

Glen Canyon Dam Adaptive Management Program Annual Reporting Meeting 2019

Crowne Plaza Phoenix Airport

WREN 2-3 Conference Rooms

4300 E. Washington Street, Phoenix, AZ 85034

WebEx: <https://ucbor-events.webex.com/ucbor-events/onstage/g.php?MTID=efa5bc89e6316ef8ac7da6850a8235bb5>

Phone #: 877-913-4721 Passcode: 3330168#

TIME	Tuesday, March 12, 2019
8:30 – 8:40 (:10)	Welcome and Administrative: Seth Shanahan, Technical Work Group (TWG) Chair <ul style="list-style-type: none"> • Introductions: Michael Moran, Deputy Chief, GCMRC
Native and Nonnative Fish	
8:40 – 9:10 (:30)	Mainstem Fish Monitoring: SWEF/Lees Ferry/Invasives, Dave Rogowski, AZGFD
9:15 – 9:35 (:20)	Razorback Sucker/Small-Bodied Fish Monitoring, TBD, Bio-West and ASIR
9:40 – 9:55 (:15)	Tributary Trout Control/Translocations, Brian Healy, NPS Grand Canyon
10:00 – 10:15 (:15)	BREAK
10:15 – 10:35 (:20)	Humpback Chub: LCR & Mainstem Aggregations, Randy VanHaverbeke, USFWS
10:40 – 11:00 (:20)	Humpback Chub: Population Dynamics, Maria Dzul, GCMRC
Riparian Vegetation	
11:05 – 11:25 (:20)	Riparian Vegetation Monitoring, Brad Butterfield, NAU
11:30 – 12:30 (1:00)	LUNCH
Tribal Partners	
12:30 – 12:55 (:25)	Transcending Generations: The Zuni Importance of Grand Canyon through the Voices of Zuni Youth: Results from the 2018 Zuni Monitoring and Pedagogical River Trip, Kurt Dongoske, Pueblo of Zuni
1:00 – 1:25 (:25)	Archival Knowledge and TEK in the Hualapai Monitoring Program, Peter Bungart, Hualapai Tribe
Bug Flows Experiment	
1:30 – 2:00 (:30)	Bug Flows: Implementation and Resource Response, Ted Kennedy and Jeff Muehlbauer, GCMRC
2:05 – 2:25 (:20)	Bug Flows: Next Steps, Ted Kennedy and Jeff Muehlbauer, GCMRC
2:30 – 2:45 (:15)	BREAK
Water Quality	
2:45 – 3:00 (:15)	Phosphorous, Metabolism and Fish, Charles Yackulic and Bridget Deemer, GCMRC
3:05 – 3:25 (:20)	Water Quality in Lake Powell and the Colorado River, Bridget Deemer, GCMRC
Socioeconomic/Hydropower	
3:30 – 3:45 (:15)	Hydropower, Clayton Palmer, WAPA
3:50 – 4:30 (:15)	Engaging Navajo Nation chapters in historic preservation and survey research, Lucas Bair, GCMRC and Melinda Arvis-Ciocco, Navajo Nation
4:40 – 5:00 (:20)	Discussion
5:00	Adjourn
5:30 – 7:30	POSTER SESSION (list of posters attached)

Poster Session – Wren Ballroom 1, Crowne Plaza Hotel Phoenix Airport, 5:30 – 7:30 PM

