

Appendices

A. El Dorado County's Saturated Soil Water Quality Protection Plan Summary and Monitoring Plan

B. Hydrology Appendices

C. Comment Letters

D. Response to Comments

E. California Regional Water Quality Control Board, Central Valley Region: Cleanup and Abatement Order (CAO) No. R5-2009-0030

F. Rubicon Trail Operating Agreement between El Dorado County and ENF

Appendix A: El Dorado County's Saturated Soil Water Quality Protection Plan

RUBICON TRAIL

PROJECT NUMBER 99426



SATURATED SOIL WATER QUALITY PROTECTION PLAN

TECHNICAL REPORT

December 2010

Addendum #1 – January 2011

El Dorado County



Department of Transportation



Prepared By: Steve P. Kooyman, P.E.

For: State Water Quality
Control Board Central
Valley Region

Clean-Up and Abatement
Order No. R5-2009-0030



Table of Contents

| | | |
|-----|--|----|
| | List of Acronyms and Abbreviations | v |
| 1.0 | Executive Summary | 1 |
| 2.0 | Introduction | 8 |
| | 2.1 Plan Location | 8 |
| | 2.2 General Site Description | 9 |
| 3.0 | Rubicon Trail History | 11 |
| 4.0 | Plan Overview | 12 |
| | 4.1 Plan Milestones | 12 |
| | Figure 1- Project Location Map | 13 |
| | 4.2 Plan Goals and Objectives | 14 |
| 5.0 | Site Characteristics | 16 |
| | 5.1 Topography | 16 |
| | Figure 2- Topographic Map | 17 |
| | Figure 3- Slope Map | 18 |
| | 5.2 Geology | 19 |
| | Figure 4 - Geological Map | 20 |
| | Figure 4a- Geologic Description | 21 |
| | 5.3 Soils | 22 |
| | 5.4 Land Use | 22 |
| | Figure 5- Soils Map | 24 |
| | 5.5 Property Network | 25 |
| | Figure 6- Public Property | 26 |
| | 5.6 Hydrology | 27 |
| | 5.6.1 Basins | 27 |
| | 5.6.2 Precipitation | 27 |
| | 5.6.3 Lakes, Ponds, Streams | 27 |
| 6.0 | Existing Hydrology Summary | 29 |
| | 6.1 Watershed Characteristics | 29 |
| | Figure 7- USGS Watersheds | 30 |
| | Figure 8- Watershed Map | 33 |
| | 6.2 Storm Frequency | 34 |
| | 6.3 Precipitation Values | 34 |
| | Figure 9- Mean Annual Rainfall | 36 |
| | Figure 10- Rainfall Intensity Duration Frequency Curve | 37 |
| | 6.4 Hydrologic Methods | 38 |
| | 6.4.1 Flow Gage Record | 39 |
| | 6.4.2 USGS Regression Equation | 39 |
| | 6.4.3 USACOE Runoff from Snowmelt Equation | 39 |
| | 6.4.4 Unit Hydrograph Method (HEC-HMS) | 39 |
| | 6.4.5 Hydrologic Results | 40 |
| 7.0 | Existing Trail Hydraulics Summary | 48 |
| | 7.1 Trail Characteristics | 48 |
| | 7.2 Hydraulic Methods | 49 |
| | 7.3 Hydraulic Results | 49 |
| 8.0 | Storm Water Volume and Sediment Loading Summary | 50 |
| | 8.1 Groundwater and Percolation | 50 |
| | 8.2 Storm Water Volume Loading Estimate | 50 |



8.3 Sediment Loading Estimates 50

8.3.1 Storm Water Channel Erosion and Surficial Erosion 50

8.3.2 Pollutant Loading Conclusions 52

9.0 Rubicon Trail Existing Conditions Problems 53

9.1 Problem Areas 53

9.2 Opportunities and Constraints 54

Figure 11 - Rubicon Trail (Phase 1) Existing Trail Conditions 55

Figure 12 - Rubicon Trail Typical Existing Trail Photos 56

10.0 Formulating Trail BMP's 57

10.1 Source Control BMP's 57

10.1.1 Revegetation 57

10.1.2 Rock Fill 57

10.1.3 Rock Apron 58

10.1.4 Rock Slope Protection 58

10.1.5 Rock Inlet Protection 58

10.1.6 Rock Beast Wall 58

10.1.7 Rock Gabion 58

10.1.8 No Source Control 59

10.1.9 Source Control BMP Summary 59

10.2 Hydrologic Design BMP's 59

10.2.1 Rock Lined or Grass Lined Channels 59

10.2.2 Rock Ditch Crossings 60

10.2.3 Rock Check Crossings 60

10.2.4 Rock Ford Crossings 60

10.2.5 Pipes 61

10.2.6 No Hydrologic Design 61

10.2.7 Hydrologic Design BMP Summary 61

10.3 Treatment BMP's 61

10.3.1 Rock Energy Dissipator 63

10.3.2 Rock Outlet Protection 63

10.3.3 Source Infiltration 63

10.3.4 No Treatment 64

10.3.5 Treatment BMP Maintenance Considerations 64

10.3.6 Treatment BMP's Not Considered 64

10.3.7 Treatment BMP Summary 64

10.4 BMP Unit Cost for Meeting Goals 65

11.0 Evaluating BMP's 67

11.1 BMP Selection Methodologies 67

11.2 Trail Seasonal Closure BMP 68

11.3 BMP Summary 68

Figure 13 - Rubicon Trail (Phase 1) Typical Proposed BMP Trail Map 69

Figure 14 - Rubicon Trail (Phase 1) Typical Proposed BMP Trail Details 70

11.4 BMP Evaluation 71

11.4.1 BMP Sediment Reduction Analysis 71

11.4.2 Water Quality Analysis Validation 73

11.4.3 BMP Hydrologic Analysis 75

11.4.4 BMP Hydraulic Analysis 77

11.4.5 BMP Evaluation Categories 80

11.4.6 Reduction of Coarse Sediment 80

11.4.7 Reduction in Runoff Volume 80



| | |
|---|----|
| 11.4.8 Reduction in Peak Flow..... | 80 |
| 11.4.9 Design Effort (DE) | 80 |
| 11.4.10 Constructability (C) | 80 |
| 11.4.11 Maintainability Effort (ME) | 80 |
| 11.4.12 Operations and Maintenance Costs (Costs)..... | 81 |
| 11.4.13 Design Life (DL)..... | 82 |
| 11.4.14 Disturbance (D) | 82 |
| 11.4.15 Aesthetics (A) | 82 |
| 11.4.16 Fundability (F)..... | 82 |
| 11.5 BMP Evaluation Summary..... | 82 |
| Figure 15 - Rubicon Trail (Phase 1) Proposed BMP Trail Conditions | 84 |
| 12.0 Maintenance | 85 |
| 13.0 Monitoring..... | 86 |
| 13.1 Monitoring Plan..... | 86 |
| Figure 16 - Typical BMP Photo Documentation | 87 |
| 14.0 Education..... | 88 |
| 15.0 Enforcement | 89 |
| 16.0 Implementation | 90 |
| 16.1 Schedule..... | 90 |
| 16.2 Budget | 90 |
| 17.0 References | 91 |

List of Tables

| | |
|--|----|
| Table 1. Plan Goals | 14 |
| Table 2. Typical Trail Slopes..... | 16 |
| Table 3. Soil Characteristics..... | 22 |
| Table 4. General Plan Elements..... | 23 |
| Table 5. Private Parcels..... | 25 |
| Table 6. Drainage Basins..... | 27 |
| Table 7. Sub-Watersheds..... | 31 |
| Table 8. Mean Annual Precipitation Values..... | 34 |
| Table 9A. HEC-HMS (Unit Hydrograph) Results 25 year, 1 Hour Event Wentworth Springs Watershed..... | 41 |
| Table 9B. HEC-HMS (Unit Hydrograph) Results 25 year, 1 Hour Event Ellis Creek Watershed..... | 42 |
| Table 9C. HEC-HMS (Unit Hydrograph) Results 25 year, 1 Hour Event Loon Lake Watershed..... | 43 |
| Table 9D. HEC-HMS (Unit Hydrograph) Results 25 year, 1 Hour Event Existing Trail Estimate..... | 44 |
| Table 10A. HEC-HMS (Unit Hydrograph) Results 10 year, 6 Hour Event Wentworth Springs Watershed..... | 44 |
| Table 10B. HEC-HMS (Unit Hydrograph) Results 10 year, 6 Hour Event Ellis Creek Watershed..... | 45 |
| Table 10C. HEC-HMS (Unit Hydrograph) Results 10 year, 6 Hour Event Loon Lake Watershed..... | 46 |
| Table 10D. HEC-HMS (Unit Hydrograph) Results 10 year, 6 Hour Event Existing Trail Estimate..... | 46 |
| Table 11. HEC-HMS (Unit Hydrograph)/USGS Regression Equation Results 100 Year, 24 Hour Event..... | 47 |
| Table 12. RUSLE Load Calculations Summary (Phase 1)..... | 52 |
| Table 13. Rubicon Trail (Phase 1) Existing Trail Conditions Summary..... | 53 |



| | | |
|-----------|---|----|
| Table 14. | Source Control BMP Options..... | 59 |
| Table 15. | Hydrologic Design BMP Options..... | 61 |
| Table 16. | BMP Treatment Options..... | 65 |
| Table 17. | BMP Unit Costs..... | 66 |
| Table 18 | RUSLE Post BMP and Existing Conditions Trail Summary | 73 |
| Table 19 | Treatment BMP Design Volume, 25 year-1 hour Event (Trail Only) | 76 |
| Table 20 | Treatment BMP Design Volume, 25 year-1hour Event (Total WS) | 77 |
| Table 21 | Hydrologic Design BMP Peak Flow Summary – 10 year, 6-hour Event (RLC) | 78 |
| Table 22. | Hydrologic Design BMP Peak Flow Summary – 10 year, 6-hour Event (RDX) | 79 |
| Table 23. | BMP Operations and Maintenance Cost Summary..... | 81 |
| Table 24. | BMP Evaluation Summary | 83 |
| Table 25. | Proposed Trail Conditions Summary..... | 83 |
| Table 26. | Monitoring Data Collection Table..... | 86 |
| Table 27. | Plan Schedule..... | 90 |
| Table 28. | Plan Implementation Budget..... | 90 |

