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# Potential Experiments and Management Actions Water Year 2021

TWG Meeting  
January 22, 2021

# Objectives

- Introduce “menu” of LTEMP experiments for consideration in Calendar Year 2021.
- Discussion of Process: Planning and Implementation Team status for spring 2021 considerations.
- Tee up GCMRC for more detailed discussion of these items.



# Potential LTEMP Flow Experiments Water Year 2021

| GCD Experimental Flow              | Duration                          | Implementation Window |
|------------------------------------|-----------------------------------|-----------------------|
| Fall HFE                           | up to 96 hours                    | October - November    |
| Extended Duration Fall HFE         | 97- 192* or 97-250 hours***       | October - November    |
| Spring HFE <sup>Δ</sup>            | up to 96 hours                    | March – April         |
| Proactive Spring HFE <sup>Δ◇</sup> | 24 hours**                        | April – June          |
| Trout Management Flows             | up to 3 cycles/month for 4 months | May – August          |
| Macroinvertebrate Flows            | target 2-3 replicates             | May – August          |

\* First test not to exceed 192 hours

\*\* First test 24 hours

\*\*\* After first test, up to 250 hours

Δ no Spring HFE in same WY as extended duration Fall HFE

◇ no proactive Spring HFE in same WY as sediment-driven Spring HFE

## Other Potential FY2021 Flows :

- Apron Repair + Spring Disturbance Flow Test (March)
- Release reduction for Overflight (steady 8,000 cfs for 7 days in May)



# High Flow Experiment Timeline

## Spring HFE, sediment triggered

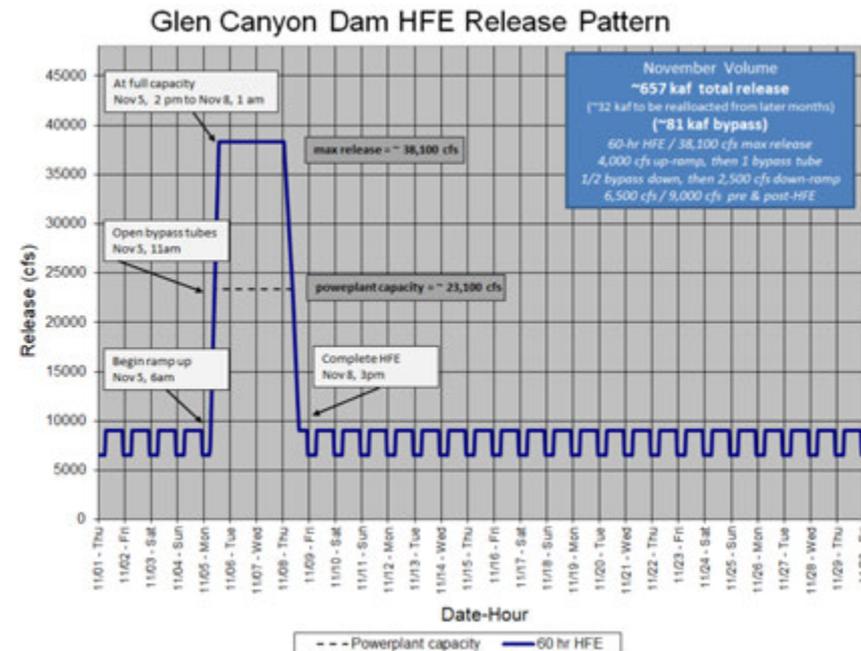
- Sediment accounting: Dec 1 – June 30
- Implementation / Planning Team decision: late February
- Possible implementation: March-April

