



## Aquatic, Water Quality, Geomorphology, & Hydrology Resources Water Balance Model Subcommittee

### Technical Working Group Meeting

**Date:**

**Time:**

**Location:**

**Directions** **Parking:**

**Discussion Topic:**

**Agenda**

**Attendees**

**Summary**

**Handouts, Attachments & Presentations**

## **Directions to SMUD's Customer Service Center**

SMUD has two four-story buildings located adjacent to Highway 50 on the north side, between 59th Street exit and 65th Street exit. The Customer Service Center (CSC) is the newer building of the two located at 6301 S Street, and houses the Rubicon Room, Forestview 1,2, & 3, Sequoia 1,2,& 3, Timberline 1,2, & 3, and the HRL Conference Room located on the third floor (Northwest wing). The Headquarters building is located at 6201 S Street, directly west of the CSC. It houses the Headquarters' Customer Center (HCC), the Auditorium and several other conference rooms.

The Field Reporting Facility (aka FRF) is located behind the SMUD Headquarters building: go under the Light Rail overpass, then to the left about 150 yards.

Directions:

**Heading East:** From downtown Sacramento, head east on Highway 50, exit at **59th Street**. This exit will take you up-and-over Highway 50. Go straight at the first intersection, travel about a half mile. On your left (north) is the SMUD Headquarters building, the next building is the Customer Service Center.

**Heading West:** From Placerville, take Highway 50 to Sacramento and exit at **65th Street**. Go straight about one block after the first intersection. The Customer Service Center is the four-story building on your right (north).

You should be able to find parking spaces for visitors located in the area between the two buildings. There is also parking available in a parking lot on Folsom Blvd. behind the SMUD complex.

If you need assistance to find the Rubicon Room, Timberline 1,2,& 3, Sequoia 1,2,& 3, Forestview 1,2, & 3, and the Hydro Relicensing's Conference Room located on the third floor of the Northwest wing, see the guard at the lobby desk. The Headquarters Customer Center (HCC) room is located in the Headquarters building opposite the board of directors Auditorium in the first floor. Drive Safely.

**Note:** *Downloadable maps can be found at [hydrorelicensing.smud.org/meetings/meet\\_loc.htm](http://hydrorelicensing.smud.org/meetings/meet_loc.htm)*

**Sacramento Municipal Utility District  
White Rock Room  
6301 S Street  
Sacramento, CA 95817**

**Water Balance Model Subcommittee**  
Upper American River Project Relicensing  
**Wednesday, October 8, 2003**  
1:00 pm to 4:00 pm

**NOTE: PLEASE BRING YOUR CALENDAR TO THE MEETING SO WE CAN SET  
FUTURE SUBCOMMITTEE MEETING DATES.**

## **Agenda**

### **Administration**

- Introductions
- Approve/Modify Agenda
- Approve Water Balance Model Subcommittee Meeting Summary
- Identify Time Sensitive Items Not on the Agenda

### **Status Reports**

- Review Action Items in September 23, 2003 Subcommittee Meeting Summary
- Receive Report from Water Year Type Subgroup on October 8 Meeting

### **Identify Meeting Action Items**

### **Schedule Next Subcommittee Meetings & Set Meeting Agenda**

**Sacramento Municipal Utility District (SMUD)  
Upper American River Project (UARP) Hydro Relicensing Project**

**Water Balance Model Subcommittee Meeting Summary  
October 8, 2003  
1:00AM – 3:00PM**

The Water Balance Model Subcommittee (WBMS) met on October 8, 2003, at SMUD's Customer Service Center, White Rock Room. A notice of and agenda for the meeting was distributed to all interested parties on September 25, 2003. Meeting participants included:

- Bob Hughes – *CDFG*
- Jim Lynch – *DTA*
- Parvez Mody – *SMUD*
- Cheryl Mulder – *ENF*
- Mike Preszler – *Mead & Hunt*

**SUMMARY**

- The subcommittee approved the September 23 subcommittee meeting summary
- The subcommittee gave general concurrence to the Water Year Type Subgroup's observation
- The next Subcommittee meeting is scheduled for November 8, from 9 a.m. to 4 p.m.

