



MEETING ANNOUNCEMENT

CONTAMINANTS OF EMERGING CONCERN (CEC) EARLY WARNING NETWORK

Regional Expansion of NOAA's Mussel Watch Program to Monitor CECs in Coastal California

WHEN AND WHERE

October 20 & 21
San Francisco Estuary Institute
7770 Pardee Lane, 2nd Floor
Oakland, CA 94621
510.746.7334
<http://www.sfei.org/>

MEETING HOSTS

San Francisco Estuary Institute (SFEI)
Southern California Coastal Water Research Project (SCCWRP)
NOAA | National Ocean Service | National Centers for Coastal Ocean Science (NCCOS)

MEETING OBJECTIVE

Determine which CECs shall be added to Mussel Watch Program monitoring activities in coastal California starting this year (Winter 2009/10).

BACKGROUND

On March 11 & 12, NOAA convened a workshop in Costa Mesa, California entitled "*Contaminants of Emerging Concern (CEC): Adapting NOAA Monitoring and Research to Address CEC Management in Coastal, Marine and Great Lakes Environments*" with the goal of advancing an organizational strategy to coordinate existing regional and national monitoring, research, and assessment programs towards a contaminant of concern (CEC) early warning network. Among the key workshop outcomes was that NOAA's National Status & Trends (NS&T) Mussel Watch Program be re-engineered to become the principal Agency CEC monitoring capability, serving as an early warning sentinel for CECs nationwide.

Since that time, Mussel Watch Program (MWP) managers and scientists have begun the task of moving forward from this recommendation towards implementation of a modestly reconfigured MWP that can measure CECs throughout coastal, marine and Great Lakes Waters. Also among the workshop recommendations was the need for regionally-tailored monitoring. In the face of budget constraints, geographic specificity provides a means to optimize



monitoring, thereby potentially saving costs at national level implementation.

To that end, MWP scientists have chosen the State of California as the first “test-bed” for re-engineering, and seek your participation and guidance on developing a short list of initial CECs to address in its first year of transformation. The MWP budget will still present constraints on what is feasible; however, considerable adjustments to the Program’s nationwide sample allocation (effort) are being considered to make room for an expanded list of chemical and possibly biological contaminants monitored in the “*California Pilot*”. Your participation in this discussion is paramount to a successful first step towards transforming Mussel Watch to include the foundation of a National CEC Early Warning network along our Nation’s shores.

STARTING POINT – Some Guiding Parameters

Mussel Watch is the longest running Coastal and Great Lakes contamination monitoring program that National in scope each year; dating back to 1986. As such, please consider the unique requirements of maintaining a National program while finding ways to improve the Mussel Watch product line. Clearly, cost is relevant here, as are consistency and continuity, among others. Below are some general guidelines to keep in mind as we develop a short-list of CECs.

- 1) While we are looking to sharpen our analytical focus on regional CECs, it may be beneficial in the long-term if early changes to the chemical monitoring portfolio have broad (*i.e.*, National) relevance and cause for concern.
- 2) New monitoring techniques will be up for consideration (e.g., passive sampling devices, strategic sample placement, altered sampling frequency, etc.); however, we intend to continue monitoring contaminant body burdens in shellfish as a central component to program protocols.
- 3) Chemical analyses planned for this years’ Mussel Watch sampling event will be focused solely on samples collected from California waters. While samples will be collected nationwide, those collected outside of California state waters will be stored for later analysis. This strategy will generate a “cost-savings” at a National level that will be entirely invested in California; allowing for the expanded list of CECs. Even so, cost will be part of the decision-making process. Figure 1 (page 3) shows a map of Mussel Watch sites throughout the Nation.
- 4) Mussel Watch Program staff believe it is important to maintain a connection to the historical record it has generated. As such, we intend to maintain our regularly scheduled analysis of “legacy contaminants”, including PCBs, PAHs, DDTs, trace metals, etc. We will consider developing a sample attenuation strategy to potentially reduce the frequency of monitoring some of these, but wish to maintain the standard suite of analytes during this first year of change.

