

APPENDICES:

- **FIRE HAZARD RATING FORM and explanation**
- **MAPS OF COUNTY AND EACH LANDSCAPE NEIGHBORHOOD, WITH COMMENTS ON IMPORTANT PROBLEMS AND STRATEGIES FOR EACH.**
- **Creating Wildfire-Defensible Zones, Publication No. 6.302, by F. C. Dennis, CSU Cooperative Extension and Colorado State Forest Service, 5/2003.**
- **Wildfire and Your Forest Home, Reduce the Risk. Wet Mountain Fire Protection District.**
- **GOVERNMENT – SPECIAL DISTRICTS. HOUSE BILL 07-1168, CONCERNING FOREST IMPROVEMENT DISTRICTS.**
See http://www.state.co.us/gov_dir/leg_dir/olls/s12007a/sl_111.htm

Understanding the Wildfire Risk and Hazard Assessment Form

A. Means of Access –

This is for escape routes and emergency vehicle access. Can include two track roads that may not be used, but are wide enough for a vehicle to travel on. Make sure the road is in good condition. Make sure there is ample space for emergency vehicles to maneuver around without obstruction. There should be street signs and addresses clearly visible.

B. Vegetation –

1. Characteristics of predominant vegetation. Density and fuel loading create fire hazards.
 - a. Light – Keep grasses mowed at least 50’ from structures and 30’ away from either side of the road.
 - b. Medium – Keep bushes trimmed and away from under trees
 - c. Heavy – Thin trees around home for defensible space. Limb or remove trees along driveway that could obstruct an emergency vehicle.
