

## Public Comments (retyped from comment forms)

Jacquelyn Theisen

13N77 A(N?) Goes to a water feature along Deer Cr. Also provides access to Rubicon River for swimming holes.

Matthew Rundle, Polka Dots MC

The PDMC opposes any closure of existing Forest Service roads. However, the current risk and benefit assessment appears to keep open the vast majority of existing roads. The PDMC appreciates the FS efforts to keep as many roads and trails open as possible.



Northern Sierra Regional Trail Operations Office  
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Responsible Official:  
Laurence Crabtree, Eldorado National Forest Supervisor  
100 Forni Road  
Placerville, CA 95667

September 4, 2015

**Re: Pacific Crest Trail Association Comments on the Travel Management Sub Part A, Travel Analysis Process (TAP)**

Dear Supervisor Crabtree,

I am writing on behalf of the 10,000 member Pacific Crest Trail Association (PCTA). PCTA is the Forest Service's primary private partner in the management, maintenance and protection of the Pacific Crest National Scenic Trail (PCT). As such, it is PCTA's role to advocate for the best possible protection of the PCT and the experience it offers to PCT users. PCTA has a sound partnership with the Eldorado National Forest in the management and maintenance of the PCT. Further, I want to express my appreciation to Forest Engineer, Tom Goebel, for taking the time to discuss the Subpart A project with me on multiple occasions.

PCTA is aware that Subpart A is not a project requiring NEPA compliance and no decisions are being made or implemented from this process. However, based on the guidance provided from the Regional Office, PCTA feels the ENF has not sufficiently reviewed the minimum road system in terms of analyzing the impacts of various routes on the PCT.

In July 2012, the Regional Office (RO) distributed the TAP Guidebook to all R5 Forests. The Guidebook calls for special attention to be given to the PCT. In Appendix E the Guidebook states, "For the purposes of meeting the Travel Management Rule, Subpart A requirements for identifying a minimum road system, the TAP should assess the NFTS's risk on quiet recreation for visitors using selected non-motorized trails of national importance." The Guidebook continues on E-2, "For the purposes of the

TAP, the presence of nationally significant non-motorized trails, which represent the top tier of non-motorized trails in the region, are deemed priority for identifying segments of the NFTS that could place quiet recreation “at risk” for these trails.”

It seems the ENF did not consider the PCT when doing the initial analysis for the following reasons:

1. There is no “recreation” risk category and therefore, seemingly no specific analysis on the impacts of roads to the PCT.
2. The PCT is not discussed or mentioned at all in the Travel Analysis Report (TAR) or any of the appendices.
3. The PCT is not illustrated on the TAP map.
  - a. As such, a ½ mile buffer was not illustrated on the map around the PCT as suggested by the Regional Office TAP Guidebook.

The above points are all in direct contradiction to the guidance provided by the Regional Office. This is disappointing as the PCT is the only National Scenic Trail in Region 5, and the Guidebook specifically calls out the need to recognize nationally significant non-motorized trails. Further, I tried to be involved with the project for over two years, and I have discussed the project with Forest staff and referenced the Regional Guidebook on multiple occasions. It is for these reasons that I am surprised the PCT has been completely left out of this project.

Accompanying this letter are worksheets PCTA has generated to evaluate the roads that are in close proximity to the PCT. I am very familiar with the PCT on the Eldorado NF, but because the PCT is not illustrated on the TAR map, I have had to estimate some of the routes impacts to the PCT. PCTA hopes these worksheets provide valuable information to the ENF staff that will generate the final Travel Analysis Report (TAR). The few roads on the Forest that cross or are closely adjacent to the PCT are recommended as “likely to be needed” in the draft TAR. I beg the question as how this determination can be made without evaluating these specific roads’ impacts to the PCT and the experience the trail affords PCT users. PCTA does not take the position that any and all roads near the PCT should be closed to protect the trail experience. Rather, our recommendations are based on the usefulness of a route to access the PCT for important recreation or administrative purposes vs. the potential negative impacts a route has on the PCT.

Supervisor Crabtree, I look forward to any questions you or your staff has regarding PCTA’s road analysis worksheets and recommendations. Thank you for your time and support.

Thank you,

Justin Kooyman  
PCTA Northern Sierra Regional Representative

Cc:  
Mike Dawson, PCTA Trail Operations Director  
Beth Boyst, USFS PCT Manager  
Tom Goebel, Eldorado National Forest Engineer

Cindy Oswald, Eldorado National Forest Recreation Officer  
Morgan Fessler, Tahoe Rim Trail Association Trail Operations Director

Pacific Crest Trail Association  
**MINIMUM ROAD SYSTEM WORKSHEET**

National Forest: Eldorado Ranger District: Placerville

Road Name: \_\_\_\_\_ Road Number: 11N13

Forest Service Road Maintenance Level (1-5): 1

Relation to Pacific Crest National Scenic Trail:  Intersect  Dead-end  Parallel

**Findings**

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Road is:  Essential  Important  Redundant

**Reasons to Maintain:**

Trailhead user access  Access for maintenance and construction  
 Offers equestrian trailer access/parking

**Reasons to Decommission:**

Litter  Access to trespass from OHVs and bicycles  
 Noise  Impacts on scenery  
 User conflicts  Reduced remoteness  
 Damage to soils, watershed and water  Hiker and equestrian safety

**Comments:**

This route crosses the PCT and detracts from the PCT user experience. PCTA recommends closing this road, unless it provides overwhelming public need.

**PCTA Recommendation**

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**Maintain:**

Keep as open  
 Keep as closed

**Partial Decommission:**

From: \_\_\_\_\_  
To: \_\_\_\_\_

**Decommission:**

Close, restore to more natural state  Close, restore to more natural state  
 Close, convert to non-motorized use  Close, convert to non-motorized use

**Road Review Conducted By**

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Name: Justin Kooyman  
Phone Number: 530-414-3422

Date: 9/2/2015  
Email Address: jkooyman@pcta.org

Pacific Crest Trail Association  
**MINIMUM ROAD SYSTEM WORKSHEET**

National Forest: Eldorado Ranger District: Pacific

Road Name: \_\_\_\_\_ Road Number: 14N39

Forest Service Road Maintenance Level (1-5): 2

Relation to Pacific Crest National Scenic Trail:  Intersect  Dead-end  Parallel

**Findings**

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Road is:  Essential  Important  Redundant

**Reasons to Maintain:**

Trailhead user access  Access for maintenance and construction  
 Offers equestrian trailer access/parking

**Reasons to Decommission:**

Litter  Access to trespass from OHVs and bicycles  
 Noise  Impacts on scenery  
 User conflicts  Reduced remoteness  
 Damage to soils, watershed and water  Hiker and equestrian safety

**Comments:**

This route does not provide key access for recreational or administrative PCT uses. As such, PCTA suggests closing this route on the east shore of Richardson Lake and prohibit use beyond this point to Sourdough Hill. This will eliminate a road crossing on the PCT which will enhance the PCT experience for hikers and equestrians.

**PCTA Recommendation**

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**Maintain:**

Keep as open  
 Keep as closed

**Partial Decommission:**

From: \_\_\_\_\_  
To: \_\_\_\_\_

**Decommission:**

Close, restore to more natural state  Close, restore to more natural state  
 Close, convert to non-motorized use  Close, convert to non-motorized use

**Road Review Conducted By**

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Name: Justin Kooyman  
Phone Number: 530-414-3422

Date: 9/2/2015  
Email Address: jkooyman@pcta.org

Pacific Crest Trail Association  
**MINIMUM ROAD SYSTEM WORKSHEET**

National Forest: Eldorado Ranger District: Amador

Road Name: \_\_\_\_\_ Road Number: 09N01F

Forest Service Road Maintenance Level (1-5): 1?

Relation to Pacific Crest National Scenic Trail:  Intersect  Dead-end  Parallel

**Findings**

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Road is:  Essential  Important  Redundant

**Reasons to Maintain:**

Trailhead user access  Access for maintenance and construction  
 Offers equestrian trailer access/parking

**Reasons to Decommission:**

Litter  Access to trespass from OHVs and bicycles  
 Noise  Impacts on scenery  
 User conflicts  Reduced remoteness  
 Damage to soils, watershed and water  Hiker and equestrian safety

**Comments:**

This route provides administrative access to the PCT. PCTA supports the ENF recommendation to classify this route as "likely to be needed."

**PCTA Recommendation**

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**Maintain:**

Keep as open  
 Keep as closed

**Partial Decommission:**

From: \_\_\_\_\_  
To: \_\_\_\_\_

**Decommission:**

Close, restore to more natural state  Close, restore to more natural state  
 Close, convert to non-motorized use  Close, convert to non-motorized use

**Road Review Conducted By**

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Name: Justin Kooyman  
Phone Number: 530-414-3422

Date: 9/2/2015  
Email Address: jkooyman@pcta.org

Pacific Crest Trail Association  
**MINIMUM ROAD SYSTEM WORKSHEET**

National Forest: Eldorado Ranger District: Placerville

Road Name: \_\_\_\_\_ Road Number: 11N09A

Forest Service Road Maintenance Level (1-5): 3

Relation to Pacific Crest National Scenic Trail:  Intersect  Dead-end  Parallel

**Findings**

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Road is:  Essential  Important  Redundant

**Reasons to Maintain:**

Trailhead user access  Access for maintenance and construction  
 Offers equestrian trailer access/parking

**Reasons to Decommission:**

Litter  Access to trespass from OHVs and bicycles  
 Noise  Impacts on scenery  
 User conflicts  Reduced remoteness  
 Damage to soils, watershed and water  Hiker and equestrian safety

**Comments:**

This route provides access to the Sayles Canyon trailhead. This trailhead is a popular equestrian trailhead and provides access to the PCT. Importantly, the Sayles Canyon trailhead serves as an alternate to the Hwy 50 trailhead, which does not provide adequate equestrian parking or space. PCTA supports the recommendation of "likely to be needed."

**PCTA Recommendation**

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**Maintain:**

Keep as open  
 Keep as closed

**Partial Decommission:**

From: \_\_\_\_\_  
To: \_\_\_\_\_

**Decommission:**

Close, restore to more natural state  Close, restore to more natural state  
 Close, convert to non-motorized use  Close, convert to non-motorized use

**Road Review Conducted By**

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Name: Justin Kooyman  
Phone Number: 530-414-3422

Date: 9/2/2015  
Email Address: jkooyman@pcta.org



September 8, 2015

Tom Goebel  
Forest Engineer  
Eldorado National Forest  
100 Forni Road  
Placerville, CA 95667

Sent via email to: [thomasmgoebel@fs.fed.us](mailto:thomasmgoebel@fs.fed.us) Analysis

Re: Travel Analysis Project/Report

Dear Mr. Goebel:

It was good to see you at the Eldorado National Forest (ENF) TAR meetings. We appreciate the Forest providing the opportunity for the public to comment on the draft TAR. As a follow-up to our discussions, we submit and urge you to consider the following comments on the Travel Analysis Project/Report for the ENF.

**Generally, we find this report to be substantially inadequate for complying with the requirements of Chapter 20, Subpart A, which requires: *“Travel analysis should be science-based. Analysts should locate, correctly interpret, and use readily available and relevant scientific literature in the analysis. Disclose any assumptions made during the analysis, and reveal the limitations of the information on which the analysis is based.”***

The ENF has known for over ten years that it must comply with subpart A of the Travel Management Rule at 36 CFR 212.5(b)) and has known since November 2010 that it needed to complete a travel analysis process by the end of Fiscal Year 2015. It delayed beginning this project until the eleventh hour and has now provided a TAR that reflects how little importance the ENF attached to the process. The TAR lacks scientific credibility, public or other agency input, and identifies only 13.98 miles, out of 2,907 miles (0.5%) as “likely not needed for future use.” By asserting road analyses will be done on a future project-by-project basis, the ENF continues to delay any meaningful attempt at analyzing its overall road system or dealing with its ecological impacts. We believe this is a huge lost opportunity for the ENF to scale back the size of its enormous road system in order to put itself on a trajectory towards ecological and fiscal sustainability. The list of roads “likely not needed for future use” could be a valuable tool for informing future purpose and need statements. With so few roads on that list, however, future projects are not likely to include road decommissioning in their purpose and need statements, nor to analyze additional roads for decommissioning. Indeed, recent projects have proposed to reconstruct and/or open to the public more non-system roads than they have recommended for decommissioning.<sup>1</sup>

This report contains not a single citation to identify the science behind the assumptions made when assigning risk or benefit. Rather, the criteria used to determine both risk and benefit appear, in some (but not all) cases, arbitrary and without scientific basis.

