port's seismic, climate change, and public safety challenges.

Successful resilience planning for climate change, sea level rise, disaster response, and social equity requires that local entities like the Port collaborate with agencies beyond their jurisdictional boundaries. Examples of the Port's local and regional collaborations include:

- Resilient SF
- Mayor's Sea Level Rise Coordinating Committee
- CHARG - Coastal Hazards Adaptation Resiliency Group

Port staff has recommended a new resilience goal and related policies for the Waterfront Plan Update to:

- Elevate resilience as a key "value" and goal of the Waterfront Plan;
- Incorporate existing City and Port resilience, emergency preparation and disaster recovery requirements that affect waterfront land use, planning, development and construction;
- Align with the Port's new **2016-2021 Strategic Plan** objectives that address resilience;
- Guide the Port's land use and planning decisions to ensure they continue to reflect public values about the form and function of the waterfront to inform the design and development of resilience improvements, including the Seawall Resilience Project; and
- Inform and coordinate with City and regional resilience planning efforts.

The Waterfront Plan's new resilience policies should be consistent with the significant resilience planning and policy work in place and underway in the City, Bay area and beyond.

The Resilience Subcommittee discussed environmental sustainability policy ideas at earlier meetings. Resilience and environmental sustainability are interrelated issues. For example, sustainable land management practices to improve wetlands and tidal habitats can make areas more resilient to sea level rise, water pollution, and other stresses. As the Waterfront Plan Update process moves forward, there will be further redrafting and integration of all policy ideas to ensure clarity and consistency.

Prior to the meeting, Port staff provided Policy Context and Discussion ideas for 3 Topics discussed below. Staff reminded attendees that Subcommittee policy discussions will provide guidance to Port Staff as they draft proposed updates to the 1997 Waterfront Land Use Plan. The discussions are on-going and iterative, and will require further revision and reconciliation with ideas generated in the Land Use and Transportation Subcommittee meetings, full Working Group meetings, and other public forums, before ultimately being considered by the Port Commission. The policy ideas provided are in regular text below, followed by comments in italics that were received during the March 29th meeting.

5. Topic 1 - Emergency Preparedness & Disaster Recovery - Policy and Discussion Ideas:

Planning, Training and Mitigation

1. Develop and maintain/update plans to ensure availability of Port facilities and lands needed for the movement of people, goods and debris after an emergency.
2. Maintain and update the Port's Emergency Response Plan, in compliance with applicable City, state and federal regulations.

Comment: Port staff maintain the Port's Emergency Response Plan continuously, updating it to reflect changes in capacity, policy and practice. The Port conducts "table top" exercises monthly with the City's Department of Emergency Management (DEM) and larger exercises that include deployment of personnel and equipment at least annually.

3. Retain waterside access for loading/unloading vessels, and space to stage people and resources.
4. Maintain flexible areas of Port lands (parks, parking lots, under-developed industrial lands) that can be used for staging response and recovery operations after a disaster.

Comment: DEM regularly reviews availability of open space in the city to pre-identify areas that can be used for staging and other emergency response/disaster recovery services. Port lands, such as Pier 80 and 96, are primarily identified for water transport of goods. These lands are not necessarily reserved for that purpose, but changes to large spaces also happen infrequently, so there are opportunities to plan for change.

5. Improve the Port's ability to facilitate evacuations by strengthening the structures and improving the capacity and flexibility of existing ferry, water-taxi, and other vessel landing facilities *and protecting access to them*.

Comment: There are designated emergency routes to water transit locations within the city.

6. Identify where additional facilities may be needed; determine if existing waterfront infrastructure could be modified to enable emergency ferry access (e.g., openings in railings, mooring features, and dual docking capacity).
7. Integrate protection of the Port's historic and cultural resources in the Port EOP for all phases of emergency response and disaster recovery and reconstruction efforts.
8. Continue to monitor and integrate climate change projections into the Port's emergency planning and preparedness efforts, and assess how SLR may affect critical facilities.
9. Develop and maintain mutual aid agreements and regional joint exercises with local, regional and state governments as well as other relevant agencies.
10. Encourage tenants to evaluate their earthquake risks, and work closely with them to maximize emergency preparedness and disaster recovery operations; foster tenant-to-tenant connections to advance disaster readiness and response.

Comments: Consider including neighborhood and business connections and homeowners associations too. Add references to Neighborhood Emergency Response Team (NERT) - a volunteer organization that works with the SF Fire Department to help neighborhood groups prepare for and respond to emergencies. The Port should reach out to tenants regarding the availability of and encourage participation in NERT, working with each other and with homeowners associations on adjacent (i.e. across the street) or nearby property. The Port could use its existing advisory groups to build awareness of NERT.