## Spring HFE, proactive

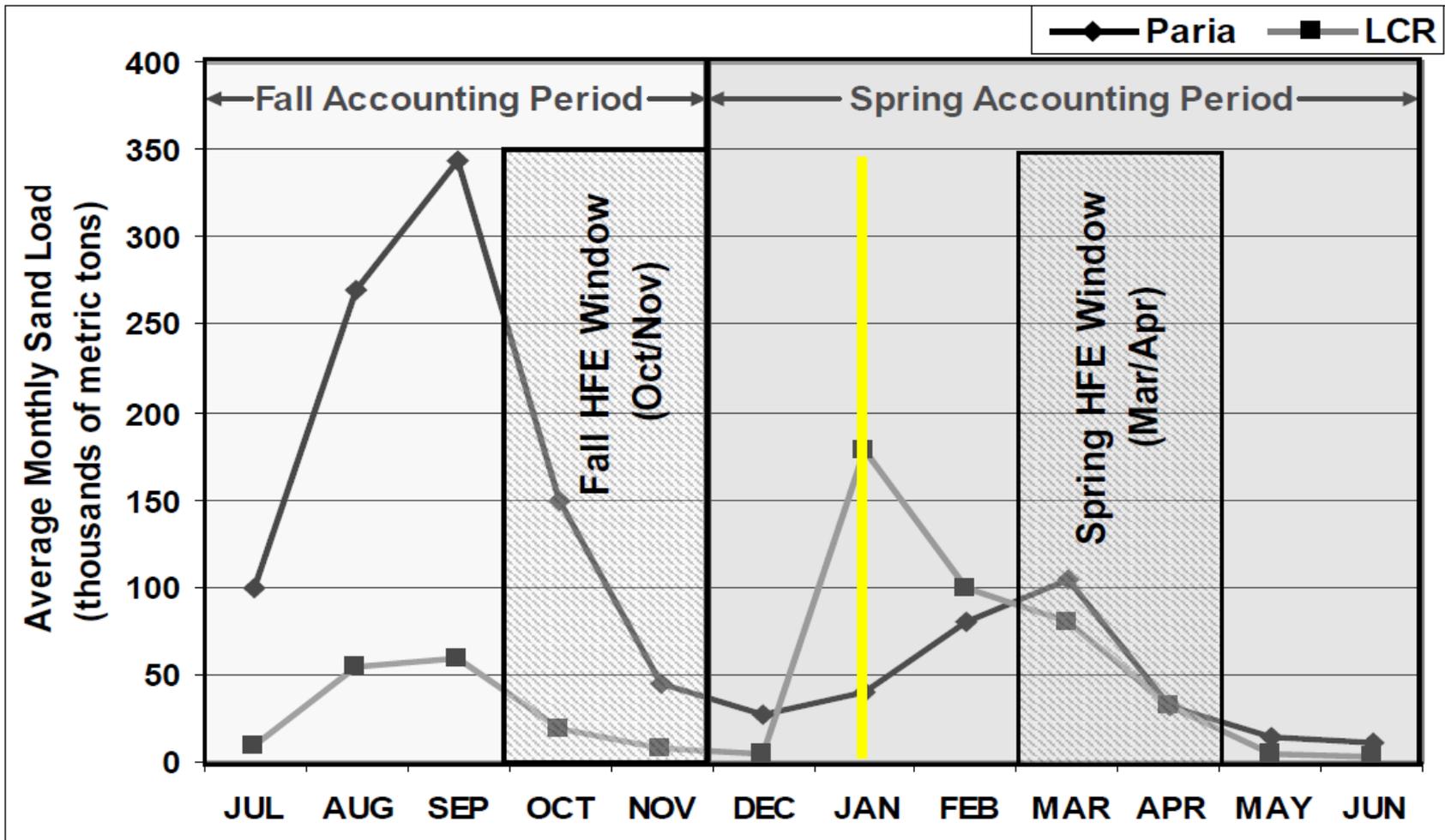
- Equalization (GCD releases  $\geq 10$  maf)
- Planning Team: late February
- Possible implementation: April-June

## Fall HFEs, sediment triggered

- Sediment accounting: July 1 – Nov 30
- Implementation / Planning Team: early September
- Possible implementation: October – November

