

Dragon Bravo Post-Fire Updates



Dragon Bravo Fire: July 4 – Sept 28, 2025



Lightning strike July 4, 2025



Declared fully contained on
September 28



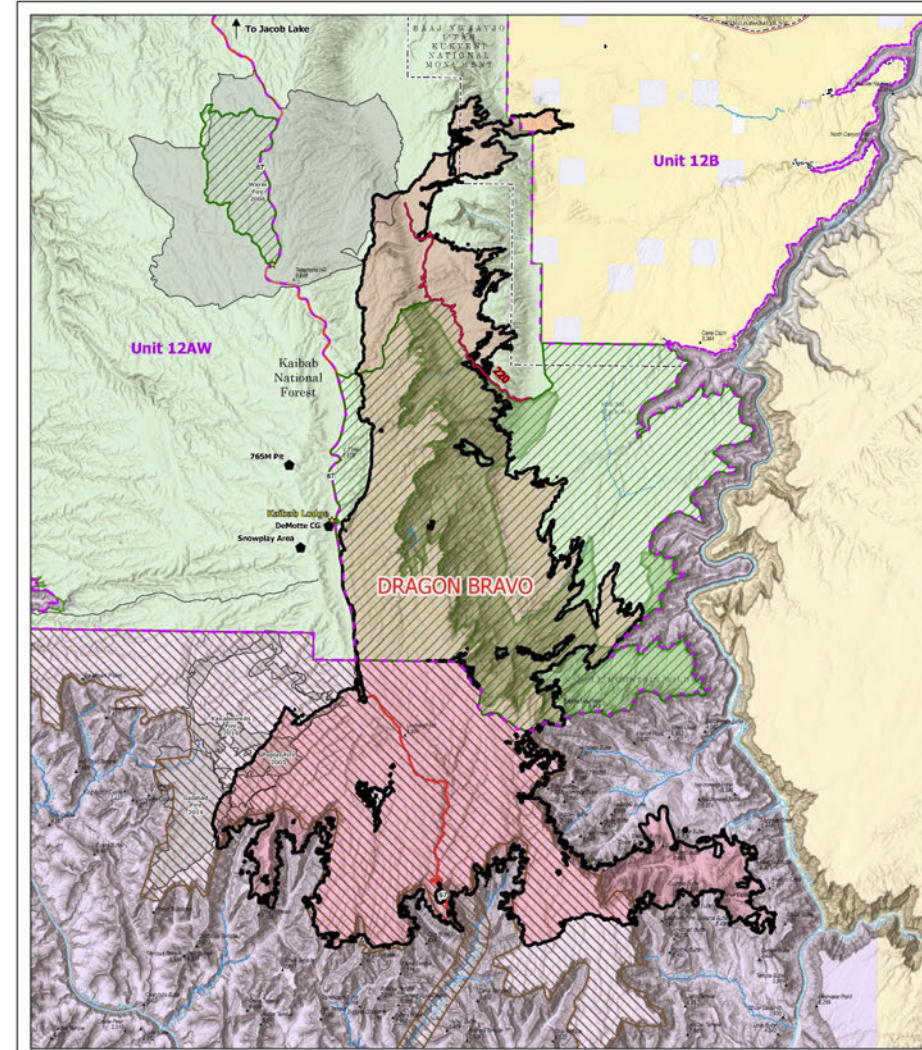
>145,000 acres on NPS and USFS



Losses: 106 structures and critical
utilities



Planning for a partial opening of North
Rim on May 15th



Public Information

Dragon Bravo
AZ-GCP-000597
9/29/2025

145,504 acres at 8/20/2025 0120

0 2.5 5 7.5 10
Miles

1:100,000 | 9/23/2025 2:08P
North American 1983 Datum, Lanting Grid

- Contained Fire Edge
- Wildfire Perimeter
- ★ PIO Board
- Closed Locations
- Closed Roads
- ▨ NPS Closure Areas
- ▨ USFS Closure Areas
- ▨ Game Management Units
- ▨ Fire History
- ▨ Baaj Nwaavjo Itah Kukveni National Monument
- ▨ Forest Service Lands
- ▨ State Public Lands
- ▨ Other State Lands
- ▨ Bureau of Land Management Lands
- ▨ National Park Service Lands