Appendices

- Appendix A. CGS Report Summary
- Appendix B. Problem Area Photographs
- Appendix C. Existing Conditions Hydrology
- Appendix D. Existing Trail Conditions Maps
- Appendix E. Existing Trail Conditions Sediment Calculations
- Appendix F. Proposed Hydraulic Calculations
- Appendix G. Proposed Trail Conditions Maps
- Appendix H. Proposed Trail Sediment Reduction Calculations
- Appendix I. BMP Details/Toolbox
 - RCD Toolbox Reference Sections
 - Details
 - Post BMP Photo Documentation – LL Section
- Appendix J. Reduced Set Saturated Soil Water Quality Protection Plan



List of Acronyms and Abbreviations

| Acronym/Abbreviation | Definition |
|----------------------|--|
| ASTM | American Standard Testing Method |
| BMP | Best Management Practices |
| BOS | County of El Dorado Board of Supervisors |
| CAO | Clean-Up and Abatement Order |
| CGS | California Geological Survey |
| County | El Dorado County |
| CTC | California Tahoe Conservancy |
| DOT | El Dorado County Department of Transportation |
| Drainage Manual | El Dorado County Drainage Manual |
| ENF | Eldorado National Forest |
| FORT | Friends Of The Rubicon Trail |
| GLC | Grass Lined Channels |
| HPGN | High Precision Geodetic Network |
| OHV | Off Highway Vehicles |
| Plan | Saturated Soils Water Quality Protection Plan - SSWQPP |
| QP | Snow Melt |
| RED | Rock Energy Dissipator |
| Report | Technical Report |
| RLC | Rock Lined Channels |
| ROM | Rough Order of Magnitude |
| ROW | Right of Way |
| RSP | Rock Slope Protection |
| RUSLE | Revised Universal Soil Loss Equation |
| SM | Silting sand |
| SMUD | Sacramento Municipal Utility District |
| Trail | Rubicon Trail |
| TRPA | Tahoe Regional Planning Agency |
| TSS | Total Suspended Solids |
| USACOE | United States Army Corp of Engineers |
| USFS | United States Forest Service |
| USGS | United States Geographic Survey |



1.0 Executive Summary

1. Introduction

This Saturated Soils Water Quality Protection Plan (Plan) has been developed by the El Dorado County, Department of Transportation (DOT) pursuant to Item 2 within the Clean-Up and Abatement Order (CAO) No. R5-2009-0030 issued to El Dorado County and the United States Department of Agriculture, Forest Service, Eldorado National Forest (ENF) on April 30, 2009. This Technical Report (Report) provides the technical information and civil engineering analysis, which supports the design of the proposed BMP's within the Plan.

2. Saturated Soil Water Quality Protection Plan (SSWQPP) Goal

The main goal of the SSWQPP is to comply with the CAO requirements under Item 2 as it relates to controlling existing erosion on the Trail and reducing sediment loss rates from the existing Trail to Type 1 and 2 streams.

3. Plan Development Methodologies

The DOT utilized the "Trail Condition Assessment, Phase 1, Rubicon Trail – East of Wentworth Springs Campground, El Dorado County, California, June 2009" as prepared by the California Geological Survey (CGS), the 2008 State Off-Highway Vehicle (OHV) Grant Soil Conservation Guidelines, the 2010 DOT Site Assessment, the 2010 Rubicon Trail Toolbox as developed by the Georgetown Divide Resource Conservation District, the DOT Standard Details for Erosion Control, and the United States Department of Agriculture Handbook for Forest and Ranch Roads as the main reference material to develop the proposed Best Management Practices (BMP's) within the Plan.

A. Erosion and Sediment Problems

In order to identify the solutions to the erosion and sedimentation problems along the trail the DOT used the 2008 Soil Conservation Guidelines, which provides a prioritization mythology by rating the Rubicon Trail (Trail) problems as high, medium, or low. Also, the DOT used a similar approach which is used in Lake Tahoe as part of the Erosion Control Program pursuant to the California Tahoe Conservancy (CTC) Guidelines, which uses a prioritization based on the hierarchy of controlling sediment and erosion from a watershed perspective.

The State Parks OHV Division developed a Trail Conditions Evaluation system which utilizes various trail condition codes, trail geometric input parameters, and topographic feature input parameters to rate the Trail under a Red, Yellow, and Green coding system. A trail rating of Red indicates the segment of the trail with the highest potential for soil loss, Yellow indicates medium potential for soil loss, and Green represents a trail segment that is stable for the intended OHV use.



Within the Phase 1 portion of the Plan the 2009 CGS Assessment identified 6,123 feet of trail segment rated as Red, 7,877 feet of trail rated as Yellow, and 10,395 feet of trail rated as Green.

As part of the 2010 DOT Field Assessment, the DOT completed an erosion problem category along the Phase 1 portion of the Trail segment in accordance with the CTC Erosion Control Guidelines. The CTC Guidelines present three (3) main categories as follows:

(1) Source Control – Areas that exhibit uncontrolled erosion (i.e. eroding banks, shoulders, etc.). Source controls are measures that prevent erosion from the source.

(2) Hydrologic Design – Areas that have concentrated flows from the upper watershed or from the Trail as sheet flow that are captured within trail area. Hydrologic Design BMP's maintain or create distributed flow patterns (e.g., flows which discharge from the Trail frequently, or from shoulders by un-concentrated "sheet flow") and avoid concentration or increases of flows where feasible.

(3) Treatment – Areas that don't capture the sediment prior to reaching a Type 1 or 2 watercourse. Treatment BMP's emphasizing removal of sediments prior to reaching the Type 1 and 2 watercourses.

The main focus of this evaluation system is based on a basic principal of natural sediment transport processes. First control the erosion and sediment from the source, second provide for distributed flow paths to reduce natural erosive forces along the Trail, and third capture/infiltrate/treat the sediment at key natural outfall areas.

In many cases, along the Trail the erosion problems exhibited several characteristics within each of the CTC erosion problem categories. Therefore, the BMP solutions at these specific locations were designed to mitigate several categorical erosion problems (i.e. Source Control BMP with a Hydrologic Design, BMP or a Hydrologic Design BMP outfall to a Treatment BMP, etc.).

Within the Phase 1 portion of the Plan, the DOT identified the following number of erosion problems in accordance with the CTC erosion problem categories:

Source Control – 133 sites

Hydrologic Design – 68 sites

Treatment – 63 sites

The number of site locations exhibiting the three (3) erosion problem categories compared well with the 2009 CGS Assessment.

B. Soil Characteristics

As part of the 2009 CGS assessment and 2010 DOT Site Assessment, various sections of the Trail were evaluated based on soil conditions during saturation. The majority of the soil types within the Phase 1 area have been classified under the American Standard Testing Method (ASTM) Classification system as silty sand (SM), which in essence is



decomposed granite. There are sections of the Trail around the Wentworth Springs Campground and near perennial streams and floodplains that have a soil classification of poorly graded sand with silt. Each Trail area exhibits different characteristics when the soil is considered saturated. For instance, within the majority of the Trail segments, the silty sand material functions fairly well under saturated conditions and has an ability to resemble a standard gravel road for structural compaction during OHV use. However, in the areas that have poorly graded sand with silt and some organics the Trail section shows signs of mechanical erosion from the OHV use (i.e. heavy rutting). There is large portion of the Trail segment that travels over solid granite slab formations. In these areas there is no evident mechanical erosion problem, hence, no BMP's have been proposed within these areas.

C. Hydrology

Within the Phase 1 portion of the Plan the DOT has identified the following sub-watersheds within each Drainage Basin that the Trail section passes through:

Gerle Creek Basin – Does not include Loon Lake

26 Sub-watersheds (1 acre to 60 acres)

Ellis Creek Basin

17 Sub-watersheds (4 acres to 850 acres)

The majority of the Rubicon Basin is within the Phase 2 portion Plan area which has the following sub-watersheds:

22 sub-watersheds (4 acres to 3,800 acres)

The majority of the watersheds drain directly into the Trail section, which either captures the off-site run off during storm and snow melt events or pass through the Trail sections at key sag points towards major ravine and/or creeks/streams.

The DOT has developed an extensive hydrologic analysis of these sub-watersheds to determine peak flows and volumes for the 2 year, 10 year, 25 year, average annual snow melt run-off, and 100 year (sub-watershed areas greater than 100 acres) pursuant to the County of El Dorado approved Drainage Manual. The peak flows and volumes from the 25 year -1 hour event were used to size the particular BMP's along the Trail at key drainage outfall points related to the sections of the Trail that are directly connected and in-directly connected to various Type 1 and 2 watercourses. Most of the BMP's that convey the Trail run-off were designed to convey the 25 year, 1 hour event as well as the 10 year, 6 hour event. The key element within the analysis was to determine the existing conditions and post-BMP conditions using the same frequency storm in order to provide a quantitative differential for peak and volume mitigation which satisfies the CAO requirements. The 25 year, 1 hour event was selected as the sediment transport storm which is the typical summer convective storm. This storm type happens on an annual basis, so the 25 year interval is somewhat misleading. The storm pattern



exhibits a large cell burst over a small area with a very high rainfall intensity which typically produces the largest sediment concentration during the dry summer months. The typical range of peak flows from the Sub-Watersheds up stream of the Trail using the 25 year, 1 hour event was 0.18 cubic feet per second (cfs) in the Gerle Creek sub-Watershed area to as high as 121.58 cfs in the Ellis Creek Sub-Watershed area. The peak flows from the Trail only were of magnitudes less based on the Trail Sub-Watershed area being much smaller. For simplicity, the DOT used a re-occurring ratio within each Sub-Watershed of approximately 0.23 cfs/acre for the Trail peak flow calculations related to the 25 year, 1 hour event. An additional ratio related to the 10 year, 6 hour was also used for a Trail volume analysis with a typical ratio range of 0.44 to 0.62 cfs/acre.

