

Technical Work Group Chair Report

Adaptive Management Work Group Meeting

August 20, 2020

Seth Shanahan

TWG Chairperson

Meetings

- Past
 - June 23-24, 2020 (webinar)
- Future
 - October 14-15, 2020
 - January 20-22, 2021

Items Reported Elsewhere on AMWG Agenda

- COVID-19 impacts
- Triennial Budget and Work Plan
 - Science Advisors review
- Basin hydrology and operations
- LTEMP experiments considered & implemented for WY2020 and WY2021

Updated: August 10, 2020

Glen Canyon Dam Adaptive Management Program Adaptive Management Work Group Meeting, August 19-20, 2020

Wednesday, August 19, 2020

Day 1 Webinar Information:

<https://bor.webex.com/bor/j.php?MTID=m8bc1c6fc14d01bbc251a84a878566883>

Telephone: 415-527-5035 Meeting Number: 199 912 1277

DRAFT AGENDA

START TIME ¹ (Duration)	Wednesday, August 19, 2020 Topic and Presenter and Purpose ²
8:30 PDT/ 9:30 MDT (:45)	Welcome and Administrative: Tim Petty, Assistant Secretary for Water and Science, Department of the Interior and Secretary's Designee <ul style="list-style-type: none">▪ Introductions and Determination of Quorum (13 members)▪ Approval of February 12-13, 2020 Meeting Minutes▪ Approval of May 20, 2020 Meeting Minutes▪ Administration Update▪ Progress on Nominations and Reappointments▪ Action Item Tracking Report

Flycatcher and Rail Monitoring

- LTEMP BO - Reclamation to partially fund NPS to conduct:
 - Yuma Ridgeway's Rail surveys every three years
 - Southwestern Willow Flycatcher surveys every other year
- 2019 results
 - Flycatcher – 14 sites surveyed in GRCA, none detected
 - Rails – 1 site surveyed in GRCA, none detected



Figure 2. Google Earth imagery of RM275R in summer 2017 (pre-fire). Note the presence of a lot of green vegetation (mature willows and tamarisk) and that the oval shaped area surrounded by the green vegetation is the marsh that is surveyed for Ridgeway's Rail. The marsh is comprised of cattails and is entirely inundated with water year-round due to construction of dams/berms on the west side (river side/downslope) that hold the water back.

Modeling Procedures for Triggering HFE's

HFE Sediment Modeling

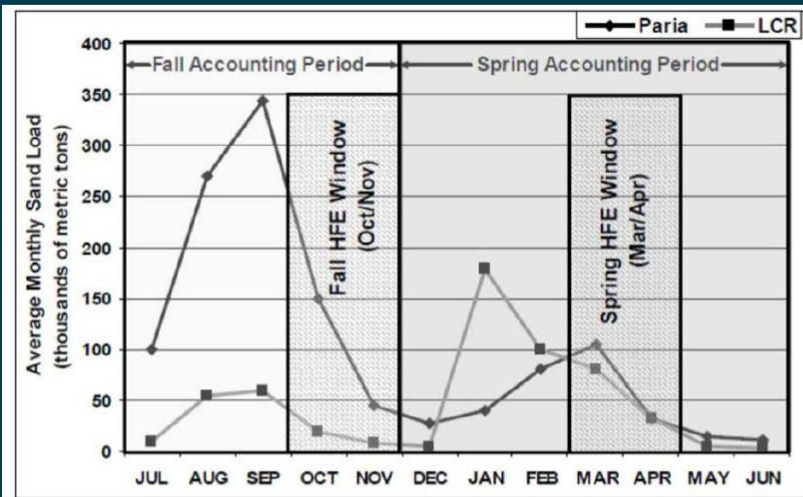
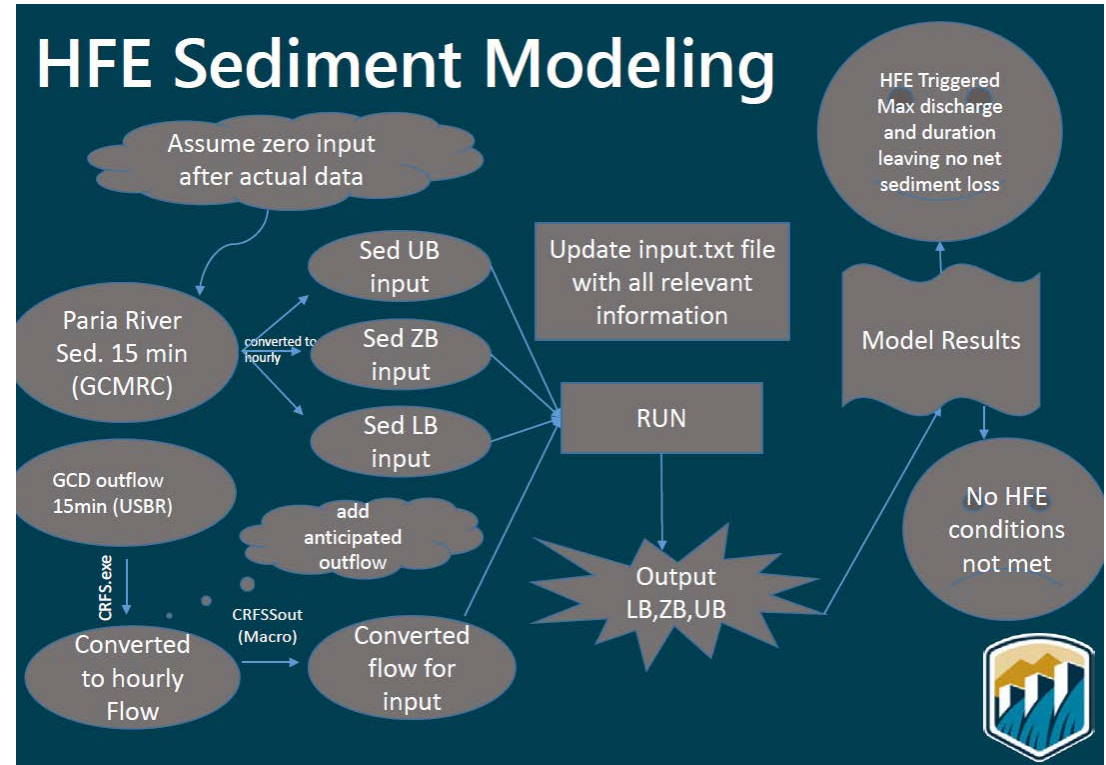


