

Glen Canyon Dam Adaptive Management Program Annual Reporting Meeting 2023

Crowne Plaza Hotel

4300 East Washington Street, Phoenix, AZ 85034

Tuesday Jan. 24 | 8:30 a.m. - 5 p.m. MDT

WEBINAR: <https://rec.webex.com/rec/j.php?MTID=m1843da24942daa18492079fd4dacab0a>

Call in (415) 527-5035 | Participant Passcode: 2761 837 1561

Meeting Number: 2761 837 1561 | Meeting Password: AR24

TIME	Tuesday, January 24, 2023
8:30-8:35 (:05)	Welcome and Administrative: Seth Shanahan, TWG Chair, and Scott VanderKooi, Director USGS Southwest Biological Science Center
8:35-9:05 (:30)	Round-Table Introductions
Natural Processes/Aquatic Food Base	
9:05-9:20 (:15)	Bug Flows and Food Base Update, Ted Kennedy, GCMRC
9:25-9:40 (:15)	Molecular and Modeling Tools for Tracking Food Base Dynamics in Changing Environments, Dave Lytle, Oregon State University
9:45-10:00 (:15)	Production and Nutrient Content of Benthic Algae in the Glen Canyon Section of the Colorado River, Mia Wrey, Fordham University
10:05-10:15 (:10)	BREAK
10:15-10:30 (:15)	Predicting Water Quality in Lake Powell: Updates and Improvements to the Existing Mechanistic Model, Bryce Mihalevich, GCMRC
10:35-10:55 (:20)	Dissolved Oxygen Dynamics in Lake Powell and in the Glen Canyon Tailwater, Bridget Deemer, GCMRC
Humpback Chub	
11:00-11:50 (:50)	Humpback Chub Population Dynamics in Grand Canyon, Randy Van Haverbeke, USFWS, and Maria Dzul, GCMRC
11:55-1:05 (1:10)	LUNCH
1:05-1:20 (:15)	2022 NPS Update- Humpback Chub Translocation Monitoring and Associated Nonnative Trout Removal, Emily Omana Smith, NPS
Trout Fishery	
1:25-2:05 (:40)	Trout Recruitment and Growth Dynamics in Glen Canyon, AZ, Mariah Giardina, GCMRC, and Josh Korman, Ecometric
2:10-2:25 (:15)	Applying Ultrasonography in a High-Throughput Setting to Describe the Reproductive Potential of Brown and Rainbow Trout, James Crossman, Cross Ecology, Molly Webb, USFWS, and Josh Korman, Ecometric
2:30-2:40 (:10)	BREAK
2:40-2:55 (:15)	What Do We Know After Two Years of the Brown Trout Incentivized Harvest Program? Lucas Bair, GCMRC
3:00-3:15 (:15)	Lees Ferry Fishery AZGFD, David Rogowski, AZGFD
Other Native Fish/Nonnative Invasive Species	
3:20-3:35 (:15)	Grand Canyon Fish Monitoring, David Rogowski, AZGFD
3:40-3:55 (:15)	Predation Risk Posed by Introduced Warm-Water Predators, David Ward, Eric Frye, Laura Tennant and Clay Nelson, GCMRC
4:00-4:20 (:20)	Smallmouth Bass Depletion Effort in Glen Canyon, Laura Tennant, GCMRC
Future Conditions	
4:25-5:00 (:35)	Implications of Lower Lake Powell Elevations and/or Annual Releases on Grand Canyon Resources, Charles Yackulic and group discussion
5:30 – 7:00	POSTER SESSION (list of posters attached)

Poster Session - Crowne Plaza Hotel, 4300 E Washington St, Phoenix, AZ, Tuesday, January 24, 2023, 5:30-7:00 PM	
Poster Title	Author
Sediment	
Riverbed Response to the 2021 Spring Disturbance Flow in Western Grand Canyon	Matt Kaplinski and others, GCMRC
Numerical Modeling of Mud Transport, Storage and Release on the Colorado River, Arizona	Gerard Salter and others, GCMRC
Drivers of Sandbar and Campsite Erosion and Deposition	Robert Tusso and others, GCMRC
Data visualization and management	
Modernizing data telemetry efforts for important riparian resources in the Grand Canyon	Thomas Gushue and Joseph Thomas (GCMRC)
Accessing Grand Canyon Resource Monitoring Information Through Data Visualizations	Tom Gushue, Joseph Thomas, Caitlin Andrews, Erica Byerley and others, GCMRC
Colorado River Online Data Resources	Tom Gushue, Joseph Thomas, Caitlin Andrews, Erica Byerley and others, GCMRC
Glen Canyon Dam Adaptive Management Program Wiki: A one-stop shop for information.	Craig Ellsworth
Water Quality	
Visualizing Over 60 Years of Data at Lake Powell	Caitlin Andrews, GCMRC
Riparian Vegetation/Archaeological Sites	
Riparian Vegetation Status and Trends	Emily Palmquist, GCMRC
LTEMP Experimental Vegetation Treatments in Grand Canyon National Park	Lonnie Pilkington, Daniel Boughter, Cameron Prophet & Ashton Bedford, NPS
LTEMP Vegetation Management Experiments to Improve the Geomorphic Condition of Archaeological Sites in GRCA: Preliminary Results	Joshua Caster and others, GCMRC and NPS
Fisheries	
Predictive Models for Adaptive Management- Brown Trout	Lucas Bair, GCMRC
Green Sunfish: Aquatic Gremlins of the Southwest	Eric Frye & David Ward, GCMRC
Aquatic Food Base	
Gross Primary Productivity in Marble and Grand Canyon	Lindsay E. Hansen, GCMRC
A deep dive on net-spinning caddisflies (<i>Hydropsyche oslari</i>): Measurements of body size and stable isotope ratio for adult caddisflies provides insights into growing conditions during the Bug Flow experiment.	Megan Starbuck, Anya Metcalfe, Jeff Muehlbauer, Ted Kennedy