One purpose of travel analysis, per the regulations at 36 C.F.R. § 212.5(b)(1), is to help the agency move towards a fiscally sustainable transportation system. We request that the agency use the TAP’s fiscal analysis to inform road-specific management recommendations. Such use of the TAP’s fiscal analysis will help the agency bring costs more in line with funding realities. This is imperative given that, based on the 10 year trend in road funding, the ENF will likely continue to receive fewer road maintenance dollars. The ENF’s fiscal analysis is lacking in several ways. We offer suggestions later in our in section II of this letter that we would like the agency to consider.

The TAP was to involve “a broad spectrum of interested and affected citizens, other state and federal agencies, and tribal governments,” as required (36 CFR 212.5 (b)), and the WO directives. (Nov. 10, 2010) Please identify which State and federal agencies and tribal governments were consulted.

The TAP does not “*compare current travel management direction to the desired condition identified in the land management plan to identify the need for change.*” (FSH 7709.55 Chapter 20, 20.3, (3 a)).

Perhaps most importantly, the TAR virtually ignores the issue of road density and road/trail density. Road density is briefly addressed in the wildlife risk assessment, but

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<sup>1</sup> Fosters Fir Forest Health Draft EA, Calceat Ecological Restoration EA  
CSNC/PEER/TWS/CBD Comments on ENF TAR  
September 8, 2015

not included in the hydrological risk assessment, despite being a critically important factor when assessing overall watershed health. Nowhere in the TAR is the overall road density quantified.

It is not clear how risks and benefits rankings were weighed, but it appears all resources weighed equally. Would a benefit rank of 5 for recreation carry the same weight as a risk rank of 5 for hydrology?

Finally, Table 13 identifies 26 miles of high risk/low benefit roads; but only half of those, 13.98 miles, are listed as likely unneeded. There is no road-by-road explanation of why half of these roads were not listed as likely unneeded.

The Inyo and Sequoia have both released draft TAP Reports and it is very clear that these units are taking this process seriously. The Inyo's Draft TAP Report identified 19% of its roads as likely not needed for future use and the Sequoia identified 24%. We urge the ENF to follow in the footsteps of your colleagues elsewhere in the Region. The Inyo draft report is available online here:

< <http://www.fs.usda.gov/detail/inyo/landmanagement/planning/?cid=stelprd3834316>  
> and the Sequoia's draft report is available online here < <http://www.fs.usda.gov/detail/sequoia/landmanagement/planning/?cid=stelprdb5435007>>.

We address the above concerns more specifically below:

### **Fiscal Analysis**

The ENF's Economic Analysis dances around the fact that the Eldorado receives only a third of the funding it needs to maintain its paved roads, and funding for ML 1- 3 is inconsistent and uncertain. The TAR employs ten-year old figures; the reader must do the math that reveals current deferred maintenance on the ENF is at least \$45 million for its paved roads alone. The TAR concludes, "the ENF is unlikely ever to have enough funding to maintain the entire road network to the required standard," yet fails to identify or recommend a road system that meets the requirement "to reflect long-term funding expectations." (36 CFR 212.5)

In the "Budget" section of the TAP Report, pgs 10-11, the ENF clearly misses the mark. The ENF states that:

This analysis shows the ENF cannot afford to maintain all of the roads currently in service to the standards required in Forest Service Directives. That does not mean that the ENF will have to reduce the road system to the size that can be maintained to standard, but it does mean that users may experience less than optimal conditions on the forest roads.

TAP, p. 11. The ENF fails to acknowledge here the commonplace knowledge that lack of maintenance results in a deteriorating road system, and that a deteriorating road system can have tremendous impacts on water quality. This conclusion would lend itself to actually doing something to right-size the road system instead of simply putting forest visitors on notice that road conditions may not be optimal.

It is extremely important that the Forest Service not ignore the findings from their fiscal analysis. It is important that the information disclosed in the fiscal analysis not be cast aside as unrealistic because budget allocations are not commensurate with the funding needed to maintain the entire system. One of the purposes of the TAP is to help the agency move towards a fiscally sustainable transportation system. 36 C.F.R. § 212.5 (b)(1). The best way to move towards a fiscally sustainable transportation system is to use the fiscal analysis for informing road management and setting priorities.

With this in mind, we encourage the ENF to propose management actions in the TAP Report that will help bring costs in line with funding realities. Low benefit roads are an easy place to start. Many low benefit roads are likely unneeded for future use. The ENF should put these roads on the list of roads that are likely not needed. Decommissioning these unneeded roads will permanently remove them from the maintenance cycle thereby reducing the maintenance backlog.

### **Terrestrial Wildlife**

It is well documented that beyond specific road density thresholds, certain species will be negatively affected, and some will be extirpated. Most studies that look into the relationship between road density and wildlife focus on the impacts to large endangered carnivores or hunted game species, although high road densities certainly affect other species – for instance, reptiles and amphibians. Forman and Hersperger (1996) found that in order to maintain a naturally functioning landscape with sustained populations of large mammals, road density must be below 0.6 km/km<sup>2</sup> (1.0 mi/mi<sup>2</sup>). Several studies have since substantiated their claim.

- Black bear are negatively impacted at a road density of 0.25 km/km<sup>2</sup> Jalkotzy et al. (1997)
- Bobcat (Wisconsin) are impacted at a density of 1.5 km/km<sup>2</sup> (density of all road types in home range) Jalkotzy et al. (1997)
- Large mammals are impacted at a density of >0.6 km/km<sup>2</sup> (apparent threshold value for a naturally functioning landscape containing sustained populations- Forman and Hersperger (1996)

The TAR must identify the scientific basis for the wildlife risk rankings, including why some wildlife species (Spotted Owl, Northern Goshawk, Great gray owl and deer) were selected for analysis and others were not. Please explain how the TAR arrived at wildlife risk ratings for road density. Identify the scientific basis for a 4 mile/section for high risk, 2-4 for moderate risk.

What is the basis for not considering motorized trails in density risk? The California Department of Fish and Wildlife (CDFW) has repeatedly recommended a maximum combined road/motorized trail density of 2.5 miles/section in deer winter range. Was CDFW consulted for input into the TAR?

Why is there no high or low risk category for deer; and why is a road in critical deer winter habitat only considered “moderate?” Why is no risk assigned to roads in fawning habitat? In the past, vehicles in fawning habitat have been considered a significant enough impact to close those areas to vehicles, such as the Van Vleck meadow complex.

The Region 5 (R5) Travel Analysis guidebook recommends a comprehensive list of metrics to develop wildlife-related risk factors. These include:

- Roads that intersect critical habitat, recovery plan areas, conservation strategies or conservation agreements available as polygons. When evaluating road overlap with polygons, units should consider if the species is sensitive to road disturbance.
- Buffer distances for active locations of federally and state- listed species as well as Forest Service sensitive species, where road-related disturbances are a risk factor for the species.
- Roads that intersect with California’s Essential Connectivity Areas and Natural Landscape Blocks.<sup>2</sup>

The route-specific risk information generated as part of this species level analysis would help ensure that management recommendations that stem from the TAP eliminate or mitigate site-specific risks that the motorized transportation system poses to important wildlife species. We urge the final TAP to use the above metrics.

### **Aquatic and Riparian Wildlife**

The TAR must identify the scientific basis for the risk rankings for amphibian species. How was the determination of distance from stream as risk determined? The Western pond turtle is known to range far from its aquatic environment; yet there appears to be no risk assigned to its terrestrial habitat. For the Yosemite toad, the risk factors are only evaluated routes near wet meadows *above* 6,500 feet, however, the Yosemite toad is found generally at elevations from 4,790 to 11,910 ft (78 Fed. Reg. at 24499). Risks to Yosemite toad from routes near wet meadows as low as 4,790 feet

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<sup>2</sup> R5 Travel Analysis Guidebook, Appendix E, pages 3-9.

should also be evaluated. Similarly, California red-legged frogs are found up to 5,200 feet (see 2002 Recovery Plan, USFWS), however the risk is only analyzed for routes below 4,500 feet, this should be corrected. In addition, there is no justification provided for only assessing risks to California red-legged frog near breeding habitat, risks to all CRLF habitat including dispersal habitat along streams should be evaluated.

For all amphibians, it is unclear how the risks to species, stream habitats, and water quality from route crossings of both perennial and intermittent streams were assessed, if at all. Other than a few general statements about the value of well designed and maintained stream crossings, the impacts of the existing stream crossings to not appear to have been assessed for risks.

Risks to riparian obligate species such as Willow flycatcher and water ouzel (dipper) are not adequately identified, including risks associated with noise and air quality impacts to essential breeding and rearing habitat in riparian areas.

## Hydrology

The ENF Ecological Restoration Implementation Strategies asserts,

*“Roads will continue to be an emphasis for watershed restoration. The Forest will continue to pursue opportunities to remediate effects to aquatic resources through the Legacy Road Program and other available means. The Forest has identified high risk road segments through four years of road sediment surveys conducted in 2008-2011.”*

Please cite the science on which stream crossing density risk and stream road proximity risk are determined. Were the road sediment surveys used to inform the TAP? If they were used, please explain how these were part of the risk analysis. How do the results of the TAR, with its miserly list of likely unneeded roads, help implement the Ecological Restoration Implementation Strategies?

Where both stream and road densities are high, the incidence of connections between roads and streams can also be expected to be high, resulting in more common and pronounced effects of roads on streams (Gucinski et al. 2000). For example, a study on the Medicine Bow National Forest (WY) found as the number of culverts and stream crossings increased, so did the amount of sediment in stream channels (Eaglin and Hubert 1993). They also found a negative correlation with fish density and the number of culverts. Invertebrate communities can also be impacted. McGurk and Fong (1995) report a negative correlation between an index of road density with macroinvertebrate diversity.

According to the TAR,

*“Dense road systems influence resources and non-motorized user experiences, thus **road system modification planning should attempt to reduce road density**. The maps produced for this report give an indication of areas which should be considered for reduction of road mileage, but at this level of analysis, determining which roads within those areas are the most likely roads to consider was not possible.” (Emphasis added.)*

The TAR must include a Road density risk for Hydrology, and disclose forest-wide road density. Determining which roads might be removed to reduce road density is precisely what the TAP is expected to do, here and now. Road density weighs very heavily in watershed health assessments; reducing road and motorized trail density is the only way watershed health will be improved. The Forest Service Watershed Classification Guide Condition Rating Rule Set uses from 1 to 2.4 mi/sq. of road and trail as parameters for “at risk” (fair) conditions and more than 2.4 mi/sq. mile of road/trail density as the metric for “impaired” (poor) conditions.<sup>3</sup>

The TAR must include a road risk analysis based on road/trail density. It could do that by determining road density by watershed, and assign each road in that watershed the appropriate risk rating.

Finally, the TAR must disclose the road/trail density on the Forest, or by watershed. A travel analysis report that doesn’t disclose that vital information provides an incomplete picture of the road system. We have attached, as Attachment 1), our own map, using ENF GIS information to illustrate the road density on the Eldorado NF. When one removes Wilderness acres from the equation, mapped road density on the ENF exceeds 8 miles/section; and this doesn’t include unauthorized routes.

The TAR is internally inconsistent. It identifies the Watershed Condition Index as an Information Source, (p. 3) , yet the Hydrology section notes; “The Watershed Condition Assessment for the ENF did not have road-specific information that was necessary for this analysis.” (p. 28) The WCI could have been used to identify and rank specific roads. Individual roads in watersheds identified by the WCI as “at risk,” for example, should have been scored as high-risk roads.

## Fire

According to the TAR, ML-4 and ML-3 roads provide safer and more efficient access to fires. Road benefit analysis should include road maintenance level and actual road condition. Many ML-2 and ML-3 roads are in such terrible condition that access for

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<sup>3</sup> USFS, “Watershed Condition Classification Technical Guide,” July 2011.

fire vehicles would be very slow and difficult. Those roads should rank lower for fire benefit than ML-4 and M-L3.

The TAR states, *“a project level analysis might indicate need to reduce miles for this purpose, but at this scale, the reduction of roads in WUI is not recommended.”* The intent of the TAR was to provide a Forest-wide analysis of the road system; and identifying roads likely to be unneeded. Project level analysis could confirm those recommended changes, or determine a road is, in fact, necessary in a specific location, but the intent of the TAR is to suggest, at the Forest level, roads that may not be needed.

