Status Update:
TMDL for Dissolved Copper in the Shelter Island Yacht Basin

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Marinas Interagency Coordinating Committee (MIACC) &
Anti-Fouling Strategies Workgroup (AFSWG)

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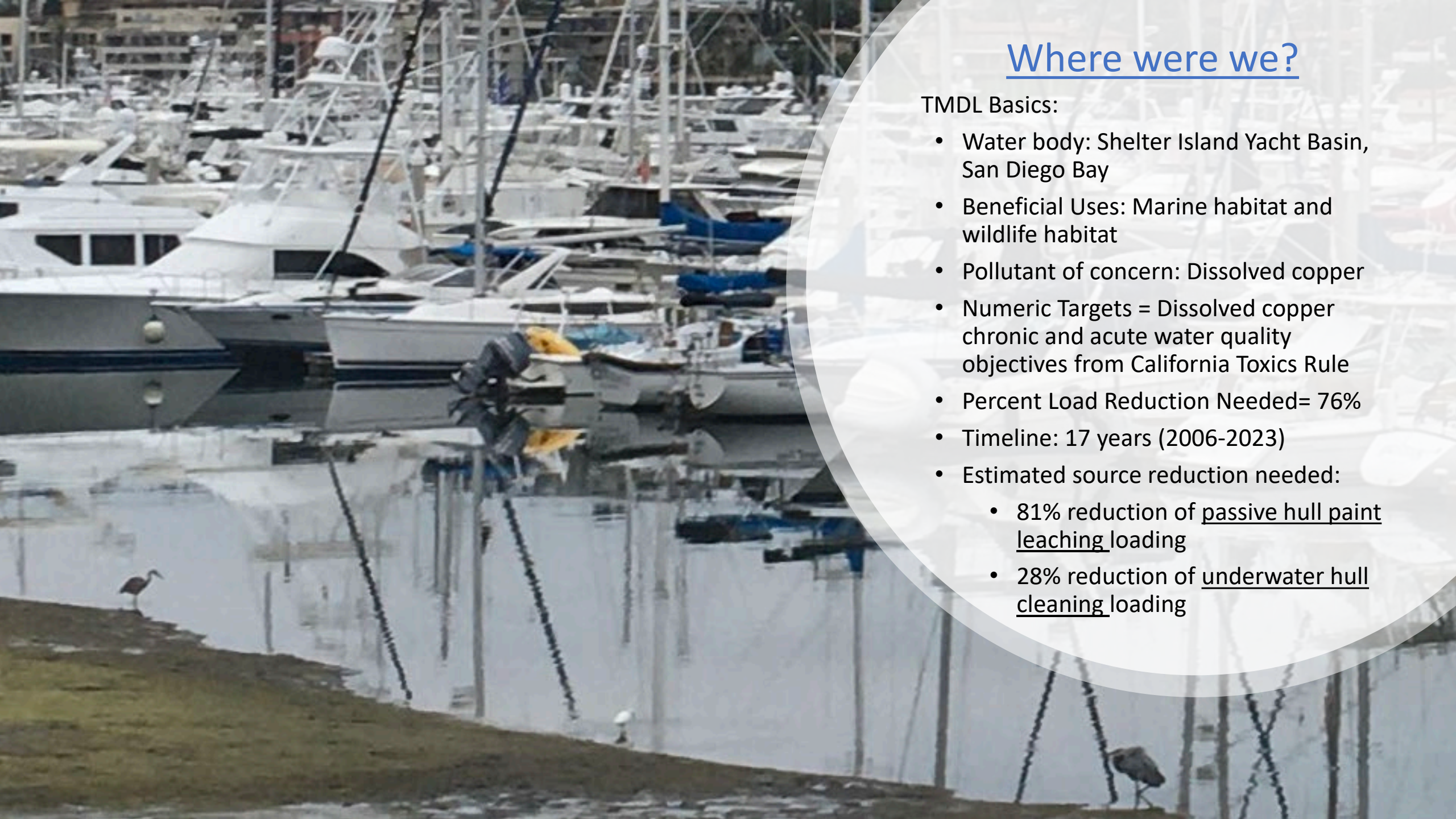