Additional: Slash = Broken tree tops and branches. Remove debris by chipping, hauling away, burning (only when conditions permit), lop and scatter under 12”.
2. Defensible space and Home Ignition Zone – See CSU publications for guidelines.

C. Topography – Steepness contributes to rapid fire spread in forest and other vegetation.

1. up to 20% slope, you have a small slope around your house (less hazard)
2. 21% - 30% slope, you have a moderate slope around your house
3. 31% - and above, you have a severe slope around your house (high hazard)

D. Available Fire Protection

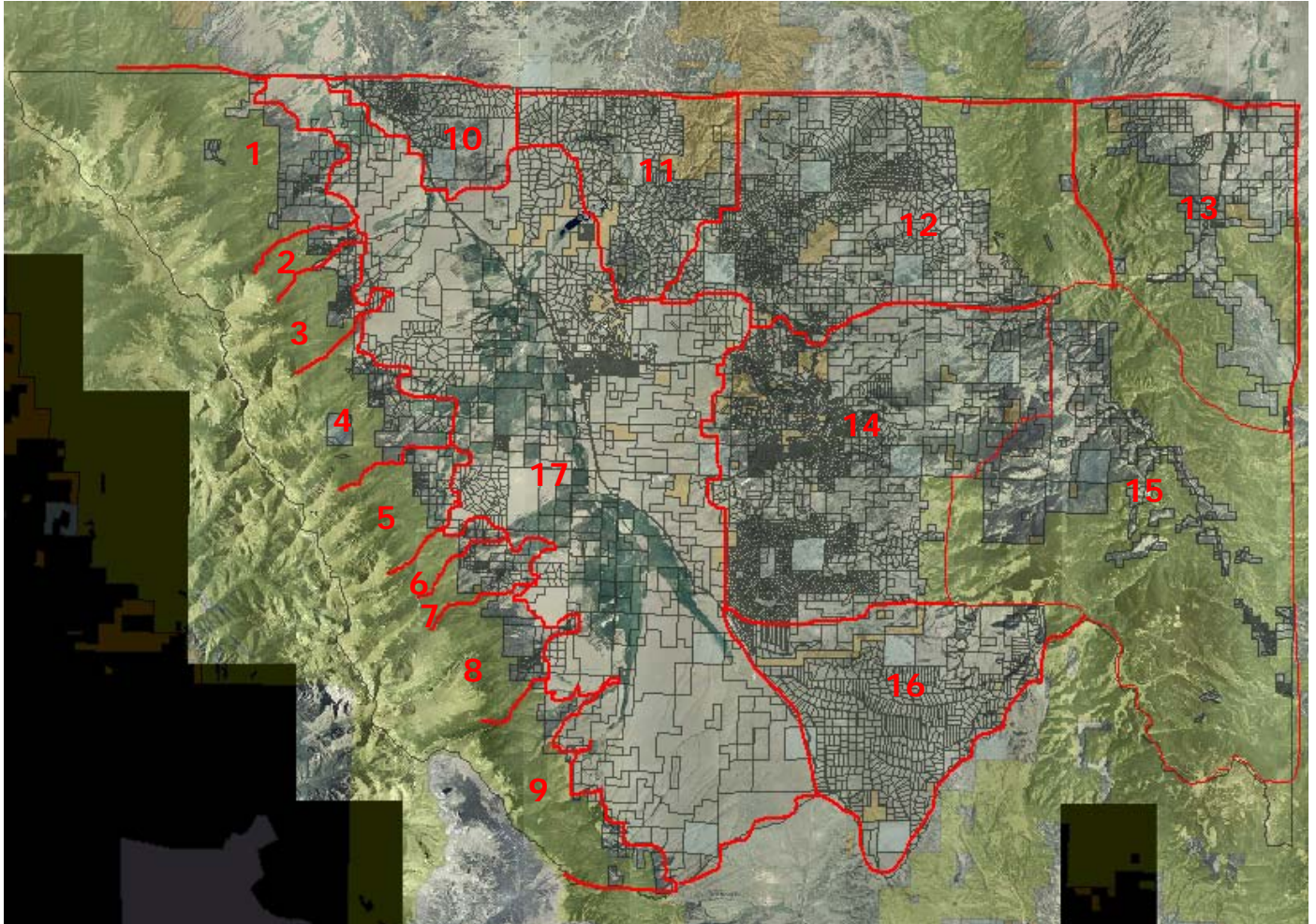
1. Water source availability (for firefighting) – from hydrant, well, cistern with pump, or source with draft connections
2. Organized Response Resources - Fire station equipment and crew over 10 miles away.
3. Fixed Fire Protection – inside home – consider for your home.
4. Roofing Assembly – for structural ignitability.
 - a. Class A – metal or clay tile – least flammable.
 - b. Class B – Asphalt tiles
 - c. Class C – treated wood shingles
 - d. Nonrated – untreated wood shingles – most flammable
5. Building Construction – for structural ignitability.
 - a. Materials
 - i. Metal, Stucco, Composite Decking, Concrete pads – least ignitable.
 - ii. Metal, Stucco, wood decking
 - iii. Log, Log siding, Wood siding, Wood decking – most ignitable.
 - b. Building setback – from vegetation or forest
 - i. small slope – less fire risk
 - ii. large slope – more fire risk

