

# Meeting Agenda

1. Welcome & Introductions
2. Participation Rules, Guidelines, etc
3. Copper Overview
4. Alternative Hull Paint Project
5. Paint Registration Process
6. Viable Paints
7. Paint Categories for Testing
8. Paint Manufacturers/Supplier Participation

# Copper –why is it a problem?

- ❖ Copper-based antifouling paints
  - Passive Leaching
- ❖ In-water Hull cleaning
  - Overly Abrasive scrubbing
  - Power cleaning methods
  - Hand cleaning methods

# Total Maximum Daily Load (TMDL)

- ❖ Regulatory program under CWA Section 303(d)
  - Water body assessment
  - Define total load and set load allocations
  - Develop implementation plan
  - Identify timeline for compliance

# SIYB Copper TMDL

- ❖ High levels of dissolved copper in SIYB water column (4,600 lbs/year)
- ❖ 95% of loading from passive leaching (2,000 kg or 4,400 lbs/year)
- ❖ 5% of loading from hull cleaning (100-116 kg or 220-255 lbs/year)

# 2006 303(d) Additions

- America's Cup Harbor
- Coronado Cays
- Glorietta Bay
- Harbor Island – East Basin
- Harbor Island – West Basin
- Marriott Marina
- Chula Vista Marina

# San Diego Bay 303(d) Listings



# SIYB Copper TMDL

- ❖ 17 year phased compliance period
- ❖ Compliance by 2022
- ❖ 76% required load reduction
- ❖ 3 out of every 4 boats will need to switch to non-copper

Stage	Years	Reduction	Estimated Target Loading (dis Cu kg/yr)
1	0-2 (2005–2007)	0%	N/A
2	2-7 (2007-2012)	10%	1,900
3	7-12 (2012-2017)	40%	1,300
4	12-17 (2017-2022)	76%	567

# Copper Reduction Strategy

	Stage 1			Stage 2 - 10% reduction					Stage 3 - 40% reduction					Stage 4 - 76% reduction				
Components	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Collaborative Efforts	Green																	
Baseline Information Collection	Blue	Green																
Education/Outreach	Green																	
Voluntary Mechanisms	Blue	Yellow																
Regulatory Mechanisms	Blue								Red					Red				

EPA  
Grant

# “Safer Alternative Antifouling Paint” Project

# Project Goals & Objectives

## Primary Project Goal

- Identify viable alternatives to copper-based antifoulant paint

## Project Objectives

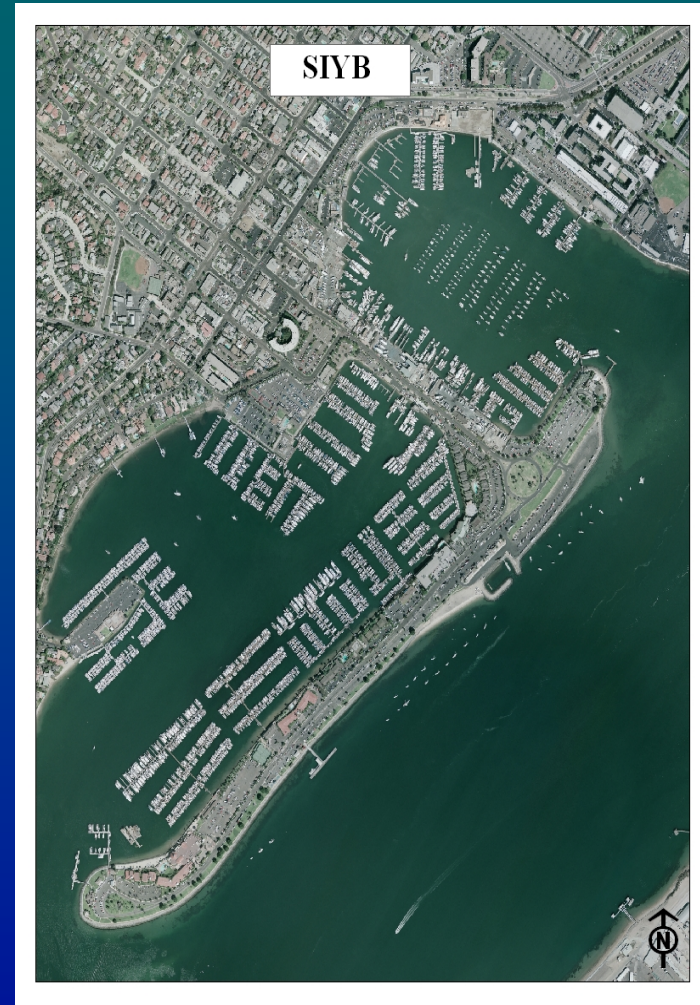
- Encourage transition away from copper paints toward safer alternatives
- Use project to assist in TMDL compliance
- Encourage project findings to have impacts beyond San Diego