The analysis should factor in the risk of a wildland fire from specific roads, as well as the benefits for emergency access. Research shows that human-ignited wildfires, which account for more than 90% of fires on national lands, is almost five times more likely in areas with roads (USDA Forest Service 1996a; USDA Forest Service 1998). Furthermore, Baxter (2002) found that off-road vehicles (ORVs) could be a significant source of fire ignitions on forestlands. Roads can affect where and how forests burn and, by extension, the vegetative condition of the forest. See Attachment 1 for more information documenting the relationship between roads and wildfire occurrence.

## **Range**

Please explain the rationale for assigning all ML-1 and ML-2 roads in range allotments a benefit ranking of 5. The TAR must cite the science used to assign this rank. There appears to have been no consideration by Range for route density or duplication. It would be difficult to justify a ranking of “5” for duplicate roads; please explain this omission.

## **Vegetation management**

Benefit analysis for vegetation management relies on a single value, acres accessed. “The value of a road increases in direct proportion to acres accessed.” While this may be a valid metric, it should by no means be used exclusively. We suggested in our letter of February 9, 2015 to the Forest Supervisor, and in our meeting on January 28, 2015 that the value of a road for vegetation management was related to the likelihood it would be needed in the foreseeable future (10 years). It seems logical that a road within a vegetation management project proposed in the next few years would have a higher value than one in an area where there were no projects planned in the foreseeable future.

## **Travel management designations**

Subpart A requires all FS system roads to be assessed in the TAP, including those on the MVUM. We were also assured by the Forest Supervisor that designation under Subpart

B did not mean a road would not be subject to Subpart A. So we find it concerning the TAR appears to assume roads on the MVUM are “likely to be needed indefinitely.” We have provided the ENF, during Subpart B and subsequently, numerous examples of roads that were added to the MVUM without regard to need or resource damage and we expected that information would be considered in this analysis.

#### **Appendix B: Economic analysis.**

According to the TAR, the ENF’s estimated annual road maintenance cost is \$3,039,980. Average total maintenance funds available: \$972,176, or 32%. The TAR rightly concludes, “The ENF is unlikely ever to have enough funding to maintain the entire road network to the required standard.” The point of this exercise is to identify a road system more in keeping with available budgets, by determining which roads the forest really doesn’t need. This TAP is a failure in that regard.

The ENF Travel Management Plan refers to a 2005 statistical sample of paved roads that predicted the pavements on ENF roads were nearing the end of useful life. It stated the rate of deterioration would be increasing, and called for an annual expenditure of \$2.2 million for the Maintenance Level 5 asphalt. The study indicated a current (2005) backlog of \$3.4 million that could increase to \$11.5 million by 2010 if the ENF only spent \$100,000 annually on pavement maintenance. In 2006 the ENF’s road maintenance backlog was \$23 million. Using these statistics, in the ten years since that analysis deferred maintenance for pavement maintenance will have grown by \$22 million, to a total of over \$45 million. This doesn’t include maintenance on unpaved roads, which are the source of sedimentation.

According to the TAR, “*Timber sale work is performed on roads used by the sales and most of the work that is accomplished on Maintenance Level 2 roads is done through timber sales.*” This statement supports our suggestion that road in areas where no vegetation management is proposed in the next ten years receive a low benefit score, at least for vegetation management.

4. The TAR states,

*“The ENF has little influence over the amount of funds it receives. Maintenance work that is not accomplished becomes deferred maintenance and will only be accomplished if it becomes a critical safety issue. Special funding for these deferred maintenance items may be possible, but it is not considered a source for maintaining the road system to standard.”*

The ENF does, however, have influence over the size of its road system; and Forest Service regulations require each national forest to identify a road system that “reflect(s) long-term funding expectations.” 36 C.F.R. § 212.5(b).

## Recreation

Loss of solitude is listed as a Key Issue, but there is no risk analysis for loss of solitude. Recreation benefits are defined strictly by access to developed or dispersed sites. We had requested the risk/benefit analysis include an isolation index to measure a road's impact on quiet recreation as well as on habitat fragmentation.

There has been a significant loss of passenger vehicle access to our national forests over the past several years. Forests should not lower maintenance levels on passenger vehicle roads in order to achieve an affordable system.

### Changes in the roads system to be considered

The TAP identifies "changes to be considered" at some future time. These should have been considered in this TAP. Those include:

- 1. Roads rarely used by the public or Forest Service that are high risk should be considered for decommissioning.*
- 2. Roads rarely used by the public or Forest Service that are low resource risk should be considered for either decommissioning or reduced maintenance level.*
- 5. Roads accessing vegetation that will not be accessed for 10 years or more may be evaluated for reduced maintenance level or possibly decommissioning unless there is a fire/fuels access need.*
- 6. Roads frequently used by the public or Forest Service with moderate to high resource risk should be evaluated for relocation of portions of the roads away from resource risks or the creation of alternate access routes with fewer resource risks.*
- 7. Parallel routes or locations with multiple access provide opportunities to decommission the highest risk road.*

All the above should have been analyzed in Subpart A, instead of kicking the can down the road!

### Analysis should have considered road specific information provided by the public.

During the lengthy Travel Management planning process, the public, including our organizations, provided extensive road-specific comment and information. It appears none of that has been considered in this TAP and TAR. We attach here road-specific information and recommendations we made during Travel Management, and on other projects.

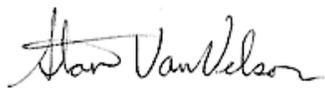
## Conclusion

Overall, we are greatly disappointed in this TAR, to which we have looked forward for so many years. An opportunity to begin identifying opportunities for restoring watersheds on the ENF has been largely squandered. The list of likely not needed roads falls far short of what we believe the Chief anticipated, and certainly doesn't approach what is needed on this forest to begin ecological restoration. Nor does it approach the road reduction opportunities identified on other forests. Promises made to us that the obvious shortcomings of Subpart B would be addressed in Subpart A have not been fulfilled. We urge you to reconsider your determinations and issue a final TAP that is science-based and reflects the ecological restoration goals of Forest Service leadership.

Sincerely,



Karen Schambach  
Center for Sierra Nevada Conservation  
and  
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Responsibility  
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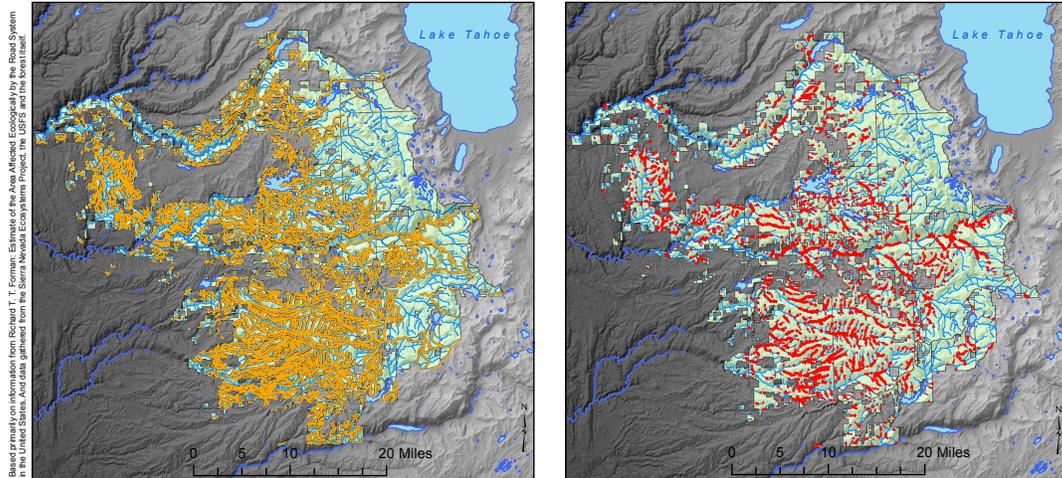
cc: Laurence Crabtree, ENF Supervisor

## Attachments

1. CSNC Eldorado National Forest Road Density map.
2. Eldorado National Forest Restoration Strategy
3. Roads and Fire: A Proven Relationship, The Wilderness Society
4. CSNC Appeal of the Callegat Ecological Restoration EA
5. Road-specific Recommendations (from Subpart B comments).

### ATTACHMENT 1

#### Road Effect Zone and Roads Contacting Sensitive Aquatic Habitat



The orange buffer represents a 100 meter "road effect zone" in which species dynamics, soil characteristics, water flow regimes, and vegetation cover are altered due to the presence of a road. The road effect zone stretches from 100 to 1000 meters, averaging 600 meters. 33% of Eldorado National Forest falls within the minimum 100 meter road effect zone.

Within Eldorado National Forest there are 2,049 instances of a motorized use road or trail entering a riparian corridor. There are 186 places within Eldorado National Forest where a motorized use road or trail intersects a meadow. Since December of 2014 we have identified 196 additional pioneered routes within a riparian buffer or effecting a meadow.

Road Effect Zone  
 streams  
 Eldorado National Forest



Roads in Riparian/Meadow Zone  
 streams  
 Eldorado National Forest

## Attachment 5 ENF TAR Road Specific Recommendations

1. Data sheets completed by watershed specialists during Subpart B noted sediment deliver from the following routes: 8N20, 8N33A, 9NY03, 10N60, 9N27A, 9NY04, 10N65D, 10N50R, 10NY33, 10NY14, 10NY13, 11NY09A, 10N55Q, 10N83Y, 10NY20A, 10NY40Q, 10N40R, and 10N55F. Some of these roads were recommended for decommissioning after these site-specific surveys. Those roads, should get extra scrutiny in the TAP.
2. 10N83S is impacting Sopiago Creek. "The creek channel is loaded with sediment; it would normally be a rocky channel. Site of Hydrologic Concern #3 is where runoff from Road 10N83S delivers sediment to an unnamed tributary of Sopiago Creek."<sup>1</sup>
3. The 42 roads initially identified as bordering or traversing a meadow require extra scrutiny and consideration. Some of those roads were determined not to be impacting meadows, but are impacting alder wetlands and riparian zones. As part of our settlement of the Subpart B litigation, the Forest Supervisor promised those roads would be analyzed under all the Sierra Nevada Forest Plan Amendment Riparian Conservation Objectives, for impacts to riparian resources and wetlands. We want to see that promised analysis in the TAR.<sup>2</sup>
4. Site specific comments from our Comments on the ENF Subpart B EIS Specific Route Recommendations. (We recognize some of these routes are classified as motorized trails, not roads.) Those comments are repeated below:

### Routes with Riparian Impacts

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<sup>1</sup> Poff, Roger. Review of Forest Service OHV Soil Conservation Activities: Amador District, Eldorado National Forest. March 12, 2004. (In TM project record.) .

<sup>2</sup> ENF Travel Management SEIS Appeal withdrawal, September 11, 2013

| <b>Route #</b> | <b>Location</b>   | <b>Comment</b>   |
|----------------|---|--|
| 12N57          | Brush Creek   | Route known to adversely affect aquatic features <sup>3</sup><br><br>Crosses Brook Creek, a perennial stream; Brush creek, a perennial stream; and 2 unnamed perennial tributaries to Brush Creek; approx. 1.5 km of this route within Riparian Conservation Areas; adjacent slopes steep.   |
| 17E16          | Caples Cr.,<br>Strawberry Cr.,<br><br>Sayles Cyn.                       | Route known to adversely affect aquatic features. <sup>4</sup><br><br>Crosses an unnamed seasonal tributary to Caples Creek and bisects 2 meadows; second meadow is headwater area for unnamed perennial tributary to Strawberry Creek.  |
| NSR12Y32A-A    | Lower Jones Fork<br>Silver Creek  | Route known to adversely affect aquatic features <sup>5</sup><br><br>Dead-end non-system route; 0.3 km within the Jones Fork Silver Creek RCA; this segment of the Jones Fork Silver Creek above Union Valley Reservoir has been identified by SNEP as potential Aquatic Diversity Management Area.  |
| NSR 1439-CA    | Miller Creek  | Route known to adversely affect aquatic features <sup>6</sup><br><br>Total rte length is 0.7 km; over 50% of route is within a meadow or the high water line of Richardson Lake.   |
| 9NY22          | N. Fork Cosumnes<br>River-Van Horn<br>Creek                             | Route known to adversely affect aquatic features <sup>7</sup><br><br>Parallels Van Horn Creek, a degraded perennial stream within the RCA for 1.3 km.  |
| 14N27          | Rubicon River<br><br>Hell Hole<br>Reservoir and<br>Upper Gerle<br>Creek | Route known to adversely affect aquatic features <sup>8</sup><br><br>Bisects 5 meadows; crosses a meadow in the headwaters of Dellar Creek; crosses an unnamed seasonal reach of Dellar Creek twice; crosses a seasonal reach of an unnamed tributary to the Rubicon River 3 times; crosses a perennial segment of this same unnamed tributary once. |

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<sup>3</sup> Tabl A-11 Routes known to adversely affect aquatic features that are proposed for designation under Alternatives and B. (Holst 2007) Biological Evaluation for the Public Motor Vehicle Route Designation Project.

