

# TECHNICAL WORK GROUP CHAIR REPORT

Adaptive Management Work Group Meeting

May 18, 2022

Michelle Garrison

TWG Vice Chairperson

# MEETINGS

## Past

- October 13-14, 2021
- January 11-13, 2022 - TWG and AR
- April 12-13, 2022

## Future

- June 15-16, 2022
- October 12-13, 2022

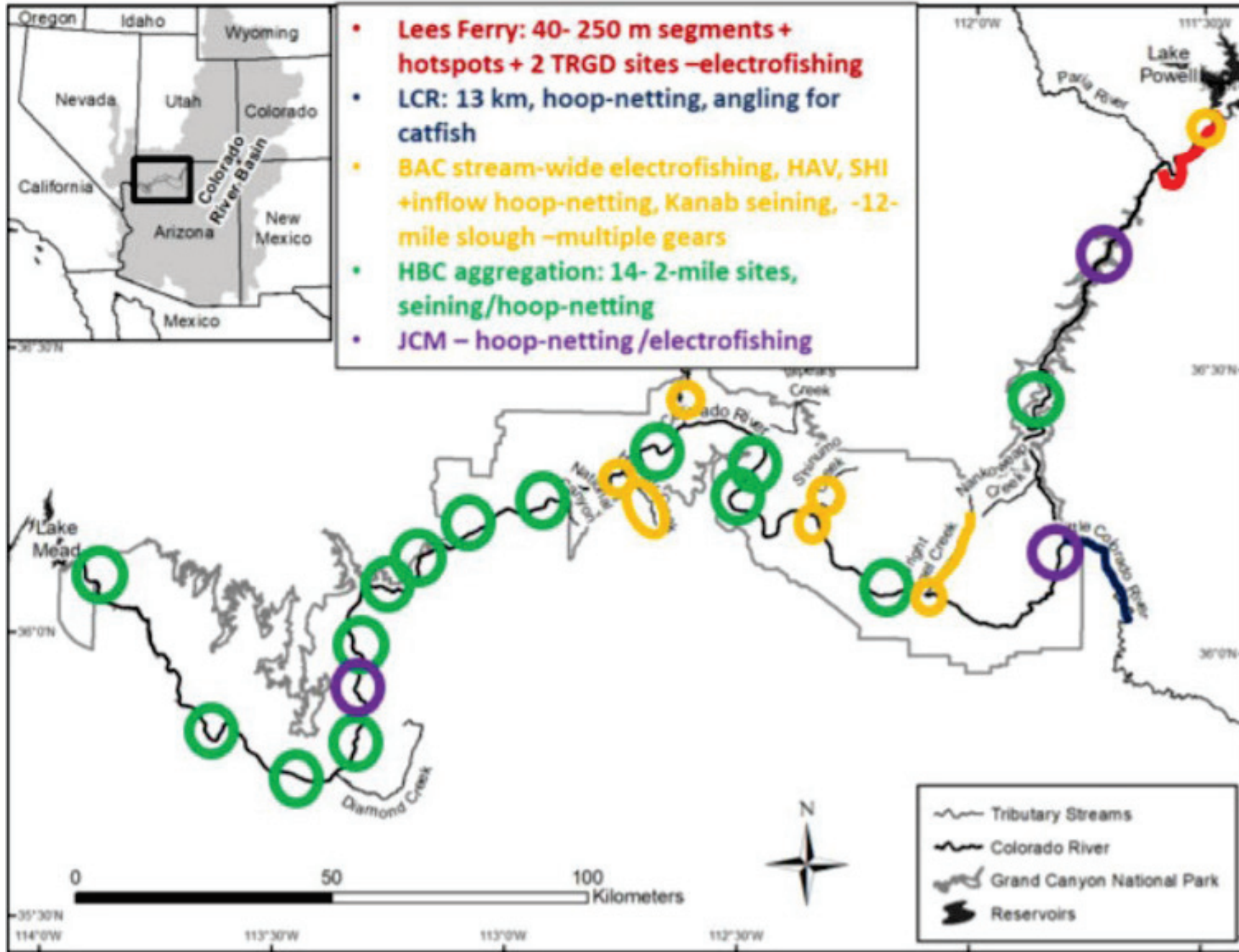
## ITEMS REPORTED ELSEWHERE ON AMWG AGENDA