Poster Title	Author
Sediment/Archeological and Cultural Resources	
Grain-size controls on sand storage in rivers	David Topping, GCMRC
Process and progress in monitoring surficial changes to cultural resources within Grand Canyon National Park	Joshua Caster, GCMRC
Patterns in the sand: Bedforms of the Colorado River in Grand Canyon	Daniel Buscombe and Matthew Kaplinski, NAU
Constructing a 260-km long, 25-cm resolution map of Colorado River bed sediment in Glen, Marble, and Grand Canyons	Daniel Buscombe and others, NAU
River channel evolution in sediment surplus environments: A case study of Colorado River reaches in incised reservoir sediments	Edward Schenk and others, Springs Stewardship Institute
Riparian Vegetation/Tribal Resources	
Ground-based riparian monitoring and research	Emily Palmquist, GCMRC
Landscape scale riparian corridor analysis using 2013 remotely sensed airborne data, Grand Canyon, Arizona	Laura Durning, NAU
Natural Processes	
Aquatic insects link the Colorado River to terrestrial vertebrates in Grand Canyon	Christine Lupoli, ASU
Citizen science acoustic bat monitoring in Grand Canyon	Carol Fritzing, GCMRC
Genetic diversity and distributions of <i>Hydropsyche</i> caddisfly throughout the Colorado River Basin	Anya Metcalfe, GCMRC
River Regulation Consequences and Surprises: Benthic and Hyporheic Anoxia in the Colorado River, Glen Canyon National Recreation Area	Larry Stevens, Springs Stewardship Institute
Humpback Chub/Other Native Fish	
What Environmental Conditions Reduce Predation Vulnerability for Juvenile Colorado River Native Fishes?	David Ward and Ben Vaage, GCMRC
What's in the hump of the humpback chub?	David Ward and Michael Ward, GCMRC
Just keep swimming sucker	Cory Nielsen and others, AZGFD
Safety in numbers: Cost-effective endangered species management for viable populations	Lucas Bair, GCMRC
Hot, cold, and hungry suckers	Pillar Wolters and others, AZGFD
Data Stewardship	
Improving access to river science data by leveraging Amazon Web Services and Internet of Things Connected Sensors	Tom Gushue and others, GCMRC
Glen Canyon Adaptive Management Wiki	Craig Ellsworth, WAPA

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TIME	Wednesday, March 13, 2019
8:20 – 8:30 (:10)	Welcome and Administrative: Seth Shanahan, TWG Chair <ul style="list-style-type: none"> • Introductions: Scott VanderKooi, Chief, GCMRC
History and Background of HFEs	
8:30 – 9:10 (:40)	History and Background of High Flow Experiments, TBD
9:10 – 9:30 (:20)	Discussion
Effects of HFEs on Sediment Transport and Sandbars	
9:30 – 10:00 (:30)	Sediment Mass Balance/Accounting/Timing, David Topping, GCMRC
10:00 – 10:15 (:15)	BREAK
10:15 – 10:35 (:20)	Sediment Modeling, Scott Wright, USGS CAWSC
10:40 – 11:05 (:25)	Sandbar Dynamics, Paul Grams, GCMRC
11:10 – 11:30 (:20)	High Elevation Sand/Cultural Sites, Joel Sankey, GCMRC
11:35 – 11:55 (:20)	Riparian Vegetation, Brad Butterfield, NAU
12:00 – 1:00 (1:00)	LUNCH
Effects of HFEs on Other Resources	
1:00 – 1:25 (:25)	Aquatic Food Base, Ted Kennedy and Jeff Muehlbauer, GCMRC
1:30 – 2:00 (:30)	Rainbow Trout and Brown Trout, Mike Yard, GCMRC
2:05 – 2:30 (:25)	Native and Nonnative Fishes, David Ward, GCMRC
2:35 – 2:55 (:20)	Hydropower/Recreation, Lucas Bair, GCMRC
3:00 – 3:15 (:15)	BREAK
3:15 – 3:45 (:30)	What's Next? Key Uncertainties and Future HFE Design, Scott VanderKooi and Mike Moran, GCMRC
3:45 – 5:00 (1:15)	Panel Discussion
5:00	Adjourn

Glen Canyon Dam Adaptive Management Program

TECHNICAL WORK GROUP MEETING

MARCH 14, 2019

Crowne Plaza Phoenix Airport

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4300 E. Washington Street, Phoenix, AZ 85034

WebEx: <https://ucbor-events.webex.com/ucbor-events/onstage/g.php?MTID=e4eef1318bdc1f3da9e5c6396ae7ff4eb>