**ADMINISTRATION**

***September 23, 2003 Subcommittee Summary Approved*** – The Subcommittee approved the September 23, 2003 meeting summary.

***Confidentiality/Model Use Agreement*** – The agencies have declined to sign the confidentiality/Model Use Agreement.

**STATUS OF ACTION ITEMS**

The following action items from the previous meeting have been completed:

- Water Year Type subgroup met on October 8 to discuss possible alternative water year type definitions
- USFS and CDFG reported that the agencies have decided to develop a separate water balance model on their own and would send a list of data request
- Parvez Mody issued revised list of nodes for the model

Outstanding action items are listed below:

1. SMUD's Expert User to issue an email stating SMUD will make EDCWA's model run request (the first request) before November 10, 2003 meeting
2. Dave Hanson to call John Gangemi. No date assigned.

3. Bill Hetland to report on JBIT's discussions regarding whether consumptive withdrawals should be included in the model used in the UARP Relicensing (as compared to the model used by the JBIT) at the October 8 Subcommittee meeting.
4. SMUD to add Chili Bar and Iowa Hill to the CHEOPS model. No date assigned.
5. Parvez Mody to update Model Run Request Form
6. Margaret to calculate total unimpaired flows at all nodes in the list. No completion date assigned.

## REPORT FROM WATER YEAR TYPE SUBGROUP

***Subcommittee In General Agreement On Water Year Type Subgroup's Observations From October 8 Subgroup Meeting*** – The Water Year Type Subgroup, said the Subgroup met on October 8 at SMUD. Participants at this meeting included Bob Hughes, Mike Preszler, Cheryl Mulder, Parvez Mody and Jim Lynch. After reviewing the data and some discussion the subgroup shared the following observations with the subcommittee:

1. **CDWR's Bulletin 120 is Best Source for WY Types Trigger** - Ideally, WY types should be tied to an impartial and reliable forecast. After reviewing various options, the California Department of Water Resources (CDWR) Bulletin 120 is the best source of information for the trigger for WY types.
2. **Bulletin 120's Forecast of Total Water Year Unimpaired Flow into Folsom is Best Trigger for WY Types** - Ideally, WY types should be as reflective of conditions in the watershed as possible. After reviewing the *SWRCB Reconsideration of Decision 1635*, CDWR data regarding forecasts of unimpaired flow for the total water year verses the April through July period, and CDWR data for runoff into Folsom Reservoir verses runoff from Silver Creek, the total water year unimpaired runoff into Folsom Reservoir is the best trigger for WY types.
3. **WY Types Change on 2/10, 3/10, 4/10, 5/10 and 10/10** – Since CDWR publishes Total Water Year unimpaired runoff forecast for American River in to Folsom on February, March, April and May 1 and CDEC publishes its estimated total water year runoff on October 1, WY Types should change soon (in case the publication is late and to allow the Licensees time to make the changes) after each publication. Specifically:
  - CDWR February 1 Forecast would be used to set the WYT from February 10 through March 9
  - CDWR March 1 Forecast would be used to set the WYT from March 10 through April 9
  - CDWR April 1 Forecast would be used to set the WYT from April 10 through May 9
  - CDWR May 1 Forecast would be used to set the WYT from May 10 through October 9
  - CDEC October 1 Estimate would be used to set the WYT from October 10 through February 9
4. **Five WY Types Best** – Five WY Types best capture the variability of WY Types in the watershed. These can be described as *Critically Dry, Dry, Below Normal, Above Normal* and *Wet*.
5. **Specific WY Types** – The five specific WY Types are:
  - Critically Dry – less than 900,000 acre-feet
  - Dry – from 900,000 to 1,700,000
  - Below Normal – from 1,700,001 to 2,600,000
  - Above Normal – from 2,600,001 to 3,500,000
  - Wet – more than 3,500,000