Grand Canyon National Park (GRCA): 2026 Operations



- **March 4, 2026:** Lower North Kaibab Trail reopening from Phantom Ranch to Ribbon Falls with enhanced flood monitoring
- **May 15, 2026:** North Rim tentative reopening for limited visitor services
- **Spring/Summer:** Assessments of the North Kaibab Trail and updated flood mapping
- **Ongoing:** Monitoring of cultural resources stabilization, watershed response, fish impacts downstream, wildlife and vegetation





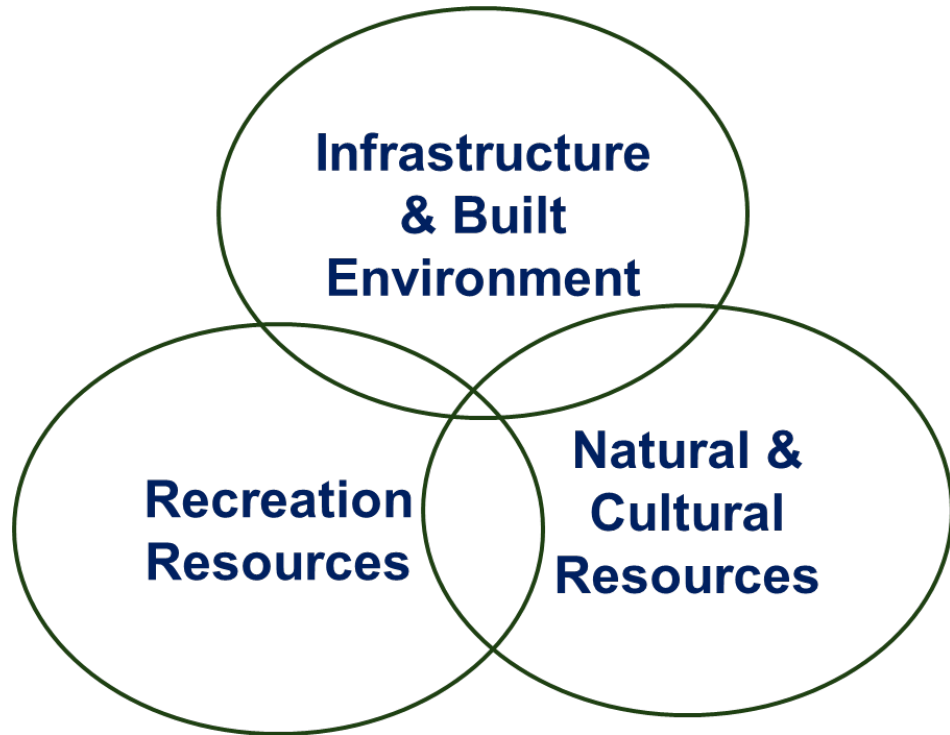
Recovery Planning / BAER Review (Aug 19 – Sept 4)

- The Burned Area Emergency Response (BAER) team
- Focused on burn severity map and field verification
- Finalized a plan for emergency stabilization to protect life and property & to prevent further degradation of natural and cultural resources





Recovery Planning / BAER Review (Aug 19 – Sept 4)



Observations and Resource Concerns



Trail damage / fossils



Geohazards along trails



Forest regeneration

Loss of native species & control of invasive plants; managing hazard trees and snags



