

## **Noble Fire**

Observations from road reconnaissance of the Noble fire revealed that the most intense fire areas were south facing slopes and ridges dominated by chamise, mountain mahogany, manzanita and scrub oaks. Many drainages retained some vegetation and burned in a mosaic pattern. Soils testing for hydrophobicity in several locations revealed only one site where there was evidence of intermittent hydrophobicity to a depth of 1 cm. This site was located on a ridgetop along Beegum Road. Oaks and chamise are rapidly resprouting. This new vegetative growth in conjunction with the leaf drop that will occur at many sites within the burned over area prior to the rainy season could reduce the raindrop impact and soil erosion potential within these areas. Beegum Road was not surveyed to the campground. No potential Emergency Watershed Program (EWP) projects on private lands were discovered within the Noble fire area.



Noble Fire landscape view



Hydrophobic soil

## **Motion Fire**

### **Benson Drive**

Reconnaissance of the Benson Drive area of West Redding revealed potential hazards as related to the destructive effects of the Motion Fire. A private residence adjacent to the South Fork of Spring Creek, above the Spring Creek reservoir, may be threatened by flooding due to increased flows entering the drainage. Wildfires burned the knobcone pine stand surrounding the home greatly reducing the vegetative cover in the area. An 18inch plastic culvert which directs surface flows into the drainage has been partially burnt out. The extent of the burnt portion of the culvert is unknown, likely 2 or more feet of the culvert has been compromised. Failure of this culvert is highly likely. Headcutting of a portion of Benson Drive is possible if this culvert fails or is not replaced. A second culvert located roughly parallel to the first is buried under the beginning section of an access road and drains the roadside ditch along Benson Drive. This culvert has been covered by piled debris and is no longer functional. This property (11938 Benson Drive) has experienced flooding in the past. The drainage itself did not burn extensively and is well vegetated near the homesite.

Treatment should include two culvert replacements. NRCS will follow up with the landowner to provide technical information regarding the placement of sandbags or other protective measures, as necessary, to provide flood protection.

Other homes along Benson drive were assessed where possible. It was determined that the extent of potential damage to these properties does not meet the criteria necessary to implement remediation through the EWP.



Burned over knobcone pines, Benson Dr.



Culvert damage

### Coram Ranch

Reconnaissance of the Motion fire along Coram Road revealed Cottonwood Creek could pose a potential problem. A small bridge could be threatened by debris flows as well as increased surface flows from the extensive wildfire damage on the west side of Coram Road. Coram Road served as the fire line and no vegetation was burned east of the Cottonwood Creek Bridge which remains well vegetated. The creek channel is very narrow; it is likely that debris that becomes dislodged with winter flows may get hung up in the channel before making its way to the bridge. Clearance under the bridge is minimal;  $\leq 5$ ft.

Treatment recommendations may include removal of debris and hazard trees within and along the channel to 150 yards upstream of the bridge. Additional reconnaissance following storm events would be necessary to remove any new accumulations of debris. Further protective measures may be considered to reduce erosion potential near the bridge site.

Situated nearby is the historical town of Coram. Old foundations and other remnants of cultural significance have been unveiled following the wildfire. Significant concern exists as to the likelihood of looting at these archaeological sites. There is an erosion feature that is also potentially threatening one historic foundation and possibly Coram Road. Fencing this area of the Coram Ranch property to reduce the likelihood of vandalism and looting of the historic sites is a recommended treatment alternative. NRCS will follow up with the landowner to provide technical assistance as needed. Enforcement of Off Highway Vehicles regulations will also be important to reduce the potential impact to this area. Damage to the Coram Ranch property does not meet the criteria necessary to be treated through the EWP program.



Cottonwood Creek Bridge near Coram Ranch



Foundation from historic town of Coram

### **Whiskey Creek Road/Cabin**

One cabin, presumed to be abandoned, lies between Whiskey Creek Road and Whiskey Creek and may be threatened under circumstances of debris flow. Prior evidence of debris flows exist; it appears that the area has been altered by man as there is an accumulation of bank fill piled along the roadside. Due to steep slopes, rocky soils and hazard trees, debris fall may be a serious hazard. Sedimentation to Whiskey Creek following debris flow is also of concern. In addition, inadequately sized culverts may reduce the drainage capability in this area. Work has been initiated along the road to remove some of the existing hazardous vegetation.

Recommendations include the use of signage along Whiskey Creek Road to warn travelers of potential hazards in the area including tree and rock falls. Further investigation is needed to determine the extent of road work that should be completed in the area. Treatment options are limited and do not warrant EWP assistance.



Cabin at Whiskey Creek



Potential debris flow area

### **Deerlick Fire**

Road reconnaissance initiated in the area of the Deerlick fire revealed no significant concerns. The burned over area has a very low population level and the fire burned primarily in chaparral, an ecosystem that is prone to frequent wildfires. Coarse textured, rocky soils may reduce the amount of erosion that could occur. The probability of flooding of the Graves ranch related to ecosystem damage from the wildfire is considered to be of low probability.



Deerlick Fire



Chemise, following wildfire

## **Moon Fire**

### **Zogg Mine Road Homes**

NRCS assessing the Moon Fires utilized USFS BARC maps to identify broad landscape areas to perform on the ground reconnaissance. Initial on the ground reconnaissance was done in the Igo Area. Houses along Zogg Mine were visited to identify any imminent threats to life and property. No imminent hazards to life or property were identified along the length of this road. A cultural resource site was visited above Zogg Mine Road. NRCS. Field test of hydrophobicity were made and documented on field worksheets at a site past the end of Zogg Mine Road in an area of moderate burn intensity. A GPS location and photographs were taken. The majority of the lower drainage appeared to be low burn intensity. The upper reaches tended from moderate to high.



