

**Wildfire Outcome Report**

**Venado Fire**

**NM-SNF-562**

**Santa Fe National Forest**

**D-3 Jemez Ranger District**

**0310-03**

**July 20<sup>th</sup> 2018**



*Figure 1: Venado Fire on 7/23/18*

## **Wildfire Outcome Report For the Venado Fire**

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### **Introduction**

The Venado Fire is a lightning caused fire that was discovered on the Jemez Ranger District, July 20<sup>th</sup>, 2018. The origin of the fire was on Venado Mesa at an approximate location of N35D 46' 14.16" by W106D 48' 10.08". The fire started west of Forest Road 376 and south of Forest Road 488. The Venado Fire burned in Management Area R and the Jemez National Recreation Area of the Santa Fe National Forest. The fire was managed with a full suppression strategy; initial action was taken the morning of the July 21<sup>st</sup>, 2018. The fire grew rapidly on the 21<sup>st</sup>; additional resources were ordered, and a Type 3 Incident Commander took command of the fire at approximately 1600. The fire size in the evening of the 21<sup>st</sup> was estimated from the air at 200-300 acres. Suppression strategy at this time was to hold the fire west of the FR 376 and south of FR 488, while scouting areas to contain the fire to the west and south. West winds on the 22<sup>nd</sup> pushed the fire towards FR 376, but crews were successful in holding the fire at the road. Southeast winds on the 23<sup>rd</sup> aligned with slope and fuels in Joaquin Canyon and pushed the fire first along the 488 road and eventually across it in a series of crown fire runs. The northwest edge of these crown runs crossed Joaquin Canyon into an area that had been thinned, piled, and burned in 2015 as part of the Chaparral Project area. This prior treatment would prove critical to containment efforts on the west side of the fire, providing an anchor point to construct dozer line to and beyond. Early on the 24<sup>th</sup>, as crews worked to contain spot fires north of FR 488, one spot fire became well established, and the fire made subsequent fuels driven runs to the north and east. Monsoon rain eventually aided resources in their efforts and the fire was contained with existing roads, dozer line, and handline on August 3<sup>rd</sup>, 2018 at 4064 acres (Figure 2). The treatment effectiveness of the Chaparral Project area will be captured in a separate document. The combination of having treatments in place to slow fire progression and change of weather, allowed for beneficial outcomes to existing vegetation in the Venado fire footprint.

### **Vegetation**

Vegetation within the Venado Fire ranges from pinon-juniper woodlands at the lower elevations to dry mixed conifer forest (Douglas Fir and White Fir) at the higher elevations. The majority of the fire burned in ponderosa pine forest in the interceding elevations. Gambel oak is present throughout the understory and exists in small pure stands within the fire area. Elevation ranges from 6600 ft along Forest Road 376 to 9510 ft at the top of Joaquin Mesa. The mesas and ridges within the fire footprint include all aspects and widely various slopes ranging from steep slopes to relatively flat mesa tops. Much of the forest within the Venado Fire footprint had been logged in the early 20<sup>th</sup> century. Fuel



conditions in the area show a departure from desired conditions, with high densities of small diameter pine and heavy surface fuel loading. Some areas north of FR 488 had been treated as part of the Joaquin Watershed Restoration Project.

Fire behavior and subsequent effects varied across the area. While one large (600-700 acres) patch of timber burned at high severity, the majority of the fire footprint included a mix of low and moderate severity. The high severity portion of the fire will not be claimed as a benefit to the resource. The resource benefit acres claimed are focused in areas that burned at lower to moderate severities. In these areas, the fire consumed dead and down fuels (10 hr, 100 hr, and 1000 hr fuels), and reduced surface litter. The fire also raised canopy base heights, and thinned small trees in the understory. Other fuels and fire benefits of the Venado fire include the following:

- Reduction of accumulations of litter and duff which will allow for increased productivity and regeneration of native grasses and herbaceous layer
- Reduction in accumulations of 1 hr., 10 hr., 100 hr. and 1000 hr. fuels
- Reduced vegetative competition for water and nutrients
- Decreased fuel loading which will allow the area to be managed with lower severity surface fire with modified suppression tactics in the future
- Shift of Fire Regime Condition Class (FRCC) from FRCC 2 to FRCC 1
- Recycling of nutrients
- Increased canopy base heights
- Single tree torching which created a mosaic in an otherwise homogenous stand and which will allow for early successional vegetation to regenerate in the understory, creating a diversity in age class distribution

## **Wildlife**

The majority of the Venado fire burned at mostly moderate and low fire severity which beneficially impacted one Threatened species, its Critical Habitat and two Forest Sensitive Species and their associated habitat. In general, wildlife habitat on the western side of the fire is mixed conifer forest dominated by Douglas and white fir. The eastern and northern portions of the fire are primarily composed of stands which are dominated by ponderosa pine and gamble's oak.

The fire burned through approximately 4,064 acres of Critical Habitat designated for the Mexican spotted owl (MSO) and burned the entire Deer Creek PAC (Protected Activity Center). This MSO PAC is composed of rock cliffs, mixed conifer stringers and southern aspect ponderosa pine. Most of the mixed conifer and ponderosa pine which occurred on south aspect slopes was lost to higher fire severity. However, the integrity of rock alcove nesting habitat is unchanged due to lack of fire in those areas. The fire lightly burned the outer portion of a Peregrine falcon (PEFA) eyrie/ management zone at low severity. Impacts to these resources were largely beneficial due to the conditions at which the fires burned and mosaic of fire severities distributed on the landscape. This allowed for moderate and high severity fire to create openings, reduce canopy cover and recruit snags/down wood throughout the fire perimeter. Increases in light penetration and reduction of canopy cover will allow for graminoid, herbaceous and woody vegetation to respond and provide for heterogeneous and bio diverse vegetative conditions. This will facilitate production of food resources for arthropods, mammals, birds, reptiles and

will also increase prey base habitat and numbers for MSO and PEFA. Mixed fire severities also consume down wood, recruit snags and create additional down wood resources which are essential to healthy ecosystem function and productivity with regard to cavity nesters, fungi, bacteria, lichen, arthropods and nutrient cycling.

Although there were large portions (600-700 acres) of contiguous canopy loss in some areas, low severity fire dominated the Venado fire. Large contiguous areas of stand replacement are quite susceptible to erosive forces and can be difficult to re-vegetate. However, aspen sign was evident in high severity affected areas and we anticipate aspen to re-vegetate quickly where it was present. In other areas, gamble oak is likely to take over as the first successional stage in addition to grasses.

### **Heritage Resources**

There were a total of 67 archaeological sites within the perimeter of the Venado fire comprised of both prehistoric and historic structures and artifact scatters. A majority of the sites were avoided during suppression efforts. One site, a historic logging structure, was partially consumed after fire crept into the site. Fortunately Aravaipa crew members and the Lead Resource Advisor took action and the portion that was burning was removed and a hand line was put in saving what now remains of the historic feature.

There were a number of fieldhouses that were in an area that experience rapid fire growth which generated intense heat causing heavy sooting, cracking, and spalling to structural stones. Eleven of these sites were examined post-fire during BAER efforts and it was found that the vegetation around the features was entirely consumed. This may, in the future, cause heavy erosion in turn negatively impacting cultural resources.

### **Conclusion**

The Santa Fe National Forest will claim 2945 of 4064 acres within the Venado Fire in FACTS. Objectives were met in larger portions of the Venado Fire as set forth in the Santa Fe National Forest Plan.