- Basin hydrology, operations and drought response, and water quality
- Non-native aquatic species establishment risk
- WY22 LTEMP experiments – Bug Flows
- Program funding
- Science updates
- Monitoring metrics (action item tracking)

## RECENT THEMES AT THE TWG (SETH'S OPINION)

- Satisfaction with roles and responsibilities
- Developing a common understanding about resource status and progress toward reaching goals
- Knowing when the evidence may suggest a different course of action
- Satisfaction with exploring ideas consistent (or not) with the LTEMP ROD
- Satisfaction with nimbleness
- Concerns about consequences of continuing drought: water quality, high temperatures, low flows, low reservoir elevations, etc.

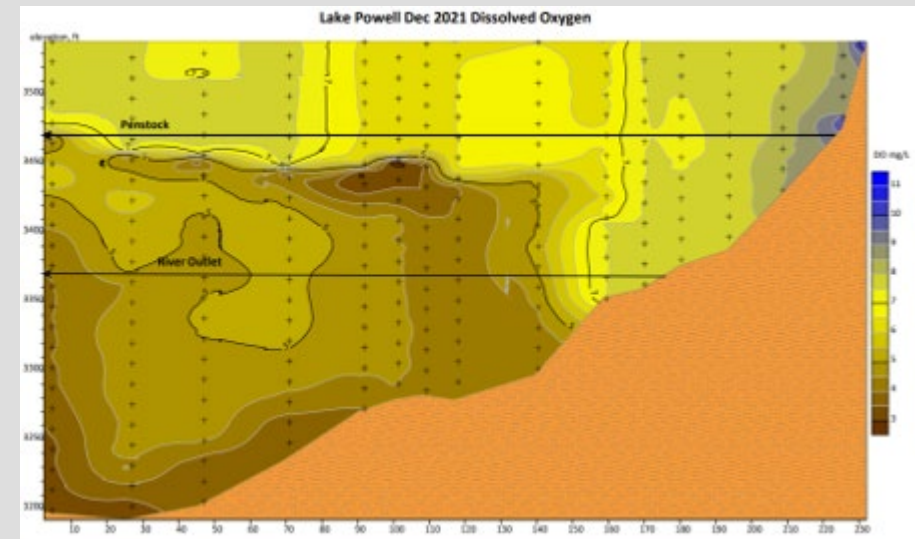
# NON-NATIVE FISH



# DISSOLVED OXYGEN

## Scope of Investigation

1. A synthesis or literature review of low DO issues at other Reclamation and non-Reclamation facilities (USACE, TVA, etc.).
2. An assessment of current monitoring methodology and infrastructure at Lake Powell.
3. Risk analysis to resources downstream.
4. Potential tools for addressing low D.O. events at CGD.

