

## Header

Resource Specialty: Boundary Program Management

Hayden Pass – Salida RD/ PSICC – July 2016:

Sean Hines, BLM Front Range District Office/ Joe Velasquez, Pike and San Isabel NFs and Cimarron and Comanche NGs

## Report

1. Objectives: Protect existing land survey monuments that control the FS boundaries which are at risk based on the Hayden Pass Fire.
2. Initial Concerns (based on your resource/specialty): Existing General Land Office, Bureau of Land Management, Forest Service and private land survey monuments that control the public land boundaries are at risk of being lost based on the Hayden Pass Fire and the residual effects from the fire. These residual effects include flash flooding, landslides and debris flow which may be a result from the fire.
3. Resource Condition Assessment
  - a. Resource Setting – Land survey monuments have been set to control the boundaries between public and private land as part of the Public Land Survey System. These resources could be original stone monuments set in the 19<sup>th</sup> century or modern monuments made of various metals and plastics. The monuments that have been identified all control the public land boundary, are within drainages that will be prone to flooding due to the fire or are on slopes within high intensity burn areas and are at risk of flash flooding, landslides and debris flow.
  - b. Burned Area Reconnaissance – Based on existing survey records relative to maps of the burned area there are certain land survey monuments that need to be located and protected.
  - c. Findings of the On-The-Ground Survey
    - i. Public land boundaries and the physical ground locations of private land and public land have been identified as being at risk of being lost. The associated values consist of the location of fences, structures and roads as well as the correct location of the public land boundaries for future treatment projects.
    - ii. The existing land survey monuments in question have been used since the 1880s to determine land boundaries for public and private land. Since the 1880s several land surveys have been conducted to identify the associated boundaries. If the monuments in question were lost it would cost the tax payers and adjacent land owners a considerable amount of funding to reestablish the boundaries based on controlling land survey monuments in areas that have not been effected by the fire.
4. Emergency Determination –
  - a. Risk Assessment – Certain land survey monuments have been listed as using the BAER Risk Assessment Matrix. The certain monuments that have been identified have a very likely probability of damage or loss based on the fire and residual effects of the fire. The magnitude of consequences would be major due to the substantial property damage of the monuments and the irreversible damage to this critical resource. These risks cannot be managed via administrative means because the monuments need to be protected in the field. There is a proven treatment to manage these risks, as proposed below. The proposed treatment will substantially reduce the risk of losing the monument within the first year after the fire. This action is the most economical method to manage this risk and the cost is minimal and

justifiable. This treatment proposal can be completed before damage is expected within the year.

- b. Emergency Response Strategy – The identified land survey monuments and associated bearing trees would be identified, rehabilitated and protected. A coordinate diagram and monument descriptions would then be created for future reference for resource specialists to conduct their work.

5. Treatments to Mitigate the Emergency

- a. Treatment Type: Land survey monument location and protection.
- b. Treatment Objective: Preserve existing land survey monuments that are at risk from the results of the fire.
- c. Treatment Description: The monuments will be located on the ground using survey grade GPS so that the monument and its location can be put to future use if necessary. Then we will set a new monument, if needed, in its place. The new monument will be a 2 ½” aluminum post with a 3 ¼” aluminum cap with the corner markings stamped into the top. We will then protect any official bearing trees by painting the existing tree and attaching a sign to it, or by cutting the burned tree to a stump and attaching a sign to the stump in order to preserve the evidence. We then would set a steel fence post along-side the new monument so that it can be easily identified, this post will also reinforce the monument. This rehabilitation will help protected against flooding and debris flow caused by the residual effects of the fire. These corners will then be described and recorded for future use.

6. Discussion/Summary/Recommendations – There currently is a need to locate and protect the land survey monuments that are at risk of being destroyed due to the fire and the after effects of the fire. The risks associated with not taking action are very great and could result in tens of thousands of dollars lost due to the loss of certain survey monuments that control the public land boundaries. The cost to locate and protect these monuments is minimal and the treatment work can be done before the monuments are lost. We recommend that the monuments be located, rehabilitated and protected as soon as possible to avoid any unnecessary future costs.