The Port should identify "vulnerable" businesses (i.e. small businesses, legacy businesses) and educate them about their own responsibilities vs. Port's responsibilities to prepare for emergencies and post disaster assistance.

11. Identify, replace, and protect vulnerable infrastructure and critical service lifelines in high-risk areas.

Comment: need to identify/evaluate non-Port structures (like Municipal Pier) that protect the Port and its operations.

Response and Recovery

1. Develop a long-term recovery plan to bridge the gap between emergency response and long-term recovery of Port activities/operations, including focused attention on cost recovery.
2. Work closely with the SFMTA, BART, WETA, Golden Gate Ferries, and other regional transportation providers to increase the resiliency of Port, City and regional transportation facilities and ensure continuity of operations to serve the Port.
3. Continue coordination with emergency managers, tenants, water transit agencies, ferries and private boat operators to facilitate safe and efficient water transport and maritime evacuations; collaborate with regional partners to maximize water-borne movement of supplies, reconstruction materials and debris.
4. Seek state and federal funding for mitigation projects, collaborating with other local and regional agencies as needed to maximize success.
5. Continue participation in the San Francisco Lifelines Council and support development of a regional lifelines council of Bay Area cities and agencies; water, energy, transportation, and communication and other "lifeline" providers; and non-governmental organizations, to improve communication and collaboration, share disaster response and recovery planning, and coordinate restoration of lifeline systems as quickly as possible after a disaster.
6. Utilize green building practices and ensure quality design in rebuilding projects.

6. Topic 2 - Sea Level Rise and Flood Protection - Policy and Discussion Ideas:

Port-wide Considerations

1. Develop a strategy that includes short, mid- and long-term planning and implementation timeframes to ensure that new Port projects include appropriate flood protection and SLR adaptations that advance the Port's and City's goals; develop near-term adaptation plans for higher risk assets and areas.

> *Comments: Finding money to address existing infrastructure and seismic risk should be part of Port's strategy. Consider setting a time frame for a broader public process that addresses choices and tradeoffs, perhaps using a city/regional frame.*

2. Continue to examine the risk of flooding due to the effects of climate change, including storm surges, changes in precipitation patterns, and SLR, to develop a more-detailed, site-specific understanding of the Port's vulnerability and prioritize action areas.
3. Work closely with FEMA to accurately reflect current flood risks at the Port.
4. Take an agile adaptive management approach to planning and implementing SLR adaptations that reflect evolving best practices and changing conditions; evaluate costs and benefits, monitor results, and adjust future actions accordingly.
5. Consider a wide range of strategies for managing SLR, including armored edges, elevated land or floors, floating development, floodable development, living shorelines or wetlands, and managed retreat; choose strategies that reflect the unique character, location, and land uses of adjacent neighborhoods.

> *Comment: There are existing examples of this. Treasure Island will adapt to SLR by having setbacks that allow for anticipated flooding. The Mission Rock and Pier 70 Waterfront developments at the Port plan to adapt by raising elevation. The Port's Crane Cove Park is designed to allow flooding.*

6. Leverage SLR adaptation planning to achieve a broad range of Waterfront Plan urban design, historic preservation, public access, transportation, maritime, ecological, and recreational goals and

other public benefits.

Comment: The WLUP should recognize the need for a master plan, including vulnerability assessment, implementation plan, and timeline. Establish a long term vision for the waterfront. If you are making seismic improvements you should get other urban design benefits as well. The plan should include specific timelines for what can be accomplished in the next 5 years, 10 years, etc.

7. Develop a publicly-vetted cost benefit analysis framework to evaluate and prioritize public benefits that should be achieved in major resilience and public infrastructure improvements.

Comment: All City projects have to follow a prescribed process for evaluating cost effectiveness and resilience to SLR prior to seeking funding through the Capital Planning Committee. BCDC is another agency for which financial analysis is done prior to permit issuance.

8. *Clean up* contaminated lands *in ways that consider inundation* caused by rising seas.

9. Work closely with the historic preservation community, SHPO, and other interested stakeholders to integrate protection of the Port's historic and cultural resources with resilience planning and design. Develop guidelines for acceptable changes and interventions to maximize protection of historic resources.

Comment: The seawall is the historic resource. Port should be talking to SHPO now about historic preservation of the seawall.

10. Work proactively with Port maritime and non-maritime tenants, legacy businesses, and development partners to identify early investments in resilience projects, including interim measures that would eliminate or reduce later, more costly repairs or optimize the life of Port assets; explore innovative leasing, financial and other incentives to bring them to fruition.

11. Prioritize protection of City and regional transportation and utility networks (e.g., BART, MUNI, Ferry System, sewer and stormwater systems.)

