SEPTEMBER 18 MEETING NOTES

NEXT MEETING DATE SCHEDULED FOR: DECEMBER 4, 2013

INTERAGENCY COORDINATING COMMITTEE (IACC) JOINT MARINAS AND RECREATIONAL BOATING

Extended Introductions	**10:00 AM-10:30 AM**
Jack Gregg, California Coastal Commission	*Time: 30 Minutes*
Jowin Cheung, State Water Resources Control Board	

Marina Interagency Coordinating Committee Attendance List

Athar Khan (Santa Ana Regional Water Quality Control Board) – On phone
Barbara Heinsch – CalRecycle – In Person
Chris Scianni (State Lands Commission) –On Phone
Jack Gregg – California State Lands Commission (CCC)– In Person
Jowin Cheung – State Water Resources Control Board – In Person
James Muller – San Francisco Estuary Partnership – In Person
Jenny Newman – On the phone
Katy Wolfe – Institute for Research and Technical Assistance – On Phone
Mara Noelle – State Lands Commission – In Person
Matt Peterson – California Professional Divers Association – On Phone
Michelle Bowman – AMEC – On Phone
Neil Blossom – American Chemet Corporation – On Phone
Peter Von Langen – Central Coast Regional Water Quality Control Board – On Phone
Rolf Schottle– AMEC – On Phone
Vivian Matuk – CCC / Department Boating and Waterways – In Person
Rod Taylor – Clean Marina Program – In Person
Shuka Rastegarpour – State Water Resources Control Board – In Person

Clean Boating Videos	**10:30 AM-11:00 AM**
Vivian Matuk, CCC and Department of Boating and Waterways (DBW)	*Time: 30 Minutes*

New Oil and Fuel Pollution Prevention Boating Videos

California's Boating Clean and Green Program provides tips on proper oil and fuel management to the state's recreational boating community through two new instructional videos.

Videos include tips and tools to prevent oil and fuel discharges; how to report oil and chemical spills; how to properly dispose of used oil; environmental laws; and information on other clean and safe boating practices recommended for before, during and after fueling boats.

The educational videos are a great resource not only to boaters, but to boating marina and yacht club operators in their efforts of keeping their facilities clean. Please share these valuable resources by posting the videos on your websites. Videos may be viewed and downloaded at www.BoatingCleanAndGreen.com.

In order to watch the videos you can go directly to YouTube at:

- Oil Video : http://www.youtube.com/watch?v=xNwKSOXCBbY&feature=youtu.be
- Fuel Video: http://www.youtube.com/watch?v=V5Jx8m9hY3g&feature=youtu.be

The Division of Boating and Waterways and the California Coastal Commission's Boating Clean and Green Program developed the videos in partnership with the San Francisco Estuary Partnership, the Keep the Delta Clean Program and the Santa Monica Bay Restoration Foundation. Staff developed the video content with assistance, review and support from a Technical Advisory Group comprised of members with the marine industry and boating associations (listed in the videos credits).

The videos were shot in October 2012 in Sacramento (Riverbank Marina) and in Oakland (Oakland Yacht Club and Marina Village Yacht Harbor). During the fuel video shot, staff worked with Captain Tommy Holtzman (Boat Owner and US Coast Guard Auxiliary), his boat the "Shady Ladies" and his crew (John Derrick Jr. and Warren Golubski (Boaters and US Coast Guard Auxiliary) and Chloe Golubski, an adorable dog. In the oil clean boating video, staff worked with Captains Robert J. & Susan Engelhart and their boat "Music."

The Boating Clean and Green Program is an education and outreach program conducted through the Division of Boating and Waterways and California Coastal Commission. The program promotes environmentally-sound boating practices to marine businesses and boaters.

