



**Welcome to the CLU-IN Internet
Seminar**

**Community Engagement Activities at
Superfund Sites**

Sponsored by: National Institute of Environmental Health Sciences,
Superfund Research Program

Delivered: March 31, 2011, 1:00 PM - 3:00 PM, EDT (17:00-19:00 GMT)

Instructors:

Anna Goodman Hoover, University of Kentucky, (Anna.Hoover@uky.edu)

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Moderator:

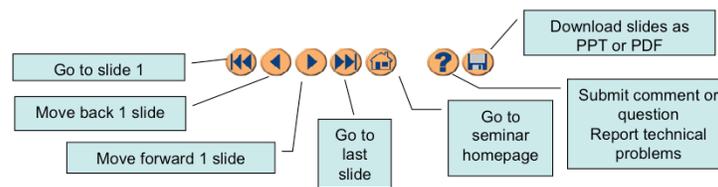
Beth Anderson, Superfund Research Program (NIEHS) (tainer@niehs.nih.gov)

Visit the Clean Up Information Network online at www.cluin.org

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Housekeeping

- Please mute your phone lines, Do NOT put this call on hold
- Q&A
- Turn off any pop-up blockers
- Move through slides using # links on left or buttons



- This event is being recorded
- Archives accessed for free <http://clu.in.org/live/archive/>

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Although I'm sure that some of you have these rules memorized from previous CLU-IN events, let's run through them quickly for our new participants.

Please mute your phone lines during the seminar to minimize disruption and background noise. If you do not have a mute button, press *6 to mute #6 to unmute your lines at anytime. Also, please do NOT put this call on hold as this may bring delightful, but unwanted background music over the lines and interrupt the seminar.

You should note that throughout the seminar, we will ask for your feedback. You do not need to wait for Q&A breaks to ask questions or provide comments. To submit comments/questions and report technical problems, please use the ? icon at the top of your screen. You can move forward/backward in the slides by using the single arrow buttons (left moves back 1 slide, right moves advances 1 slide). The double arrowed buttons will take you to 1st and last slides respectively. You may also advance to any slide using the numbered links that appear on the left side of your screen. The button with a house icon will take you back to main seminar page which displays our agenda, speaker information, links to the slides and additional resources. Lastly, the button with a computer disc can be used to download and save today's presentation materials.

With that, please move to slide 3.

Identifying the Relationship Between Citizen Values & Environmental Health

Using Community-Based Participatory Communication in Superfund Communities



Anna Hoover, M.A., Chike Anyaegbunam, Ph.D., Lindell Ormsbee, Ph.D.
University of Kentucky

www.paducahvision.com

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Overview

- Community-Based Participatory Communication: Goals and Tools
- Case Study: The Paducah Gaseous Diffusion Plant Future Vision Study
- Challenges and Future Directions for CBPC

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Roots of CBPC

- Action Research (1940s)
- Rapid Rural Appraisal (1970s)
- Participatory Rural Appraisal (1980s)
- Participatory Learning and Action (1990s)
- Participatory Rural Communication Appraisal (1990s)
- Community-Based Participatory Research (1990s)



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To date, CBPC has been used by the United Nations FAO and the World Bank in Rural Africa, ongoing since 1994

???? Appalachian Kentucky, 2003 -2005

NIOSH in its Social Marketing of Tractor Safety: US National Project, 2007-2009

The Goals of Community-Based Participatory Communication (CBPC)



- Engagement
- Empowerment
- Collaboration
- Context
- Trust



The Tools of CBPC

- Visualizations
- Projective Techniques
- Interviews
- Group Work
- Dialogue
- Ranking and Scoring



Case Study: The Paducah Gaseous Diffusion Plant Future Vision Study



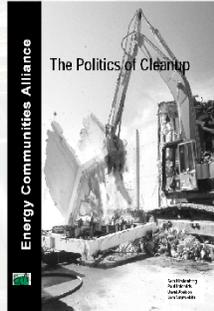
- Only operating US uranium enrichment plant
- 1,200 workers
- \$121 million payroll
- Buffered by West Kentucky Wildlife Management Area
- TCE and Tc-99 found in nearby private drinking wells (1988)
- US EPA Superfund National Priority List (1993-94)
- Among the world's largest TCE plumes
- Plant scheduled to close in 5-10 years

Project Goals

- Involve communities in visioning for site remediation, use, and monitoring.
- Ensure that future use goals help advance local needs and values.