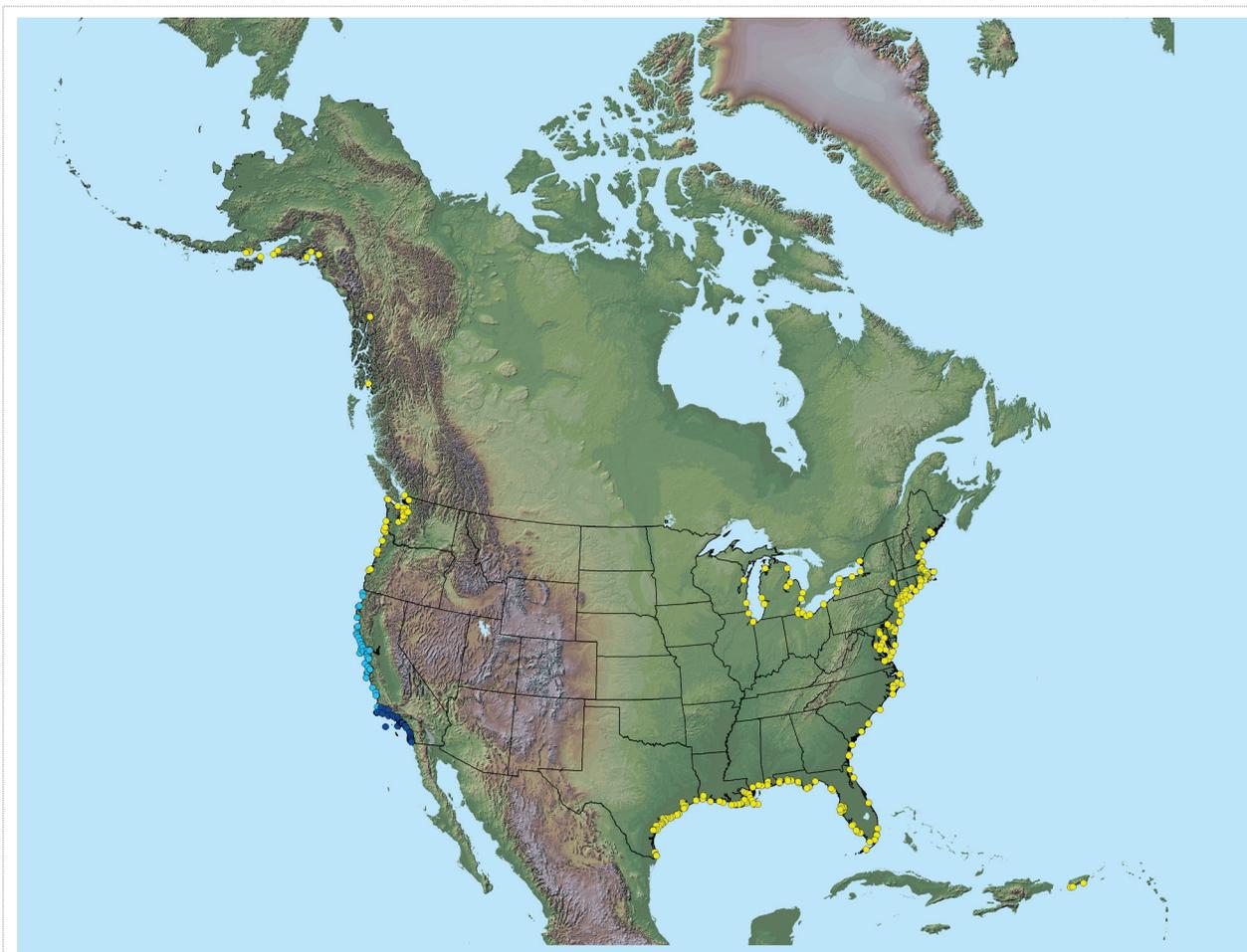


Figure 1. Map of NOAA Mussel Watch Program monitoring sites. Light and dark blue sites are California monitoring locations, light blue sampled during odd years, dark blue during even (total N=70). Prior to partnerships developed with SCCWRP and California EPA in fiscal year 2008, the total sample effort in California was 33 sites – a 112% increase in coverage resulting from these partnerships.

STARTING POINT – A Candidate List for Consideration

As a springboard for discussion, Mussel Watch Program staff developed a list of CECs that may be feasible to address. A simple screening process was used to prioritize new compounds that could be measured in upcoming Mussel Watch monitoring work. Parameters used for screening included:

1. Established methods are present for compound;
2. Other agencies and organizations currently measure for them;
3. They are relevant to legislators, policy makers and regulators; and
4. As a whole they represent a diverse group of threats to the environment, fate and transport mechanisms, and types of compounds



Candidate CECs are classified into broad groups (see list below **in bold**), with one or two examples of each provided for each group. These are only examples, and meant to generate discussion. Of principal concern is that we address the most appropriate broad classes of contaminant. If the classes presented meet that objective, let us develop a final list of potential additions to the Mussel Watch monitoring portfolio. If not, what is missing? After we arrive at a short list of candidates, Mussel Watch Program staff will review the consensus recommendations, and determine what will be feasible to implement during this winters' monitoring event. Note that some of the contaminants listed below are not CECs per se, rather potential additions to the Mussel Watch list (e.g., microbial agents, alkanes, etc.). We will report our determination, and provide all meeting participants with the final plan of action. The example list follows.

