

**State of California
Constituents of Emerging Concern
Coastal and Marine Ecosystems
Science Advisory Panel**

Panel Report Out

Meeting #2

**September 30 – October 1, 2010
Costa Mesa, CA**

Oceanic Sites

Exposure

Fate/Bioavailability

Toxicity

Q4

Q3

Sources

Q1

Q2

Point

POTW Discharge

- Domestic
- Industrial
- Brine
- DBPs

Nonpoint

Air Deposition
GW seepage
Stormwater*
FW-riverine-ocean*

- Log Kow >3
- “Pseudo-persistent ionics”
- Degradates
- Half-life
- BCF/BAF (trophic transfer)

- Population > Individual
- Chronic vs. Acute
- Repro > growth > survival
 - Neuro-endocrine
 - Immune
- Direct vs. Indirect
- Antibiotic Resistance
- Mixtures
- Predictive

Framework

Prioritize compounds using:

- each category for initial screening (CCI3)?
 - Subjective Ranking (1-5)
- WERF model/list?

Q5

Case Studies for confirmation?

- SAR
- OCSD/LACSD
- Bight studies

Q6

SCHEDULE

- **Two-year project to be completed Summer 2011**
- **Meeting #1: Jan 2010**
 - Defining/refining the charge
 - Perspectives of interested parties
 - Identify short term data gaps
- **Meeting #2: Summer 2010**
 - Working meeting to address charge questions
- **Meeting #3: Winter 2011**
 - Present preliminary findings
 - Outline draft report
- **Meeting #4: Spring 2011**
 - Complete draft report for public comments

PANEL OBSERVATIONS & OBJECTIVES

- **Charge questions are broad, complex and require a wealth of data to address definitively**
- **Schedule is very aggressive; allocated resources are finite and time available of panel members is limited**
- **Focus on CECs in wastewater and stormwater**
- **Panel will strive to**
 - Define a framework/process to address all charge questions
 - Apply the framework using existing, up to date information
 - Make recommendations to improve framework and fill data gaps

CONCEPTUAL APPROACH

- **Adopt risk-based framework developed by panel for recycled water applications**
- **Utilize existing wastewater effluent database(s)**
- **Build upon existing stormwater information**
 - supplement with second round of data collection
- **Distinguish between direct (dissolved) & indirect (particle reactive) exposure in fate and effects sub-models**
- **Identify appropriate (coastal/marine) eco-receptors, endpoints & tools**

COLLABORATION WITH WERF

- **Incorporate biological effects concept**
- **Co-identify key data gaps**
- **Data exchange & prioritization**
 - CEC occurrence in wastewater effluents
 - Panel interest in meta data for TOrC project database
 - California specific data
 - Stormwater data separation?
 - 90th percentile calculations
 - Analytical Method used (GCMS vs. LCMS; MS vs. MS/MS)
 - » Isotope Dilution?
 - Toxicity thresholds
- **Continued communication**
 - Share draft reports
 - Exchange input on future directions