Mixed-Methods Approach



Guiding Principles

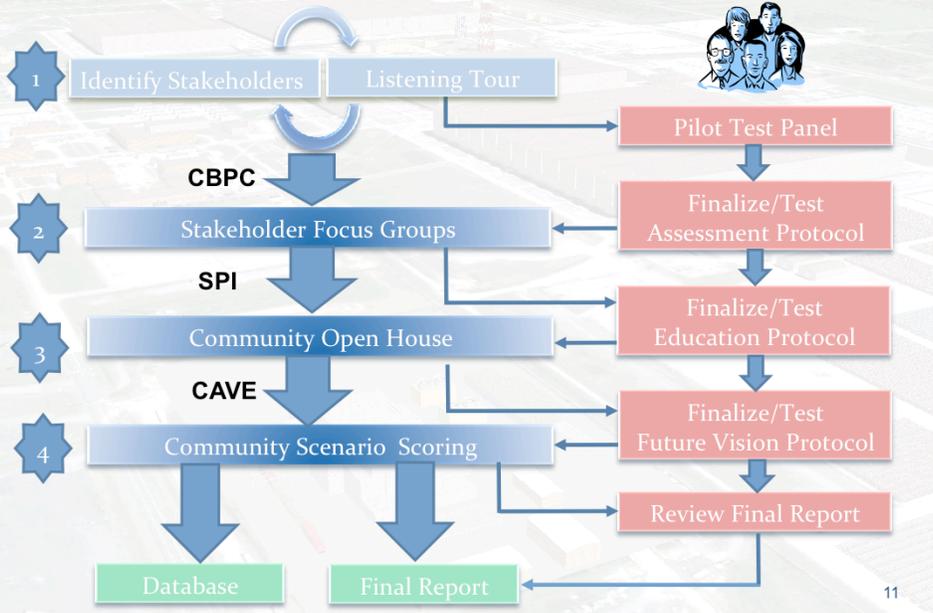
- Qualitative Tools**
 - Community-Based Participatory Communication
- Quantitative Tools**
 - Structured Public Involvement
 - Casewise Visual Evaluation

Tool Box



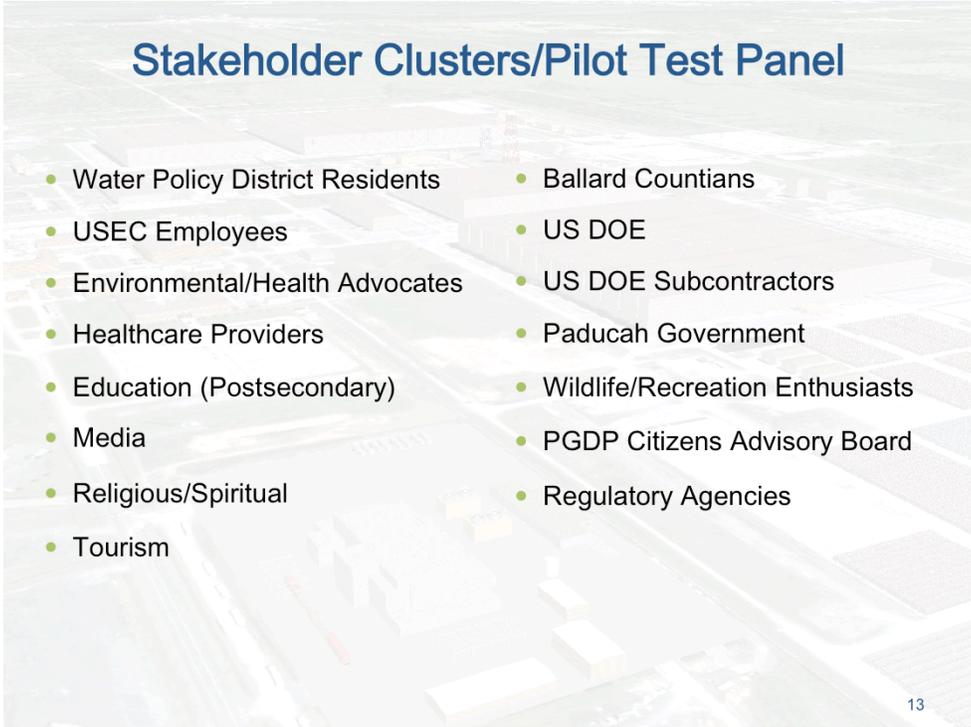
Evaluation Metric

Adapting the CBPC Process



Methods: Listening Tour Protocol

- Overview: Project and Process
- What are your individual/organizational concerns?
- What long-term development opportunities exist?
- What long-term development challenges exist?
- What is your individual/organizational long-term vision for the site?
- What do we need to know?
- Who should be involved?



Stakeholder Clusters/Pilot Test Panel

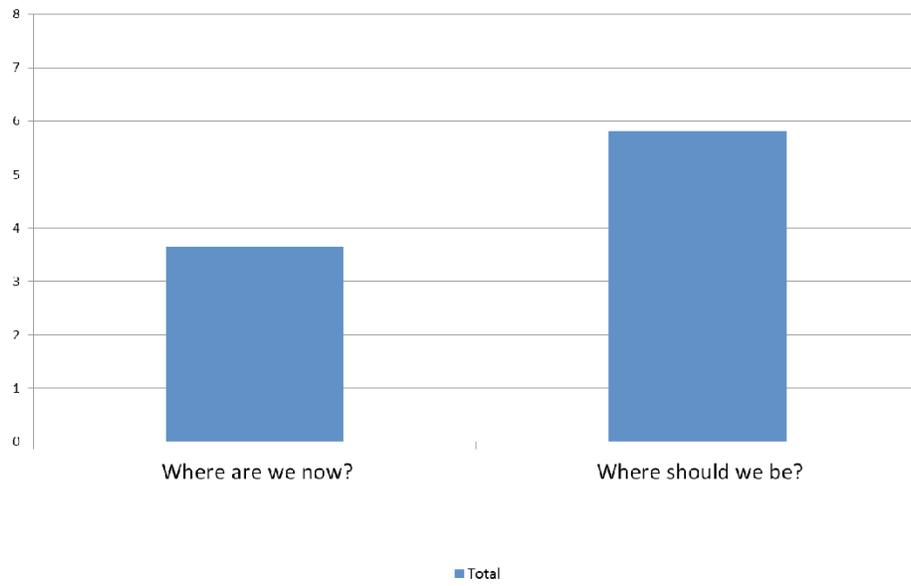
- Water Policy District Residents
- USEC Employees
- Environmental/Health Advocates
- Healthcare Providers
- Education (Postsecondary)
- Media
- Religious/Spiritual
- Tourism
- Ballard Countians
- US DOE
- US DOE Subcontractors
- Paducah Government
- Wildlife/Recreation Enthusiasts
- PGDP Citizens Advisory Board
- Regulatory Agencies

