Technical Work Group Chair Report

Adaptive Management Work Group Meeting

August 20, 2020

Seth Shanahan

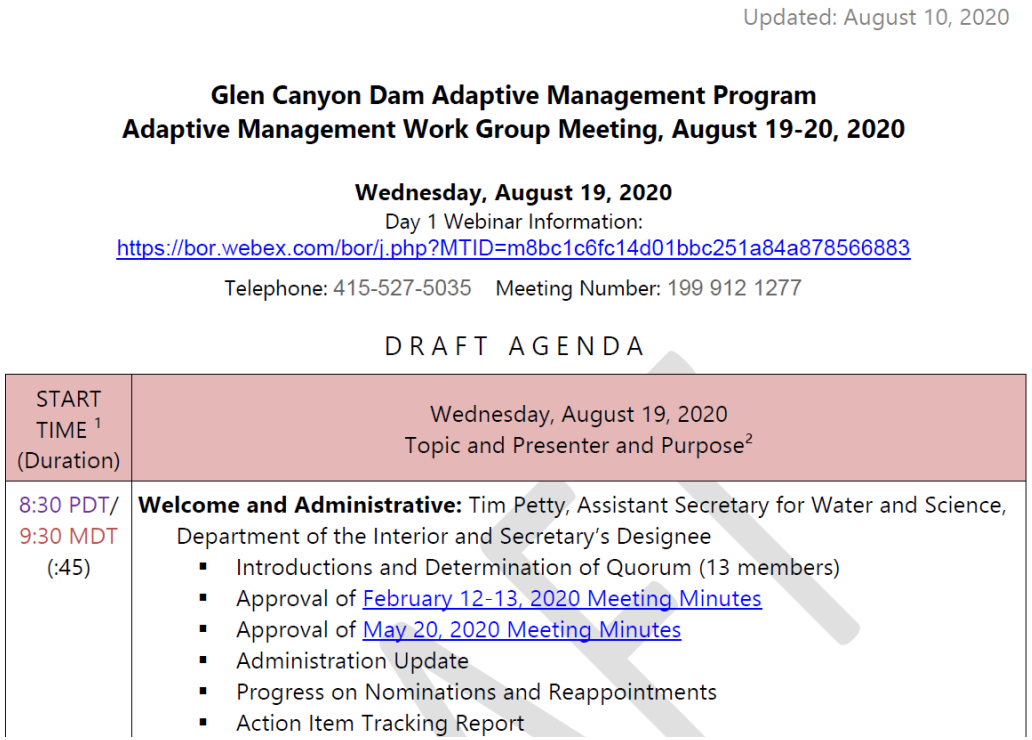
TWG Chairperson

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 ▪ 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 Ridgway'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