6. **Review WY Types Every 5 Years** – Since the specific WY Types are based in part on the 50-year-long median value, the application for license should include a provision that the Licensee shall calculate the 50-year-long median once every 5 years coincident when CDWR publishes a new 50-year-long average, and if the new median value is more than 5 percent different than 2.6 million, the Licensee would consult with the Forest Service, SWRCB, USFWS, and CDFG regarding any possible changes to WY Types. If a change is agreed to, the Licensee shall file a recommendation with FERC.

The next meeting of the subgroup is set for November 6 at SMUD's Timberline 1 room, in CSC building.

**Action Item 7:** Water Year Type Subgroup to meet at 8:00 a.m. at SMUD's office on November 6 to continue development of Water Year types for consideration by the Subcommittee, and to report at November 10 Subcommittee meeting

## **MODEL NODES**

Parvez Mody distributed a revised list of nodes for the Water Balance Model.

## **NEXT MEETING**

***Next Water Balance Model Subcommittee Meeting Is Scheduled For November 10*** – The next Water Balance Subcommittee meeting is scheduled for Wednesday, November 10, at SMUD from 9:00 a.m. to 4:00 p.m. As agreed to by the Subcommittee, agenda items will include:

- Review/Approve Agenda
- Identify "Hot" Items
- Approve October 8, 2003 Subcommittee Meeting Summary
- Review Status of Outstanding Action Items
- Receive Report from Water Year Type Subgroup
- Identify Meeting Action Items
- Schedule Next Subcommittee Meeting and Set Agenda

**NOTE: THE WATER BALANCE MODEL SUBCOMMITTEE HAS NOT SCHEDULED ANY MEETINGS AFTER OCTOBER 8. PLEASE BRING YOUR CALENDARS TO THE OCTOBER 8 MEETING SO WE CAN SCHEDULE ADDITIONAL MEETINGS.**

# UARP Relicensing

## Water Balance Model Nodes

### Reservoir Nodes:

- 1 Rubicon Reservoir
- 2 Rockbound Reservoir
- 3 Buck Island Reservoir
- 4 Loon Lake Reservoir
- 5 Gerle Reservoir
- 6 Robbs Peak Reservoir
- 7 Ice House
- 8 Union Valley Reservoir
- 9 Junction Reservoir
- 10 Camino Reservoir
- 11 Brush Creek Reservoir
- 12 Slab Creek Reservoir
- 13 Iowa Hill Reservoir
- 14 Chili Bar Reservoir

## **Stream flow Nodes:**

### **Rubicon Reach:**

- 1 Rubicon Reservoir bypass release in to Rubicon River
- 2 Rubicon Reservoir spill in to Rubicon River
- 3 Rubicon - Rockbound Tunnel inlet
- 4 Rubicon River at Rubicon Springs
- 5 Rubicon River below Miller Creek
- 6 Rubicon River below Little Rubicon River

### **Rockbound Reach**

- 1 Rockbound Lake release to Buck Island Reservoir

### **Buck Island Reach**

- 1 Buck Island Reservoir bypass release in to Little Rubicon River
- 2 Buck Island Reservoir spill in to Little Rubicon River
- 3 Buck Island - Loon Lake Tunnel inlet

### **Loon Lake Reach**

- 1 Loon Lake PH diversion
- 2 Loon Lake bypass release in to Gerle Creek
- 3 Loon Reservoir spill in to Gerle Creek
- 4 Gerle Creek below Jerrett Creek
- 5 Gerle Creek below Barts and Dellar Creek
- 6 Gerle Creek Inflow Above Rocky Basin Creek
- 7 Gerle Creek below Rocky Basin Creek
- 8 Gerle Creek Inflow to Gerle Reservoir

