

**Delta Mercury Exposure Reduction Program (MERP)
Community Stakeholder Meeting Notes**

February 4, 2015 - Fairfield - 10AM-12PM

In Attendance:

Name	Organization
Kathryn Kynett	Sacramento-San Joaquin Delta Conservancy
Susan Klasing	Office of Environmental Health Hazard Assessment
Margy Gassel	Office of Environmental Health Hazard Assessment
Janis Cooke	Central Valley Water Board
Laura McLellan	Central Valley Water Board
Kathy Miller	San Joaquin County Board of Supervisors/Sacramento-San Joaquin Delta Conservancy
Argentina Davila-Luevano	California Lulac Institute
Angela G. Luevano	TODOS UNIDOS - Antioch
Lino Ancheta	Contra Costa Environmental Health
Stan Jones	Andreas Cove Yacht Club, Twitchell Island, Owl Harbor Marina
Lysa Voight	Sacramento Regional County Sanitation District
Shakoora Azimi-Gaylon	Sacramento-San Joaquin Delta Conservancy
Jeff Boggs	Solano County Health Department
Maha Abdelaziz	California Department of Public Health
Mary Helen Nicolini	Friends of Marsh Creek Watershed
Terry Schmidtbauer	Solano County Resource Management
Ricardo Serrano	Solano County Resource Management
Joel Ellinwood	Member of the Public
Gabriela Passat	Delta Conservancy/California Department of Public Health
Alcira Dominguez	California Department of Public Health
Vidal Pedraza	San Joaquin County Environmental Health Department
Michael Kent	Contra Costa County Health Services
Elisa Sabatini	Yolo County Natural Resources
Lauren Joe	California Department of Public Health
Alyce Ujihara	California Department of Public Health
Amber Taxiera (via webex)	The Sierra Fund
Kelsey Westfall (via webex)	The Sierra Fund
Andy Gordus (via webex)	California Department of Fish and Wildlife (Fresno)
Alex Keeble-Toll (via webex)	The Sierra Fund

Introduction and Welcome (Delta Conservancy - Shakoora Azimi-Gaylon & Gabriela Pasat)

The Delta Mercury Exposure Reduction Program (MERP) is a multi-year, multi-agency effort to raise awareness of mercury in Delta waters and to reduce mercury exposure. Community stakeholder meetings provide input as to how the MERP can be improved, and educate the public as to what

resources and tools for outreach and education are available. Thank you to Ricardo Serrano and Jeff Boggs with Solano County Resource Management for providing the room and logistical support for the meeting. The next meeting date is scheduled for May 20, 2015 at the Delta Conservancy, 1450 Halyard Drive Suite 6, West Sacramento, CA, 95691. If there is interest in hosting the meeting at another location to serve a specific region of the Delta, the MERP team is happy to coordinate this.

Acronyms

Delta MERP—Delta Mercury Exposure Reduction Program

CDPH—California Department of Public Health

OEHHA—California Environmental Protection Agency, Office of Environmental Health Hazard Assessment

US Food and Drug Administration (FDA)

US Department of Agriculture (USDA)

Presentation by Susan Klasing from OEHHA: “Mercury or Omega-3s? The risks and benefits of fish consumption”

For a video of this presentation, go to:

<https://youtu.be/OH1pnjf3Dmg?list=PLb3Xf3y6X4erneRMELcb8uFNk8ISsKPYY>

- Risks of mercury
- Where mercury is in the environment
- Forms of mercury, where mercury is in the environment and how it moves through the environment
 1. Mercury enters the water from the air and from runoff.
- Historic gold and mercury mining in California:
 1. Mercury amalgamates with gold
 2. Mercury mining in California occurred until 1981
 3. The link between mining locations and locations for which there are specific advisories
- Fish consumption is the main source of mercury exposure for most people.
- Most fish have some level of mercury.
- Generally, predator fish and older fish have higher levels of mercury.
- How do we know mercury causes human health programs?
 1. Minamata, Japan 1950s – 1960s
 - Population was exposed when mercury containing waste water was released into a bay, which then accumulated in fish that people ate
 - Mercury exposure was very high
 2. Iraq 1971 – 1972
 - Population was exposed when mercury treated seed grain was mistakenly used for making bread instead of planting
 3. From these events, learned that the brain is most affected by mercury exposure and that fetuses and children are most sensitive

