

Saturday, July 13, 2013

**Prescott National Forest, Bradshaw Ranger District**

 **Resource Advisor Report**

**Members of Granite Mountain Hot Shots in the champion Alligator Juniper tree before they treated the area, ultimately saving this majestic tree from the fire.**

**Incident Dates:** 6/18 thru 7/11/2013

**Fire Number:** AZ-PNF-130497

**Resource Advisors:** Jeff Gilmore (Red Rock RD CNF), Celeste Gordon (Verde DR), Evan Richards (Wilderness Ranger), Jake Russell (Range Specialist), Max Wahlberg (PNF Ecologist), Jason Williams (Trails and Wilderness Mgr)

**Location:** Bradshaw Ranger District, primarily Granite Mountain Wilderness and areas west commonly known as Doce Pit.

**Incident Commanders:** Tony Sciacca’s SW Area Type 1 Team (6/19/-6/26) , Dave Ramirez’s Central West Zone Type 3 Team (6/26-7/10)

**Point of Origin:** Doce Pit Road

**Fire Cause:** Human – under investigation

**Size:** 6,767 Acres

**Land Status:** Primarily Forest Service, with less than 25 acres of private on the east side of fire.

**SUMMARY:**

Overall things went excellent in relation to resource advising during this incident. We did not have any major damage to resources that we could have prevented through our efforts. The team of 6 resource advisors and 2-3 archeologists worked extremely well for completing all of the necessary work. The type 1 IMT was easy to work with and all the

division supervisors successfully carried out the READ’s mitigation measures. We successfully rehabilitated approximately 15 miles dozer and hand line that was constructed during the fire. Some significant resources like the champion juniper and some historic and prehistoric cultural resources were protected through our efforts. Rehabilitation was properly completed in all divisions. The additional work completed by the Type III team was also an excellent bonus to the forest.

We learned many things by comparing this incident to the Gladiator fire from 2012. I have made a short list here for further discussion and research.

-Resource Advisor Team: Excellent make up of having enough ground resources and having a presence in ICP. The addition of Celeste was excellent as she brought line officer

perspective and the necessary knowledge and skills to ask the right questions to the right people. I would highly recommend we maintain this coordination position as a line officer if possible for all large incidents (Type 1 and Type 2). It was very difficult for me to not go out to the field with my intimate knowledge of the landscape surrounding the fire, I hope that I struck a good balance.

Archeologists: Jim Mckie and Bruce Nellans and I had discussed how we mobilize these resources properly days before this incident and I hope we now realize that we must order archeologists immediately and we will work to get local private archeologists line qualified to be available by name request so that it doesn’t take days to get archeologists. That being said, mobilization of line Archeologists on Doce was an improvement over the Gladiator Fire of 2012.

Weed Wash: As is typical, the weed wash station proved problematic during the Doce Incident. Delays in getting ordered equipment in place and set-up resulted in very little line going fire apparatus being washed prior to work on the Forest. Furthermore, the contract equipment that arrived was not adequate to meet the needs of thoroughly washing heavy fire apparatus including dozers and excavators. It is recommended that the specific need for a weed wash station be included in future delegation letters, and the PNF needs to specify exactly what type to order. Outreach to other forests regarding this issue and potential solutions is ongoing.

Closure Order: This went much better this time around as we had an idea of the correct process. To further expedite the process in the future, we recommend the forest draft a short written document of how forest closure orders are to be implemented.

Retardant Use and Mapping: We got a variety of information about where retardant had been used during this incident and some of it was accurate and some of it wasn’t. The reporting for misapplication was much easier since it has been done before. We had a few excellent discussions about retardant use with operations personnel and what values were being protected along with rationale for retardant use in favor of water application high on the west ridge of the mountain. Ultimately the retardant use was justified in most cases.

Unfortunately, there were a few applications that ended up primarily on rocks instead of vegetation. Improved language in future delegation letters may help improve discussions regarding retardant use in sensitive areas.

Objectives in WFDSS: When the Type I IMT wrote their first set of incident objectives they did not include some of what was put into the WFDSS that we did prior to them taking the fire. It is unclear how this happened and if it was just a result of the speed at which the team took over the fire. In the future it would be important to follow any team’s process of developing these objectives or working more closely with them to ensure they understand that the objectives as shown in WFDSS is what we want.

Wilderness Motorized Use: This did not go as smoothly as past fires and it might just take a little more front loading on the beginning side of things, to ensure that the divisions are directed to track this information daily. I told the planning section that their idea of having crews or anyone for that matter, fill out this info would work. On past fires division supervisors have been the best avenue to get accurate data on motorized use in the wilderness.