E. Placement of Gas and Electric Utilities – Power lines, and nearby propane tanks.

F. Additional rating factors

1. Topographical features – steep hillsides near home and near your neighborhood
2. Area with history of wildfire occurrence – show likelihood of wildfire.
3. Area exposed to severe fire conditions – ridge tops are high-risk homesites.
4. Other structures that store flammable material – add to fire hazard.

THE FOLLOWING MAPS ARE FOR THE WHOLE COUNTY AND THEN FOR EACH OF THE LANDSCAPE NEIGHBORHOODS – These show aerial photos, topography, access, land parcels, and fire behavior. Associated fire history is also illustrated in separate maps. Geographic Information System (GIS), aerial photo, topographic, access, land parcel maps, and Fire Behavior model information was obtained from the U. S. Forest Service, BLM, and Custer County Zoning Office.



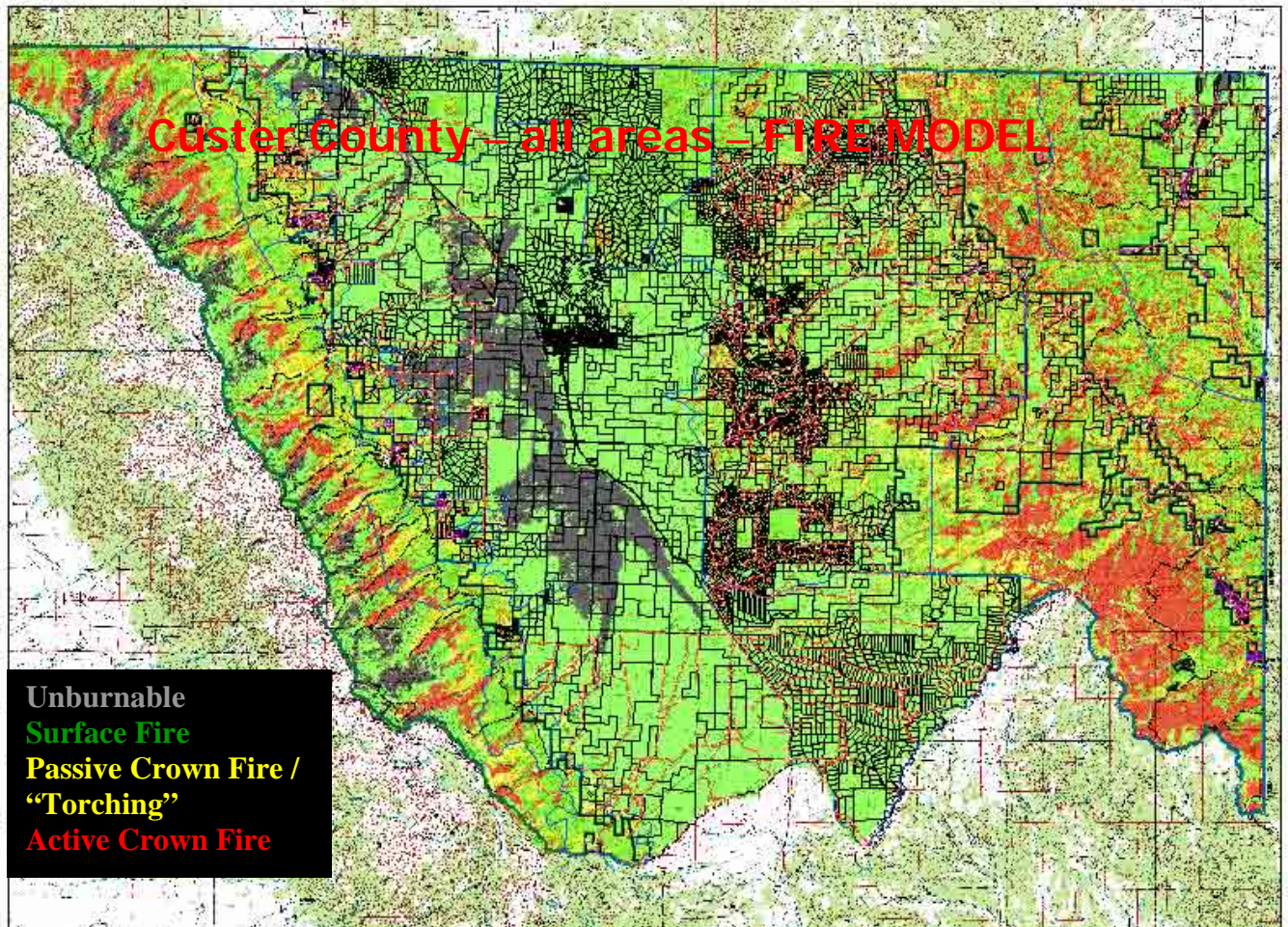
Custer County landscape neighborhoods, 2007

Note: on the above map, parcel densities appear BLACK/ GRAY SHADED. These density areas indicate especially fire hazardous areas in many parts of the county. Westcliffe and Silver Cliff are the large dark shaded area above the number “17.”

The **Landscape Neighborhoods** are as follows:

- | | |
|-------------------|-----------------------------------|
| Sangre de Cristo: | Others: |
| 1. Brush Creek | 10. Reed Road |
| 2. Verdemont | 11. Bull Domingo area |
| 3. Pines | 12. Silver Cliff Heights |
| 4. Taylor Creek | 13. Wetmore |
| 5. Alvarado | 14. East Hills |
| 6. Horn Creek | 15. Wet Mountains – to San Isabel |
| 7. Macey Creek | 16. Centennial |
| 8. Colony | 17. Main Wet Mountain Valley |
| 9. Music Pass | |

Custer County – all areas --- FIRE MODEL



**Notes: Red is extreme fire hazard.... Yellow is next hazardous.
Black-shaded indicates high-density parcel areas.**

The Fire Behavior Model maps illustrate the following:

Crown fire behavior assessment computer model assumptions:

30 mph, 20 foot winds, 90% foliar moisture content, & 90th percentile remaining fuel moisture conditions

Gray = unburnable

Dark green = surface fire only

Yellow = passive crown fire/ “torching” = Yellow

Red = active crown fire

NOTE THE FOLLOWING FIRE BEHAVIOR AREAS IN THE SUBSEQUENT MAPS:

Areas of yellow and red are prominent in:

Base of Sangres

Some Rosita areas

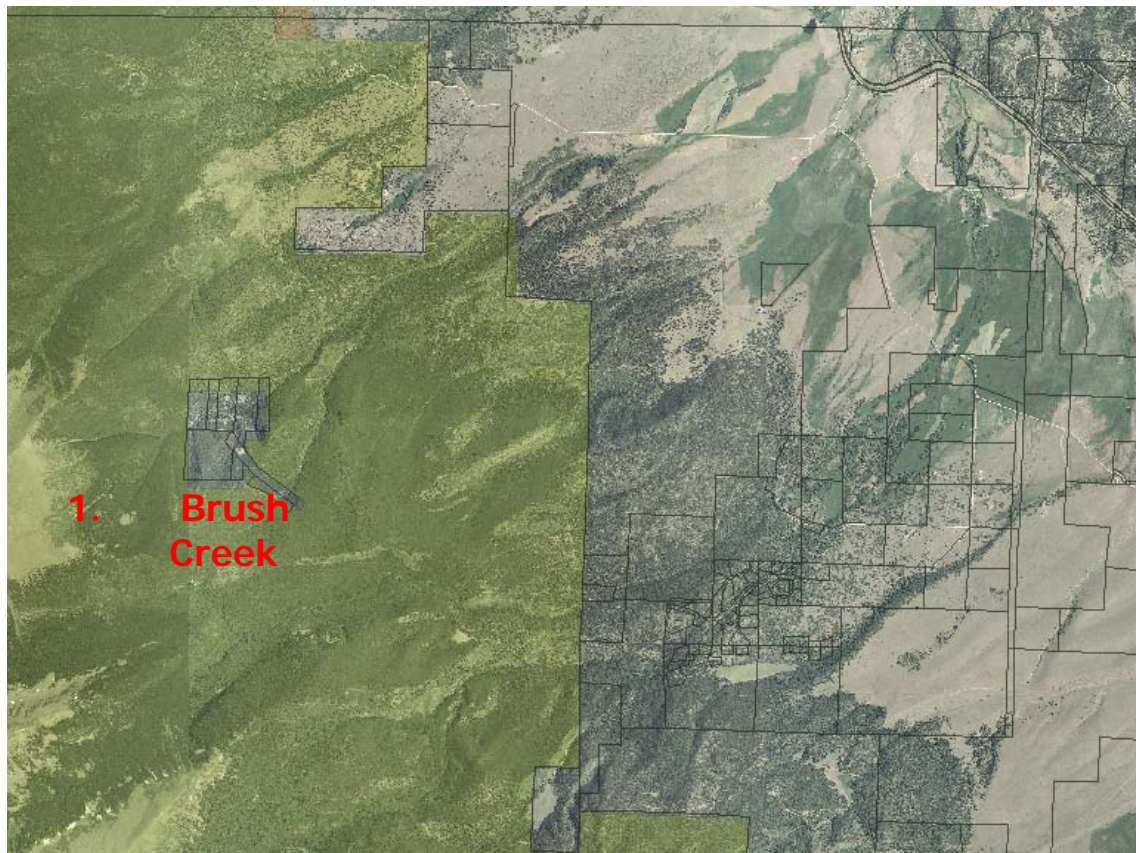
Silver Cliff Heights, and near the Oak Creek Grade main powerline

Wet Mountains, in National Forest (very prominent)