Methods: Focus Group Protocol



- Project Overview
- Arnstein Ladder
- Community Values
 - Paducah's Best Qualities
 - Qualities of the Ideal City
- Scenario Small Group Work
- Scenario Presentations, Discussion, and Evaluations
- Information Gaps

Arnstein Ladder Scoring





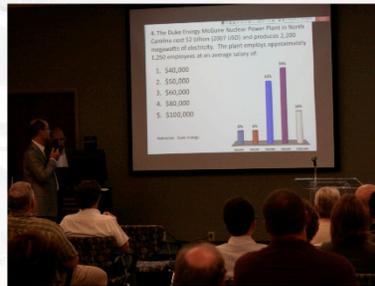
Outputs: Community Values

- Jobs
- Trust
- Family
- Safety & Security
- Friends & Sense of Community
- Open & Honest Communication
- Outdoor Recreation Opportunities
- Education & Cultural Opportunities
- Clean Water & Healthy Environment



Outputs: Public Information Meetings

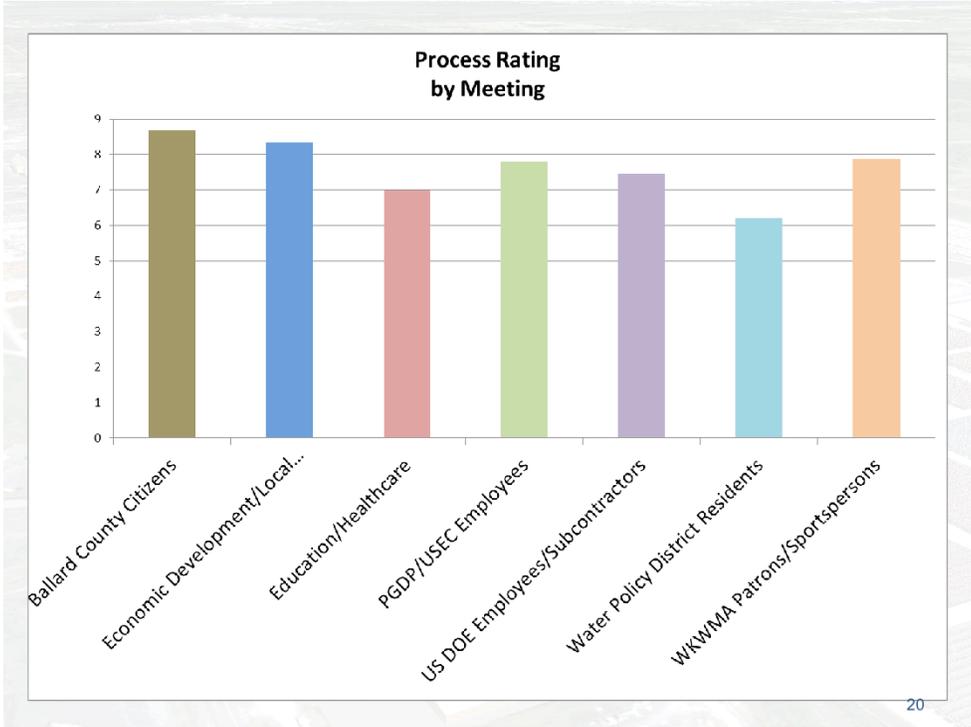
- Interactive Quiz Show Format
- Five Categories
 - The Past
 - The Present
 - The Future
 - Science
 - Cleanup
- Answers Included References to Existing Information Resources



Outcomes

- Increased knowledge of PGDP-related issues and available resources
- Increased awareness of pending closure and potential future uses of the site
- Mobilized community around future use issues
- Provided capacity-building experience in collaborative visioning
- Documented community values and scenario preferences for future advocacy

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Challenges for CBPC



- Legacy Trust Issues
- Entrenched Belief Systems
- Institutional Barriers
- Competing Academic-Community Knowledges & Languages
- Evaluation

Future Directions for CBPC

- Improving our understanding of how communities construct and balance competing risks
- Creating engaged emergency response plans
- Providing opportunities for citizens to participate in the creation of agency risk communication policies
- Informing the creation of health literacy interventions

Acknowledgments

- Citizens of McCracken and Ballard Counties
- University of Kentucky Superfund Research Program Research Translation Core
- Kentucky Research Consortium for Energy and the Environment
- Kentucky Water Resources Research Institute
- Kentucky Transportation Center
- Local and State Government Agencies and Staff
- Chas Hartman, M.A., Mitchael Schwartz, M.A., & Jason Martin, M.A.
- The project described was supported in part by grant number **P42 ES007380 from the National Institute of Environmental Health Sciences, NIH** and by grant number **DE/FG05-03OR23032 from the United States Department of Energy**. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the NIEHS, NIH or USDOE.