**Primary resource concerns, mitigations, and rehabilitation actions**

**Fire Fighter Safety:** This always goes without saying, but it is important to recognize that READs need to take this into consideration when advising on suppression and rehabilitation actions, so that they can be effective and not marginalized by making suggestions that compromise safety, in turn making their suggestions less likely to be implemented.

When advising on how to use the popular Granite Mountain Trail and many other trails as a secondary line for burning from we did not advise to avoid cutting snags, we advised not to buck them if possible. If they need to be bucked and moved to make the line successful then do that, as the alternative is unsafe conditions and the line doesn’t hold and more line needs to be created elsewhere.

**During this fire we learned the value of ordering excavators with masticator heads.** It would have been too late to mitigate the extra ½ dozer blade width on the 671 trail (Old rd bed) and the associated windrow of root balls and brush, but would have limited exposure for fire fighters to a tremendous amount of saw work and chipping work for both suppression actions and rehabilitation. This is a tremendous tool for fire suppression operations in the brush fuel type as it greatly increases fire fighter safety and reduces impact from dozer work.

**Public Safety:** During this fire local READs played a critical role in identifying the closure area as it contained so many trails and trail access points. This process worked well with having Celeste Gordon work on writing the order, with assistance from Tom Potter making maps and using the newly created law enforcement group to post and maintain the closure. Bob Orrill, Liason Officer for the Type 1 team was a tremendous help in getting the lamination and barricades for the initial closure. **This model should be duplicated in the future.**

**Private Homes/Land:** A variety of suppression actions impacted, but also saved countless homes on the east side of Granite Mountain. Retardant and brushing around homes was critical in saving these homes. It was clarified during this fire that the Forest Service does not direct or assess rehabilitation on private lands and it is the responsibility of the State of AZ to determine the proper rehabilitation from suppression actions

**Utilities (Powerlines):** The Main power line to the Bagdad Mine was burned during the 1st day of the fire and was shut down while the fire burned past. APS was able to get out to the line and get it reenergized that evening, but apparently this was very significant because it takes the Mine offline and that is a loss of a lot of money. The following day, on 6/19, APS requested permission to create a dozer line into the power poles affected by the fire. Jake Russell and I walked the proposed dozer line with a member of APS and determined the best location that it could be completed with an acceptable amount of impact to the ground and trails 620/619, thus completing APS’s mission without needing to de-energize the line again. We got Bruce Nellans to culturally clear the proposed path and APS completed their project on 6/20 & 6/21. Jake was present for the implementation of this project along with Steve Kelly.

**Transportation Infrastructure:** Many roads and trails were impacted by the fire and suppression actions. The county did an excellent job of managing their roads during the incident.

**Forest Roads:**

**FR 9261U (Division Well) 1.2 miles:** Dozer line was created from Contreras Rd to this one and then it was widened and improved to its terminus at East Tank. All rehabilitation was completed to narrow up the road, install drainage and rehab the dozerline using excavators and seeding.

**FR 671 (Baker Spg) 2.5 miles:** About ½ mile of this road was impacted through widening by ½ dozer blade width from TR 41 to Long Canyon Wash. The remainder of the road was bladed to allow better access. Rehabilitation was completed on the entire segment by reinstalling rolling grade dips and pulling in the edge that was windrowed. All brush and trees in this windrow were chipped.

**FR 9271A (Doce Pit Rd) 4.5 miles:** Only about ½ mile was impacted by the fire and suppression activities. Brush that was windrowed during initial attack was chipped, this road is anticipated to remain closed through monsoon season at a minimum.

**Forest Trails:**

**FT 37 (Little Granite) 4.18 miles:** 2.65 miles of this trail burned with moderate to high severity and no portion of it was used for line construction. This trail used treated log waterbars for erosion control and had erosion problems before the fire, all of these drainage structures were lost in the fire along the 2.65 miles that burned. It would be most cost effective over the long term to reroute this trail to a more sustainable location, rather than try to keep it in place.

**FT 38 (Upper Pasture) 2.2 miles:** 1.5 miles of this trail burned with moderate to high severity. This trail also had treated log water bars as drainage structures that have been burned and will be harder to replace then to reroute the trail. The ¾ of a mile of unburned section was an old jeep trail that was converted in the Williamson Valley Alto Pit EA to non- motorized trail. When the excavator was rehabbing FR 9261U it narrowed up the 1st 100 yards of this old jeep trail to restrict access to non-motorized travel.