FIGURE 1 Average Monthly Sand Load from the Paria River and Little Colorado River Showing the Fall and Spring HFE Accounting Periods and Implementation Windows

From: LTEMP_ROD Attachment C

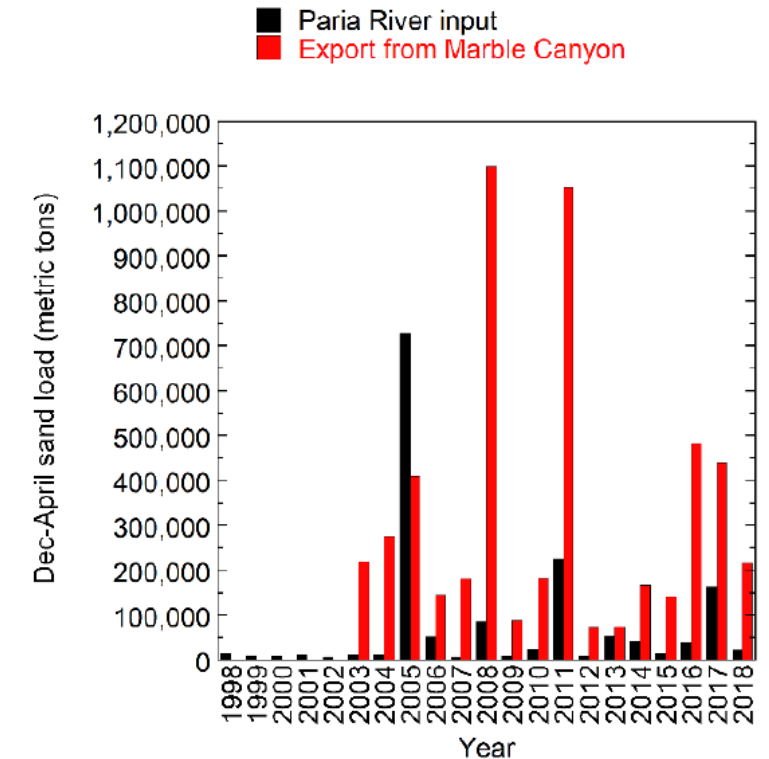


HFE Sediment Modeling



Spring HFE's

Frequency of Spring HFEs, cont.



Annual Paria River sand input (black) compared with Marble Canyon sand export (red)

Data from: https://www.gcmrc.gov/discharge_qw_sediment

The Quality of Our Nation's Waters

Flow Modification in the Nation's Streams and Rivers



National Water-Quality Program
National Water-Quality Assessment Project

Circular 1461

Importance of Springtime High Flows

North American Aquatic Insect Emergence

No. of taxa

400

300

200

100

0

Spring

Summer

Fall

Winter

The Adopt - A- Beach Repeat Photography Project

Owl Eyes RM 135.1L 5-14-
96



Owl Eyes RM 135.1L 3-9-
96



Adopt a Beach Data Entry Form (NOTE: PLEASE PHOTOGRAPH DATASHEET, THEN BEACH)

Your packet should include: a data sheet (see packet) and a ruler. It is important that the ruler is visible in the photo. Adopters often have their own rulers and you can use them. Using the ruler, measure the width of your beach. Mark it with a ruler. Please mark on people in the photo. We know that you can include additional photos, or other items on your reference page.