Historic & archeological site protection

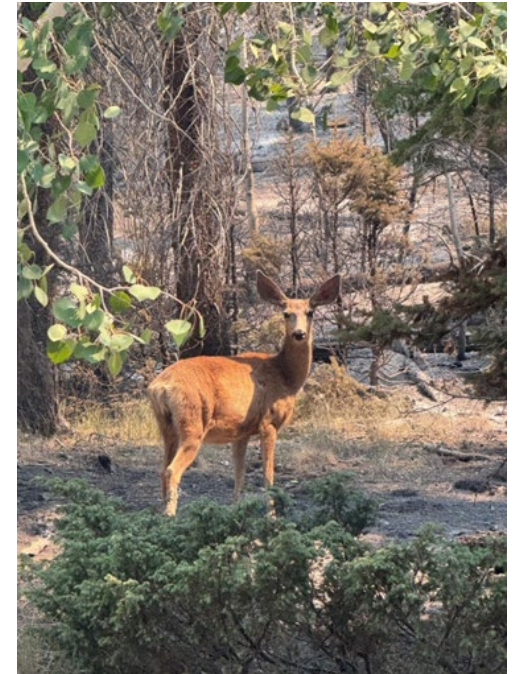


Loss of information; damage to cultural resources from runoff



Wildlife response

Imbalance between wildlife communities; degraded habitats





Observations and Resource Concerns



Recreation & river impacts



Damage to trails, beaches, cultural features



Riparian & fish impacts



Loss of riparian communities; loss of amphibians; loss of native fish



Effect on bison herd



Range shifts; herd health; impacts to springs



Water quality



Drinking water safety; impacts to riparian zones

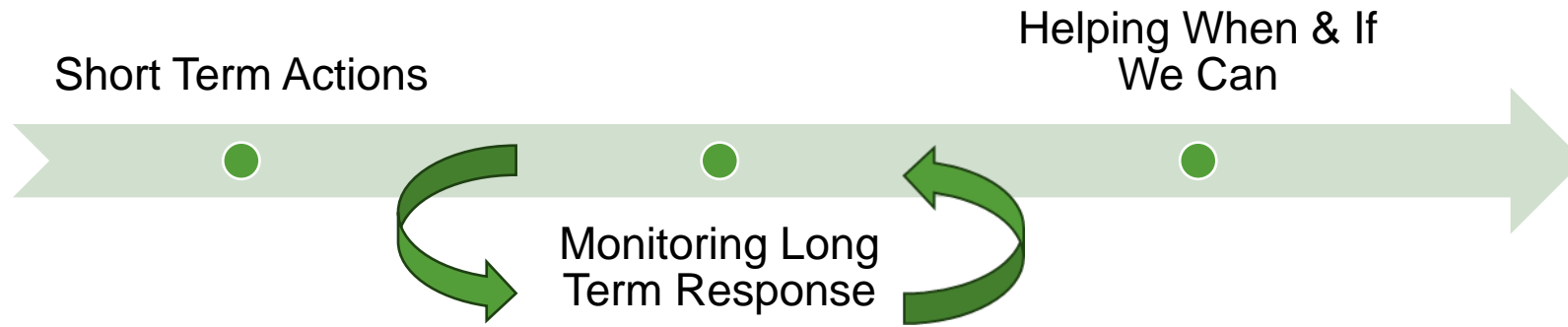
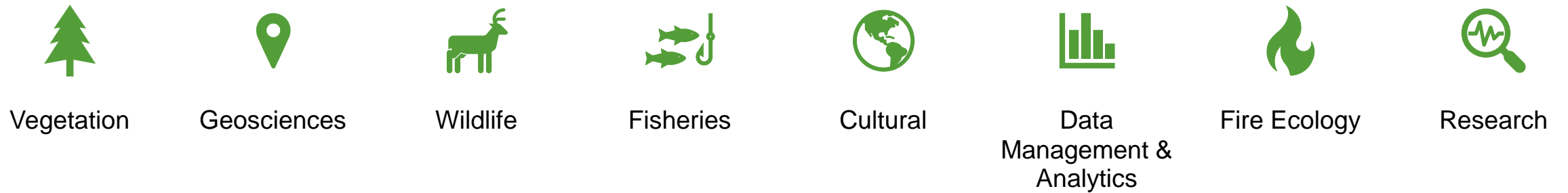


Emergency Stabilization and BAR Efforts

Emergency Stabilization (ES)	ES-12 Storm Patrol
ES-1 Trails Repair & Stabilization	ES-13 Invasive Plant Management
ES-2 Hazard Warning Signs & Messaging	ES-14 Compliance and Consultation
ES-3 Public Safety & Resource Protection	ES-15 BAER Implementation Leader
ES-4 Hazard Trees	
ES-5 Highway Safety Infrastructure Replacement	Burned Area Rehabilitation (BAR)
ES-6 HAZMAT Stabilization	BAR-1 Trails Repair & Stabilization
ES-7 Historic Building Stabilization	BAR-2 Replace Minor Assets
ES-8 Historic Building Safety Fence	BAR-3 Invasive Plant Management
ES-9 Boundary Signs	BAR-4 Replace Minor Monitoring Equipment
ES-10 Early Warning System	BAR-5 Monarch Habitat Replacement
ES-11 Drinking Water System Protection	BAR-6 BAER Implementation Leader



