



WASHINGTON, D.C. 20460

MEMORANDUM

SUBJECT: EPA Region 6 and Region 7 Tri-State Mining District Watersheds Early or Interim Action Prioritization Scheme

FROM: Sara Goyer, Remedial Project Manager
EPA Region 6, Superfund and Emergency Management Division

[Handwritten signature] 4/28/2025

Jason Gunter, Rachael Puleo, and Sara Ridinger, Remedial Project Managers
EPA Region 7, Superfund and Emergency Management Division

**JASON
GUNTER**

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GUNTER
Date: 2025.04.24
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TO: Tri-State Mining District Partners and Stakeholders

The Tri-State Mining District (TSMD) watersheds include the surface water and sediment Operable Units (OUs) for four Superfund sites. It spans three states and includes approximately 300 miles of streams, many of which are contaminated with metals: primarily lead, cadmium, and zinc from historic mining operations in the area. Following input from partners and stakeholders and the U.S. Environmental Protection Agency's Contaminated Sediments Technical Advisory Group (CSTAG), EPA Regions 6 and 7 determined that the use of early and interim actions, under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9601 *et seq.*, and the National Contingency Plan (NCP), 40 C.F.R. Part 300, will facilitate faster cleanup and allow the EPA to prioritize areas of the watersheds that present a higher risk of exposure and are of particular importance to the community.

The EPA first discussed the concept of this prioritization scheme during an April 2023 meeting with partners and stakeholders, which was held to discuss the October 2022 CSTAG comments. Between October 2023 and June 2024, EPA Regions 6 and 7 held meetings with and received written comments from partners and stakeholders regarding areas of interest for early or interim actions within the TSMD watersheds. The Regions gathered input from the following groups regarding Contaminant of Concern (COC) concentrations, Tribal impacts, proximity to source areas, and public recreational use, among other topics.

- Trustee Council of Tar Creek Indian Tribes (TCTCIT) – October 2023 (virtual meeting/written comments)
- U.S. Department of the Interior (DOI), including the U.S. Fish and Wildlife Service (FWS) – January 2024 (virtual and in-person meeting/written comments)

- Kansas Department of Health and Environment (KDHE) – February 2024 (virtual meeting/written comments)
- Missouri Department of Natural Resources (MoDNR) – February 2024 (virtual meeting/written comments)
- Oklahoma Department of Environmental Quality (ODEQ) – April 2024 (virtual meeting/written comments)
- Quapaw Nation Environmental Office (QNEO) – June 2024 (virtual meeting/written comments)
- Local Environmental Action Demanded (L.E.A.D. Agency) – June 2024 (virtual/in-person meeting)

This memorandum contains the EPA’s proposed prioritization scheme for the selection of source control actions as part of existing mine waste remedies at the Region 6 and Region 7 Superfund sites. Additionally, the scheme includes the selection of Non-time Critical Removal Actions (NTCRA) supported by the development of Engineering Evaluation/Cost Analyses (EE/CAs) following OSWER Dir. 9360.0-32, “Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA” (August 1993), as a potential path to achieve early or interim work throughout the TSMD watersheds. A brief summary of the next steps in the Superfund process for the TSMD watersheds can be found at the end of this document.

General Approach

The EPA is planning early cleanup actions throughout the watersheds, with a focus on remediation of upstream and high impact areas of contamination, while continuing to evaluate long-term cleanup approaches. The goal of taking early actions is to reduce the transport and concentration of contaminants in the TSMD watersheds. The EPA recommends an approach focusing upstream to downstream on tributaries of the Spring River, Lost Creek, and Neosho River, in areas near stabilized mine waste source material to address residual impacts. The proposed prioritization of upstream locations is based on concentration of COCs, potential for erosion and migration, habitat sensitivity, accessibility to the project locations, and potential ecological and human exposure. The approach also intends to incorporate the consideration of areas of cultural significance and high-access public use areas. Please note, many proposed project areas are on private lands, which may present access challenges.

The EPA may additionally evaluate the prioritization through the use of the EPA’s Watershed Analysis Risk Management Framework (WARMF) model and ongoing studies supporting the Feasibility Study. These tools will support the use of an empirical analysis approach to prioritizing NTCRA or early action locations, which is supported by the CSTAG Milestone 1 Recommendations for the watersheds and will help the EPA evaluate the remedial costs in each Superfund site’s EE/CA report and any follow-on actions.