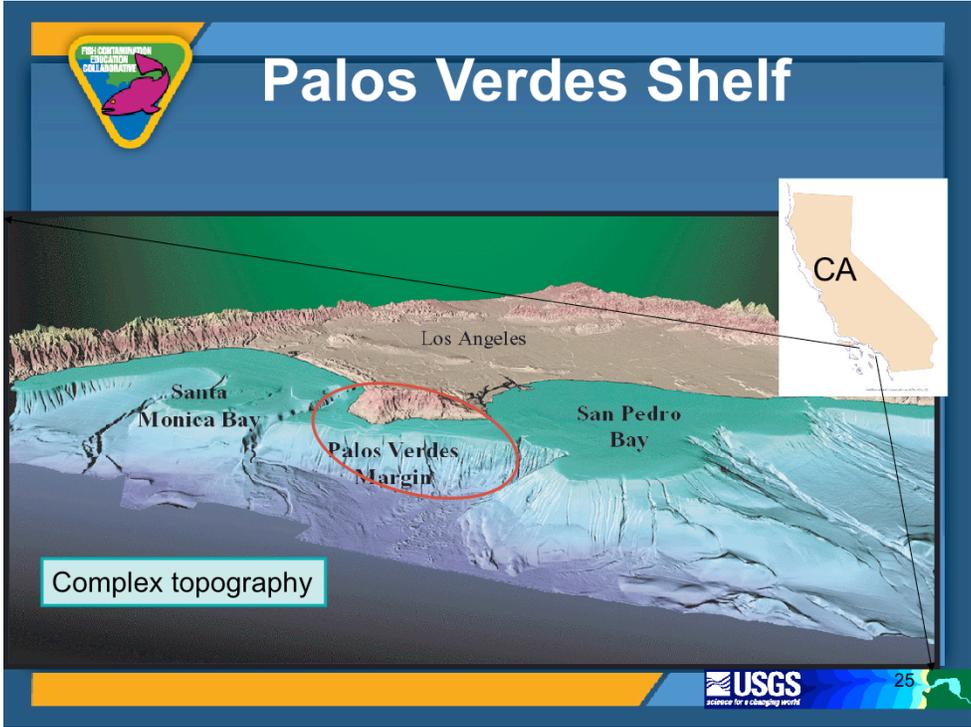
Risk Reduction through Behavior Change - Palos Verdes Shelf Superfund Program

Sharon Lin

EPA Pacific Southwest Region (Region 9)

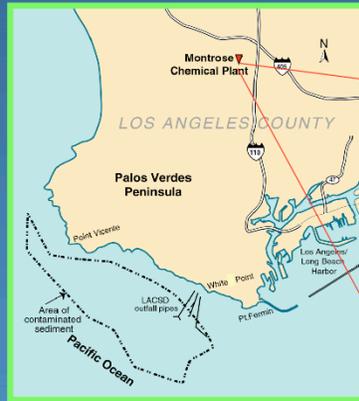
March 31, 2011

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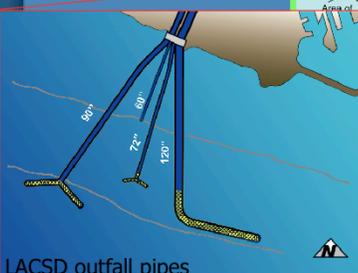


Where did the DDT come from?



Of the 800 to 1,200 tons of DDT discharged thru the outfalls, 110 tons remain on PV Shelf, along with 10 tons of PCBs

Where did the DDT come from?

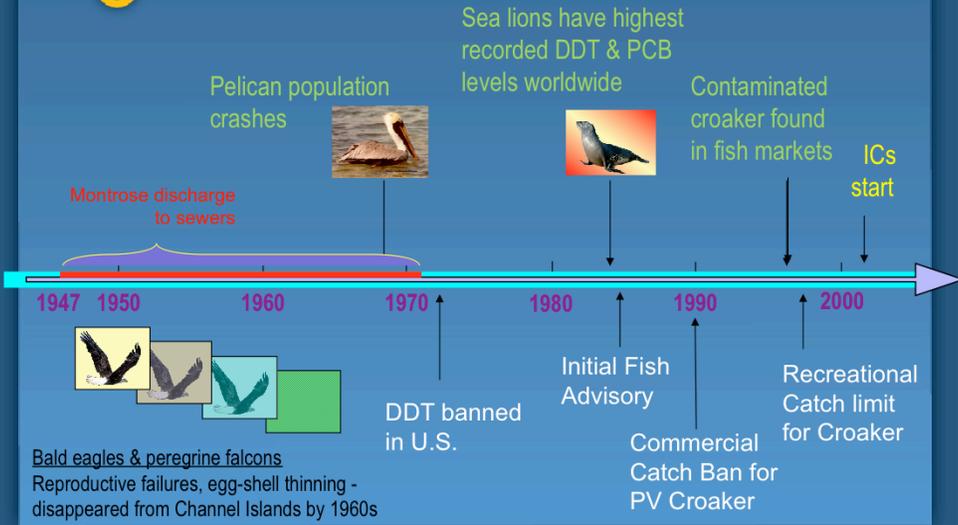


Of the 800 to 1,200 tons of DDT discharged thru the outfalls, 110 tons remain on PV Shelf, along with 10 tons of PCBs