<sup>4</sup> Ibid

<sup>5</sup> Ibid

<sup>6</sup> Ibid

<sup>7</sup> Ibid

|                           |  |  |
|---------------------------|--|--|
|                           |  |  |
| 14E09<br>(Hunter's Trail) | Rubicon River-<br>Leonardi, Spring,<br>Rubicon River-<br>Stony Creek,<br>Rubicon River-<br>Ellicott Bridge | Route known to adversely affect aquatic features <sup>9</sup><br><br>Several creek crossings. This segment of the Rubicon River designated a Wild Trout Stream by the California Dept. of Fish and Game; recommended for Wild and Scenic Designation. Popular hiking/backpacking trail. Trail guide book describes it: "If we could only have one trail to hike I would vote for this one. The best trail available for family hiking, camping, swimming, diversity of plants and geology." <sup>10</sup><br><br>History of archaeological site damage by motorcycles. |
| 17E51                     | Silver Fork<br>American River-<br>Girard Creek,<br>Upper Silver Fork<br>American River                     | Route known to adversely affect aquatic features <sup>11</sup><br><br>Crosses an unnamed seasonal tributary to Silver Fork American River; parallels Caples Creek within the RCA for 1.1 km; bisects Jake Schneider Meadow; crosses an unnamed seasonal tributary to Caples Creek within the RCA for .8 km..   |
| 11N22                     | Strawberry Creek   | Route known to adversely affect aquatic features <sup>12</sup><br><br>Parallels Strawberry Creek within the RCA for 2.0 km; bisects 3 meadows; ends at an unnamed perennial tributary to Strawberry Creek.<br><br>Please see evidence of on the ground damage documented in Appendix B, Exhibit 4  |

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<sup>8</sup> Ibid

<sup>9</sup> Ibid

<sup>10</sup> Peterson, Tom. Georgetown Hiking Trails: Trying to Get Lost Off the Divide, 2007.

<sup>11</sup> Table A-11 Routes known to adversely affect aquatic features that are proposed for designation under Alternatives A and B. (Holst 2007) Biological Evaluation for the Public Motor Vehicle Route Designation Project

<sup>12</sup> Ibid

|             |                  |  |
|-------------|------------------|--|
| NSRALP-114A | Upper Deer Crk   | Route known to adversely affect aquatic features <sup>13</sup><br><br>Crosses an unnamed perennial stream twice; crosses an unnamed seasonal stream once; bisects a meadow; ends at a second perennial stream within a meadow. |
| 08N05L      |                  | Segment in meadow; would require LRMP amendment. Violates Riparian Conservation Objectives of SNFPA <sup>14</sup>  |
| 10N13       | Strawberry Creek | Numerous perennial and ephemeral stream crossings; bisects meadows; RCA. Impacting water quality. This route impacts the headwaters to Caples Creek. See field trip notes, Appendix A, Exhibit 4                               |
| 10N13A      | Strawberry Creek | This route traverses several creek crossings and a meadow, negatively impacting the Caples Creek Potential Wilderness and non-motorized recreation   |
| 10N13B      | Strawberry Creek | This route should be closed because it serves no recreational purpose and to prevent damage to riparian resources.   |
| 10N13C      | Strawberry Creek | This route should be closed to prevent damage to riparian resources and damage to a meadow.  |
| 08N05L      |                  | Bisects meadow; violates RCO   |
| 09N01       |                  | Bisects meadow; violates RCO   |
| 09N03       |                  | Bisects meadow; violates RCO   |
| 09N04       |                  | Bisects meadow; violates RCO   |
| 09N12       |                  | Bisects meadow; violates RCO   |
| 09N82       |                  | Bisects meadow; violates RCO   |
| 09N83       |                  | Bisects meadow; violates RCO   |
| 10N01       |                  | Bisects meadow; violates RCO   |
| 10N10       |                  | Bisects meadow; violates RCO   |
| 10N14       |                  | Bisects meadow; violates RCO   |
| 10N14B      |                  | Bisects meadow; violates RCO   |

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<sup>13</sup> Ibid

<sup>14</sup> Sierra Nevada Forest Plan Amendment Record of Decision, Riparian Conservation Objectives, p

|            |                  |  |
|------------|------------------|--|
| 10N21      |                  | Bisects meadow; violates RCO   |
| 10N50      |                  | Bisects meadow; violates RCO   |
| 10NY06     |                  | Bisects meadow; violates RCO   |
| 11N09A     |                  | Bisects meadow; violates RCO   |
| 11N23      |                  | Bisects meadow; violates RCO   |
| 11N23F     |                  | Bisects meadow; violates RCO   |
| 11N23P     |                  | Bisects meadow; violates RCO   |
| 11N26      |                  | Bisects meadow; violates RCO<br><br>Please see additional evidence of on the ground damage in Appendix B, Exhibit 4      |
| 11N37      |                  | Bisects meadow; violates RCO<br><br>Please see additional evidence of on the ground damage in Appendix B, Exhibit 4      |
| 11N63      |                  | Bisects meadow; violates RCO   |
| 11N64      |                  | Bisects meadow; violates RCO   |
| 12NY15     |                  | Bisects meadow; violates RCO   |
| 13N72A     |                  | Bisects meadow; violates RCO   |
| 14N05      |                  | Bisects meadow; violates RCO   |
| 14N06      |                  | Bisects meadow; violates RCO   |
| 14N39      |                  | Bisects meadow; violates RCO   |
| 17E12      |                  | Bisects meadow; violates RCO   |
| NSR1014-AB |                  | Bisects meadow; violates RCO   |
| NSR1439-CA |                  | Bisects meadow; violates RCO   |
| 14E25      | Middle Dry Creek | Close portion south of 09N55 and north of 08N49B. This portion crosses Middle Dry Creek; severe erosion at the crossing. |
| 09N34F     | McKinney Creek   | Loop formed by this segment impacts non-motorized use of creek area and campsite.  |
| 14E10      | Rubicon          | This route is negatively impacting the Rubicon River.  |

|            |             |   |
|------------|-------------|---|
| NSRALP16AB | Caples Lake | This route should be non-motorized for hikers and equestrians. We request that the Forest Service explore providing equestrian parking at the SMUD facility near Caples Lake. |
|------------|-------------|---|

**Routes Impacting Biological Resources**

|          |                 |  |
|----------|-----------------|--|
| NSR1712A | Hwy 50 corridor | Meadow, critical summer deer range; rutted |
|----------|-----------------|--|

**Routes Impacting Non-Motorized Recreation**

|                            |  |   |
|----------------------------|--|---|
| 14E11<br>Deer Creek        | Rubicon  | In RCA, Rubicon Canyon; conflicts with hikers, promotes illegal use of South Fork Trail.                                    |
| 17E12<br>Lovers Leap Trail | Hwy 50 corridor  | Serious conflicts with non-motorized users in a premier climbing area, Lover's Leap. Noise shed impact Pyramid Peak as well |
| 11N26F                     | Pyramid Inventoried Roadless Area                      | Conflicts with non-motorized;<br>Pyramid Inventoried Roadless Area  |
| 09N34F                     | McKinney Creek   | Loop formed by this segment impacts non-motorized use of creek area and campsite.   |
| 14E04                      | Rubicon  | Route is impacting the Rubicon River and non-motorized recreation   |
| 17E23                      | Silver Lake;<br>Caples Creek Inventoried Roadless Area | Designating this trail would displace hikers and horseback riders   |
| 17E19                      | Silver Lake;<br>Caples Creek Inventoried Roadless Area | Designating this trail would displace hikers and horseback riders   |
| 17E72                      | Silver Lake  | Designating this trail would displace hikers and horseback riders   |

|       |               |  |
|-------|---------------|--|
| 09N83 | Clover Valley | Motorized noise pollution from this trail is causing negative impacts to the Mokelumne Wilderness, impacting wilderness values inside the Mokelumne Wilderness and negatively impacting non-motorized recreation both inside and outside the wilderness. |
|-------|---------------|--|

**Routes Impacting Inventoried Roadless Areas**

|       |  |  |
|-------|--|--|
| 17E16 | Schnieder Camp                         | <p>In a designated Roadless Area; provides illegal motorized access to Pacific Crest Trail.</p> <p>In addition route is causing on the ground damage as evidenced by the field survey in Appendix B, Exhibit 1</p>   |
| 17E17 |  | <p>Bisects meadow; violates RCO</p> <p>In addition route is causing on the ground damage as evidenced by the field survey in Appendix B, Exhibit 1</p>   |
| 17E19 | Caples Creek Inventoried Roadless Area | <p>USFS proposed for Wilderness</p> <p>Bisects meadow; violates RCO</p> <p>Allen Ranch Trailhead – Hidden Lake – Granite Lake Loop</p> <p>The 2006 photos provided on the disk are from a popular loop trail from Plasse Resort. The trailhead has parking for trailers, and is use by motorized and non-motorize users (including horseback riders).</p> <p>The Allen Ranch Trailhead-Hidden Lake-Granite Lake loop begins on Route 17E19, which is currently available for motorcycle use. This route contains several stream and meadow crossings where motorized vehicles are damaging riparian meadow resources. The route also leads to unauthorized vehicle use on the closed old spur trails through the riparian area to Hidden Lake. Since there is an alternative motorized route to the ridge (NST1724 &amp; 09N04) there is no need to keep 17E19 open for motorized use.</p> |

|       |   |   |
|-------|---|---|
|       |   | The non-motorized portion of the loop continues on 17E23 and crosses a meadow area just before the ridge above Hidden Lake.   |
| 17E21 | Caples Creek Inventoried Roadless Area              | <p>This trail receives significant hiking use during the spring, summer, and fall due to it's proximity to Silver Lake campgrounds, Plasse's Resort, and summer home tracts. It provides a beautiful transition from the treed beauty of Silver Lake to the open vistas of Squaw Ridge.</p> <p>Motorcycle/ATV use of this trail would degrade the recreational experience for hikers and cause safety concerns for horse riders. The same arguments hold true for other trails in the immediate vicinity of Silver Lake (17E23, 17E19, and 17E72).</p> <p>The route is rutted, rocky, and heavily used by motorcycles. Because the steeper parts are narrow, it is difficult for motorcycles to climb, and hikers are often dusted as they pass by. At times the route compromises stream courses. Where the trail levels out and opens up, a number use created spurs crisscross the area.</p> <p>This area has been designated as "Recommended Wilderness" by USFS. In addition, the trail bisects meadow and violates RCO</p> <p>In addition route is causing on the ground damage as evidenced by the field survey in Appendix B, Exhibit 1</p> |
| 17E23 | Caples Creek Inventoried Roadless Area              | Designating this trail would displace hikers and horseback riders   |
| 17E24 | Tragedy-Elephants Back Inventoried Roadless Area    | <p>This route is causing on-the-ground damage, wilderness trespass and negatively impacting non-motorized recreation.</p> <p>Please see Appendix B, Exhibit 1 for Survey Data</p>   |
| 17E19 | Silver Lake; Caples Creek Inventoried Roadless Area | Designating this trail would displace hikers and horseback riders   |
| 17E28 | Tragedy-Elephants Back                              | This route is negatively impacting non-motorized recreation. Designating this route would degrade the wilderness values of the  |

|           |  |  |
|-----------|--|--|
|           | Inventoried Roadless Area              | Tragedy-Elephants Back Inventoried Roadless Area.  |
| 17E51     | Caples Creek Inventoried Roadless Area | USFS proposed for Wilderness<br>Bisects meadow; violates RCO   |
| 17E52     | Caples Creek Inventoried Roadless Area | USFS proposed for Wilderness. This route is negatively impacting non-motorized recreation and wilderness values.                                   |
| 11N26F    | Pyramid Inventoried Roadless Area      | Impacting Pyramid Inventoried Roadless Area, potential wilderness values and non-motorized recreation  |
| 11N09A    | Dardanelles Inventoried Roadless Area  | This route is leading to route proliferation in the Dardanelles Inventoried Roadless Area.<br><br>For survey data please see Appendix B, Exhibit 1 |
| NST1322BA | Pyramid Inventoried Roadless Area      | Impacting Pyramid Inventoried Roadless Area, potential wilderness values and non-motorized recreation  |
| NSR1312A  | Pyramid Inventoried Roadless Area      | Impacting Pyramid Inventoried Roadless Area, potential wilderness values and non-motorized recreation  |
| NSR1268A  | Pyramid Inventoried Roadless Area      | Impacting Pyramid Inventoried Roadless Area, potential wilderness values and non-motorized recreation  |
| NST1712A  | Dardanelles Inventoried Roadless Area  | Impacting Dardanelles Inventoried Roadless Area, potential wilderness values and non-motorized recreation  |
| 17E12     | Dardanelles Inventoried Roadless Area  | Impacting Dardanelles Inventoried Roadless Area, potential wilderness values and non-motorized recreation  |
| NSR1109A  | Dardanelles Inventoried Roadless Area  | Impacting Dardanelles Inventoried Roadless Area, potential wilderness values and non-motorized recreation  |
| NST1716AA | Dardanelles Inventoried Roadless Area  | Impacting Dardanelles Inventoried Roadless Area, potential wilderness values and non-motorized recreation  |
| NST1716AB | Dardanelles Inventoried Roadless Area  | Impacting Dardanelles Inventoried Roadless Area, potential wilderness values and non-motorized recreation  |
| 17E71     | Caples Creek                           | This route is negatively impacting Caples Creek Recommended  |

