Overview of the “Next Steps” in the Experimental Planning Process – Embracing the “Hybrid” Approach

Ted Melis and Barbara Ralston
Grand Canyon Monitoring and Research Center

Josh Korman (Facilitator)
Ecometric Inc.
Milestones – Points along the Path of the GCDAMP – Pausing to Assess the State of Knowledge on Experimental Treatments

Knowledge About

- Certainties/uncertainties related to:
  - Flow Treatments [MLFF, LSSF, BHBF, HMF, ExpFF, plus prior Glen Canyon Dam operations since 1963, where abundant historical data are available for evaluation….
  - External Flow Treatments [Implemented operationally at other facilities where learning may be transferred to GCDAMP]
  - Non-Flow Treatments [Mechanical Removal, HBC translocation in the LCR, etc.]
Questions – How do we Evaluate when are we done with Experimental Research?

- **Are there Experimental Treatments** - for which there is sufficient cause/effect certainty to move the activity from Experimentation to ongoing management action to achieve resource objectives?

- **Experimental Design** - Can we resolve the next logical steps in resolving treatments that are still so uncertain that experimentation is needed for effective and efficient “Learning” to identify options for management?

- **Laboratory Experiments** – What is the role of highly controlled experiments conducted in the laboratory?

- **Modeling** – What is the role/utility of modeling in the evaluation & planning process [what is our predictive skill currently & how can we build on our existing Conceptual Model (GCM)]?
SCHEDULE: Summer/Fall 2005

- **Knowledge Assessment Workshops I & II** – May 18-19 & July 5-8, 2005, GETTING A HANDLE ON WHERE WE ARE EXPERIMENTALLY! Draft EXP Design by Aug. 2005 for review and comment by TWG at fall 2005 meeting(s)

- **Peer Review and Information Transfer** – Science & Manager interactions about the proposed EXP design (GCMRC Science Symposium Day #2, Oct. 26, 2005)

- **Approval/Recommendation** – GCD AMP approval (Jan 2006)

- **GCMRC Strategic Science Plan** – Experimental actions implemented in WY/FY2007 & beyond… (Phase V)
Overview of Hydropower and Experimentation

Fisheries Science Updates

Overview on the State of Knowledge w.r.t. Food Web of CRE

Discussion about the concept of “Sideboards” in the planning process?
Proposed Agenda: July 6-8, 2005
Knowledge Assessment Workshop II
Flagstaff Field Center – USGS
2255 N. Gemini Drive

July 5, 2005

Travel Day & Various Ad hoc meetings 1300-1700 at USGS facilities

1730 – 0800 – Scientists & Managers Meet for Dinner and AEM Mixer at Beaver Street Brewery
Proposed Agenda: July 5-8, 2005
Knowledge Assessment Workshop II

July 6th – 0830 – 1730

LF Strandling Studies under EFF in 2003-2004 (Davis, 30-min)
Lake Powell QW (Vernieu, 45-min)
Overview of TCD Literature – What’s in Writing? (Kubly, 45-min)

BREAK (1030-1045)
TCD Case Study I - Flaming Gorge (Vincent, 45-min)
TCD Case Study II – Shasta Project (TBD, 45-min)
Overview - Landscape Modeling & TCDs (Stevens, 15-min)

LUNCH (on own 1200-1300)
Native Fish Treatments in the Upper CR? (Valdez, 30-min)
Rainbow Trout Studies below Lees Ferry (Rogers, 30-min)
Parasites and Diseases? (Ward, 30-min)
Downstream Movement by LF Rainbow Trout? (Korman, 30-min)

Summary & Discussions on Fisheries & Aquatic Knowledge (facilitator: Korman, 60-min)
Strategic Experimental Design Options for Fish and Food Web (Korman, 90-min)
Proposed Agenda: July 5-8, 2005
Knowledge Assessment Workshop II

July 7th (0800 – 1700, facilitator, Korman)
- Historic Sand-Storage Changes (Schmidt, 30-min)
- Sand Mass Balance (Topping, 30-min)
- Downstream Quality-of-Water (Wright, 30-min)
- Overview on Modeling Status (Wiele and Korman, 30-min)
- Socio-Cultural Resource Issues (Fairley, 30-min)

  BREAK (1030 – 1045)

- NPS Cultural Resource Monitoring Results (Balsom, 25-min)
- Cultural Aeolian Process Studies (Draut, 25-min)
- Camping Area Changes (Kaplinski, 25-min)
- Recreation Resources (Harpman, 20-min)
- Overview of Afternoon Work Session (Korman, 10-min)

  LUNCH (on own 1230 – 1400)

Experimental Design Breakouts/Discussions (1400-1700)
(Facilitators: Korman, Ralston, Kubly and Melis)
Proposed Agenda: July 6-8, 2005
Knowledge Assessment Workshop II
Flagstaff Field Center – USGS
2255 N. Gemini Drive

July 8th – 0800 - 1200

Experimental Design Discussion Toward a Draft Plan:
Getting it Done! (Facilitator: Korman)

LUNCH (on own)

Departures