

**Glen Canyon Dam Adaptive Management Work Group Meeting
May 25, 2016**

Summary of Actions Taken

The AMWG reached consensus on the following actions during this meeting:

- AMWG approves the minutes of February 24-25, 2016, meeting.

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**May 25, 2016**

**Start Time:** 9 a.m. (MDT)

**Conducting:** Jennifer Gimbel, DOI, Principal Deputy Assistant Secretary for Water and Science

**Facilitator:** Mary Orton, The Mary Orton Company, LLC

**Committee Members/Alternates:**

Melinda Arviso-Ciocco, Navajo Nation  
Jan Balsom, National Park Service (GRCA)  
Eric Bobelu, Pueblo of Zuni  
Chris Cantrell, Arizona Game & Fish Department  
Kerry Christensen, Hualapai Tribe  
Kevin Dahl, National Parks Conservation Assoc.  
Jayne Harkins, State of Nevada  
Chris Harris, State of California  
Leslie James, CREDA

Sam Jansen, Grand Canyon River Guides  
Lynn Jeka, Western Area Power Administration  
John Jordan, Int'l Federation of Fly Fishers & TU  
Vineetha Kartha, State of Arizona  
Daniel Picard, U.S. Bureau of Reclamation  
Steve Spangle, U.S. Fish and Wildlife Service  
Larry Stevens, Grand Canyon Wildlands Council  
Steve Wolff, State of Wyoming

**Committee Members Absent:**

Charley Bullets, Southern Paiute Consortium  
Tom Buschatzke, State of Arizona  
James deVos, Arizona Game and Fish Department  
Deborah Dixon, State of New Mexico  
Dawn Hubbs, Hualapai Tribe  
Leigh Kuwanwisiwma, Hopi Tribe  
Chip Lewis, BIA  
Ora Marek-Martinez, Navajo Nation

John McClow, State of Colorado  
Eric Millis, State of Utah  
David Nimkin, National Parks Conservation Assoc.  
Don Ostler, State of Wyoming  
Ted Rampton, UAMPS  
Tanya Trujillo, State of California  
VACANT, San Juan Southern Paiute Tribe

**USGS/Grand Canyon Monitoring and Research Center**

Helen Fairley, Program Manager

Scott VanderKooi, Chief, GCMRC

**Interested Persons, TWG Members, and Alternates:**

Steven Anderson, U.S. Geological Survey  
Adam Arellano, WAPA  
Tara Ashby, U.S. Bureau of Reclamation  
Rob Billerbeck, National Park Service  
David Braun, Sound Science LLC  
Dan Bunk, U.S. Bureau of Reclamation  
Kathleen Callister, U.S. Bureau of Reclamation  
Shane Capron, WAPA/TWG Vice Chair  
Bill Chada, U.S. Bureau of Reclamation  
Rick Clayton, U.S. Bureau of Reclamation  
Marianne Crawford, U.S. Bureau of Reclamation  
Winkie Crook, Hualapai Tribe  
Paul Davidson, U.S. Bureau of Reclamation  
Kurt Dongoske, Pueblo of Zuni  
Craig Ellsworth, WAPA  
Katrina Grantz, U.S. Bureau of Reclamation  
Jessica Gwinn, U.S. Fish & Wildlife Service  
John Hamill, Int'l Federation of Fly Fishers & TU  
Paul Harms, State of New Mexico  
Jeffrey Inwood, Arizona Dept. of Water Resources  
Lisa Meyer, WAPA

Jill Nagode, U.S. Bureau of Reclamation  
Jessica Neuwerth, State of California  
Brent Rhees, U.S. Bureau of Reclamation  
Sarah Rinkevich, DOI Federal Tribal Liaison  
Peggy Roefer, State of Nevada (CRC)  
Monica Richards, Tri-State  
Marty Rozelle, The Mary Orton Company, LLC  
Kendra Russell, U.S. Bureau of Reclamation  
Sarah Ryker, DOI/Water and Science  
Brian Sadler, Western Area Power Administration  
Randy Seaholm, State of Colorado  
Seth Shanahan, State of Nevada (SNWA)  
Angela Slaughter, State of Nevada (CRC)  
Rodney Smith, DOI/Solicitor's Office  
Rosemary Sucec, NPS (GLCA)  
Justin Tade, DOI/Solicitor's Office  
Shana Tighi, U.S. Bureau of Reclamation  
Jason Tucker, U.S. Bureau of Reclamation  
Warren Turkett, State of Nevada (CRC)  
Kathy Tyer (WAPA)

