

Technical Work Group Chair Report

Adaptive Management Work Group Meeting

May 20, 2020

Seth Shanahan

TWG Chairperson

Meetings

- Past
 - April 15-16, 2020 (webinar)
- Future
 - June 23-24, 2020 (webinar)
 - October 14-15, 2020
 - January 20-22, 2021

Items Reported Elsewhere on AMWG Agenda

- Triennial Budget and Work Plan
- COVID-19 impacts
- Hydrology, operations, reservoir/release conditions
- Bug flows and other potential experiments in 2020

Updated: May 19, 2020

GLEN CANYON DAM ADAPTIVE MANAGEMENT PROGRAM
ADAPTIVE MANAGEMENT WORK GROUP MEETING
MAY 20, 2020

WebEx URL: <https://bor.webex.com/bor/j.php?MTID=m9591ccc1cb6d4253916c127b92a5cc4b>
WebEx Password: AMWG

Phone #: 415-527-5035 Participant Passcode: 909 402 582

DRAFT AGENDA

START TIME ¹ (Duration)	Topic, Presenter, and Purpose
8:00 PDT/AZ 9:00 MDT 11:00 EDT (:30)	<p>Welcome and Administrative: Tim Petty, Assistant Secretary for Water and Science, Department of the Interior and Secretary's Designee</p> <ol style="list-style-type: none">1. Webinar Protocols<ul style="list-style-type: none">▪ Please mute the audio on your telephone or computer when you are not speaking.▪ Do not use your "hold" button, as this could play music for everyone on the webinar.▪ If you want to ask a question or make a comment, use the "raise hand" button on the webinar platform to indicate you want to speak.▪ Please identify yourself when you speak.2. Introductions and Determination of Quorum (13 members)3. Approval of February 12-13, 2020 meeting minutes (<i>postponed until August 2020</i>)4. Action Item Tracking Report update5. Progress on Nominations and Resappointments6. Impacts from and Response to COVID-19<ul style="list-style-type: none">▪ Department of the Interior – Tim Petty, Brent Esplan▪ GCDAMP – NPS, GCMRC

AMWG Item 2019.May.22

- Item summary
 - “A next step would be for GCMRC to identify experimental flow options that would consider high valued resources of concern to the GCDAMP (defined above), fill critical data gaps, and reduce scientific uncertainties.”
- Progress
 - FLAHG calls; GCMRC to consider hydrographs
- Next Steps
 - June 2 - FLAHG Call
 - Discussion about possible hydrograph
 - Resource forecasts

