

# Recap: Technical Elements of Biological Objectives

# Role of the Science Team

- Develop the technical basis for regulatory assessment of biological integrity in streams
- Follow the initial philosophy provided by regulatory and stakeholder panels
  - Need numeric endpoints
  - Statewide consistency and regional accuracy/applicability
  - Process should be transparent
  - Process can be used for other waterbodies and indicators in the future
- Science team does not make policy

# Role of the Scientific Advisory Panel

- Provide technical guidance to science team
- Selected by stakeholder panel
- International subject matter experts
  - Stream ecology
  - Ecological modeling
  - Toxicology
  - Hydrology
  - Bioassessment
  - State and Federal Regulatory Experience
- All panelists from outside of California

# Technical Work Products

- Workplan
- Reference conditions
- Scoring tool
- Causal assessment

# Technical products were developed with input from many audiences

- Science Team
- Scientific Advisory Panel
- Stakeholder Advisory Group
  - Causal Assessment Stakeholder Workgroups
- Regulatory Advisory Group
- External Peer Reviews
  - Policy Peer Review
  - Journal Peer Reviews

# Meetings To Review Technical Progress

Technical Element	Scientific Advisory Panel	Stakeholder Advisory Group	Regulatory Advisory Group
Workplan	Oct 2010	Mar 2010 Oct 2010 Nov 2010	June 2011
Reference Condition	Apr 2011 Sept 2011 Apr 2013	Apr 2011, May 2011, Sept 2011, Apr 2013	June 2011 May 2012
Scoring Tool	Sept 2011 Apr 2012 Oct 2012	Sept 2011, Apr 2012, May 2012, Oct 2012, Dec 2012, Apr 2013	Jun 2011 May 2012 Oct 2012
Causal Assessment	Oct 2011 Apr 2012 Oct 2012	Oct 2011, Apr 2012, Oct 2012, Dec 2012, Apr 2013	May 2012 Oct 2012

# Documentation Strategy

- Journal manuscripts
- Technical reports
- Web content
- Training courses and workshops

# Journal Manuscripts

**Examples:** reference condition development and scoring tool development

- Major technical components represent significant scientific advances
  - Journal publication process helps ensure that technical foundation is robustly vetted
  - Fosters interaction with a wide international audience
- Targeted to a research audience - typically do not include all the detail desired by end users



# Technical Reports

**Examples:** Causal Assessment and CSCI Users Manual

- Targeted for end user audiences (akin to guidance or instructional documents)
  - Too detailed for the novice, might be insufficient for experts
  - Essential for applying the tools appropriately

# Web Sites

**Examples:** online CSCI calculator, reference condition datasets, CADDIS, SWAMP SOPs

- Provide hands-on tools for practitioners
  - Standardized scoring
  - Allows users to dig deeper into datasets
- Access to raw data
  - GIS layers
  - CEDEN
- Help desk

# Training and Workshops

- Important for successful implementation
- Standardized curriculum
  - Guidelines for competence evaluation and documentation
- Several potential venues
  - College of Bioassessment (CDFW, Training Academy)
  - California Aquatic Bioassessment Workgroup
  - Scientific societies (SETAC, SFS)
  - Trade organizations (SAFIT)
- Fee based?
  - SWRCB funds dwindling

# Documentation Status

- Draft Journal articles and Technical Report
  - Received feedback from Science Panel and Causal Stakeholders
- Stakeholder panel asked to see early drafts
- Now is your chance to give us informal feedback
  - We want to know what you liked best [least]

Questions or Comments?

# Our Next Steps for Documentation

- Submit articles for journal publication
  - Finalize the Casual Assessment Technical Report
- Support Training and Workshops
- Waiting on support for web site development
- SWRCB external peer review