Interagency Coordination/Soil Scientist
Angora Fire, Lake Tahoe Basin Management Unit
July 2007
Todd J. Ellsworth, Inyo National Forest

I. Introduction

I was assigned to be the Interagency Coordinator on this incident. In addition, I acted as a soil scientist to assist the lead soil scientist in obtaining data and making additional on the ground observations. The Lake Tahoe basin has many interested local, state and federal agencies due to the importance of maintaining environmental conditions, especially water quality in and around Lake Tahoe. In addition, this fire received a high amount of interest from the media. The BAER team leader and Forest BAER coordinator determined that the Interagency Coordinator position was needed to facilitate communication between the interested entities. The following is a chronicle of my contacts and meetings.

II. Assessment

July 2. Monday

I arrived at the assignment and met with Team Leader Jim Frazier and Co-team Leader Stephanie Heller to discuss the current situation of the fire and my role as Interagency Coordinator. Stephanie already present the BAER program overview powerpoint to a large group to explain the Forest Service BAER process and objectives. From that meeting she developed a spreadsheet of people and agencies specifically interested in cooperating with the Forest Service during the assessment phase. We briefly discussed how we would like to communicate with this group. We concluded that we would invite them to the evening briefings and produce a daily summary to e-mail to interested cooperators. They also informed me that a meeting with the cooperators was scheduled for 4:00 p.m. Tuesday July 3 so I could introduce myself to them and begin dialogue with them regarding the Angora BAER assessment.

July 3. Tuesday

Team Leader Frazier briefed the team on expectations during the assignment in the morning. We went into the field early afternoon getting an overview of the fire area from the Angora road and drove through several neighborhoods that burned. We came back to prepare for the Interagency meeting.
Appendix A contains a list of attendees at the July 3rd meeting. I briefly discussed the BAER process, where the team was in the process. We discussed the initial values at risk identified by the BAER team with input from the Forest. The interagency cooperators

acknowledged and validated the initial list. I then asked them how we should communicate with each other throughout the assessment. We agreed that the cooperators can attend our nightly briefings; we also agreed that I would put together a daily summary of BAER activities to send out. People could then call me or come to the BAER den to receive further clarification. We then opened the floor for discussion. The cooperators were appreciative of the Forest Service moving forward with this process and sharing information. Jane Schmidt of the NRCS noted that the two agencies will be working closely throughout this process. The meeting lasted approximately 1.5 hours.

July 4th Wednesday

I met Cathleen Thompson, BAER PIO, at the Lake Tahoe Basin Management Unit (LTBMU) Supervisors Office in the morning to work on the BAER daily briefing. I gave Cathleen the e-mail list developed by Stephanie and attendees of the cooperators meeting the previous day. In addition, we sent the briefing to key Forest Service personnel and Sen. Feinstein's staff in Washington. The Briefings are attached in Appendix B of this document. I then went in the field with Tim Biddinger, Rick Weaver, and Jim Frazier to observe post-fire hillslope and channel conditions in the Seneca Lake area. We then walked down Angora Creek.

July 5th Thursday

I met Cathleen Thompson, BAER PIO, at the Lake Tahoe Basin Management Unit (LTBMU) Supervisors Office in the morning to work on the BAER daily briefing. I went to the field again with Tim, Rick and Jim. We started by the water tank on Lookout Mnt. drive and walked across the hillslope observing hillslope conditions including water repellency, soil texture, ash depth, and slope. We noted the swales on the hillslope. We proceeded until we hit Angora Creek and followed Angora Creek to where it intersects Lake Tahoe Blvd. noting channel condition. I attended a public meeting at 6:00 p.m. the main topic was disposal of waste on properties that burned and starting the rebuilding process. No BAER questions were asked at the meeting. The following cooperators attended our evening briefing: Myrnie Mayville U.S. BoR, Doug Cushman, Lahontan Water quality board, Steve Chilton TRPA and Shawn Butler, CTC

July 6th Friday

I met Cathleen Thompson, BAER PIO, at the Lake Tahoe Basin Management Unit (LTBMU) Supervisors Office in the morning to work on the BAER daily briefing. I went in the field with Tim, Rick and Jim. We went to area behind the high school to assess risks to high school and Lake Tahoe Blvd. I met with the NRCS (Jane Schmidt, Woody and Julia Grim) at 3:00 p.m. to share information and discuss were both agencies were at in the assessment process. We discussed concerns that the county had regarding post-fire erosion and that the NRCS team is working with the County. We also discussed the urban lots and how the Forest Service, Tahoe Conservancy and the NRCS need to work together to address issues related to the lots. We agreed that the BAER urban lot team would go out with the NRCS the next day. We also discussed that the NRCS should be at our Saturday meeting to discuss treatments with the BAER team. The following

cooperators were at our 7:00 p.m. meeting :Shawn Butler,CTC, Doug Cushman Lahontan water quality control board, Steve Chilton, TRPA and Myrnie MayvilleUSBR, Joe Pepi, CTC

