BUREAU OF RECLAMATION

American River Group

1:30 PM – 3:30 PM
Conference Line: +1 (321) 209-6143; Access Code: 985 598 947#
Webinar: Join Microsoft Teams Meeting

Thursday, April 20, 2023

Notes

1. Action Items

    - Thuy Washburn - Revise MRR in Base Flow Table
    - Erica Meyers - Share information regarding the health of juveniles in the river
    - Kirsten Sellheim - Share bi-weekly report with Rod Hall
    - Barb Byrne – Provide a progress update on the Power Bypass Report at the May ARG meeting.
    - For next meeting – Review draft temperature management plan and updated temperature models.

2. Introductions
    - USBR: Thuy Washburn, Nadira Kabir, John Hannon, Melissa Vignau, Zarela Guerrero, Mechele Pacheco, Spencer Marshall, Brad Hubbard
    - NMFS: Barb Byrne
    - USFWS: Paul Cadrett
    - CDFW: Crystal Rigby, Jason Julienne, Mike Healey, Erica Meyers, Nick Bauer, Jennifer O'Brien, Duane Linander, Tracy Grimes
    - SWRCB:
    - Water Districts: Tony Barela, Michelle Banonis, Greg Zlotnick, Paul Hellicker, Tom Boardman
    - City of Sacramento: Brian Sanders
    - City of Roseville: Sean Bigley
    - City of Folsom: Marcus Yasutake
    - DWR: Mike Ford
    - WAPA: Mike Prowatzke
    - EBMUD: I-Pei Hsiu, Max Fefer
    - SMUD: Tyler Belarde, Ansel Lundberg
    - PCWA: Ben Barker
    - FishBio:

- Water Forum: Erica Bishop, Jessica Law, Chris Hammersmark, Liana Huang
- PSMFC: Logan Day, Hunter Morris
- CFS: Kirsten Sellheim
- Shingle Springs Band of Miwok Indians:
- Other: Rod Hall, DeDe Birch, Carolyn Bragg, Joshua Jaco, Ted Rauh

2. Fisheries Update
    - CDFW provided updates
        - Nimbus Fish Hatchery
            - Almost all of the Chinook salmon have been moved to the outdoor raceways and are being coded wire tagged.
            - CDFW will be releasing approximately 800,000 fall-run Chinook smolt into the lower American River in early May. The release date will be based on when fish reach approximately 60 fish per pound /80 millimeters.
            - The rest of the fall-run Chinook salmon production is going to be released at points within the San Pablo and San Francisco bays.
            - All Steelhead have hatched and are in the outdoor rearing troughs. They will remain there until mid to late June (the raceways need to be clear of fall-run Chinook before the Steelhead can be moved).
        - Juvenile monitoring began the week of 4/10/23. There are 12 sample sites and each is sampled once a month. Based on current river conditions it is not feasible to conduct sampling at Upper Sunrise Beach and Paradise Beach. Sailor Bar and Howe Avenue are being used as substitutes.
            - So far there have been 35 juvenile fall-run Chinook salmon and 2 juvenile Steelhead observed.

    Question/Comments
        - Water Forum asked if the CDFW crews are seining and snorkeling right now?
            - CDFW responded that they are currently only seining.
        - Cramer Fish Science (CFS) asked whether the Chinook will be released at Sunrise?
            - CDFW responded yes, they will be tagging 500 fish with acoustic tags and there will be receivers at different points in the river to track their movement. Based on positive data from spring-run salmon tagged earlier in the season, it appears survival and immigration conditions for juvenile Chinook are good this year.
        - CDFW ask about the health of juveniles in the American River and whether there has been any observations of abnormalities?
            - The fish at the hatchery are doing well, but they are unsure about the fish that have been observed in the seining efforts. They can get more information and follow up with the group.
        - CDFW asked if the rotary screw trap (RST) cones will be lifted during the hatchery release?
            - PSFMC responded that they will raise cones pending the number of ad-clipped fish released.

    - Cramer Fish Science (CFS) provided updates on their steelhead spawning surveys.
        - It has been a hard year for surveys due to poor visibility conditions.
        - They have only seen 31 Steelhead this season; however, this number should be taken with a grain of salt because of the limited number of surveys conducted.
        - Surveys were finished in late April.

