

# Glen Canyon Dam Adaptive Management Program

## FY25 Annual Reporting Meeting Agenda

Flagstaff, AZ; Little America - 2515 E Butler Avenue

Day 1 (Tuesday February 3, 8:00 a.m. – 5:00 p.m. MST) / Day 2 (Wednesday February 4, 8:00 a.m. – 5:00 p.m. MST)

Teams meeting registration: [ARM Day 1 Registration](#); Meeting ID: 292 932 119 799 49; Passcode: Lg7jx93r

Dial-in: [202-640-1187](#) | Code: [812970406#](#)

Start	End	Duration	DAY 1 - Tuesday, 3 February 2026
8:00 AM	8:30 AM	0:30	<b>Welcome and Administrative:</b> Mark Anderson <sup>1</sup> , Andrew Schultz <sup>1</sup> , Bill Stewart (USBR), Jeremy Hammen (USBR), Seth Shanahan (SNWA)
8:30 AM	8:35 AM	0:05	Roundtable Introductions – name and affiliation
			<b>Tribal Resources</b>
8:35 AM	9:05 AM	0:30	Navajo Cultural Training; Erik Stanfield (Navajo Nation)
9:05 AM	9:25 AM	0:20	2025 Hopi River Monitoring; Jakob Maase (Hopi Tribe)
9:25 AM	9:45 AM	0:20	2025 Hualapai Monitoring Updates; Carrie Cannon (Hualapai Tribe)
9:45 AM	10:00 AM	0:15	Tribal Resources Discussion
10:00 AM	10:45 AM	0:45	<b>POSTER BREAK</b>
			<b>Natural Processes</b>
10:45 AM	11:05 AM	0:20	Drivers of aquatic insect production and diversity in the Colorado River; Ted Kennedy <sup>1</sup> , Eric Scholl <sup>1</sup> , Kate Behn <sup>1</sup>
11:05 AM	11:20 AM	0:15	Aquatic ecosystem monitoring using eDNA metabarcoding; David Lytle (Oregon State University)
11:20 AM	11:35 AM	0:15	Dissolved oxygen dynamics in Glen Canyon Dam releases; Bridget Deemer <sup>1</sup>
11:35 AM	11:50 AM	0:15	Natural Processes Discussion
11:50 AM	1:00 PM	1:10	<b>LUNCH</b>
			<b>Rainbow Trout Fishery</b>
1:00 PM	1:40 PM	0:40	Trout Metrics and Synthesis of Flow Effects on Trout Population Dynamics; Brian Healy <sup>1</sup> , Josh Korman (Ecometric Research), Bridget R. Deemer <sup>1</sup> , Benjamin Miller <sup>1</sup> , Lindsay E. Hansen <sup>1</sup> , Dale Fonken (AGFD), David Rogowski (AGFD), Charles B. Yackulic <sup>1</sup> , Theodore A. Kennedy <sup>1</sup> , Lucas Bair <sup>1</sup>
1:40 PM	1:55 PM	0:15	Rainbow Trout Fishery Discussion (with notes from Bill Persons (Trout Unlimited))
			<b>Humpback Chub</b>
1:55 PM	2:40 PM	0:45	Monitoring Humpback Chub in the Little Colorado River and Colorado River, Grand Canyon (synthesis across Humpback Chub projects); Maria Dzul <sup>1</sup> , Mike Pillow (USFWS), Pilar Rinker (USFWS), John Fennell (AGFD), Charles B. Yackulic <sup>1</sup> , David Ward (FWS), David Rogowski (AGFD), Lindsay Hansen <sup>1</sup> , Benjamin Miller <sup>1</sup> , Kimberly Dibble <sup>1</sup>
2:40 PM	2:55 PM	0:15	Humpback Chub Discussion
2:55 PM	3:40 PM	0:45	<b>POSTER BREAK</b>
			<b>Nonnative Aquatic Species</b>
3:40 PM	4:25 PM	0:45	A synthesis of nonnative aquatic species monitoring, research, and modeling in the Colorado River; Dibble, K.L. <sup>1</sup> , C.B. Yackulic <sup>1</sup> , D. Eppehimer <sup>1</sup>
4:25 PM	4:40 PM	0:15	Nonnative Aquatic Species Discussion
			<b>Other Native Fishes</b>
4:40 PM	4:45 PM	0:05	Colorado River Native Fishes-Introduction to the Other Native Fish Resource Goal
4:45 PM	5:00 PM	0:15	Other Native Fishes Discussion
5:00 PM	6:30 PM	1:30	<b>POSTER BREAK (SOCIAL; Little America)</b>
			<b>End Day 1</b>