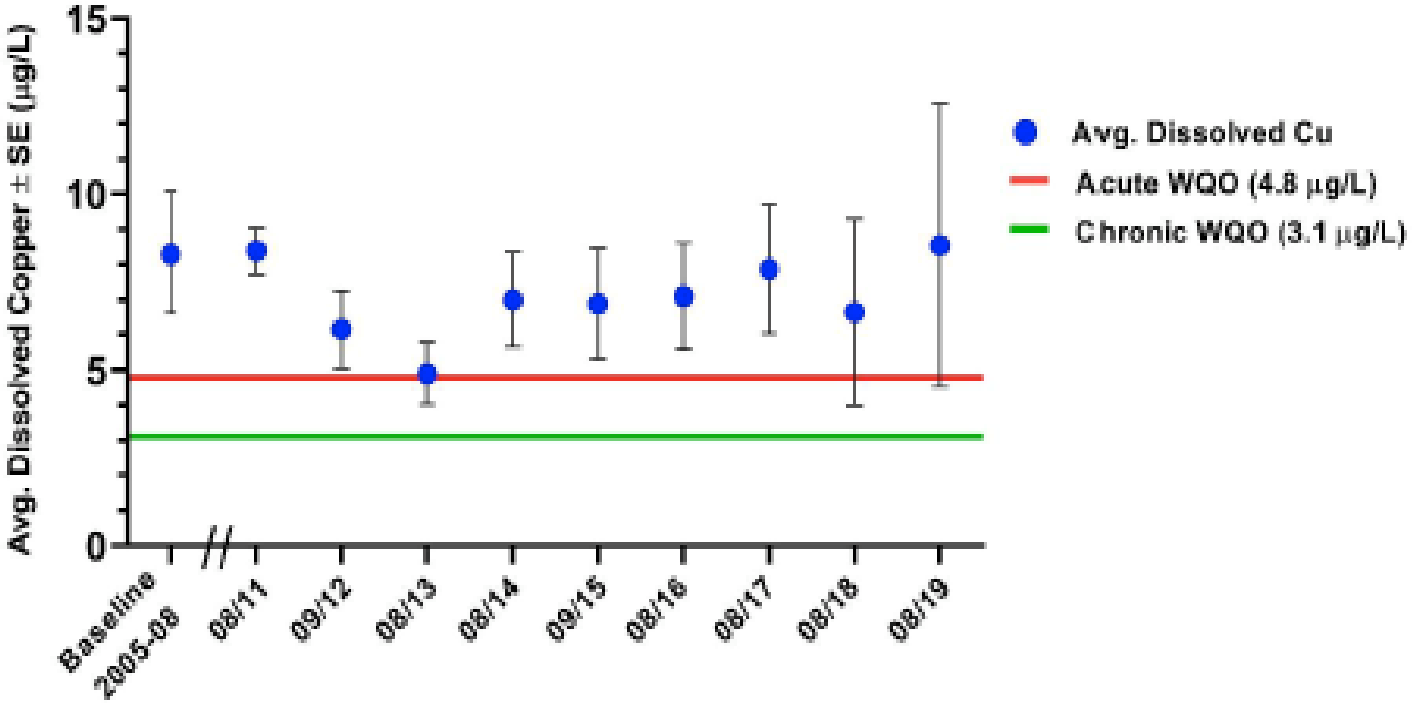
Where were we?

TMDL Basics:

- Water body: Shelter Island Yacht Basin, San Diego Bay
- Beneficial Uses: Marine habitat and wildlife habitat
- Pollutant of concern: Dissolved copper
- Numeric Targets = Dissolved copper chronic and acute water quality objectives from California Toxics Rule
- Percent Load Reduction Needed= 76%
- Timeline: 17 years (2006-2023)
- Estimated source reduction needed:
  - 81% reduction of passive hull paint leaching loading
  - 28% reduction of underwater hull cleaning loading

Where are we now?

In 2019, dissolved copper ranged from 4.1 ug/L to 15ug/L



Moving Forward

Strategy for a Healthy San Diego Bay (2012)

1. Identify Key Uses and Areas for those uses
2. Assess conditions of those areas
3. Prioritize issues (e.g., restore, protect, etc.)
4. Set measurable, meaningful outcome goals

ASSESSING CONTAMINANTS IN FISH & SHELLFISH IN SAN DIEGO BAY

MONITORING & ASSESSMENT
SAN DIEGO WATER BOARD
February 2017

Photo: W. Chiu

Fishing is a key recreational and subsistence activity in San Diego Bay. Several contaminants exist in bay sediments that can become incorporated into fish and shellfish tissue, via bioaccumulation and biomagnification, potentially posing a threat to humans consuming the seafood.