Even though the BMP's have been designed using this type of storm event for capturing run-off volumes, they will most likely continue to function through-out the water year (October to October) during various types of storms and during the spring snow melt season.

D. Erosion Potential Method – Soil Erosion Rates

In order to provide a qualitative/quantitative means to address the sediment differential from the existing Trail conditions to the post-BMP Trail conditions the DOT utilized an analytical model, which is based on a mathematical expression to predict erosion rates and is included within the State OHV 2008 Soil Conservation Guidelines. This analytical model is the Revised Universal Soil Loss Equation:

$$A = R * K * L * S * C * P$$

Where:

- A = annual soil loss in tons per acre per year
- R = rainfall erosivity factor
- K = soil erodibility factor
- L = slope length factor
- S = slope gradient factor
- C = cover management factor
- P = erosion control practice factor

This method has been used on many forest and OHV roads throughout the Country and is one of the most widely recognized methods to predict soil loss.

The key understanding in using this method to determine existing soil loss versus post-BMP soil loss is that, it is purely a comparison analysis to identify where the highest soil loss rates exist on the Trail and what types of BMP's will be able to reduce the rate to amenable levels to comply with the CAO requirements. From the existing Trail conditions map and existing data the soil loss rate within the Phase 1 portion of the Plan area was estimated at **68.31 Tns/Year**. This quantity represents the existing sediment loss from the Trail prism only which has an average width of 14 feet. There is a considerable amount of off-site or upper watershed sediment of magnitudes



greater than the Trail sediment loss that comes into the Trail; however, for this analysis the DOT calculated only the Trail portion.

4. Plan Overview

A. Typical Trail Maintenance BMP's

The DOT has developed the proposed BMP's within the Plan in accordance with the 2009 CGS Assessment, the 2010 DOT Site Assessment, the 2010 Rubicon Trail Toolbox as developed by the Georgetown Divide Resource Conservation District, the DOT Standard Details for Erosion Control, and the United States Department of Agriculture Handbook for Forest and Ranch Roads coupled with the hydrologic and sediment loss analysis. Each of the typical BMP's were categories in accordance with the CTC Erosion Control Guidelines (Source Control, Hydrologic Design, and Treatment) and were designed using specific topographic information on the Trail and civil engineering judgment.

Typical BMPs such as Rock Fill, Rock Slope Protection, and Rock Breast Walls are considered source control types of BMP's, where Rock Ditch and Check Xing's are considered hydrologic design types of BMP's, and Rock Outfall Protection and Rock Energy Dissipators are considered treatment types of BMPs.

In sum total the Plan depicts up to 300 proposed BMP's within the Phase 1 portion of the Trail. An additional 300+ BMP's are proposed within the Phase 2 portion of the Trail, however, this section of the Trail warrants an additional DOT site assessment, which will be completed in late spring early summer. Within the Phase 1 portion of the Plan the DOT proposes to place 88 linear feet (lf) of Log Barriers, 614 lf of Rock Barriers, 42,000 square feet (sf) of Rock Fill, 443 lf of Rock Check Crossings, 761 lf of Rock Ditch Crossings, 338 sf of Rock Aprons, 1,574 sf of Rock Inlet Protection, 673 lf of Rock Outlet Protection, 1,972 cubic feet (cf) of storm water storage in 31 Rock Energy Dissipators, 1,719 lf of Rock Slope Protection, 469 lf of Rock Lined Channels, 198 lf of Rock Berms, and 380 lf of Rock Breast Walls. Also, as part of the Plan to reduce sediment from the Trail, the DOT proposes to rehabilitate approximately 18,000 sf of non-approved variants along the Trail.

B. Season Closure

As part of this analysis, the DOT considered an additional type of BMP for controlling sedimentation on the Trail in the form of a seasonal closure. Based on the minimal Trail use during saturated soil conditions, the proactive maintenance strategies being programmed within the DOT Maintenance Division for Trail maintenance, and the installation of the BMP's for minimizing sediment from the Trail, the Trail will be able to be used year round and still meet the goals of the Plan.

C. Post BMP Soil Loss

Using the same soil loss methodologies for the existing Trail conditions, the DOT calculated the proposed soil loss rates from the Trail after the installation of the BMP's. The post-BMP soil loss rate within the Phase 1



portion of the Plan was estimated at **51.19 Tns/Year** which is a 25% decrease in the annual soil loss rate from the Trail. Furthermore, the DOT calculated the treatment capturing capacity of several BMP's (i.e. Rock Energy Dissipators and Rock Outfall Protection BMP's) with an estimated soil capturing capacity of **152.62 Tns/Year**. Therefore, based on the soil loss reduction from Trail BMP's and the additional sediment capturing capacity of the various BMP's, the proposed plan will reduce the sediment from the Trail by **169.74 Tns/Year** or greater than 4 times the existing Trail soil loss rate of 68.31 Tns/Year. This essential means that the proposed BMP's will be capturing a portion of the off-site sediment as well as the on-site sediment from the Trail prior to discharging into Type 1, 2, or 3 streams.

5. Plan Education

The DOT has embarked on an extensive Trail educational campaign that includes, but is not limited to, an educational video, a bandana campaign, trail signage, various trail committee meetings, and a County website.

6. Plan Enforcement

In order to comply with the CAO of "an enforcement component" as part of the Plan, the DOT has been actively engaged with the following Law Enforcement Agencies:

El Dorado County Sheriff's Department

State Parks OHV Rangers

United States Forest Service Law Enforcement Division

During the 2010 season, the law enforcement efforts were increased substantially from previous years. State Parks OHV division launched a pilot program with Rangers camped at Spider Lake every weekend July 1st through the Labor Day Weekend. This put officers on the Trail during the overnight hours every weekend. El Dorado County Sheriff's Department had officers on the Trail every weekend and several overnights. The Forest Service had two Forest Patrol Officers on the Trail every weekend.

This increased law enforcement was well received by the users and provided a good measure of the type of enforcement needed. El Dorado County is in discussions with State Parks regarding their continued presence on the Trail. El Dorado County Sheriff's Department will be on the Trail every weekend during the 2011 season. All rules of the road apply to this Trail and violators will be cited. Officers will cite for resource damage and keep Trail users on the Trail and prevent them from creating new variant routes.

El Dorado County will hold two Law Enforcement Summit meetings a year, one at the end of the season to debrief and one in February to coordinate efforts in the upcoming season. The coordinated effort works for all agencies and ensures that enforcement needs are met on the Rubicon Trail.



7. Plan Annual Maintenance

As part of the annual BMP monitoring efforts, the DOT will evaluate the installed BMP's along the Trail in the spring and fall. A BMP maintenance log will be created which will specify the location and maintenance needs at each of the BMP sites, which will be included within a Rubicon Trail maintenance work order. Most of the maintenance activities will be coordinated with ENF, private land owners, and user groups prior to initiating the work. It is anticipated that the routine maintenance work will cost approximately 50,000/year which will be funded through OHV grants, In-Lieu funds, and the SMUD funds, with volunteer user groups assisting where appropriate.

8. Plan Implementation

A. Budget

The costs associated with the Plan and implementation thereof is estimated to cost approximately \$1.9 million, which will be funded by OHV Grants, In-Lieu funds, and SMUD funds coupled with assistance from the various volunteer user groups.

B. Schedule

The DOT anticipates completing all the proposed BMP's within the Plan by the summer of 2012.

9. Monitoring

The DOT will provide an annual Monitoring Report as part of the BMP evaluation efforts using photographic documentation and some field measurements of sediment captured within the treatment BMP's.



13.0 Monitoring

In order to properly assess the installed BMP's within the Plan area the DOT will be completing field assessments on an annual basis which will be coordinated with the annual maintenance efforts. The protocols for the field assessments will be included within a Monitoring Plan.

13.1 Monitoring Plan

The DOT has developed a Monitoring Plan for the Phase 1 portion of the Plan area which includes visual and photographic documentation of BMP's before and after installation of the BMP's along the Trail (See Figure 16). In addition, the Monitoring Plan outlines methods which will be utilized to record the volume of sediment captured within each BMP. The pre-construction and post-construction results will be reported on an annual basis with technical memos summarizing the field observations.

The primary goal of the Monitoring Plan is to quantify the existing sediment load and determine the hydrologic reduction in runoff volumes to Type 1 and 2 Streams based on the sediment and volume load reduction benefits of the Plan. The monitoring results will also be used to calibrate and validate the BMP designs for reducing sediment from the existing Trail. The data collected as apart of the field assessments will be inputted into a GIS database system, which was originally developed by the CGS as part of the 2009 CGS Assessment. Field observations associated with the monitoring may include the following data fields as depicted within Table 26:

Table 26 – Monitoring Data Collection Table

| Field 1 | Field 2 | Field 3 | Field 4 | Field 5 | Field 6 | Field 7 | Field 8 | Field 9 |
|----------|----------|-----------------|-------------------------|----------------------|----------------------------------|----------------------|--------------------------------|----------|
| Point ID | Photo ID | GPS Coordinates | Description of Location | Purpose of the Photo | Date photo point was established | Date BMP's Installed | Number of Photo Points on Site | BMP Type |



Photo Point # EC-02 – Station 117+18.21

Rubicon Trail Route (1.0) Wentworth Springs looking East

Figure 16 - Typical BMP Photo Documentation



14.0 Education

The DOT has embarked on an extensive trail educational campaign that includes, but is not limited to, an educational video, a bandana campaign, trail signage, various trail committee meetings, and a County website. The following bandana campaign is ongoing and will be completed by the end of 2012:





15.0 Enforcement

In order to comply with the CAO of “an enforcement component” as part of the Plan, the DOT has been actively engaged with the following Law Enforcement Agencies:

El Dorado County Sheriff’s Department

State Parks OHV Rangers

United States Forest Service Law Enforcement Division

During the 2010 season, law enforcement efforts were increased substantially from previous years. State Parks OHV division launched a pilot program with Rangers camped at Spider Lake every weekend July 1st through Labor Day Weekend. This put officers on the Trail during the overnight hours every weekend. El Dorado County Sheriff’s Department had officers on the Trail every weekend and several overnights. The Forest Service had two Forest Patrol Officers on the Trail every weekend.