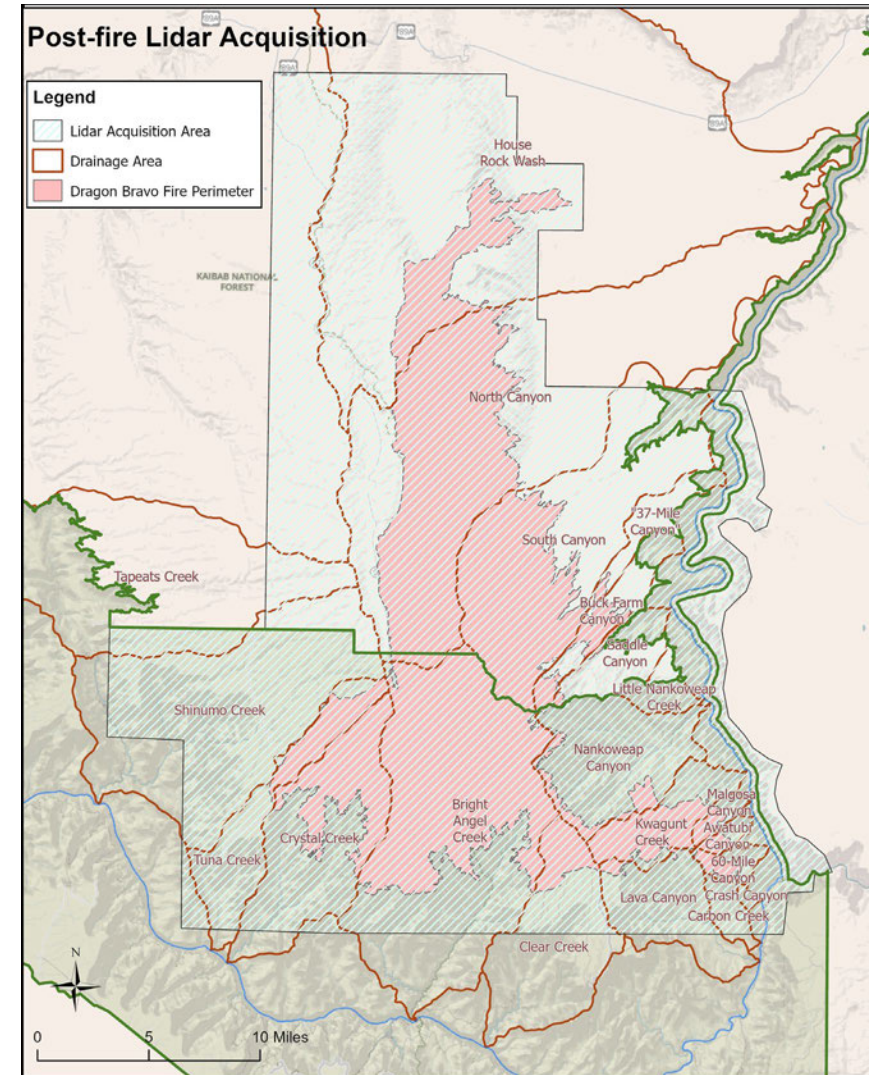
Restoration Strategy: Supporting Landscape Renewal





Data Integration

LiDAR Acquisition to inform landscape changes





Water Resource Concerns

Risks to drinking water (Roaring Springs, Bright Angel Creek)

- Persistent post-fire contaminants on North Rim could flush into groundwater system
- Ash and other contaminants washing off burned areas into streams

Risk of higher magnitude flash flooding and debris flow sediment volumes

- Loss of vegetation; hardened, water repelling soils increase rapid runoff after rainfall, especially in burn areas below the rim
- **Affected watersheds:** Bright Angel Creek (Phantom Ranch), House Rock, North & South Canyons, Buck Farm Canyon, Nankoweap Creek, Kwagunt Creek, 60-mile, Malgosa, Awatubi, Clear Creek, Tuna Creek, and Crystal Creek