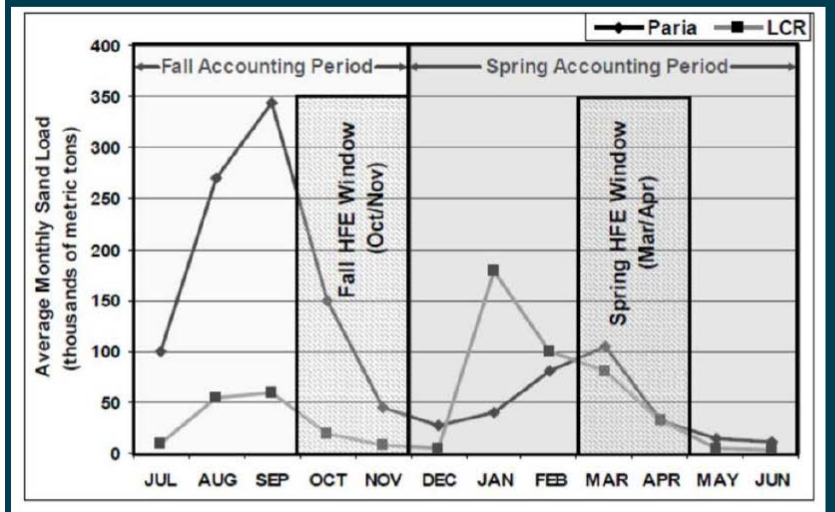
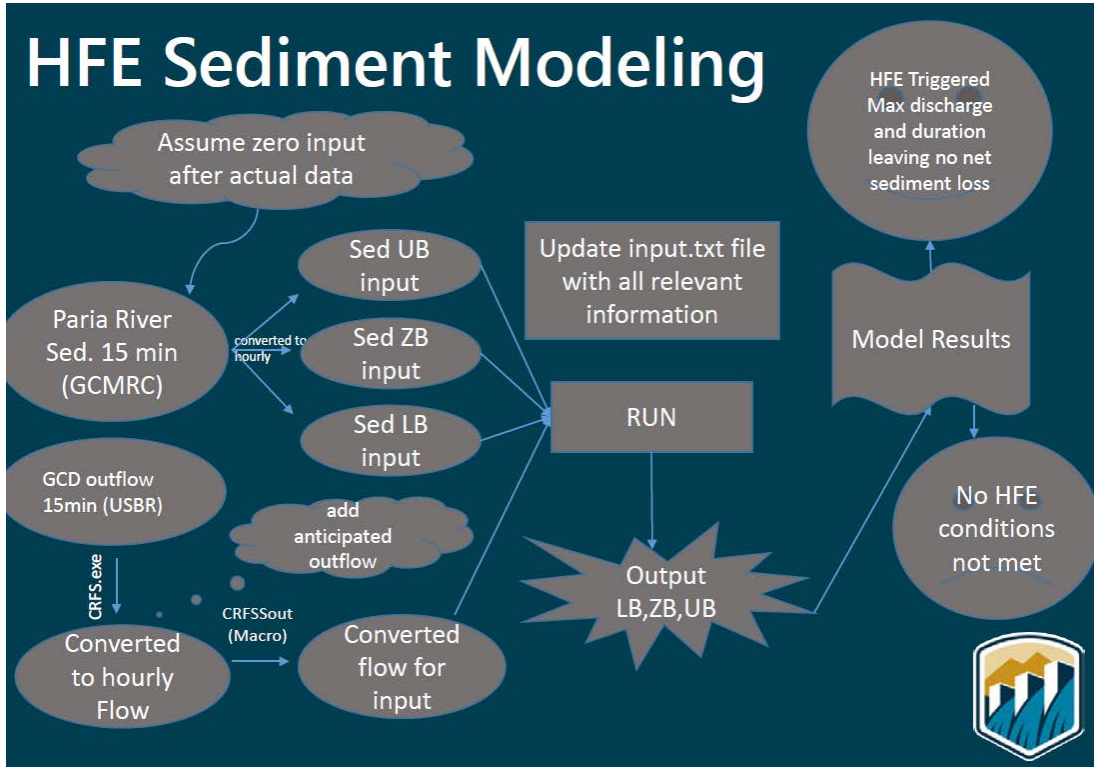


FIGURE 1 Average Monthly Sand Load from the Paria River and Little Colorado River Showing the Fall and Spring HFE Accounting Periods and Implementation Windows