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El Dorado County will hold two Law Enforcement Summit meetings a year, one at the end of the season to debrief and one in February to coordinate efforts in the upcoming season. The coordinated effort works for all agencies and ensures that enforcement needs are met on the Rubicon Trail.



**COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION
INTEROFFICE MEMORANDUM**



Date: December 15, 2010

38

To: Board of Supervisors

LATE DISTRIBUTION

From: Steve Kooyman

Date 2:16 pm, Dec 16, 2010

Subject: Rubicon Trail Monitoring Plan

The County of El Dorado ("County"), Department of Transportation ("DOT") has completed the Monitoring Plan related to the DOT's Operations and Maintenance Plan for Phase I on the Rubicon Trail.

DOT's Ground Operations and Maintenance efforts have been divided into two sequential phases, and consequently the Monitoring Plan for the Rubicon Trail will have two phases. The Phase I Monitoring Plan, which was submitted to the California Regional Water Quality Control Board on September 30, 2010, is for the portion of the trail from Loon Lake and Wentworth Spring to Little Sluice. As noted in my presentation the small amount of usage that takes place during saturated soil conditions is on the portion of the trail covered by the Phase I monitoring plan. The Phase II Monitoring Plan will be completed as part of the Phase II Ground Operations and Maintenance Grant, in the 2011 season.

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EL DORADO COUNTY
2:15 pm, Dec 16, 2010

COUNTY OF EL DORADO

DEPARTMENT OF TRANSPORTATION



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September 30, 2010

Wendy Wyels
California Regional Water Quality Board
Central Valley Region
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95760

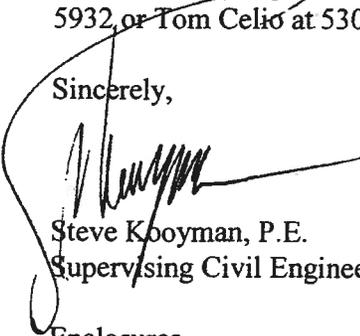
**RE: Cleanup and Abatement Order ("CAO") No. R5-2009-0030, Rubicon Trail 2010
Operations and Maintenance Plan – Monitoring Plan**

Dear Ms. Wyels:

The County of El Dorado ("County"), Department of Transportation ("DOT") has completed the Monitoring Plan related to the DOT's 2010 Operations and Maintenance Plan BMP activities for your review and comment pursuant to our meeting on September 9, 2010 between DOT/County staff and you and your staff.

The DOT appreciates the Water Board's time and effort on this item and looks forward to continuing our partnership as part of the CAO related work on the Rubicon Trail. Please contact me at 530-621-5932, or Tom Celio at 530-642-4905 if you have any questions.

Sincerely,



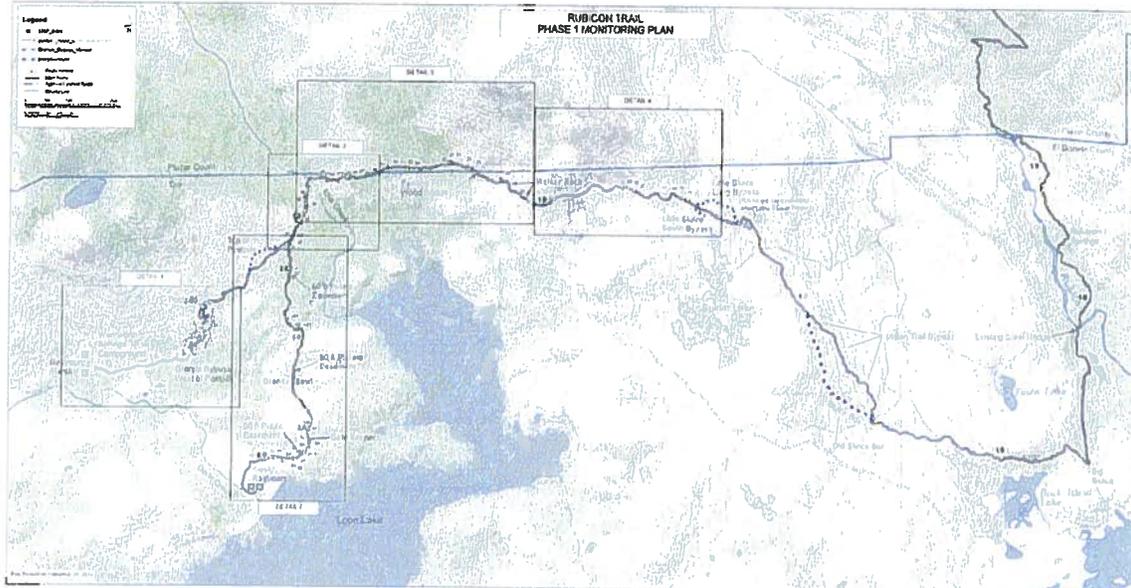
Steve Kooyman, P.E.
Supervising Civil Engineer

Enclosures

cc: Pamela Creedon, Central Valley Water Board
John Knight, Board of Supervisors, District I
Ray Nutting, Board of Supervisors, District II
Jack Sweeney, Board of Supervisors, District III
Ron Briggs, Board of Supervisors, District IV
Norma Santiago, Board of Supervisors, District V
Gayle Erbe-Hamlin, El Dorado County Chief Administrative Office
Ed Knapp, El Dorado County County Counsel
Jim Ware, El Dorado County Department of Transportation
Tom Celio, El Dorado County Department of Transportation
Diane Rubiaco, USDA ElDorado National Forest

10-1279.D.2

RUBICON TRAIL 2010 OPERATIONS AND MAINTENANCE PLAN PHASE 1 GROUND OPERATIONS



MONITORING PLAN

**THE COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION
2850 FAIRLANE COURT**

PLACERVILLE, CA 95667

OCTOBER 2010

TABLE OF CONTENTS

| | |
|---|----|
| 1.0 INTRODUCTION..... | 1 |
| 1.1 BACKGROUND..... | 1 |
| 1.2 PROJECT GOALS | 1 |
| 1.3 PROJECT OBJECTIVES..... | 1 |
| 1.4 PURPOSE OF MONITORING | 2 |
| 1.5 MONITORING PLAN..... | 2 |
| 1.6 SCOPE OF MONITORING PLAN..... | 3 |
| LOCATION MAP | 4 |
| 2.0 METHODOLOGY..... | 5 |
| 2.1 VARIABLE SELECTION..... | 5 |
| 2.2 STATISTICAL DESIGN | 6 |
| 2.3 DATA MANAGEMENT AND ACCEPTANCE CRITERIA | 6 |
| 2.4 PHOTO FREQUENCY AND DURATION..... | 6 |
| 2.5 EQUIPMENT AND METHODS..... | 6 |
| 2.6 REPORTING | 6 |
| 2.7 SCHEDULE / DELIVERABLES | 7 |
| DETAIL PHOTO MAPS | |
| DETAIL 1..... | 8 |
| DETAIL 2..... | 9 |
| DETAIL 3..... | 10 |
| DETAIL 4..... | 11 |
| DETAIL 5..... | 12 |
| APPENDIX A..... | 13 |

1.0 Introduction

1.1 BACKGROUND

The County of El Dorado, Department of Transportation ("DOT"), is currently implementing various Best Management Practices ("BMP's") along the section of the Rubicon Trail from Wentworth Springs Campground to Little Sluice (Main Trail Route 1.0) and from the Loon Lake Kiosk to the Intersection of Wentworth Springs Rd. (Intertie Route 2.0) (see Figure A). These two segments of the Rubicon Trail have been further defined with the 2010 DOT Operations and Maintenance Plan and within the 2010 California State Parks Off-Highway Motor Vehicle Recreation Division ("OHMV") Grant, with a Project designation as Phase 1 Ground Operations. The various sedimentation problems and proposed BMP treatments along these two trail segments have been identified within the California Geologic Survey ("CGS") 2009 Rubicon Trail Assessment Report with additional DOT 2010 field assessment baseline updates in accordance with the Clean-up and Abatement Order ("CAO"), R5-2009-0030 issued by the State water Quality Control Board Central Valley Region ("SWQCBCVR") and the Grant Guidelines as part of the DOT's 2009 and 2010 OHMV Grants.

1.2 PROJECT GOALS

The main goal of the 2010 Operations and Maintenance Plan for the Phase 1 Rubicon Trail Ground Operations is to mitigate the existing sedimentation issues identified within the CGS Report with supplemental information from the DOT 2010 field assessments. The scope of the Monitoring Plan will assist the DOT in achieving this goal by gathering pertinent existing conditions baseline information to use in the BMP design as well as evaluating the effectiveness of the installed BMP's. The sedimentation problems that will be addressed, using specific BMP's, were defined within the 2009 CGS Report with added DOT 2010 field assessments as part of the OHMV Soil Conservation Plan guidelines. Each BMP treatment type has been further classified within the DOT's BMP Toolbox under the headings of Source Control (SC), Hydrologic Design (HD), and Treatment (T). The Rubicon Trail BMP toolbox is currently being developed in coordination with the Resource Conservation District ("RCD").