Wednesday Jan. 25 | 8:30 a.m. - 5 p.m. MDT

WEBINAR: <https://rec.webex.com/rec/j.php?MTID=m0af636e0e091f89145ad77ac2461e191>

Call in (415) 527-5035 | Participant Passcode: 2760 181 8675

Meeting Number: 2760 181 8675 | Meeting Password: AR25

TIME		Wednesday, January 25, 2023	
8:30-8:35 (:05)	Morning Welcome		
Sediment			
8:35-9:05 (:30)	Project A Update and Evaluation of LTEMP Sand Management, David Topping, GCMRC		
9:10-9:30 (:20)	Project B Overview and Evaluation of High-Flow Experiments During Aridification, Paul Grams, GCMRC		
9:35-9:55 (:20)	Sandbars and Campsites: Response to High-Flow Experiments and Recent Trends, Katie Chapman + others, NAU and GCMRC		
10:00-10:15 (:15)	BREAK		
10:15-10:30 (:15)	Overflight Remote Sensing, Joel Sankey, GCMRC		
10:35-10:55 (:20)	A Continuous High-Resolution Profile of the Riverbed and Water Surface for 460-km of the Colorado River in Grand Canyon, Arizona, Shannon Sartain and others, GCMRC		
11:00-11:20 (:20)	Streamflow, Sediment and Vegetation Dynamics; Implications for Geomorphic Change in the Colorado River and its Tributaries, Dave Dean, GCMRC		
Hydropower and Energy Resources			
11:25-11:45 (:20)	Glen Canyon Hydropower Production & Value: Status & Trends, Clayton Palmer WAPA		
11:50-1:00 (1:10)	LUNCH		
Tribal Perspectives			
1:00-1:20 (:20)	Hopi River Monitoring, Jakob Masse, Hopi Tribe		
1:25-1:40 (:15)	Navajo Nation Monitoring Update, Erik Stanfield Navajo Nation		
1:45-2:05 (:20)	What of Invasive Species of Thought? Identifying the Legacies of the Glen Canyon Adaptive Management Program and its Sciences in Practice, Edward Wemytewa, Giorgio Hadi Curti and Kurt Dongoske, Pueblo of Zuni		
2:10-2:30 (:20)	Learning from the Colonial Legacies of the Glen Canyon Dam Adaptive Management Program (GCDAMP): Braiding Indigenous Knowledge and Western Science to Re-Center Indigenous Stewardship of Traditional Cultural Landscapes, Dr. Ora Marek-Martinez, NAU		
2:35-2:50 (:15)	Tribal Perspectives, Question and Answer, Group Discussion		
2:50-3:00 (:10)	BREAK		
Archeological and Cultural Sites			
3:00-3:20 (:20)	Archaeological Sites are Eroding in Grand Canyon: Floods, Low Flows and Vegetation Management Can Help, Joel Sankey, GCMRC		
3:25-3:45 (:20)	50 Years of Ecological Change to Campsites in the Riparian Zone along the Colorado River in Grand Canyon National Park, Arizona, Helen Fairley, GCMRC		
3:50-4:05 (:15)	Riparian Restoration at Paria Beach, Kelly Burke, GCWC		
Riparian Vegetation			
4:10-4:30 (:20)	Riparian Vegetation Research and Modeling, Brad Butterfield, NAU		
4:35-4:50 (:15)	The Changing Status and Role of Common Reed (<i>phragmites australis</i>) along the Colorado River Downstream from Glen Canyon Dam, Arizona, Larry Stevens, GCWC		
4:55-5:00 (:05)	Wrap Up, Scott Vanderkooi		
5:00	Adjourn		