

Technical Work Group Chair Report

Adaptive Management Work Group Meeting

August 17, 2022

Seth Shanahan

TWG Chairperson

Meetings

- Past
 - June 15-16, 2022
- Future
 - October 12-13, 2022
 - January 24-26, 2022 - TWG and AR (in-person??)

Items Reported Elsewhere on AMWG Agenda

- Basin hydrology, operations, and water quality
- Drought operations
- Budget recommendation
- Direction from the Secretary's Designee
- High risk nonnative fish status
- Programmatic Agreement, science, and experiment updates

Updated: Aug 10, 2022

Glen Canyon Dam Adaptive Management Program Adaptive Management Work Group Meeting, August 17-18, 2022

Wednesday, August 17, 2022

Day 1 Webinar Information:

<https://rec.webex.com/rec/j.php?MTID=m2ac6c2cecbe198a24e26693fb283017>

Telephone: 415-527-5035 Meeting Number: 2761 935 7298 Password: Aug17

DRAFT AGENDA

START TIME: ¹ (Duration)	Wednesday, August 17, 2022 Topic and Presenter and Purpose ²
8:30 PDT/ 9:30 MDT (:45)	Welcome and Administrative Updates: Wayne Pullan, Secretary's Designee to the Adaptive Management Work Group (AMWG) and Mike Harty, Facilitator to the AMWG <ul style="list-style-type: none"> ▪ Webinar Protocols ▪ Introductions and Determination of Quorum (13 members) ▪ Approval of May 18, 2022 Meeting Minutes ▪ Administrative Updates <ul style="list-style-type: none"> ○ Summary of May Meeting Evaluation ○ Member Status, Nominations, and Reappointments ○ Action Item Tracking Report ○ PRN: AMWG nominations ○ PRN: Post-2026 Colorado River Reservoir Operational Strategies ○ May Meeting Minutes
9:15 PDT/ 10:15 MDT (:30)	AMWG 101 <ul style="list-style-type: none"> ▪ Rod Smith, (30 minutes) Purpose: To provide a background on the AMWG program and its proceedings.
9:45 PDT/ 10:45 MDT (1:00)	Basin Hydrology, Water Quality, and Operations: Heather Patno, Hydraulic Engineer, Bureau of Reclamation. <ul style="list-style-type: none"> ▪ Presentation (30 minutes) ▪ Q&A and discussion (30 minutes) Additional Information: 1) 24-Month Study ; 2) 5-Year Projections Purpose: To increase understanding of water supply, forecasted hydrologic conditions, and projected reservoir conditions (including DO and Temp) and operations for the current and upcoming water years.
10:45 PDT/ 11:45 MDT (:15)	BREAK

Tabletop Exercise Summary

Purpose

- Explore agency responsibilities
- Possible ways to respond
- Possible GCDAMP role

Key Concerns

- Prioritizing prevention over detection
- Capabilities to detect quickly
- Thresholds for action
- Agency consultation with GCDAMP
- Funding limitations
- Staff and equipment availability

Monitoring Metrics

LTEMP Performance Metrics: Criteria

- Reflects the expected performance outcome of each LTEMP goal (or measures a performance outcome triggering a legal compliance action or experiment)
- **Quantifiable (metric = measurable)**
- Technically & financially feasible to measure
- **Relevant to the metrics used to select LTEMP preferred alternative**



Next Steps

- **Today:** Provide input on draft metrics (descriptions - format, content, interpretability, graphical presentations, interpretability, etc.)
- **June 16-30, 2022:** TWG members review draft report; submit written comments NLT 6/30
- **July-August 2022:** Complete discussions re: metrics for Goals 1, 7, & 8; GCMRC revises and finalizes draft metrics for other LTEMP goals
- **September 2022:** final draft metric descriptions (all goals); present to TWG October 2022



Effects of Bug Flows, Fall HFEs, Competition, and Water Quality on Growth Rates of Rainbow Trout in Glen Canyon

Josh Korman
Ecometric Research

Bridget Deemer
Grand Canyon Monitoring &
Research Center, Southwest
Biological Science Center, US
Geological Survey