7. Recommended Monitoring (if needed) – N/A

8. Consultations and Findings – N/A

9. References – N/A

10. Appendices –

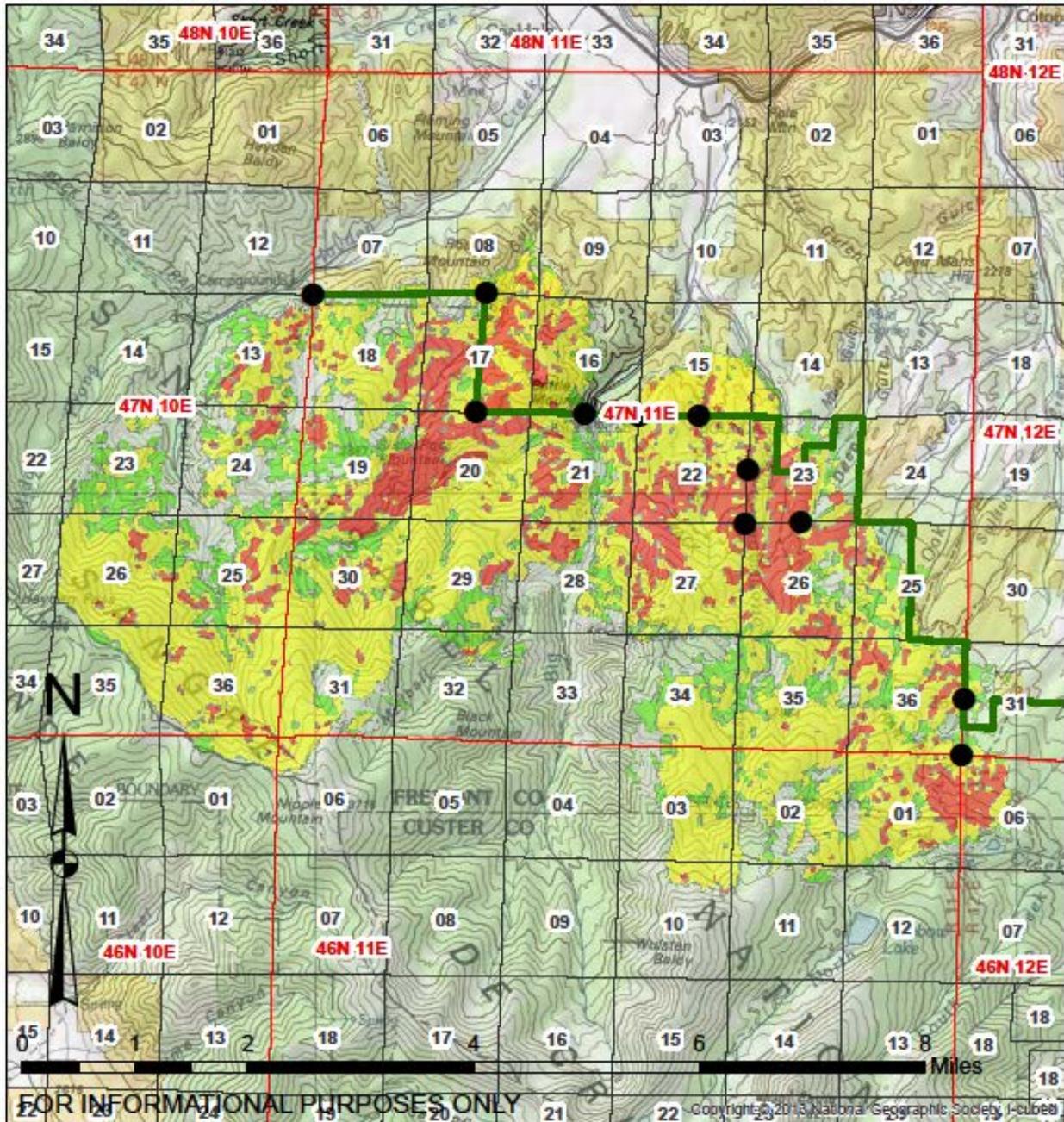
Appendix A – Monument Location Diagram

A-1

# Hayden Fire At Risk Monument Protection

## T. 47 N., R. 11 E., NMPM

### BAER Team Monument Protection Estimate



Created by Sean Hines  
 BLM Cadastral Surveyor  
 07/28/2016

- |                                   |                         |                           |
|-----------------------------------|-------------------------|---------------------------|
| ● Search for and Protect Monument | Low-Moderate Intensity  | Bureau of Land Management |
| — FS Boundary                     | Moderate-High Intensity | Private                   |
| Low Intensity                     | High Intensity          | US Forest Service         |