

# ReSHAPE Project

## Wildfire and Treatment Mapping and Assessment

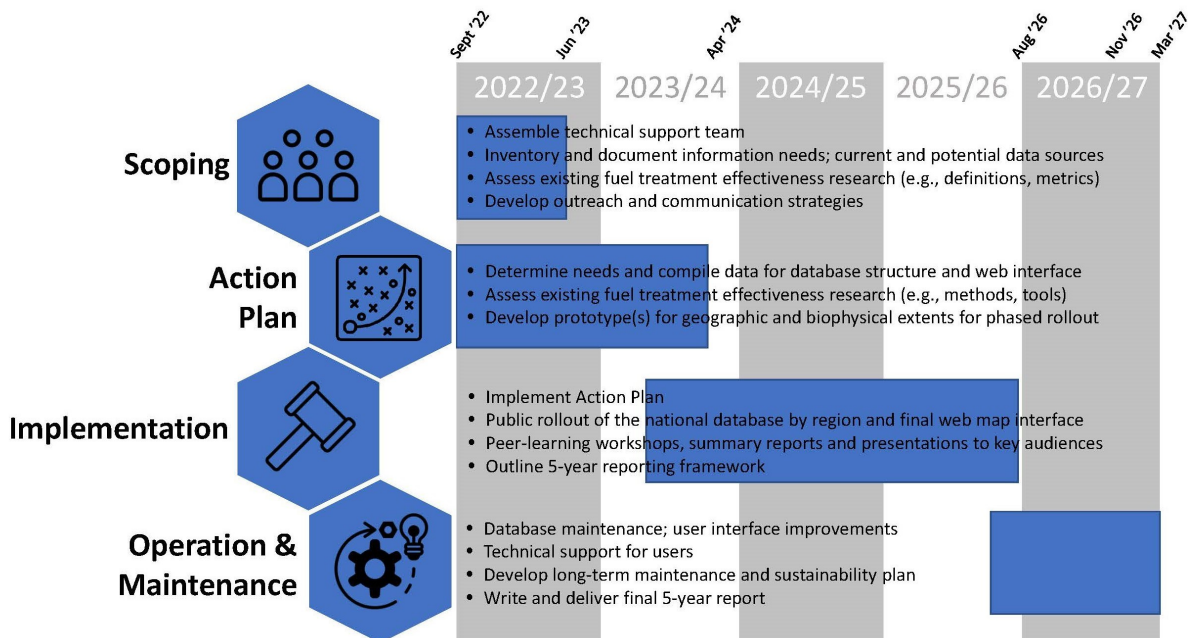
### 2021 Infrastructure Investment and Jobs Act

As a Congressionally authorized program, the [Southwest Ecological Restoration Institutes](#) (SWERI) includes three university-based restoration institutes: the New Mexico Forest and Watershed Restoration Institute (NMFWR), the Colorado Forest Restoration Institute (CFRI), and the Ecological Restoration Institute (ERI) in Arizona. These institutes work together across the Southwest and Interior West to develop a program of applied research and service that helps create healthy forests, prevent wildfires, sustain the resiliency of water supplies to wildfires, and create jobs.

The SWERI have heard from policymakers, land management agencies, and the research community that there is a need to **compile and display existing information** on fuels treatment projects and wildfires at the national level, to **coordinate and facilitate the use of these data** for assessing, planning, and monitoring fuel treatment interactions with wildfires across boundaries, and to **analyze and report** on fuel treatment effects. As a result, the SWERI are identified in the [2021 Infrastructure Investment and Jobs Act](#), commonly referred to as the “Bipartisan Infrastructure Law (BIL),” to undertake a national wildfire and treatment mapping and assessment project.

The resulting effort being led by the SWERI to accomplish the work outlined in the BIL is the ReSHAPE Project. Within the scope of ReSHAPE, the SWERI are working with existing affected entities and partners, as well as forging new partnerships, to ensure that ReSHAPE both supports and enhances ongoing efforts to display information on fuel treatments and wildfires from the Department of the Interior (DOI) and USDA Forest Service, as well as add capacity where needed to facilitate the use and application of cross-boundary fuel treatment data to reduce the risk of catastrophic wildfire.