**Recorder:** Linda Whetton, Reclamation

**Welcome and Administrative.** Ms. Gimbel, Secretary's Designee, welcomed the members and general public.

- Introductions were made and a quorum was determined to be present.
- Approval of February 24-25, 2016, Meeting Minutes. Motion proposed by Mr. Wolff, seconded by Mr. Harris. The minutes were approved by consensus.
- Action Item Tracking Report (**Attachment 1**).
- Update on Recruitments: GCMRC Deputy Chief - Mr. VanderKooi. The position will be re-advertized in early June.
- LTEMP Update – Ms. Grantz. The Draft EIS was published on January 8 and the public period comment closed on May 9. Approximately 3,000 comments were received and most were generally supportive of the Preferred Alternative but some with caveats related to the Low Summer Steady Flows experiment and potential impacts to hydropower. The goal is to have a Final EIS by August 30 and a Record of Decision by September 30.
- Progress on Nominations and Reappointments: Mr. Uberuaga will retire at the end of the month; his alternate Ms. Jan Balsom has stepped in. Mr. Kowalski (alternate) terminated from the State of Colorado. Ms. Jessica Gwinn was appointed the TWG alternate for USFWS and Mr. Jeffrey Inwood as the TWG alternate for the State of Arizona on a temporary basis.

**Basin Hydrology and WY 2017 Hydrograph (**Attachment 2**)** – Mr. Davidson. Basin snowpack peaked at 94% on April 2<sup>nd</sup> 2016. The current forecast for April to July most probable unregulated inflow is 5.5 maf (77%). The forecast ranges from a minimum probable of 3.85 maf (54%) and maximum probable of 7.65 maf (107%). The water year 2016 operating tier for Lake Powell was set in August 2015 as the upper elevation balancing tier. Lake Powell is currently projected to release 9.0 maf. In water year 2016, Reclamation is using the approved 2016 hydrograph.

**GCD Maintenance Schedule.** For 2016, five to seven units are expected to be available at any time and Reclamation anticipates having enough capacity to meet the scheduled releases for 2016. For 2017, one unit is anticipated to be down for maintenance with seven units available for a potential November 2016 HFE.

**WY2017 Proposed Hydrograph.** The proposed water year 2017 hydrograph is the same as the approved water year 2016 hydrograph which targets lower August and September release, reallocating water from those months to other equal value months for hydropower, mainly December and January, and avoids shifting water to June. The 2017 projected annual releases are: minimum probable at 8.23 maf, most probable at 9.0 maf, and maximum probable at 11.91 maf. The current water year 2017 hydrograph proposal is:

| <b>Annual Release Volume</b> | <b>June</b>       | <b>August</b>   | <b>September</b> |
|------------------------------|-------------------|-----------------|------------------|
| Less than 9.0 maf            | 600 kaf – 650 kaf | 800 kaf         | 600 kaf          |
| 9.0 maf – less than 9.5 maf  | 800 kaf           | 900 kaf         | 700 kaf          |
| 9.5 maf – less than 10 maf   | 900 kaf           | 900 kaf         | 700 kaf          |
| 10 maf and greater           | 900 kaf or more   | 900 kaf or more | 800 kaf or more  |

**Federal Advisory Committee Act Overview: FACA 101 – Managing People and Process (**Attachment 3**)** – Ms. Jill Nagode. As follow-up to the AMP Assessment Report presented at the last meeting, Ms. Nagode presented an overview of the Federal Advisory Committee Act (FACA) of 1972, focusing on how the statute requires that Federal advisory committees such as the AMWG be organized, and the committees' role, purview, and processes. The Department of the Interior has 112 Federal advisory committees including the AMWG, which was established in 1997 and is renewed every two years.

Ms. Nagode also explained Departmental roles and contacts for FACA processes. The Department's Committee Management Officer, Margaret Triebsch, coordinates with GSA and general counsel. Ms. Nagode serves as BOR's Federal Group Officer and is responsible for working between all the committees. She coordinates closely on nominating AMWG members and alternates and updating members' resumes. The Designated Federal Official (Jennifer Gimbel) works closely with the Secretary's Designee (also Jennifer Gimbel), who makes recommendations to the Secretary of the Interior.

**Law of the River (Attachment 4)** – Mr. Rod Smith. As follow-up to the AMP Assessment Report presented at the last meeting, Mr. Smith presented an overview of the Law of the River including the 1922 Colorado River Compact and interactions with water use, moving water in the Upper and Lower Basins and Mexico, tribal water rights, and Glen Canyon Dam operations.

Mr. Smith gave an overview of the Long-Range Operating Criteria (LROC) and related criteria for moving water between Lake Powell and Lake Mead. He also touched on the 2007 Interim Guidelines, the CRSP Act of 1956, and the Grand Canyon Protection Act of 1992.

