

Assessing Post-Fire Hydrological Impacts in Watersheds Critical for Protecting the Region



El Dorado Water Agency (EDWA), in collaboration with the U.S. Bureau of Reclamation, Sacramento Area Flood Control Agency, Placer County Water Agency, and the Sacramento Municipal Utility District (SMUD) are initiating a scoping effort to assess and monitor the post-fire hydrological response in the American and Cosumnes Watersheds. There is a tremendous need for this scoping effort as recent wildfires burned large areas in the watersheds creating significant flooding and water quality concerns for the region.

Research shows that “large and frequent fires promote loss of biologically important soils and increase the likelihood of damaging flood and mass erosion events.” In addition to immediate threats, increased runoff and erosion in the years following a fire can threaten natural resource sustainability.

EDWA’s scoping project will be a multi-year effort that will build on completed studies and ongoing initiatives and will support critical watershed and forest management research and practices. The scoping effort is designed to determine partners’ needs and desired outcomes, formulate specific objectives, develop required activities and tasks, outline schedules, costs, and potential funding sources, and establish a framework for project management and oversight.

The scoping effort will supplement the Caldor Fire Burned Area Emergency Response (BAER) assessment report developed by the U.S. Forest Service which provided an initial hydrologic analysis of flood increases expected from the devastation. While the BAER report provided valuable information, the assessment was performed with a number of simplifications to meet the aggressive timeline dictated by the BAER process.

Post-Fire Hydrological Assessment and Monitoring Needed to Protect the Region’s Communities, Watersheds, and Habitat

Through this collaborative effort, EDWA and its partners will help protect public safety, infrastructure, and water quality from the devastating impacts of wildfires by:

- Assessing the variation and magnitude of increased flooding expected from the burned catchments using a detailed peak flow analysis.
- Identifying and planning revegetation efforts in burned watersheds by revealing areas that will provide the greatest benefit from the application of conservation activities.

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