**FT 39 (White Rock Spg) 2.07 miles:** 1.97 miles of this trail burned with moderate to high severity. It has not been assessed for repair as of yet. It was not used as a containment line.

**FT 41 (Cedar Springs) 2.93 miles:** 0.49 miles of this trail burned with low to moderate severity. ½ mile was used as dozer line and has been rehabbed, but willneed follow up with reassurance signs for users to stay on trail. The remaining 1.75 miles was an old road that was bladed and widened by the dozer. Rehab was completed by installing drainage and pulling the windrow berm back to narrow up the road. All brush and trees were chipped. A locked gate has been installed at its junction with FR 671.

**FT 261 (Granite Mountain) 4.11 miles:** 2.64 miles of this trail burned with moderate to high severity and about ½ mile from Granite Basin Lake going towards Blair Pass inside the wilderness was prepared as a containment line, but not used. Crews cleared brush and snags using the trail and the drainage next to the trail. Most of the brush and log windrows were dispersed out of view as well as cleaning all drainage structures from Blair Pass to the lake. A few stacks of brush and logs remain that can easily be dealt with in the future.

Blair Pass (trail junction 37, 41, & 261) is completely burned and wilderness portal signs, trail signs, and register box were completely consumed. The switchbacks leading to the top were burned mostly with high severity and all of the remaining treated log water bars were consumed, leaving 2 pieces of rebar sticking up 6-10 inches. The flooding damage on the trail will be the primary factor in allowing us to reopen this trail and the top basin area will need to be treated for a few hazard trees. The rock work that needs to be completed now that there is no drainage on many sections could cost well over $100,000.

**FT 308 (Tin Trough Spgs) 5.46 miles:** 2.34 miles of this trail burned with low to high severity. The high severity was the section in the wilderness. The low severity was close to Williamson Valley TH. The section of trail that connects with Mint wash Trail 345 was used as containment line and has been rehabbed by spreading brush and juniper limbs out of sight of the trail. There is a significant amount of retardant in this section of trail as well.

The high severity areas of the trail will be tremendously difficult to restore as much of the trail follows breaks in the rocks and will erode heavily. We have a RAC grant for $60,000 for this trail, but it was planned for a section of the trail that was unburned. All signs at the wilderness boundary on the east end were burned, along with a register box.

**FT 320 (Baby Granite) 2.01 miles:** Only 1/10th of a mile of this trail burned with moderate severity, but the remainder of it was used as a secondary containment line. Crews cut brush and trees along its length and created a windrow of brush that was later dispersed out of view of the corridor during rehabilitation. Many social trails were identified coming off private lands and will need to be dealt with in the coming months. The sign at the junction of trail 308 and 320 still stands.

**FT 345 (Mint Wash) 4.16 miles:** No sections of this trail were burned, although the fire burned up to the trail in some places west of Williamson Valley TH. Its entire 4.16 miles were prepared as a containment line. Suppression clearing was up to one chain deep off of the trails edge, the line also used Mint Wash as a break in several areas. All slash and log material was windrowed along the east side of the trail or the wash edge. Trail tread and drainage features were un-affected by suppression work. Some cutting did occur in the bottom of the drainage but impact was minimal. During rehabilitation slash and log debris were dragged out of site and used for erosion control and bank-stabilization in appropriate areas. All slash and heavy fuels were successfully removed from the wash and hidden from site or used as erosion mitigation.

**FT 400 (American Ranch) .39 miles:** .33 miles of this trail burned with moderate to high severity. No actions were taken for use as containment line. This trail will need to have reassurance markers placed along its length to keep users on the trail. We need to communicate with American Ranch about only using the system trails to access forest lands.

**FT 671 (North Granite) 3.38 miles:** This trail is part of the old historic wagon road and was road width before the fire. None of this trail burned, but the entire length was prepared as a containment line by dozers (extra ½ blade width) and hand crews clearing brush ½ chain off the road. This road has been completely rehabbed using dozers to install drainage, excavators to pull the windrowed berm and brush as well as clearing all drains of slash material, and finally crews chipped all cut brush and log material. Excavators also attempted to hide many root balls created from the dozer pass. Final rehab will be placing boulders back on each end that were removed to facilitate passage of vehicles. The PNF road crew is scheduled to complete this work on the week of July 15th.

**Cultural**: Cultural Resources data has been removed to protect sensitive data. This section should include descriptions of site in the operational planning area, any sites damaged by fire or fire suppression actions, and repair recommendations. Before and after pictures are recommended.

