



San Juan Headwaters

FOREST HEALTH PARTNERSHIP

Plumtaw Fire Area Tour

September 30, 2022

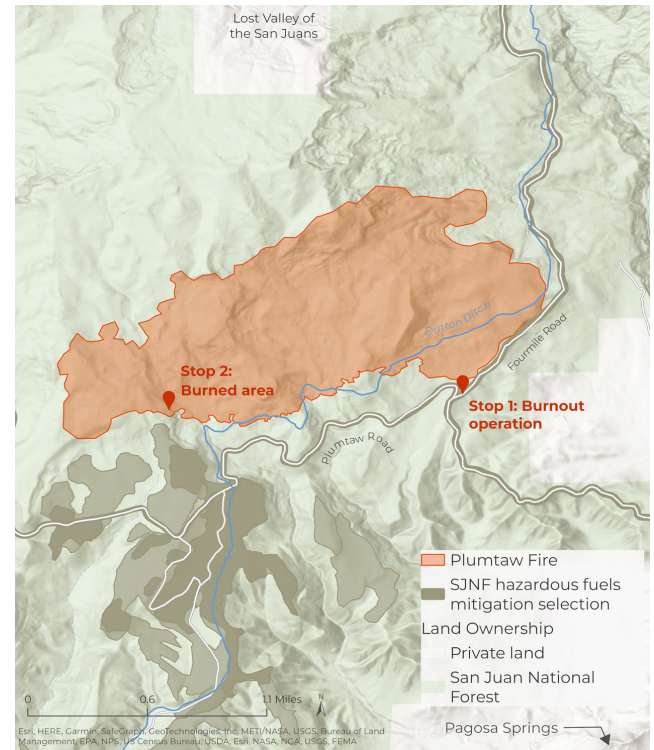
Context

The winter of 2021-2022 was a good snow year, but the spring was exceptionally dry. By the time the Plumtaw Fire started on May 17th, 2022, much of the San Juan Mountains hadn't seen moisture for three weeks, and the whole landscape was in a fire deficit. Due to fuel conditions, the objective was to suppress the Plumtaw Fire. Existing partnerships between the Archuleta County Office of Emergency Management, Pagosa Fire, and the USFS helped respond to the fire and manage it from multiple angles.

The ignition source remains unknown, but a natural start is unlikely. Engines and air resources were assigned quickly because of the fire's potential to spread and the minimal hold locations beyond the Fourmile Road. The fire burned 721 acres in Ponderosa Pine, mixed conifer, and aspen stands. Gambel Oak exists in the understory but was mostly dormant at the time of the fire. White Fir acted as a ladder fuel and the fire quickly became a crown fire that was driven by prevailing westerly winds.

Tour Stop 1: Management and Infrastructure

The Fourmile area was identified as a Potential Operational Delineation (POD) because of natural and man-made holding features that can be used to manage fires. Since 2009, the SJHFHP has identified the Fourmile Watershed as a priority area for forest management and treatment. In 2021, after a SJHFHP tour in the Fourmile Drainage with partners at the Pagosa Area Water and Sanitation District (PAWSD), the SJNF completed a fuels reduction treatment along the Fourmile Road. This strategic treatment created decision space for fire managers during the Plumtaw fire; a burnout operation from the Fourmile Road played an important role in fire management. Additional forest management work, conducted via the Joint Chiefs program in the area south and southwest of the fire, could have provided more options for management if the fire moved in that direction. The recent and layered history of strategic forest management in this area increased the decision space for fire managers.



Tour participants gather for discussion. Photo: Alec McKeand

Although previous management contributed to the outcome of the Plumtaw Fire, weather was the ultimate decision maker. Beginning on the evening of May 17th, clouds and increased relative humidity presented operational advantages. Had fire weather been more extreme, the Plumtaw fire could have been a long-lasting event.

Significant values at risk in this area include Fourmile diversion, which delivers water to Stevens and Hatcher Reservoirs via the Dutton pipeline. Although PAWSD diversifies their water sources, this diversion typically provides 2/3 of Pagosa's municipal water. The Lost Valley of the San Juans subdivision sits just north of the fire area and was also a primary focus of operational protections. In addition to creating operational decision space, pre-planning for post fire impacts on watersheds including debris flows and changes in water chemistry is critically important.



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Partners discuss forest and fire ecology at tour stop 2. Photo: Alec McKeand.

Tour Stop 2: Forest and Fire Ecology

Historically, fires burn every 7-15 years in Ponderosa Pine forests, and every 20-50 years in mixed-conifer forests, including Aspen, Douglas Fir and shrubs. After decades of fire exclusion across this landscape, fire is long overdue in this area and in other areas of the same forest type. Because of the fuel conditions and the proximity to homes and critical community infrastructure, the Plumtaw Fire was suppressed. In places like this, where uncharacteristically large and hot fires threaten values at risk, active forest management using a variety of tools can allow for more decision space when fires eventually ignite, and improve fire outcomes.

The Plumtaw fire unfolded as a mixed severity burn typical of mixed-conifer forest types. Fire, along with other mechanisms, is an important landscape management tool in fire adapted ecosystems. Similarly, these tools must be applied across jurisdictional boundaries in key locations for communities and ecosystems to realize the potential benefits of landscape management.



Partners discuss management at tour stop 1. Photo by Alec McKeand.

VALUES

- CRITICAL WATER INFRASTRUCTURE AND RESOURCES
 - FOURMILE DIVERISON
- NEIGHBORING SUBDIVISIONS
- SECONDARY FINANCIAL IMPACTS

FUTURE OPPORTUNITIES

- SUPPORT WORK ON PRIVATE LAND
- IDENTIFY CROSS-BOUNDARY OPPORTUNITIES USING MAPPING EXERCISES
- REPLICATE FUELS TREATMENTS IN SIMILAR KEY LOCATIONS
- MANAGE IGNITIONS IN LANDSCAPES WITH FIRE DEFICITS
- LEARN ABOUT THE EFFECTS OF MIXED SEVERITY FIRE, MIMIC WITH TIMBER AND ECOLOGICAL RESTORATION ACTIVITIES

Interested in participating in the next SJHFHP tour or meeting? Email Julia to get involved or learn more: julia@mountainstudies.org