Fill in the date/time/location. It is important that the ruler is visible in the photo. Adopters often have their own rulers and you can use them. Using the ruler, measure the width of your beach. Mark it with a ruler. Please mark on people in the photo. We know that you can include additional photos, or other items on your reference page.

Change in Beach Size from Previous Visit (circle one): INCREASE DECREASE SAME

Dominant Cause of Change (circle one):
Light Daily/Monthly Flow Rain Wind People Don't Know

Supporting Observations for Dominant Cause (check any that are appropriate):
☐ New outcrop ☐ Tide/Delta flow ☐ Change of slope ☐ Sand from wind or people ☐ Beach is eroding ☐ Blowed sand ☐ Out

Secondary Cause of Change (circle one):
Dike Daily/Monthly Flow Rain Wind People Don't Know

Supporting Observations for Secondary Cause (check any that are appropriate):
☐ New outcrop ☐ Tide/Delta flow ☐ Change of slope ☐ Sand from wind or people ☐ Beach is eroding ☐ Blowed sand ☐ Out

Do you find evidence of tamarisk beetles in/near camp? YES NO

Campsite Quality Compared to Last Visit (circle one): SAME BETTER WORSE

Supporting Observations for Campsite Quality (check any that are appropriate):
☐ Footprinting ☐ Stairs ☐ Fodder ☐ Trail erosion ☐ Vegetation encroachment ☐ Open sand area ☐ Human impacts - ants, bee scold, etc.

Any Comments about Campsite Condition? (Describe in this space)

Did you camp here this visit? Yes No How many people in your group?

If you camped here, does it feel crowded or comfortable given the water level and group size?

Considering the campsite quality factors above, and the restriction against camping in the Old High Water Zone, what would a good group size be for this camp at the current water level?

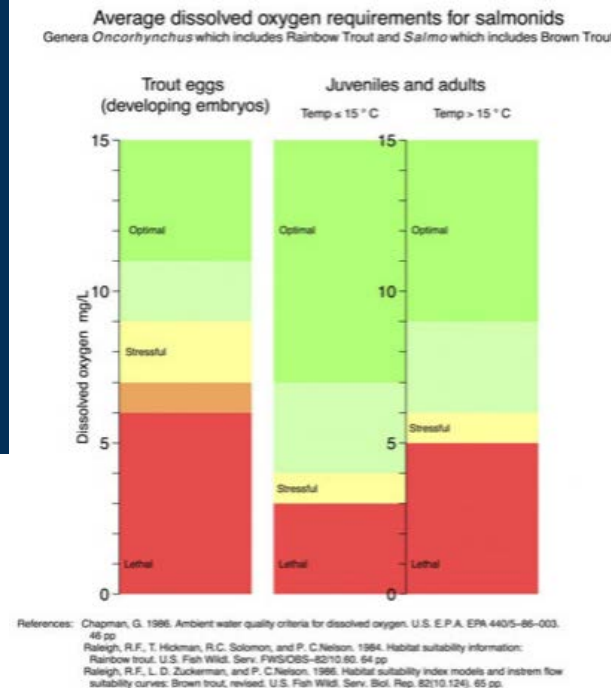


Metalimnion low dissolved oxygen events in Lake Powell and their transport downstream of Glen Canyon Dam

Bridget Deemer

TWG Meeting 24 June
2020

Grand Canyon Monitoring and Research Center
Southwest Biological Science Center
U.S. Department of the Interior
U.S. Geological Survey



Current Predictive Capacity

- DO module for CE-QUAL-W2 can predict low DO events, but does not always predict the concentrations at penstock height accurately
- We know these events are most likely to occur when the reservoir is low and we have a high inflow year
- Quarterly whole-lake trips and monthly trips to Lake Powell give us an idea of when a low DO event may be likely to reach the penstock depth

Future TWG Agenda Items

- FLAHG recommendation
- Admin. history project
- Nearby uranium mining
- Foodweb concentrations of mercury
- Lake Powel Pipeline Project
- NPS Colorado River Management Program monitoring activities
- Spring flows and aquatic insects
- Adaptive management
 - Information thresholds
 - Monitoring metrics

Flow Ad Hoc Group

FLAHG Workflow