Tributary Monitoring

House Rock, 9/9/2025



North Canyon, 9/9/2025



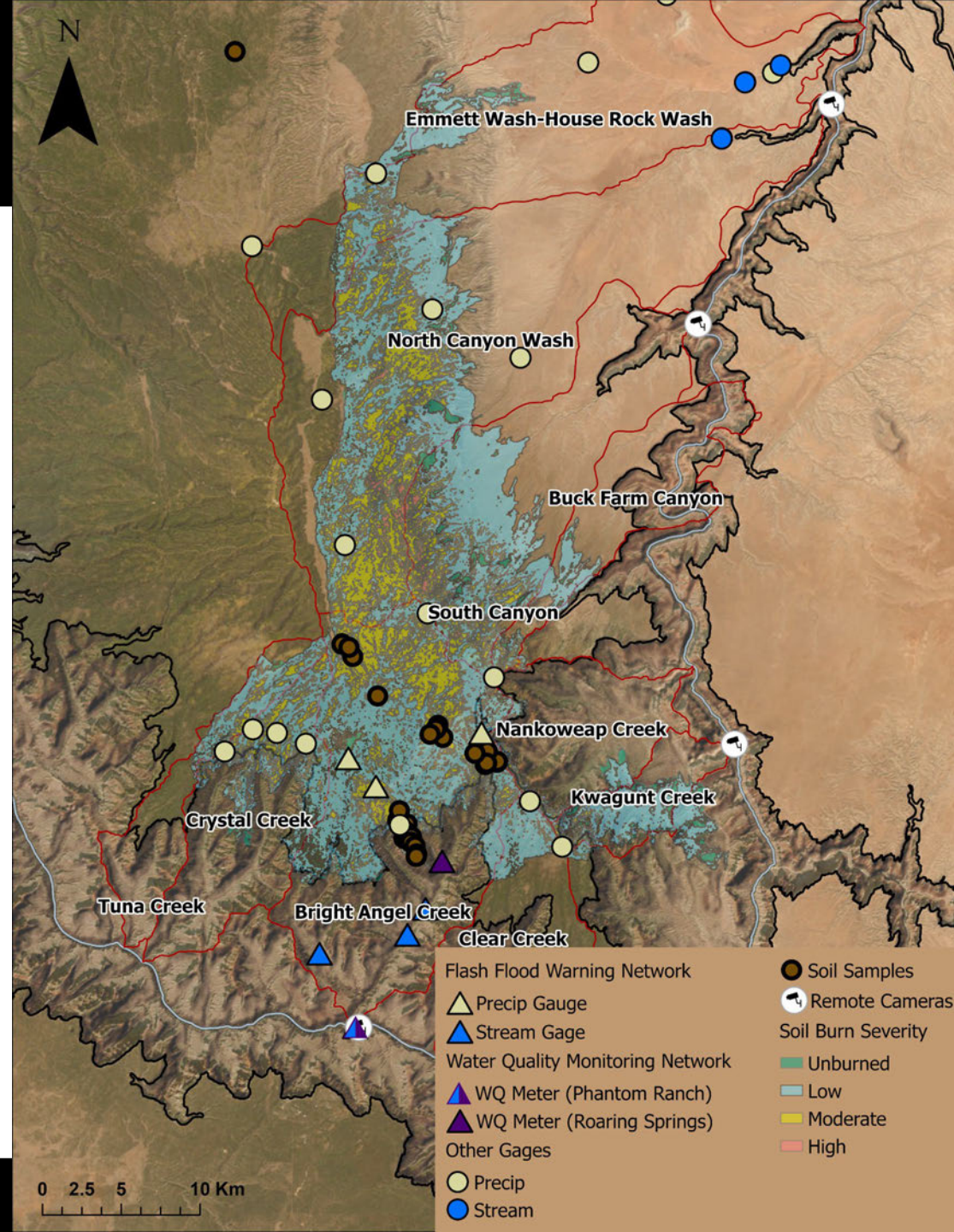
Rider Canyon, 9/9/2025



USGS Photos

Post-Fire Monitoring

- Water Quality monitoring in BAC watershed (NPS)
- BAC flash flood monitoring (AZWSC, GCMRC, NPS)
- Debris flow and flash flood monitoring in other affected watersheds (GCMRC, PCMSC)
- Contaminant sampling in soil on the North Rim (PCMSC)



