

**Colorado River Storage Project
Flaming Gorge Working Group
Meeting Minutes
April 26, 2011**

Participation

This meeting was held at Western Park, Vernal, Utah. Attendees are listed below.

Purpose of Meeting

The purpose of operation meetings (held in April and August) is to inform the public and other interested parties of Reclamation's current and future operational plans and to gather information from the public regarding specific resources associated with Flaming Gorge Reservoir. In addition, the meetings are used to coordinate activities and exchange information among agencies, water users, and other interested parties concerning the Green River.

General

Ed Vidmar (Reclamation) welcomed everyone to the Flaming Gorge Work Group meeting. Each person introduced themselves and their interest or involvement with Flaming Gorge operations. The agenda for the meeting was reviewed and attendees were told there would be time set aside for all questions and discussion that the audience might have.

Flaming Gorge Process

Heather described the process for Flaming Gorge dam operations. She discussed how the Recovery Implementation Program (RIP), Flaming Gorge Technical Working Group (FGTWG), and Flaming Gorge Work Group (FGWG) work together to provide recommendations on release scenarios and allow Reclamation the information to make operational decisions. Heather discussed the role the Record of Decision (ROD) and the Flow and Temperature Recommendations play in determining Flaming Gorge operations.

Upper Green River and Yampa River 2011 Forecast Update

Colorado Basin River Forecast Center Presentation April 2011

Ashley Neilson (Colorado Basin River Forecast Center) gave a presentation on the hydrologic conditions of the Green and Yampa river basins. Ashley is the CBRFC forecaster for the Green and Yampa River basins. Ashley's presentation displayed the monthly precipitation charts for the entire Colorado river basin. October thru December were wet conditions, followed by a dry January. February and March were above average precipitation. The 2011 water year seasonal precipitation is above average. April precipitation has areas recording upwards of 6 inches in some spots. April precipitation has been much above average (>200%).

The short term forecast is for yet another storm system for the coming weekend. The 6 to10 day outlook is for below average precipitation. The 8 to14 day outlook is for average conditions. Ashley also displayed and discussed the long range forecast that can be found at <http://www.cpc.ncep.noaa.gov/products/predictions/30day/>. Fall soil moisture is near normal in the Upper Green, and very wet in Yampa and Little Snake river basins. The Upper Green river basin is at 148% of normal Snow Water Equivalent (SWE). Water year 2011 is on par with 1996

and 1997 for SWE. The water years 1996 and 1997 are two years with the most recorded snowpack in the Yampa river drainage. In the Upper Yampa river drainage 2 of the 16 Snotel sites have showed melting as of the end of April, while the remaining 14 Snotel sites are still accumulating snow. Numerous Snotel sites in the upper Yampa drainage are showing highest recorded values on record.

Ashley then explained how forecasts are made. Temperature, precipitation, radar, satellites, river gages, reservoir release, snow level readings are all taken into account to develop the runoff forecasts. The National Weather Service is currently using two types of forecasting models, a Statistical model and an Ensemble Streamflow Prediction (ESP) model. The data set currently uses 1976 to 2005 for the ESP model.

Ashley explained the Flaming Gorge forecast. The April 15th forecast is for 1,500 kaf or 126% of normal. This is a 105,000 acft increase from the April 1st forecast. The April 15th forecast ranks 9th on the all-time highest volume forecasts for Flaming Gorge.

The explanation of the Yampa river forecast was next. There is record snowpack in the Yampa river drainage. Current conditions indicate more SWE than the previous record years of 1986, 1997, and 1984, and the snow is still accumulating. April precipitation in the Yampa drainage has been 300% to 400% of average. The two river peaks seen recently at the Deerlodge gauge can be attributed to rain events only.

The peak flow forecast for the Yampa river at Deerlodge are:

2011 Forecast Exceedance Probability				
90%	75%	50%	25%	10%
23,000 cfs	25,000 cfs	28,000 cfs	33,000 cfs	39,000 cfs

The peak recorded flow for the Deerlodge gauge is 33,200 cfs in 1984. The 2011 50% forecast would put this springs expected peak flow as second place on record. If the Yampa river were to see a little more than the 25% forecast, it would set a new all time record.

