

Efforts to Optimize and Standardize Local Seafood Safety Monitoring

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Fish Tissue Contamination Monitoring

- Santa Monica Bay Restoration Commission based design
- JWPCP, Terminal Island, and Hyperion permit requirements
- Four basic components

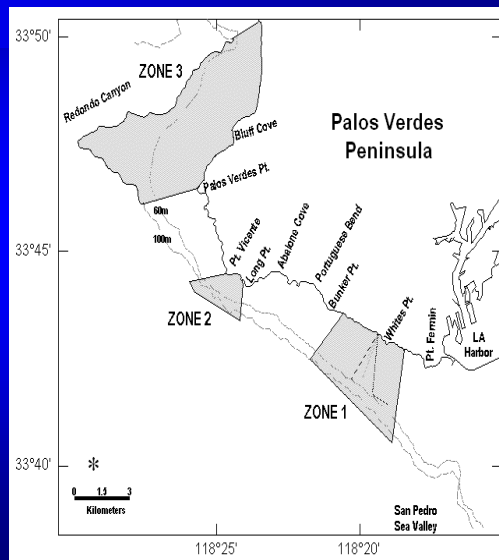


NPDES Fish Tissue Contamination Monitoring Programs

- Local Trends (Annual)
 - Spatial and temporal trends in relation to outfall
- Local Seafood Safety (Biennial)
 - Management of local seafood consumption advisories
- Regional Seafood Safety (Ad Hoc)
 - Assess commercial and sport fish contamination within the Bight relative to human health risk
- Regional Predator Risk (Ad Hoc)
 - Estimate health risk of fish tissue consumption to marine birds, mammals, and wildlife within the Bight

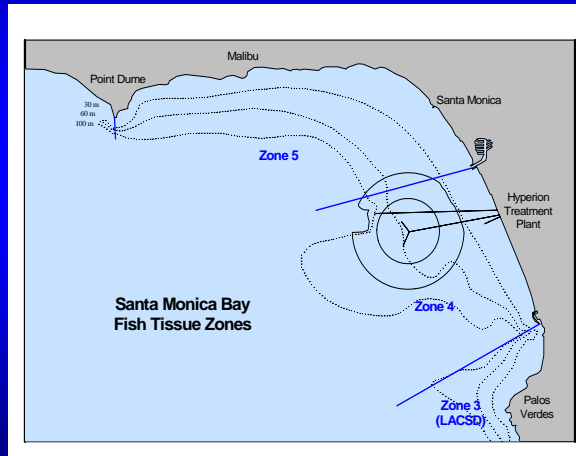
Local Seafood Safety Monitoring Sampling - JWPCP

- 3 discontinuous sampling zones
- Biennial sampling (even years)
- Collect within single season (Summer/Fall)
- “Consistent” size class
- 10 fish muscle tissue composite sample from each zone



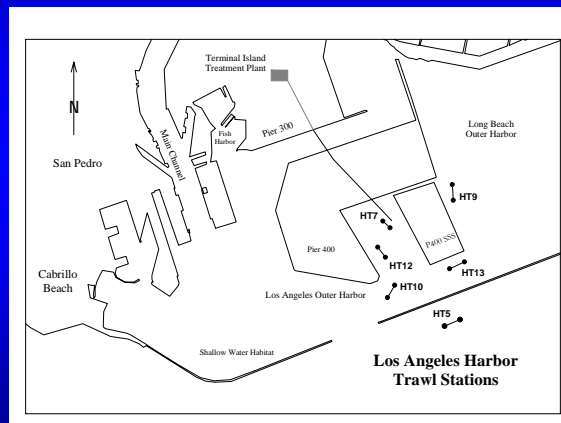
Local Seafood Safety Monitoring Sampling - Hyperion

- 2 continuous sampling zones
- Biennial sampling (odd years)
- Collect within single season (Summer/Fall)
- “Consistent” size class
- 10 fish muscle tissue composite sample from each zone



Local Seafood Safety Monitoring Sampling – Terminal Island

- No specific zones or locations
 - Target outer harbor near outfall
- Annual sampling
- Silent on what time of year to collect
 - Summer selected
- 10 largest individuals
- 10 fish muscle tissue samples analyzed individually



