Potential Water Year 2020
LTEMP Experiments &
Bug Flow Update
AMWG Webinar
May 20, 2020
LTEMP Process for Experiments

- Annual Reporting and TWG meetings
- Notification and Consultation to Tribes & PA Parties
- Implementation / Planning Team Recommendation
- DOI decision

1.4 COMMUNICATION AND CONSULTATION PROCESS FOR ALTERNATIVE D

To determine whether conditions are suitable for implementing or discontinuing experimental treatments or management actions, the DOI will schedule implementation/planning meetings or calls with the DOI bureaus (USGS, NPS, FWS, BIA, and Reclamation), WAPA, AZGFD, and one liaison from each Basin State and from the UCRC, as needed or requested by the participants. The implementation/planning group will strive to develop a consensus recommendation to bring forth to the DOI regarding resource issues as detailed at the beginning of this section, as well as including WAPA’s assessment of the status of the Basin Fund. The Secretary of the Interior will consider the consensus recommendations of the implementation/planning group, but retains sole discretion to decide how best to accomplish operations and experiments in any given year pursuant to the ROD and other binding obligations.
# LTEMP Flow Experiments w/ Spring-Summer 2020 Potential

## GCD Experimental Flow Duration Implementation Window

<table>
<thead>
<tr>
<th>GCD Experimental Flow</th>
<th>Duration</th>
<th>Implementation Window</th>
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<tbody>
<tr>
<td>Spring HFE&lt;sup&gt;Δ&lt;/sup&gt;</td>
<td>up to 96 hours</td>
<td>March – April</td>
</tr>
<tr>
<td>Proactive Spring HFE&lt;sup&gt;Δ◊&lt;/sup&gt;</td>
<td>24 hours**</td>
<td>April – June</td>
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<tr>
<td>Trout Management Flows</td>
<td>up to 3 cycles/month for 4 months</td>
<td>May – August</td>
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<tr>
<td>Macroinvertebrate Flows</td>
<td>target 2-3 replicates</td>
<td>May – August</td>
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<tr>
<td>Fall HFE</td>
<td>up to 96 hours</td>
<td>October - November</td>
</tr>
<tr>
<td>Extended Duration Fall HFE</td>
<td>97- 192* or 97-250 hours***</td>
<td>October - November</td>
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* 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
Paria River Discharge & Sand Load

Discharge
Paria River at Lees Ferry
(Dec 1, 2019 – May 19, 2020)

Cumulative Sand Load
Paria River at Lees Ferry
(Dec 1, 2019 – May 19, 2020)

(https://www.gcmrc.gov/discharge_qw_sediment/station/GCDAMP/09382000#) May 20, 2020
Marble Canyon Sand Mass Balance

Upper Marble Canyon

Lower Marble Canyon


Sand Budget Model Results

Not sufficient sediment to support an HFE.
Bug Flows: Implementation

- Give bugs the “weekends off”
- Stable, low flows on weekends, May-August
- Eggs laid on weekends won’t dry/die

Tested at Glen Canyon Dam May-August 2018 & 2019!

Unpublished data, subject to change, do not cite.
Insect response equivocal

2018-Huge Increase!
2019-Back to earth

Unpublished data, subject to change, do not cite.
Monitoring 2020 Bug Flows

Sampling at Accessible Sites

Thanks to NPS for assistance!

- Phantom Ranch citizen science
  - Started early May
- Lees Ferry monitoring
  - Monthly sampling by USGS personnel
- Citizen Science starts June 14
  - Assuming river trips resume
  - Will observe peak caddisfly emergence
  - Anticipate ~500 light trap samples
  - Statistical power still high

Unpublished data, subject to change, do not cite.
If NO monitoring in 2020

**Can’t Detect**
- Short-term effect
  - 2020 Bug Flows
- Long-term effect
  - 2019 Bug Flows

**Can still detect (in 2021)**
- Long-term effect
  - 2020 Bug Flows
  - 2018-2020 Bug Flows (Cumulative)

Unpublished data, subject to change, do not cite.
Hydropower

- WAPA estimates that the Colorado River Basin Fund will end the 2020 fiscal year with a balance of $138 million. This does not meet WAPA’s target for an end of year balance.
- The proposed MPF experiment may reduce this balance by $428,000, and is not expected to have a substantial impact on the basin fund.
Implementation & Next Steps

• Planning / Implementation Team Recommendation
  o Monday, April 20 – Recommendation Report issued
  o Wednesday, April 22 - Presentation to Leadership Team

• DOI Decision – Approved!
  o Friday, April 24 - ASWS Decision Memo signed
  o Friday, April 24 – Email notification to AMWG & TWG
  o Wednesday, April 29 - Notification to Tribes and Parties to the PA
  o Thursday, April 30 - Press Release

• Next Steps
  o Monitoring and updates by GCMRC as conditions allow
  o Ongoing coordination during implementation
  o Operational flexibility and emergency exception criteria will be maintained.