



Fish Contamination Education Collaborative Partners Meeting

25 September 2025

9:00 a.m. to 11:00 a.m.

Cabrillo Marine Aquarium Library

[3720 Stephen M White Dr, San Pedro, CA 90731](https://www.cabrillomarineaquarium.org/3720-Stephen-M-White-Dr,-San-Pedro,-CA-90731)

ATTENDEES

U.S. Environmental Protection Agency (EPA) Region 9:

Renee Jordan Ward**
Maria Rodriguez**
John Chesnutt

EA Engineering, Science, and Technology, Inc. (EA):

Evana Newberry**
Natali Hoeg

Daniel B. Stephens & Associates (DBS&A):

Heather Hackstedde**
Matias Gibertoni**

Los Angeles County Sanitation District (LACSD):

Wonnapa Natanom-Harrold

Cabrillo Marine Aquarium:

Bayne Westrick-Snapp**
Jim DePompei**

California Office of Environmental Health Hazard Assessment (OEHHA):

Tran Pham Huyen

California Department of Fish and Wildlife (CDFW):

Lt. Michael Vicknair
Dan Waligora
Holly Gellerman
Katie Zeeman

Los Angeles County Department of Public Health (LACDPH):

Stefani Daryanto
Alberto Rivadeneyra**
Eugene Loi**

State Water Resources Control Board (SRWCB):

Luke Ginger

USC Sea Grant

Amalia Almada**

California Department of Toxic Substance Control (DTSC):

Chinh Sheow**
Eileen Mananian

Chinese Christian Herald Crusade (CCHC)

Shelly Chen**

Los Angeles Regional Water Quality Control Board (RWQCB)

Xiaofei Cui

University of Southern California (USC):

Amalia Almada**
Linda Chilton

Boat People SOS (BPSOS):

Hang Nguyen

Heal the Bay

Zoe Collins

Total attendees = 28

**In-person attendance



Meeting Purpose

This Fish Contamination Education Collaborative (FCEC) partners meeting brought together new members and provided updates on the Palos Verdes Shelf (PV Shelf) Institutional Control (IC) program activities. Questions were accepted during and following each section of the presentation, however, the summary of these questions and answers has been provided at the end of each discussion topic section below. The meeting progressed through the following discussion points:

1. Welcome, Introductions, and Agenda Review

EPA discussed the importance of this partners' meeting and the IC Program's approach for reducing the consumption of contaminated fish, which includes the newly finalized Community Involvement Plan (CIP). This included highlighting the different roles of the FCEC and the Palos Verdes Shelf Technical Information Exchange Group (PVSTIEG):

- Community Involvement Plan was finalized in July 2025 provides a conceptual site model (CSM). EPA described what a CSM is and how it shows PV Shelf contamination moving through the site into humans and other organisms like marine mammals, birds, and fish.
- EPA discussed the PVSTIEG aspects of the IC Program and what stage of the CERCLA process the site is in:
 - Goal: Plan, review, and discuss technical information related to the cleanup of the Palos Verdes Shelf under CERCLA
 - Recently reviewed and commented on the Draft Palos Verdes Shelf Human Health and Ecological Risk Assessment (HHERA)
 - Human health risks were drafted in 2025 using consumption rates from 2014 and tissue concentration data from recent samples.
- EPA discussed the FCEC part of the IC Program:
 - Goal: Minimize risks to human health by reducing consumption of fish contaminated with DDT and PCBs from the Palos Verdes Shelf site
 - Utilizes outreach and education programs to increase awareness of impacted communities

2. Program Update - Renee Jordan Ward (EPA), Evana Newberry (EA)

- New pier signs installed in phases.
 - Phase 1 (Piers) – Complete:
 - Santa Monica, Venice, Hermosa, Redondo, Cabrillo, Pier J, Rainbow Harbor, Belmont, Seal Beach
 - Phase 2 (Beach and Coastal Areas) – In Progress:
 - Completed: Manhattan Beach
 - Planned: Ballona North Creek/Playa del Rey Jetty, Ballona South, Dockweiler Beach, Rocky Point, Torrance Beach, Royal Palms/White Point
 - Tentative/Lowest Priority: El Porto/El Segundo *Note- Location was previously considered for removal from outreach area, replace only if EPA decides to keep in the IC program*
 - Phase 3 (Boat Launches and other Areas) – (Anticipated 2026)
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- Discuss potential sign locations to be added. Upcoming annual reporting will be used to determine future locations.
- DNC Sign Inspection Schedule Updated (based on EPA-issued Technical Direction Memo):
 - Quarterly: Pier J, Rainbow Harbor, Belmont, Seal Beach
 - Semi-annually: Cabrillo, Santa Monica, Venice, Hermosa, Redondo
 - Annually: All other DNC sign locations
- Dramatic increase in QR scans after pier sign installations (400+ scans/month)
- Fish ID Cards updated July/August 2025
 - New design includes crossed out Do-Not-Consume (DNC) fish
- New stuffed fish and magnet bags for fishing game
- Transition to electronic tally forms for angler outreach began May 2025 for all piers except Cabrillo
- ArcGIS user dashboard created, with visual breakdown of data collected from tally sheets
 - Pier J highlights:
 - Third-lowest AOP pier encounters of 9 piers total
 - Even split between new and repeat anglers
 - Majority of anglers aware of contamination
 - Most white croaker caught at Pier J compared to other piers
 - #1 intent “Catch and Release” with #2 intent “Consumption”