Water Quality Monitoring

Phantom Ranch

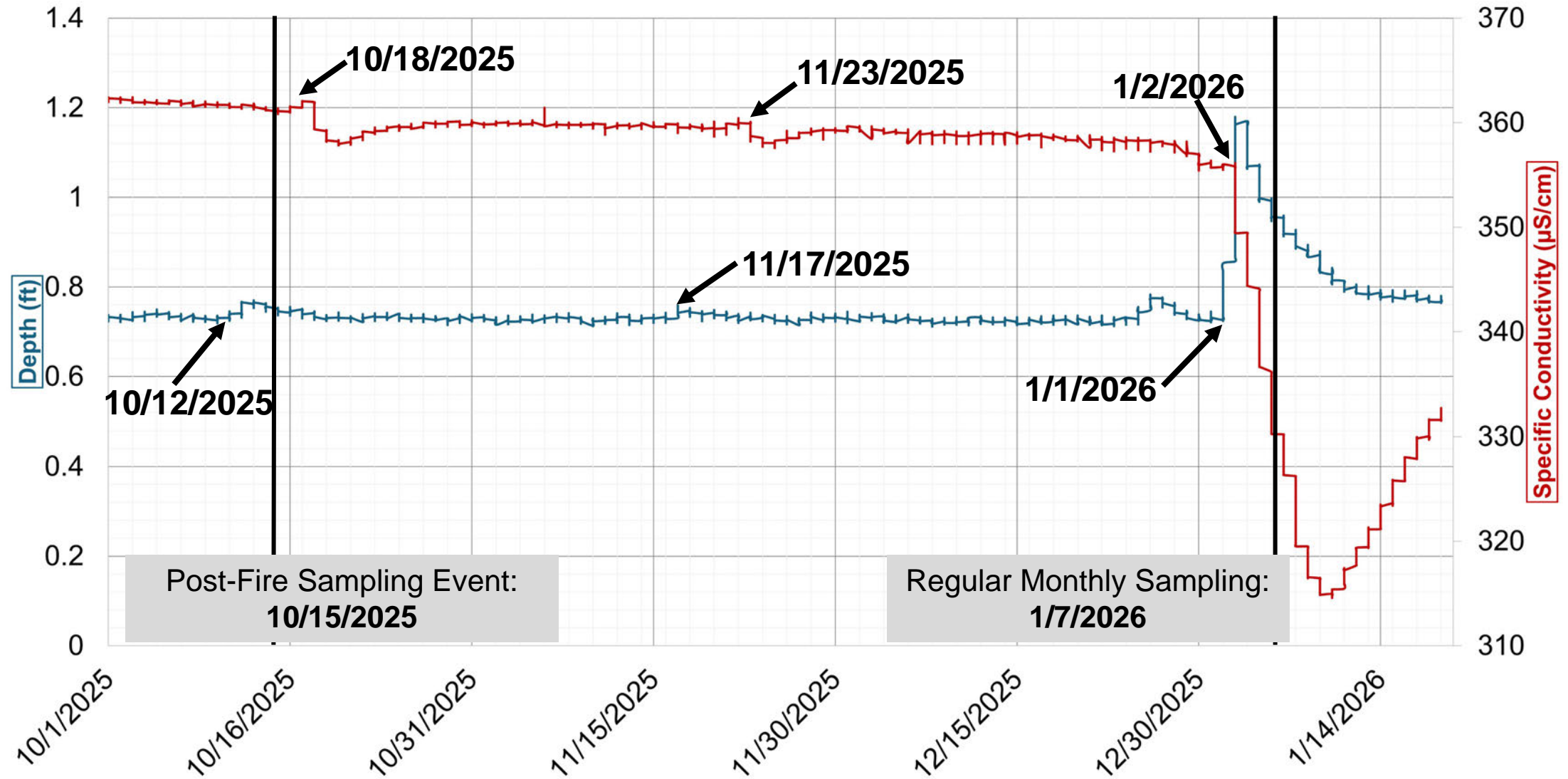


Roaring Springs





Water Quality Monitoring





Native Fish Concerns—Much to Protect

- Approximately 95% of the world's population of humpback chub is in Grand Canyon
- Humpback chub were downlisted to threatened in 2021, in large part due to GRCA population
- Non-ESA protected native fishes are abundant as well
- More native fishes river-wide than nonnative fishes (unlike in the 1990s- 2000s)





Fisheries and Aquatics Risk

- Post-fire runoff may *degrade water quality through ash, sediment, and contaminants, reducing dissolved oxygen and increasing turbidity and temperature.*
- Disturbance and altered habitat conditions may *elevate risk of aquatic invasive species.*
- Loss of riparian vegetation and sediment/debris flows may *destabilize streambanks and disrupt spawning and rearing habitats.*
- Fish may experience *direct mortality and sublethal effects, including reduced growth, reproduction, and recruitment.*
- Impacts may *extend from tributaries to the mainstem Colorado River*, with severity dependent on burn intensity, geomorphology, storm events, and climate-driven uncertainty.