- CFS will be drafting an annual report with their results that will be provided at the May ARG meeting.
- Stranding surveys have been ongoing since flows began to drop. CDFW and CFS have worked to do some fish rescues. Riverbend side channel is the place that most often has stranding, along with the Upper Sunrise side channel.
    - Based on stranding, it appears there are a significant number of Steelhead in the system this year (the count is up to 2,600 fish thus far).
- CFS has been conducting surveys in relation to restoration projects and many of the juvenile Chinook salmon are still in the system.

- PSFMC provided updates on their RSTs.
    - The RSTs are running on a 7-day a week schedule.
    - The traps were offline from March 10 – March 23 due to the 30,000 cfs flows but were able to resume sampling when flows reached 10,000 cfs.
    - The traps were offline on April 4 due to take exceedance that was suspected to be a hatchery spring-run Chinook that was adipose clipped. This fish is suspected to be from the Feather River release cohort from March 16.
    - As of April 18, they have captured:
        - 63,983 unmarked length-at-date fall-run Chinook
        - 408 unmarked length -at date fall-run Chinook
        - 24 unmarked length-at-date spring-run Chinook
        - 16 unmarked length-at-date winter-run Chinook
        - 13 Adipose clipped hatchery Chinook
    - Over the past week they have been averaging 50-100 unmarked Chinook salmon per day. These are a mix of fry and parr life stages ranging from 20-60 mm.
    - The fall-run Chinook salmon are much smaller than they were last season. This is likely due to the colder river temperatures.
        - With temperatures at Watt being 10-11 degrees C, the average fork length for April 18th was 43 mm with a range of 34 mm to 61 mm.
        - Last year at this same time Watt temperatures were 14-16 degrees Celsius and the average fork length was 74 mm.
    - PSFMC conducted an efficiency trial on March 30th when flows were at 7,000 cfs. Trap efficiency was low (1.5%).
    - PSFMC will be releasing 1000 more hatchery fish on 4/20. Fish will be tagged and are an average of 55 mm.
    - To track some of the acoustically tagged fish please visit https://oceanview.pfeg.noaa.gov/CalFishTrack/#Central_Valley_Enhanced

  Question/Comments

    - Rod Hall asked CFS if there were maps of the stranding sites?
        - CFS commented that they will share the biweekly report which should include maps.
    - CDFW asked if their observed sizes match those observed by CFS?
        - CFS responded that yes the sizes match.

3. Operations Updates
    - SMUD
        - South Fork American River Watershed
            - Releases from Chili Bar for April are at 3,700 cfs.
            - SMUD's forecast will come out around the same time as the B-120.

- SMUD is working to move as much water through the system as possible while avoiding spill
- Flow is too high for recreational uses and will have to be scaled back (e.g., for holiday weekends)

- PCWA
  - Storage:
    - French Meadows: 86 AF at 63% capacity with a daily release average of 400 cfs.
      a. The gates at French Meadows were dropped on April 1 and it is operating at full capacity.
      b. There will be a 50% chance of spill in June based on expected runoff.
    - The R11 gauge below Oxford Powerhouse is running heavy at 3,500 cfs.
    - Flows into Folsom Reservoir are at a 7-day running average of 6,250 cfs.
    - Hell Hole: 179 AF at 86% capacity.
      a. There are no gates at Hell Hole and when it fills there is nowhere for water to go other than spill. There is currently 28 TAF of storage left before it fills.
    - Inflow has increased as the snow has started to melt with 20 TAF of inflow.
    - Airborne Snow Observatory (ASO) is now including the American River system in their program. There are sensors that are based on automated snow pillow sites, as well as locations where physical measurements are taken. ASO, PCWA, and SMUDS measurements are used by DWR and the CNRFC and will help more accurately estimate the amount of runoff that will occur.
    - There is a planned outage in May,

4. Central Valley Operations
   - American River releases are at 7,000 cfs and will stay there until inflow increases significantly.
   - Folsom Reservoir storage is at 728 TAF. Elevation is not near the conservation line, but significant snowmelt is anticipated when temperatures rise.
   - April inflows are above 7,000 cfs and slowly increasing storage.
   - Folsom Reservoir temperatures are relatively cool with the top layer of the reservoir beginning to warm.
   - Large releases were required to stay below the top of the conservation line. Elevation is currently 135 TAF below the top of conservation but will likely get close to the top during the next storm.
   - There were issues with Unit 1 of the temperature shutters. It was necessary to fix the issue before the top shutter is lowered next week.
   - Given the large amount of water and cold temperatures, releases are likely to mirror 2017. This suggests the 65-degree Fahrenheit temperature target at Watt Ave is achievable.