Program Updates Q&A

Questions: The attendees had various iterations of similar questions about the development and calculation of the risk assessment values. EPA clarified that the FCEC is focused on the human health risk levels associated with consumption of fish from PV Shelf, and various EPA attendees explained how the levels were developed. EPA and EA clarified to attendees that the previously completed a specific Palos Verdes Shelf consumption study (2014) was used along with recent tissue sample results to perform the draft risk assessment for human health.

Comment: Nuance to “Consumption” category for GIS dashboard. “Consumption” does not necessarily include consumption of DNC fish.

3. Pier Angler Outreach Updates - Renee Jordan Ward (EPA), Evana Newberry (EA)

- Renee Jordan Ward (EPA) provided a Pier Angler Outreach summary for August 2024 - July 2025 monitoring period
 - 9 piers were addressed collectively: Santa Monica, Venice, Hermosa Beach, Redondo Beach, Rainbow Harbor, Pier J, Belmont Pier, Seal Beach, Cabrillo Pier.
 - Each pier visited weekly for daytime outreach
 - Evening outreach conducted at Venice and Redondo Piers once per week
 - E-forms implemented at 8 of 9 piers; Cabrillo Pier data provided to EA and is entered monthly to the GIS Dashboard, so the IC Program Dashboard is able to be comprehensive.
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- 43 miles of coastline collectively covered
- 3,542 tip cards distributed (91% English, 6% Spanish)
- Seasonal trends - less anglers seen during winter months
- Nearly all repeat anglers aware of contamination
 - #1 awareness source - AOP team. #2 awareness source - signage
- Zip Code Analysis
 - 464 zip codes provided
 - Most frequent daytime zip codes: San Pedro 90731, Los Angeles 90001, Lakewood 90712
 - Most frequent evening zip codes: Los Angeles 90001, Los Angeles 90291
 - 15 zip codes reported outside of the U.S.
- Evana Newberry (EA) provided an overview of the Pier Angler Outreach conducted by Cabrillo Marine Aquarium and DBS&A for August 2024 - July 2025 monitoring period
- New vs. repeat anglers (50/50) and awareness (50%) roughly the same for both daytime and evening outreach
- 82% of anglers approached agree to speak with outreach team
- Cabrillo Pier (most frequently visited) with most daytime anglers surveyed.
- Redondo second busiest pier for both daytime and evening outreach
- Primary language spoken: English (95%), Spanish (5%)
- E-forms will allow us to review pier outreach schedule to breakdown busiest hours for each pier.
- Outreach observations:
 - Belmont and Redondo Piers are the most active. Rainbow Harbor is consistently the least active pier.
 - New anglers more numerous with lower reported awareness compared to repeat anglers
 - Roughly 99% of anglers interviewed spoke in English
 - Evening outreach reaches fewer anglers but a greater portion of those anglers are new contacts
- 2025 DNC Pier Sign Installation overview:
 - Old signs have been removed at Phase 1 areas, and new DNC signs have been installed at the 9 AOP piers (Phase 1 areas) by LACDPH, the City of Long and the City of Seal Beach
 - Most recent DNC annual inspection was completed July 2025 following new inspection schedule; beach and coastal locations (Phase 2 areas) without new signs were not required to be inspected.
 - Maintenance/replacements are anticipated to be conducted by LACDPH and City Pier contacts
 - QR codes are being heavily used
 - AOP e-form geolocation data will reveal where to most effectively place new signs

Pier Angler Outreach Q&A

Q: What is being used to attach pier signs?



A: Metal clamps and [rarely] zip ties. LACDPH and EA coordinate with responsible parties for each pier, and they use the appropriate installation materials.