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DRAFT AGENDA

START TIME (Duration)	Thursday, March 14, 2019 Topic, Presenter, and Purpose
8:30 (:30)	Welcome and Administrative: Seth Shanahan, Technical Work Group (TWG) Chair <ul style="list-style-type: none">▪ Introductions and Determination of Quorum (16 members)▪ Approval of June 25-26, 2018 and October 10, 2018, Meeting Minutes▪ Review 2019 Meeting Dates: May 1 (webinar); June 11-12; and October 16 (webinar)▪ Update on Personnel and Member Changes▪ Update on Agency Website Changes▪ Update on Project C.9 – Preventing Fish Passage through the Dam▪ Lees Ferry Rainbow Trout Stocking▪ Notice of Using Action Item Tracking Form to Track Important Questions▪ Update on Monitoring and Research Trips to Occur from Today until Next Meeting▪ Updates on Items of Interest that are in Consideration for Implementation before Next TWG Meeting
9:00 (:15)	Update on Hydrology, Operations, and Reservoir/Release Temperatures: Heather Patno, Bureau of Reclamation (Reclamation) <ul style="list-style-type: none">▪ Presentation (10 minutes)▪ Q&A and discussion (5 minutes)
9:15 (:30)	Long-Term Experimental and Management Plan (LTEMP) Biological Opinion Conservation Measures Update: Emily Omana Smith, Bureau of Reclamation (Reclamation), Scott VanderKooi, Grand Canyon Monitoring and Research Center (GCMRC) <ul style="list-style-type: none">▪ Presentation (10 minutes)▪ Q&A and discussion (20 minutes)
9:45 (:60)	Discussion of Possible Experimental and Management Actions that May be Implemented for CY19 and Opportunities for Monitoring Background Conditions that May Mimic Experimental Actions: Seth Shanahan, TWG Chair, Emily Omana Smith, Reclamation, and Scott VanderKooi, GCMRC <ul style="list-style-type: none">▪ Presentation, Q&A, and discussion (60 minutes)
10:45 (:15)	BREAK
11:00 (:15)	Plans for Preparing a Colorado Pikeminnow Reintroduction Feasibility Study in CY19: Kirk Young, U.S. Fish and Wildlife Service (Service) <ul style="list-style-type: none">▪ Presentation (10 minutes)▪ Q&A and discussion (5 minutes)

START TIME (Duration)	Thursday, March 14, 2019 Topic, Presenter, and Purpose
11:15 (:30)	Recommendations to Downlist Razorback Sucker and Humpback Chub to Threatened Status: Kevin McAbee, Service <ul style="list-style-type: none"> ▪ Presentation (20 minutes) ▪ Q&A and discussion (10 minutes)
11:45 (:15)	Non-Native Aquatic Species Control Plan: Rob Billerbeck, National Park Service <ul style="list-style-type: none"> ▪ Presentation (10 minutes) ▪ Q&A and discussion (5 minutes)
12:00 (:15)	Southern Paiute Consortium 2018 Monitoring Program: Charley Bullets, Southern Paiute Consortium <ul style="list-style-type: none"> ▪ Presentation (10 minutes) ▪ Q&A and discussion (5 minutes)
12:15 (1:15)	LUNCH
1:30 (:15)	Annual FY18 Reporting on Expenditures: Emily Omana Smith, Reclamation; Mike Moran, GCRMC <ul style="list-style-type: none"> ▪ Presentation (10 minutes) ▪ Q&A and discussion (5 minutes)
1:45 (1:15)	Review Initial Results and Findings from Triennial Work Plan (TWP), Identify Potential TWP Changes, and Give Direction to Budget Ad Hoc Group for Developing Annual Budget Recommendation: TWG members <ul style="list-style-type: none"> ▪ Q&A and discussion (75 minutes)
3:00 (:15)	Discussion of Emerging Issues and Request for Agenda Items for Next Meeting: Seth Shanahan, TWG Chair <ul style="list-style-type: none"> ▪ Q&A and discussion (15 minutes)
3:15 (:05)	Public Comment
3:20	ADJOURN