- Large scale studies were done in Faroe Islands, Seychelles Islands and New Zealand to identify the lowest doses with adverse effects and highest dose where no adverse impacts to health are observed.
- During studies of the effects of mercury on children, the effects were detectable by medical tests that measure how the brain works, but subtle enough that a parent or teacher would not be able to detect the effects.
- There are advisories for women of childbearing age, babies and young children and separate advisories for other adults.
- OEHHA has a statewide advisory for lakes and reservoirs that do not have their own advisory
- Some of the health benefits of eating fish are thought to be associated with Omega-3s, a type of fatty acids in fish; other benefits may be from a combination of nutrients in fish.
- Omega-3 fatty acids are associated with many health benefits, including benefits for heart and brain health.
- Advisories about eating fish can deter people from gaining the health benefits of fish.
- Fish have the type of Omega-3 thought to have the best effect on health, DHA, and EPA.
- Plants also have Omega-3 fatty acids, but it is in a different form, ALA.
- There is also another type of fatty acid, Omega-6 fatty acids, and it is thought that it is important to maintain a diet with a certain ratio of Omega-6 to Omega-3 fatty acids. However, in the modern western diet, the ratio is thought to be too high.
- The current Delta advisories indicate fish species that are relatively high in omega-3 fatty acids with a heart symbol (unless the mercury levels are high enough that the population is recommended not to eat that species at that site).
- In 2014, the US Food and Drug Administration (FDA) released an assessment of the net effects (benefit of omega-3 fatty acids vs mercury exposure) on the fetus of the pregnant mother eating fish.
- The assessment concludes that the benefit of eating most fish species increases with fish consumption up until a point, then additional fish consumption could have a negative impact on the brain development of the fetus. However, this also depends on the mercury levels of the fish being consumed.
- The goal of the advisories is to help people get the health benefits of eating fish, not the negative affect of mercury exposure.
- The FDA and USDA has added a minimum amount of fish that should be eaten for a healthy diet (8 ounces) and listed 4 species that should not be consumed by women who are pregnant, who many become pregnant, nursing mothers, or young children: shark, swordfish, tilefish (from the Gulf of Mexico), and King mackerel.
- They also found that many commonly eaten fish are low in mercury and many people do not eat the recommended amount of fish.
- The USDA updates the Dietary Guidelines for Americans every 5 years.
- Meeting materials also include a handout produced by the FDA and US EPA showing the different levels of types of Omega-3 fatty acids, DHA and EPA in different fish species.
- **Questions/Comments from the Audience:**

1. Are there reports of illness in the US each year due to mercury exposure?
 - **Response:** It is difficult to prove that mercury exposure is causing symptoms that people may report to their doctor as symptoms are subtle and could be attributed to many different causes. There are a few cases when people have reported symptoms that were alleviated as their fish consumption decreased.
2. Can the body get rid of mercury over time?
 - The human body does excrete mercury over time, but it does so at a slow rate. This is why women cannot just stop eating fish high in mercury at the time they become pregnant and have the mercury level in their body drop immediately. It takes time for the body to excrete the mercury.
3. Here in the Delta, are we seeing improvements in health or changes in behavior based on trainings and outreach?
 - While some evaluation has been done, there hasn't been a recent area-wide survey.
4. Why does highway 12 divide the advisories for the North Delta and the South/Central Delta?
 - Highway 12 is an easily recognizable feature dividing two areas with different contamination levels
5. Rio Vista hosts Striped Bass fishing, is it important what Delta waterbody the fish came from for their mercury levels?
 - Striped Bass travel, so there is an advisory just for striped bass (and four other species) regardless of what waterbody they are caught in.
6. How does this research apply to fish oil supplements?
 - The American Heart Association or your personal physician may have information about this.