1.3 PROJECT OBJECTIVES

The Project objectives represent physical conditions that can be measured to assess the success of the Project in achieving the Project goal. The 2010 Operations and Maintenance Plan ("Project") will conform to the OHMV Soil Conservation Plan guidelines as well as all pertinent USFS guidelines. The purpose of the Project to improve water quality by the following objectives:

1. Removing sediment discharge from the road before it reaches a Type 1 water course (T)
2. Stabilizing eroding cut slopes (SC)
3. Stabilizing roadside drainages (SC)
4. Stabilizing and armoring the road (SC)
5. Directing Off-site drainage across the road (disconnecting the off-site drainage from the road) (HD)

Each of these Objectives can be further delineated into the BMP Types (i.e., for the Objective 1, a BMP Type that will satisfy this Objective is Rock-Lined Energy Dissipator). The DOT will be using the CGS GIS/database with additional DOT field data to track all installed BMP's. Each BMP will be defined by Class, General Name, and Type (e.g. Source Control, Slope Stabilization, and Rock Slope Protection)

1.4 PURPOSE OF MONITORING

The pre-Project monitoring efforts will allow for the evaluation and documentation of existing problem areas with the results of the monitoring being used by the DOT to evaluate and select design solutions as appropriate to the proper BMP Type. The BMPs will be installed to mitigate the associated existing sediment loads from the Rubicon Trail for this particular Project area. The pre-Project Monitoring will also allow for calibration of the hydrologic analysis as well as estimation of the sediment load in the storm water runoff.

The post-Project monitoring efforts will provide the DOT the necessary information to evaluate and document each type of BMP to determine the effectiveness in meeting the specific goal and objectives of the Project. Typically the post-Project monitoring duration is two years which provides the minimum annual variances to complete a BMP assessment. Additional post-Project monitoring efforts are typically chosen to develop a trend analysis for long term planning and scientific research. This Monitoring Plan will utilize the two year BMP effectiveness type of frequencies in order to comply with the OHMV Grant Guidelines and CAO requirements.

Another positive result of post-Project Monitoring is that the data allows the DOT to better determine ongoing annual trail maintenance requirements for the Rubicon Trail and determine maintenance needs for future DOT projects. This type of monitoring is designed for spring and fall BMP inventory assessments which will be on-going throughout the life of the trail improvements. This type of data can be used to build trends with respect to maintenance frequencies, which in turn will assist the DOT with routine maintenance prioritization and potential cost saving measures.

1.5 MONITORING PLAN

The purpose of this Monitoring Plan is to discuss the scope, variables, and methodology to be implemented as part of the Rubicon Trail Phase 1 Operations and Maintenance Plan BMP implementation in accordance with the CAO and OHV Grant requirements. The monitoring effort should establish baseline conditions prior to BMP installation activities (complimenting the 2009 CGS Report), maintenance activities during BMP installation, and two years of BMP evaluation. Results of the monitoring efforts will be presented in the below reports as outlined in the Schedule and Deliverables sections of this plan.

The main objectives of the Plan are:

- Provide photographic documentation of the implemented BMP's as well as record existing and post-Project conditions with respect to proposed improvements
- Evaluate the different BMP Types to control erosion and sediment loss (source control, hydrologic design, treatment)
- Provide visual observations of the site conditions within the Project limits during runoff to assist in hydrologic model calibration (spring runoff)
- Recommend improvements to the BMP design features for use on similar future Projects and to update the BMP Toolbox

Annual Monitoring Report

The Annual Monitoring Report will provide the methods of BMP evaluation to meet the Project objectives, the collected data, photo documentation, and the BMP effectiveness analysis for the first water year after the installation of the BMP's.

Final Monitoring Report

The Final Monitoring Report will provide the second year of collected data and update the BMP effectiveness analysis with a final table which identifies each BMP Type and the effectiveness rating related to controlling erosion and sedimentation on the Phase 1 portion of the Rubicon Trail.

1.6 SCOPE OF MONITORING PLAN

As part of the Rubicon Trail CAO and OHMV Grant the County proposes to conduct visual monitoring of vegetation, surface waters, and BMP's within the Rubicon Trail road alignment to monitor operation and maintenance progress, appropriate implementation of Best Management Practices (BMPs), and to assess the BMP effectiveness with respect to the sedimentation issues on the trail. Field parameters observed will be documented by photographic monitoring using a digital camera and GPS photo tracking device. Data, photos, and their related parameters will be compiled into an Annual Monitoring Report with Final Monitoring Report after two years of monitoring. Photos and other recorded information will be collected before, during, and after BMP implementation. The monitoring will include four distinct seasons:

- Fall – Fall Frontal
- Winter - Rain on snow event (trail accessibly dependent)
- Spring – snowmelt runoff event
- Summer – thunderstorm

Information will be organized into an Annual Monitoring Report (first year of monitoring) and Final Monitoring Report (second year of monitoring) to be delivered to the Water Board and OHV at the completion of monitoring activities, typically at the end of each water year (October) with one to two months for compilation and data analysis.

2.0 Methodology

2.1 VARIABLE SELECTION

Field parameters considered for monitoring include photographic, sedimentation, precipitation and trail counts.

2.1.1 Photo Monitoring

The DOT will conduct visual monitoring of vegetation, Type I and II water courses, existing sedimentation issues within the trail limits to determine appropriate selection of BMPs, and to better quantify the effects that the BMP's had on environmental resources in the area. BMP and revegetation improvements will be documented by the photographic monitoring pre-Project and after the BMP's have been implemented. Data, photos, and their related parameters will be compiled into an Annual and Final Monitoring Report to track BMP effectiveness related to the Project goals and objectives. Photos and other recorded information will be collected before, during, and after BMP implementation pursuant to the OHMV Grant funding guidelines and availability of funds during the following seasons:

- Fall
- Winter
- Spring
- Summer

Field observations associated with the monitoring may include:

| Field 1 | Field 2 | Field 3 | Field 4 | Field 5 | Field 6 | Field 7 | Field 8 | Field 9 |
|----------|----------|-----------------|-------------------------|----------------------|----------------------------------|----------------------|--------------------------------|----------|
| Point ID | Photo ID | GPS Coordinates | Description of Location | Purpose of the Photo | Date photo point was established | Date BMP's Installed | Number of Photo Points on Site | BMP Type |

See APPENDIX A for examples of a Field Observation Form, database template to be used in the field for purposes of data entry and an example of the Photo Output that will be produced.

2.1.2 Sedimentation Monitoring

As part of this effort, the DOT proposes to include sedimentation capture quantification at the key BMP treatment types for sediment. This will be accomplished through field measurements during the spring/summer BMP assessments and the measurements placed within a database. With this hydrologic/sediment monitoring effort, the DOT intends to extrapolate information from the Phase 1 Operations and Maintenance Plan and apply it to the Phase 2 Operations and Maintenance plan development to assist in the overall BMP design efforts.

2.1.3 Precipitation Monitoring

The DOT will continue to collect data from surrounding available precipitation sites to calibrate the current Rubicon hydrologic model.

2.1.4 Trail Count monitoring

The DOT will be coordinating with the Rubicon Trail Foundation ("FTR") and Friends Of The Rubicon ("FOTR") for the next two years with respect to obtaining seasonal trail counts (i.e.

peak summer season) using trail surveys at main locations (Loon Lake Kiosk and Ellis Creek). The data will be compiled and be incorporated into the Annual and Final Monitoring Reports.

2.2 STATISTICAL DESIGN

Pre-Project photos will be compared to conditions during the 2010 O&M Plan Implementation and post-Project photos to document the pre-existing conditions and allow for a visual comparison of the Project mitigation measures at each monitoring site. Further analysis and query of the parameters may allow recommendations for improvements to the design of BMP's for maintenance upgrades and for future proposed BMP's within the Phase 2 Project area.

2.3 DATA MANAGEMENT AND ACCEPTANCE CRITERIA

During the first season of pre-Project data collection (spring 2010 to fall 2010), the DOT will evaluate photos and data at the identified monitoring locations. From this, a decision will then be made as to whether the sites selected for photo monitoring and data collection provide the appropriate level of detail for monitoring in the subsequent seasons. Depending on the results of this analysis, the availability of funding and necessity, the DOT may either increase or decrease the number of monitoring sites.

2.4 PHOTO FREQUENCY AND DURATION

Photo monitoring of the BMP treatments within the Rubicon Trail Phase 1 O&M area will be collected during the pre-Project effort to better determine existing conditions and help with BMP selection.

The County proposes to monitor during the following seasons:

- Fall – Rain
- Winter – rain on snow event
- Spring – snowmelt runoff event
- Summer – thunderstorm

Photo monitoring of the installed BMP's will continue for two years following the completion of the Phase 1 O&M work to assess the effectiveness of the BMP's in achieving the Project goal and objectives. However, the second year of the monitoring effort scope might be altered based on funding availability and the amount of supporting information gathered from the first year to determine the effectiveness.

2.5 EQUIPMENT AND METHODS

Monitoring sites will be based on areas that receive BMP's, areas of high sediment accumulation, and areas where revegetation/trail rehabilitation may occur. The Pre and Post-Project monitoring will be performed with a digital camera and these photos will be included in the Annual and Final Monitoring Reports. The DOT will also provide a sediment capture estimation at key BMP treatment locations (i.e. directly connected to a Type I water course) based on the annual spring BMP assessment.