Zogg Mine Cultural Site



Zogg Mine Rd. House

### **South Fork Rd to Hulling Creek Drainage**

This area of the Moon fire showed areas of moderate to high burn intensities on the BARC map and through ground reconnaissance. No Imminent Threats to Life and Property identified.



Testing Hydrophobicity



Hulling Creek Drainage

### **Eagle Creek Irrigation Diversion and Lateral**

Reconnaissance of the Eagle Creek drainage included several cabins and bridges. Burn intensity appeared to be predominantly moderate to high in the mid-elevation range traversed. A value at risk was identified for the Eagle Creek diversion lateral that feeds into the Happy Valley Irrigation Ditch. The ditch is at high risk of blockage due to the high burn intensity on steep decomposed granitic soils and the high tree and

brush mortality adjacent and upslope of the ditch. Liveoak, Manzanita, Blue Oak and Gray Pine Trees are dominant in the area and several example of trees and branches falling into the ditch were noted. The ditch area of concern runs for 1.3 miles. Treatment measures for this site include: Hazard tree removal, Upslope Straw Mulching and sediment removal & debris removal over the winter. The Igo-Ono Community Service District which maintains the Canal was notified by NRCS of the existing hazards on 8/1/08.



Eagle Creek Irrigation Lateral



Eagle Creek Irrigation Diversion

### **Eagle Creek Bridge**

The Eagle Creek Bridge crossed Eagle Creek at the Town of Ono in Shasta County. The Moon Fire burned the riparian area immediately up to the Bridge. There is a existing hazard posed by the trees in the active floodplain should be fall into the floodplain or channel and precipitate a blockage at the bridge. The Eagle Creek Bridge is the Value at Risk should this occur as hydrology modeling indicates an increase of sedimentation and peak flows will likely occur this winter due the burn severity and scope of burns. Recommended treatment is remove hazard trees in the floodplain 300-500 feet upstream of the bridge. Monitor and perform necessary maintenance to prevent any debris blockages at the Bridge. This is a Shasta County Bridge and the Public Works Office was contacted by NRCS on 8/6/08 regarding this hazard.



Eagle Creek Bridge at Ono



Dead Trees present an obstruction Hazard at Bridge

### **Moon Fire Roads**

Due to a combination of moderate to high burn intensity, steep slopes, highly erodible decomposed granite soils and high rainfall, unsurfaced roads on private lands above Ono are at risk for accelerated erosion and

washouts. A significant roaded area exists in the decomposed granite soils above Ono. Private landowners should have their roads inventoried for potential problems and take one or more of the following treatment measures: Remove sediment in existing culverts, upgrade culverts, install rolling dips, grade out rills and outslope road surfaces, rock rolling dips, install energy dissipaters, perform annual or more frequent inspection and maintenance, close roads during wet periods. NRCS will host a public meeting with local Conservation District Officials and Agencies to encourage landowners to take preventive actions before winter storms if possible. Local Technical Assistance and Cost-Share Programs will be presented.



Private Roads above Ono



Existing road erosion on decomposed granite soils

### **Rector Creek Flume and Happy Valley Irrigation Lateral**

The Rector Creek Flume sustained damages to the wooden support structures upholding the flume. This resulted in collapse of a portion of the 170 foot 30 inch steel pipe causing cracking and large leaks. An emergency, temporary repair was completed by the Igo-Ono Community Service District so that irrigation delivers could continue. The entire structure is at high risk of collapse. If the structure does not collapse immediately it may be washed out by the elevated peak flows and sediment yield and debris that may come down Rector Creek this winter as the diversion supports are in the active channel and floodplain. Treatment recommendations: NRCS has informed the Igo-Ono Community Service District that the Emergency Watershed Protection Program (EWP) may be able to provide technical and financial assistance To repair or replace this structure so that total failure of the flume does not occur. New support structures and pipeline are needed due to the age and condition of these structures. A Damage Survey Report is being prepared for this Value at Risk.



Collapsed Rector Creek Flume



Emergency Repair of Flume



Wooden Support Destroyed in Fire



Collapsed pipe in Floodplain

### Happy Valley Irrigation Ditch

The Happy Valley Irrigation Ditch is at risk of plugging due to the high mortality and burn intensity along 2.5 miles of the ditch in the Rector Creek and Eagle Creek Drainages. Trees are currently falling across the ditch and into the ditch which could cause plugging and overtopping of the ditch which could erode the outer earthen bank leading to a failure of the ditch. Upslope sheet, rill or gully erosion could move significant amounts of sediment into the ditch which could reduce ditch capacity or cause a plug. Treatments recommended for the 2.5 mile reach are: Removal of hazard trees that could fall in the ditch or damage the earthen bank when they fall. Trash racks installed at entrance to Eagle Creek Flume, straw mulch 30 feet upslope of the ditch to prevent sedimentation of the ditch, ditch inspection, sediment and debris removal after major storm events this winter.



Tree fallen across ditch



Upslope hazards to ditch – trees & sediment



Flume entering Eagle Creek Drainage



Trash Rack needed to prevent clogging of pipe