

Draft Sediment Quality Objectives for Enclosed Bays and Estuaries

State Water Resources Control Board
Hearing
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Presentation

- Background
- Basis for Conceptual Approach
- Draft Plan
- Schedule
- Contact Information

Sediment Quality Objectives

- A Standard for Sediment Quality...*that is a means to differentiate sediment impacted by bioavailable toxic pollutants from those that are not*
- Legally no different than a Water Quality Objective
- But.....very difficult to develop
 - There are no state wide sediment quality objectives in the Country

Basis for Developing SQOs

- In 1989, the California Water Code was amended to require the State Water Board to develop SQOs (Chapter 5.6 Sections 13392.6, 13393.).....did not happen for a variety of reasons
- In 1999, the State Water Boards was sued and lost over, among other things, failure to develop SQOs
- As a result the State Water Board was required to develop and adopt SQOs in a relatively short time frame

Conceptual Approach

- No single tool can reliably predict whether pollutants in sediment may pose a risk or not
 - Sediment chemistry doesn't account for the pollutants that are tightly bound versus those that can be transported across biological membranes
 - Sediment toxicity laboratory bioassays use disturbed sediment and assess limited number of life histories/exposure pathways, organisms may or may not be native
 - Benthic community represents the actual health of a ecologically significant receptor but can be disturbed by natural or non pollutant related stressors
- Applying multiple tools can reliably predict sediment quality
 - *Multiple Lines of Evidence Approach or Sediment Quality Triad.*
 - Rarely applied within a regulatory framework. Typically applied using best professional judgment

Draft Plan

Overview of Plan

- Narrative SQOs
- Interpreted using specific indicators and thresholds
- Implementation language describing;
 - Application of SQOs within specific programs
 - NPDES Permits
 - 303(d) listings (waterbody impairment)
 - Dredging
 - Exceedence of SQOs
 - Response Actions
 - Stressor Identification
 - Biological based pollutant targets

Draft Plan

Collect and analyze samples
Chemistry, Toxicity, Benthos

Compile and summarize data
QA review, means/sums

Apply Indicators for each LOE
Indices and thresholds

Determine LOE Category
Integrate indicators

Station impact assessment
Compare LOEs

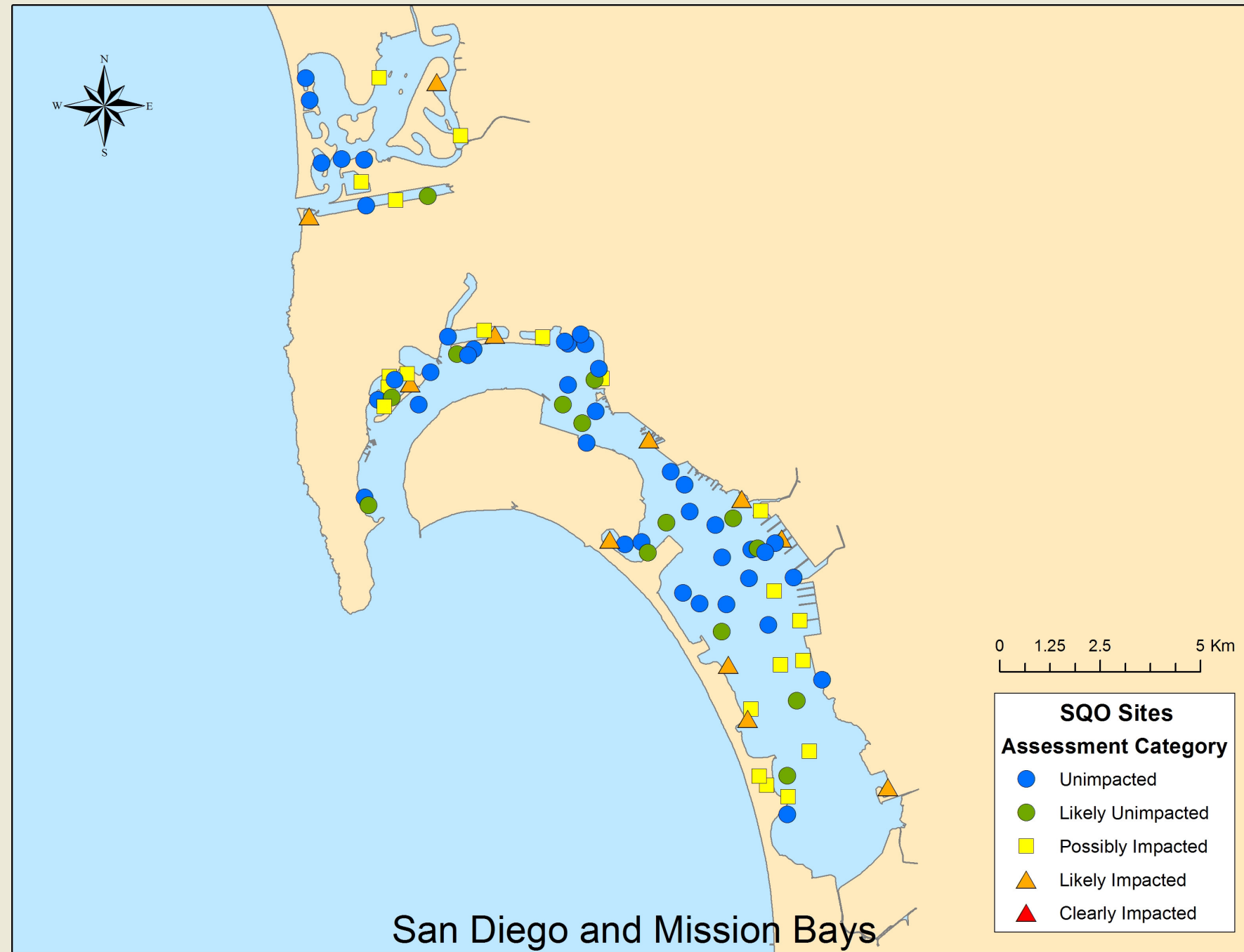
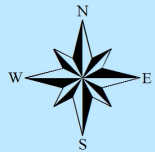