2.6 REPORTING

The objective, methods and results of the Rubicon Trail Monitoring Plan will be compiled into an Annual Monitoring Report at the completion of the first year investigation. The post-Project monitoring program will continue throughout the implementation of the 2010 O&M Plan and based on the results of the first year monitoring effort, methods and techniques may be adjusted

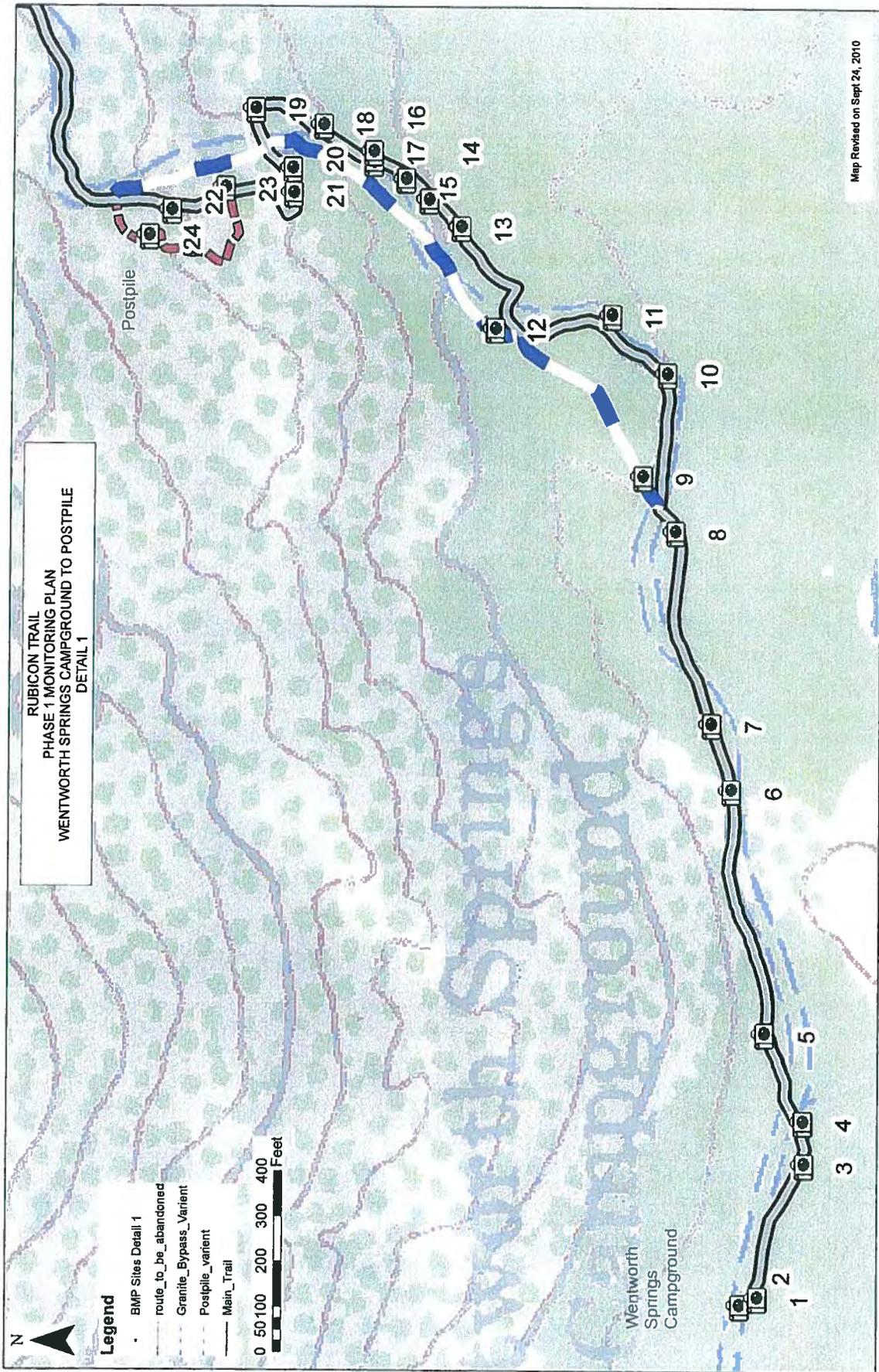
to assure that the findings of the monitoring efforts satisfy the goal and objectives of the Project and ultimately the sedimentation goal within the CAO.

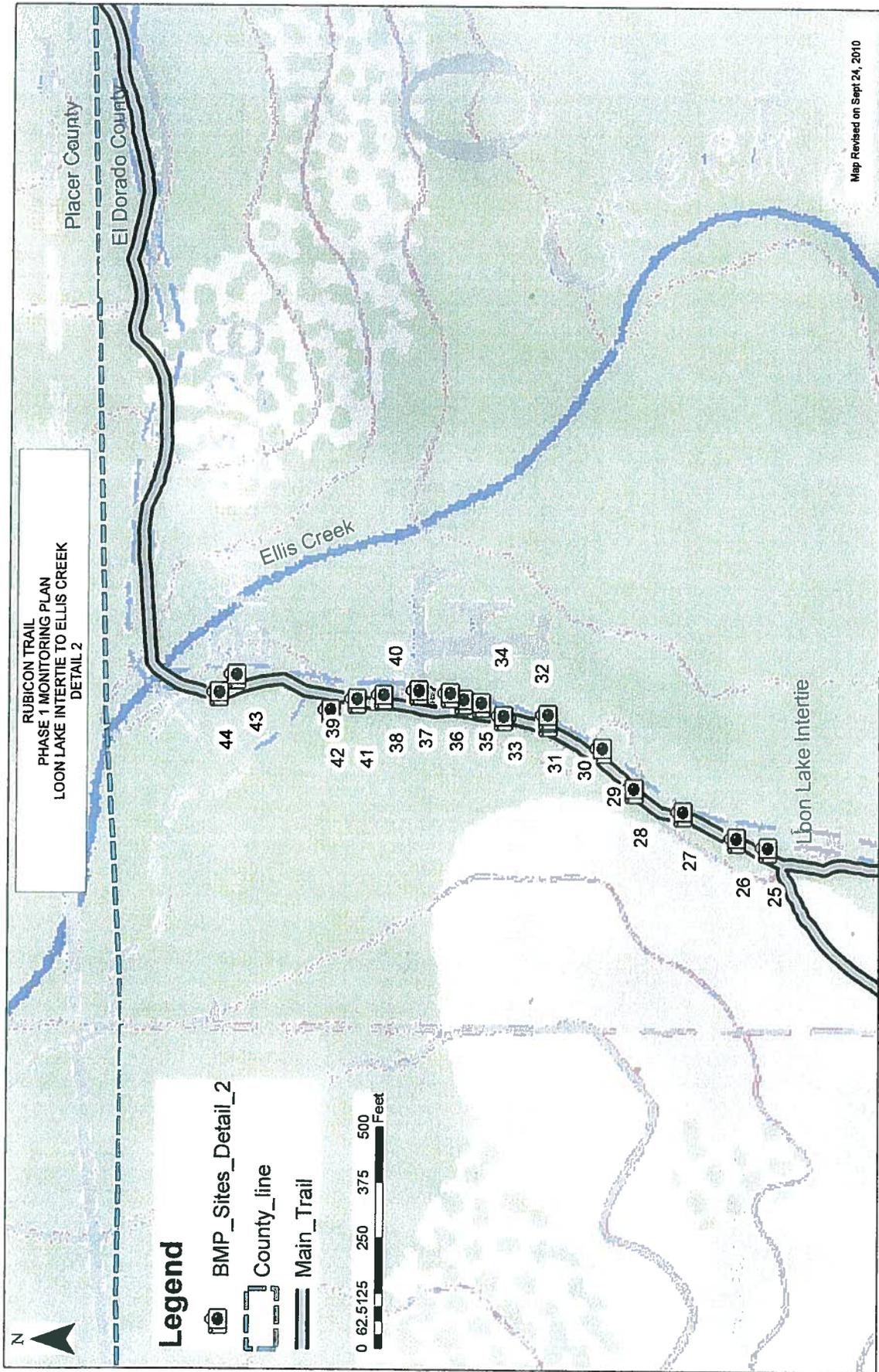
2.7 SCHEDULE / DELIVERABLES

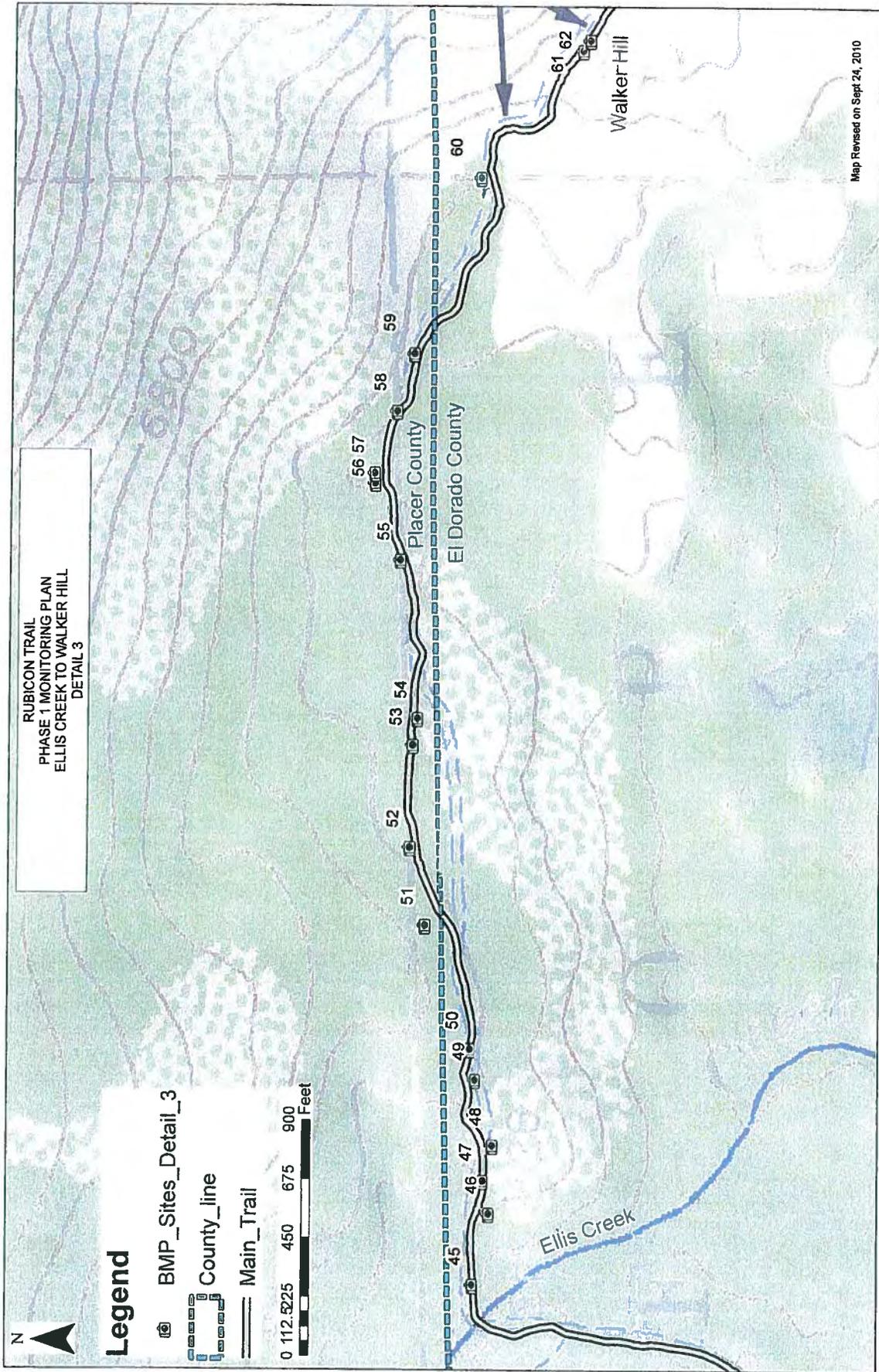
See Table 2 below for the Project monitoring schedule, which assumes the time frame for maintenance activities includes summer 2010. Monitoring will continue over the course of the 2010 Operations and Maintenance Plan implementation for the Phase 1 Rubicon Trail Ground Operations, post-Project monitoring will begin in the winter 2010 and continue through summer/fall 2011. The second year, if required, will begin in the fall of 2011 through the summer/fall of 2012.