Question/Comments:

- NMFS asked why there was use of the spillway and was it related to negative power pricing?
  - USBR responded that yes, there are issues with negative pricing. Because of this they have been moving water through the power plant and

bypassing a small amount of it. They are taking water from the top, so it should not impact the temperature of the reservoir overall.

- NMFS expressed concern regarding fall temperatures and asked whether it might be possible to have lower flows in July and August to allow for higher flows in September and October – especially as there may also be a need to reduce flows for restoration projects later in the year.
    - USBR responded that the flows are a monthly average. They do know that there is a project in October for which they will need to decrease flows to less than 2,500 cfs.
    - Water Forum noted that they have been in contact with USBR CVO staff regarding a spawning/rearing habitat project planned for the summer but they anticipate being able to complete most of the work with higher flows, since USBR has committed to reducing flows to approximately 2,000 cfs (or lower) for two weeks in October to support the final phase of construction (spawning gravel placement – where lower flows are necessary)
- CDFW commented that they had calculated the MRR for April was 1,500 cfs rather than 1,750 cfs.
    - 1,500 cfs was confirmed and USBR will update the table for the meeting summary.
- CDFW asked if there was an anticipated month when the reservoir will be full and what the flows in May and June will be?
    - USBR noted that while the 90% forecast shows 7,500 cfs in May, it is hard to estimate further out because it will depend on the rate of inflow from snow melt. They expect the reservoir to fill sometime in late May but intend to lower flows on weekends (such as the 4th of July).
- USBR commented that they believe this year will be a little different than 2017 because of the amount of snowpack.
- USFWS asked if there is a projection for when 215 water might be available?
    - USBR responded that this is a snowmelt timing issue. It is their understanding that when the elevation in the reservoir is over the power plant capacity then 215 water will become available. At this time their best guess is mid-May.
- USBR acknowledged that high flows are a concern for recreational users but there is not much they can do because they have to release water as it comes into the reservoir.

5. Temperature Modeling
    - The modeling presented is a little more conservative in terms of temperature than what is expected because it is based on the 90% exceedance forecast. Additionally, the modeling used 2014 Met Data, which was one of the warmest years.
    - The modeling begins on April 4, which was the last profile done on the Folsom Reservoir.
        - This model shows Watt Ave. reaching 68 degrees for somewhere between 3 – 4 weeks. The rest of the season should be closer to 66 degrees at Watt Ave. and then somewhere between 64 and 66 degrees at Hazel Ave.
        - September shows higher water temperatures because flows will drop to 2,000 cfs but the air temperature will still be quite warm.
    - It may be possible to get temperatures at Watt down to 60 degrees by October 15th, but that has not been run through the model yet. This would be the point when the reservoir has been fully mixed and all the shutters have been lowered. The only way to get slightly cooler water would be with a power bypass.

- Stantec will share revised model results that are based on next month's updated forecast.

Questions/Comments

- NMFS asked if it would be possible to cut flows in May so that flows do not have to drop so low in September and whether this might provide temperature benefits.
    - CBEC responded that they can run this through the model but don't anticipate that the temperature benefits at Hazel would be significant. The temperature difference between August and September is not that large even with changes in flow rate because at that point in time water is being pulled from lower in the reservoir.
- CDFW recommended using different year-types as the basis for modeling as only looking at a warm year provides a worst-case scenario.
- NMFS suggested having a temperature management plan (TMP) ready to review by the next meeting. The plan could aim to have cooler water in the fall and would include the understanding that conditions are subject to change based on snowmelt and other factors.

The next regularly scheduled ARG meeting is on **Thursday, May 18 from 1:30pm-3:30pm**.