

WCD-RSwickard  
PRJ-13.10

Subject: Navajo Unit Operations Meeting Notes

Dear Interested Party:

Enclosed is a summary of our April 20, 2011, meeting to coordinate Reclamation's operation of the Navajo Unit. The meeting was held at the Civic Center in Farmington, New Mexico.

Highlights of the meeting include:

— The most probable April through July modified unregulated inflow to Navajo Reservoir, based on the mid-April forecast, is 550,000 acre-feet, or 75 percent of the 30-year average. However, this is only a forecast and is subject to change as updated forecasts become available.

—The reservoir elevation on April 18, 2011 was 6,059.1 feet, which corresponds to approximately 1,336,156 acre-feet of storage (99% of the end of April average). The current release to the river is approximately 500 cfs.

—As of April 19, 2011, the average snowpack for SNOTEL stations above Navajo was at 86 percent of average, with a snow water equivalent (SWE) of 16.1 inches.

— The release from Navajo Reservoir has been approximately 500 cubic feet per second (cfs) since October 19, 2010. A temporary increase to approximately 650 cfs occurred April 15 to April 20, to maintain a target base flow through the endangered fish critical habitat reach of the San Juan River (Farmington to Lake Powell). The release was decreased to 500 cfs on April 21, 2011, where it should remain until the spring peak release.

— Based on the mid-April inflow forecast, under the minimum and most probable forecasts a 1-week at 5000 cfs hydrograph will be released with a week-long ramp up/down.

Copies of the material presented and past meeting notes are available online at:

<http://www.usbr.gov/uc/wcao/water/rsvrs/mtgs/nmcurrnt>

If you have any suggestions on improving the operation meetings or the summaries of the meetings, please let us know. The next meeting will be held on Tuesday, **August 30, 2011 at 1:00 at the Farmington Civic Center, Farmington, New Mexico (200 West Arrington Street)**. If you have questions, please call me at 970-385-6590.

Sincerely,

Ryan Christianson, Acting  
Water Management Group Chief

Enclosure

bc: 86-68140

UC-400, UC-434, UC-438, UC-436, UC-700 (ea w/encl)

WCG-EWarner, WCG-DCrabtree, WCG-SMcCall,

WCG-JHock , WCG-Erik Knight (ea w/encl)

WCD-RSwickard, WCD-RChristianson, WCD-MChiarito,

WCD-MVelasquez (ea w/encl)

## NAVAJO UNIT OPERATIONS MEETING

April 20, 2011

**Participation:** This meeting was held in Farmington, New Mexico at the Civic Center. The attendance list is attached.

**Purpose of Meeting:** The purpose of these meetings, held annually in January, April, and August, is to gather input for determining upcoming operations for Navajo Reservoir. This input is used in Reclamation's development of an overall 24-month study for operation of Reclamation projects in the Upper Colorado River Basin, which includes plans for Glen Canyon, Flaming Gorge, Aspinall Unit and Navajo. Input from individuals, organizations, and agencies along with other factors such as weather, water rights, endangered species requirements, flood control, hydro power, recreation, fish and wildlife management, and reservoir levels, will be considered in the development of these reservoir operation plans. In addition, the meetings are used to coordinate activities and exchange information among agencies, water users, and other interested parties concerning the San Juan River and Navajo Reservoir.

### Guest Speaker

Paul Davidson from Reclamation's Upper Colorado Region Office in Salt Lake City, Utah gave an overview presentation on the 24-month study and how Navajo operations influence planning for the Colorado River Basin, including Lake Powell/Mead operations.

### Review of 2011 Operations

A quick overview was given of the 2011 Water Year up to April 20, 2011, including a graphical summary of Navajo Reservoir operations, downstream flows, and current Navajo Reservoir conditions.

The reservoir elevation on April 18, 2011 was 6,059.1 feet which corresponds to approximately 1,336,156 acre-feet of storage (99% of the end of April average). The Navajo Indian Irrigation Project (NIIP) headwork's is diverting approximately 480 cfs, and the San Juan-Chama Project was diverting approximately 385 cfs. The current reservoir release to the river is approximately 500 cfs.

### Water Year 2011 Conditions

Graphics showing the precipitation patterns in the Colorado River Basin as a percent of average were shown for monthly summaries, as well as seasonal totals. As with recent years, most precipitation fell in December, and below average precipitation followed through April. Typical La Nina storm tracks can be observed in the seasonal precipitation pattern.

As of April 19, 2011, the average snowpack for SNOTEL stations above Navajo was at 86 percent of average with a snow water equivalent (SWE) of 16.1 inches. The snowpack reached a maximum of 17.5 inches SWE at the end of March. Comparisons of past year's snowpack on the same date indicate that inflows similar to what is currently forecasted would be expected.

Longer-term forecast indicate there are equal chances of above or below average precipitation for the coming months. The La Nina anomaly is forecasted to return to neutral conditions by the middle of the summer.

### **Water Year 2011 Forecasts**

The most probable April through July 2011 modified unregulated inflow, based on the mid-April forecast, is 550,000 acre-feet, which is 75 percent of the 30-year average. The minimum probable and maximum probable April-July inflow forecasts are 395,000 acre-feet (54% of average) and 725,000 acre-feet (98% of average), respectively. The current weekly ESP model run indicates inflows lower than the most recent coordinated forecast.

In compliance with the San Juan River Basin Recovery Implementation Program (SJRIP) Flow Recommendations, under the minimum and most probable forecasts a 1-week at 5000 cfs hydrograph will be released with a week-long ramp up/down. Under the maximum probable forecast, a 3-week at 5000 cfs hydrograph would be released with week-long ramp up/downs.