Comment: The Mayor's Office of Economic and Workforce Development is doing this on the Southern Bayfront, where developers are required to contribute funds for infrastructure improvements to adapt to SLR.

12. Leverage existing intergovernmental alliances with City, regional, state and federal partners and form innovative, new partnerships to catalyze policy changes, pilot projects and spur investments to meet the Port's most pressing resilience challenges.

13. Promote public understanding of resilience challenges and opportunities (e.g., SLR adaptation, earthquakes and other disasters, protection of the historic, cultural, and ecological resources) and develop support for planning, funding and implementing resilience improvement measures.

Comment: Educate tenants about their SLR risk.

Project-level Considerations

When evaluating design alternatives for Port projects, consideration should be given to the following priorities:

a. Avoid major changes to the existing form of the waterfront that may prove unnecessary; instead design to support future adaptations, if/when needed.

b. Maximize protection of existing working waterfront berthing and dockside operations and future use/adaptation of the waterfront's edge for vessel docking, berthing or tie-ups, including for emergency response operations and water recreation.

c. Maximize protection of the Port's historic and cultural resources.

d. Avoid significant impediments to existing physical and visual public access and/or provide new or enhanced public access, views, and connections to the Bay.

e. Preserve and enhance existing natural shoreline edges to the maximum feasible extent.

f. Integrate existing SLR adaptations with retrofits that slow down, capture and reuse water that flows into creeks and the Bay from Port and upland areas.
g. Use materials for new shoreline edges and in-water structures that foster a rich marine habitat, promote ecological functioning, and enhance the Bay.
h. Provide inviting connections to and between waterfront public access and open spaces.
i. Incorporate resilience best practices for raising structures or ground floors; protecting and elevating critical power, mechanical, hazardous material, fuel and trash storage and other infrastructure; cladding and bolstering vulnerable building exteriors.
j. Minimize short-term, construction impacts and maximize long-term improvements to the waterfront's multi-modal transportation network.

7. Resilience Topic 3 – Seismic Safety - Policy and Discussion Ideas:

Port-wide

1. Reduce structural and nonstructural hazards to life safety and minimize property damage resulting from future seismic events; provide information and guidance to help tenants incorporate earthquake safety in their uses and operations of Port facilities.
2. Continue to seismically retrofit vulnerable Port buildings, piers and other infrastructure.
    Comment: In addition to retrofitting existing, create expectation that structures will be habitable and survive interruption of services after a disaster.
3. Work with City officials, design professionals, and community members as they develop higher standards for building safety and post-earthquake re-occupancy, ensuring their applicability to the Port's unique structures.
4. Reduce risks to life safety while still preserving the architectural character of buildings and structures important to the unique visual image of the San Francisco waterfront, and increase the likelihood that historically valuable structures will survive future earthquakes.
5. Create a database of vulnerable Port buildings, seismic evaluations, and seismic retrofits to track progress, record inventories, and evaluate and report on retrofit data.
6. Recognize and ensure projects evaluate unique seismic issues associated with filled lands and shoreline stability, such as liquefaction, lateral spreading, and amplified ground motions.

Seawall Resilience Project

1. Improve earthquake safety of the historic Embarcadero Seawall and reduce the potential for seismic damage and disruption to Port facilities, and City transportation and utilities within The Embarcadero and upland properties, without delay.
    Comment: Prioritization of near-term projects under the Seawall Resilience Project should consider strengthening essential structures and infrastructure as well as life safety risk.
2. Develop a planning framework so that near-term Seawall seismic improvements are informed by an outlook and strategy for short-, mid-, and long-term sea level rise adaptation.
    Comment: In Northeast Sub-area planning process, consider whether development needs to be constrained in any way to preserve space or land that might be needed to rehabilitate the seawall.
3. Incorporate easily implementable near-term measures that can improve life safety, protect critical infrastructure and assets, and control damage of historic structures.
4. Recognize and support the public commitment to maintenance and rehabilitation of structures in the Embarcadero Historic District (including the Seawall), which is a defining feature of San Francisco.

5. Include opportunities for ecological and environmental enhancements to the Bay in the Seawall Resilience Project.
6. Limit disruption during construction, especially to business and transportation, *and especially to legacy and maritime tenants.*
7. Seek a wide variety of local, state, federal and private funding sources.
8. Ensure transparency and accountability to the public and all stakeholders.

Comment: Need to emphasize public education and outreach required to support resilience projects.

8. Next Steps

- April 12th - Land Use Subcommittee Meeting
- April 19th - Resilience Subcommittee Meeting
- May 3rd – Transportation Subcommittee Meeting