Especially note yellow & red, & some green (meadows)

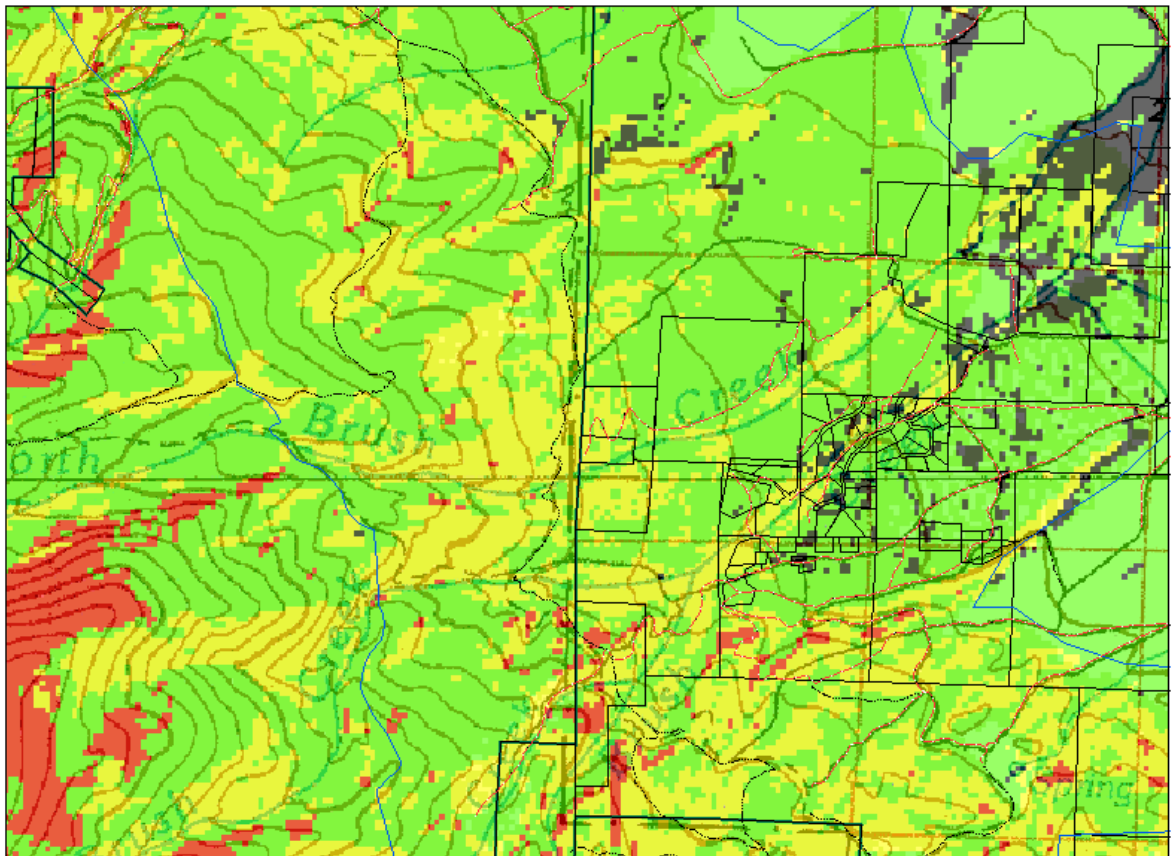
Near subdivisions, especially small lots (a warning!)