### **Gerle Reach**

- 1 Gerle Reservoir bypass release in to Gerle Creek
- 2 Gerle Reservoir spill in to Gerle Creek
- 3 Gerle Reservoir to Robbs Peak Reservoir (Gerle Canal)
- 4 Gerle Creek at Confluence with SF Rubicon River
- 5 SF Rubicon at Confluence with Rubicon River

### **Robbs Peak Reach**

- 1 Robbs Peak Reservoir bypass release in to SF Rubicon River
- 2 Robbs Peak Reservoir spill in to SF Rubicon River
- 3 Robbs Peak PH diversion

### **Ice House Reach**

- 1 Ice House Reservoir bypass release in to SF Silver Creek
- 2 Ice House Reservoir spill in to SF Silver Creek
- 3 Jones Fork PH diversion
- 4 SF Silver Creek below Peavine Creek
- 5 SF Silver Creek below Windmiller Ravine
- 6 SF Silver Creek below Big Hill Canyon
- 7 SF Silver Creek at Junction Reservoir

### **Union Valley Reach**

- 1 Union Valley spill in to Junction Reservoir
- 2 Union Valley PH diversion

### **Junction Reach**

- 1 Junction Reservoir bypass release in to Silver Creek
- 2 Junction Reservoir spill in to Silver Creek
- 3 Jaybird PH diversion
- 4 Silver Creek below Grey Horse Creek
- 5 Silver Creek below Onion Creek
- 6 Silver Creek below Sugar Pine Creek
- 7 Silver Creek at Camino Reservoir

### **Camino Reach**

- 1 Camino Reservoir bypass release in to Silver Creek
- 2 Camino Reservoir spill in to Silver Creek
- 2 Camino PH diversion
- 3 Silver Creek below Round Tent Canyon
- 4 Silver Creek Halfway, no name creek
- 5 Mouth of Silver Creek

### **Brush Creek Reach**

- 1 Brush Creek Reservoir bypass release in to Brush Creek
- 2 Brush Creek Reservoir spill in to Brush Creek
- 3 Camino PH diversion
- 4 Brush Creek Inflow to Slab Creek Reservoir

### **Slab Creek Reach**

- 1 Slab Creek Reservoir bypass release in to SF American River
- 2 Slab Creek Reservoir spill in to SF American River
- 3 White Rock PH diversion
- 4 SF American River below Iowa Canyon Creek
- 5 SF American River above Mosquito Road Bridge
- 6 SF American River below Rock Creek
- 7 SF American River Above Chili Bar Reservoir
- 8 Diversion to Iowa Hill Reservoir

### **Iowa Hill**

- 1 Release to Slab Creek

### **Chili Bar Reach**

- 1 Chili Bar Reservoir bypass release in to SF American River  
(PH diversion)
- 2 Chili Bar spill in to SF American River
- 3 Chili Bar synchronous bypass release
- 4 SF American River below Dutch Creek
- 5 SF American River below Greenwood
- 6 SF American River below Weber Creek

## **Inflow Nodes**

- 1 Rubicon River Inflow to Rubicon Reservoir
- 2 Highland Creek Inflow to Rockbound Reservoir
- 3 Ellis Creek Inflow to Loon Lake
- 4 SF Rubicon Inflow to Robbs Peak Reservoir
- 5 SF Silver Creek Inflow to Ice House Reservoir
- 6 Tells Creek Inflow to Union Valley Reservoir
- 7 Big Silver Creek Inflow to Union Valley Reservoir
- 8 Jones Fork Silver Creek Inflow to Union Valley Reservoir
- 9 Little Silver Creek Inflow to Junction Reservoir
- 10 Silver Creek Inflow to Camino Reservoir
- 11 Brush Creek Inflow to Brush Creek Reservoir
- 12 Slab Creek Inflow to Slab Creek
- 13 Iowa Canyon at SF American River
- 14 Rock Creek at SF American River