

Flaming Gorge Technical Working Group
July 7, 2012, 10:00am
Conference Call Record

Attending:

Fish and Wildlife Service: Kevin McAbee,
UCRIP – Tom Chart, Jana Mohrman, Kevin Bestgen
Reclamation – Katrina Grantz, Malcolm Wilson, Beverley Heffernan, Dave Speas, Peter Crookston, Ed Vidmar
Western – Jerry Wilhite, Clayton Palmer
Argonne National Labs – Kirk LaGory

Agenda:

- Review 2012 spring larval entrainment findings [Reclamation, Speas]
- Review updated hydrology [Reclamation, Grantz]
- Review updated backwater habitat data [Argonne, LaGory]
- Discussion [FGTWG members]
- FGTWG decision on recommendation to Reclamation

Overview:

The primary purpose of the call was to discuss flows during the Early Base Flow Period (June-Sept 30th). Katrina Grantz of Reclamation, acting FGTWG chair, filling in for Heather Hermansen, lead the meeting.

Hydrology Discussion:

Katrina Grantz reviewed spring and summer/fall basin hydrology and Flaming Gorge reservoir operations information. The July forecast for unregulated inflow to Flaming Gorge during the April – July season is 540kaf (~84% exceedence) and is trending down. This forecast corresponds to the lower end of Moderately Dry hydrologic classification. Flows on the Yampa are extremely low, (3rd percentile) at ~60cfs. For the current Moderately Dry hydrologic classification, the 2000 Flow and Temperature Recommendations recommend flows at Jensen in the range 1,100cfs-1,500cfs. Based on hydrology, Katrina recommended a target baseflow near the lower end of the moderately dry hydrologic classification (in the range of 1,100 to 1,300cfs at Jensen). Katrina presented 3 operations scenarios: targeting (1) 1,100cfs at Jensen, (2) 1,300cfs at Jensen, and (3) 1,500cfs at Jensen, using the current forecast for the Yampa. Jana Mohrman noted that Elkhead is releasing approximately 40cfs and likely will contribute approximately that much for the remainder of the season.

Spring 2012 Larval Entrainment Findings:

Dave Speas provided an overview of field observations during and after the Larval Trigger Study. Dave noted that the study was a success in term of the great coordination and execution to bring water in a short amount of time to boost water in Stewart Lake. The goal was to entrain razorback sucker larvae during the spring peak. The execution was very good and, in terms of meeting the entrainment goals, was huge success. Unfortunately, many of the wetlands that connected last spring experienced very high

evaporation and evapotranspiration and nearly or essentially dried up this year, and although there aren't direct observations of dead endangered fish, it was clear there were widespread fish kills. So it appears the LTS was successful in implementing larval trigger flows (entrainment occurred, timing was apparently great), but that there wasn't sufficient volume of water entrained to sustain the wetland habitats through the end of June. FGTWG discussion of specific wetlands followed. Members discussed that Matt Breen indicated that he observed nearly 100% fish kill in Stewart Lake before end of June and that Aaron Webber noted that results downstream were also very dismal. The group noted that these results are a good data point for results in a low water year. The group noted that larval entrainment was aimed at razorbacks and that the goal now is for habitat for pikeminnow.

Review Updated Backwater habitat data:

Kirk LaGory provided an overview of recent backwater survey results. The group evaluated relationships between flow and surface area, depth and volume (indicators of habitat). The group reviewed both individual backwater data and the total values for all backwaters. Kirk noted that the relationship between flow and habitat is fairly different than what was seen in 2011 (e.g., Backwater 5 last year was very significant player... not so much this year). Despite lack of big peak flow, still have significant differences between flow-volume, depth, area. Kirk noted that we have decent depth even at lower flows this year. He described that surface area is a very important variable for habitat and that the flow-surface area relationship is comparable to last year, but different in some ways. He also noted that surface area is generally increasing with flow up to around 1700cfs, above which there is a drop off of surface area.