<sup>1</sup> U.S. Geological Survey, Southwest Biological Science Center, Grand Canyon Monitoring and Research Center

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Day 1 (Tuesday February 3, 8:00 a.m. – 5:00 p.m. MST) / Day 2 (Wednesday February 4, 8:00 a.m. – 5:00 p.m. MST)

Teams meeting registration: [ARM Day 2 Registration](#); Meeting ID: 258 575 325 653 49; Passcode: RQ7Ji2GY

Dial-in: [202-640-1187](#) | [Code: 1625179#](#)

Start	End	Duration	DAY 2 - Wednesday, 4 February 2026
8:00 AM	8:10 AM	0:10	<b>Morning Welcome:</b> Mark Anderson <sup>1</sup> , Bill Stewart (USBR), Jeremy Hammen (USBR), Seth Shanahan (SNWA)
			<b>Hydropower and Energy</b>
8:10 AM	8:25 AM	0:15	Hydropower Resource Update; Jerry Wilhite (WAPA)
8:25 AM	8:40 AM	0:15	Hydropower and Energy Resource Discussion
			<b>Recreational Experience</b>
8:40 AM	9:00 AM	0:20	Recreational Experience Introduction; Ben Reeder (Grand Canyon River Guides)
9:00 AM	9:15 AM	0:15	Recreational Experience Discussion
9:15 AM	10:00 AM	0:45	<b>POSTER BREAK</b>
10:00 AM	10:20 AM	0:20	Project L: Overflight Remote Sensing in Support of Long-Term Monitoring and LTEMP; Joshua Caster <sup>1</sup>
			<b>Sediment</b>
10:20 AM	10:50 AM	0:30	Evaluation of LTEMP sand management; David J. Topping <sup>1</sup> , Paul E. Grams <sup>1</sup> , Ronald E. Griffiths <sup>1</sup> , Matt Kaplinski <sup>1</sup> , Katie A. Chapman <sup>1</sup> , David J. Dean <sup>1</sup> , Max A. Evans <sup>1</sup> , Gerald Salter <sup>1</sup> , Keegan M. Donovan (Arizona Water Science Center)
10:50 AM	11:10 AM	0:20	Riverbed and sandbar response to dam operations and high-flow experiments; Paul Grams <sup>1</sup> , Matt Kaplinski <sup>1</sup> , Shannon Sartain <sup>1</sup> , Gerard Salter <sup>1</sup> , Katie Chapman <sup>1</sup> , Robert Tusso <sup>1</sup> , David Topping <sup>1</sup>
11:10 AM	11:30 AM	0:20	Reservoir Operational Strategies for Sustainable Sand Management in the Colorado River (summary of recent publication), Gerard Salter <sup>1</sup>
11:30 AM	11:45 AM	0:15	Sediment Discussion
11:45 AM	1:15 PM	1:30	<b>LUNCH</b>
			<b>Riparian Vegetation</b>
1:15 PM	1:35 PM	0:20	Vegetation Induced Declines in Channel Width with Implications for Eddy Sandbar Dynamics in the Colorado River in Marble and Grand Canyons; David Dean <sup>1</sup> , Josh Caster <sup>1</sup> , Joel Sankey <sup>1</sup> , Paul Grams <sup>1</sup> , Helen Fairley <sup>1</sup> , Emily Palmquist <sup>1</sup>
1:35 PM	1:55 PM	0:20	Colorado River plant communities in Glen, Marble, and Grand Canyons; Emily Palmquist <sup>1</sup> , Bradley Butterfield (Northern Arizona University), Nathaniel Bransky <sup>1</sup> (Northern Arizona University), Joel Sankey <sup>1</sup>
1:55 PM	2:15 PM	0:20	Riparian Plant Responses to Flow Regulation: A Preliminary Synthesis; Bradley Butterfield (Northern Arizona University), Emily Palmquist <sup>1</sup>
2:15 PM	2:30 PM	0:15	Riparian Vegetation Discussion
2:30 PM	3:15 PM	0:45	<b>POSTER BREAK</b>
			<b>Archaeological and Cultural Resources</b>
3:15 PM	3:35 PM	0:20	Project D: Experimental Management of Aeolian-Fluvial Interactions and Riparian Vegetation Feedbacks for Cultural Resources in Grand Canyon; Joel Sankey <sup>1</sup> , Joshua Caster <sup>1</sup> , Helen Fairley <sup>1</sup>
3:35 PM	3:50 PM	0:15	Archaeological and Cultural Resource Discussion
			<b>General Discussion Time</b>
3:50 PM	5:00 PM	1:10	Discussion
5:00 PM	5:00 PM		<b>End Day 2</b>