More information about ReSHAPE can be found [here](#).



**Figure 1.** Diagram depicting the proposed timing of individual phases and associated tasks for ReSHAPE, the SWERI BIL-funded wildfire and treatment mapping and assessment project.

## Progress Phases

The SWERI developed a scope of work to accomplish the SWERI BIL provision that was approved by program coordinators in the USDA Forest Service and DOI Office of Wildland Fire (OWF). The Washington Office Fire and Aviation Management (FAM) in the USDA Forest Service holds the agreement, which was executed in September 2022. The SWERI are working in partnership with an advisory team at FAM, Forest Service Research and Development, and OWF to accomplish ReSHAPE. The scope of work for this multi-year, national project includes several phases (Figure 1), and specific deliverables:

- *Phase 1 – Scoping (complete)*: SWERI has completed the scoping phase, designed to frame the audience and intended outcomes for ReSHAPE, but will continue to scope and learn iteratively, informing ReSHAPE so it continues to support audience needs. SWERI leveraged its subject matter experience and expertise to learn from partners and refine the purpose and need for ReSHAPE. A technical support team of subject matter experts in the DOI, USDA Forest Service, and non-federal entities ensured SWERI scoping was extensive and sensitive to existing people, programs, products and platforms relating to cross-boundary fuel treatment data. Results can be found in the [Scoping Report](#). Scoping also resulted in a Communications Plan.
- *Phase 2 – Develop Action Plan (through April 2024)*: Using the results from the scoping phase, SWERI will co-develop with agency program coordinators, technical support team members, and contractors, a comprehensive action plan that accomplishes the specific tasks and deliverables outlined for SWERI in subsections (A), (B), and (C) (see SWERI BIL provision language [here](#)). (Deliverables: Action Plan, Prototype. The Action Plan will outline a roadmap for design and development of the geodatabase.)
- *Phase 3 – Project Implementation (through August 2026)*: In this phase, SWERI will implement the action plan, including phased rollouts of the geospatial fuel treatment database and web map interface, ongoing assessment and facilitation of audience use of fuel treatment data and related spatial decision support tools, and assessment of fuel treatment effects relative to wildland fire-related management objectives. (Deliverables: National Database, Portfolio of Peer Learning, and Presentations)
- *Phase 4 – Operation and Maintenance (November 2026 and beyond)*: The national database and web interface developed in Phase 3 will require updates, maintenance, and technical support for users. At the end of Phase 4, SWERI will produce a final report documenting the national database and fuel treatment effects. (Deliverables: Final 5-Year Report)

## Progress Updates

- The Program Director led scoping to identify project needs and develop a strategy for meeting goals and deliverables in the first two phases. SWERI completed a [Scoping Report](#) and hired a contractor, Innovate!, to advance documentation on existing databases and geospatial analysis tools, data management strategies, and interface design.
- SWERI have developed an action plan and are working with Innovate! to help incorporate the knowledge gained during scoping into the prototype of the [Treatment and Wildfire Interagency Geodatabase \(TWIG\)](#) geospatial database and viewer. The action plan will include steps to facilitate use and application of TWIG. SWERI are working to inventory existing databases and cross-reference data, drafting a map of existing interfaces, refining a list of attributes, drafting a wireframe for the beta version of the database and viewer, identifying interaction capabilities for the viewer, and continuing to develop partnerships, such as the National Association of State Foresters, to advance relationships with state forestry entities.
- SWERI is also advancing a research program that will be coordinated across the three institutes. The program will include three areas of focus: 1) Biophysical Effects — evaluating the effects and metrics of fuels treatments on wildfire; 2) Data Sciences — an assessment of available data and data sets to determine comparability, quality needs, and gaps; and 3) Social Assessments — evaluation of existing decision support tools and applicability of tools to support adaptive management strategies. A paper on metrics for measuring treatment effects was published in the [Journal of Forestry](#), and virtual discussion with partners was conducted to discuss ongoing efforts.
- Additionally, SWERI have been hiring staff to support the Action and Implementation Phases of the ReSHAPE Program and advance the use and evaluation of TWIG.



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