

# Plumtaw Fire

An example of how previous management increased decision space during a fire event



## Context

The spring of 2022 was exceptionally dry for southwest Colorado, with low relative humidity, low fuel moisture, and a **fire deficit** across much of the forested landscapes. These were perfect conditions for a devastating, long-lasting wildfire event. When the Plumtaw Fire started on May 17th, 2022, just 7 miles north of Pagosa Springs, Colorado, fire officials feared the worst.

The Plumtaw Fire burned a total of 721 acres in a warm dry mixed-conifer forest with gambel oak in the understory. There were many downed trees in the area, and the gambel oak acted as ladder fuels for the fire to climb to the tree canopy, where it was sustained for much of the event. The fire is suspected to be of human origin.

### What is a fire deficit?

Certain ecosystems, like the warm dry mixed-conifer forest that the Plumtaw Fire burned through, rely on frequent wildfire to reduce the amount of fuels on the ground. When a landscape is in a fire deficit, it hasn't had its regular dose of wildfire, so fuels accumulate to higher levels, leading to an uncharacteristic wildfire when it eventually ignites.



## Logistics

The initial attack was heavy, but the fire continued to outpace the attack during the first day. The fire started within a potential operational delineation (POD), which is a unit to contain fire using natural and artificial landscape features. As the prevailing winds pushed the fast growing fire to the northeast, fire managers developed a plan to use the eastern POD boundary, the Fourmile Road, as a control line. Previous management along the Fourmile Road increased the safety and comfort in this decision.

Winds calmed and humidity increased during the first night, allowing crews to conduct backburn operations from the Fourmile Road. A Rocky Mountain Incident Management type 2 team managed the fire from May 20th to May 27th, and a type 3 team took control on May 28th as containment grew.

Left: Active fire behavior during backfiring operations the night of May 17

"While we acknowledge the role of luck, we also work to improve the odds of achieving incident objectives by investing in pre-planned tools such as PODs. We have witnessed their value at all levels of incident response" -Brad Pietruszka

## Previous management

San Juan Headwaters Forest Health Partnership identified the Plumtaw area as a priority for treatment years before the Plumtaw Fire started. Dutton Ditch provides **critical drinking water** for the Town of Pagosa Springs, and the partnership foresaw the devastating consequences of a large fire in this watershed. **Private subdivisions** like Lost Valley of the San Juans and the **proximity to town** provided additional reasons for concern if a fire started in the area. The Pagosa Ranger District of San Juan National Forest, who manages this land, heard the community's concerns and took action, completing a fuels reduction treatment along Fourmile Road in 2021. Brush and understory vegetation were cleared and masticated along the road, creating a fuel break for effective management of future fires, just like it did for the Plumtaw Fire.

Weather and fuel conditions also contributed to the successful outcome of this event, but "It was exciting to hear about how the hazardous fuels treatment done on Fourmile Road last year offered and continues to offer fire crews several options while managing the Plumtaw, especially in relation to protecting important values and resources in that drainage" said Dana Guinn, Director of Forest Programs at Mountain Studies Institute. Dr. Tony Cheng, from Colorado Forest Restoration Institute added, "I love seeing examples where work on the ground that came out of a collaborative process made a difference."