Conclusions

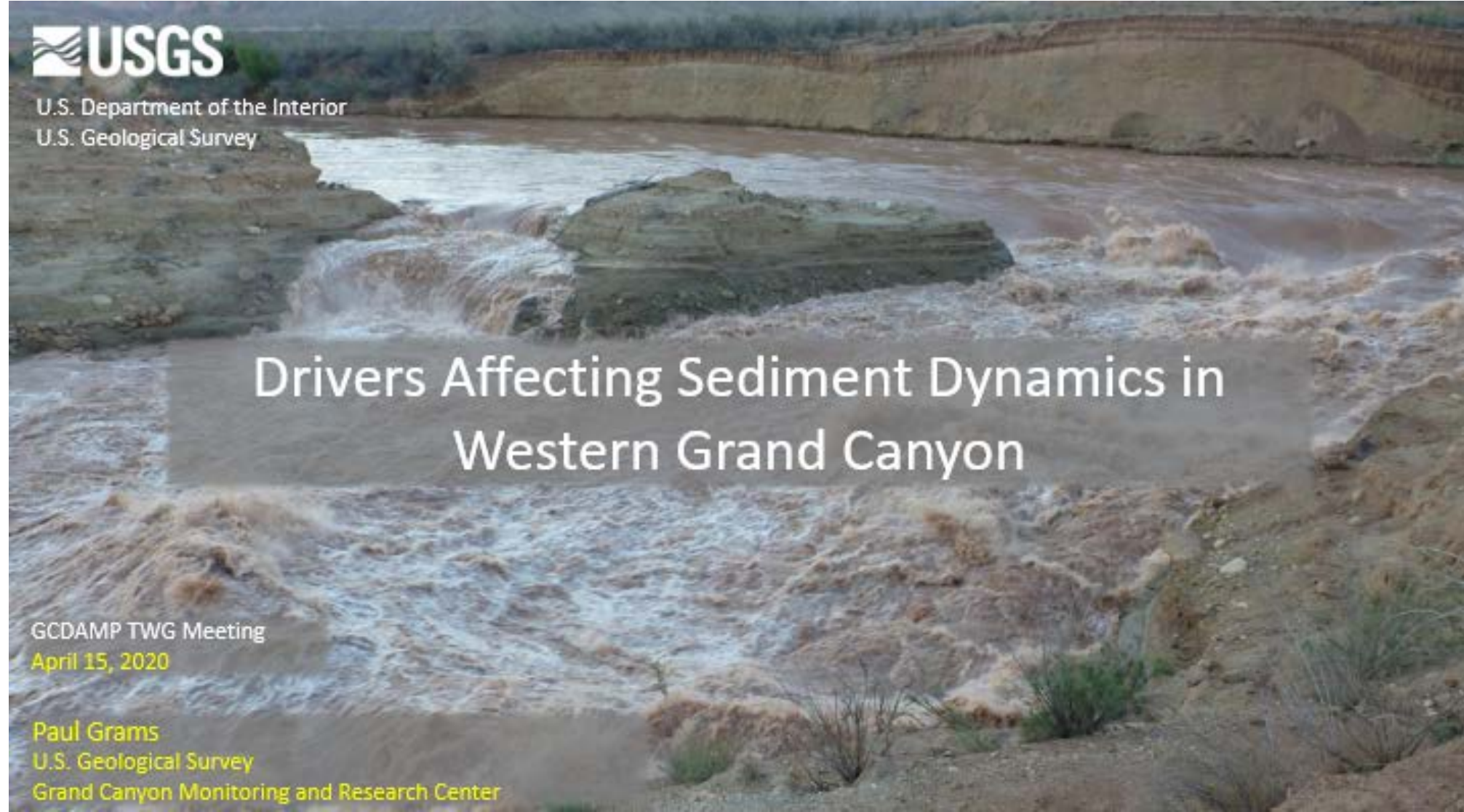
Population Status and Trends

- Rainbow trout abundance of catchable sized fish has increased and remained stable for the last 3-years.
- Since the RBT population crash, RBT relative condition is good, above 1.0
- 2017 was the last moderately large RBT recruitment (age-0) event.
- Since 2015, brown trout relative abundance (CPUE) has progressively increased.
- BNT relative condition and growth remains good and appears higher than RBT
- Since 2015, annual recruitment events for BNT have been relatively large with the exception of 2017 (i.e., the only year that RBT had a moderately large recruitment year since 2011)
- Difference in electrofishing catch between the two trout species suggest that BNT are not occupying the near shoreline (wetted edge) when smaller in size (i.e., vulnerable only during fall and winter)

Experimental Flow Status and Trends

- Reduction in invertebrate prey production/growth rates due to reservoir dynamics likely led to the RBT population crash (2014-2015).
- Fall High Flow Experiments may have an effect on trout growth and condition, but at this time the effect appears to be weak and inconclusive.
- Stable Summer Flows (“Bug Flows”) appears not to have had a positive effect on RBT growth and overall condition (i.e., other extrinsic factors).
- The implementation of Trout Management Flows is limited by researchers inability to forecast recruitment prior to, or during the ideal time period (specified by LTEMP design)