**Science Advisors: Charter, Protocols, and FY17 External Review Topics (Attachment 5)** – Dr. David Braun. The executive coordinator of the Science Advisor Program is establishing a work plan to guide future efforts. A proposed activity for FY2017 is an external review panel to look at best practices for incorporating Native American traditional knowledge into the AMP.

Comments:

- *The Hualapai Tribe will be requesting formal government-to-government consultation on the makeup of the panel on incorporating traditional knowledges. In a conversation with Charley Bullets (Southern Paiute Consortium), Ms. Rinkevich said they also desire govt-to-govt consultation with Reclamation.*
- *The Pueblo of Zuni will also submit a request for govt-to-govt consultation. Reclamation requested the request in writing. The Department appreciates the opportunity to talk with the tribes.*

Ms. Gimbel suggested the tribes edit the Charter to include words that would meet their needs.

**FY 2017 Budget and Work Plan** – Mr. Capron. He noted the budget process table previously approved is being updated again. Following the April TWG meeting, input was sought from other ad hoc groups and will be discussed on a future BAHG call. The BAHG will develop a recommendation for the TWG that they'll consider in June and the TWG will make a recommendation to the AMWG at its August meeting.

**Bureau of Reclamation FY17 Budget (Attachment 6a)** – Ms. Katrina Grantz. In the FY15 budget, Reclamation prepared the budget using a 3% CPI rate. The CPI for 2015 came in at 1.7% rate so there was a reduction between what was originally planned for and the final amount. The FY16 was prepared using a 3% CPI rate but will probably end up around 0%. Based on internal discussions, future budgets will be prepared using 0% to allow for additional funds if the CPI rate comes in higher.

**GCMRC FY2017 Proposed Budget (Attachment 6b)** – Mr. Scott VanderKooi. The FY17 budget is proposed to be \$9,286,900 with \$186,000 from other Reclamation funding. Their overhead rates were projected to go up in anticipation of GCMRC moving into a new facility. Construction on the new facility should start in 2017 with occupancy in 2018. Recognizing there were shortfalls in the FY16 and FY17 budgets, they made the decision to budget in a shortfall. With the delay in the building of the new facility, the overhead rates have declined which help make up for the shortfall.

**AMWG Next Steps** - Ms. Jennifer Gimbel thanked everyone for their participation. Upcoming items for the AMWG August meeting will include approval of: 1) the FY17 Budget and Workplan, 2) Water Year 2017 Hydrograph, and 3) Science Advisor Charter, Protocols and 2017 Work Plan. Additional agenda items need to be sent to Linda Whetton by June 1.

Since the AMWG August meeting will be held in August in Flagstaff, GCMRC will be hosting a river style cookout at their boathouse on Wednesday, August 24. More details to follow.

**Public Comment:** None

**Adjourned:** 11:41 a.m.

**Remaining 2016 Meetings:**

- June 14-15, 2016 – TWG Meeting/WebEx in Salt Lake City UT
- Aug 24-25, 2016 – AMWG meeting in Flagstaff, Arizona

**AMWG Meetings in 2017:**

- February 15-16, 2017 (Phoenix, AZ)
- May 24, 2017 (webinar)
- August 30-31, 2017 (Flagstaff, AZ)