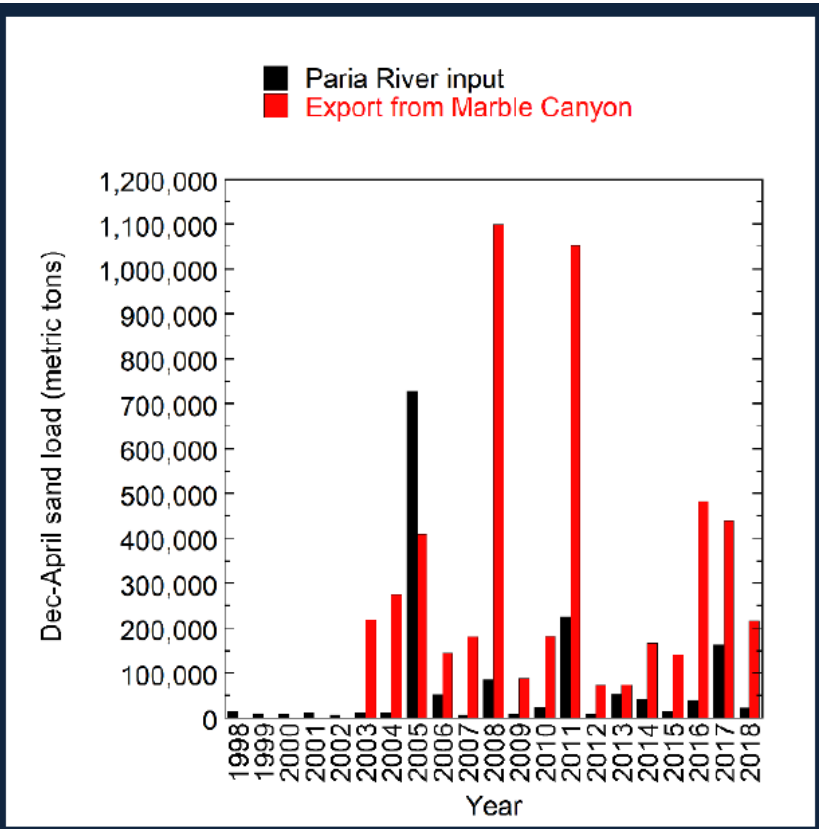
From: LTEMP_ROD Attachment C

HFE Sediment Modeling



Spring HFE's

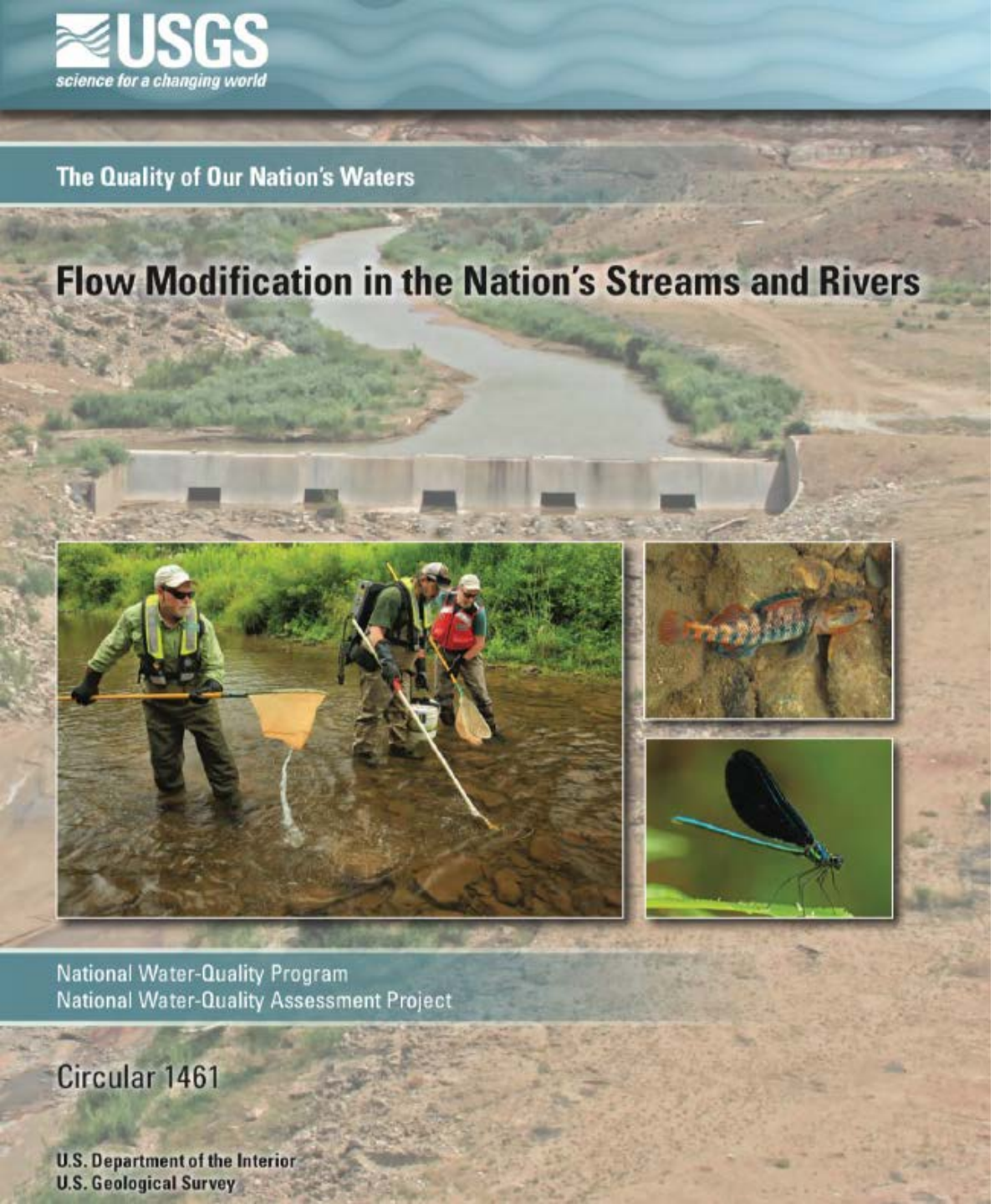
Frequency of Spring HFEs, cont.



