Technical Work Group Chair Report

Adaptive Management Work Group Meeting
February 10, 2022

Seth Shanahan
TWG Chairperson
Meetings

• Past
  • October 13-14, 2021
  • January 11-13, 2022 - TWG and AR

• Future
  • April 12-13, 2022
Items Reported Elsewhere on AMWG Agenda

• Basin hydrology, operations, and water quality
• Program funding
• Science updates (SDF, bug flow, etc.)
• Temperature management and predicted effects (power generation in the bypass tubes)
• Incentivized harvest program
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
The Question on Everyone’s Mind

Near-Term Hydrology

Long-Term Hydrology

Long-Term Hydrologic Projections for the Colorado River Basin and Methods for Considering Uncertainty

GCD Adaptive Management Plan
October 13, 2021

James Prairie, PhD, Upper Colorado Basin Region
Projected River Temperatures

Valdez et al. 2013
SMB Opt. Growth - 23

SMB Opt. Ovulation - 16
SMB Opt. Incubation - 15
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.).


3. Risk analysis to resources downstream.

4. Potential tools for addressing low D.O. events at GCD.
- Lees Ferry: 40-250 m segments + hotspots + 2 TRGD sites – electrofishing
- LCR: 13 km, hoop-netting, angling for catfish
- BAC stream-wide electrofishing, HAV, SHI + inflow hoop-netting, Kanab seining, ~12-mile slough ~ multiple gears
- HBC aggregation: 14-2-mile sites, seining/hoop-netting
- JCM – hoop-netting/electrofishing
## Incidental Take Parameters – Tier 1 Action Initiation Triggers

<table>
<thead>
<tr>
<th>Tier 1 – Early Intervention</th>
<th>Trigger</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>3-year average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined adult (&gt;200 mm) humpback chub (HBC) in the mainstem Little Colorado River (LCR) aggregation and LCR</td>
<td>≤ 9,000</td>
<td>12,000</td>
<td>11,000</td>
<td>TBD</td>
<td>Not applicable. Trigger for adults based on annual population estimate</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recruitment of sub-adult HBC (150-199 mm) does not equal or exceed estimated adult mortality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) Sub-adult population estimate in LCR in spring</td>
<td>≤ 1,250 for 3 years</td>
<td>2,600</td>
<td>1,000 *</td>
<td>TBD</td>
<td>TBD but likely to be above trigger</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) Sub-adult population estimates in mainstem in Juvenile Chub Monitoring (JCM) Reach in fall</td>
<td>≤ 810 for 3 years</td>
<td>500</td>
<td>200</td>
<td>TBD</td>
<td>TBD but likely below trigger</td>
</tr>
</tbody>
</table>

Model estimates for adults are rounded to the nearest 1,000 and to the nearest 100 for sub-adults.

*No estimate was obtained for sub-adults in LCR in spring 2020 due to COVID-19 restrictions. The 2020 number was estimated by using data collected and abundance estimated from fall 2019.*
Improve Communication and Coordination

Expanded SCAHG charge
• Emerging issues notifications

Tabletop exercise concept
• Possible Science Advisors Program role
Informational Updates

What & How?

Phased Conceptual Approach:
- Phase 1 Pikeminnow Viability/Feasibility Assessment

Razorback Sucker Expert Panel

- White Paper in development
- Tribal consultation ongoing
Other Items

- Establish informational webinar dates for potential experiments
- AZGFD concern over RBT numbers in Lees Ferry
- Aquatic vegetation removal to disadvantage BNT
LTTEMP Metrics Project

- Focus is on defining metrics for Effectiveness Monitoring ("Phase 1")
  - "To assess effectiveness of policy . . ." and
  - "track progress towards achieving management objectives . . ."

- LTEMP defines 11 specific goals
  - How do we know if the goals are being achieved? Need to define performance metrics!
  - Performance metrics tell us "achieved/ not achieved" - but not why

- NOT a Core Monitoring Plan

USGS
Future TWG Agenda Items

• FY 2023 budget and workplan recommendation
• Monitoring metric next steps
• Monitoring and reporting conditions, e.g., non-native fish passage, DO, temp., declining lake levels
• Tabletop exercises
• Potential FLAHG charge