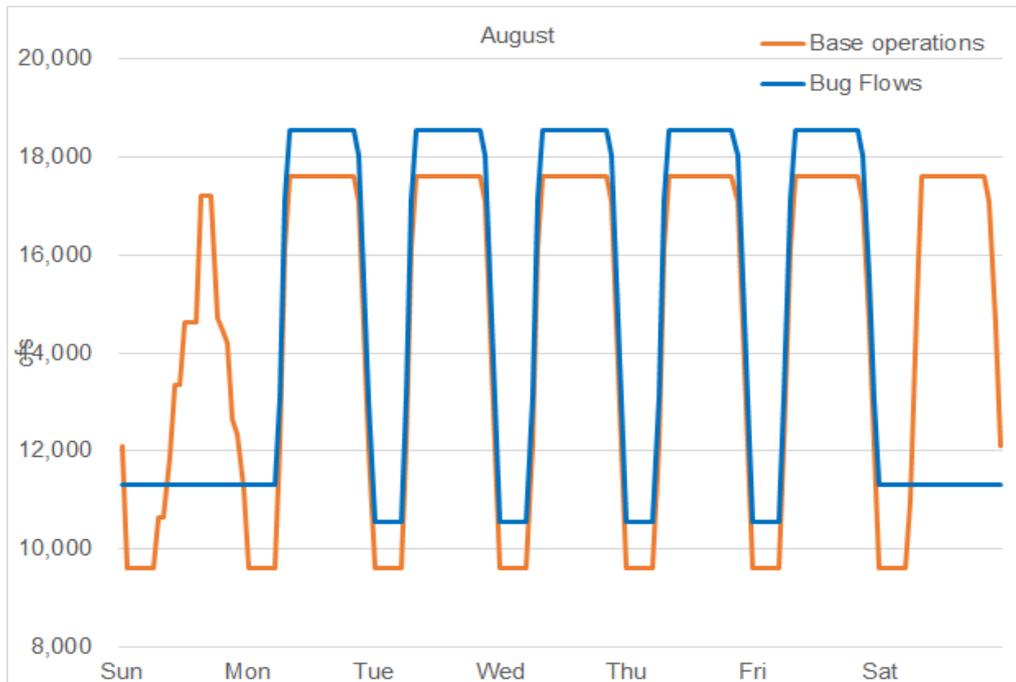


# HFE Accounting & Implementation Windows



# Macroinvertebrate Flows

“Bug Flows” Objective: Improve food base productivity and abundance or diversity of mayflies, stoneflies, and caddisflies



- “Give bugs the weekends off”
- Weekend stable low flows from May-August
- Eggs laid on week-ends never dry
- Tech Team will consider a 4<sup>th</sup> year soon



# Trout Management Flows

TMFs are a special type of fluctuating flow designed to reduce the recruitment of trout by disadvantaging YOY trout

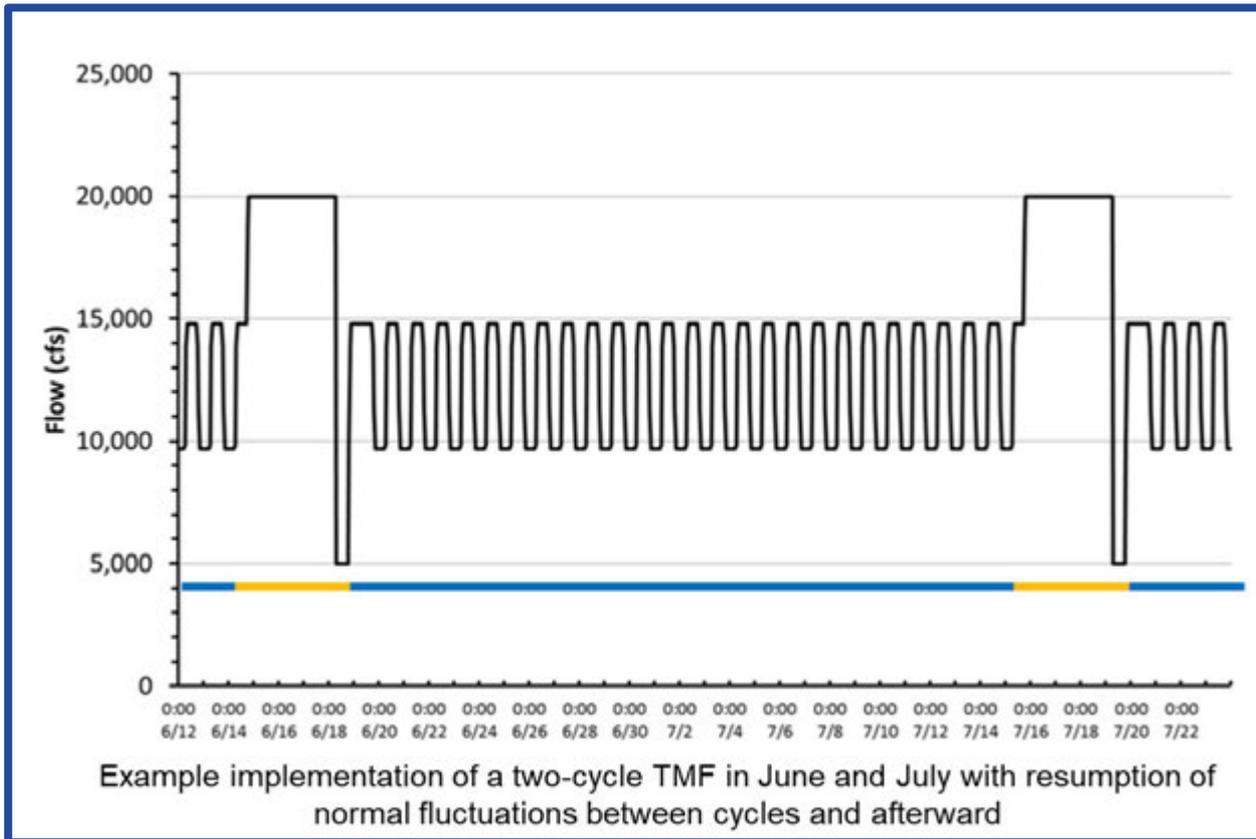


FIGURE 6 Example Implementation of a Two-Cycle TMF in June and July with Resumption of Normal Fluctuations between Cycles and Afterward (Monitoring for effectiveness would occur before and after each cycle. The horizontal line below the graph shows periods of normal fluctuation [blue] and TMFs [orange].)