2025 Run-Off Observations



Many reports from river users of flash flooding, blackened water in tributaries and the Colorado River, ash deposition, and water smelling of smoke as far downstream as RM 207.

GCMRC/ FWS- deployed dissolved oxygen sensors:

- above Little Nankoweap Creek (52.02R),
- above Lava Canyon (Chuar) Rapid (65.60 R),
- below Upset Rapid (151.15R), and
- across from Stairway Canyon Camp (171.65L)



Upper Bright Angel Creek Tributaries



NPS Photo Danielle Urich

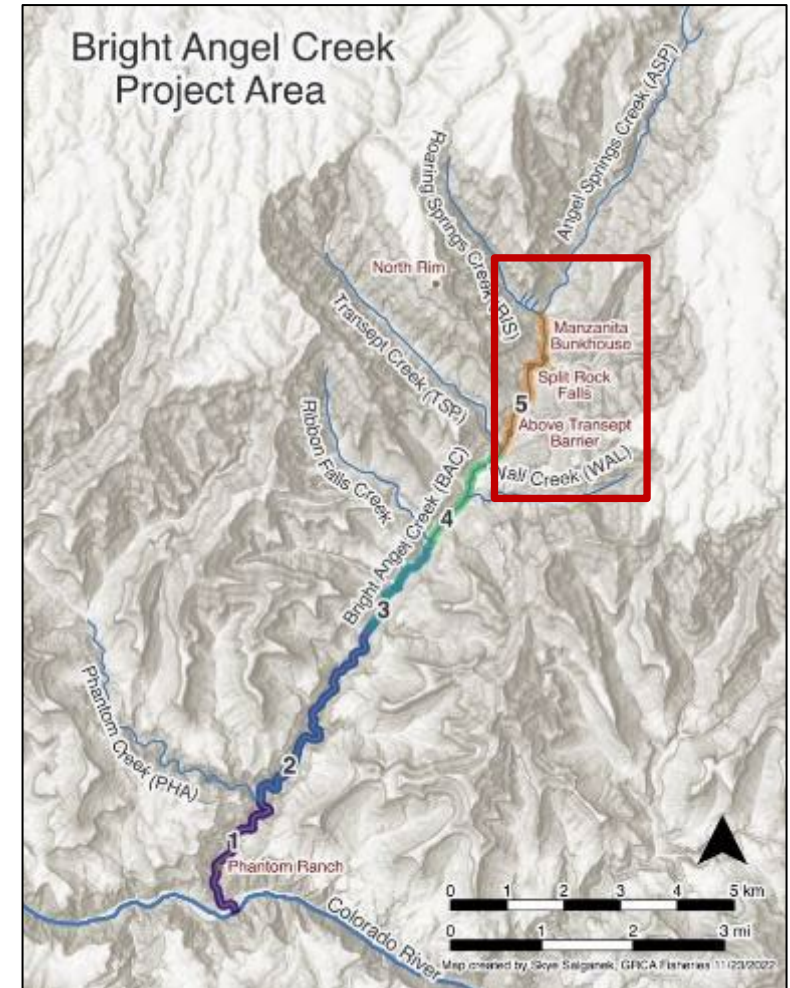


NPS Photo Tara Blake



2025 Monitoring of Bright Angel Creek Watershed

- Flooding and ash-laden debris flows have already impacted fish habitat despite minimal precipitation since the fire.
- Upper watershed historically supported dense nonnative trout populations and has been difficult to sample.
- December 2025 reconnaissance survey detected no trout in headwaters or upstream of the Transept Canyon fish barrier.
- No native fish have ever been documented in this reach.
- Environmental DNA samples collected; laboratory analysis pending to confirm fish presence or absence



Questions?

