

## Calsim-III Hydrology Development Group

### MEETING NOTES

November 3, 2004 (Wednesday)

9:00am - 11:30am

Resources Building, 8<sup>th</sup> floor conference room

*Agenda (Note: This agenda differs from the agenda that was distributed at meeting; it summarizes the agenda that took shape during the meeting.)*

1. Opening Remarks (Kadir)
  2. Review of Meetings 9/15/04 and 10/8/04
  3. Review of Short-Term (March 2005) and Long-Term Needs (DWR definition convergence) steering Hydrology Development
  4. Influential Planning Processes steering Hydrology Development decisions (re: methodology and budget-area definitions)
  5. Identification of Criteria to steer methodology & budget-areas
  6. Unanswered Questions for each Criterion
  7. Assignment of Briefings to address Unanswered Questions
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#### Relevant Notes:

#### **2. Review of Meeting 9/15/04 and 10/8/04**

- An initial framing thought was offered and then abandoned:
  - "Looking ahead, we have to decide on boundary area types: DAU, WMA, or "sub-elements to both".
- The replacement framing thought focuses on methodology and budget-areas being decided on jointly, and flexibly throughout the Sac Valley. We agree that future budget areas should be basin-oriented but must adhere to district/operational realities as necessary.
- General methodological principles will lead to budget areas that fit basin- and district-centric needs; development of principles will be steered by dependent planning processes and other criteria (agenda items 4-6)

#### **3. Review of Short-Term and Long-Term Needs**

- Short-term needs involve updating the Sacramento Valley Hydrology in the Interim Common Assumptions CALSIM II baseline. This work needs to be completed by March 2005 in order to comply with next-phase Common Assumptions study production.
- Long-term needs involve adopting a DWR-wide definition for budget areas that serves (1) annual Water Plan updates, (2) DPLA activities, and (3) budgeting performed DWR Northern/Central/SanJoaquin.

- Near-term hydrology improvements for CALSIM II will be driven by development and application of a criteria-driven methodology; criteria discussed in Agenda Item 4. Methodology development will be steered by collaboration between CALSIM Hydrology Developers and DWR District budget analysts/data providers.

#### 4. Influential Planning Processes

- Two planning processes were identified as primary influences:
  - State Water Plan Update (i.e. local water budget analyses, development of multiple “futures”, expanded geography relative to CALSIM II)
  - Forums currently served by CALSIM II (i.e. environmental documentation, effects analysis involving state/federal project operations)
- Additional planning processes were discussed for influence on hydrology development; but were instead identified as being reactive or adaptive:
  - CALAG studies: It is viewed that their spatial element of analysis is adaptable to what is decided upon jointly for Water Plan and CALSIM.
  - DWR Districts’ water budgeting: In steering the methodology for developing jointly sufficient spatial elements for Water Plan and CALSIM, it is presumed that Districts will only promote spatial elements for which they can feasibly produce budgets.
  - CVGSM3: Model development needs to be cognizant of long-term CALSIM III spatial resolution, but it does not steer the resolution decision.
  - CalWater: Central Valley representation in CalWater is currently formative and would not influence the collaboration between (1) DWR District data/budgeting realities, and (2) criteria-driven spatial resolution decisions to benefit Water Plan and CALSIM III. Additionally, the basin-centric view of CalWater for budget-area definition will be represented in the collaboration.

#### 5. Criteria steer Methodology Development

1. Predictive Questions being posed in the State Water Plan forum.
2. Predictive Questions being posed in CALSIM II-supported forums.
3. Validation Capability relative to Potential Applications
4. Model Dependencies
5. System Attributes
  - Data availability
  - Spatial reach (and source consideration)
  - Ownership (and management-area consideration)
  - Hydrologic Constraints
  - Physical Constraints

- Operational/facility Constraints
- 6. Temporal Resolution Needs (subset of 1. and 2.?)
- 7. Compatibility
  - Backward
  - Forward (i.e. for future hydrology development plans; extensibility)
- 8. Project Management Considerations
  - Level of Effort Required: Staff
  - Level of Effort Required: Budget
  - Schedule Limitations

## 6. Are there unanswered Questions for Each Criterion (Yes/No?)

- Criteria 1. and 2. **(Yes)**
  - Key questions need to be communicated to the group to steer methodology development.
- Criteria 3. **(No)**
  - Validation capabilities will be implied through collaboration between DWR Districts and CALSIM Hydrology Developers, and through application of Criteria 5.
- Criteria 4. **(Yes)**
  - Secondary models may have input needs that are not well met by the current hydrology representation in CALSIM II. Unanswered questions remain if secondary models have concrete CALSIM-output requests that would feedback into the methodology of hydrology development.
- Criteria 5. **(No)**
  - These criteria and their influence on methodology development are self-evident. They need to be applied during implementation of a methodology development framework. No unanswered questions.
- Criteria 6. **(Yes)**
  - Temporal resolution needs were left for discussion at the next meeting, and are viewed to be embedded with Predictive Questions being asked in the Water Plan and CALSIM-served processes.
- Criteria 7. **(Yes)**
  - Backward compatibility: *mentioned today, but not adequately defined as an influential criteria on methodology development*
  - Forward compatibility: Water Plan's need for multiple "futures" development is one foreseeable issue – may be a off-shoot issue of Predictive Questions
- Criteria 8. **(No – for now)**
  - Schedule milestones identified: pre- and post- "March 2005"
  - Staff/Budget considerations can't be made until the group reviews a straw proposal from Bourez/Draper on methodology development/application to develop near-term Sac Valley WMAs for CALSIM II. Extensibility of this methodology to serve long-term

hydrology development needs will be considered (e.g., geographic extension, mechanics of scenario development, temporal resolution). Future resource needs in reaction to this straw proposal must be decided upon by planning and model-development group managers at DWR/Reclamation.

## **7. Assignment of Briefings to address Unanswered Questions**

- Briefing List for next meeting
  - Re: Criteria 1 – Predictive Questions from Water Plan process
    - R. Juricich (30 minutes)
    - Include discussion from Criteria 7. on forward compatibility
  - Re: Criteria 2 – Predictive Questions from CALSIM processes
    - R. Leaf (30 minutes)
    - Include discussion from Criteria 6. on temporal resolution
  - Re: Criteria 4 - Model Dependencies
    - DSM2 (Mike Mierzwa; 10 minutes)
    - Stream Temperature (Tansey/Yaworks; 10 minutes)
    - CALAG (Hoagland/Farnam; 10 minutes)
    - CVGSM3 (Moncrief; 10 minutes)
    - WQ, Channel Meander, Sediment Transport Models (Tansey; 15 minutes)
      - *Note – A CALSIM-centric model map was developed by SKS for the Water Plan process. R. Juricich will submit html map to Kadir for HDG distribution.*

## **8. Next TWO Meetings: November 17, 1:30-4:30 December 1, 9:30-12:30**

- Agenda – November 17
  - Review of 11/03 mtg (5 min)
  - Briefings on Unanswered Criteria Questions
    - Predictive Questions: Water Plan (30 min)
    - Predictive Questions: CALSIM (30 min)
    - Model Dependencies
      - CALSIM-centric Model Map (5 min)
      - DSM2 (10 min)
      - Stream Temperature (10 min)
      - CALAG (10 min)
      - CVGSM3 (10 min)
      - WQ, Channel Meander, Sediment Transport (15 min)
  - Distribution and Overview of Draper/Bourez Straw Proposal

*Note: This is just a group introduction to the straw proposal. A two-week review period will then take place and it will be discussed in more detail at the Dec 1 Meeting.*