Discussion

The group discussed which flow regimes would be best for fish and habitat given the current hydrology. Much of the discussion focused on whether and how much flows could be enhanced during the summer months, and what that would mean for flow and habitat during the winter months. The group discussed the question of whether it is better to have high backwater habitat (and flows) right now and then slope down through the fall and down to winter. Kevin Bestgen stated that, in terms of flows, the highest value for the fish is in the summer to help small fish grow, producing better survival rates going through fall and winter. He noted that historically/naturally, this is how things occurred. Kevin McAbee expressed a desire to start out high (1500+ cfs) now and hold it for a month and then end up at 1500cfs near the end of September. He pointed to 2002 data, when the hydrology was very low and there were low survival rates. Katrina Grantz noted that due to the dry hydrology this year higher flows in summer will require lower flows in winter in order to meet spring reservoir storage targets. She also noted that the forecast is trending down and conditions are likely to get drier than is currently modeled.

After biology, backwater habitat and hydrology discussion, each FGTWG member weighed in on what type of flows he or she could support as a final FGTWG recommendation to Reclamation management.

Dave Speas (Reclamation) was in support of flows up to and including 1500cfs for the early summer, if we were to exceed 1500 at Jensen, he would not advocate doing it for very long. Katrina Grantz said she could support higher flows earlier in the Base Flow season, if these releases were backed off later in late August and September, recognizing this will result in flows perhaps as low as 800 and 850cfs later in the fall and winter. Ed Vidmar expressed concern about the dry hydrology and that it is trending drier and that we likely won't get the inflow currently projected for the fall and winter months.

Kevin McAbee (FWS) said he would like to go over 1500 even if for a little bit right now, would like it for a few weeks to a month. He said he wouldn't like to see flows below 1400 before Sept 30th, but was willing to give up a little bit as we got closer.

Jerry Wilhite (Western) said he would like to see flows it higher during the summer, as close to 1500 while we can, but doesn't want to sacrifice the winter. He mentioned he did not want to see 1500 in through September 30th and then drop directly to 800cfs on Oct 1st. Jerry is in support of ramping down throughout the whole month of September rather than a drop off.

Recommendation:

After discussion regarding biology and hydrology, the group agreed to propose to Reclamation management the following base flow targets for the months of July, August and September:

Targets at Jensen, UT:

July: 1,500cfs

Aug: 1,500cfs

Sep: 1,300cfs

There were no dissenting votes in the group's final proposal. Concern was expressed by Reclamation regarding the relatively high proposed releases based on the dry hydrology this year. Concern was also expressed by FWS that flows at or above 1,500cfs are very important during the summer months for fish. There was final agreement by Western, FWS and Reclamation to stay close to 1500 for July and August and ramp down to 1,300cfs in September to result in a more gradual transition to winter base flows beginning in October.

The group agreed that enhanced base flows during the summer season are very important to growth and survival rates of smaller fish, even if it means trading lower base flows in the fall and winter months for higher base flows during the summer months. There was a general understanding that the proposed base flows for the summer months would likely result in base flows near 800-850 cfs during the Oct-Feb months.

Based on this hydrology and the need for Reclamation to get as near to the 6027 elevation target by March 1st, the target baseflow for the entire base flow season (through March 1st) is 1,100cfs. The proposed summer targets exercise the + or - 40% variability from

the overall target base flow. For the winter base flows, it is anticipated that the recommended targets will exercise the + or – 25% variability (winter targets have not been explicitly discussed in terms of a proposal to Reclamation management.)

Next Steps:

The FGTWG chair (currently, Katrina Grantz, acting for Heather Hermansen) will put forth to Reclamation management the FGTWG proposed Early Base Flow targets. The FGTWG will be informed of Reclamation’s final decision.

Because the current target at Jensen, UT is already 1,500crfs, no immediate changes would need to be made to operations at Flaming Gorge Dam. Flows on the Yampa will continue to be monitored and releases will continue to be adjusted as needed.