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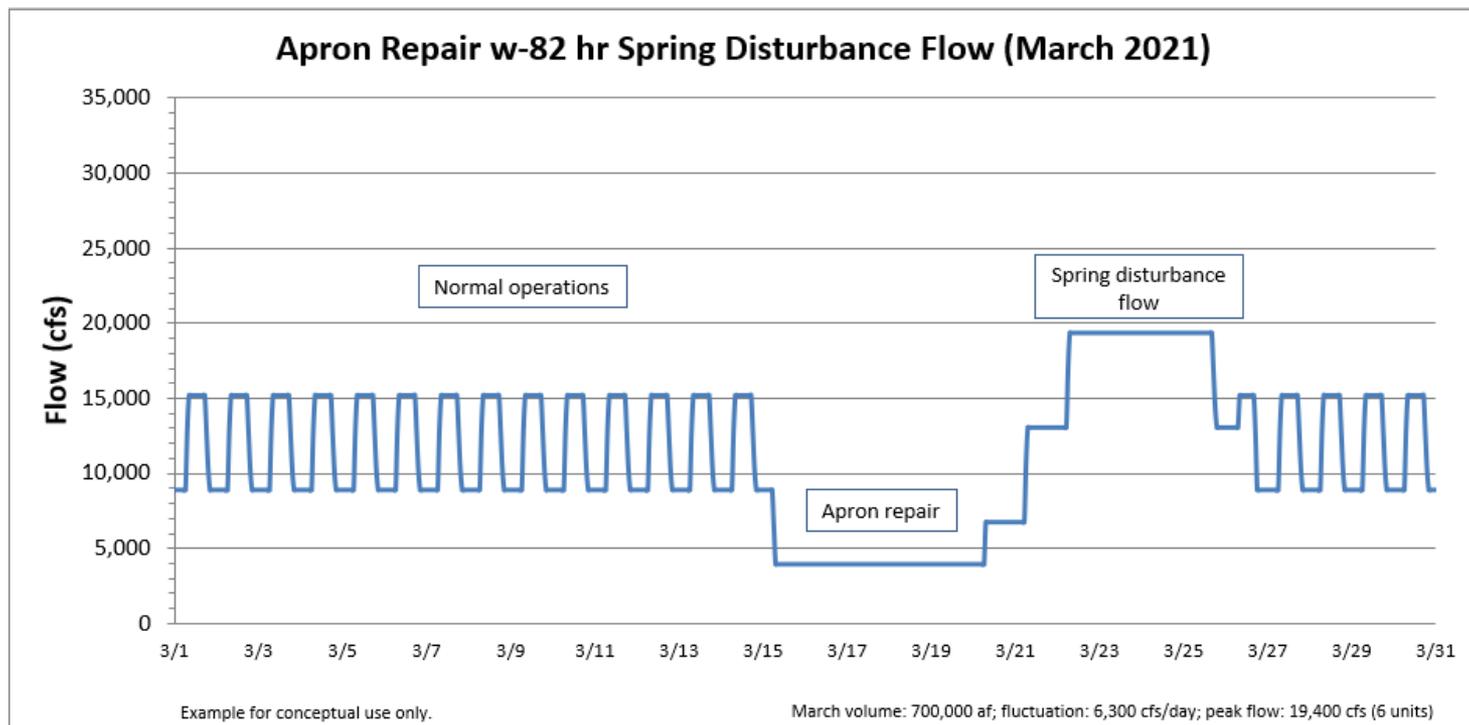
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# Spring Disturbance Considerations

- Hydrograph characteristics:

- Implement in mid-March → **March 15-26**
- Minimum release: 4,000 cfs for 120 hours
- Peak release: ~19,400 cfs for 82 hours (6 hydro units)
- Ramp rates: 4,000 cfs/hr up; 2,500 cfs/hr down; max change of 8,000 cfs per 24-hour period



# Spring Disturbance Flow - Tech Team Update

- Tribal Notification – **Tuesday, January 12**
- Annual Reporting and TWG meetings to discuss potential exp. actions for the year - **Today**
- Implementation / Planning Team to develop a consensus recommendation to DOI
  - AMWG / TWG webinar – **2pm MST Monday, January 25**
  - Technical Team Call # 4 & final report – **January 28**
  - GCD Leadership Team – **11am MST Tuesday, February 2**
- DOI Designee decision – **COB Wednesday, February 3**
- Possible implementation – **Monday, March 15**



Clarence Fullard  
303-253-1042  
cfullard@usbr.gov



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