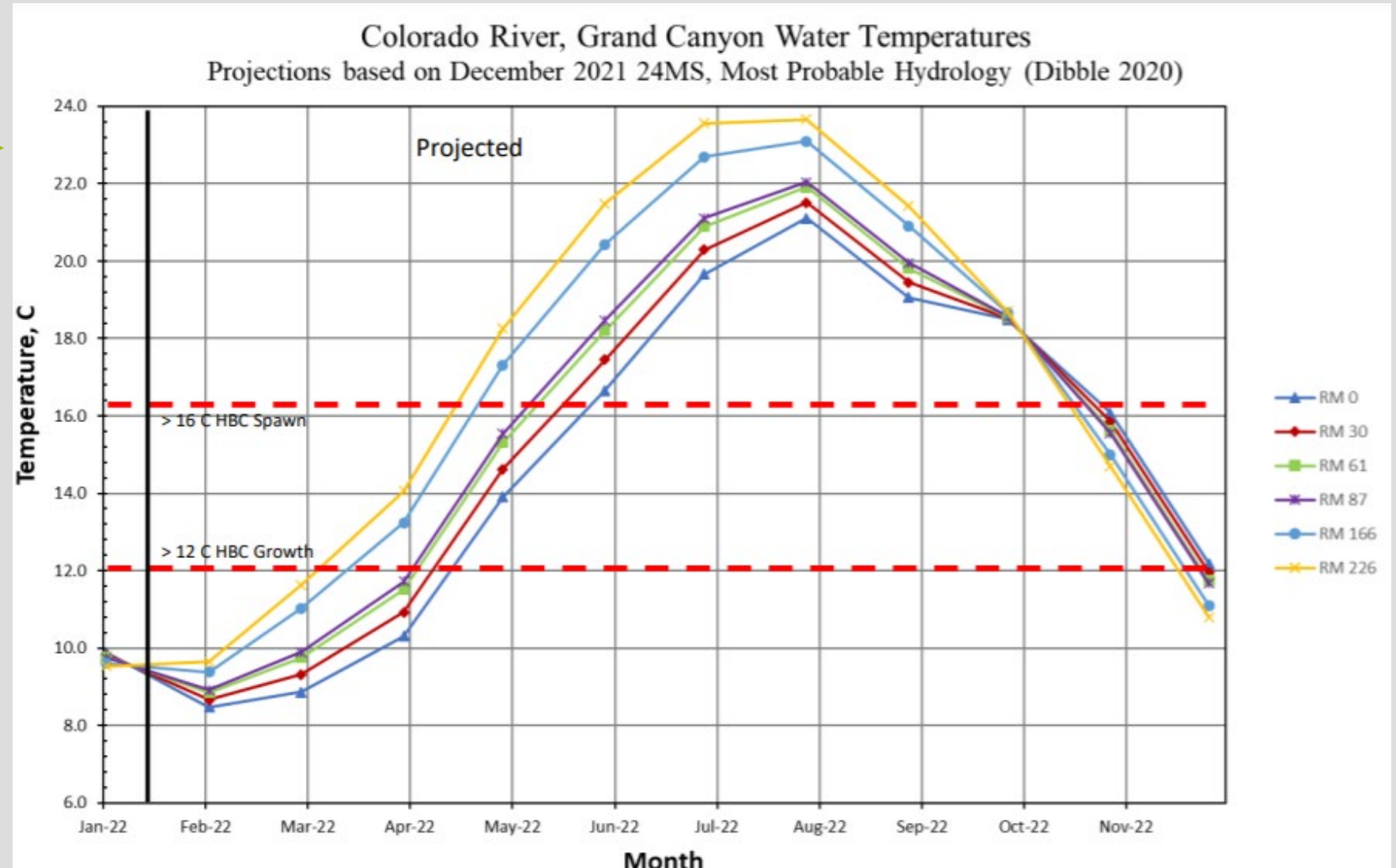


# PROJECTED RIVER TEMPERATURES

Valdez et al. 2013  
SMB Opt. Growth - 23 →

SMB Opt. Ovulation - 16 →

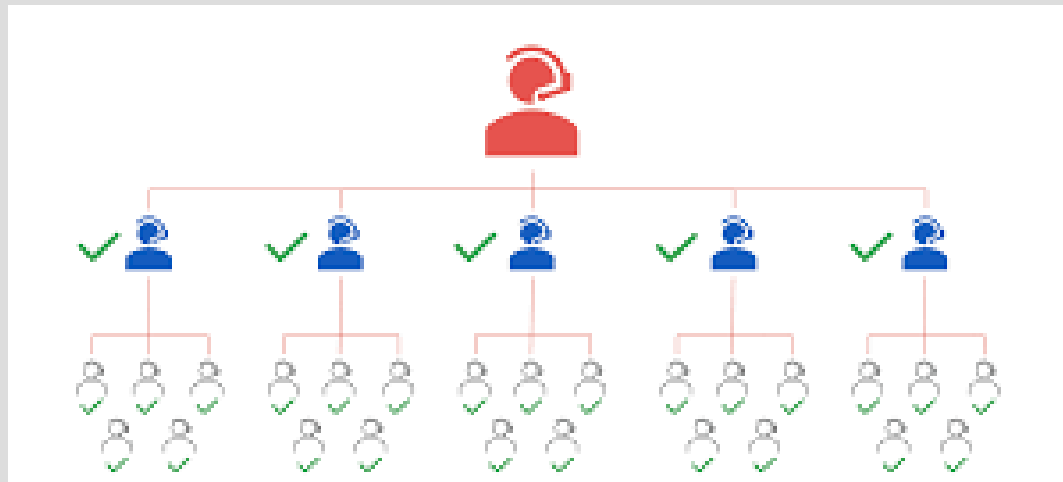
SMB Opt. Incubation - 15 →



# IMPROVE COMMUNICATION AND COORDINATION

## Expanded SCAHG charge

- Emerging issues notifications



## Tabletop exercise concept

- Facilitated by Science Advisors Program





# TWG MEETING TABLETOP EXERCISE

## Tabletop Exercise Purpose:

Help the Technical Work Group (TWG) identify areas of potential importance to the Adaptive Management Work Group (AMWG), concerning:

- (a) agency responsibilities for monitoring and responding to such events,
- (b) possible ways in which these agencies may respond to such events and ways in which these actions may affect the river and its canyons and biota, and
- (c) possible roles for the AMWG and its TWG in the decision-making process for such actions.

# TWIG MEETING AND TABLETOP EXERCISE

## Background Information

- **Smallmouth Bass: Lessons Learned from the Upper Basin**
- **Non-Native Fish Studies in Lake Powell**
- **Near-Term Threat of Smallmouth Bass Establishment below GCD**
  - **Team organized to understand threat and explore mitigation opportunities**
  - **Non-native aquatic species management actions available to NPS**

# TWG TABLETOP EXERCISE

## Background Information

**Breakout Group  
Brainstorming  
Session:**

- Priorities
- Concerns
- Ideas
- Data Gaps
- Decision Processes

**Survey**

**Breakout Group  
Topic Session:**

- Remediation Action  
Options
- Detection and Alert  