The current CBRFC forecast for the peak of the Animas River at Farmington is May 31<sup>st</sup>. The goal of the spring peak release from Navajo Reservoir is to best match the peak of the Animas River at Farmington. The preliminary dates for the spring peak release are to begin on May 23<sup>rd</sup> with the ramp up and reaching 5,000 cfs on May 27<sup>th</sup> continuing through June 2<sup>nd</sup>, followed by a ramp down concluding on June 9<sup>th</sup>. After the spring peak release, it is anticipated to return to the base release of 500 cfs. These dates may be adjusted on the order of 2 to 3 days based on the latest peak forecast for the Animas River. A final release hydrograph will be announced approximately 1-week prior to the beginning of the ramp-up.

### **Modeled Results of Operation Plan**

Graphs were presenting showing the forecasted inflows, releases, storage and elevations as a result of the current operation plan on a monthly time step. Resultant graphs of the downstream model were presented, based on the operation plan for each forecast scenario. For the most probable forecast and corresponding operation plan, a downstream peak of approximately 7000 cfs is anticipated for the San Juan River in the critical habitat area near the first of June. Under the minimum probable forecast and corresponding operation plan, releases of up to 1300 cfs would be necessary to meet downstream target base flows.

### **Nearby Projects Update**

An overview of the conditions of nearby reservoirs was presented. The forecasted inflow into Vallecito Reservoir is sufficient to reach a full reservoir. Lemon Reservoir is not projected to fill this year. The Animas-La Plata Project is currently pumping at full capacity (approximately 280 cfs). Lake Nighthorse is 72% full, storing 89,378 acre-feet. The reservoir is anticipated to fill this summer. The Navajo Nation Municipal Pipeline is currently under construction.

### **Maintenance Activities**

The stilling basin cleanout was accomplished successfully. The plan to perform maintenance on

the 6x13 Emergency Gate Bonnet is scheduled to begin in mid-August. During the gate maintenance (one to two months), the release will be diverted through the auxiliary outlet works. The auxiliary outlet works release capacity is 1400 cfs.

### **Agency/Organization Activities and Discussion of Related Activities**

U.S. Fish & Wildlife Service – Announced upcoming San Juan Recovery Implementation Program (SJRIP) meetings. The Biology Committee meeting is scheduled for May 10, the annual meeting is scheduled for May 11 and the Coordination Committee meeting is scheduled for May 12. All these meetings will be held at the Fort Lewis College in Durango, Colorado.

The New Mexico Department of Game and Fish is planning on remedial improvement to the downstream fish habitat area below the dam, which will likely occur in the fall when releases are approximately 500 cfs. The release may need to be decreased for several days to accommodate these activities.

San Juan River Dineh Water Users Association – Underground pipeline project for the Shiprock, New Mexico water users has been completed. The system is ready for use. The mitigation for the disturbed lands was accomplished by removing vegetation on the San Juan River banks including Russian olive and tamarisk.

A dust on snow update was given by Chris Landry for the Center from the Snow and Avalanche Studies located in Silverton, Colorado. The dust events on the snow cause more radiation to be absorbed which has an effect on the runoff snowmelt. Dust events have been recorded this year, but are not as significant as the ones observed in the last couple years.

**Next Meeting** - Scheduled for **1:00 p.m. on Tuesday, August 30, 2011** at the Civic Center in Farmington, New Mexico (200 West Arrington Street).

## **Attendance List – April 20, 2011 Navajo Operations Meeting**

Andrews, Roy, San Juan Shrine, Fruitland NM  
Ashcroft, Nick, West Hammond Domestic Water Users Assoc., Bloomfield NM  
Becker, Herb, Jicarilla Apache Nation, Dulce NM  
Broughton, Brian, CO Division of Water Resources, Durango CO  
Campbell, Dave, Fish and Wildlife Service, Albuquerque NM  
Chestnut, Britt, City of Farmington, NM  
Christianson, Ryan, Bureau of Reclamation, Durango CO  
Crawford, Carroll, Bloomfield Irrigation District, Bloomfield NM  
Darnell, Dan, City of Farmington, Farmington NM  
Davidson, Paul, Bureau of Reclamation, Salt Lake City UT  
Davidson, Robert, Navajo Dam Water Users, Navajo Dam NM  
Day, Henry, Arizona Public Service, Phoenix AZ  
Dennis, Neal, Navajo State Park, Arboles CO  
Duncan, April, NAPI, Farmington NM  
Duncan, Martin, San Juan River Dineh Water Users Inc., Shiprock NM  
Durst, Scott, US Fish and Wildlife Service, Farmington NM  
Garcia, Dennis E., Corp of Engineer, Albuquerque NM  
Greenberg, Andy, Float-N-Fish, Farmington NM  
Greene, Mike, PNM, Albuquerque NM  
King, Virginia, City of Farmington, Farmington NM  
Lane, Teresa, Hammond Conservancy District, Bloomfield NM  
Lasator, Stevy, Lee Acres Water Users Association, Farmington NM  
Leavesley, Brain, CO Division of Water Resources, Durango CO  
Lile, Carrie, Southwest Water Conservation District, Durango CO  
McKim, Doug, NM State Parks, Navajo Dam NM  
Miller, Gordon, San Juan Water Commission, Farmington NM  
Oxford, Robert, Citizen, Farmington NM  
Prder, Sam, West Hammond Water Users, Bloomfield NM  
Ricord, Dashedle, City of Farmington, Farmington NM  
Robinson, Kelly, Western Refining, Bloomfield NM  
Sorrelhorse, James, Navajo Nation Emergency Management, Shiprock NM  
Wethington, Marc, NM Department of Game and Fish, Navajo Dam NM  
Wimsatt, Marian, BHP Billiton, Farmington NM