Local Seafood Safety Monitoring *Target Species Comparison*

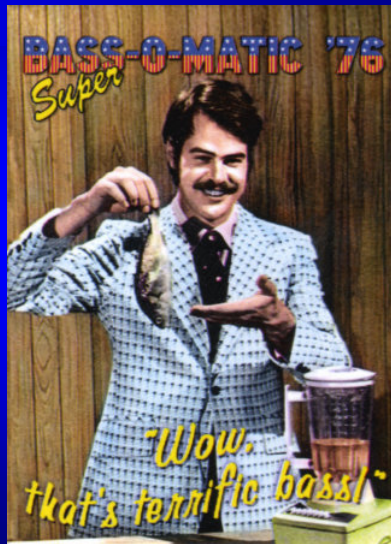
| Group/Species | JWPCP | Hyperion | Terminal Island |
|------------------------------------|------------------------|---------------------|-----------------|
| Rockfish | Scorpionfish (sculpin) | Whatever they catch | |
| Kelp bass | X | X | |
| Sand bass | X | X | |
| Surfperches | Black perch | X | |
| Croakers | White | White | White (Trend) |
| Sportfish other than white croaker | | | Queenfish |

Local Seafood Safety Monitoring *Analyte List Comparison*

| Analyte(s) | JWPCP | Hyperion | Terminal Island |
|--------------------------------|-------|----------|-----------------|
| Total DDT/Derivatives (6) | X | X | X |
| Total PCBs (7 Aroclors) | X | X | X |
| PCB Derivatives (41 congeners) | X | X | |
| Mercury (Hg) | X | X | |
| Arsenic (As) | X | X | |
| Selenium (Se) | | X | |
| Lipids (%) | X | X | X |
| Moisture (%) | X | X | |
| Wet weight | | | X |

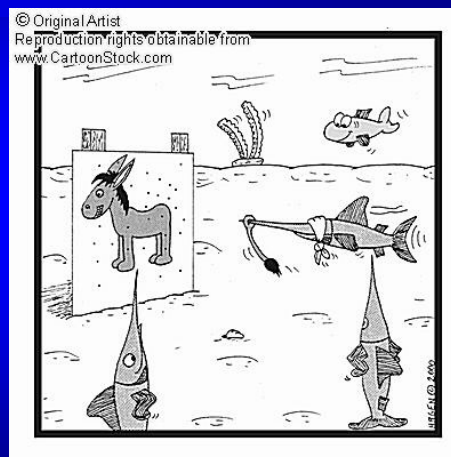
Local Seafood Safety Monitoring *Other Inconsistencies*

- Tissue sampling
 - Whole fillet versus subsample
- Tissue processing
 - Individual versus composite homogenization
- Analytical techniques/detection limits
 - What is needed level of detection?



Local Seafood Safety Monitoring *Other Questions*

- Who are the primary data users?
- What are their needs?
- Do these programs meet these needs?
- If not, can they be modified to better meet these needs?



Local Seafood Safety Monitoring Standardization Effort

- May 2007 Meeting
- Attendees
 - Permit holders
 - Scientific and regulatory staff
 - Regulators
 - LARWQCB
 - EPA Region 9 (invited)
 - Data users
 - OEHHA
 - EPA IC, Superfund, MSRP, SMBRC should have been invited
- Agenda
 - Purpose of program
 - Share permit requirements and Implementation
 - Determine end-user needs
 - Identify significant differences between programs
 - Attempt to resolve significant differences
 - Develop standardized monitoring program

Local Seafood Safety Monitoring Standardization Effort

- Major Conclusions
 - Standardize species, tissue processing, and analyte list
 - Measure variability
 - 3 replicates of 3-4 fish
 - Reduce frequency
 - New data every 5 years is plenty (rotate species)
 - Reduce detection limits for PCBs to <1 ppb
 - Allow for flexibility in the program
 - Location, season, species, analytes depending on need
 - Identify needs of other data-users

Local Seafood Safety Monitoring Standardization Effort

- Next Steps
 - Draft revised program
 - Distribute draft to participants and expanded group of data users for review and comment
 - Discuss comments and revise program
 - Submit proposal to LARWQB for inclusion of revised program in NPDES permits

