

**Meeting Summary:**

The first part of the meeting was used for presentation and discussion of

- New developments in California protocols, and data management options being developed
- Issue Papers on the 5 major topics for followup from the February 2002 meeting.

In the afternoon, the group divided into 2 breakout sessions on protocols and reference conditions, and then regrouped to discuss next steps.

Major discussion items and proposed follow-up actions:

*1. Protocol Standardization and applicability in urban streams.* For consistency, better to use a smaller menu of flexible protocols. Guidance is needed on when and how to deviate from the standard (see notes from breakout session below). The CDFG lab is conducting comparison studies that are encouraging; their QAPP was suggested as guidance on QA/QC.

*2. Reference Conditions and stream classification*

The breakout group saw stream classification as an important prerequisite to developing reference conditions, with the need to look at factors such as climate, elevation and extent of hydromodification due to human activities. There are different philosophies for defining reference conditions, in terms of “best available” vs. comparison to a hypothetical “pristine” condition. Different BASMAA and Regional Board staff to continue discussions as an ad-hoc workgroup.

*3. Physical Habitat Assessments and/Chemical Measurements*

The what and how of additional data to collect along with bioassessment data depends on your objectives, which are determined by management questions. Standardization should focus on a relatively low “common denominator” but more rigorous or detailed data will be more specific to individual projects.

*4. Management Questions* – where and how is bioassessment appropriate/useful?

This involves the overall context for using bioassessment. It was suggested that BAMBI request feedback from participants on what Management Questions you are trying to address; this can lead to evaluation of what is the available knowledge to help Bay Area managers.

*5. Organization: what's next?* Some support for follow-up work is available from stormwater programs (members of BASMAA).

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**Standardization of protocols (Issue Paper #1) -- breakout session summary**

*General guidance on application of protocols:* BAMBI should recommend that all programs use a limited number of standard protocols. An initial division should be made between the CSBP and similar protocols that focus on riffles (assuming that a reach is characterized by alternating riffle-pool sequences), as opposed to “multihabitat” or “proportionate habitat” approaches in which a sample is composited from a variety of habitat types in the reach, with each habitat type represented in proportion to the area of the reach that it occupies (e.g. EMAP). A table format was used to compare these options and also the proposed modifications to the CSBP for ambient monitoring:

<b>Protocol designation:</b>	Existing CSBP (1999 professional version))	Proposed CSBP modified for ambient	Representative habitat
<b>Sampling strategy per site:</b>	3 samples @ 3 riffles	1 riffle sample (composite 3 rectangles from 1 riffle?)	Can be multi-habitat in proportion to presence (e.g. EMAP) or standard no. of “jabs”
<b>Subsample count per sample:</b>	300	500	(EMAP protocol)
<b>Recommended adds – lab</b>	Enumerate large/rare taxa	Enumerate large/rare	Enumerate large/rare
<b>Applications:</b>			
<b>Wadeable streams with riffles present:</b>	Acceptable; Replication may be preferred for detailed characterization or if required for statistical analyses	Preferred for general screening because greater density of sites will give more information for same cost	Acceptable, site biological data may not be very similar to results of CSBP, but same trends should be apparent within datasets
<b>Transition (how should this be defined?)</b>	Use judgment?	?	?
<b>Stream segments without riffles:</b>	“adaptations” possible but not comparable with riffle-based samples	“adaptations” possible but not comparable with riffle-based samples	Preferred

This guidance is for screening-level assessments using the new Standard Taxonomic Level I. Potential future activities could be:

- a) continue general networking and information sharing
- b) with available funding, collect information to refine and fill in gaps in the table.

*Additional Notes:*

Artificial substrates are not recommended for general bioassessment. They have advantages for particular research or site-specific questions but these do not apply for screening purposes. There are many disadvantages including need for twice as many site visits,

Selection of locations for rectangles/jabs should be directed or systematic, not totally random. Judgment is needed when determining the representativeness of sample, considering hydrology and structure of the stream reach.

Standardization of lab procedures is important if comparing data from different programs, e.g. details of picking and gridding techniques and also the magnification used for these steps and in sorting.