Recovery Implementation Program (RIP) Research

Upper Colorado Recovery Implementation Program Presentation April 2011

Tom Chart is the Director of the Recovery Implementation Program for the US Fish and Wildlife Service. Tom took a little time at the front end of his presentation to explain the RIP and who the partners are on the program. The general purpose is to recover the 4 endangered fish in the Green river. The goal of the program is to balance the law of river and the Endangered Species Act. The RIP accounts for the depletion caused by 1807 different water projects amounting to 2,842,168 acft of depletion. Utah accounts for 603,578 acft of that total depletion. The Recovery Program elements include habitat flow management, research monitoring, habitat development, stocking endangered fish, and managing non-natives.

Tom explained the Technical Work Group Flow recommendations. The importance of achieving 18,600 cfs in reach 2 is to create significant floodplain connection. The goal of the recommendation is for Flaming Gorge releases to be timed to match the peak of the Yampa river

or to begin immediately after the peak of the Yampa. Flaming Gorge releases should also be timed on presence of razorback sucker larvae drift. New science information indicates Flaming Gorge releases need to occur post Yampa peak. The 2011 TWG request has 3 main points of emphasis of achievement; 1. Flaming Gorge releases need to be altered to maximize overlap of Yampa river flows, 2. Achieve floodplain habitat flows, and 3. Are wetlands successful in promoting larval growth.

The Primary objective of the recommendation is to time Flaming Gorge releases to connect floodplains when larvae are present. This means flows of 18,600 for 2 weeks or more. The Secondary objective is to assist in meeting the objective of Stirrup floodplain. This requires flows in excess of 15,000 cfs for 5 days in reach 2.

In 2008 in the Stirrup Wetland, 7 endangered fish were monitored using the wetland. In 2009, 40 endangered fish were monitored, and in 2010, 42 endangered fish used the wetland.

The Base flow request is targeted for young of the year Colorado pike minnow habitat. Higher base flows seem to assist in pikeminnow survival, while elevated base flows have negative effects on non-natives.

2011 Flaming Gorge Technical Working Group Proposal

Heather presented the FGTWG proposal. This year is classified as moderately wet. The objective is to time flows in reach 2 with appearance of razorback larvae achieving 18,600 cfs for at least 2 weeks in reach 2. Flaming Gorge releases will have a down ramp of 1,000 cfs/day following peak flow releases. The hydrologic classification that flows will be based on will be the May 1 forecast.

Flaming Gorge 2011 Operation Plan

Reclamation Hydrology Presentation April 2011

Heather presented the current Flaming Gorge operations and presented possible operational scenarios for spring 2011. Current Flaming Gorge releases are at 3,300 cfs going to maximum power plant capacity by the end of the week. Flaming Gorge reservoir is currently at 85% of capacity. The reservoir elevation as of April 25th is 6025.13. The April thru July inflow volume for 2009 was 91% of average, and 2010 was 59% of average. The current runoff forecast for the Upper Green is 144% of normal, and the Yampa is 145% of normal.

Flaming Gorge current operations plan is for power plant capacity from now to late May, then going to 8,600 cfs for 12 days or so, then to base flows of 1,800 cfs.

Heather displayed graphs using historical runoffs of 1983, 1984, and 1997 conditions and what would happen at Flaming Gorge if we were to see those types of conditions.

The current plan for Base flows are to somewhere between 2,000 and 2,500 cfs average daily flows. There is a large range of possibilities for base flows. The daily fluctuation has to remain within a stage change at the Jensen gauge of 0.1 meter or less. There can be more fluctuation when the Yampa is running high, and less fluctuation with the Yampa running lower. The

current operational plan is to also draw the reservoir back down to elevation 6027 by Spring 2012.

Summer 2011 Base Flow Power Operations Proposal

Western Area Power Administration Presentation April 2011

Lyle Johnson with Western Area Power Administration presented Western's planned daily operations once flows are reduced to base flow operations. The goal is to utilize generators as efficiently as possible based on power demands. Western's proposals comply with the Biological Opinion and Flow and Temperature recommendations. Western will use daily release targets provided by Reclamation. For each hydrologic condition, Western prefers the lower volume pattern to save reservoir volume for later in the year.

