New Mexico Environment Department

Wildfires and Surface Water Quality

Surface Water Quality Bureau

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Water Quality Sampling

The Surface Water Quality Bureau (SWQB) collects water quality samples to <u>monitor</u> <u>surface waters</u> in New Mexico and <u>assess</u> the results by comparing them to the <u>surface water quality standards</u>.

- Water quality standards consist of designated uses and criteria to protect the designated uses.
- Designated use examples are livestock watering, wildlife habitat, irrigation, primary contact, warmwater aquatic life, coldwater aquatic life, secondary contact, and public water supply.
- Surface water quality criteria differ for each stream and designated use.
- Data collected during or immediately after temporary catastrophic events are typically not used to make water quality impairment decisions (aka "CWA §303(d) listings").



Water quality sampling locations (red dots) in New Mexico (2022). Map: <u>https://gis.web.env.nm.gov/oem/?map=swqb</u>

Over 45% of New Mexico's assessed surface waters fail to meet quality standards



Existing Water Quality Impairments

- Impaired means waters with degraded water quality that do not meet the criteria set in the water quality standards.
- There are many stream reaches within and downstream of areas impacted by wildfires that were impaired before the fire.



Impaired streams in New Mexico. Map: https://gis.web.env.nm.gov/oem/?map=swqb



SWQB Wildfire and Water Quality Information

- https://www.env.nm.gov/surfacewater-quality/wildfire-impacts-onsurface-water-quality.
- FAQ for wildfire impacts on surface water quality
- <u>This presentation</u> (with links)
- Wildfires can affect physical, chemical, and biological quality of surface waters within the fire area and downstream.

Common post-fire water quality impacts:

- Increased debris and sediment, including black ash, logs, and rocks.
- Increased nutrient loading from burned plants.
- Introduction of radionuclides and heavy metals from ash, soils and geologic sources within the burned area.
- Introduction of fireretardant chemicals resulting in increased nitrogen as ammonia.
- Increased temperatures from loss of vegetation and black ash.



University of New Mexico

New Mexico Highlands University

U.S. Geological Survey (USGS)

New Mexico State University

Amigos Bravos

Hermits Peak Watershed Alliance

Other Non-Governmental Organizations



Watershed Restoration Post-Fire

Next 319 Application Period: Fall 2024/ Winter 2025

Next River Stewardship Program Request for Proposals: Fall 2024/ Winter 2025

- Clean Water Act Section 319 (Nonpoint Source) Project Selection: Priority points awarded for post-fire projects. Post-fire plans are an eligible type of plan. SWQB will help applicants complete planning elements as necessary.
- River Stewardship Program project selection: Post-fire rehabilitation is an eligible activity.





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