7/7/07 Saturday

I met Cathleen Thompson, BAER PIO, at the Lake Tahoe Basin Management Unit (LTBMU) Supervisors Office in the morning to work on the BAER daily briefing. I participated in discussions regarding treatments to mitigate identified emergencies. I met briefly with Bob Slater, El Dorado County DOT. Jim and Stephanie met with him and went out in the field. Bob had the following concerns:

- Tahoe Mtn. Road – between uppermost subdivision in the fire and Dundee Heights. What effects the fire on FS land will there be on the road?
- Boulder Mtn. Rd. – on FS land. How will FS deal with road drainage at lower end of road?
- Lake Tahoe Blvd.- Angora Creek Crossing. How will El Dorado DOT and FS address water passage
- Slopes above subdivisions – erosion and debris flow potential from FS land. What will the FS do to mitigate this hazard?

Jim and Stephanie met Bob at the Angora Creek restoration area to discuss concerns to this project.
I went to the Lake Tahoe Blvd. Angora Creek crossing with a photographer from the Tahoe Tribune so they could take pictures of the fire area and how we do soil and watershed post-fire assessments. I showed him the water repellency test which he took many pictures of. A reporter from the Tahoe Tribune will do a follow up interview on Monday.
The BAER team had the evening briefing at 4:00 p.m. The Jane Schmidt, Dave Krietemeyer and Lisa Colcult from the NRCS attended. We briefed them on the treatments we were thinking about and recommending. They discussed results of their field up to now. They had concerns around the high school and Gardner St. I agreed to go out in the field with them on Sunday to look at upslope conditions and downstream concerns.
Darrell Cruz from the Washoe Tribe came to the BAER den after the meeting. Stephanie and I briefed him as to the treatments we were considering and the status of the BAER assessment.
Doug Cushman from Lahontan Water Quality Board also came to the BAER den after the meeting. I briefed him as the treatments we were considering. Other BAER team members provided further clarification to Doug including how much erosion and sedimentation the treatments can mitigate. We told Doug that the treatments will mitigate approximately 2/3 of the expected erosion and sedimentation and that ash and sediment in reaching Lake Tahoe is probable.

7/08/07 Sunday

I prepared the BAER daily summary and sent it out from the LTBMU SO.

I met the NRCS at their office at 0900. We went to the High School first. We discussed that high burn severity lands exist above the high school and that the BAER Team is proposing to treat that with either straw mulch or hydromulch. Dave K. of the NRCS showed me where they are thinking about putting sand bags around the buildings. We also discussed the possibility of nuisance sediment reaching the football field. Dave K. said they may put sand bags or other deflectors around the field.

I went out with the NRCS yesterday to look at the Gardner Street issues. We walked up the hillslope behind the rock lined ditch. There is a large green, grass meadow in the swale leading to the rock lined ditch. In addition there are several downed lots in the meadow area that can capture ash and sediment. Most of the area contains scorched pine and fir trees that still contain needles. We believe the needlecast will be good in that area providing additional ground cover. The Forest is not proposing any additional treatments in that area. The NRCS is looking at staging sand bags for placement during a storm event to prevent damage to pvt lands.
We talked to a Private land owner on Gardner St. who said water ran on the crown of the road in 1997 rain on snow event and other high flow events.
I participated in further treatment discussions with the BAER Team and worked on my report and other documentation.

7/09/07 Monday
I prepared the final BAER daily summary from the assessment team and sent it out from the LTBMU SO.
I met with a reporter for the Tahoe Tribune. I discussed the BAER process, issues and our findings with him. I also received an e-mail from John Greenhut, City of South Lake Tahoe administer. His message and my response are included in Appendix C.