<sup>1</sup> U.S. Geological Survey, Southwest Biological Science Center, Grand Canyon Monitoring and Research Center

# Glen Canyon Dam Adaptive Management Program

## FY25 Annual Reporting Meeting Posters

Poster Breaks mid-morning and afternoon on Days 1 and 2, evening Day 1 – See Agenda

LTEMP METRICS REPORTING	AUTHORS
LTEMP Resource Goal 1: Archaeological Sites and Cultural Resources	Helen Fairley <sup>1</sup> , Joel Sankey <sup>1</sup> , Joshua Caster <sup>1</sup>
LTEMP Resource Goal 2: Natural Processes	Bridget Deemer <sup>1</sup> , Emily Palmquist <sup>1</sup> , Ted Kennedy <sup>1</sup>
LTEMP Resource Goal 3: Humpback Chub	Maria Dzul <sup>1</sup> , Kimberly Dibble <sup>1</sup> , Emily Omana Smith <sup>6</sup> , Jeff Arnold <sup>7</sup> David Ward <sup>8</sup> , David Rogowski <sup>9</sup> , Charles Yackulic <sup>1</sup>
LTEMP Resource Goal 4: Hydropower and Energy	Gregory Mark Anderson <sup>1</sup>
LTEMP Resource Goal 5: Other Native Fishes	Brian Healy <sup>1</sup> Kim Dibble <sup>1</sup>
LTEMP Resource Goal 6: Recreational Experience	Gregory Mark Anderson <sup>1</sup>
LTEMP Resource Goal 7: Sediment	Matt Kaplinski <sup>1</sup> , David Topping <sup>1</sup> , Paul Grams <sup>1</sup> , Katherine Chapman <sup>1</sup> , Robert Tusso <sup>1</sup> , Gerard Salter <sup>1</sup> , Shannon Sartain <sup>1</sup>
LTEMP Resource Goal 8: Tribal Values and Resources	Gregory Mark Anderson <sup>1</sup>
LTEMP Resource Goal 9: Rainbow Trout Fishery	Brian Healy <sup>1</sup>
LTEMP Resource Goal 10: Nonnative Invasive Species	Dibble, K.L. <sup>1</sup> , L. Hansen <sup>1</sup> , K. Behn <sup>1</sup> , C.B. Yackulic <sup>1</sup> , D. Eppehimer <sup>1</sup> , J. Arnold <sup>7</sup> , E. Omana Smith <sup>6</sup> , D. Rogowski <sup>9</sup> , D. Ward <sup>8</sup>
LTEMP Resource Goal 11: Riparian Vegetation	Palmquist, E.C. <sup>1</sup> , B.J. Butterfield <sup>10</sup> , E. Jordan <sup>1</sup>