|                     |  |  |
|---------------------|--|--|
|                     | Inventoried Roadless Area                        | Wilderness, riparian resources along Caples Creek and non-motorized recreation   |
| NST1752A            | Caples Creek Inventoried Roadless Area           | This route is negatively impacting Caples Creek Recommended Wilderness, riparian resources along Caples Creek and non-motorized recreation   |
| NST1763A            | Caples Creek Inventoried Roadless Area           | This route is negatively impacting the Caples Creek Inventoried Roadless Area, potential wilderness values and non-motorized recreation<br><br>This recently carved user-created route serves very little recreational purpose and, if designated, would likely lead to route proliferation in the Inventoried Roadless Area.<br><br>See Appendix B, Exhibit 1 |
| NST1724D            | Tragedy-Elephants Back Inventoried Roadless Area | This route is negatively impacting non-motorized recreation and the wilderness values of the Tragedy-Elephants Back Inventoried Roadless Area  |
| 08N03F              | Tragedy-Elephants Back Inventoried Roadless Area | This route is negatively impacting non-motorized recreation and the wilderness values of the Tragedy-Elephants Back Inventoried Roadless Area  |
| NSR0803FA           | Tragedy-Elephants Back Inventoried Roadless Area | This route is negatively impacting non-motorized recreation and the wilderness values of the Tragedy-Elephants Back Inventoried Roadless Area  |
| 14E11<br>Deer Creek | Rubicon Inventoried Roadless Area                | In RCA, Rubicon Canyon; conflicts with hikers, promotes illegal use of South Fork Trail.   |
| 14E04               | Rubicon  | Route is impacting the Rubicon River and non-motorized recreation  |

**Routes Causing On-the-Ground Damage to Forest Resources: See Appendix B Exhibit 4 for Detailed Route Survey Data**

|           |  |  |
|-----------|--|--|
| NSR1016AA |  | Steep Hill Climb, route negatively impacts non-motorized recreation        |
| 8N43      |  | Evidence of riparian impacts, off-route vehicle use, and steep hill climbs |
| 9N45D     |  | Riparian impacts   |

|         |  |   |
|---------|--|---|
| 9N227   |  | Riparian impact, unauthorized route proliferation, and steep hill climb         |
| 10N14G  |  | Unauthorized route proliferation, vegetation impacts                            |
| 10N46H  |  | Riparian impacts  |
| 10N55Q  |  | Unauthorized route proliferation, steep hill climbs, potential riparian impacts |
| 11N22A  |  | Steep hill climbs, rutting, vegetation impacts                                  |
| 11N26CN |  | Rutting, steep hill climbs, off-route use impacting vegetation                  |
| 11N 28A |  | Riparian impacts  |
| 11N36A  |  | Rutting, unauthorized route proliferation                                       |
| 11N37F  |  | Route leading to unauthorized route proliferation, potential riparian impacts   |
| 17E7    |  | Riparian and vegetation impacts   |

#### **Routes in Other Potential Wilderness Lands**

|           |                                   |   |
|-----------|-----------------------------------|---|
| 8N16D     | Salt Springs Potential Wilderness | Route ends in an open area that is susceptible to future route proliferation.<br><br>See Appendix B, Exhibit 3 for survey data  |
| 11N21     | Caples Creek Potential Wilderness | Steep hill climb, route leading to off-route use that damages forest resources<br><br>See Appendix B, Exhibit 3 for survey data |
| NSR1439-C | Fawn Lake Potential Wilderness    | Route impacting non-motorized recreation on Pacific Crest Trail<br><br>See Appendix B, Exhibit 3 for survey data                |
| 14N39     | Fawn Lake Potential Wilderness    | Impacting non-motorized reaction and potential wilderness values  |
| NSR1439A  | Fawn Lake Potential Wilderness    | Impacting non-motorized reaction and potential wilderness values  |

|            |                                  |   |
|------------|----------------------------------|---|
| NSRELD147M | Poison Hole Potential Wilderness | Impacting non-motorized reaction and potential wilderness values  |
| 13N43      | Poison Hole Potential Wilderness | Impacting non-motorized reaction and potential wilderness values  |
| 13N43A     | Poison Hole Potential Wilderness | Impacting non-motorized reaction and potential wilderness values  |
| 13N43B     | Poison Hole Potential Wilderness | Impacting non-motorized reaction and potential wilderness values  |
| 13N43C     | Poison Hole Potential Wilderness | Impacting non-motorized reaction and potential wilderness values  |
| 11N28      | Pyramid Potential Wilderness     | Impacting non-motorized reaction and potential wilderness values  |
| 11N28B     | Pyramid Potential Wilderness     | Impacting non-motorized reaction and potential wilderness values  |
| 11N26E     | Pyramid Potential Wilderness     | Impacting non-motorized reaction and potential wilderness values  |
| NSR1126A   | Pyramid Potential Wilderness     | Impacting non-motorized reaction and potential wilderness values  |
| 11N28A     | Pyramid Potential Wilderness     | Impacting non-motorized reaction and potential wilderness values  |
| NSR1128E   | Pyramid Potential Wilderness     | Impacting non-motorized reaction and potential wilderness values  |
| NSR1128D   | Pyramid Potential Wilderness     | Impacting non-motorized reaction and potential wilderness values  |
| 10N13A     | Strawberry Creek                 | This route traverses several creek crossings, negatively impacting the Caples Creek Potential Wilderness and non-motorized recreation |
| 10N13B     | Strawberry Creek                 | This route crosses a riparian area, negatively impacts non-motorized recreation and the Caples Creek Potential Wilderness             |
| 10N13C     | Strawberry Creek                 | This route negatively impacts non-motorized recreation and the Caples Creek Potential Wilderness                                      |
| 10N13      | Strawberry Creek                 | This route negatively impacts the Caples Creek Potential Wilderness and non-motorized recreation                                      |
| NSR1013    | Caples Creek Potential           | This route negatively impacts the Caples Creek Potential Wilderness and non-motorized recreation                                      |

|          |   |  |
|----------|---|--|
|          | Wilderness  |  |
| NSR0982B | Tragedy-<br>Elephants Back<br>Potential<br>Wilderness | This route is negatively impacting wilderness values and non-motorized recreation.   |
| 08N03FW  | Tragedy-<br>Elephants Back<br>Potential<br>Wilderness | This route is negatively impacting non-motorized recreation and the wilderness values of the Tragedy-Elephants Back Potential Wilderness |
| 08N03FS  | Tragedy-<br>Elephants Back<br>Potential<br>Wilderness | This route is negatively impacting non-motorized recreation and the wilderness values of the Tragedy-Elephants Back Potential Wilderness |
| NSR0883A | Tragedy-<br>Elephants Back<br>Potential<br>Wilderness | This route is negatively impacting non-motorized recreation and the wilderness values of the Tragedy-Elephants Back Potential Wilderness |
| 08N83    | Tragedy-<br>Elephants Back<br>Potential<br>Wilderness | This route is negatively impacting non-motorized recreation and the wilderness values of the Tragedy-Elephants Back Potential Wilderness |
| 08N83C   | Tragedy-<br>Elephants Back<br>Potential<br>Wilderness | This route is negatively impacting non-motorized recreation and the wilderness values of the Tragedy-Elephants Back Potential Wilderness |
| 08N16C   | Salt Springs<br>Potential<br>Wilderness               | This route is causing riparian impacts and negatively impacting non-motorized recreation in the Salt Springs Potential Wilderness        |

**Routes that Serve No Recreational Purpose/Previously Restored Routes: Please See Appendix B Exhibit 3 for Survey Data**

|          |  |  |
|----------|--|--|
| NST1763A |  | Route serves no recreational purpose, vegetation growth on route surface |
| NSR1439B |  | Partially restored route that serves no recreational purpose             |
| 12N47B   |  | Route serves no recreational purpose                                     |
| 11N39A   |  | Rehabilitated route should not be designated                             |
| 10N80    |  | Rehabilitated route should not be designated                             |
| 10N46L   |  | Rehabilitated route should not be designated                             |





Photo: Lou Anegli Digital

## Roaded Forests Are at a Greater Risk of Experiencing Wildfires than Unroaded Forests

- A wildland fire ignition is almost twice as likely to occur in a roaded area as in a roadless area. (USDA 2000, Table 3-18)
- The location of large wildfires is often correlated with proximity to busy roads. (Sierra Nevada Ecosystem Project, 1996)
- High road density increases the probability of fire occurrence due to human-caused ignitions. (Hann, W.J., et al. 1997)
- Unroaded areas have lower potential for high-intensity fires than roaded areas because they are less prone to human-caused ignitions. (DellaSala, et al. 1995)
- The median size of large fires on national forests is greater outside of roadless areas. (USDA 2000, Table 3-22)
- A positive correlation exists between lightning fire frequency and road density due to increased availability of flammable fine fuels near roads. (Arienti, M. Cecilia, et al. 2009)
- Human caused wildfires are strongly associated with access to natural landscapes, with the proximity to urban areas and roads being the most important factor (Romero-Calcerrada, et al. 2008)

For more information, contact Gregory H. Aplet, Ph.D., Senior Forest Scientist, at [greg\\_aplet@twc.org](mailto:greg_aplet@twc.org) or 303-650-5818 x104.

## HUMAN ACTIVITY AND WILDFIRE

- Sparks from cars, off-road vehicles, and neglected campfires caused nearly 50,000 wildfire ignitions in 2000. (USDA 2000, Fuel Management and Fire Suppression Specialist Report, Table 4.)
- More than 90% of fires on national lands are caused by humans (USDA 1996 and 1998)
- Human-ignited wildfire is almost 5 times more likely to occur in a roaded area than in a roadless area (USDA 2000, Table 3-19).

**There are 375,000 miles of roads in our national forests.**



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# Eldorado National Forest Ecological Restoration Implementation Strategy



Looking north into Sopiago Creek watershed and the Middle Fork Cosumnes River, from Forest Service Highway 88 Scenic Byway.

## Overview

Located within the Sacramento River basin, the Eldorado National Forest (Forest) manages approximately 600,000 acres of land in 4 counties. Most of the Forest lies in El Dorado County. In descending order of land area the other counties are: Amador, Alpine and Placer Counties in California. Water is a major resource on the Forest. The Forest produces roughly 1.5 million acre feet of water per year to California's residents. This amount is equivalent to the amount of water used by over 5 million households for an entire year. There are over 600 miles of fishable streams in four major drainage systems. The Forest has 297 lakes and reservoirs (including both public and private land). Water from these lakes and reservoirs is used for recreation, irrigation, agriculture, power generation, environmental and wildlife conservation, as well as municipal and industrial needs.