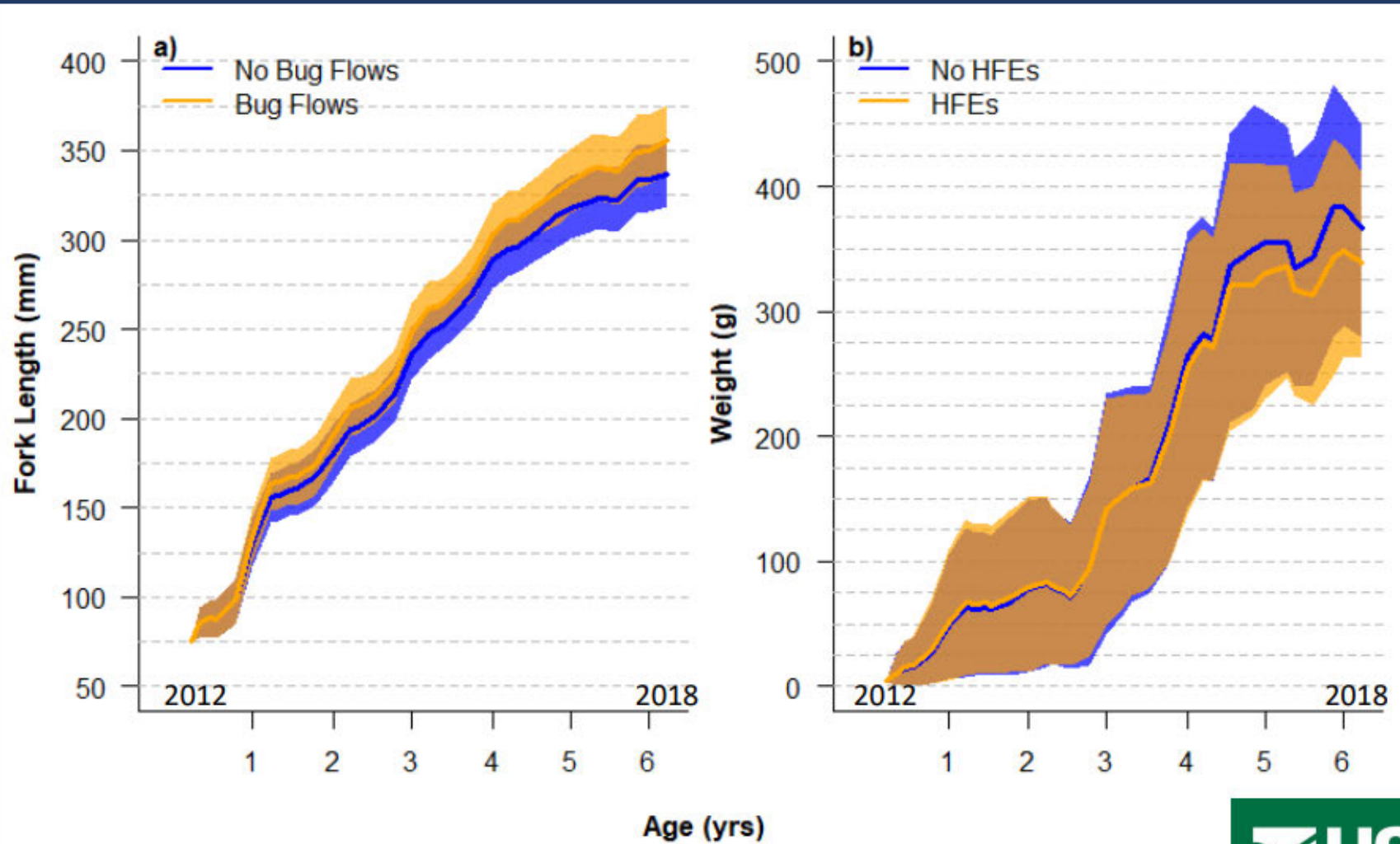
Charles Yackulic, Ted Kennedy,
Mariah Giardina
Grand Canyon Monitoring &
Research Center, Southwest
Biological Science Center, US
Geological Survey

Photo Credit. David Herasimtschuk, ©Freshwaters Illustrated

Funded through Project H. LTEMP Goals: Rainbow Trout Fishery, Humpback Chub, Recreational Experience, and Western Area Power Administration