POSTERS	AUTHORS
Toward improved efficiency in measuring realtime Paria River sediment loads for HFE design	Ronald E. Griffiths <sup>1</sup> and others TBD
Sandbar monitoring data and photos	Katie Chapman <sup>1</sup> , Bob Tusso <sup>1</sup>
Monitoring and predicting channel change in Western Grand Canyon in response to Glen Canyon Dam flows and High Flow Experiments	Shannon Sartain <sup>1</sup> , Paul Grams <sup>1</sup> , Matt Kaplinski <sup>1</sup> , Katie Chapman <sup>1</sup> , Bob Tusso <sup>1</sup> , Erich Mueller <sup>11</sup>
Visualizing Hydropower Impacts of Coolmix Flows	Lucas Bair <sup>1</sup> , Drew Eppehimer <sup>1</sup>
Grand Canyon Citizen Science PIT Antenna – Year 1 Summary	Ben Miller <sup>1</sup> , Kiona Allen <sup>1</sup> , Maria Dzul <sup>1</sup>
Hydrologic Data Collection in Grand Canyon and Colorado River Tributaries	Keegan Donovan <sup>2</sup> , Zach Harrison <sup>2</sup> , Chaska Boucher <sup>2</sup> , Kat Cooney <sup>2</sup> , Janice Talley <sup>2</sup>
Decreasing water levels in lakes and reservoirs promote increasing phytoplankton levels: a systematic review	Kathryn K. Hoffman <sup>3</sup> , Bridget R. Deemer <sup>1</sup> , Mary E. Lofton <sup>3</sup> , Cayelan C. Carey <sup>3</sup>
Fusion of ground-penetrating radar and terrestrial lidar to investigate fluvial-aeolian interactions in Grand Canyon	Joshua Caster <sup>1</sup> , Madeline M. Kelley <sup>1</sup> , Joel B. Sankey <sup>1</sup> , Ryan Porter <sup>2</sup> , Amy E. East <sup>3</sup> , Nathaniel Bransky <sup>1,4</sup> , Helen Fairley <sup>1</sup>
The role of GIS in communicating hazard risk and developing an emergency alert system in Grand Canyon, Arizona.	Thomas M. Gushue <sup>1</sup> , Erica P. Byerley <sup>1</sup>
Post-dam Glen Canyon diatom assemblage change	John Wehr <sup>4</sup> , Larry Stevens <sup>5</sup>
Natural and dam-related biotic discontinuities	Larry Stevens <sup>5</sup>
SPC Colorado River Corridor Resource Review	Daniel Bullets <sup>12</sup>

<sup>1</sup> U.S. Geological Survey, Southwest Biological Science Center, Grand Canyon Monitoring and Research Center, Flagstaff, AZ

<sup>2</sup> U.S. Geological Survey, Arizona Water Science Center, Flagstaff, AZ

<sup>3</sup> Virginia Tech, Department of Biological Sciences, Blacksburg, VA

<sup>4</sup> Fordham University, Department of Biological Sciences, Bronx, NY

<sup>5</sup> Southwest Wildlands, Flagstaff, AZ

<sup>6</sup> National Park Service, Grand Canyon National Park, Arizona

<sup>7</sup> National Park Service, Glen Canyon National Recreation Area, Arizona/Utah

<sup>8</sup> US Fish and Wildlife Service, AZ Fish and Wildlife Conservation Office, Flagstaff, AZ

<sup>9</sup> Arizona Game and Fish Department, Arizona

<sup>10</sup> Northern Arizona University, Department of Biological Sciences Flagstaff, AZ

<sup>11</sup> Southern Utah University, Department of Geosciences, Cedar City, UT

<sup>12</sup> Southern Paiute Consortium