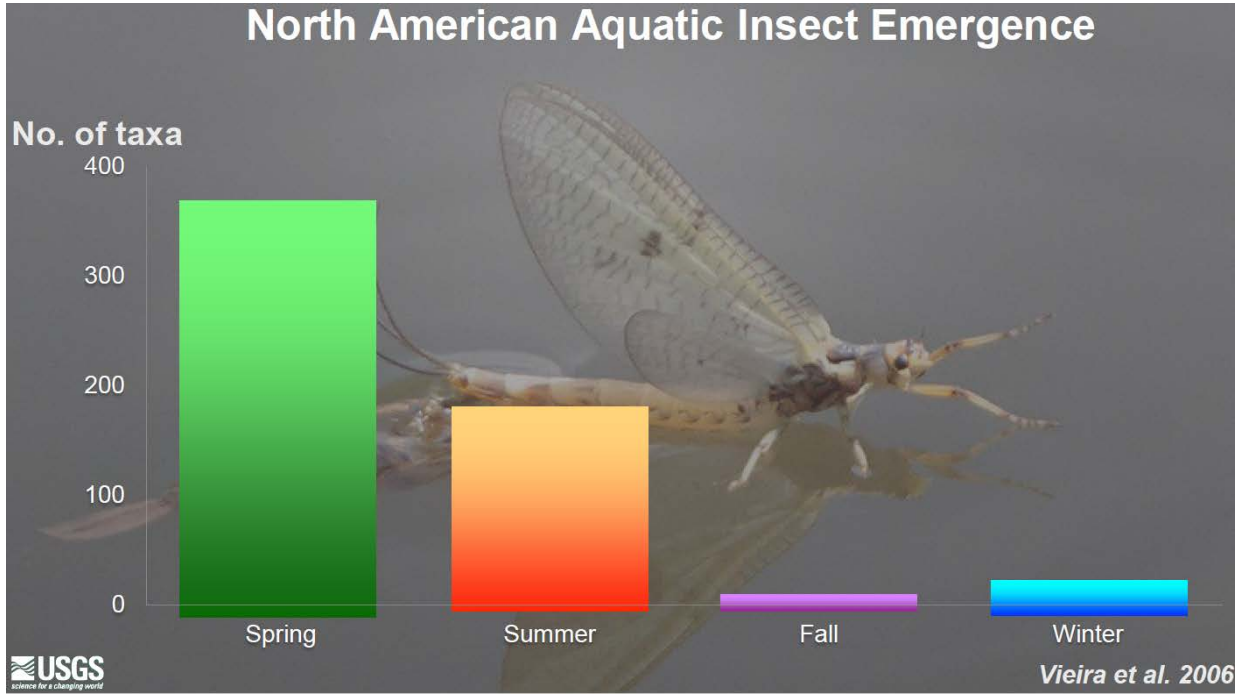
Annual Paria River sand input (black) compared with Marble Canyon sand export (red)