# Project Background

- ❖ Project initiated as part of early implementation for SIYB Copper TMDL
  - Concept developed in 2006
  - EPA Application submitted in April 2007
  
- ❖ Project details
  - 2 year project
  - 190,000 requested funding from EPA
  - Port to provide 190,000 match (in-kind and funds)

# SIYB Copper TMDL and the EPA Grant

- ❖ Project is major component of Port's Copper reduction strategy
- ❖ Time Sensitive Issue for SIYB
  - Entering first phase of copper load reduction strategy for SIYB
  - Obtain 10% reduction through volunteer transition
  - By establishing the alternatives early, boaters can start to use them immediately, prior to TMDL enforcement actions



# EPA Grant Tasks Timeline

	Start Date	End Date
Assemble Work Group	01/01/08	03/31/10
Examine Current Coatings/Methods	01/01/08	04/01/08
Examine Alternative Coatings/Methods	01/01/08	05/01/08
Develop Panel Test Protocol	04/01/08	06/01/08
Conduct Panel Tests	06/01/08	10/01/08
Analyze Results / Select Best Coatings	10/01/08	01/01/09
Develop Boat Test Protocols	01/01/09	03/01/09
Conduct Boat Tests	03/01/09	10/01/09
Analyze Results	10/01/09	02/01/10
Prepare Report	12/01/09	03/31/10

# EPA Grant – Key Components

- ❖ Stakeholder Workgroup
- ❖ Identify new and emerging paints
- ❖ Develop protocols for testing on both panels and boat hulls
  - Best application methods
  - Best maintenance strategies
- ❖ Field Testing
- ❖ Analyze findings and develop report
- ❖ End products: List of paints and outreach materials

# Stakeholder Workgroup

- ❖ Public participation will involve the formation of a stakeholder workgroup.
  - Include a wide variety of interests, each with specific expertise and perspectives
  - Promote working relationships between agencies and other parties

# Paint Identification & Evaluation

- ❖ Research on paints/coating to be tested
  - Coating materials
  - Application, cleaning and stripping methods
- ❖ New and emerging paints/coatings
  - To be determined with group input
- ❖ Existing paints included as references
  - Provides a known standard for comparisons

# Develop Protocols

- ❖ IRTA will work closely with suppliers and boat yards to develop protocols for:
  - Application Procedures
  - Testing Protocols
  - Cleaning Strategies
- ❖ Test protocol development will be completed by June 2008

# Field Testing

Field tests will occur during late spring and summer months

Panels:  
June - October, 2008



Boat Hulls:  
March - October, 2009



# Analysis & Reporting

- ❖ Evaluate findings from panel and boat hull testing
  - Cost of the coatings
  - Labor costs associated with application
  - Stripping and sanding requirements
  - Cleaning or maintenance requirements
  - Hazardous waste disposal

# End Products

- ❖ Report on types of alternative antifouling paints, including a comparative evaluation of their effectiveness
  - Cost
  - Application Efficiency
  - Maintenance
  - Antifouling Properties
  
- ❖ List of acceptable alternative paints and appropriate maintenance strategies
  
- ❖ Educational material distributed to the boating industry

# Broader Implications

- ❖ Provides guidance to other marinas in California and U.S. faced with same issues
- ❖ Lead to standards for acceptable paints for use in areas impacted by copper

# Project Support Needed

- ❖ Stakeholder Workgroup
  - ❖ Review deliverables, provide comments
- ❖ Coatings suppliers
  - ❖ Provide paints
  - ❖ Provide timely information on coating
- ❖ Boatyards
  - ❖ Work to apply paints
- ❖ Marinas
  - ❖ Identify areas to hang panels
  - ❖ Identify/solicit boater volunteers during boat testing

QUESTIONS?



# Viabile Paints

- ❖ What do we mean by “viable”?
  - Products should be available commercially
  - Boaters need to be willing to incorporate alternate strategies along with a switch in paints.
  - Balance longevity, cleaning, & application with cost

# Viabile Paints

- ❖ What is NOT meant by “viable”?
  - Alternative paints should not replace copper problem with another pollutant problem
  - Application or maintenance of alternative paints may be different than copper.
  - One size will NOT fit all

# Viabile Paints

## ❖ Keys to Successful Transition

- Demand needs to drive market from reliance on copper products.
- Effective alternatives to copper paints need to be readily available.
- Accompanying strategies need to be promoted to increase comfort level.
- Change will not occur overnight!

# Viabile Paints

## Discussion Points

1. What do you expect out of a viable paint?
2. What are your concerns about using alternative antifoulant paints?

Break – 15 minutes

