

TMDLs: An Agency's Perspective

California Marine Affairs & Navigation Conference Panel Discussion

Karen Holman
Manager, Environmental Programs
Port of San Diego
January 16, 2014

Panel Questions

1. What is your department's involvement with TMDLs?
2. What is your department's responsibilities to comply/adhere to TMDLs?
3. What do you believe are the greatest challenges for attainment of TMDL compliance?
4. What are the mechanisms within your jurisdiction for enforcement?

Involvement in TMDLs- Port of San Diego



Watershed Issues:

- Chollas Creek (*Metals, Diazinon, Bacteria*):
- Switzer Creek, Paleta Creek, Downtown Embayment (*Sediment Toxicity, PAHs, Chlordane*)

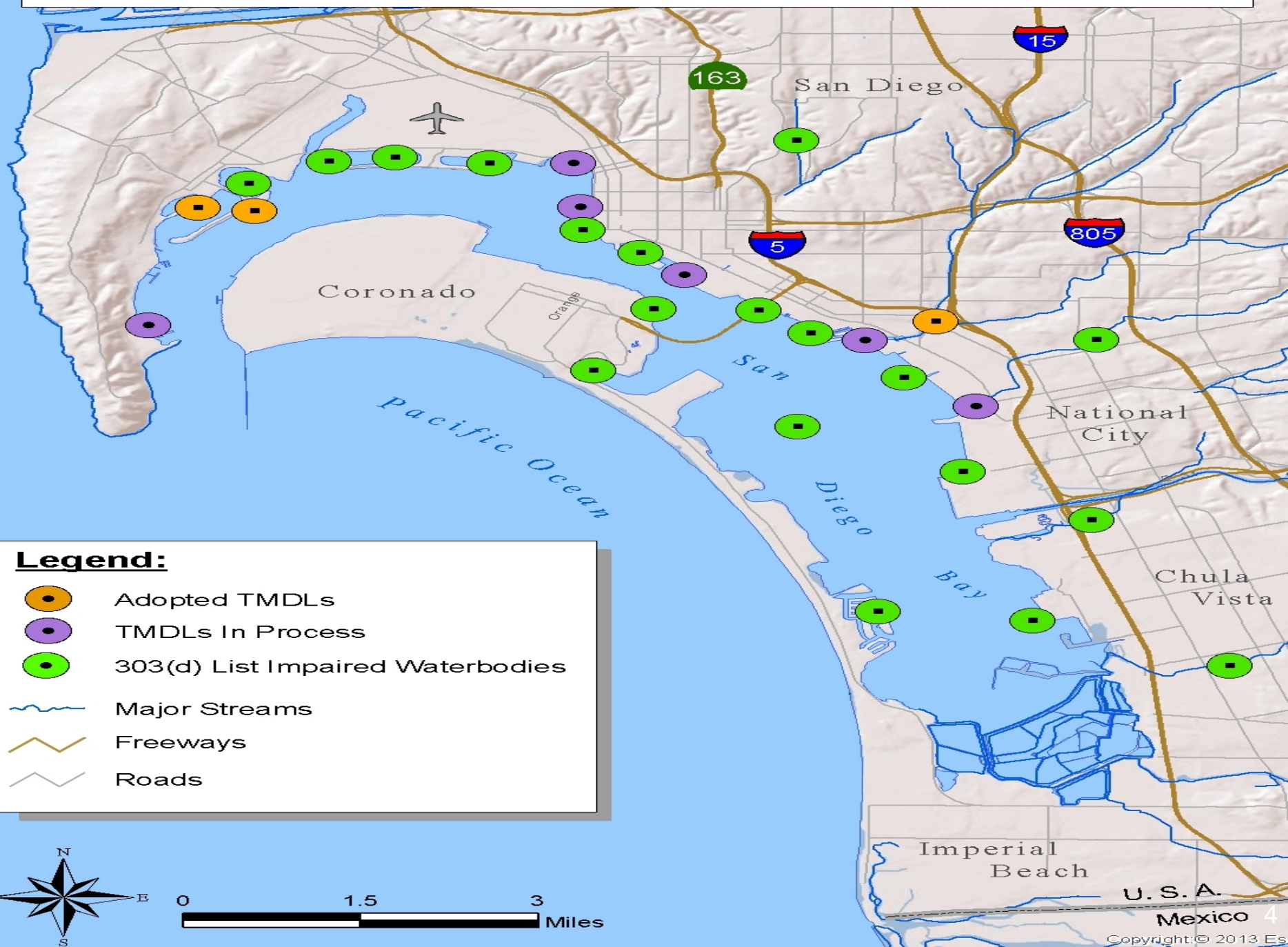
Legacy Issues:

- Shipyards and other industrial areas (*Sediment Toxicity*)
- fish tissue (*PCBs*)

In-Bay Issues:

- Shelter Island Shoreline Park (*Bacteria*):
- Shelter Island Yacht Basin (*Copper*):

San Diego Bay TMDLs & 303(d) List Impaired Water Bodies





Copper Impairments in San Diego Bay

The Port's Compliance Responsibilities



Watershed

- ✓ Coordination with upstream partners (cost sharing monitoring, implementation, reporting)
- ✓ Inclusion into stormwater (MS4) permits
- ✓ BMP implementation on Port areas

Legacy Issues

- ✓ Addressed through Clean-up Orders
- ✓ Focus on historical sources, parties, etc

In-Bay Issues

- ✓ Regular bacteria monitoring, trash controls, BMPs
- ✓ Development of bay-wide Copper Reduction Program

Copper TMDL

Load Reduction Approach



1. Find Permanent Solutions to Reduce Copper
 - ✓ Advocate and support change at state/federal level
 - ✓ Evaluate & identify new alternative products
 - ✓ Consider other feasible options (hydrology, TMDL modification, etc)
2. Consider an Adaptive Strategy
 - ✓ Regularly evaluate & assess activities
 - ✓ Incorporate new monitoring information, when available
3. Use a Phased & Integrated Approach
 - ✓ Assessments based on TMDL interim targets
 - ✓ Educate boating community
 - ✓ Incorporate regulation, when appropriate

The Port's Copper Reduction Program



**Hull Paint
Testing & Research**

**Policy Development/
Legislation**

Hull Paint Transition

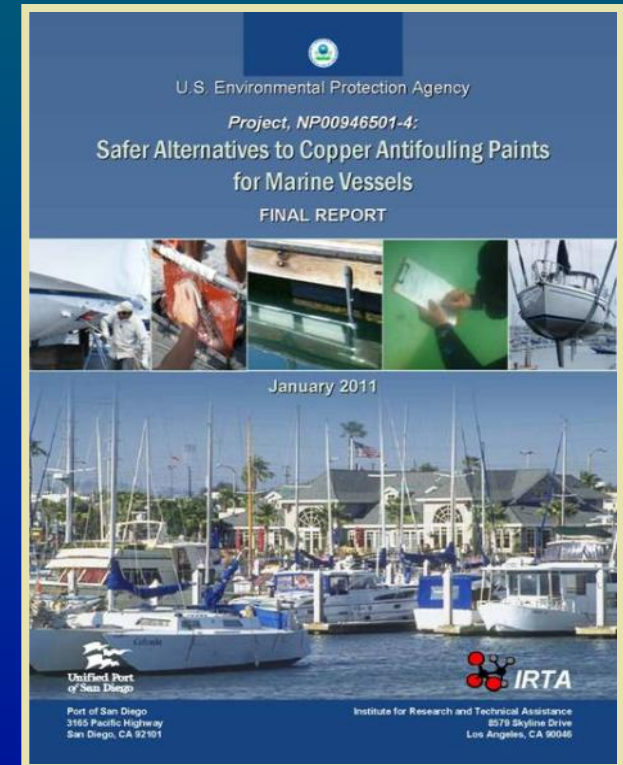
Education & Outreach

**Monitoring &
Data Assessment**

Implementation Efforts

Developed solid program foundation

- Robust outreach program
- Secured Grant funding
- Extensive research on alternative paints
 - Advancing new technology
 - Hull paint study received national attention
 - Noticed shifts in hull paint industry



Implementation Efforts (cont')



- Boats Converted
 - Port fleet (16)
 - Grant conversions (30+)
- State Legislation
- Hull Cleaning Regulations
- 319h Hull Paint Grant
- SIYB Hydrodynamics Study
- Annual Hull Paint Expos



Progress Towards Compliance



- 288 vessels in SIYB using low or non-copper paint as of 2012
- Hull Cleaning BMPs reduced copper by 33kg/yr
- 17.6% load reduction from vessel paints

Years	Loading Reduction	Interim Loading Target (kg/yr)	2012 Copper Load (kg/yr)
2005-2007	0%	2163*	N/A
2008-2012	10%	1900	1730
2013-2017	40%	1300	959
2018-2022	76%	567	1,773

*The total copper load from vessel paints equals 2,100kg/yr as identified in the TMDL. The remaining 63kg/yr load is due to background, urban runoff, and atmospheric deposition; this load is not included in the reduction calculations.