Report back from breakout sessions at October Community Stakeholder Group Meetings (CDPH – Lauren Joe)

- The feedback from the breakout sessions showed agreement on the overall goal of the program.
- The team is working on integrating suggestions on groups to outreach to and has implemented some of these recommendations already in the Tri-County Area. The “Target Group” on the one-page document remains the same because it is overarching and includes all the specific groups that were suggested.
- A bullet was added to the Collaborate Objective: “Explore opportunities to gather information about consumption habits of Delta fish consumers to help guide risk reduction activities.”
 - Collaborating to gather information about fish consumption habits of people in the Delta (through surveying and research-related activities) was mentioned as an important topic. While there are no funds specifically for this, surveys and related activities can be integrated into Delta MERP projects to help gain this information. This is likely to be an agenda item in the future

- A line was added to one of the bullet points in the Educate Objective, so that it now reads: “Identify new venues for distribution of materials and information, such as various types of media and targeted community involvement.”
 - There were many suggestions around utilizing various types of media, like video, radio, social media, and more. There were also suggestions for specific groups to target for activities, like faith-based organizations, and retirees. Much of this work will be accomplished by the grantees, but if a particular media project or target group is identified by our CSG as a priority, this can be discussed in the future
- We will post the updated one-pager online and will ask for feedback via email after this meeting. We will revisit this every so often to make sure we are keeping with your vision for the Delta MERP.

Questions/Comments from the Audience:

- Is advisory information available at when you get a fishing license?
 - **Response:** Yes, it is in a book given out with the license. However, suggestions for calling attention to this information are welcome.

Delta Warning Sign Development (CDPH—Alyce Ujihara)

- Past Signage Efforts
 - In 2006 to 2008, signs were posted at about 60 sites throughout the Delta with assistance from the Delta counties and others.
 - CDPH interviewed anglers about their comprehension of the sign information:
 - There was high recognition of the fish species pictured, but comprehension of the message was not high
 - The advice for fish in the red and green categories (indicating higher or lower chemicals) did not appear to be well understood
 - There was some confusion of the geographic area to which the Delta sign referred to
 - Evaluations were also done for the physical conditions of the signs:
 - Signs held up better at active marinas compared to more remote locations
 - Based on this evaluation, more durable materials and more secure methods of posting are recommended
 - This information will be considered when prioritizing posting location
 - The advisories have changed since the Delta signs were posted:
 - New fish were added and the advice for some fish became more restrictive. Also, there was no sign developed for the San Joaquin River
 - What was learned in the Delta was applied to the development of the SF Bay “Fish Smart” signs:
 - Focus was on a few simple messages that conveyed information without needing to read the text
 - More testing and evaluation was done in the design phase

- Surveys indicated better comprehension of the message even among low literacy or non-English speakers. Many people had also remembered having seen the sign and could recall one or more fish that was safe or not safe to eat
- New Delta Signs—next steps:
 - Form a subcommittee/workgroup for sign development
- **Questions/Comments from the Audience:**
 - Video conferencing was recommended for the sign development subcommittee/workgroup
 - **Response:** A webex was provided for this meeting and was used. The Delta MERP Team will continue to look into methods to allow people to provide input at these meetings without having to travel.

Small Grants Program Update (CDPH—Alcira Dominguez)

- Seven applications have been received for the small grants program.
- \$60,000 in grant money is available and will be distributed to four different grant applicants (\$15,000 each).
- All seven applications have been screened for completeness and a review panel will convene in early March to reach a decision on awards.

Action Items:

- Community members are invited to participate in a subcommittee/workgroup for the development of a new Delta warning sign.