Action Item(s): None

Associated Attachments with this section:


vivian_sticker (2).JPG


Letter_Oil&Fuel Videos QRStickersFina

ePaint	**11:00 AM-11:40 AM**
Jack Gregg, CCC	*Time: 25 Minutes*

Traditional antifouling paints use copper as the biocide to control biofouling. Although copper is a naturally occurring compound, in high concentrations copper is detrimental to aquatic life. Our harbors, bays, estuaries, and lakes are particularly susceptible to build up of high levels of copper and other harmful compounds. In terms of metal toxicity, elemental copper is second only to mercury.

ePaint Company was established in 1991 to market environmentally friendly coatings. The primary thrust of the marketing effort is towards specialty coatings for the control of bio-fouling. ePaint antifouling and foul release coatings combine several different mechanisms to keep your

boat hull clean. The main mechanism found in all ePaint coatings is a patented photo-active technology. Energy from visible light in the water column is used to combine water and dissolved oxygen molecules to form hydrogen peroxide that blankets around the boat hull, creating a surface inhospitable to bio-fouling animal larvae such as barnacles and zebra mussels. Hydrogen peroxide is very effective at deterring bio-fouling from settling yet quickly decomposes back into water and dissolved oxygen. ePaint coatings are comprised of different ablative resin matrix's designed to wear at different rates.

Questions from the group:

1. What is the efficacy of antifouling of these paints? (just the paint vs. ePaint with biofouling). Are there other non-toxic and viable options for paint available? Are there non-toxic and viable paints that are available?

   Answer: Yes (Please see attachment in Announcement and Wrap up section below)

2. Some paints have a zinc problem, is there any information on which is more effect: ePaint with zinc or without zinc?

   Answer: Zinc is less toxic in some waters (Northern vs. Southern California). There are other non-biocide paints. Katy Holman mentioned immerging paint that don't have copper, and more information can be found on her website: www.irta.us

Action Item(s): None

Associated Attachments with this section:

ePaint Tech Overview for MTMA a

Announcements and Adjournment	**11:40 AM-12:00 PM**
Jack Gregg, CCC and Jowin Cheung, SWRCB	*Time: 25 Minutes*

Announcements

1. The Port of San Diego is interested in collecting testimonials from Southern California boaters who have successfully used a non-biocide hull paint on their vessel. It can be either a commercial or recreational vessel as the Port is addressing both audiences in their Copper Reduction Program. They can contact either Stephanie Bauer (sbauer@portofsandiego.org) or Michelle Bowman (michelle.bowman@amec.com).

2. Presentations at the last meeting of the Marian IACC workgroup generated a number of questions about alternative hull paints. Vivian Matuk, the Environmental Boating Program Coordinator for the California State Parks, Division of Boating and Waterways and the California Coastal Commission, forwarded the link to a brochure regarding selection of alternative hull paints per discussion at the meeting. Please see the link below:

http://www.portofsandiego.org/component/docman/doc_download/3530-how-to-select-an-alternative-hull-paint.html?Itemid=472

3. America's cup is wrapping up; this could be your last chance to see it.

4. Michelle Bowman is working on copper reduction in San Diego using a nonbiocide paint. Karen Holman converted 29 boaters to use nonbiocide paint on their hulls at the Port of San Diego.

5. Next Meeting Date is: December 4, 2013.

Action Item(s): Please submit any topics or suggestion for the next meeting to Jack Gregg (Jack.Gregg@coastal.ca.gov) or Jowin Cheung (jowin.cheung@waterboards.ca.gov)

ANTIFOULING STRATEGIES (AFS) WORKGROUP

Introductions	**1:00 PM-1:15PM**
Jack Gregg, CCC and Jowin Cheung, SWRCB	*Time: 15 Minutes*