Appendix A:

BAER – Multi-Agency Cooperators Coordination Meeting
July 3, 2007
Lake Tahoe Community College

ATTENDEES:

Jim Fraizer	**USFS**	**209-559-6125**	**jfrazier@fs.fed.us**
Brent Roath	**USFS**	**707-562-8941**	**broath@fs.fed.us**
Steve Chilton	**TRPA**	**775-762-7542**	**schilton@trpa.org**
Stephanie Heller	**USFS**	**530-307-0157**	**sheller@fs.fed.us**
Myrnie Mayville	**USBR**	**775-589-4240**	**mmayville@mp.usbr.gov**
Shawn Butler	**CTC**	**530-543-6034**	**sbutler@tahoecons.ca.gov**
Darrel Cruz	**Washoe Tribe**	**775-265-8692**	**darrel.cruz@washoetribe.us**
Kent Julin	**Marin Co. Fire**	**415-233-0695**	**kjulin@co.marin.ca.us**
Ken Anderson	**CA State Parks**	**530-525-9535**	**kande@parks.ca.gov**
John Munn	**Cal Fire**	**916-203-0138**	**john.munn@fire.ca.gov**
Douglas Cushman	**Lahontan WQ**	**530-542-5417**	**dcushman@waterboards.ca.gov**
Jane Schmidt	**NRCS**	**530-543-1501 x101**	**jane.schmidt@ca.usda.gov**
Woody Loftis	**NRCS**	**530-543-1501 x104**	**william.loftis@ca.usda.gov**
Brad Rust	**USFS**	**530-226-2427**	**brust@fs.fed.us**
Cathleen Thompson	**USFS**	**707-853-4243**	**cjthompson01@fs.fed.us**

Appendix B -

Angora BAER Summary – 7/4/07

Hope everyone had a happy and safe 4th of July!!

The BAER team continued with field assessments of post-fire conditions and potential values at risk. Critical observations include:

- The Earth Sciences team surveyed potential flood source areas which include the steep hillslopes with high severity burn to determine the extent and severity of a post-fire runoff event. Preliminary calculations suggest that steeper areas with a high severity burn can expect an increase in accelerated erosion.
- The Earth Sciences team surveyed Seneca pond area and Angora Creek (on National Forest Lands) to determine the capacity of Angora Creek to absorb expected increased peak flows, ash and sediment. There are several lower gradient areas on Angora Creek where ash and sediment can collect.
- The "Urban Lot" assessment team determined that there are 148 Forest Service urban lots totaling 216 acres. They are systematically visiting each lot to determine post-fire conditions.

Today, the BAER team will continue with field assessments in identified critical areas within the fire area including potential values at risk. Coordination will continue with the interagency group including the NRCS Damage Survey Report team. These assessments will further refine and clarify specific risks the fire effects pose.

For further information contact Todd Ellsworth at 760-937-2082.

Note: This evenings briefing will be at 7:00 p.m. at the Lake Tahoe Community College Art Gallery.

Submitted by Todd J. Ellsworth
Angora BAER Team Interagency Coordinator
7/5/07

Angora BAER Summary – 7/5/07 (updated 7/6/07)

The BAER team continued with field assessments of post-fire conditions and potential values at risk. Critical observations include:

- The geology team evaluated the risk of debris flows from the fire area into the residential neighborhoods around Elk Lookout/Mule Deer Circle area. They will continue the evaluation today to further refine what risk exists.

- The watershed team evaluated the slopes behind the residential neighbors around Elk Lookout/Mule Deer Circle area. They walked across the hillslope to Angora Creek. There is a large "runout" at the bottom of the slope before ash and sediment could reach Angora Creek. The swales on the hillslope are generally not connected to Angora Creek. They dissipate in the large runout area before reaching the Creek. Vegetation in and around Angora Creek is recovering quickly, as the soil moisture is high, and has the ability to trap sediments. The large amount of large woody debris in Angora Creek has the ability to trap debris and sediments. The watershed team observed the condition in Angora Creek below the fire on State Park lands. The stream channel is highly sinuous with vegetated, stable banks. The sediment filtering potential is high in this part of Angora Creek.

- The urban lot team continued their survey and noted a few parcels that have high erosion risk. People are cutting and taking trees throughout the fire area. They will continue their survey today of the larger lots.

Most teams will finish their field work today. Priorities include assessing the risk to the High School, Forest Service roads within the fire, and the neighborhoods around Elk Lookout/Mule Deer Circle area.

The BAER Team is starting discussions on possible treatments to mitigate risks today. They also will be meeting with the NRCS to discuss findings and share information. Cooperators are encouraged to attend tonight's' briefing at 7:00 p.m. in the Art Gallery at the Lake Tahoe Community College.

If you have any questions please contact Todd Ellsworth at 760-937-2082.

