

Success Stories

How the SWFSC and JFSP bring professionals together to improve outcomes



Watershed protection: Spreading a successful model throughout the Southwest and beyond

THE SOUTHWEST FIRE SCIENCE CONSORTIUM (SWFSC) IS SUCCESSFULLY BRINGING TOGETHER FIRE MANAGERS, PRACTITIONERS, AND SCIENTISTS to assure the best science is used to address the most pressing fire management challenges. The SWFSC also provides the ability to share success stories across organizational and geographical boundaries, thus amplifying their impact. One such example features protection of critical watersheds from wildfire.

- » Increasing flooding and erosion following wildfires can pose significant threats to communities and result in millions of dollars in damages to infrastructure and municipal water supplies.
- » In partnership with the U.S. Forest Service and nongovernmental organizations, the city of Santa Fe, New Mexico is proactively preventing such damages by managing forests in critical watersheds so that they are resilient to wildfire.
- » The SWFSC, by providing a forum for the city of Santa Fe to share their success, opened the door for a similar model to be implemented in Flagstaff, Arizona via a \$10 million bond passed by a 76% vote.
- » With continued support, the SWFSC is allowing others throughout the western U.S. to learn about how communities like Santa Fe and Flagstaff are successfully protecting communities and critical watersheds from the lasting effects of wildfire.

The goal of the SWFSC is to accelerate the awareness, understanding, adoption, and implementation of readily available wildland fire science throughout the southwestern U.S. by providing a forum for managers, scientists, policy makers, and the public to interact and share science. The SWFSC is part of the Joint Fire Science Program Fire Science Exchange Network, a national collaboration of 15 regional fire science exchanges.

“It was after hearing the presentation about how the City of Santa Fe implemented water user fees at the SWFSC’s workshop- that is when Paul Summerfelt and I looked at each other and said, ‘We can do this in Flagstaff!’”

—Anne Mottek Lucas,
Mottek Consulting



Fifteen regional Fire Science Exchanges are funded by the Joint Fire Science Program.

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Long after wildfires are out, the altered soil and vegetation conditions can result in dramatic watershed effects that persist for years and have substantial impacts to communities. Massive post-fire flooding and debris flows following the 2010 Shultz Fire resulted in one fatality and many millions of dollars in property and infrastructure damage in and around the city of Flagstaff, Arizona. Eight years later, debris flows and floodwaters coming out of that area continue to damage homes and infrastructure.

These watershed effects can be avoided if the threat of severe wildfire is substantially reduced in watersheds where the risk of post-fire impacts is highest. Tried-and-true techniques like forest thinning and prescribed fire can reduce the fire threat, but obtaining sufficient funds to implement projects can be a challenge.



Forest thinning projects designed to protect critical watersheds around Flagstaff have accelerated in recent years thanks in part to the SWFSC and their work in sharing fire science and management success stories throughout the Southwest.

The city of Santa Fe, New Mexico took an innovative and proactive approach to secure funding for protection of their municipal watershed, imposing a fee for city water customers for ongoing forest management designed to maintain health of the watershed. The costs to maintain healthy forests within the watershed (about \$258,000 per year) is far less than the estimated water clean-up costs (over \$80 million) should a wildfire occur in the watershed.

With the help of the SWFSC, the city of Santa Fe model is spreading throughout the Southwest and beyond. It started with a forum and field tour of the city of Santa Fe municipal watershed in 2011 organized by the SWFSC. The SWFSC also supported travel to the field tour for two members of the Greater Flagstaff Forest Partnership, who wanted to learn more about what was happening

in Santa Fe. They came away from the field tour with a spark to initiate a similar program in Flagstaff, Arizona. After just one year, the Flagstaff Watershed Protection Project was a reality. With overwhelming public support (74%) a \$10 million bond measure was passed to protect critical forested watersheds around Flagstaff.

The SWFSC continues to spread information about watershed protection projects so that others can learn from the success in places like Santa Fe and Flagstaff. For example, they paid for members of the Flagstaff Watershed Protection Project to present at the National Cohesive Strategy Workshop in Reno, Nevada in 2018. According to Matt Millar with the City of Flagstaff Fire Department, “by supporting our participation in this type of event, the Consortium provides outreach capabilities that we would otherwise totally lack.” 🌱

“A lot of communities in the West are thinking about watershed protection. The SWFSC allows us to share our success with new audiences. They are coming to us and asking, ‘You did what? How did you do this?’”

—Paul Summerfelt, Wildland Fire Management Officer, City of Flagstaff.