Systems
- Decision Making  
Processes and  
Information Needs

## Hypothetical Emergency Scenario

**Large Group  
Discussion:**

- Gaps
- Management and  
Resource Issues
- Response Speed
- Unacceptable  
Outcomes

**Report**

**Large Group  
Discussion:**

How can TWG be a responsive asset and resource to GCDAMP in emergency situation?

# TWG MEETING TOPICS: WATER QUALITY

AMWG motion approved on February 10, 2022: The Adaptive Management Work Group (AMWG) directs the Technical Work Group (TWG), with support from the Grand Canyon Monitoring and Research Center and Reclamation, to identify the scope of work, potential funding sources and priorities, schedule, and staffing needed to evaluate water quality released from Glen Canyon Dam and potential effects on resources in the Colorado River ecosystem (CRE) on a short-term and longterm basis. To address short-term needs, the TWG and GCMRC will prepare an assessment report that focuses on water quality parameters and impacts, including potential thresholds, on affected resources throughout the CRE, subject to available funding. (Estimated cost: \$250,000). In the long-term, this evaluation will inform any future AMWG recommendations to the Secretary of the Interior regarding infrastructure modifications.

**SOW under development**

## FUTURE TWG AGENDA ITEMS

- Budget and workplan recommendation
- Monitoring metric next steps
- Monitoring and reporting conditions, e.g., non-native fish passage, DO, temp., declining lake levels
- Tabletop exercise summary and report
- Chair and Vice Chair election
- Science updates