The California Office of Environmental Health Hazard Assessment (OEHHA) conducts scientific evaluations of risks to public health. In 2013, OEHHA released an advisory for San Diego Bay identifying the weekly number of servings of select fish species considered safe to eat, based on contaminant levels measured in fish tissue that could affect human health. The 2013 OEHHA advisory relies on contaminant-concentration data in fish tissue collected from 1999 through 2010. Since that time, additional data from several efforts have become available.

SAN DIEGO BAY: A RESOURCE OF MANY USES

San Diego Bay is an important water body in the San Diego region due to its ecological value and because it supports tourism; commercial, recreational, and subsistence fishing; and a variety of recreational, maritime, industrial, commercial, and military uses. For this reason, the San Diego Water Board endorsed a "Strategy for a Healthy San Diego Bay" via Resolution No. R9-2015-0086 in June 2015. The Strategy identified the key beneficial use categories of the Bay as:

- Recreation (water contact ("REC-1") and non-water-contact ("REC-2"));
- Human consumption of fish and shellfish; and
- Habitats and ecosystems

A primary goal of the Strategy is to use monitoring data to assess attainment of these key beneficial uses, as well as changes in their status over time, and to communicate findings to the public.

DATA AVAILABLE FOR ANALYSIS SINCE THE 2013 OEHHA ADVISORY

- SCCWRP Bight Regional and Regional Harbor Monitoring Programs and City of San Diego Shallow Water Habitat Survey (Fish Tissue, 2013-2014)
- San Diego Water Board Surface Water Ambient Monitoring Program (Lobster Tissue, 2014-2015)
- NOAA Mussel Watch Program (Mussel Tissue, 2010-2015)
- CDPH Marine Biotoxin Monitoring Program (Clam and Mussel Tissue, 2011-2016)
- San Diego County DEH Beach and Bay Monitoring Program (Water Quality, 2014-2016)

This "status sheet" presents analyses of more recent data collected by federal, state, and local agencies. Data analyzed included contaminant levels in fish, lobster, and mussel tissue, marine biotoxins in clam and mussel tissue, and levels of fecal indicator bacteria in water where bivalve shellfish may be harvested by the public. This information is not intended as a consumption advisory; rather, the goal is to evaluate whether the key beneficial use category of "safe to eat" is being met. This information can be used to educate the public and to prioritize efforts for achieving healthy waters in San Diego Bay.

Common Fish and Shellfish Analyzed

Pacific Chub Mackerel
Spotted Sand Bass
California Spiny Lobster
Mussel
California Halibut
Topsmelt
Round Stingray
Pismo Clam

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ASSESSING BACTERIA LEVELS IN SAN DIEGO BAY

MONITORING & ASSESSMENT
SAN DIEGO WATER BOARD
February 2017

Photo: C. Gorham

This "status sheet" reports on current conditions of San Diego Bay in terms of its ability to support water-contact recreation (i.e., the "REC-1" beneficial use). Water quality standards are commonly used to determine if waters are safe for human contact. Fecal indicator bacteria such as *Enterococcus* have been linked to various pathogens commonly associated with sewage (or fecal matter). When *Enterococcus* levels in water exceed standards deemed safe for human water contact, the potential risk of contracting a waterborne illness increases.

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Photo: J. Haas

Beach advisories are posted when bacteria levels are above the water quality standards and swimming is not advised. SD County Department of Environmental Health routinely monitors swimming areas to evaluate bacteria levels. In San Diego Bay, weekly samples are collected at six beaches between April 1st and October 31st of each year. In some cases (such as at Shelter Island Shoreline Park in 2015), monitoring continues through the winter months. This monitoring of bacteria levels allows for evaluation of how often each beach met or did not meet safe swimming water quality standards during the "dry" season (May through September) and "wet" season (October through April).

Photo: J. Anderson

Photo: E. Chan

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Eelgrass beds are a key habitat in San Diego Bay. How do we know if they are "healthy"?