TMDL Challenges for the Port



Watershed:

- End of pipe (ongoing upstream inputs)
- Societal issues (residential, transportation, etc.)

Legacy Issues:

- Bringing in historic parties
- Setting appropriate clean-up levels
- Seeing improvements may take decades (fish, etc.)

In-bay Issues:

- Politics
- Behavior changes

Copper TMDL Challenges



- Standard treatment measures won't work for copper problem
- Balance interests of stakeholders, the economy and the environment
- Statewide changes take time
 - Support needed from multiple parties
- Consistent messaging
- Difficult to change public behavior about paint use and boat cleaning
 - Boaters need to be open to alternate strategies along with switch in paints.

Mechanisms of Enforcement

- Hull Cleaning Permit
 - Requires BMPs for businesses
 - Requires Marina participation
 - Enforceable through citations, fines, etc.
- Vessel tracking required by Investigative Order (currently voluntary)
- Exploring other policy options
 - Pre-emption
 - Legal feasibility
 - Cost

Questions?

Karen Holman

Manager, Environmental Programs

Environmental & Land Use Management

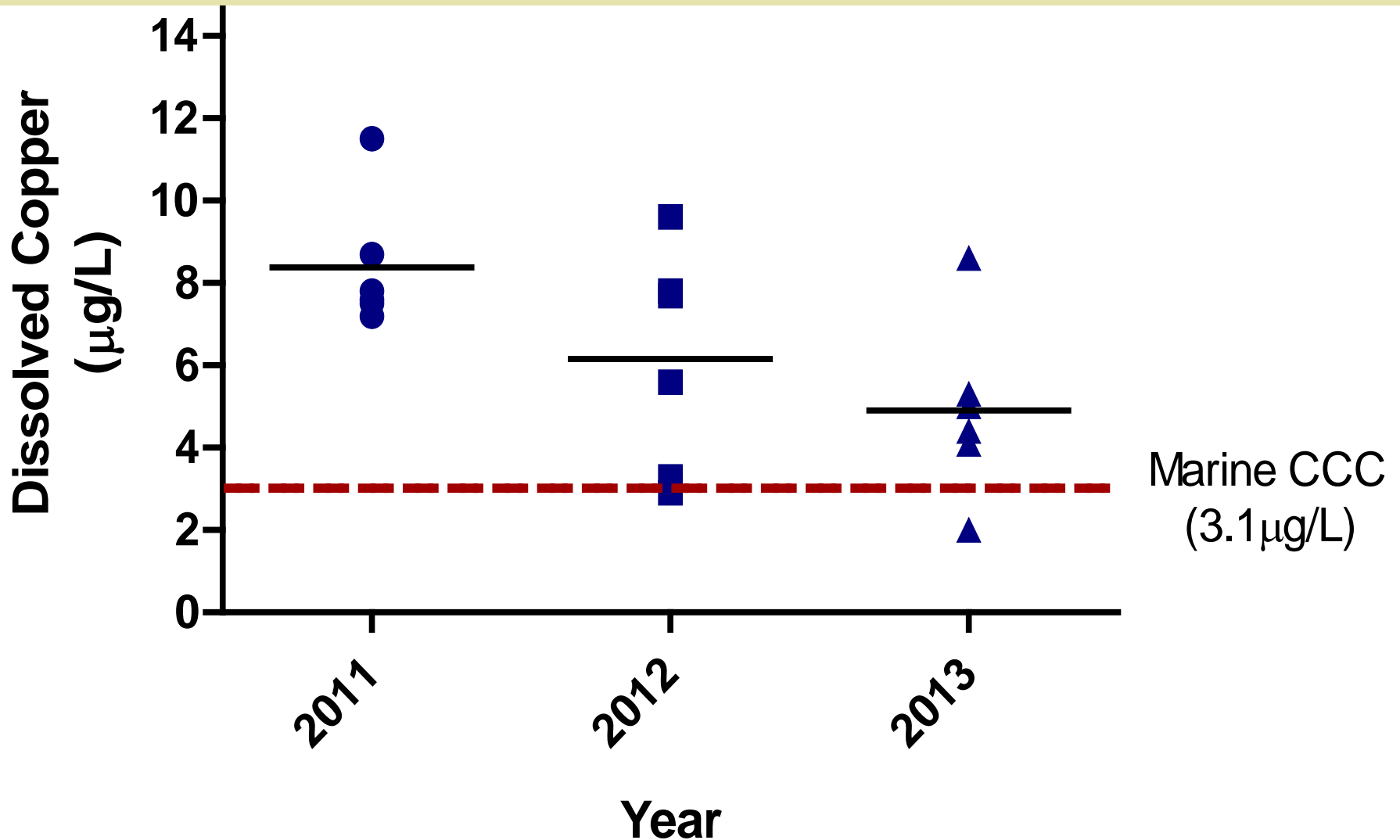
(619) 725-6073

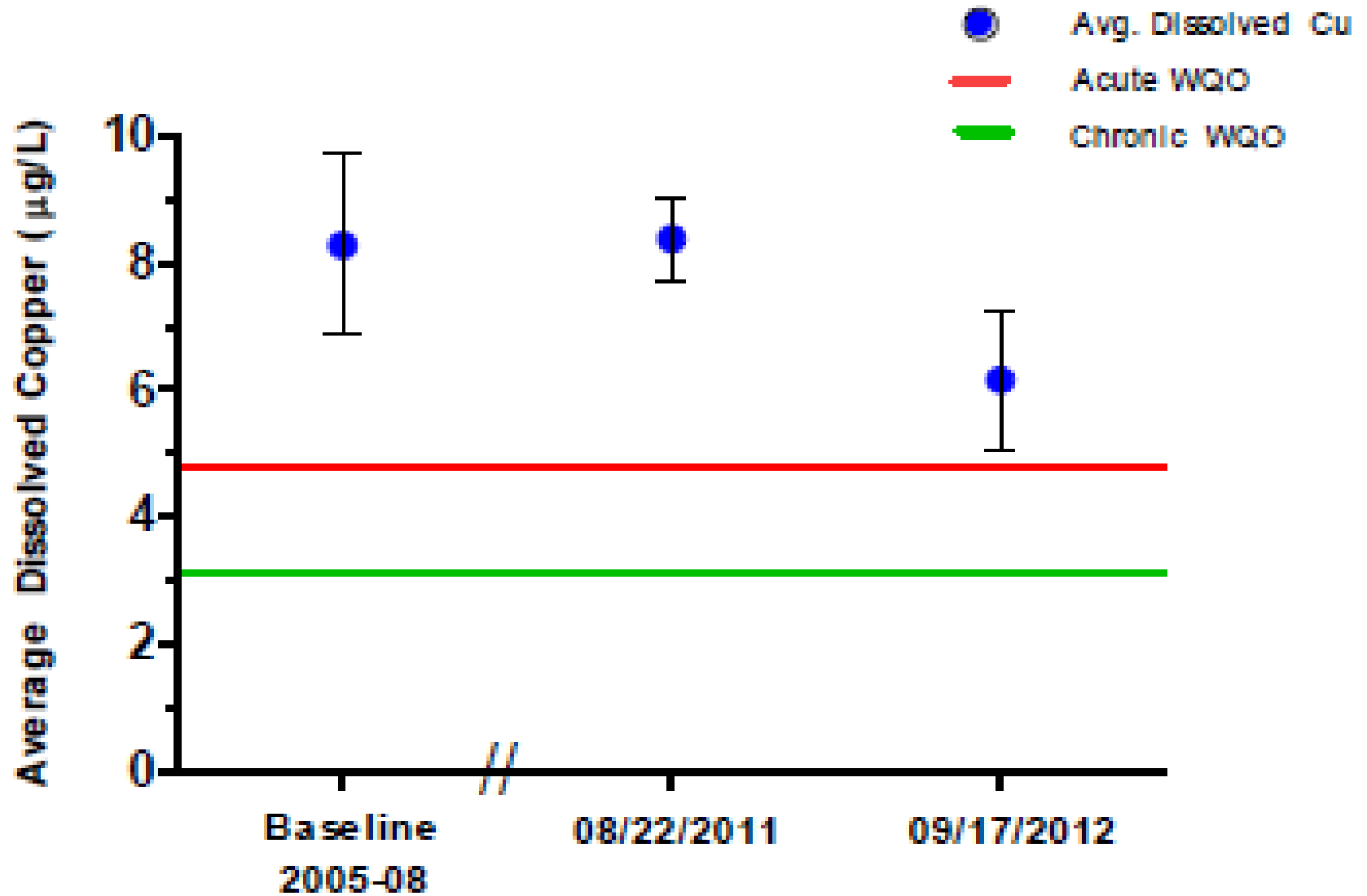
kholman@portofsandiego.org

Lessons Learned

1. Education is extremely important
2. Collaboration and networking is important to success of program
3. Remain transparent
4. Seek grant funding
 - Be proactive in developing projects
 - Learn from other grant projects

Dissolved Copper Concentrations





Average Dissolved Copper Relative to Baseline