In Tyndall Gulch Fire of 2006 (this indicates the model is accurate)



#1. Brush Creek aerial photo

Brush Creek south FIRE MODEL



1c. Brush Creek Density Area



#1. Brush Creek Density Area has many older cabins and homes, with dense forest and oak brush. Hidden cabins indicate great need for defensible space work. One large meadow serves as a firebreak and evacuation safe zone. Narrow roads are one-way-in and one-way-out, and escape routes need development to the north and south (on both public and private lands.) Several ponds could serve for fire fighting water if developed.

Nearby Lake Creek fire scar shows wildfire can happen in the Sangres.



Lake Creek - 1993 - 250 acres



WILDFIRE IN #1. BRUSH CREEK – Lake Creek

The Lake Creek fire of 1993 burned 250 acres. It started from a lightning strike high above Rainbow Trail, but hot and dry southwest winds blew it downhill to threaten the Rainbow Trail Lutheran Camp and private lands bordering the National Forest. A huge fire control effort contained the fire at considerable cost, approximately \$450,000 or about \$1,800 per acre.

Lessons learned: The fire was driven by high, dry and down-slope winds in July. It demonstrated that on the east side of the Sangres, typical down-slope winds can be offset by the tendency of fire to go upslope with forest fuels in a chimney effect – therefore slowing a wildfire even in high wind conditions. As a result, the USFS fire model red zones on the east slopes of Sangres may be less of a hazard than those on the west slopes and tops of the Wet Mountains.

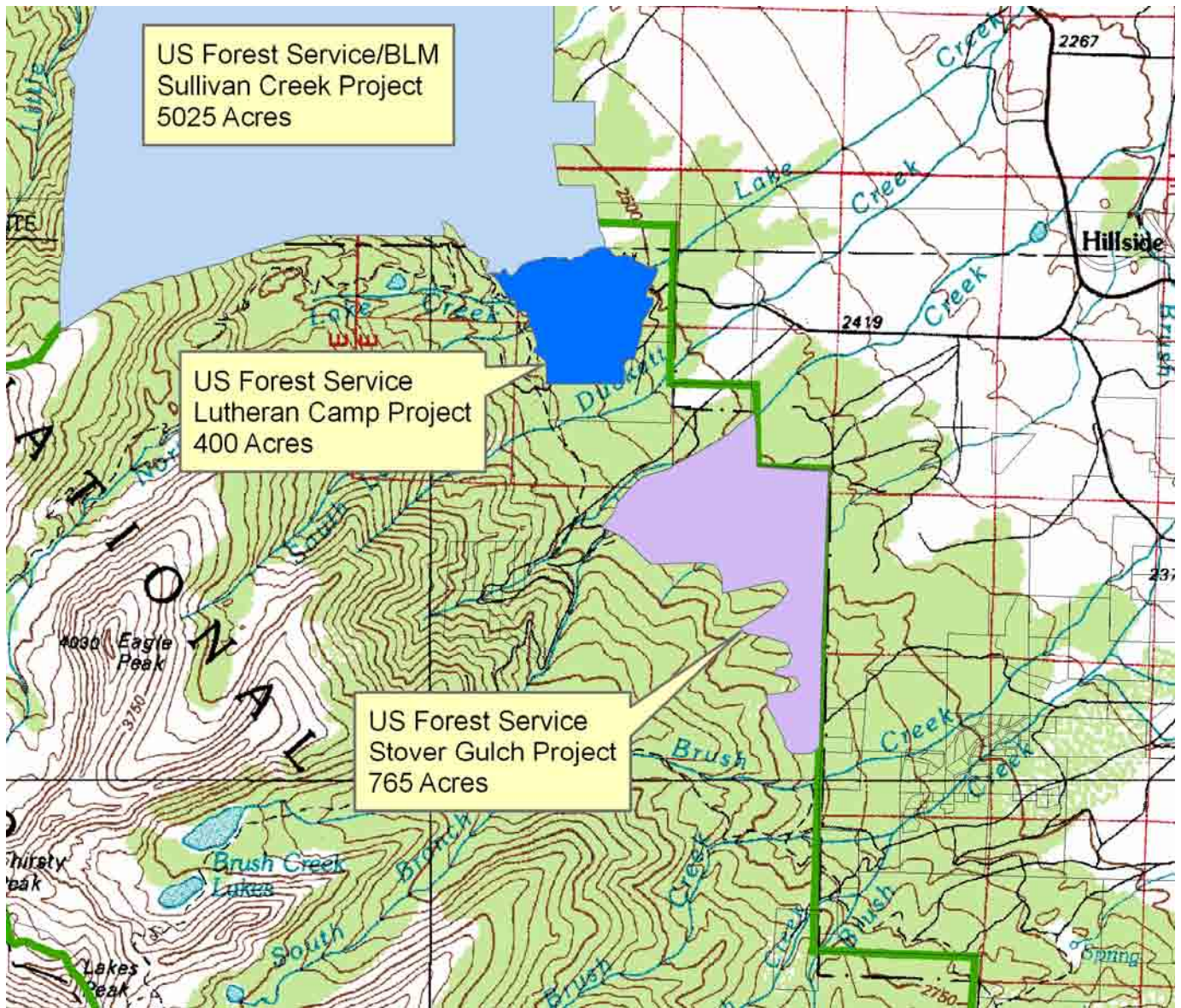
This burn scar is an excellent example of what a severe wildfire can do in the Sangres, in effect creating a “moonscape.” It is also a living example of forest re-growth after fire.