TWG Agenda Item



USGS
U.S. Department of the Interior
U.S. Geological Survey

Drivers Affecting Sediment Dynamics in Western Grand Canyon

GCDAMP TWG Meeting
April 15, 2020

Paul Grams
U.S. Geological Survey
Grand Canyon Monitoring and Research Center

Controls on sediment transport and channel adjustment in Western Grand Canyon -- Overview

- Decrease in river gradient controls transport capacity
 - Decrease in slope of original river bed beginning at Separation Canyon
 - Accumulated sediment on the bed of Lake Mead amplifies decrease
 - Downstream control created by Pearce Ferry Rapid also amplifies decrease
- Upstream sediment supply
 - ~1.5 million metric tons of sand plus ~6 million metric tons of silt and clay transported past Diamond Creek each year
- Local sediment supply
 - Eroding banks of Lake Mead contribute unknown volume of additional sediment
- Annual flow volume
 - Overall control on annual transport capacity
- Daily flows (releases from Glen Canyon Dam)
 - Controls water depth
 - May affect timing of erosion and deposition
 - May affect spatial patterns of erosion and deposition

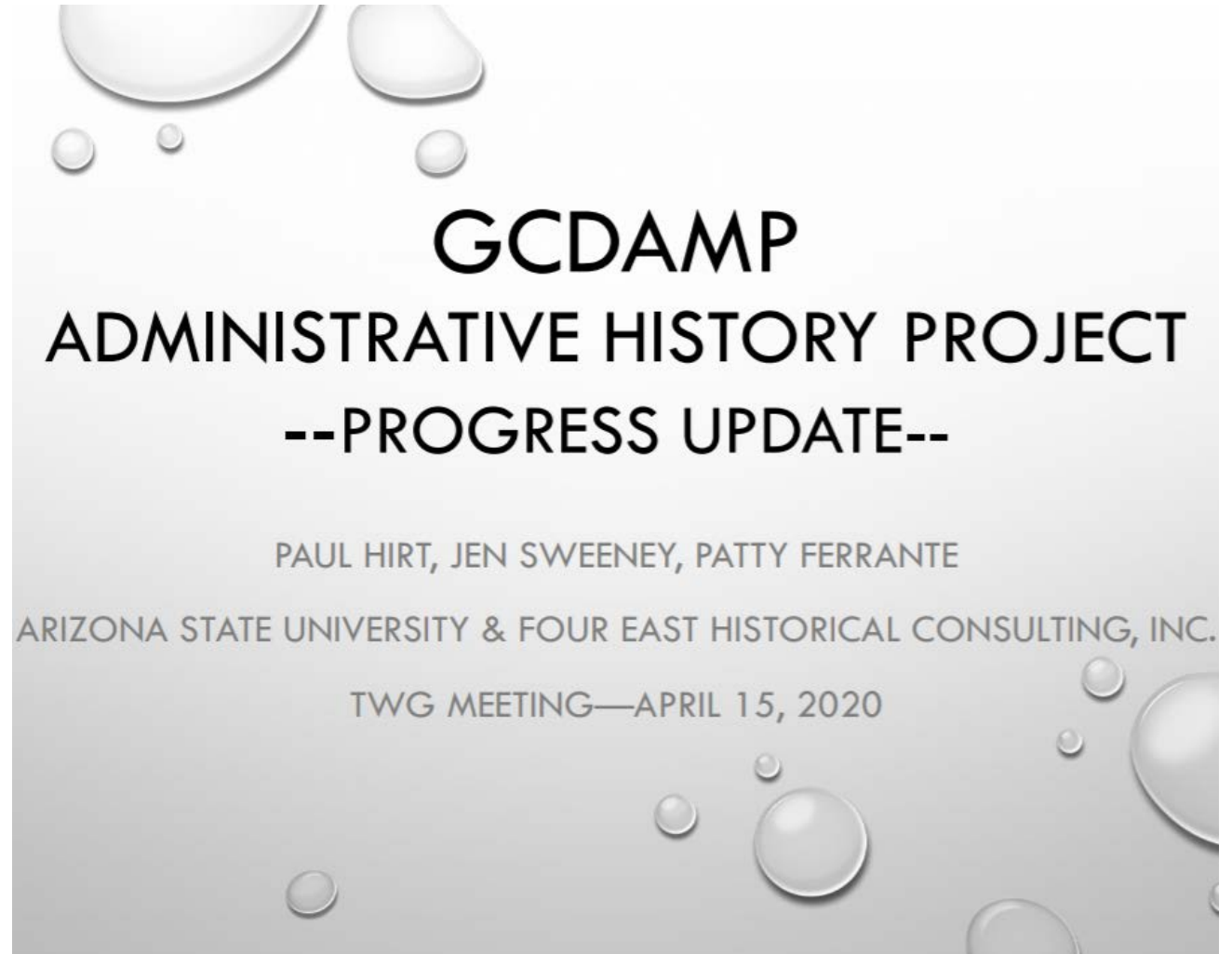
Potential next steps

Potential Next Steps

- Proposed study plan
 - Understand relation between flow (dam releases), sediment supply, and patterns of scour and fill
 - Estimate mass of sediment contributed by eroding banks
 - Determine controls on rate of bank erosion
- Field data collection
 - Select a ~5-km study reach
 - Make repeat measurements during an HFE
- Geomorphic study
 - Quantify incision and bank erosion
- Modeling
 - Model streamflow and sediment transport for different flow scenarios

Project Elements

- Oral histories
- Administrative history website and archive
- Administrative history narratives
- Orientation packet



gcdamphistory.org