Draft Plan

Station Assessment categories

- Unimpacted
- Likely Unimpacted
- Possibly Impacted
- Likely Impacted
- Clearly Impacted
- Inconclusive

Application

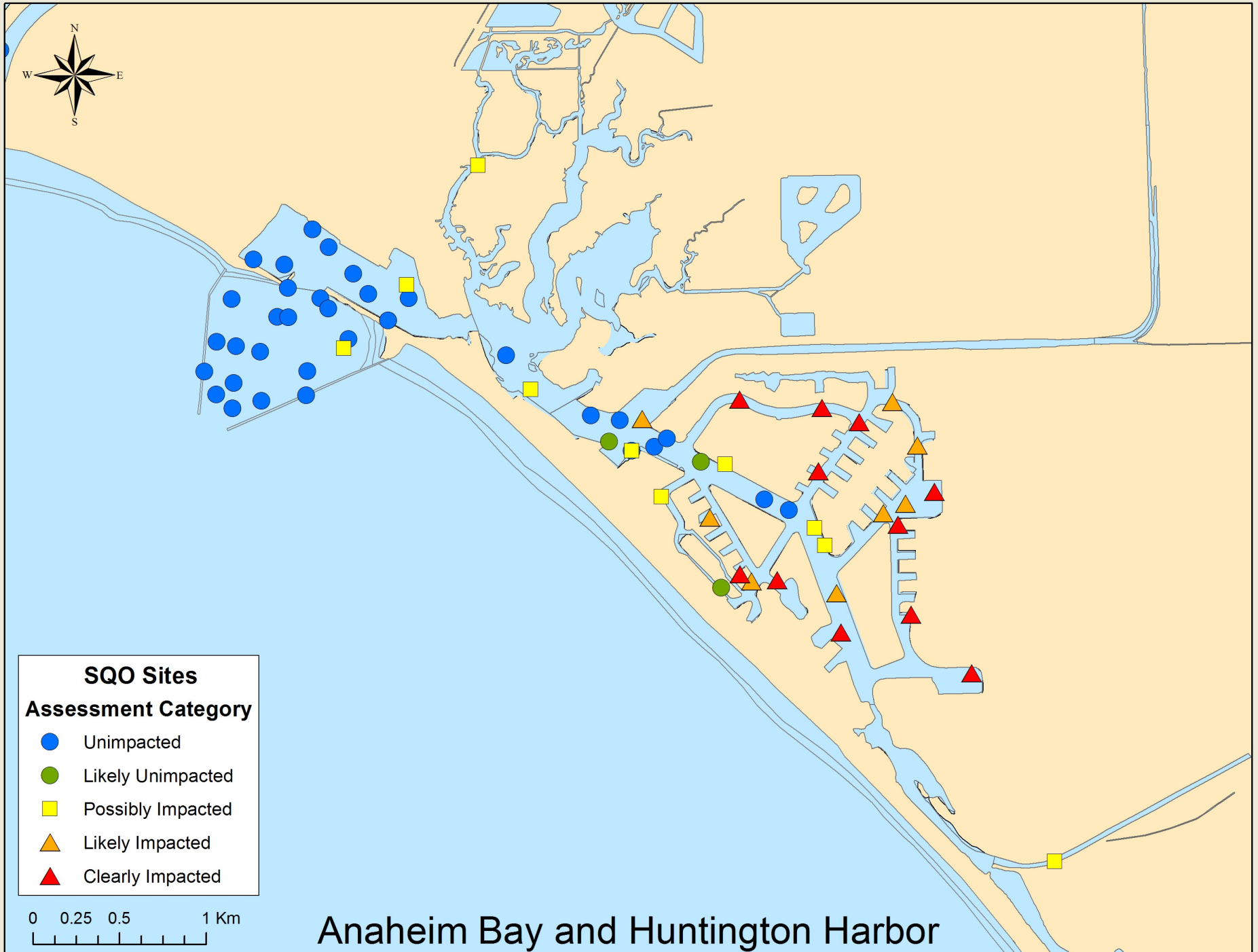


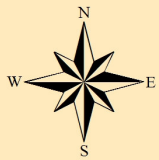
San Diego and Mission Bays

0 1.25 2.5 5 Km