LACSD outfall pipes

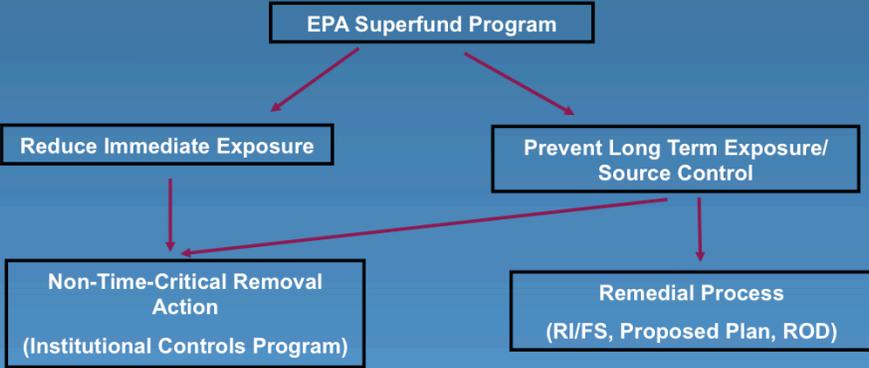


Historic Timeline – Injury





Superfund Program at PV Shelf





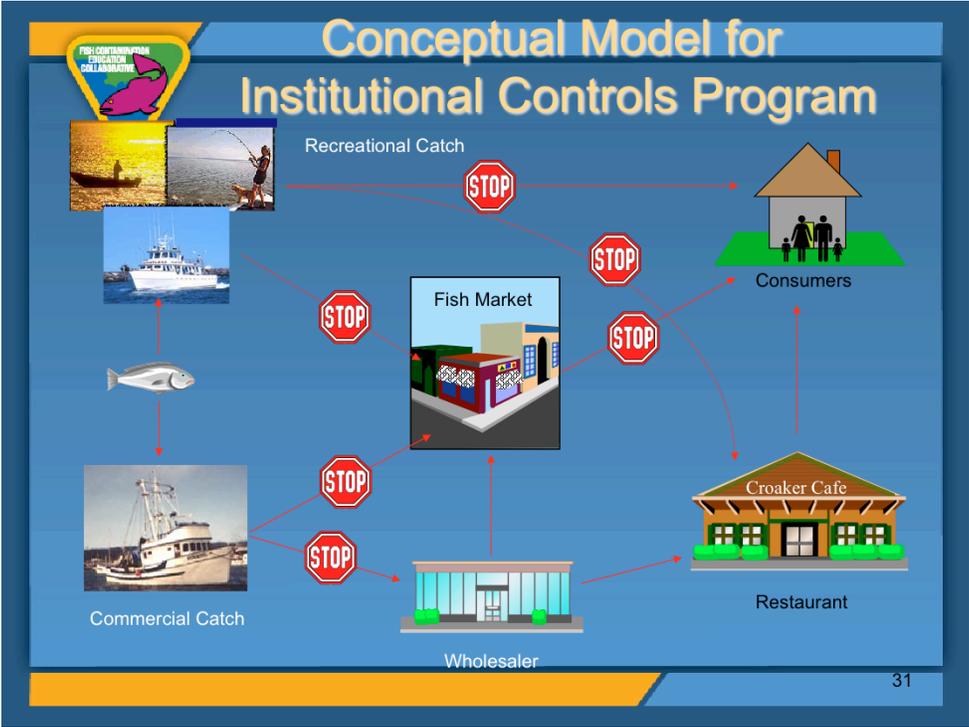
Palos Verdes Shelf Institutional Controls

1. Public Outreach & Education

2. Monitoring (markets & ocean)



3. Enforcement of White Croaker fishing ban & catch limit





Public Outreach & Education

Educate communities about fishing and fish eating behaviors that would reduce their risks





Fish Contamination Education Collaborative - FCEC



The diagram illustrates the Fish Contamination Education Collaborative (FCEC) and its network of partners. At the center is the FCEC logo, which features a stylized fish and the text "FISH CONTAMINATION EDUCATION COLLABORATIVE". Surrounding this central logo are ten partner logos, each connected to the center by a thin line. The partners include:

- NOAA (National Oceanic and Atmospheric Administration)
- United States Environmental Protection Agency (EPA)
- Heal the Bay
- California Department of Fish and Game
- Cabrillo Marine Aquarium
- County of Orange
- California Department of Public Health (CDPH)
- Environmental Health Services (EHS)
- California State University, Long Beach
- California State University, Fullerton
- California State University, San Bernardino

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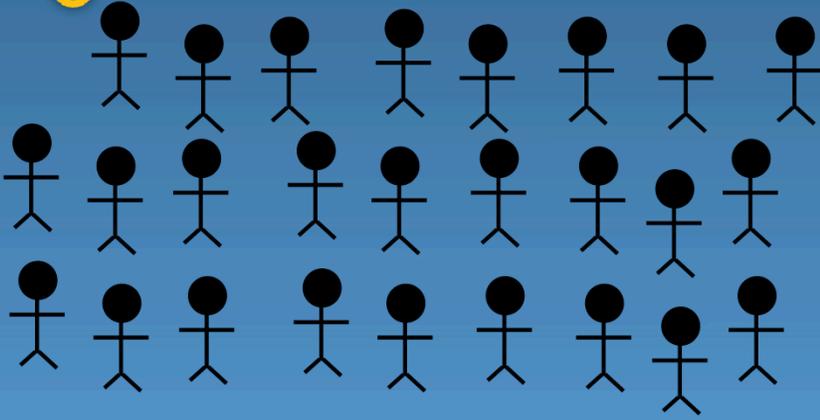