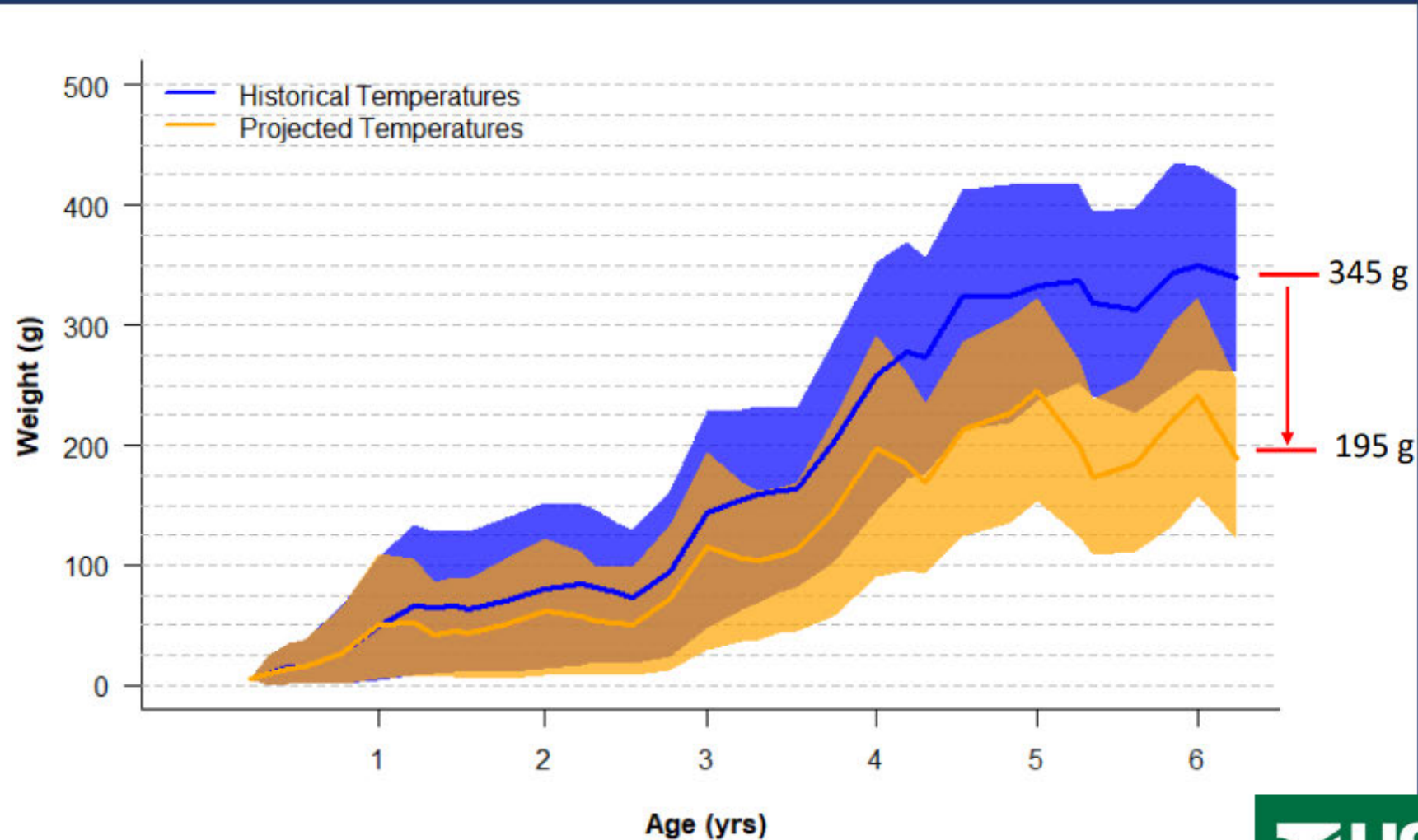
Very Limited Effects of Annual Implementation of Bug Flows or Fall HFEs on Lifetime Growth



Preliminary Data, Do Not Cite

Water Quality:

Very large negative water temperature effect
under drought (2022) conditions



Preliminary Data, Do Not Cite

Trout Management Flow White Paper

Purpose of White Paper

- Not a decision document
- Compilation of information to reference when making a decision
- Review current state of science
 - Design
 - Implementation
 - Effectiveness
- Focus on rainbow trout
 - Brown trout included but not the focus
- *Not a substitute for tribal consultation



Next steps

- Draft paper will be posted on TWG website with June meeting materials
 - Comments focused on topics missing in conversation related to TMFs
- Provide any thoughts/comments to kpetersen@usbr.gov by September 15th, 2022



Adopt-a-Beach Program



Martha's, RM 38.6 left
2021 before and after



State of the Beaches: 2022 Conclusion

- As we know, the monsoon season 2021 deposited the 2nd most sand through the Paria, since we started measuring this deposit.
- No HFE was conducted in 2021
- Camping beaches along the CRE support recreation, but also indicate the health of the ecosystem
- This mega-drought and the Basin Fund were stated reasons for not conducting the fall HFE of 2021
- LTEMP/ HFE protocols allow HFE's while sending the same amount of water downstream in a water year as *not* conducting an HFE
- Conducting HFE's supports science and the Grand Canyon Protection Act
- HFE's are one of our strongest tools available to mitigate negative impacts from the dam, especially when followed by lower fluctuations
- Climate change will require creative solutions to balance all resources

Future TWG Agenda Items

- Strategic Plan, including operating alternatives
- Project N – hydropower improvement experiment
- Razorback sucker augmentation plans
- Final draft monitoring metrics
- Field conditions and resource status
- Triennial Work Plan and Budget schedule prep.