All of Western's daily summer patterns for Base flows utilized a single peaking pattern of operations.

Western's Study plan for high spring flows in Reach 1 was discussed by Clayton Palmer. It is called the Flaming Gorge Flushing flow science plan. The partners to the plan include; NPS, Western, Reclamation, USU, Argonne National Laboratories. The science plan is for Green River studies in 3 sections of the river, Red Canyon, Browns Park, and Ladore Canyon. The science plan is still under development.

Discussion and Next Meeting

Ed Vidmar brought up the issue of how to let Jensen residents know of upcoming predicted flows of the Green river through the Jensen area. Some possibilities include getting announcements to the Post Office or the General Store in Jensen. Ed will look into how this could be accomplished.

The next meeting of the Flaming Gorge Work Group is August 23, 2011 at 11:00 am at the Western Park Convention Center in Vernal, Utah.

Presentations

[Colorado Basin River Forecast Center Presentation April 2011](http://www.usbr.gov/uc/water/crsp/wg/fg/pdfs/CBRFC_Apr11.pdf)

http://www.usbr.gov/uc/water/crsp/wg/fg/pdfs/CBRFC_Apr11.pdf

[Upper Colorado Recovery Implementation Program Presentation April 2011](http://www.usbr.gov/uc/water/crsp/wg/fg/pdfs/UCRIP_Apr11.pdf)

http://www.usbr.gov/uc/water/crsp/wg/fg/pdfs/UCRIP_Apr11.pdf

[Reclamation Hydrology Presentation April 2011](http://www.usbr.gov/uc/water/crsp/wg/fg/pdfs/ReclamationWorkGroup_Apr11.pdf)

http://www.usbr.gov/uc/water/crsp/wg/fg/pdfs/ReclamationWorkGroup_Apr11.pdf

[Western Area Power Administration Presentation April 2011](http://www.usbr.gov/uc/water/crsp/wg/fg/pdfs/WAPA_Apr11.pdf)

http://www.usbr.gov/uc/water/crsp/wg/fg/pdfs/WAPA_Apr11.pdf

Attendees

Name	Organization
Gene Shawcroft	CUWCD
Brian Raymond	Daggett County Econ. Dev.
Trina Hedrick	DWR
Steven Piersen	Farmer
Kevin Clegg	GROGA
Doug Burton	GROGA
Jerry Taylor	Lucerne Marina
Kevin Werner	NOAA/CBRFC
Ashley Nielson	NOAA/CBRFC
Tamara Naumann	NPS-Dinosaur NP
Melissa Trammell	NPS-Salt Lake City
Danny Schneider	OARS/Hatch
Bruce Lavsie	OARS/Hatch
Bret Wojciak	OARS/Hatch
Russell Schubert	OARS/Hatch
Heather Hermansen	Reclamation
Dave Speas	Reclamation
Dave Klein	Reclamation
Steve Hulet	Reclamation
Ed Vidmar	Reclamation
Ted Rampton	UAMPS/CREDA
Matt Breen	UDWR
Ryan Mosley	UDWR
Matt McKell	UDWR
Kirk Robbins	Uintah MAD
Mark Sprague	USFS Flaming Gorge
Nanette Gale	USFS Flaming Gorge
Tom Chart	USFWS
Paul Downhour	USGS
Kevin VanTassell	Utah Senate
Brent McKee	UWCD
John B. Hunting	UWCD
Clayton Palmer	WAPA
Lyle Johnson	WAPA
Jeffrey Ackerman	WAPA

Previous Meeting Minutes

Flaming Gorge Working Group Meeting Minutes:

April 27, 2010

August 26, 2009

April 15, 2009

August 20, 2008

April 16, 2008

August 23, 2007
April 19, 2007
August 22, 2006
April 13, 2006
November 2, 2005
October 28, 2005
August 25, 2005
April 20, 2005
August 19, 2004
April 15, 2004