

Sea Level Rise Checklists

Incorporating Sea Level Rise into Capital Planning

October 3, 2022



Introduction

The purpose of SLR Checklists is to raise awareness of adaptation planning, create some analytic rigor in terms of thinking through how projects can be designed to respond to SLR, & the analysis can be used as a tool to seek funding.



Capital Plan

- Provides road map for ensuring long-term safety, accessibility, & modernization of infrastructure & facilities.
- Guidance provides departments with step-by-step approach for considering SLR vulnerability & risk.
- Requires all projects over \$5 million located in SLR zone to submit completed checklist to City Engineer & City Administrator for project to be eligible for inclusion in Capital Plan or Capital Budget.



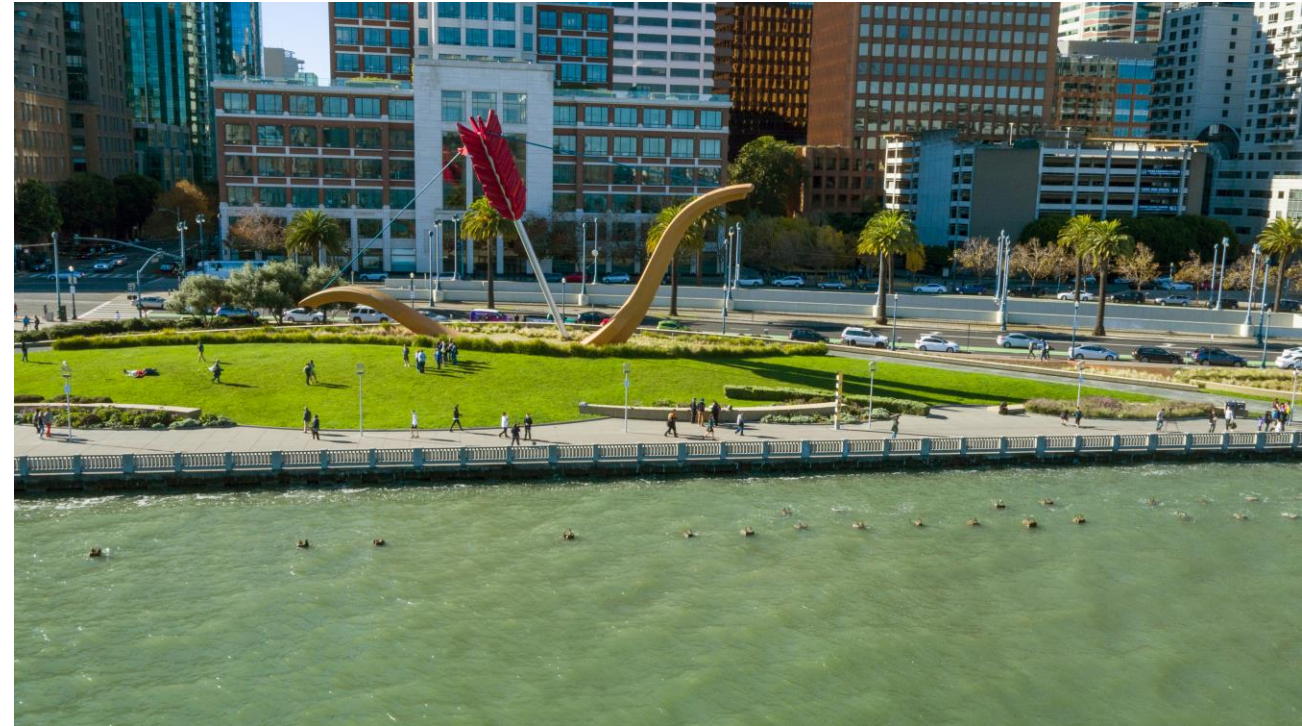
Benefits

- Adaptation measures can potentially open-up new funding streams for project proponents.
- Federal, state, & private funds available for projects.
- For example, FEMA's Building Resilient Infrastructure & Communities funding program.
- Bond language requires floodproofing.