1. Pharmaceuticals

Carbamazepine
Erythromycin

2. Hormones

17-alpha-Ethynylestradiol
17-beta-Estradiol

3. Flame retardants

PBDEs
OH-PBDEs - hydroxylated polybrominated diphenyl ethers

4. Pesticides

pyrethroids

5. Personal care products/ Household use

Triclosan

6. High volume production chemicals

Perfluoro compounds

7. Microbial agents

Vibrio spp.

8. Histopathology

Bivalve molecular diagnoses for histopathology

9. Radionuclides

⁹⁰Sr
^{239, 240}Pu

10. Petroleum fingerprinting

n-alkanes
Pristane and phytane

11. Nanoparticles

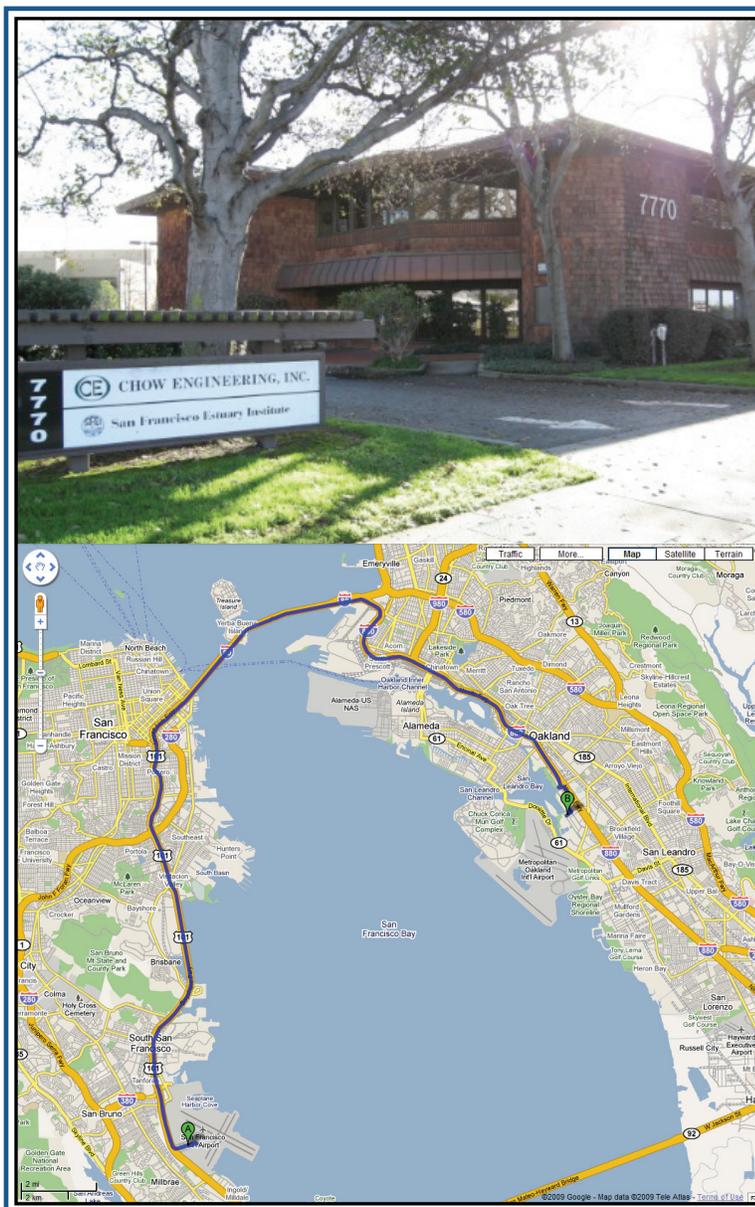
Nano-silver
Carbon-nanotubes



We look forward to seeing you in San Francisco, and thank you in advance for your assistance in improving the Mussel Watch Program to better address emerging threats to coastal water quality throughout the Nation.

LOGISTICS

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 Oakland, CA 94621
 (510) 746-7334



SFEI is located 3 miles from the Metropolitan Oakland Airport (OAK), and roughly 30 miles from San Francisco International Airport (SFO). There are a variety of Hotels very near the Institute, including:

Holiday Inn Express Oakland

66 Airport Access Road, Oakland, CA
 (800) 651-1883
 (510) 569-4400
<http://www.oaklandhiexpress.com/>

Courtyard Oakland Airport

350 Hegenberger Road, Oakland, CA
 (510) 568-7600
<http://www.marriott.com/hotels/travel/oakap-courtyard-oakland-airport/>

Quality Inn Hotel - Coliseum Hotel

8471 Enterprise Way, Oakland, CA 94621
 (510) 562-4888
<http://www.oaklandqi.com/>

The good folks at SFEI have offered to find us all a table at a nearby restaurant during the evening of October 20. Please let me know if you have any dietary restrictions so that we can take that into account while planning for this evening out together.