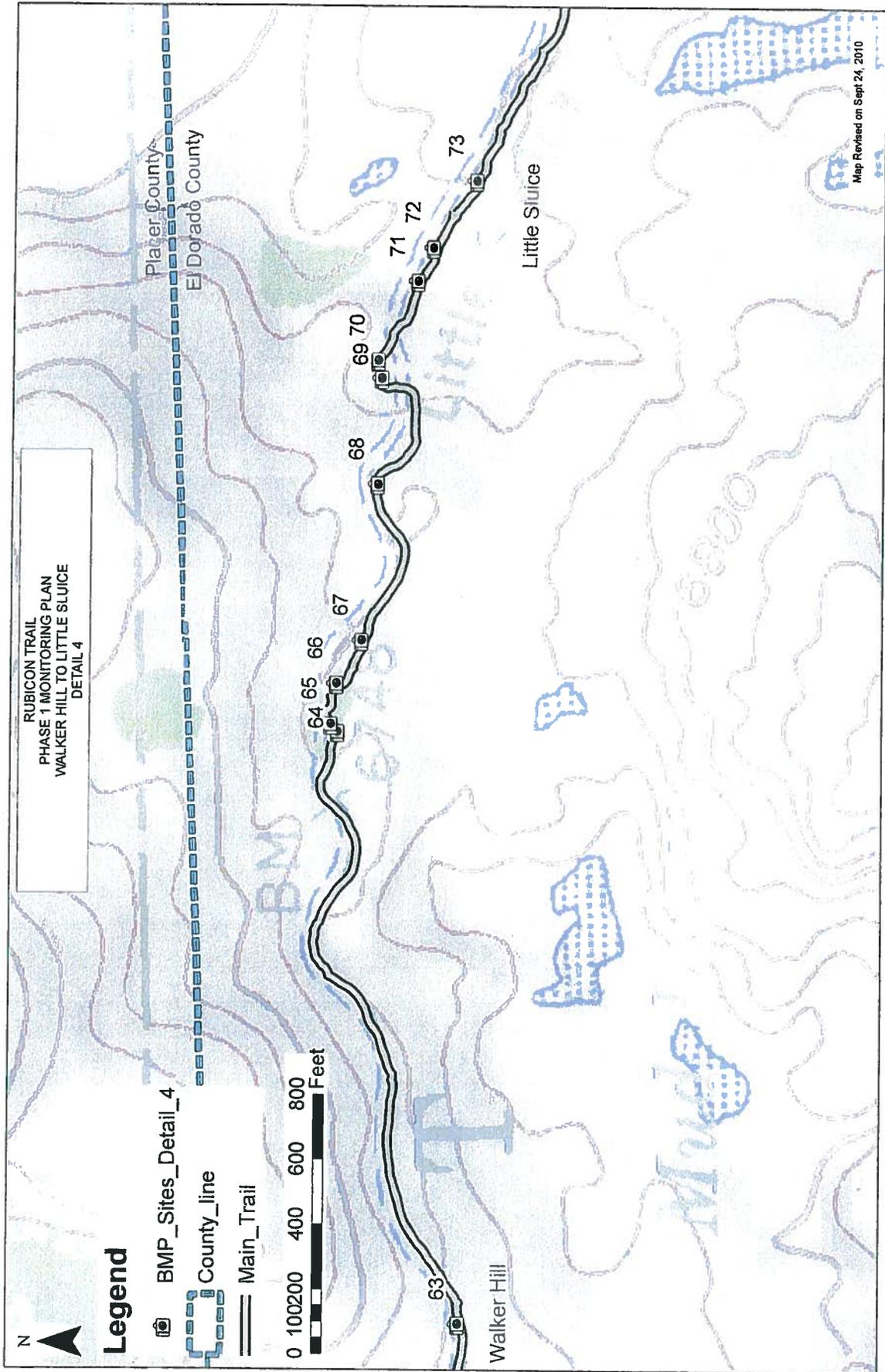
TABLE 2 – SCHEDULE

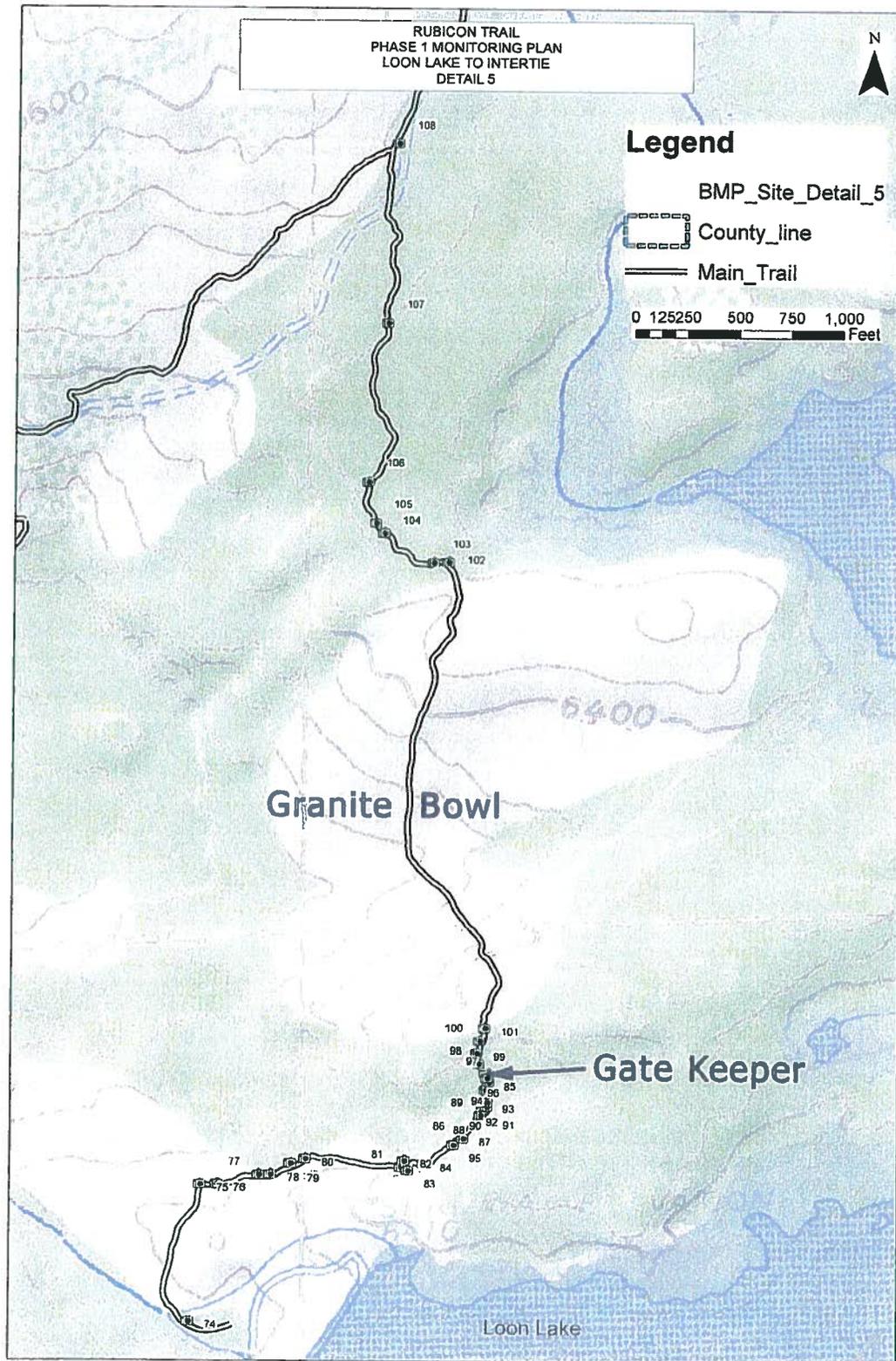
| PHASE/TASK | ESTIMATED COMPLETION DATE |
|-----------------------------|---------------------------|
| Scoping | |
| Conceptual Development | October 2010 |
| Planning | |
| Preliminary Monitoring Plan | October 2010 |
| Agency Review | November 2010 |
| Final Monitoring Plan | November 2010 |
| Annual Monitoring Report | November 2011 |
| Final Monitoring Report | December 2012 |











APPENDIX A
FIELD OBSERVATION FORM EXAMPLE

Project Name: Rubicon Trail 2010 Ground Operations Phase 1

Photo Point #: --

BMP Type: --

BMP Installation Date: --

GPS Coordinates: --

Date Photo Points were Established: --

Number of Photo Points on Site: --

Location Description: --

Purpose of Photo: BMP effectiveness

Additional Comments:

| | |
|--|--|
| Detailed/Close-up Map Showing Photo Point Location | Larger Scale/Broad-view Map Showing Photo Point Location |
|--|--|

