MARINA AND RECREATIONAL BOATING WORKGROUP
& ANTIFOULING STRATEGIES WORKGROUP MEETING

September 10, 2015 Meeting Notes

Meeting held at: CAL/EPA Building – 2nd Floor, Room 240, 1001 "I" Street, Sacramento, 1:00 PM - 3:30 PM
Hosted by: Jowin Jung—State Water Resources Control Board and Tamara Doan—California Coastal Commission

1. Introductions and Announcements (15 minutes) 1:00 – 1:15

Attendee: Name and Affiliation 9/10/15

Name	Affiliation
In Person	
Rod Taylor	Clean Marina Program
Dave Bedillion	Quantum Molecular
Jowin Jung	State Water Resources Control Board
Tamara Doan	California Coastal Commission
April Da Silva	Department of Pesticide Regulation
Charlie Foster	Quantum Molecular
Rick Stenberg	Quantum Molecular
Rick Tribble	Quantum Molecular
Mike Starr	Quantum Molecular
Ray Lopez	Petit Paint
Pat McLafferty	Aerofleet
Melenee Emanual	SWRCB
Carlos Guiterrez	Department of Pesticide Regulation
Angela Akens	State Water Resources Control Board
On Phone	
Josh Mackie	San Jose State University
Kate Pearson	Island Palms
Sue Keydel	U.S Environmental Protection Agency, R9
Michael Zlotkin	Innermost Containment
Carl Nettleton	Nett Strategies
Peter von Langen	Water Boards
Adrienne Cibor	Nautilus environmental
Jerry Desmond	Desmond lobby firm
Doug Foster	
Bill Kraus	APEX Group
Brad Oliver	Half Moon Bay Marina

Name	Affiliation
On Phone *continued…*	
Charlotte Miyamoto,	County of Los Angeles
Chris Scianni,	State Lands Commission
Colin Anderson,	American Chemet Corporation
David Elias,	Regional Water Quality Control Board - San Francisco
James M. Haussener,	California Marine Affairs and Navigation Conference
John Adriany,	ChemMetrics
Katy Wolfe	Institute for Research and Technical Assistance
Linda Candelaria	Regional Water Quality Control Board - Santa Ana
Matt Peterson	Fast Bottom Hull Diving
Michelle Bowman	AMEC
Neal Blossom	American Chemet Corporation
Rolf Schottle	AMEC
Sande George	Stefan / George Associates
Sandy Lea	Kop-Coat Specialty Coatings
Shana Rapoport	Regional Water Quality Control Board - Los Angeles
Susan Keydel	Environmental Protection Agency
Tim Riley	Tim Riley & Associates
Tom Nielsen	Nielsen Beaumont Marine Inc
Vada Yoon	Anchor QEA
Virginia St. Jean	San Francisco Department of Public Health
Vivian Matuk	California State Parks Division of Boating & Waterways and California Coastal Commission

- Misc announcements
- Brief Question/discussion Re: How harbors/marinas are handling bathrooms for live-aboards.

2. In-Water Vessel Hull Cleaning BMP Fact Sheet Update (10 minutes) 1:15 – 1:25

David Elias—San Francisco Regional Water Quality Control Board

2 - In-water vessel hull cleaning BMP fact

David Elias updated group on the development of a Fact Sheet for Hull Cleaning.

[The interim BMP for in-water hull cleaning consists of a containment and collection system capable of collecting all process water generated during in-water hull cleaning and directing it to a treatment system]

Questions & Comments:

- Factsheet focuses on Chemical discharge, but silent on the impacts to species
- Does this guidance only apply to large boats?
  These BMPs are pertinent to the Vessel General Permit; and are not restricted to any specific type of boat; rather it applies to any hull cleaning discharge.