The image shows a screenshot of the website gcdamphistory.org. The page has a dark blue background with a faint map of the Grand Canyon. In the top left corner, there is a logo consisting of a blue hexagon with a white icon of a dam and the text "GCDAMP" in white. In the top right corner, there are three navigation links: "About" with a downward arrow, "Archive" with a downward arrow, and "History" with a downward arrow, followed by a search icon. Below the navigation, there is a white text line that reads "Welcome to the GCDAMP Administrative History". The main heading is "Glen Canyon Dam Adaptive Management Program" in large, bold, white font. Below the heading, there is a paragraph of white text: "This website hosts an administrative history of the Glen Canyon Dam Adaptive Management Program (GCDAMP) including the Adaptive Management Work Group (AMWG), Technical Work Group (TWG), the U.S. Geological Survey's Grand Canyon Monitoring and Research Office (GCMRC), and the Bureau of Reclamation's Glen Canyon Environmental Studies Program (GCES)."

GCDAMP

About ▾ Archive ▾ History ▾ 🔍

Welcome to the GCDAMP Administrative History

Glen Canyon Dam Adaptive Management Program

This website hosts an administrative history of the Glen Canyon Dam Adaptive Management Program (GCDAMP) including the Adaptive Management Work Group (AMWG), Technical Work Group (TWG), the U.S. Geological Survey's Grand Canyon Monitoring and Research Office (GCMRC), and the Bureau of Reclamation's Glen Canyon Environmental Studies Program (GCES).

Next Steps

TO BE COMPLETED BY SEPTEMBER 2020...

- 7 MORE ORAL HISTORIES
- EXPANDED ADMINISTRATIVE HISTORY NARRATIVE
- ORIENTATION PACKET
- MORE DOCUMENTS AND FEATURES ON WEBSITE & ARCHIVE
- FULL TEXT SEARCH CAPABILITY FOR “KEY READINGS”

Feedback Needed
Contact paul.hirt@asu.edu

Future TWG Agenda Items

- Budget recommendation
- Chair/vice-chair elections
- Adopt-A-Beach program
- DO monitoring and management
- HFE Q&A
- FLAHG progress – hydrograph feasibility
- Bug flow monitoring
- Spring flows and aquatic insects
- Bird surveys (flycatchers and rails)
- Adaptive management
 - Information thresholds
 - Monitoring metrics