Fish Contamination Education Collaborative - FCEC





Raising Awareness



- Korean CBO
- Vietnamese CBO
- Pacific Islander CBO
- Latino CBO
- Filipino CBO

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Community Based Social Marketing



Targeted Outreach



Monitoring Program

- Fish in Ocean (EPA, NOAA, State)
- Market place (EPA, Local health agencies)
- Pier fishing (EPA, Community)
- Behavior monitoring
 - Community based social marketing – focused on quantitative measure of behavior change (exposure)
 - Angler fishing behavior (types fish to catch)
 - Community fish consumption behavior (remove fatty parts of the fish, fillet vs. whole fish)



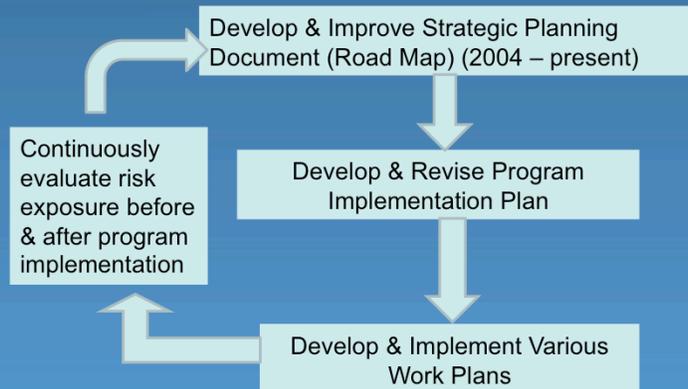
Enforcement

- Enforcing white croaker commercial catch ban area and daily bag limit - *CDFG*
- Market owners buy fish from approved sources – local health departments – *Los Angeles County, Orange County and City of Long Beach Health inspectors and CDFG*





Strategic planning and quantitative risk reduction





Using technology to create public transparency



- Real time project progress – interactive GIS map
- Project e-newsletter
- Project website (www.pvsfish.org)
 - >10,000 unique visitors/month
 - Continuous & frequent content update



FCEC Blog



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Blog

See What We're Doing

FCEC Partner Meeting on May 5

Posted on website | April 30, 2010

FCEC is holding a Partners Meeting on May 5 at the Orange County Health Care Agency from 9am to 4pm. The meeting will address a number of topics including education for fishermen (in light of the 2009 fish consumption advisory), community outreach and market monitor work. We'll also be discussing near-outreach material our teams will be using.



To learn more please visit our [next event calendar](#).

Tags: [FCEC](#), [fish contamination](#), [Partner Event](#)
Posted in [Events](#) | [No Comments](#)

FCEC Does Earth Day in Long Beach

Posted on website | April 28, 2010

FCEC spent the 28th and 29th of April celebrating Earth Day at the wonderful aquarium of the Pacific In Long Beach. In all we were able to reach out to over 420 community members about fish contamination.

One of the people we spoke with was aware of the contamination on Pico (near the pier) and expressed a hopeful outlook: "I just go to the islands or San Clemente to go fishing," said Alfred of Simi Valley.

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Connects to Facebook, flickr, YouTube and eNewsletter sign-up form

Allows for users to leave comments!

Blog

See What We're Doing

Take a Walk with an FCEC Partner

Posted by admin | April 9, 2010

Come on out on Saturday, April 17 to the [Horrell Community Center in San Gabriel](#) in the morning to participate in a walk-a-thon fundraiser and annual that will help support one of FCEC's great partner organizations. Proceeds from the walk will help fund the great work the organization does.



FCEC educational materials will also be handed out during the day's event, so it will also be a great way to spread the word about our program.

To learn more please call Connie Kwok at 626-286-2600. Your support is greatly appreciated!

Tags: [FCEC](#), [Horrell Community Center](#), [volunteer event](#)
Posted in [Events](#)

2 Responses to "Take a Walk with an FCEC Partner"

Rebecca Soong says:
April 13, 2010 at 6:16 pm

2010 Annual Walkthon - Schedule and detail info:-
a) April 17 10. 8 :30 am registration , walk start 9:00 -11:am at 715 E Mission Rd , San Gabriel Ca 91776 where the CCHC building is , we will walk approx 2.8 mil & back to CCHC.
b) Participant for the walk is \$ 20.00 per person , u will receive a free t shirt & a baseball cap as a gift , each participant with sponsorship \$ 100.00 or more will also receive a travel bag if you register before 9:00am.
d) If u wish after the walk , fun continues , pls join us the Charity Carnival - food , performance ,charity sale, games ,prizes & FCEC , Census and Global Energy booth. So ,pls mark your calendar , bring family & friends!

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FCEC Photos



FISH CONTAMINATION PREVENTION EDUCATION COLLABORATIVE

Website Translation

Welcome - FCEC Fish Contamination Education Collaborative - Windows Internet Explorer

http://pdf.fhcr.org/index/vietnamceec.htm

Trang Chính | Về Chương Trình FCEC | Giáo Dục | Sức Khỏe | Tài Liệu | Liên Lạc Với Chúng Tôi

11/09/2010 02:19:00 2010/09/20 20:20:00

TIN TỨC BÁO CHÍ

→ Cơ Quan Hợp Tác Với FCEC

→ Phương Tiện Truyền Thông

→ Thị Trường

→ Người Câu Cá

→ Công Nghiệp

Xin chào quý vị

Ủy Ban Hợp Tác Giáo Dục Về Cá Ô Nhiễm (FCEC) là thành phần của chương trình thông tin và giáo dục của Cơ Quan Bảo Vệ Môi Trường Nước Mỹ (USEPA), để bảo vệ sức khỏe của những dân cư từ sự nguy hiểm an cá bị ô nhiễm trong vùng Valles Verdes shelf superfund site.