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

USGS



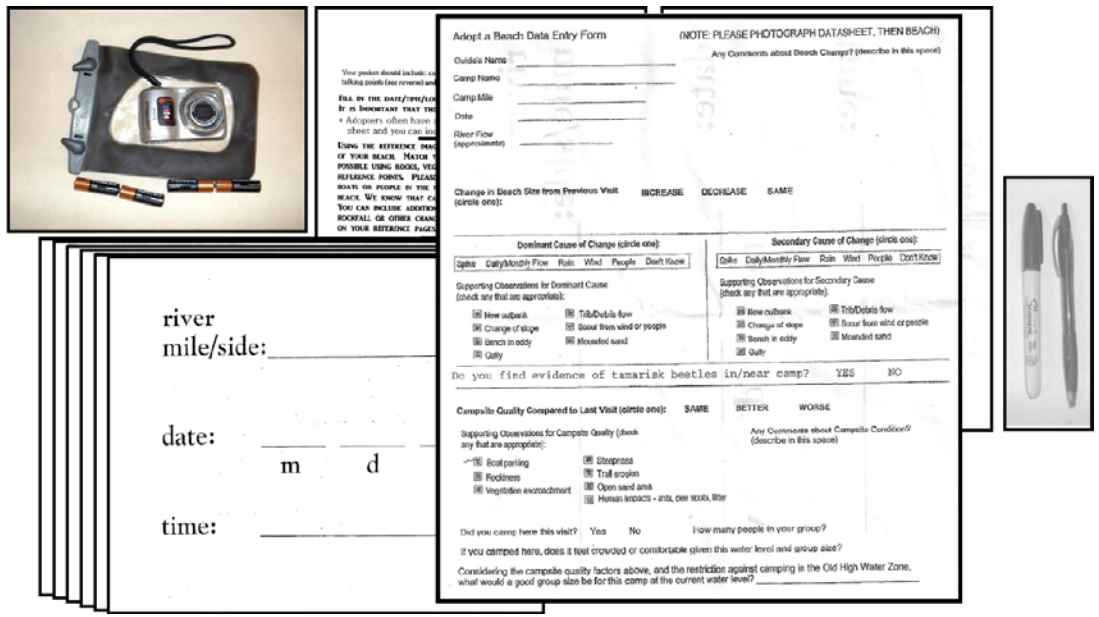
Importance of Springtime High Flows



The Adopt - A-Beach Repeat Photography Project

Owl Eyes RM 135.1L 3-9-96

Owl Eyes RM 135.1L 5-14-96



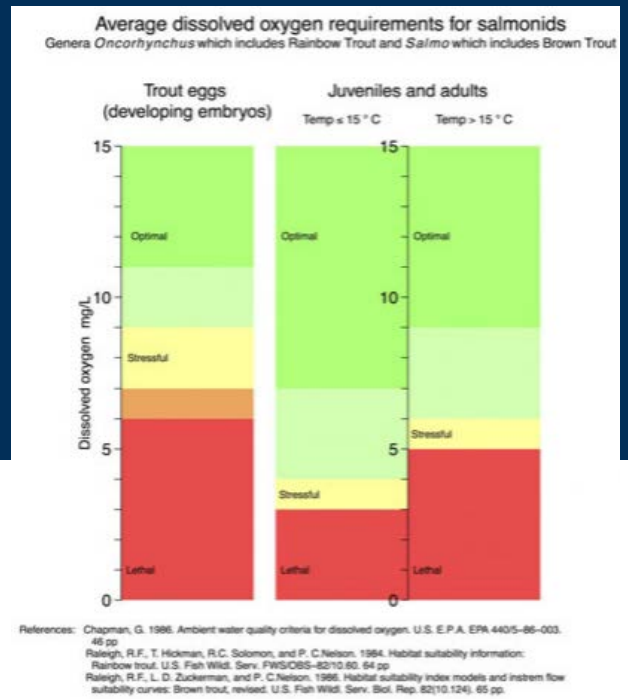
USGS
science for a changing world

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

USGS

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