Functioning watersheds are critical to the sustainability of a clean water supply necessary to sustain a healthy environment, economic viability, and strong communities. The primary goal for the Forest is to

implement ecological restoration with watershed health in mind. Fire is an important ecological function on the Forest. The presence or absence of fire in these ecosystems affects the structure and function of forest habitats influencing the health and resiliency of these watersheds. Additional goals include:

- Maintain healthy and well-distributed populations of native species through sustaining habitats associated with those species
- Use ecological strategies for post-fire restoration
- Apply best science to make restoration decisions
- Involve the public through collaborative partnerships that build trust among diverse interest groups
- Create additional funding sources through partnerships
- Incorporate the "Triple Bottom Line" into our restoration strategy: emphasizing social, economic and ecological objectives

- Implement an “All lands approach” for restoring landscapes
- Establish a sustainable level of recreational activities and restore landscapes affected by unmanaged recreation
- Implement an effective conservation education and interpretation program that promotes understanding the value of healthy watersheds and ecosystem services they deliver and support for restoration actions.
- Improve the function of streams and meadows
- Restore resilience of the Forests to wildfire, insects and disease
- Integrate program funding and priorities to create effective and efficient implementation of restoration activities
- Reduce the spread of non-native invasive species

## Challenges

Implementation of this suite of restoration goals will collectively restore resilience and sustainable ecosystems on the forest under current and future conditions. However, there are a number of challenges the forest must overcome to fully achieve our ecological restoration goals. The most critical of these challenges include:

- Our organizational capacity to increase or maintain the pace and scale of activities is being negatively impacted by reduced budgets. Current downsizing our organization, specifically in the areas of forest and fuels management, will directly affect how quickly we restore forest ecological function. Reduced budgets also impact our ability to retain and maintain employees with experience and expertise.
- Funding sources, in particular from outside sources such as Partnerships, emphasize implementation rather than planning. Our ability to complete required environmental planning and analysis is more constrained due to reduced budgets and limitations on use of partnership funds.
- Although there is emphasis for integrating ecological restoration for some programs, current program funding guidance does not support integration of funding and priority setting for ALL programs needed for efficient and effective ecological restoration. Low levels of funding for soil and watershed improvement continue, compounded by a need to develop technical capacity for restoration work.

- While local communities may recognize the benefits of implementing ecological restoration for ecosystem services, there is a need to increase the understanding and support from downstream water users, including Sacramento and East Bay communities.

## Strategies for Ecological Restoration

The Forest is implementing out-year strategic planning between all programs involved in ecological restoration activities. Integration affords being more efficient in planning investments, and affords effectiveness of restoration activities on a landscape basis, as well as fostering collaborative partnerships. Out-year strategic planning across programs (multi-year program of work) allows planners, resource specialists and collaborative partnerships to know where the Forest’s priorities are located for management activities. The Forest is also employing Best Science approach to ecological restoration. The recommendations and guidance described in the recent General Technical Reports 220/237, “An Ecosystem Management Strategy for Sierran Mixed Conifer Forests” is being applied to all thinning and fuels treatment projects occurring in mixed conifer stands. There are currently several complimentary integrated strategic planning efforts addressing ecological restoration goals on the Forest.

## Watershed Restoration Strategy

- The Forest will continue to implement the Watershed Condition Framework (WCF) resulting in a more strategic approach to watershed restoration on the Forest. The Forest currently has Watershed Restoration Action Plans for two Priority watersheds: Union Valley Reservoir-Silver Creek and Caples Creek. Essential Projects within the Union Valley-Silver Creek Priority Watershed are: Van Vleck Area Restoration Planning & Implementation and N. Union/McKinstry Meadow/Jones Fork OHV Restoration.
- The Forest is also engaged in projects outside of Priority Watersheds, including the South Fork Rubicon River OHV Restoration project, Cody Meadow restoration in the South Fork American River watershed, Callegat watershed restoration projects in the Cosumnes River basin, and the forest-wide Road-Sediment Survey Project Planning.
- Meadow and riparian restoration work, including planning and implementation of restoration projects, will continue to be a watershed program emphasis. Meadow restoration identified in the Regional Forester’s Leadership Intent is a

component of the National Strategic Plan for watershed restoration and is also a priority for multiple Forest Service partners.

- Roads will continue to be an emphasis for watershed restoration. The Forest will continue to pursue opportunities to remediate effects to aquatic resources through the Legacy Road Program and other available means. The Forest has identified high risk road segments through four years of road sediment surveys conducted in 2008-2011. Addressing outcomes of Travel Management may be a priority in the near future.

### Integrated Vegetation and Fuels Management Strategy

The Eldorado led the region with integration of vegetation management and fuels management. Planning for all vegetation and fuels management projects incorporate activities that work together to restore forest health and include prescribed fire to manage fuels at levels that meet goals for maintaining wildlife habitat in a healthy forest where remaining fuel presents a low potential for catastrophic wildfire. Table 1 at the end of our chapter shows the activities planned for integrated vegetation and fuels management.

### Invasive Species Management Strategy

- The forest collaborates with various partners to control or eradicate invasive species on the forest. Priority species for management on the forest include spotted knapweed, yellow starthistle, purple loosestrife, perennial pepperweed, medusahead, and Canada thistle.
- In 2011 the Eldorado National Forest collaborated with various outside partners to accomplish 340 acres of invasive plant control on NFS lands. Partnerships included El Dorado County, El Dorado Irrigation District and PG&E.
- In 2012 two seasonal employees increased capacity and are treating high priority infestations across the forest using a combination of funding sources including Eldorado and Amador County RAC, Fred's restoration dollars, and NFWW. Approximately 400 acres of invasive plant control accomplishment are expected using integrated pest management. Species include: yellow starthistle with Eldorado County (250 acres), spotted knapweed control, invasive species at ranger stations, admin, and recreation sites. Surveys include recent wildfire and other project areas for new infestations.

- An EA for using Integrated Pest Management (IPM) to treat invasive plants across the forest is in progress. With the EA in place the forest expects to increase invasive species management to approximately 460 acres.

### Tactics for Increasing Restoration

There are currently several tactics being implemented on the Forest to increase the pace and scale of ecological restoration.

- The Forest has successfully integrated the fuels and vegetation management programs focusing on the integration of budgets and seamless organizational planning and implementation. Landscape scale planning will include restoration activities proposed from a suite of program areas in addition to fuels and vegetation activities to increase planning and implementation efficiencies.
- The Forest is a regional and national leader in the use of Stewardship Contracting to increase monetary investments leveraged with appropriated funds. Fuels and vegetation projects are planned at the landscape scale to use economies of scale.
- The Forest has begun the use of managed fire for resource benefits to achieve ecological restoration.
- The Forest has increased opportunities for partnerships and grants. Partnerships include entities such as Coca Cola, Trout Unlimited (El Dorado Chapter), Amador-Calaveras Consensus Group, and Friends of the Rubicon. Grant funds from the State of California Division of Off-Highway Vehicles and Sierra Nevada Conservancy have contributed to projects such as trail reconstruction and decommissioning, and project planning. Increased use of partnerships, grants, and Stewardship Contracting will aid in increasing the pace and scale of restoration treatments across all program areas on the Forest.

### Recent Accomplishments

The Forest has recently planned or implemented numerous projects relating to ecological restoration. Examples of some of these projects include aquatic organism passage, reforestation, trail rehabilitation, improved aspen health, decreased road densities, increased fire resilience and forest health, decreased erosion and decreased sediment in streams. Several of these projects are highlighted below.

### Cornerstone Restoration Project

The Cornerstone Restoration Landscape Project is an integrated approach to restoring ecological function for

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a large portion of the Mokelumne River basin stretching across the Eldorado and Stanislaus National Forests. The Forest, in collaboration with the Amador Calaveras Consensus Group (ACCG) have developed an 8-year schedule of restoration activities focusing on projects that improve forest health and watershed conditions, creating fire-safe communities, and sustaining local economies.

Because of this collaborative effort, one of 10 nationwide Collaborative Forest Landscape Restoration Program (CFLRP) grants was awarded to the Cornerstone Project. The CFLRP provides matching funding for a wide variety of ecological projects including meadow and stream restoration, restoration of cultural sites, enhancing forest vegetation resiliency, and reducing the risk of catastrophic wildfire with threats to lives and property. The Stanislaus and Eldorado Forests in collaboration with ACCG are developing a Master Stewardship Agreement. The Agreement is intended to memorialize and formalize the mutually beneficial collaborative relationship between the Forests and ACCG. Collaborative project design within the Mokelumne watershed spanning the “cornerstone” where both Forests meet at the Mokelumne River is ongoing.

### **Raintree Restoration Project**

The Raintree Restoration Project is an integrated approach to restoring ecological function covering approximately 9,000 acres of Sierran Mixed Conifer forest. This project restores forest health and resiliency to insect and disease and wildland fire by:

Incorporating the principles outlined in the GTR-220 and 237; treating fuels and overly dense forested stands; enhancing montane hardwood communities by removing competing vegetation; enhancing quaking aspen aggregations through removal of competing overstory vegetation; closing/decommissioning of approximately 47 miles of non-system roads; restoring dispersed recreation areas impacted by motor vehicle use; placement of large woody debris (LWD) in LWD deficient stream channels; and reforesting areas affected by root disease. Prescribed fire will be applied throughout the project area in the future to maintain low fire behavior potential and maintain resilience to the effects of future wildland fire, insects and disease.

The Raintree Restoration Project employed a robust community outreach and collaborative approach to building a proposed action. Collaboration resulted in the formulation of new ideas and capturing the issues, concerns and opportunities provided during collaborative process. A series of meetings were held, including visits to the project area to begin fostering partnerships and development of the project framework. Collaborators included representatives

from the Sierra Forest Legacy, El Dorado Fire safe Counsel, California Forestry Association, Trout Unlimited (El Dorado Chapter), El Dorado County Board of Supervisors, and the Pacific Southwest Research Station.

The Forest used the Stewardship Contracting authority to implement the project, thus increasing the monetary investment to complete the integrated restoration work. The Forest leads the Region in the use of Stewardship Contracting, which has increased the Forest’s pace and scale of restoration treatments by retaining more timber receipts locally for implementing restoration activities.

### **Woods Lake Recreation Area Restoration Project**

Woods Lake Recreation Area Access (Woods Lake) project is an example of an integrated project to improve stream and aquatic species connectivity while providing safe public access to a popular campground, picnic area, trailhead, and recreation residence area. The existing access road includes a culvert over a tributary to Woods Lake Creek that is misaligned, undersized and is losing structural integrity. Along with an overly sharp turn and misalignment, the culvert has been overtopped and culvert headwall erosion has narrowed the road to an effective width of only 10 ft. over the culvert, too narrow for recreational vehicles. A serious public safety concern exists, and further deterioration of this stream crossing could result in the closure of the Woods Lake recreation area. In addition to the public safety concern, this deteriorating culvert presents a serious risk to aquatic habitat and water quality. Failure of the culvert crossing during a large streamflow event would release several cubic yards of sediment into the east fork of Woods Lake Creek, sufficient to damage over 1.6 miles of pristine aquatic habitat, including partial or complete filling in of pools with sediment, lateral and/or channel erosion, and partial burial of wet meadow areas next to the stream.

Replacement of the existing hazardous culvert by a standard bridge will improve and protect stream function as well as improve public safety for the popular Woods Lake recreation facilities that are in proximity to the well-traveled Forest Service Scenic Highway 88 Byway. The Woods Lake project will remove the existing culvert with its constriction in stream flow and erosion sediment delivery, reshape the streambanks to match the upstream and downstream streambanks, and restore stream function for the east fork of Woods Lake Creek. Streambank restoration includes replanting native riparian and upland vegetation to stabilize the reshaped streambanks and filter sediment to protect water quality. This is an Alpine County RAC and legacy road funded project.

The project was proposed through collaboration between the Alpine County Resource Advisory Committee (RAC) and the Amador Ranger District of the Eldorado National Forest. A series of meetings were held, with visits to the project site to foster partnerships and development of project objectives. Alpine County's RAC provided sufficient funding to complete NEPA and site survey and design, with the understanding that the Forest would apply for Legacy Road program funding to complete the project. Additional funding for implementation was obtained from the Forest Service Legacy Road program. The project is scheduled for completion in summer of 2012.

### **Freds Fire Restoration Project**

The Freds fire ignited along Highway 50 on October 13, 2004 and burned approximately 7,700 acres in mixed ownerships; 4,600 acres of Eldorado National Forest (ENF), 2,830 acres of Sierra Pacific Industries, and 280 acres of other private landowners until October 17, 2004 when a winter storm helped contain the fire. The fire burned westerly in steep terrain (3,920 – 6,966 feet in elevation) into the Cleveland Fire on the west and the Wrights Fire on the east. The area burned by Freds Fire on the Eldorado National Forest supported the last significant stands of old forest along a 30 mile stretch of the South Fork American River Canyon. Most of those stands burned at high intensity, and the impacts of this loss for forest structure, habitat connectivity, wildlife habitat,

watershed, and aesthetics spread beyond the fire boundary.