- Concerns that this system is difficult for smaller rec boats...as it requires pressure against hull…?
  David: when you scrub the bottom of the boat, Cu concentrations are very high, making all of these discharges illegal, the alternative is dry docking; therefore this BMP is an alternative to dry-docking.
- Does a filter exist?
  Yes, systems are available to rent with filters depending on flow; still need to monitor discharges;
- Is this available for recreational boats?
  Yes, scrubbing unit may need to be modified to match the size of the boat; but the filters are the same
- Does the system collect the metals?
  Yes, the system is to collect organics and metals (biocides in paint, orgural(sp?), 'organic' from paint; material sluffed off from the paint is collected/not discharged.
- Does system collect the Particulates?
  Yes, the Organo-Clay will get more than just particulates
- Once the organics are in cartridges, how are they disposed of?
  Organo-Clay becomes a waste stream item, discharge accordingly; Nothing exotic, but goes into the industrial waste stream.
  Linda: In separating particulate from dissolved metals, use a 45u filter, and these filters are smaller, so they will get more than req.
- Costs for recreational boating sector?
  Dave, Michael: it should be reasonable if it's operating as a facility for multiple boats (not for just one)

---

3. Proposed Commercial Ship Biofouling Regulations Update (10 minutes) 1:25 – 1:35

Chris Scianni—California State Lands Commission

- Biofouling Mgmt. regs.: Al rulemaking docs on website www.slc.ca.gov, Programs, invasive species program, Article 4.8; International and large container shipping
- They've been working since 2007 to adopt regs. for reducing the introduction of invasive species; there have been several diff iterations; last May new proposed regulations were released; two comment periods since May, finalize/approval will be around July 2016.
- Details can be found on their website: http://www.slc.ca.gov/Programs/MISP.html
- Email Q&Comments to Jowin (now Jeanie Mascia, Jeanie.Mascia@waterboards.ca.gov) and/or Chris Scianni (Chris.Scianni@slc.ca.gov)

---

4. Innermost Containment update and Copper/Zinc Disposal (25 minutes) 1:35 – 2:00

Michael Zlotkin—Innermost containment

No PPT presentation available; See Innermost Containment website for photos and information:
http://www.innermostcontainment.com/about

Here are a few submitted photographs:


Containment System1.jpg


collected gunk1.jpg


hoisted container for clean out.jpg

Questions & Comments:

- How do you dispose of waste?
  Dry it out and send it to the land fill.
- Is it recyclable?
  Not sure but want it to be? Working on getting it analyzed to assure compliance with land fills.
- What are the concentrations when you filter water?
  Down to 0ug detection; < 100ug/L
- Are you able to meet the standards with this BMP?
  Yes, slower filter process

- What are costs? 30' boat?
  ~<200$
- Boom containment seems large…
  Yes, but it's able to move btwn slips.
- How much time does it take to clean a typical boat?
  A diver can position in <5mins; Hull cleaning set up takes a few mins, towing around harbor based on distance, filter/pumping depends: ~30-90 mins
- Is this an Interim BMP?
  This has been shown to be the best available BMP
- What's the Cost
  It cost's approximately $20K to purchase & have your own system (Organo-Clay =1.5$/#); when you rent you are buying the clay since its not recycles; 3K# of clay will clean hundreds of boats.
  Virginia: To get this recognized as recyclable - start petitioning State DSC.
- Is this using EDTE filters?
  Not yet. More than ½ of Cu is grabbed by the micron filters.

---

5. *Quick Break - 5 minutes* *2:00 – 2:05*

---

6. **Copper Tolerance and Vessel Traffic (20 minutes)** **2:05 – 2:25**

Joshua Mackie—San Jose State University

Mackie_InterAgFoulin
gMTG_Presentation_0

Questions & Comments:

- Linda: Blue was 60/red 40 – what was the leach rates? No, would send which paints were used: How determined Cu levels,
- Josh: Used literature, hot spot = known to be polluted, exceeds EPA criteria... L: Dissolved Cu in H20, are you looking at seds?
  Josh; Not linking those, using literature on seds, but not measuring it;
- Rick w/ Coval: Less Cu at Catalina/Avalon, which is a pleasure boat area...so there is no cleaning there?
  Josh; It was not measured at that location.
- Marinas with breakwaters, current, vs. static areas: Are you seeing Cu is dissipating thru current? Reaching out into the ocean?
  Josh: It is hard to see at this juncture... currently = lower dose of Cu, could see that it would affect experiment... surveying sites a 2nd time, looking at geographic areas ad seeing similar responses by species.