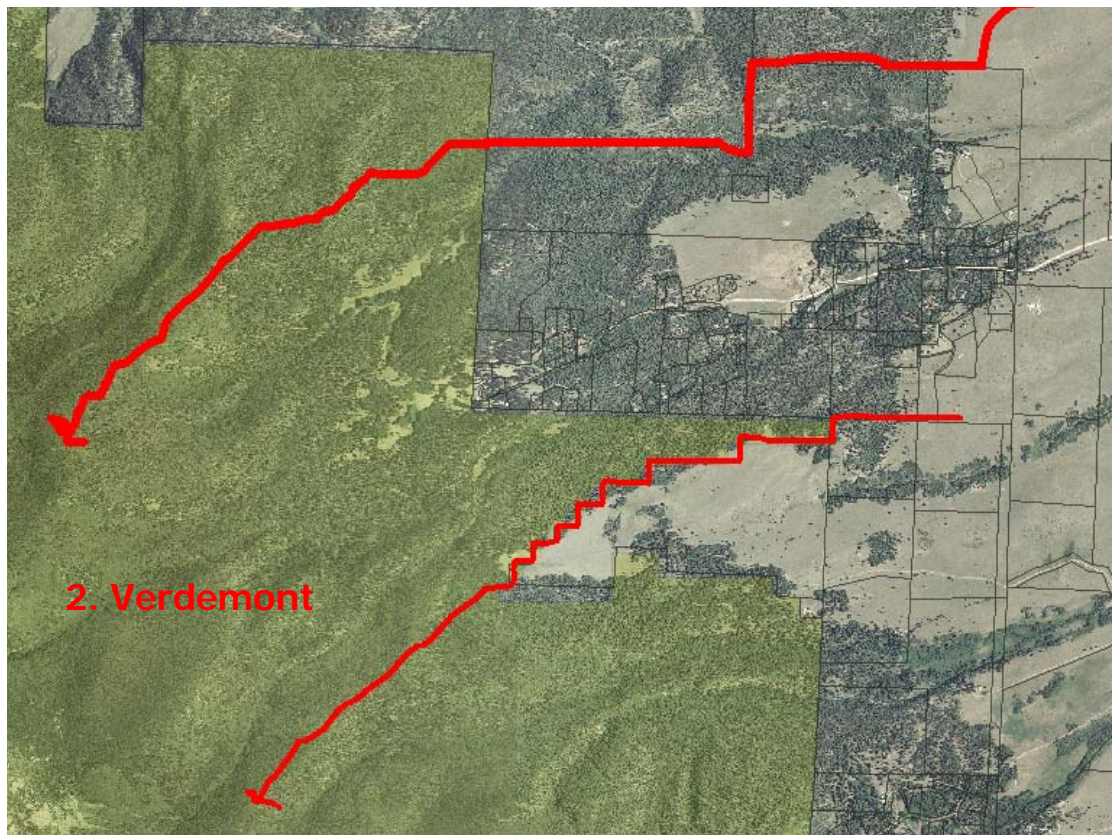
-- in 2007,
forest slowly
coming back



BRUSH CREEK --- USFS PROJECT AREAS

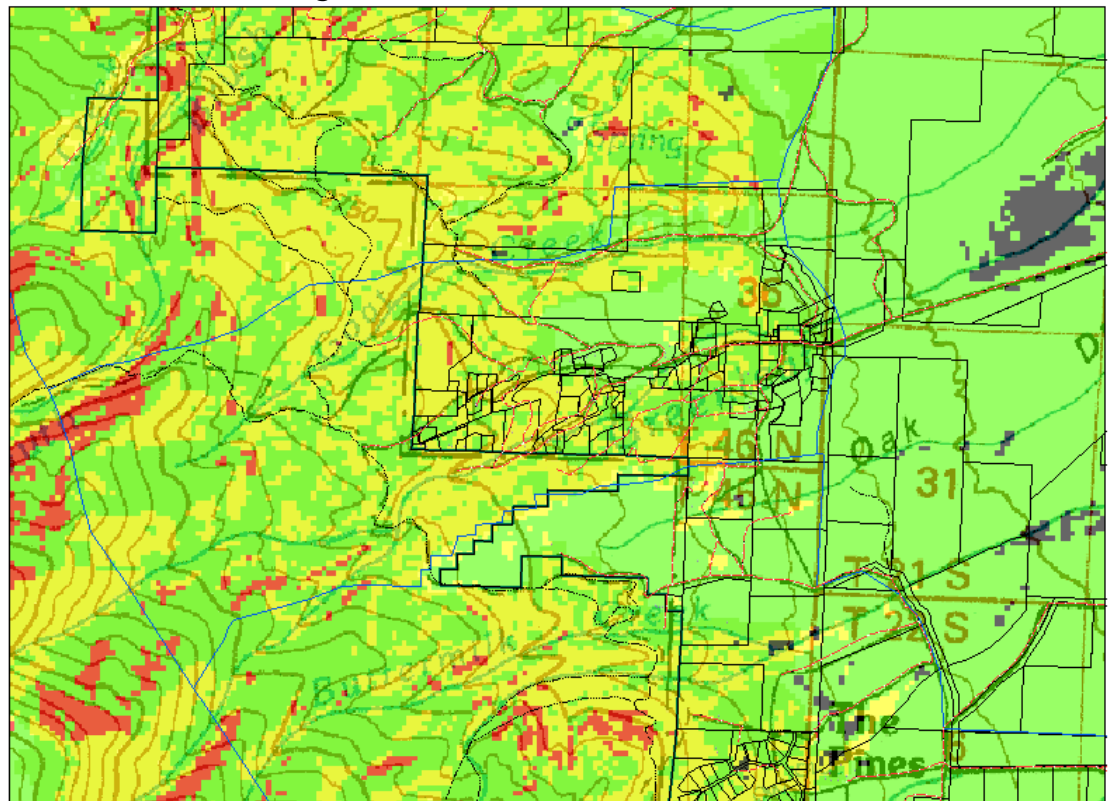
- a. Sullivan Creek (active tree and oak brush treatments, many years)
- b. Lutheran Camp (project completed in 2006, tree and brush)
- c. Stover Gulch (in planning)