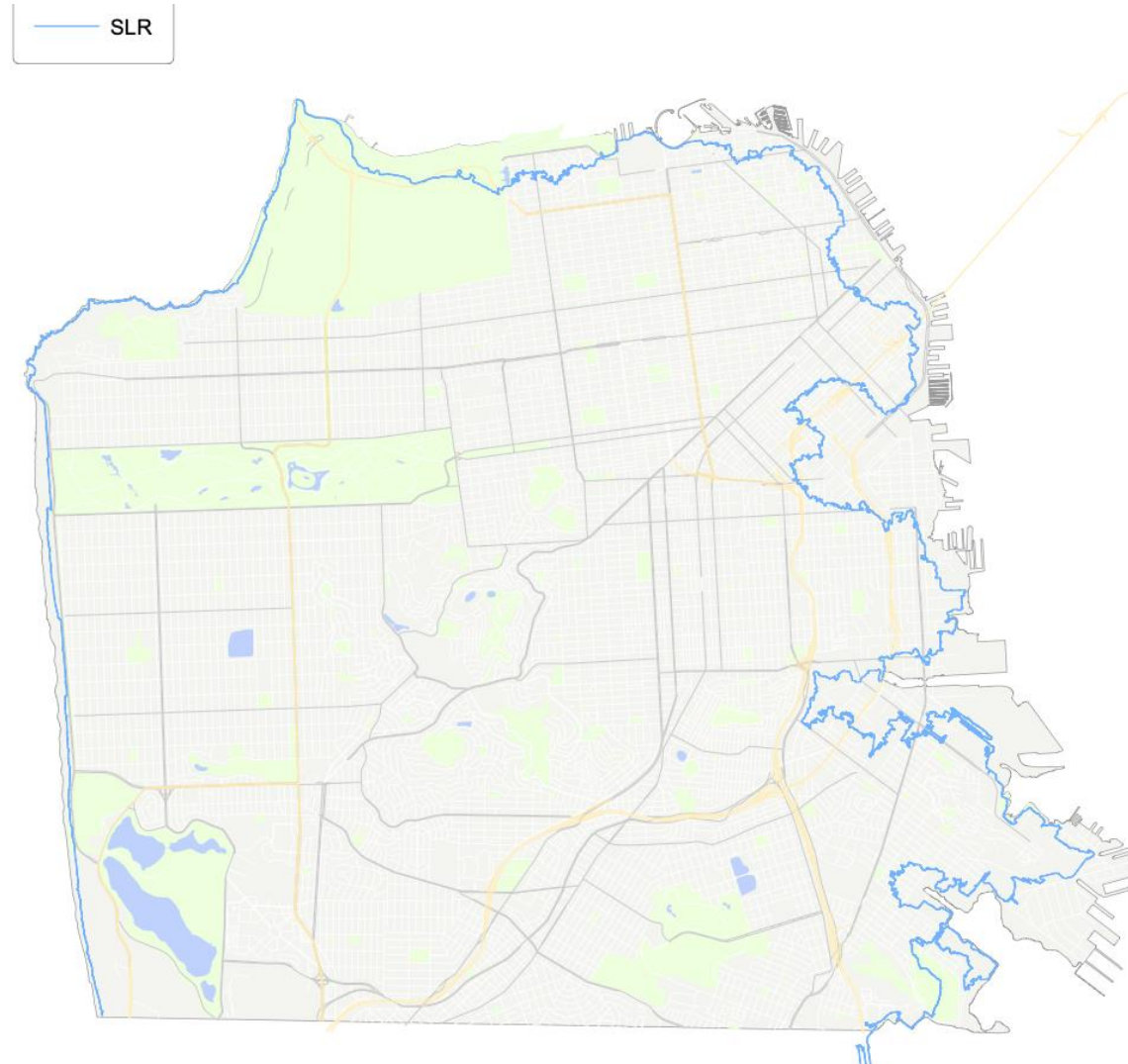


Principles of SLR Adaptation

- Increase project resilience – a resilient facility should be built to withstand, or recovery quickly from, natural hazards.
- The SLR Guidance & Checklist help the City:
 - Update & adopt new SLR science as the projections are updated, revised, & the science evolved.
 - Increase the resilience & adaptive capacity of City projects.
 - Implement a standard vulnerability assessment process to aid in consistency.



Location – Is Project Located in an Inundation Zone During Its Lifespan?