Antifouling Strategy Work Group Attendance List

Chris Scianni (State Lands Commission) –On Phone
Jenny Newman – On the phone
Jerry Desmond Jr – Desmond Lobby Firm – On Phone
Jim Haussener – CMAC – On Phone
John Kelly – AKZONOBEL Chemicals Inc- On Phone
Bill Jacobsen – On Phone
Carolyn Culver – California Sea Grant – On Phone
Leigh Taylor Johnson – UC Extension – On Phone
Linda Candelaria – Santa Ana Regional Water Quality Control Board – On Phone
Jack Gregg – California State Lands Commission – In Person
Jowin Cheung- State Water Resources Control Board – In Person
John Lewis – On Phone
Katy Wolfe – Institute for Research and Technical Assistance – On Phone
Kelly Moran – TDCE Environmental – On Phone
Neil Blossom – American Chemet Corporation – On Phone
Peter Von Langen – Central Coast Regional Water Quality Control Board – On Phone
Rolf Schottle– AMEC – On Phone
Shana Rapoport – Los Angeles Regional Water Quality Control Board – On Phone
Stephanie Bauer – Port of San Diego – On Phone
Tom Nielsen – Nielsen Beaumont – On Phone
Claire Waggoner – State Water Resources Control Board
Matt Peterson – California Professional Divers Association – On Phone

Effects of Hull Coatings and Hull Cleaning Practices on Fouling Organisms	
Ms. Leigh Taylor Johnson, UC Extension	**1:15 PM-2:15 PM**
And Dr. Carolynn Culver, California Sea Grant	*Time: 60 Minutes*

Changes Facing West Coast Boaters include:
California State Water Resources Control Board requires that copper discharged from Antifouling paints in Shelter Island Yacht Basin of San Diego Bay be reduced by 75% during 2007-2022 , Regional Water Quality Control Boards are concerned with elevated Copper in other San Diego Bay locations, in Newport Bay and Marina Del Rey, Statewide restrictions may or may not be implemented in California; Washingtown law restricts Copper antifouling paint to low level.

California Aquatic Invasive Species Management Plan: Strategy 2c (Recreation) calls for limiting new AIS introductions through recreational boating, fishing, diving and other water-based activities.

Transport of AIS has interfere with boating activities, potential impact on natives (outcompete natives for space and food, non-natives are copper tolerant)

Integrated Pest Management for Boats in Harbors
To stop aquatic hitch-hikers, it is important to use multiple tactics, target multiple stages of life for the AIS, and adaptively manage. There is no a one size fit all way of managing hull fouling.

Leigh and Carolynn researched on how coating type applied on a boat affect the recruitment of fouling organisms (non-native invasive species) and how effective is copper-based antifouling paint in the long term.

The conclusion of that research is that there are risk in transporting aquatic invasive species via boat with copper-based paints, particularly with increased time, higher risk of transporting AIs on boats with biocide-free coatings, and higher risk for transporting certain aquatic invasive species on boats with certain biocide free coatings.

The role of hull cleaning
There needs to be a balanced approach between ecosystem health and boat operations. When considering ecosystem health, we have to think about the water quality and aquatic invasive species. When thinking about boat operations, it is important to think of the fouling control and cost effectiveness. Research-based information is needed to support sound decisions and sustainable policies.

Leigh and Carolynn researched on in-hull cleaning and if it stimulates fouling growth, and if fouling organisms have recruitment peaks that could be useful in scheduling control tactics.

The summary of coating and cleaning results include paint/coating type and age is important, location is important, California hull cleaning management practices that are frequent and gentle do not stimulate new fouling, and fouling recruitment peaks matter when scheduling toxic hull coating applications and cleaning.

The recommendations from the studies include creating an integrated pest management strategy using a suite of fouling control tactics and cleaning boats before leaving or returning to other places (Clean then Cruise!)