4. Community Outreach Update (Evana Newberry [EA], Heather Hackstedde [DBS&A], Matias Gibertoni [DBS&A], Shelly Chen [CCHC], Evana [EA] for BPSOS, Lt. Michael Vicknair, [CDFW])

- FCEC attended 13 events between July 2024 - August 2025; were unable to attend some directly or indirectly due to LA wildfire and other administrative limitations in January-March 2025.
 - ~44,650 total event attendees
 - ~3,161 FCEC booth interactions
 - ~1,011 tip cards handed out
 - ~2,368 other outreach materials handed out
 - Local seamstress has completed replacement fish for the community outreach fishing game
 - Community events attended since previous partners meeting:
 - Cabrillo Marine Aquarium World Ocean Day - June 7, 2025 (DBS&A)
 - CCHC Annual Walkathon and Carnival - April 27, 2025 (CCHC)
 - City of Alhambra Eco Fair - April 27, 2025 (CCHC)
 - City of Garden Grove - National Night Out - August 5, 2025 (BPSOS)
 - Observations:
 - DBS&A (Heather Hackstedde, Matias Gibertoni):
 - Several booth visitors reported awareness from newly installed signs
 - Personal perspectives on public and personal health experiences are sometimes shared, with people’s perspective that their or someone they know’s health is/has been affected by the contamination in fish tissue or the environment
 - Recommendation: the FCEC poster display would benefit from a redesign, with less text and larger font size.
 - Most booth visitors do not reportedly fish at the piers. Outreach events help increase broader community awareness of contamination, risks, and how to make healthy fish consumption choices
 - Shelly Chen (CCHC)
 - Many visitors spoke Chinese as a first or second language, and were grateful to have outreach materials in Chinese
 - Several visitors who did not fish themselves took additional pamphlets to share with friends and family who do fish, mostly in English and Spanish
 - Many younger and English-speaking visitors were particularly interested in historical context of why contamination is an issue
 - The fishing game remains very popular with children; the new fish and magnet set-up will test whether there is still an issue of certain fish species being caught over and over while other species fall off the line before they can be reeled in
 - Evana Newberry (EA) for BPSOS
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- Many Vietnamese-speaking elders showed interest in the booth’s display and mission
- Many attendees were unfamiliar with the risks of consuming contaminated fish, particularly white croaker
- The fish game is very popular and attracted many families
- The comic books were very popular. They were the most-distributed item at this event
- Bait Shop Outreach (DBS&A)
 - As of July, 36 shops are currently participating. Four of the 40 shops elected to discontinue participation in the program because they no longer sell bait.
 - Two shops left the FCEC bait shop outreach program in January.
 - Two shops left the FCEC bait shop outreach program in July. Family Deli and Grocery and Mr. C’s Liquor
 - A total of 3,305 tip cards were distributed to 35 of the 36 bait shops. One shop did not accept additional tip cards.
 - 1,625 English
 - 1,525 Spanish
 - 700 Chinese
 - 700 Vietnamese
 - Some shops did not have displays or had cards available behind other displays
 - Some shops declined additional tip cards
- Enforcement Update (Lt. Vicknair, CDFW)
 - Outreach Summary:
 - 2,784 anglers interviewed by CDFW Enforcement – 81% of inspections had at least one angler that was aware
 - FCEC Outreach Team and family/friends were the most commonly reported awareness sources.
 - The vast majority of anglers are not aware during enforcement
 - Five total commercial inspections this year - all markets no restaurants (no boats)
 - White Croaker Seizures
 - 165 white croakers observed
 - 122 white croakers seized from one angler (at a Cabrillo marine area)
 - 1 white croaker related warning
 - 1 white croaker related citation
 - 67 anglers stated they would keep a white croaker if caught
 - 11 anglers not adhering to prescribed bag limits

Community Outreach Q&A

Q: What is the reasoning for bait shops declining to accept additional tip cards?

A: Low interest/enthusiasm in shopkeepers



Q: Were fish seized by CDFW known to be distributed for commercial sale?

A: No reliable answer for this. Not much trafficking seen for white croaker. More local/close knit community sales observed.

Q: Can seized white croaker be sent to EPA for testing?

A: CDFW will follow up with EPA.

5. Program Proposals and FCEC Requests (Renee Jordan Ward, EPA)

- Phase 3 DNC pier sign locations:
 - EPA is considering boat launch/beach areas based on CDFW enforcement data.
 - Other suggestions or input on that approach?
- Continued angler outreach at Rainbow Harbor?
 - Consistently lowest angler turnout
 - White croaker caught frequently
- Due to increase in QR scans, updates for the website are necessary. Looking for ideas.
- Brochures and Curriculum Guides
 - Propose to discontinue paper options (available online only)
 - Looking to connect with Los Angeles Unified School District (LAUSD) for curriculum guide distribution

Program Proposals Q&A

Q: Do we know what is happening to white croaker biologically?

A: EPA is not researching biological effects within white croaker currently. Focus of FCEC is on risks to human health.

6. FCEC Action Items (Renee Jordan Ward, EPA)

- FCEC member Action Items - Provide feedback (by October 14):
 - Send locations where there should be additional pier sign placements under Phase 3
 - Input on if angler outreach should continue at Rainbow Harbor
 - Input on discontinuing printed brochures and curriculum guides
 - Input on any ideas for website updates

7. Adjournment, and optional Cabrillo Pier walk