Sea Level Rise
Inundation Mapping

Propose Adaptation Measures



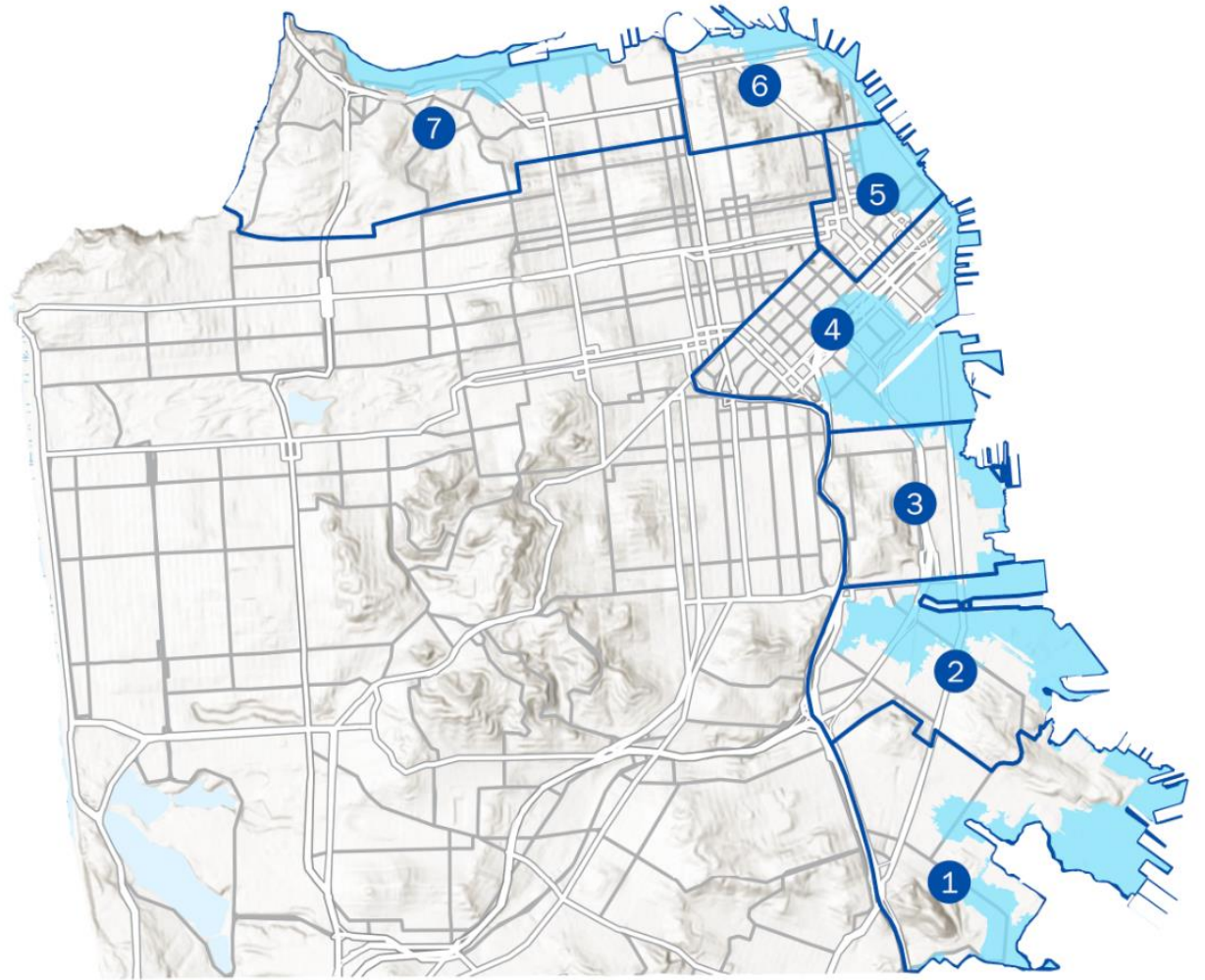
Checklists

- Public Works recently received over 30 checklists
- Criteria for evaluation:
 - Site information is plausible.
 - Project scope is clearly presented.
 - Project lifespan is plausible.
 - Establishes whether SLR analysis is relevant to scope of project.
 - Distinguishes between physical & functional adaptation.
 - Distinguishes between measures to address current flooding v. SLR.
 - Contains analysis of adaptive capacity of project.
 - Considers project scope modifications to address adaptive capacity.



What's Working Well

- We have pioneered a data-driven system.
- We have pretty good information about project locations.
- Tool for determining elevation has been developed.



What Needs Improvement

- Checklists need to include actual adaptation measures.
- People focused on numbers rather than ensuring project was adaptable.
- We need to define the universe of projects: capital planning is considering options; identifying capital projects; and we need to work with enterprise agencies to coordinate timing.

Discussion

- Where do adaptation strategies come from? We would like to propose standard adaptation measures.
- How do we ensure the horizontal infrastructure network is resilient in addition to specific buildings/sites? In other words, how do we address block-level SLR resiliency?
- How do we operationalize SLR adaptation measures, for example, with Islais Creek Bridge and Ocean Beach? Should we provide a help desk, and who should provide that service?
- We are we looking at stressors such as other flooding hazards, heat, & air quality - should we include them in the guidance?



Thank You!

For more information, please contact:

Sandra Hamlat

Office of Resilience and Capital Planning

Principal Resilience Analyst

415.554.6283

sandra.hamlat@sfgov.org



A Collaboration Between:



SF Environment