FCEC là một thành phần chính của chương trình Điều Khiển (Institutional Controls), của Cơ Quan Bảo Vệ Môi Trường Nước Mỹ (US EPA) phối hợp với chương trình Theo Dõi (Monitoring) và Áp Dụng Luật Định Cá (Enforcement).



Evaluate Strategy

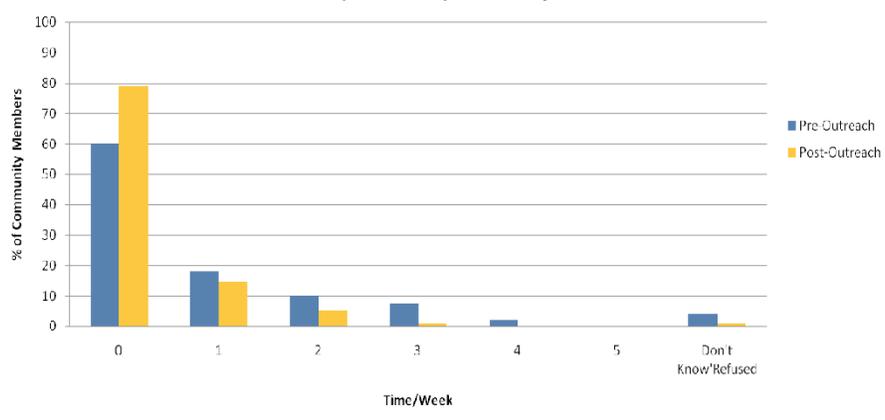
Community outreach





Results: Reducing Unhealthy Fish Eating Behaviors

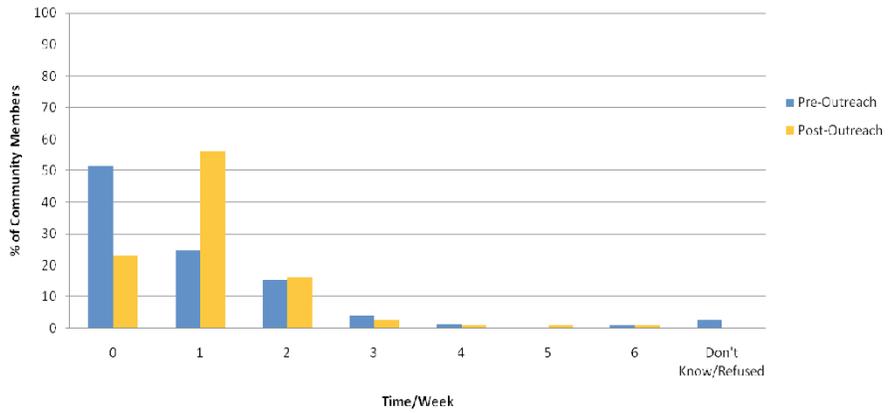
Fish Fillet (with Skin) Consumption Rate





Results: Increasing Healthy Fish Eating Behaviors

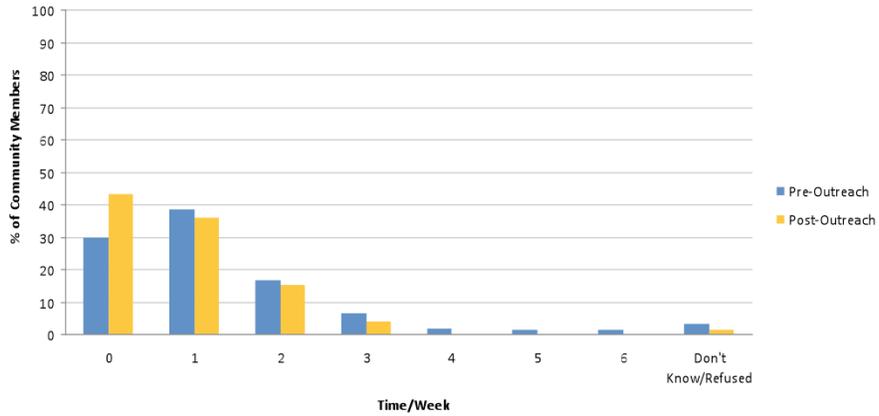
Skinless Fish Fillet Consumption Rate





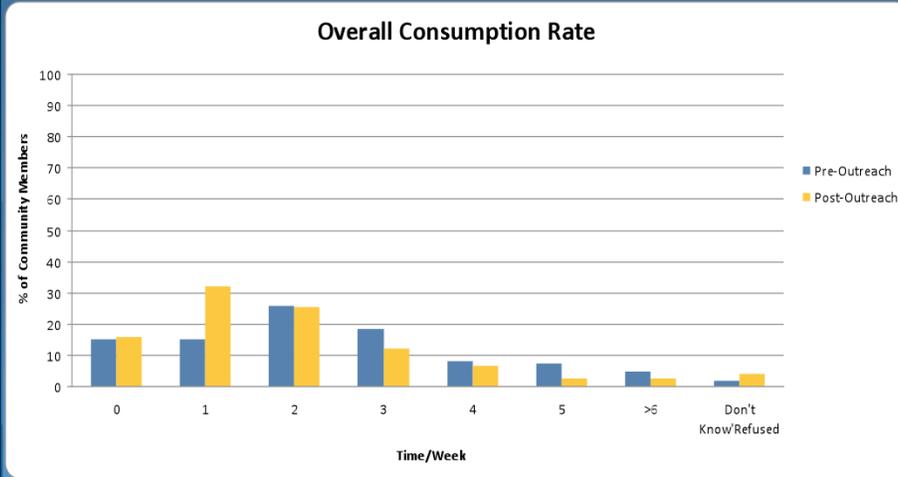
Results: Reducing Unhealthy Fish Eating Behaviors