SQO Sites
Assessment Category

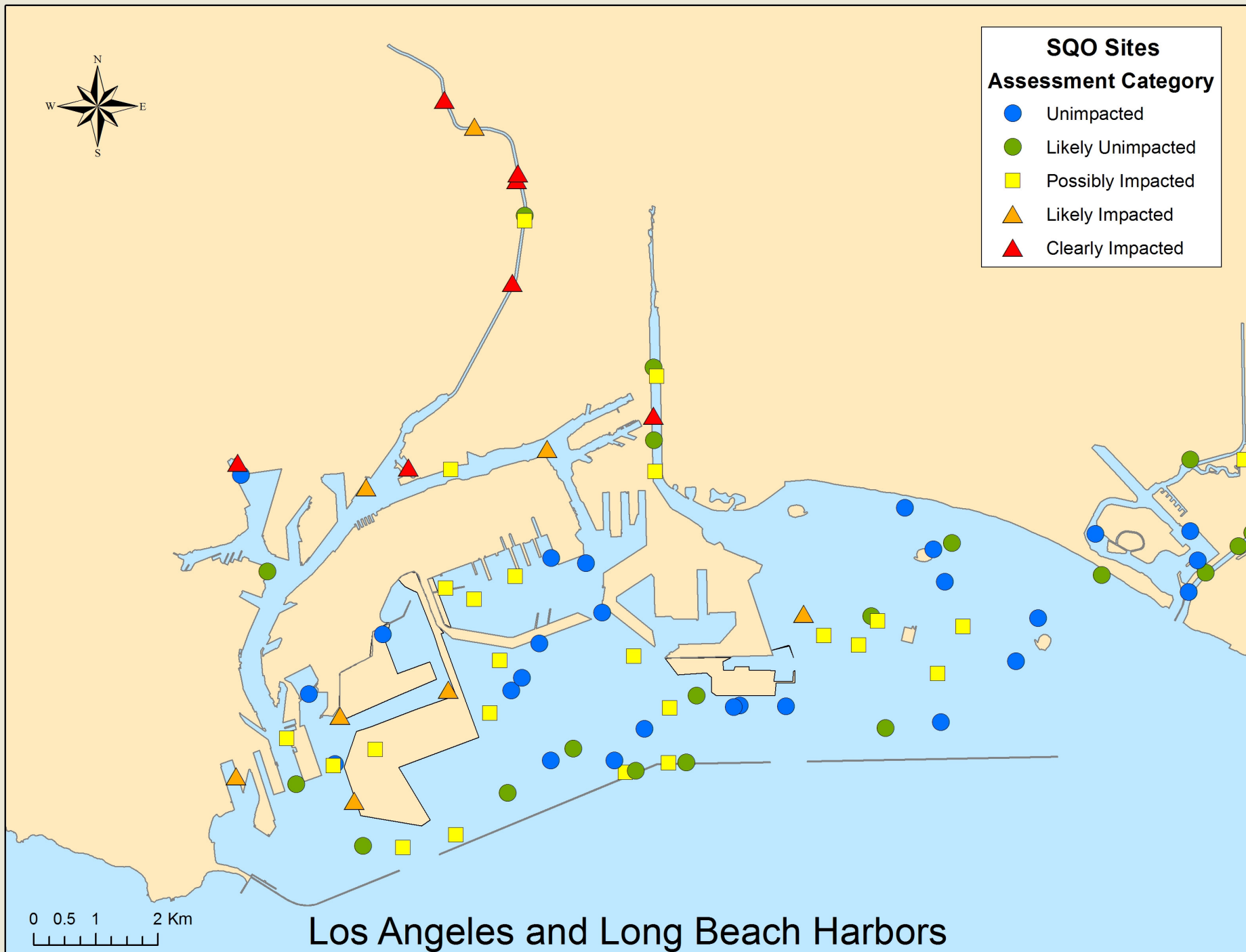
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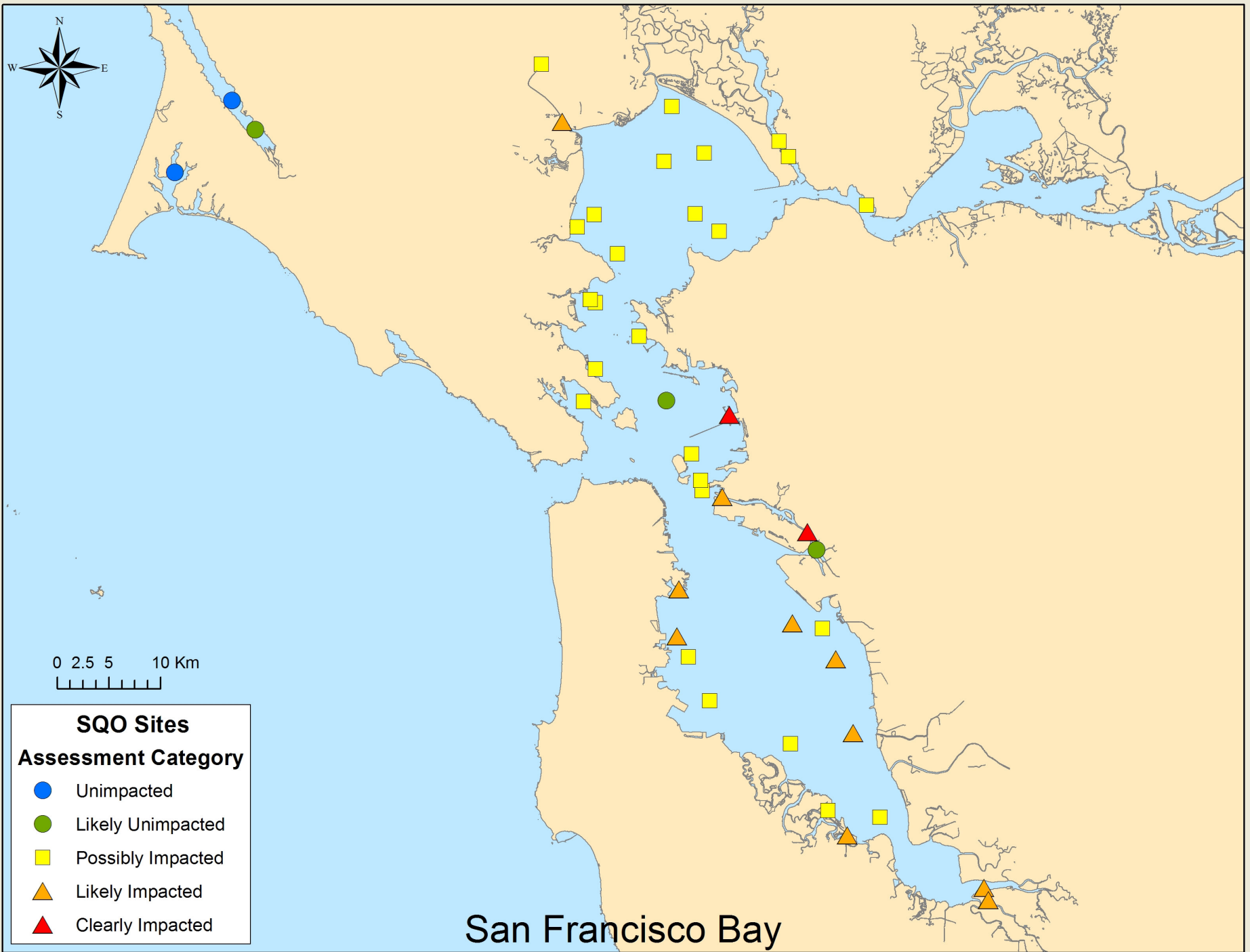
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Los Angeles and Long Beach Harbors



Phase I Schedule

- Draft Staff Report circulated September 2007
- Comment period ends November 30, 2007
- Public Hearing November 19, 2007 at the Resources Bldg (Sac)
- Board Meeting January 2008

More Information

- Web page

- <http://www.waterboards.ca.gov/bptcp/sediment.html>

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