Prioritization of locations within the watersheds helps the EPA to address areas that have the highest risk and are of particular importance to the community. The proposed locations contained

in this memo are tentative. The EPA's decision to perform work in any given location will follow the processes laid out in CERCLA and the NCP and will involve additional input from partners and stakeholders. The EPA plans to develop EE/CAs for each Region 7 Superfund site and will use the EE/CAs to develop the Action Memorandums for each site. The EE/CAs may include evaluation of the following cleanup approaches:

- Contaminated sediment removal from existing depositional areas. Sediment would be removed periodically from these locations and disposed at on-site repositories.
- Contaminated sediment removal from gravel bars or beach areas that are typically above the water level. Sediment would be removed periodically from these locations and disposed at on-site repositories.
- Contaminated sediment removal from depositional areas with existing grade control (e.g., upstream of low-water crossings). Sediment would be removed periodically from these locations and disposed at on-site repositories.
- Construction of traps or grade control structures to collect both instream (bedload) and overbank (suspended) sediment. Sediment would be removed periodically from these locations after construction is complete and disposed of at on-site repositories.
- Stabilization of eroding contaminated riverbanks.
- Treatment of contaminated seeps that recharge to surface water.
- Establishment of Institutional Controls with property owners to help preserve cleanup measures.

In Region 6, early actions will be performed at mine waste sites within OU4 of the Tar Creek Superfund site in and near streams under Interim Measures until a final remedy can be implemented. The remedial design for this work is structured to offer a "toolbox approach" for the various Interim Measures to be implemented. The toolbox includes eight best management practices that may be utilized for each project, alone or in combination, as appropriate based on site-specific conditions at the time of implementation.

- Upland excavation
- Stabilized cover
- Wetland buffer
- Berms
- Sedimentation pond
- Creek and/or sediment trap excavation
- Stone revetment
- Soldier pile and lagging

As part of the long-term cleanup, the EPA has completed the TSMD watersheds Remedial Investigation (RI) reports for the Upper and Lower units, which assess site risks through collected information to support the development, evaluation, and selection of an appropriate cleanup approach. Data collected throughout early cleanup actions and continued data gap analysis will

also support long-term site decision making. Mine waste remediation at each of the four Superfund sites within the TSMD is ongoing and supports reduction in contaminant flow into the watersheds.

Preliminary Watershed Locations

The following locations are preliminary action areas suggested based on the prioritization scheme criteria. Specific locations will be determined and documented in either early or interim actions in accordance with CERCLA and the NCP.

Oronogo-Duenweg Mining Belt, Jasper County, Missouri

- Ben's Branch (tributary of Center Creek)
- Lone Elm Hollow (tributary of Turkey Creek)
- Center Creek (tributary of Spring River)

Cherokee County, Kansas

- Big Gulp (seep to Tar Creek)
- Tar Creek (tributary of Neosho River)
- Willow Creek (tributary of Spring River)

Newton County Mine Tailings, Newton County, Missouri

- Shoal Creek (tributary of Spring River)
- Willow Branch (tributary of Lost Creek near Ivy Dr.)

Tar Creek, Ottawa County, Oklahoma

As a massive amount of mining waste remains near and in-streams in the Oklahoma portion of the TSMD, the removal of that waste from the watersheds is a priority for Region 6. The EPA will continue to utilize interim measures under Tar Creek OU4, as well as final remedial actions under the existing Tar Creek OU4 remedy to remove chat piles, chat bases, and/or fine tailings ponds, as applicable, from the following watersheds:

- Tar Creek (tributary of Neosho River)
- Elm Creek (tributary of Tar Creek)
- Lytle Creek (tributary of Tar Creek)
- Beaver Creek (tributary of Lower Spring River)
- Hockerville Creek (tributary of Lower Spring River)
- Ontario Creek (tributary of Lower Spring River)

Next Steps

For all early, interim, and final actions at the TSMD watersheds, the EPA will follow the requirements set forth in CERCLA and the NCP, including requirements for community involvement and public outreach. The EPA will also coordinate and consult with Tribal governments, as appropriate, in accordance with the 2023 *EPA Policy on Consultation with Indian Tribes*.

The EPA intends to complete the following steps:

1. Develop a monitoring plan for the TSMD watersheds.
2. Region 7 to develop EE/CAs in FY25-FY27.
3. Region 6 to continue removing source material from in and near-stream areas under the Core Area Basis of Design Report utilizing a toolbox of best management.

For any questions, please reach out to a member of the EPA TSMD watersheds team.