

SCCWRP DIRECTIONS ON EACH OF THESE ITEMS

- **Areas that are presently high priority research areas for SCCWRP and where we see many possible ways to provide support**
 - SHEL beneficial use standard (primary State Board item)
 - Ocean acidification (secondary)
 - Harmful algal blooms (secondary)
 - Emerging contaminants (secondary)
- **Where we might be of help, but have no studies presently planned**
 - Areas of Special Biological Significance (primary)
- **Areas where we are not presently working and which seem unlikely to become a focal point for us**
 - Desalination (primary)
 - Tribal uses (primary)

SHELL BENEFICIAL USE STANDARD

- **Our planned study for Newport Bay will be the first to directly address appropriateness of the existing SHEL standard**
 - The study is a collaborative effort among the Regional Board, regulated parties in the watershed and several NGOs
 - A good forum for discussion about alternatives, depending on outcome of the study
- **We are standing by to help with design and/or implementation of similar studies in other parts of the State**
 - We are aware of interest in similar studies in Morro and Humboldt Bays
 - Nothing concrete at the moment
- **Conducting several studies with coliphage, a likely alternative indicator**
 - We recently trained, and are presently conducting an intercalibration among, six southern California laboratories

OCEAN ACIDIFICATION

- **Our modeling work is at the forefront of this issue**
 - State Board leadership has stated their consideration of this topic is dependent on whether local inputs play a meaningful role in spatial and temporal OA patterns
 - Modeling is the best way to answer that question
 - Our modeling team is the best in the world and addressing exactly the State Board question
- **We are also working to determine appropriate biological thresholds**
 - Presently have a threshold synthesis project that involves the leading experts in the world
 - Building a new lab that allows us to address the dynamic exposure and multiple stressor data information needs identified by the experts
 - Bight'18 will be first study to comprehensively assess whether SoCal biota are OA affected
- **Facilitate scientific consensus-building**
 - We are hosting a workshop this fall to enhance agreement among scientists and managers on assessing OA vulnerability
 - Chair California's Ocean Acidification and Hypoxia Task Force

EMERGING CONTAMINANTS

- **We are at the forefront on this topic**
 - Hosted Expert Panels that developed the State's strategy for monitoring/management of CECs in reuse water
 - We are planning to host an ambient water Expert Panel this fall (OPC and State Board supported)
 - Our research is focused on filling the scientific holes identified by these Panels
- **Our largest investment is focused on bioanalytical cell-line screening**
 - Developing those tests
 - Pilot testing and placing the test response into managerial context
 - Technology transfer of the tools to other laboratories
- **Targeted chemistry**
 - Working with the Expert Panel to help select the most appropriate target chemicals
- **Nontargeted chemistry**
 - Developing those techniques

HARMFUL ALGAL BLOOMS

- **We have a strong leadership role in HAB research and management application**
 - Monitoring
 - Modeling
 - Threshold development
- **Monitoring of bloom and toxin release conditions**
 - We facilitate the California Harmful Algal Bloom Monitoring and Assessment Program
 - Bight '18 is examining marine toxins accumulating in sediment and assessing bioaccumulation of freshwater toxins in shellfish deployed in coastal waters
 - We are investigating resins that can optimize sampling detection of toxins via passive sampling
- **Modeling**
 - We are studying the causal drivers of Pseudo-nitzschia blooms
 - Using our coupled physical-biogeochemical model to develop forecasting models of blooms and toxic events
- **Cyanotoxin effects on aquatic organisms**
 - Present toxin advisory guidance is focused on human health
 - We are leading a team of scientists to synthesize levels at which cyanotoxins affect aquatic organisms

AREAS OF SPECIAL BIOLOGICAL SIGNIFICANCE

- **We have a substantial history in ASBS work**
 - Helped translate narrative standards regarding “natural water quality” to numeric guidelines
 - Mapped the extent to which stormwater plumes infringe upon ASBS
 - Connected ASBS and Marine Protected Area (MPA) monitoring through the Bight Program
- **We have only one minor project planned for future ASBS work**
 - Expanding MPA monitoring into selected ASBS to assess biological condition
- **We are standing by to do more if you think we can be of help**

DESALINATION

- **We have some history in this area**
 - We performed some of the original brine toxicity testing almost 30 years ago
 - We hosted a workshop on negatively buoyant plume diffuser technology about 15 years ago
- **Our modeling could be a good solution for describing plume behavior**
 - Already doing a project for OCSD to look at the likely behavior of a concentrated wastewater plume as they move toward enhanced reuse
- **We have no intent to work on desalination at the moment**
 - Our strength is when we have all parties at the table working together
 - The desalination industry is not part of SCCWRP and appears to prefer working through their own consultants

QUESTION FOR YOU ALL

- **Are there other things we should be doing to support the Triennial Review process?**