**Sling Loads** (6/18-6/25): 9 for facilitating cold trailing in remote areas of the wilderness

**Retardant Drops** (6/18-6/25)**:** It is estimated that approximately 20 drops were made inside the wilderness. There was 345,000 gallons of retardant dropped on the entire fire.

**Bucket Drops**(6/18-6/25)**:** 100s throughout the incident and then 2 more fuel cycles on individual smokes identified after the 25th of June.

The main climbing cliff face was burned at the base and on the top and will remain closed until the trail system can be made safe for visitors. Also a lesser known cliff face, Waves of Rock was hit with a load of retardant as can be seen in the attached photos.

**Wilderness Values:**

**Chainsaw Use** (6/18-6/25): 53 saw use days, saws are only counted 1 time per day in the wilderness, not how many times it was started, so around the entire fire for all 7 days saws were authorized 53 saws were used.

**Wildlife:** Luckily, we did not have any T&E species to consider during this fire, but we did have FS sensitive species: Lowland leopard frog, Arizona toad, longfin dace, and peregrine falcons. See the misapplication of retardant report for details on impacts to the 2 amphibian species. When Evan Richards and I walked to the top of Granite Mountain on July 10th we observed 3 peregrine falcons in the area of the main cliff face.

**Vegetation (Weeds):** The ordering of the appropriate weed wash station was once again a difficult hurdle. We did get a weed wash station, but it was used limitedly and could not wash the heavy equipment that came in. We will need to pull together a map of all the areas that were affected by suppression actions for future weed monitoring; I am working with Tom Potter to complete this.

During rehabilitation work with the type III team we removed over 30 bags of Dalmatian toadflax in Granite Basin and along trail 261 leading into the wilderness. This work was mapped and will be transferred to the forest weeds coordinator. Scotch Thistle was removed from along Doce Pit rd. and many other populations of weeds were identified during this fire.

**Recreation:** The primary recreation resources affected by the fire were the trails in and around the fire, but developed facilities were impacted by suppression operations personnel and by the closure. All the developed facilities used during the fire in Alto Pit and Granite Basin got an S # assigned for emptying trash and pumping toilets. The rehabilitation work resulted in raking of pine needles in alto pit, clearing around the dam at Granite Basin Lake, and brushing the vegetation in front of the sign entering Granite Basin. Weeds were removed as described above.

**Solitude and Primitive and Unconfined Recreation values** will be somewhat impacted over the short term with limited access do to trail hazards. Solitude will be harder to find from other visitors in the coming 3-5 years as there is limited vegetative screening remaining, but time will heal this.

During the rehabilitation phase of the fire, crews were directed to remove the signs of suppression by dispersing the brush windrows along trails and dispersing log rounds. The widened trails will grow back in with brush but saw marks from limbing will be evident for years to come. Overall, the impacts from suppression will be minimal is a few years’ time, due to effective direction from READs during suppression operations and rehab activities.

**Vehicle use and Chipper:** Along the northeastern corner in section 14 where Mint Wash enters the wilderness for ¼ mile. This was found on July 11th on my walk of the boundary. No wilderness boundary signs were present, but the work that was completed in Mint Wash as a containment line was never documented and chipper use at this location was never discussed. Piles were left without dispersal and truck was driven in across grassy area to gain access.

The wilderness values as perceived by the public and land managers were dramatically affected by the fire, but long-term wilderness values will probably remain intact after a few years of vegetation regrowth. The primary impact from the fire is to the naturalness of the vegetation with a human caused fire that burned many of the larger trees and will most likely be replaced with brush and limited pinion & juniper growth at the lower elevations and less ponderosa pine growth higher on the mountain. Many large alligator junipers and ponderosa pines were lost during the fire and these will not be replaced for generations to come. There is no action to take to mitigate these concerns as in wilderness we need to let natural processes dominate and resist the desire to implement management actions to return the landscape to something we as humans perceive as natural. The BAER treatments will help to reduce soil loss on the east side of the Mountain. A Minimum Requirement Decision Guide (MRDG) was prepared for this treatment and the selected action’s benefits were weighed against no action in the wilderness.

Retardant lines will have a moderate to long-term effect on the scenery of the area and detract from the naturalness but will fade with time and become less visible. In some respects, the retardant lines helped protect some of the natural vegetation that is left so it becomes a tradeoff.

The **undeveloped character** of the area has been improved by the fire as many of the old improvements that were in disrepair burned and are no longer present. Many of the trails were maintained with treated log water bars 15 years ago and now these have been burned away and can be replaced with natural materials such as rock.