---

7. **Quantum Coatings and Sealing (25 minutes)** **2:25 – 2:50**

Mike Starr—Quantum Molecular Coatings & team

No PPT presentation available; See Quantum Coating's website for photos and information:
http://www.quantum-coatings.com/Marine-and-Hull-Coat

Coval-DataSheet-Mari
neHullCoat.pdf

Coval-Marine-Hull-Co
at-MSDS-1-1-2013.pd

Maunawili Propeller
Inspection Report F.pc

Propeller.JPG

Mike Star and partners made a presentation of their Coval Anti-fouling Marine Hull Coating materials

- Propeller photos and dive reports are from the website

There was a brief Q&A with Quantum staff after this presentation on the Coval antifouling Marine & Hull Coatings and it's applications.

---

8. Synthetic Pile Protectors (15 minutes) **2:50 – 3:05**

Bill Ellis—NorPac Enterprises
No PPT or other presentation available; See NorPac website for photos and information: www.norpacent.com

Bill Ellis called in for this presentation to the group; Jowin showed photos & website on projector during discussion. NorPac Enterprises employs a cost effective synthetic wrapping system to protect wood, steel and concrete piles; for both new installations, and wrapping existing piles.

There was a brief Q&A with Bill Ellis after his main presentation on this pile wrap system focused on examples of installation and leach potential.

---

9. Copper antifouling paint registrant update (15 minutes) **3:05 – 3:20**

Nan Singhasemanon, Carlos Gutierrez, &
April Da Silva—California Department of Pesticide Regulation

- Restated the Anti-Fouling Workgroup's *Mission Statement*
- 6/2010 Cu paint reveal – Cu concentrations were too high, therefore they revaluated the marinas that were considered to have high values
- DPR Cu Reveal – concluded main pathways, passive leaching & Underwater hull cleaning:
  - Required data to assess these issues, from registrants of paints, paint type, leaching and underwater hull cleaning study;
  - Study showed hull cleaning was a significant contributor of Coper to environment;
  - CA leg AB425, req. DPR to establish leach rates, 2/2014: 9.5 & 13.4;
  - Presented these rates at multiple meetings over 2014-15;
  - Implementation is in process for the mitigation strategy for passive leaching of Cu products, and allowed cleaning processes;
  - Put out a leach rate list on DPR Cu AF page, response to AB425, and a memo on the strategy & approach;
  - Viewable by category; 9.5-13.3, 13.4;
  - Actively developing language to put leach rates into regulation;
  - New update was released on Aug 12th 2015;
  - Further updates will be made as needed.
- Q: What's the status of action? What's next:
  April – various staff are addressing rulemaking currently; within the next <2 yrs., do not expect it to be as strict as WA, Or or NY... but are continuing the process; Based on the leach rates
- Matt terminology Q: category of AF Paint, 'no-clean' – what does that mean? Is presenter saying that 'no hull cleaning was required' – or that 'you could not clean it'?
  April: Registrants need to provide proof/that no cleaning was feasible...currently no way to specify that no cleaning was required – due to the fact that they/DPR cannot specify label language
- Virginia calcifying: Nano Cleaning – goes on 4mm and it stays on 2mm; expressed similar concerns on the carcinogenic.
- Matt Q: Coating – could sell the products, but would need evidence that there's physical/photographic evidence before he could recommend.
- Rick A: the current results show promise, but need to continue to do research and show side-by-side comparisons: Not suitable for wood; costs associated to get boats covered are still an issue... looking for volunteers... still facing haul out & product costs.

---

10. Meeting Wrap Up (10 minutes) **3:20 – 3:30**

Next meeting will be – March 2016
Now set for April 28th 2016

Goal Statement

Marina Interagency Coordinating Committee (Marina IACC)

1.) Develop partnerships among entities (e.g., state, federal and local agencies) responsible for addressing nonpoint source pollution related to boating and marinas; 2) Make efficient use of state, federal and local resources to address this pollution by sharing information, avoiding duplicative efforts and identifying technical and policy gaps; and 3) Promote improvements to marina water quality through implementation of management practices.

Antifouling Strategies Workgroup (AFS Workgroup)

To provide a forum to 1) facilitate the dissemination of boat antifouling strategy information, 2) encourage the discussion of antifouling strategy issues including (but not limited to) those relating to scientific research, socio-economic considerations, aquatic invasive species, environmental monitoring and impacts, mitigation of adverse effects, and regulations, and 3) promote the coordination of antifouling strategy-related projects and activities.