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/s/

Brian Riley

District Ranger

Jemez Ranger District

Santa Fe National Forest

Date: 10/22/2018

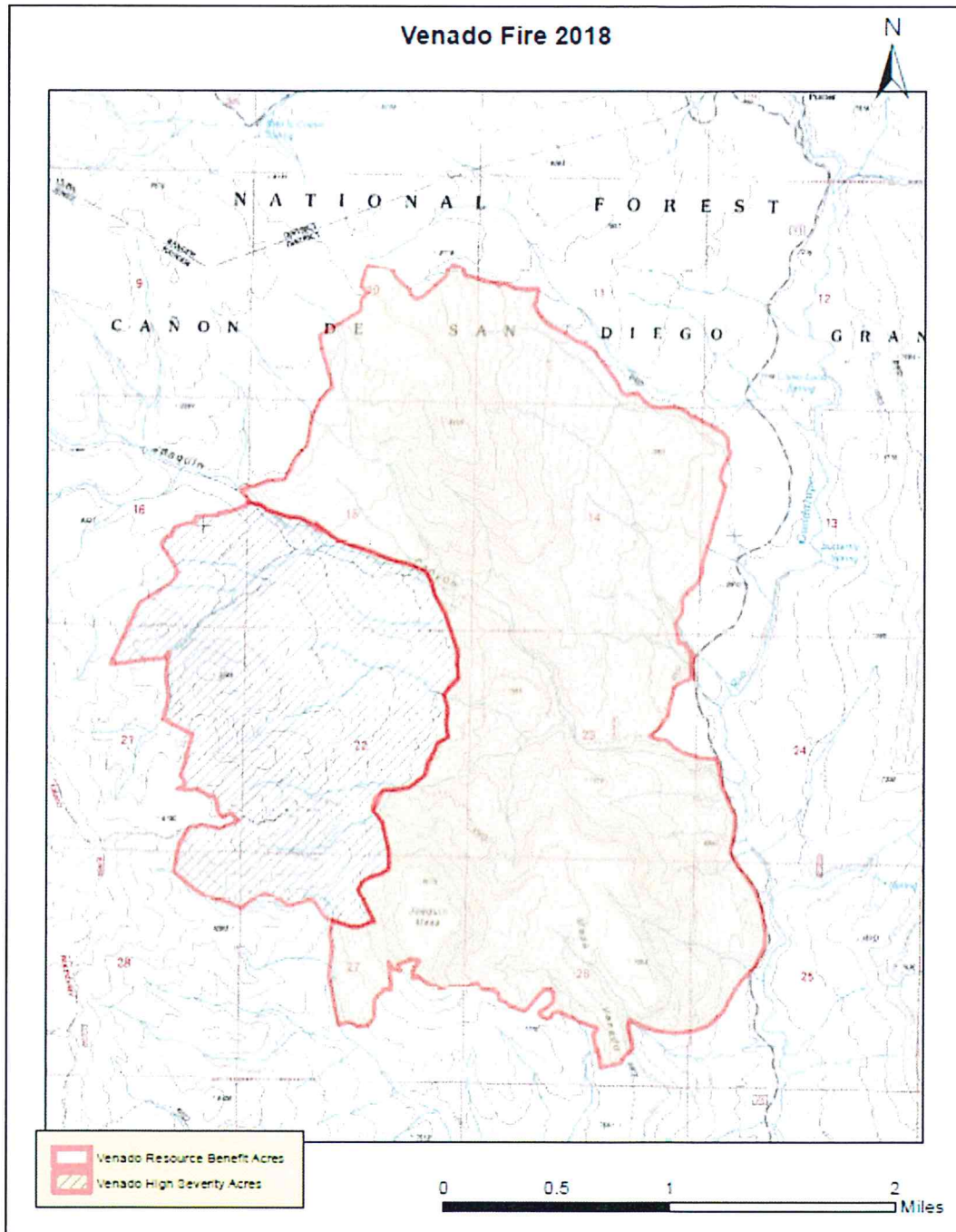


Figure 2: Map of Venado Fire