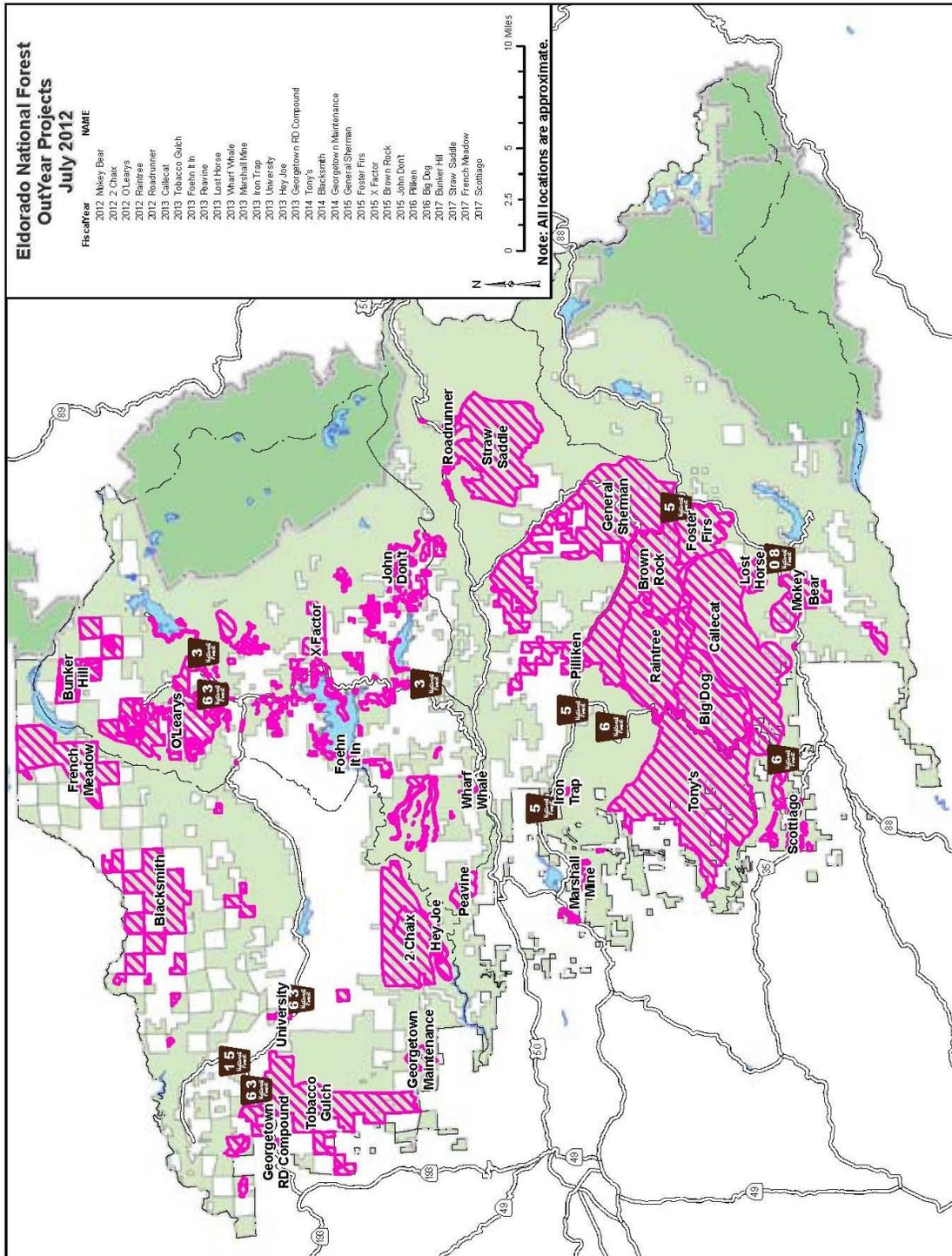
The Forest received a settlement of \$10,640,000 for damage caused by the Freds Fire. Fire settlement funds for the restoration of the area affected by the Freds Fire provide a unique opportunity to reverse ecosystem degradation, restore ecosystem health and resilience, rehabilitate damaged infrastructure, and prepare the impacted landscape for the effects of changing climates and human use patterns. The Natural Resources Damages Statute 16 579 states use of these funds are... "to cover the cost to the United States of any improvement, protection, or rehabilitation work on lands under the administration of the Forest Service rendered necessary by the action which led to the ... settlement."

The Forest is currently cooperating with the RO to design a post-fire restoration strategy utilizing settlement funds both for the Freds Fire and to produce a template for use by other forests for fire landscape restoration. The Freds Fire Restoration strategy includes priorities for activities to increase the pace and scale of restoration in the Freds Fire landscape. For 2012, projects for invasive species treatments and reforestation are funded and underway from the previous Freds Fire Restoration EIS decision. Implementation of the Freds Fire Restoration Strategy is expected to begin in FY 2013.

**TABLE 1: INTEGRATED VEGETATION AND FUELS MANAGEMENT STRATEGY**

|   | Ranger District | Quarter Implement | CCF* Sawtimber | CCF* Non-Sawtimber | Commercial Acres | Biomass Acres | Prescribed Burn (RxB) and Mechanical Surface Fuel Treat Acres |
|---|-----------------|-------------------|----------------|--------------------|------------------|---------------|---|
| <b>FY 2013</b>                            |                 |                   |                |                    |                  |               |   |
| Meiss Trap (Raintree 2) IRC               | PVL             | 1st Qtr           | 10,000         |                    | 923              | 923           |   |
| Tobacco Gulch IRSC/IRTC                   | GTN             | 2nd Qtr           | 3,000          |                    | 500              | 500           |   |
| Callie Cat IRC                            | AMA             | 3rd Qtr           | 23,000         |                    | 1,915            | 1,915         |   |
| Permits/Addon                             |                 |                   |                |                    |                  |               |   |
| South Zone Rx Burn                        | PVL/AMA         |                   |                |                    |                  |               |   |
| North Zone Rx Burn                        | PAC/GTN         |                   |                |                    |                  |               |   |
| <b>Total FY13:</b>                        |                 |                   | <b>36,000</b>  | <b>4,000</b>       | <b>3,338</b>     | <b>3,338</b>  | <b>5,000</b>  |
| <b>FY 2014</b>                            |                 |                   |                |                    |                  |               |   |
| Blacksmith Tractor/Skyline IRC            | GTN             | 3rd Qtr           | 20,000         |                    | 2,500            | 2,500         | 2,500   |
| Tony's IRC                                | PVL             | 4th Qtr           | 20,000         |                    | 4,000            | 4,000         | 1,000   |
| Copy Cat IRC (Callecat2)                  | AMA             | 1st Qtr           | 7,000          |                    | 600              | 600           |   |
| Permits/Addon                             |                 |                   |                | 4,000              |                  |               |   |
| South Zone Rx Burn                        | PVL/AMA         |                   |                |                    |                  |               | 2,500   |
| North Zone Rx Burn                        | PAC/GTN         |                   |                |                    |                  |               | 2,500   |
| <b>Total FY14:</b>                        |                 |                   | <b>47,000</b>  | <b>4,000</b>       | <b>7,100</b>     | <b>7,100</b>  | <b>8,500</b>  |
| <b>FY 2015</b>                            |                 |                   |                |                    |                  |               |   |
| Foster Firs IRC                           | AMA             | 3rd Qtr           | 15,000         | 1,500              | 1,500            |               | 500   |
| X Factor/John Don't IRC                   | PAC             | 1st Qtr           | 3,500          | 900                | 900              |               | 900   |
| General Sherman/Brown Rock IRC            | PVL             | 4th Qtr           | 30,000         | 3,000              | 3,000            |               | 3,000   |
| Permits/Addon                             |                 |                   |                | 4,000              |                  |               |   |
| South Zone Rx Burn                        | PVL/AMA         |                   |                |                    |                  |               | 2,500   |
| North Zone Rx Burn                        | PAC/GTN         |                   |                |                    |                  |               | 2,500   |
| <b>Total FY15:</b>                        |                 |                   | <b>48,500</b>  | <b>4,000</b>       | <b>5,400</b>     | <b>5,400</b>  | <b>9,400</b>  |
| <b>FY 2016</b>                            |                 |                   |                |                    |                  |               |   |
| Western Gtn Fuels Reduction IRC           | GTN             | 1st Qtr           | 10,000         |                    | 1,500            |               |   |
| Pilliken Plantation IRC                   | PVL             | 1st Qtr           | 4,000          |                    | 2,000            | 2,000         | 2,000   |
| Big Dog IRC                               | PVL             | 4th Qtr           | 6,000          |                    | 1,000            | 1,000         | 1,000   |
| Permits/Addon                             |                 |                   |                | 4,000              |                  |               |   |
| <b>Total FY16:</b>                        |                 |                   | <b>20,000</b>  | <b>4,000</b>       | <b>4,500</b>     | <b>3,000</b>  | <b>3,000</b>  |
| <b>Total FY17</b>                         |                 |                   |                |                    |                  |               |   |
| Straw Saddle IRC                          | PVL             | 4th Qtr           | 3,000          |                    | 300              | 300           | 300   |
| Bunker Hill Forest Health Tractor/Skyline | PAC             | 1st Qtr           | 9,000          |                    | 900              |               | 1,000   |
| French Mdw Tractor/Skyline IRC            | GTN             | 4th Qtr           | 6,000          |                    | 1,000            | 1,000         | 400   |
| Scottiago IRC                             | AMA             | 1st Qtr           | 10,000         |                    | 1,000            | 800           |   |
| Permits/Addon                             |                 |                   |                |                    |                  |               |   |
| <b>Total FY17:</b>                        |                 |                   | <b>28,000</b>  | <b>4,000</b>       | <b>3,200</b>     | <b>2,100</b>  | <b>1,700</b>  |

\* CCF = Hundred Cubic Feet





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June 7, 2013

Randy Moore  
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**Notice of Appeal on the Environmental Assessment, the Decision Notice, and the Finding of No Significant Impact for the Environmental Assessment for the Callegat Ecological Restoration Project; Amador Ranger District, Eldorado National Forest, Pacific Southwest Region.**

## **NOTICE OF APPEAL AND STATEMENT OF REASONS**

### **I. Notice Of Appeal**

Notice is hereby given that, pursuant to the U.S.D.A. Forest Service Regulations at 36 C.F.R. part 215, Public Employees for Environmental Responsibility (PEER) and Center for Sierra Nevada Conservation (CSNC) appeal to Randy Moore, Regional Forester, U.S.D.A. Forest Service, for relief from Forest Supervisor Kathryn D. Hardy's Record of Decision (ROD) signed on April 24, 2013, for the Callegat Ecological Restoration Project (CERP).

This appeal is consistent with 36 C.F.R. § 215.11 and is based upon written comments submitted by Appellants on the Draft Environmental Analysis. This appeal is consistent with 36 C.F.R. § 215.14 (Appeal Content) in that we are submitting substantial evidence of violations of law, regulation, and policy contained in the ROD and FEIS, requiring remand or reversal of said decision.

We incorporate by reference the February 20, 2013 comments we submitted on the draft EA for this project.

## **II. Statement Of Reasons**

### A. The ROD And EA Violate The National Environmental Policy Act

#### 1. *Failure To Analyze A Full Range Of Reasonable Alternatives*

The Council on Environmental Quality's NEPA regulations describe the alternatives section as the "heart" of the EIS, and require that an EIS's alternatives section "[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated." 40 C.F.R. § 1502.14. NEPA regulations provide that an EIS must include "the alternative of no action," as well as a "hard look" at "all reasonable alternatives."<sup>1</sup> In examining the reasonableness of an EIS's alternatives and elimination of alternatives from analysis, a court first looks to whether the "Purpose and Need" was reasonable, and then whether the alternatives considered were reasonable in light of that goal. *Surfrider Found. v. Dalton*, 989 F.Supp. 1309, 1327 (S.D. Cal. 1998), *aff'd per curiam*, 196 F.3d 1057 (9th Cir. 1999). Regarding alternatives rejected for full evaluation, a court asks "whether the summary rejection of these sites was unreasonable, such that the [EIS] failed to consider a reasonable range of alternatives." *Id.* at 1327–28 ("An unreasonable failure to consider a viable alternative renders an alternatives analysis inadequate.").

The Forest Service Handbook guides managers to "develop . . . alternatives fully and impartially . . . [and to] ensure that the range of alternatives does not prematurely foreclose options that might protect, restore, and enhance the environment."<sup>2</sup> Much legal precedent guards against an insufficient range of alternatives.<sup>3</sup> NEPA also requires that agencies "present complete and accurate

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<sup>1</sup> 42 U.S.C. § 4332(c); 40 C.F.R. § 1502.14(a), (d).