#2. Verdemont aerial photo

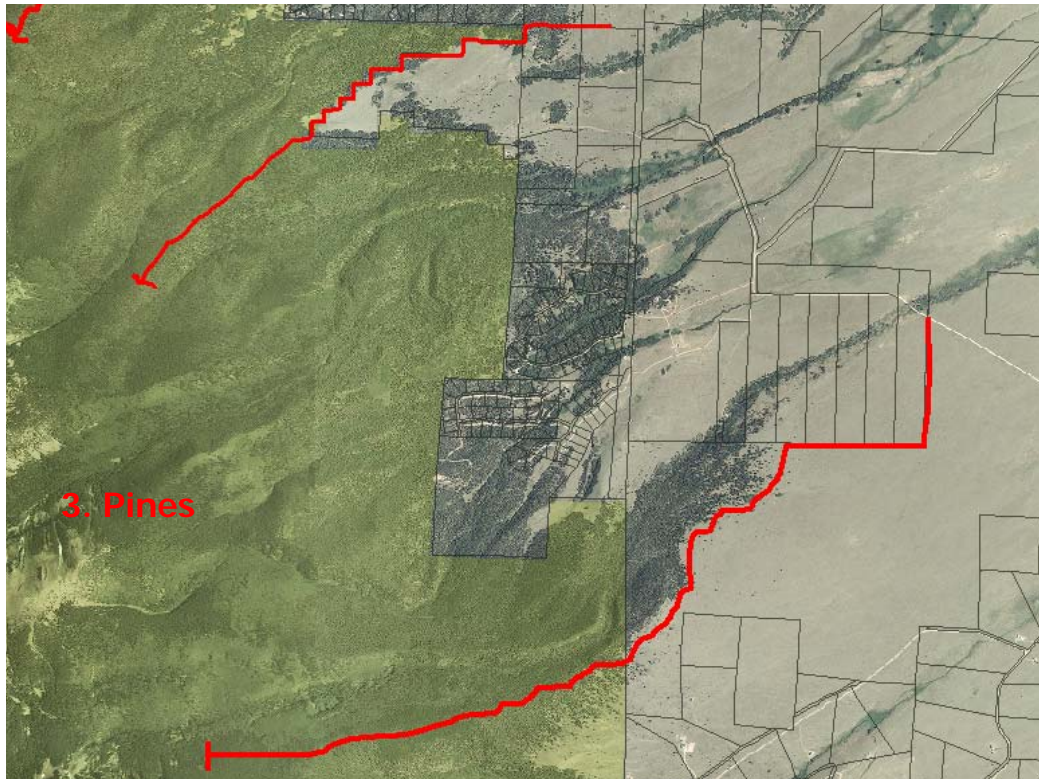
Verdemont larger area --- FIRE MODEL



2a. Verdemont Density Area

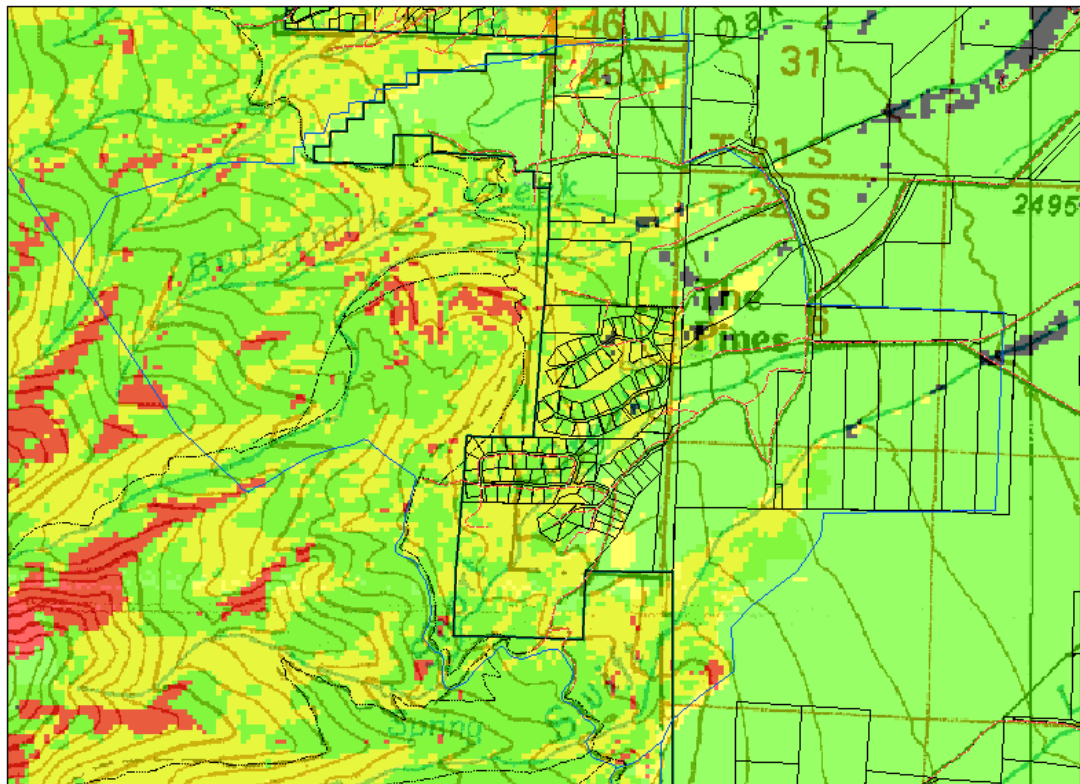


#2. Verdemont Density Area has numerous older, higher ignitability cabins and homes in thick forest, with generally one-way-in and one-way-out narrow roads and driveways. Good features are the large meadows serving as fuelbreaks and escape safe zones on the north and south, and the interspersed meadows on the west side that extend into the National Forest. Water sources (Greenleaf Creek or pond?) for fire fighting need development, as well as escape routes to the north and to the south. Note that red zones in National Forest all along the Sangres are less important than those in the Wet Mountains due to prevailing downslope winds. An emergency communication tower is also at risk.



#3. Pines aerial photo

Pines Density Area ---- FIRE MODEL



3a. Pines Density Area



#3. Pines Density Area illustrates good features of interspersed meadows and loop roads, and some possible escape routes that need to be improved. Several ponds need access and water drafting work. Forest vegetation between roads and meadows is extremely thick, and many cabins and homes are hidden in the dense forest – indicating need for defensible space and perimeter work.

An existing CWPP for Spread Eagle Ranch may serve as an example for other subdivisions. A possible draft water source may be the pond at Pines Ranch, a historic and community-value dude ranch that is at risk.