Online Resources

Coastal Resources website http://ucanr.edu/sites/coast

- Integrated Pest Management for Boats: Integrated Pest Management for Hull Fouling in Southern California Coastal Marinas (IPM strategies & tactics + ecological, coatings & cleaning research)
- Crossing Boundaries: Managing Invasive Species and Water Quality Risks for Coastal Boat Hulls in California and Baja California (supplies/services; costs/availability; boater behavior)
- Hull Fouling and Copper Tolerance – 2011 Scientific Review (English y Español)
- And many short publications in English y en Español

Boating Environmental Forum blogsite http://ucanr.edu/blogs/BoatingEnvironmentalForum/

There is an aquatic invasive species eradication and control website (http://ca-sgep.ucsd.edu/quaggazebra_mussel_control) for lake managers that focuses on quagga zebra mussel eradication and control, workshop materials (agenda and extended abstracts), and information sheets (individual strategies, combined technical reports, and references)

For more information on integrated pest management for boats and aquatic invasive species, please contact Leigh Johnson contact (ltjohnson@ucanr.edu) and Carolynn Culver (cculver@ucsd.edu)

Action Item(s): None

Attachments associated with this section: None

Biofouling, biofouling prevention, and the environment:	**2:15 PM-2:45 PM**
The complexities of practical balance"	*Time: 30 Minutes*

What is biofouling? A process of adsorption, colonization, and development of living and non-living material on an immersed substratum.

What are the consequences? On vessels (reduced speed, increased fuel needs, accelerated corrosion, acoustic noise), On the environment (increase atmospheric emissions, translocation of invasive species), To the colonies (fouling and degradation of industrial and maritime infrastructure and marine community change).

What is an effective antifouling? Biocidal and non-biocidal. Techniques. Biocidal techniques will have continuous copper release rate from stationary hull, while non-biocidal techniques will need self-cleaning.

In-Water Cleaning Guidelines or general recommendations for in-water cleaning [Australian] waters include: slime layer on a vessels using a non-abrasive technique,

macrofouling acquired outside Australia should not be cleaned in-water if technology is not available to minimize release of viable biological material into the water column, macrofouling acquired in another region within Australia should not be cleaned in-water unless a risk assessment determines that the biofouling is of low biosecurity risk, and locally acquired macrofouling may be cleaned in-water providing the coating is suitable for cleaning and the cleaning method does not damage the coating surface or release unsuitable amounts of contaminant into the environment.

How are biofouling risks best managed? A proactive antifouling prevention include external– effective antifouling prevention, internal – marine growth prevention system/antifouling material, and prescribed dry-docking intervals. Additional hull husbandry include controlled in-water cleaning and internal – chemical (acid, disinfectant), and physio-chemical (temperature, salinity, and deoxygenation) control.

Action Item(s): None

Attachments associated with this section:

Biofouling, biofouling prevention, and the e

Announcements and Adjournment	**2:45 PM-3:00 PM**
Jack Gregg, CCC and Jowin Cheung, SWRCB	*Time: 15 Minutes*

Announcements

1. The Port of San Diego is interested in collecting testimonials from Southern California boaters who have successfully used a non-biocide hull paint on their vessel. It can be either a commercial or recreational vessel as the Port is addressing both audiences in their Copper Reduction Program. They can contact either Stephanie Bauer (sbauer@portofsandiego.org) or Michelle Bowman (michelle.bowman@amec.com).

2. If there were vendors with experience or researchers with available studies specific to M galloprovincialis, please contact Rolf Schottle, Environmental Services Group Manager AMEC at (rolf.schottle@amec.com) or Direct +1 (858) 300 4323. He been approached by a power plant operator to do a alternatives analysis of anti-fouling technology specifically for Mediterranean mussels attaching to the inside of a large PVC intake pipe. He doesn't have all the specifics (flow velocities, etc), but if there were vendors with experience or researchers with available studies specific to M galloprovincialis that would be great.

3. Next Meeting Date is: December 4, 2013

Action Item(s): Please submit any topics or suggestion for the next meeting to Jack Gregg (Jack.Gregg@coastal.ca.gov) or Jowin Cheung (jowin.cheung@waterboards.ca.gov)