Submitted by
Todd J. Ellsworth
Interagency Coordinator Angora BAER Team

Angora BAER Summary

July 6, 2007

CURRENT STATUS

The BAER team continued with field assessments of post-fire conditions and potential values at risk. Critical observations include:

- The watershed team observed conditions behind the high school. The BAER team informed the NRCS of potential risks as they will take a closer look in and around the high school area. The watershed team also looked at conditions around Highway 89. There is a large, flat "run-out" area including a meadow between the high severity burned area and the highway. There are also several culverts underneath Highway 89 that can transport flows safely under the road.

- The watershed team met with the NRCS to share information and discuss concerns both agencies have observed. The NRCS shared with the BAER team their concerns that El Dorado County has with post-fire erosion and runoff. The BAER team and NRCS will continue to work closely to assess post-fire impacts.

- The urban lot team and the soil scientists continued assessing Forest Service urban lots. Several lots on the steeper slopes have an increased risk of erosion and off-site sedimentation. The team is working with the CA Tahoe Conservancy and NRCS today to assess lots to develop consistent and complimentary treatments.

The watershed team started to develop alternatives for treatments to address water quality concerns in Angora Creek and Lake Tahoe. Those discussions will continue today. In addition, discussions regarding treatments for roads and urban lots will continue.

The BAER Team is will present their findings and recommendations to the Forest Supervisor on Monday afternoon, July 9.

If you have any questions please contact Todd Ellsworth at 760-937-2082.

Angora BAER Summary
July 7, 2007 (updated 7/8/07)

CURRENT STATUS

The BAER Team completed the bulk of their field work and concentrated on analyzing field data and developing treatments to mitigate threats.

- The watershed team continued work on treatments to mitigate concerns about water quality in Angora Creek, Lake Tahoe and ash and sediment

expected in and around the adjacent neighborhoods. Their objective was to propose treatments that provide effective ground cover. They discussed two possible broadcast treatments; Heli-mulching and aerial hydromulch as a way to get cover on the ground in critical high burn severity areas. They also discussed ground hydromulch applied from a truck and hand application of straw as treatments on Forest Service lands adjacent to residential areas.

- The urban lot team developed treatments for 30 lots (55 acres) where increased erosion and off-site sedimentation is expected. They discussed treatments of spreading wood chips, barricades, water bars or small checks, additional patrol and seeding approximately 18 acres to control noxious weeds.

- The BAER Team road engineer proposed treatments to mitigate concerns on National Forest roads. He proposed armouring the outflow of the rolling dips, restoring drainage function, placing hazard signs and removing hazard trees on the 1219 road. On the 1214 road he proposed hazard tree removal and placement of hazard signs.

- The BAER team and co-team leaders met with El Dorado County Department of Transportation to discuss the BAER process and areas of concern they have. They visited the Angora Creek restoration project and discussed possible impacts post-fire erosion and peak flows could have on that project.

- The NRCS continued to survey private lands and working with El Dorado County to ensure erosion control on private lands is addressed. A BAER team member will go out in the field with the NRCS crew on Sunday to look at identified critical areas. The BAER team proposed a treatment that interagency coordination position continues after the BAER team has disbanded to ensure communication and coordination between agencies in the Lake Tahoe area continues.

Today, the BAER team will continue to refine treatments, work on reports and prepare for the Forest Supervisor close-out.

Submitted by Todd J.Ellsworth
Interagency Coordinator – Angora BAER Team

Angora BAER Summary

July 8, 2007 (updated July 9,2007)

Current Status

The BAER Team continued to concentrate on analyzing field data, finalizing treatments, finishing reports and preparing for the "close-out" with the Forest Supervisor.

- The BAER Team Interagency Coordinator/Soil Scientist went into the field with members of the NRCS assessment team. They looked at the High School and hillslope conditions behind the high school. The BAER team is proposing to do hillslope treatment on the high severity slopes behind the High School. The NRCS is evaluating the need for deflectors such as sand bags around some of the buildings. The NRCS is meeting with school officials in the near future.
  They also looked at conditions on Gardner Street. There are areas of high and moderate burn severity above a rock lined ditch that spills out on to the road. They concluded that deflectors such as sand bags may be needed on the street and around a few houses. They also concluded that additional hillslope treatments are not needed.

- In the BAER program, the Forest Supervisor is the recommending official. Once the BAER plan is approved at the Forest level it goes to the Regional Office for approval and in some cases the Washington Office for approval. The Angora BAER assessment will likely go to the Washington Office. Final approval can be expected early next week.