Respectfully submitted,

Linda Whetton  
Bureau of Reclamation  
Upper Colorado Region

## Key to Glen Canyon Dam Adaptive Management Program Acronyms

|                                                   |                                                                        |
|---------------------------------------------------|------------------------------------------------------------------------|
| ADWR – Arizona Dept. of Water Resources           | HFE – High Flow Experiment                                             |
| AF – Acre Feet                                    | HMF – Habitat Maintenance Flow                                         |
| AGFD – Arizona Game and Fish Department           | HPP – Historic Preservation Plan                                       |
| AIF – Agenda Information Form                     | IG – Interim Guidelines                                                |
| AMP – Adaptive Management Program                 | INs – Information Needs                                                |
| AMWG – Adaptive Management Work Group             | KA – Knowledge Assessment (workshop)                                   |
| AOP – Annual Operating Plan                       | KAS – Kanab Ambersnail (endangered native snail)                       |
| ASMR – Age-Structure Mark Recapture               | LCR – Little Colorado River                                            |
| BA – Biological Assessment                        | LCRMCP – Lower Colorado River Multi-Species<br>Conservation<br>Program |
| BAHG – Budget Ad Hoc Group                        | LTEMP – Long-Term Experimental and Management Plan                     |
| BCOM – Biological Conservation Measure            | LTEP – Long Term Experimental Plan                                     |
| BE – Biological Evaluation                        | MAF – Million Acre Feet                                                |
| BHBF – Beach/Habitat-Building Flow                | MA – Management Action                                                 |
| BHMF – Beach/Habitat Maintenance Flow             | MATA – Multi-Attribute Trade-Off Analysis                              |
| BIA – Bureau of Indian Affairs                    | MLFF – Modified Low Fluctuating Flow                                   |
| BO – Biological Opinion                           | MO – Management Objective                                              |
| BOR – Bureau of Reclamation                       | MRP – Monitoring and Research Plan                                     |
| BWP – Budget and Work Plan                        | NAU – Northern Arizona University (Flagstaff, AZ)                      |
| CAHG – Charter Ad Hoc Group                       | NEPA – National Environmental Policy Act                               |
| CAP – Central Arizona Project                     | NHPA – National Historic Preservation Act                              |
| GCT – Grand Canyon Trust                          | NNFC – Non-native Fish Control                                         |
| CESU – Cooperative Ecosystems Studies Unit        | NOI – Notice of Intent                                                 |
| cfs – cubic feet per second                       | NPCA – National Parks Conservation Association                         |
| CFMP – Comprehensive Fisheries Management Plan    | NPS – National Park Service                                            |
| CMINS – Core Monitoring Information Needs         | NRC – National Research Council                                        |
| CMP – Core Monitoring Plan                        | O&M – Operations & Maintenance (Reclamation Funding)                   |
| CPI – Consumer Price Index                        | PA – Programmatic Agreement                                            |
| CRBC – Colorado River Board of California         | PBR – Paria to Badger Creek Reach                                      |
| CRAHG – Cultural Resources Ad Hoc Group           | PEP – Protocol Evaluation Panel                                        |
| CRCN – Colorado River Commission of Nevada        | POAHG – Public Outreach Ad Hoc Group                                   |
| CRE – Colorado River Ecosystem                    | Powerplant Capacity = 31,000 cfs                                       |
| CREDA – Colorado River Energy Distributors Assn.  | R&D – Research and Development                                         |
| CRSP – Colorado River Storage Project             | RBT – Rainbow Trout                                                    |
| CWCB – Colorado Water Conservation Board          | RFP – Request for Proposal                                             |
| DAHG – Desired Future Conditions Ad Hoc Group     | RINs – Research Information Needs                                      |
| DASA – Data Acquisition, Storage, and Analysis    | ROD Flows – Record of Decision Flows                                   |
| DBMS – Data Base Management System                | RPA – Reasonable and Prudent Alternative                               |
| DOE – Department of Energy                        | SA – Science Advisors                                                  |
| DOI – Department of the Interior                  | Secretary – Secretary of the Interior                                  |
| DOIFF – Department of the Interior Federal Family | SCORE – State of the Colorado River Ecosystem                          |
| EA – Environmental Assessment                     | SHPO – State Historic Preservation Office                              |
| EIS – Environmental Impact Statement              | SOW – Statement of Work                                                |
| ESA – Endangered Species Act                      | SPAHG – Strategic Plan Ad Hoc Group                                    |
| FACA – Federal Advisory Committee Act             | SPG – Science Planning Group                                           |
| FEIS – Final Environmental Impact Statement       | SSQs – Strategic Science Questions                                     |
| FRN – Federal Register Notice                     | SWCA – Steven W. Carothers Associates                                  |
| FWS – United States Fish & Wildlife Service       | TCD – Temperature Control Device                                       |
| FY – Fiscal Year (October 1 – September 30)       | TCP – Traditional Cultural Property                                    |
| GCD – Glen Canyon Dam                             | TEK – Traditional Ecological Knowledge                                 |
| GCES – Glen Canyon Environmental Studies          | TES – Threatened and Endangered Species                                |
| GCT – Grand Canyon Trust                          | TMC – Taxa of Management Concern                                       |
| GCMRC – Grand Canyon Monitoring & Research Center | TMF – Trout Management Flows                                           |
| GCNP – Grand Canyon National Park                 | TWG – Technical Work Group                                             |
| GCNRA – Glen Canyon Nat'l Recreation Area         | UCRC – Upper Colorado River Commission                                 |
| GCPA – Grand Canyon Protection Act                | UDWR – Utah Division of Water Resources                                |
| GLCA – Glen Canyon Nat'l Recreation Area          | USBR – United States Bureau of Reclamation                             |
| GRCA – Grand Canyon National Park                 | USFWS – United States Fish & Wildlife Service                          |
| GCRG – Grand Canyon River Guides                  | USGS – United States Geological Survey                                 |
| GCWC – Grand Canyon Wildlands Council             |                                                                        |
| HBC – Humpback Chub (endangered native fish)      |                                                                        |

WAPA – Western Area Power Administration

WY – Water Year

(Updated: 11/28/2014)