<sup>2</sup> Forest Service Handbook 1909.15 § 14

<sup>3</sup> "An agency must look at every reasonable alternative, with the range dictated by the nature and scope of the proposed action." *Nw. Env'tl. Def. Ctr. v. Bonneville Power Admin.*, 117 F.3d 1520, 1538 (9th Cir. 1997). An agency violates NEPA by failing to "rigorously explore and objectively evaluate all reasonable alternatives" to the proposed action. *City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1310 (9th Cir. 1990) (quoting 40 C.F.R. § 1502.14). This evaluation extends to

information to decision-makers and to the public to allow an informed comparison of the alternatives considered in the EIS.” *Natural Res. Def. Council v. U.S. Forest Serv.*, 421 F.3d 797, 813 (9th Cir. 2005). The Forest Service failed in this mandate by not considering in detail an alternative that included decommissioning of several roads that have been acknowledged to be adversely impacting the watersheds in the project area. This failure has caused the Forest to foreclose options that would protect, restore, or enhance the environment. Moreover, the Forest Service failed to provide a rational explanation as to why this alternative should not be considered in detail, even after we requested it in our comments on the draft EA.

Roads contribute the highest per acre sedimentation rate of all watershed disturbances, averaging 48 times background from landsliding and 82 times background from surface erosion. Consequently, road issues are often at the heart of watershed restoration activities. (USFS, 2004) (ENF 2008)<sup>4</sup>

Forest Service Chief Dombeck’s *Natural Resource Agenda for the 21<sup>st</sup> Century* emphasizes watershed health and restoration, and forest roads. National Forest roads policy has four primary objectives: (1) More carefully consider decisions to build new roads; (2) eliminate old, unneeded roads; (3) upgrade and maintain roads that are important to public access; and (4) develop new and dependable funding for forest road management. (Eldorado 2008 Road Inventory) While the project is billed as a restoration project, we find the scope of restoration activities to be extremely limited. The project planners are not taking advantage of the opportunity to do actual restoration, i.e., road removal. Roads instead are being re-constructed and “temporary” roads built.<sup>5</sup>

The Forest Service’s narrow interpretation of the purpose and need statement was also arbitrary, resulting in the Forest Service’s failure to consider a reasonable range of alternatives. The Forest Service summarily rejected our request that the purpose and need include watershed restoration through road removal. The EA provides no explanation for the rejection. The Forest Supervisor’s refusal to consider the above alternative is arbitrary and capricious and a violation of NEPA.

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considering more environmentally protective alternatives and mitigation measures. See, e.g., *Kootenai Tribe of Idaho v. Veneman*, 313 F.3d 1094, 1122–23 (9th Cir. 2002) (and cases cited therein). NEPA requires that an actual “range” of alternatives is considered, such that the Act will “preclude agencies from defining the objectives of their actions in terms so unreasonably narrow that they can be accomplished by only one alternative (i.e. the applicant’s proposed project).” *Col. Env’tl. Coal. v. Dombeck*, 185 F.3d 1162, 1174 (10th Cir. 1999) (citing *Simmons v. U.S. Corps of Eng’rs*, 120 F.3d 664, 669 (7th Cir. 1997)). This requirement prevents the EIS from becoming “a foreordained formality.” *City of New York v. Dep’t of Transp.*, 715 F.2d 732, 743 (2d Cir. 1983). See also *Davis v. Mineta*, 302 F.3d 1104 (10th Cir. 2002).

<sup>4</sup> ENF, Road Sediment Source Inventory and Risk Assessment, 2008.

<sup>5</sup> CERP EA, p. 10 states, “There are approximately 48 miles of road reconstruction, 27 miles of maintenance and 1.5 miles of new construction temporary roads needed for the project.”

## 2. Failure to do an Environmental Impact Statement

An Environmental Impact Statement (EIS) is required for “major Federal actions significantly affecting the quality of the human environment....”42 U.S.C. §4332(2)C. The prepared Environmental Assessment (EA) should determine whether an action will have a significant impact, thus requiring preparation of an EIS 40 C.F.R. §1508.9. When an EA reveals a significant impact, as this one has, an EIS must then be prepared.

The Hydrology Report indicates the project would double ERA and TOC from the project in the Cat Creek Watershed, increasing the risk of CWE from Low to High. This is a significant effect that requires an EIS. An EIS is also needed to analyze potential impacts from the reconstruction of 48 miles of roads.

### B. The ROD and EA Violate NFMA

The Sierra Nevada Forest Plan Amendment (SNFPA) aims to restore riparian areas, specifically RCAs. The CERP violates SNFPA and the Riparian Conservation Objectives because it moves the Cat Creek watershed from a “low” risk of Cumulative Watershed Effects (CWE) to a “high” risk. A project cannot take a watershed from “low” to “high” CWE and call it “restoration.”

The CERP Riparian Conservation Objectives Analysis does not appropriately assess compliance with SNFP **Riparian Conservation Objective #2**: “Maintain or restore: (1) the geomorphic and biological characteristics of special aquatic features, including lakes, meadows, bogs, fens, wetlands, vernal pools, springs; (2) streams, including in stream flows; and (3) hydrologic connectivity both within and between watersheds to provide for the habitat needs of aquatic-dependent species.”

The CERP fails to meet the following RCO Standards and Guidelines intended to meet RCO Objective 2: #100: “*Maintain and restore the hydrologic connectivity of streams, meadows, wetlands, and other special aquatic features by identifying roads and trails that intercept, divert, or disrupt natural surface and subsurface flow paths. Implement corrective actions where necessary to restore connectivity.*”

Rather than maintain or restore hydrological connectivity, the CERP will disturb watersheds still healing from earlier timber and other activities. The CERP includes reconstruction of roads and the construction of new roads and skid trails in RCAs. “In forested watersheds that contain roads, the roads are frequently a major source of sediment that reaches streams and other aquatic features.” (Dissmeyer 2000, cited in Hydrology Report.) The RCO analysis identifies four roads that will have repairs made, but fails to address the many roads that will be reconstructed and the effects this will have on aquatic features. The RCO and EA may not simply conclude there will be no effect; that conclusion must be backed with hard facts.

**The CERP violates Riparian Conservation Objective #4:** *“Ensure that management activities, including fuels reduction actions, within RCAs and CARs enhance or maintain physical and biological characteristics associated with aquatic- and riparian-dependent species.”*

RCO Standard and Guideline #116 requires: *“Identify roads, trails, OHV trails and staging areas, developed recreation sites, dispersed campground, special use permits, grazing permits, and day use sites during landscape analysis. Identify conditions that degrade water quality or habitat for aquatic and riparian-dependent species. At the project level, evaluate and consider actions to ensure consistency with standards and guidelines or desired conditions.”*

The Middle Fork Cosumnes Landscape Analysis identified several roads that pose a high risk to aquatic resources.<sup>6</sup> Many of these same roads are now proposed for reconstruction for this project. The Landscape Analysis was not even considered when the CERP was designed, and despite our comments on the Draft EA, the final EA also ignores it.

The RCO Analysis cannot just assume that addressing a few problem areas in the watershed blesses the entire project, if on balance, the construction and reconstruction of roads and skid trails in RCAs sets back the healing that the watershed has been inching toward for decades.

According to the Hydrology Report, *“ Much of Cat Creek is in fairly good condition, while a number of the tributaries of Cat Creek contain segments that are moderately or severely degraded. ”* (Hydro, Introduction) The ROD includes a modification to the EA to exclude mechanical ground based equipment from the Riparian Conservation Areas (RCAs) of the main stems of Cat Creek and the Middle Fork Cosumnes. There is no explanation in either the Hydrology Report or the EA how protecting the main stem of Cat Creek, said to be in good condition, addresses the degradation of its tributary streams. NEPA requires the EA and the RCO analysis explain to the public the connection between the mitigation proposed for the main stem streams and any benefit to the degraded tributaries.

The Hydrology Report also states, *“The risk of cumulative watershed effects (CWE) is currently either low or moderate in the four watersheds that contain the CERP. Alternatives 1, 3, and 4 of the CERP would increase the risk of CWE in each watershed for at least a few years - the risk would be high in three of the watersheds and moderate in one watershed. For the Cat Creek watershed, design criteria would spread the implementation of the CERP over a period of time so as to prevent that watershed from exceeding the Threshold of Concern for CWE. As a result of the above, the risk of CWE is not significant.”*

There is nowhere in the EA or the Hydrology Report, however, that

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<sup>6</sup> USFS, Eldorado NF, Middle Fork Cosumnes Landscape Analysis, Table 7, (2002).

explains a nexus between extending the life of the project and reducing CWE in the Cat Creek watershed. This is merely conclusory, wishful thinking. NEPA requires “Agencies shall insure the professional integrity, including scientific integrity, of the decisions and analysis in environmental impact statements.” 40 C.F.R. § 1502.24. “They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement.”

**C. The Failure to address the Impacts of Roads in the CERP violates both NEPA and the SNFPA RCOs.**

In forested watersheds that contain roads, the roads are frequently a major source of sediment that reaches streams and other aquatic features (Dissmeyer 2000, cited in Hydrology Report.) There is a very high density of roads in the Cat Creek RCAs (18.9 miles/stream mile). Many streams, including Dark Canyon, Loggers Delight and Sugar Pine Creek, have roads paralleling both sides. These roads are all close to their respective creeks, within the RCAs. Road 9N17A comes within 25 feet of Sugar Pine Creek.



Road 9N17A comes within 25 feet of Sugar Pine Creek. Note lack of riparian vegetation between road and creek.

Drainage failures are causing sedimentation into these creeks, but these roads (9N17A, 9N17B, 9N17C, 9N17D, 9N23 and 9N23A) have also undergone a high degree of revegetation, which reduces the sediment that comes off these roads in rain events. These roads are all slated for reconstruction for this project, which, while it may correct drainage problems in the short term, will result in the production of more sediment in the long term. The EA and hydrology report fail to consider the negative impacts from road reconstruction, focusing instead only on the benefits of drainage repair. Because of the high level of revegetation of these roads, they currently receive little to no public use.



Road 9N17C has largely revegetated and gets little to no vehicle use. Reconstruction of this road will set back its natural recovery and result in demand for its public use.

If these roads are reconstructed, the public will demand to use them. There is no analysis of the probably impacts from renewed public use of these roads that are so close to streams. There is no discussion of the likely maintenance costs of these roads, nor of the likelihood maintenance funds will be available, given the over \$23 million road maintenance backlog.<sup>7</sup> An EIS needs to be prepared that adequately analyzes the probable effects of the use and maintenance of these roads on the watershed.

Cumulative Watershed Effects Analysis (CWE) does not consider roads within RCAs any differently than those on ridge tops. Hillslope gradient is one of the primary driving forces in mass-wasting failures. This indicator is based on the relation between hillslope gradient and the potential for mass wasting. Steeper gradients are usually associated with an increase in the frequency of road failures.<sup>8</sup>

Slope position appears to have significant value in mountainous terrain where failure hazard increases downslope. It can be used to distinguish between ridge and near-ridge roads, which are often less prone to failure, and those roads lower on the slope where failure is more likely.<sup>9</sup>

The hydrologic connectivity of roads is subject to change through human intervention and natural processes. Road building almost always increases hydrologic connectivity and decommissioning decreases it. Geomorphic processes tend to increase connectivity after road building is complete, through mass wasting and gullying. Road obliteration will reduce connectivity by removing ditches and other artificial channeling structures.<sup>10</sup>

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<sup>7</sup> The \$23 million road maintenance deficit is for ML 3, 4 and 5 roads. An EIS should include current road maintenance deficiencies.

<sup>8</sup> USFS, Roads Analysis: Informing Decisions About Managing the National Forest Transportation System, Appendix 2: Indicators for Analysis of Water/Road Interactions.

<sup>9</sup> Ibid

<sup>10</sup> Ibid

The CERP fails to propose or analyze benefits to the watershed from decommissioning non-system roads and OHV trails, or the decommissioning of system roads in an over-road watershed.

**D. The project violates the Travel Rule, as it fails to decommission and restore non-system routes, as promised during the recent Travel Management process.**

The recent Travel Management Project route inventory identified several user-created routes in the planning area. During Travel Management, the public was told routes not designated would be analyzed for decommissioning and restoration under NEPA for site-specific projects.

The CERP is precisely the type of project under which excess routes should be scrutinized for restoration. The project does propose to decommission one road, 9N22A, but does not disclose the location or length of the road, nor are the benefits of this decommissioning assessed. Roads 9N51B, 9NY09, 9NY08A are not included on the Motor Vehicle Use map. The CERP is the site-specific project that provides the opportunity to close these illegal routes.

**Relief requested**

The CERP is a project with potentially significant effects upon the environment. We respectfully request an Environmental Impact Statement for the project, which includes decommissioning and restoration of roads in its purpose and needs, and analysis of an Alternative in the EIS that restores roads in the RCAs of streams in the project area.

Respectfully submitted,



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