This is the final Angora BAER summary from the assessment Team. It has been our pleasure to work with the many local, state and federal cooperators during this assignment.
The Lake Tahoe Basin Management Unit will continue to provide information regarding post-fire recovery and treatment implementation.

For further information please contact Todd Ellsworth at 760-937-2082.

Submitted by Todd J.Ellsworth
Interagency Coordinator/Soil Scientist Angora BAER Team

Appendix C – Correspondence with John Greenhut

Todd:

The City of South Lake Tahoe has identified 4 areas of concern where USFS burned property abuts City residential neighborhoods. The first area is West of the high school. This area is steep and completely burned. Our concern is for debris flows in this area that would travel South to Lake Tahoe Boulevard and incapacitate our drainage system. There is an opportunity for the USFS to develop water bars along an existing access road to the old saw mill and then direct the flows into a debris basin that would need to be constructed.

The second area of concern is immediately above the High School. Again, we believe that the USFS needs to construct diversion basins in order to capture debris flows before they reach LTHS or on the LTHS property. Once the flows leave the LTHS property, they will enter drainage channels that flow into neighborhoods. Several homes are directly in the path of any debris flows. These channels have very limited drainage capacity.

The third area of concern is the USFS property West of Gardner Street. Here the natural drainage takes flows from the burned USFS property, between homes and onto Gardner Street. It then flows through pipes and on the surface of the street to an opening between the homes where it flows back onto USFS property. In a high flow scenario containing debris flows, there is potential for property damage.

The fourth area is where Pope Marsh drains out into the Keys. The fires burned into the marsh and when debris flows leave the marsh they will enter the Lake via the Keys lagoons. This drainage channel may need to be damned and the marsh utilized as a settlement basin.

We would like a response in regard to what the BAER is proposing for these areas. Thunderstorms are forecast for tomorrow and Wednesday. If you would like to meet to visit the areas please contact me at 542-6035.

> Hi John: Thanks for the reply...I believe the BAER team has addressed your areas of concern through our assessment process.
>
> 1. We looked at that area above lake Tahoe Blvd. There are areas of high burn severity. There is a large runout below these areas where the swales on the hillslope spread out. It was difficult to find the swale channels in the flat areas. The flat areas also burned lightly and have the ability to absorb ash and sediment. The road would likely capture some flows along with the unburned area east of the road. We believe the risk to lake tahoe blvd. is very low.
>
> 2. The BAER team went out to the area behind the high school several times. We are proposing hillslope treatments in the area of high burn severity. We are proposing either straw mulch or hydromulch to provide cover and lessen the risk of erosion and sedimentation. I went out to the high school with the Natural Resources Conservation Service (NRCS) yesterday. They address post-fire issues on Pvt. lands. They are looking at

putting in sand bags or other deflectors around some of the buildings to protect the buildings.They also are meeting with high school officials today or tommorrow. FYI...the school property extends up the hill slope into some high burn severity areas. This area would likely be included in the Forest Service treatment if the school district gives us permission to do so as the boundaries are ill-defined up there.

3. I went out with the NRCS yesterday to look at the Gardner Street issues. We walked up the hillslope behind the rock lined ditch. There is a large green, grass meadow in the swale leading to the rock lined ditch. In addition there are several downed lots in the meadow area that can capture ash and sediment. Most of the area contains scorched pine and fir trees that still contain needles. We believe the needlecast will be good in that area providing additional ground cover. The Forest is not proposing any additional treatments in that area. The NRCS is looking at staging sand bags for placement during a storm event to prevent damage to pvt lands.

4. The BAER Team looked at the high burn severity hillslope above the meadow. We are proposing road drainage treatments (armouring and riprap) to prevent accelerated erosion and sedimentation concentrating on the road and onto the burned hillslopes. No hillslope treatments are proposed in that area at this time. There is a long run out area to flatter ground grading into a meadow south of hwy. 89.
We look at the meadow south of Hwy. 89 to evaluate it's ability to absorb accelerated erosion, ash and sediment. There are currently grade stabilizing structures in small channel that goes through the meadow that would slow flow and allow spillage out into the meadow. The meadow should absorb the majority of increased ash and sediment. If some does go under hwy. 89 through the culverts the meadow on the north side of the highway would absorb the majority of the remaining ash and sediment.

John: I hope that addresses your concerns. Feel free to stop by the Art gallery at the community college as the BAER team will be here until 2:00 p.m. today. I will call you later this morning also. Thanks for your interest. Todd