Whole Fish Stew/Soup Consumption Rate





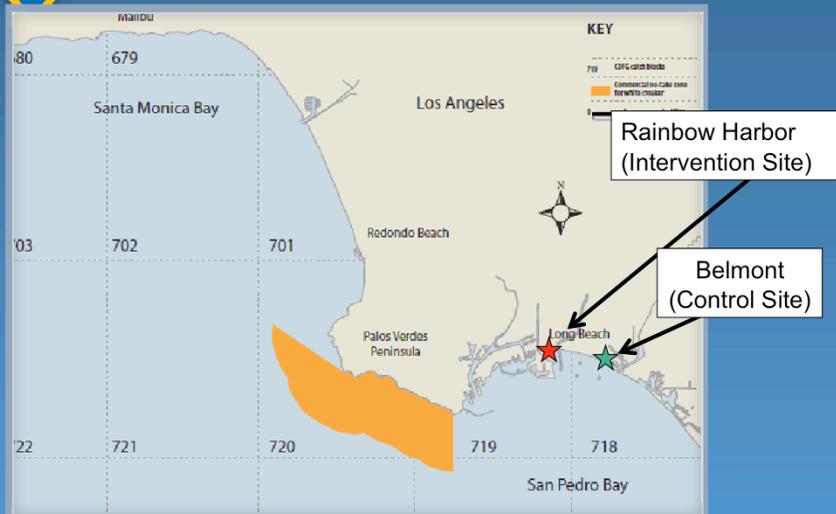
Results: Overall Fish Consumption



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Changing Behavior





Changing Behavior



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Changing Behavior



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Changing Behavior





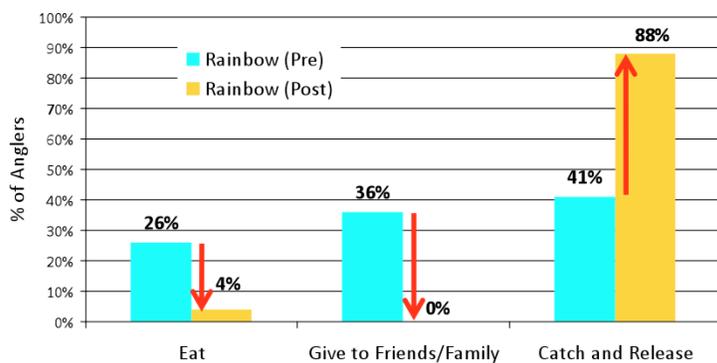
Changing Behavior





Changing Behavior

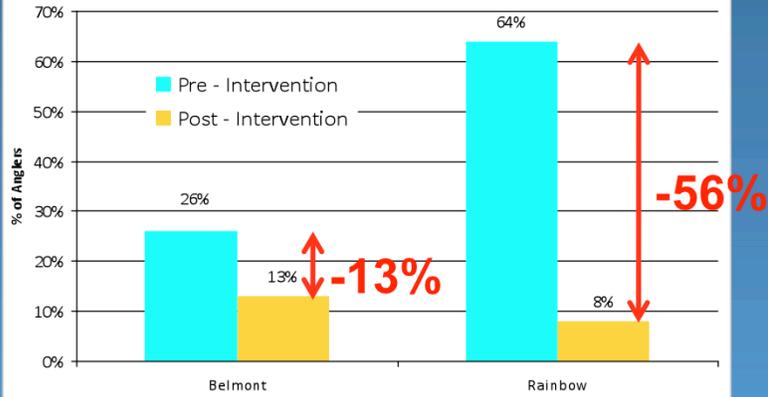
Intention for White Croaker Caught (Intervention Site)





Changing Behavior

Anglers Leaving with White Croaker





National Awards/recognition



- 2009 Citizen Excellence in Community Involvement Award
- 2009 National Environmental Justice Achievement Award
- 2010 Public Relations Society of America Silver Anvil Award (public service/government category)



Questions/discussion

Key points

- Clear goals for community work at the site
 - Awareness raising vs. behavior change
- If behavior change is the goal, then
 - There needs to be a scientific approach to outreach and education;
 - There needs to be a strong linkage between human controls and engineering controls
- Consider strategic planning tools to bring stakeholders together
- Community work goes beyond fact sheets and public meetings.

Resources & Feedback

- To view a complete list of resources for this seminar, please visit the [Additional Resources](#)
- Please complete the [Feedback Form](#) to help ensure events like this are offered in the future

U.S. EPA | United States Environmental Protection Agency | Technology Innovation Program

U.S. EPA Technical Support Project Engineering Forum
U.S. EPA Regional Office Open House for Field Use Assistance (U.S. EPA Regional Office Open House for Field Use Assistance)

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