PHOTO OUTPUT FORM
PHOTO POINT #

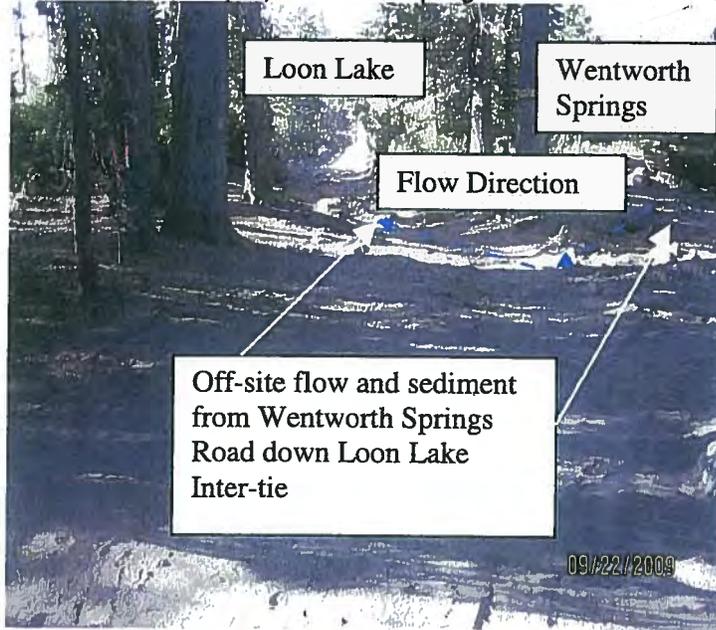
| | | | |
|-----------------------|------|---------------------------|------|
| Pre-Project Photo | | During Construction Photo | |
| Pre-Construction | Date | During Construction | Date |
| Site description etc. | | Site Description etc. | |

| | | | |
|--------------------------------------|------|--|------|
| Post-Construction Photo Fall 2006 | | Post-Construction Photo Spring 2007 | |
| Post-Construction | Date | Post-Construction | Date |
| Site description etc. | | Site Description etc. | |

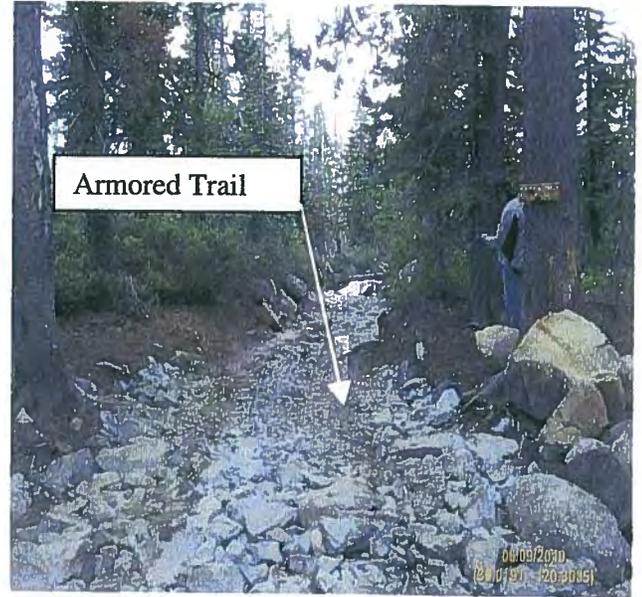
PHOTO OUTPUT EXAMPLE

Photo Point # 25/108 – Station 71+94

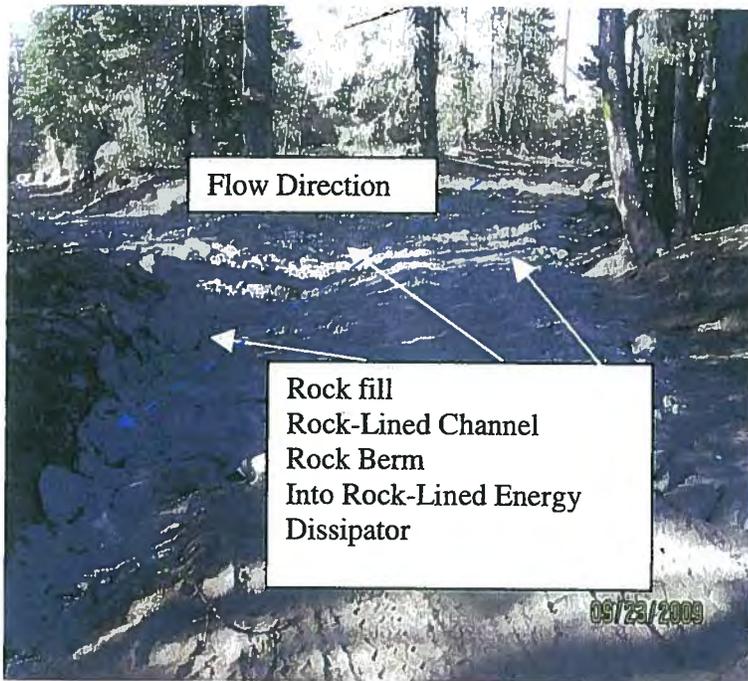
Rubicon Trail Route (1.0) Wentworth Springs Road and Loon Lake Inter-Tie Intersection looking southeast.



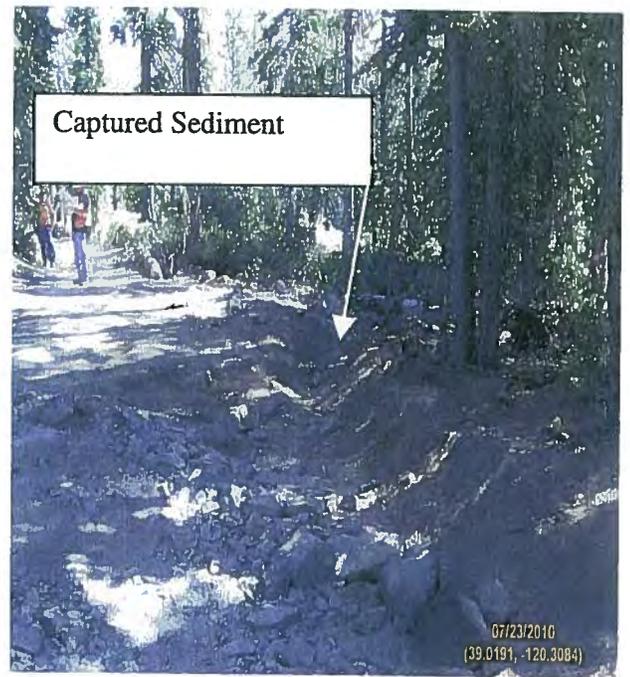
Pre-BMP Implementation
September 2009



Post-BMP Implementation
Spring 2010



Post-BMP Implementation
September 2009



Post-BMP Implementation
Summer 2010

Appendix B: Hydrology

HYDROLOGY - APPENDIX A. WATER QUALITY OBJECTIVES FOR INLAND SURFACE WATERS

| Category | Standard |
|------------------------|---|
| Bacteria | In waters designated for contact recreation, the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400/100 ml. |
| Chemical Constituents | Waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. |
| Color | Water shall be free of discoloration that causes nuisance or adversely affects beneficial uses. |
| Dissolved Oxygen | Dissolved oxygen concentrations shall not be reduced below the following minimum levels at any time: <ul style="list-style-type: none"> • Waters designated WARM 5.0 mg/l • Waters designated COLD 7.0 mg/l • Waters designated SPWN 7.0 mg/l. |
| Floating Material | Water shall not contain floating material in amounts that cause nuisance or adversely affect beneficial uses. |
| Oil and Grease | Waters shall not contain oils, greases, waxes, or other material in concentrations that cause nuisance, result in visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses. |
| pH | The pH shall not be depressed below 6.5 nor raised above 8.5. |
| Pesticides | <ul style="list-style-type: none"> • No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. • Discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses. • Total identifiable persistent chlorinated hydrocarbon pesticides shall not be present in the water column at concentrations detectable within the accuracy of analytical methods approved by the EPA or the Executive Officer. • Pesticide concentrations shall not exceed those allowable by applicable antidegradation policies (see State Water Resources Control Board Resolution No. 68-16 and 40 C.F.R. Section 131.12.). • Pesticide concentrations shall not exceed the lowest levels technically and economically achievable. • Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of pesticides in excess of the Maximum Contaminant Levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15. • Waters designated for use as domestic or municipal supply shall not contain concentrations of thiobencarb in excess of 1.0 µg/l. |
| Total Dissolved Solids | Shall not exceed 100 mg/l (90 percentile) |
| Sediment | The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses. |
| Settleable Material | Waters shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses. |

| Category | Standard |
|--------------------|--|
| Suspended Material | Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses. |
| Tastes and Odors | Water shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to domestic or municipal water supplies or to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses. |
| Temperature | At no time or place shall the temperature of COLD or WARM interstate waters be increased more than 5°F above natural receiving water temperature. |
| Toxicity | All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. |
| Turbidity | <p>Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases in turbidity attributable to controllable water quality factors shall not exceed the following limits:</p> <ul style="list-style-type: none"> • Where natural turbidity is less than 1 Nephelometric Turbidity Unit (NTU), controllable factors shall not cause downstream turbidity to exceed 2. • Where natural turbidity is between 1 and 5 NTUs, increases shall not exceed 1 NTU. • Where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20 percent. • Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs. • Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent. |

California Regional Water Quality Control Board, Central Valley Region, Basin Plan (2007).

HYDROLOGY - APPENDIX B. CUMULATIVE WATERSHED EFFECTS

| | |
|---|---|
| Definition of CWE | The analysis of cumulative watershed effects (CWE) considers the impacts of all past, present, and foreseeable land disturbances. The land disturbances selected for the analysis of CWE include those that have the potential to result in erosion and an increase in sediment delivery to aquatic features. These land disturbances include, but are not limited to: past timber harvest (both in the National Forest and on private land), roads, fires, man-made impervious areas associated with buildings and other facilities, powerline corridors, and campgrounds. An increase in the amount of sediment delivered to aquatic features can result in a number of negative effects. ¹ |
| Geographic scope of CWE | The 7 th field watersheds, which are generally 3,000 to 10,000 in size, that include the proposed land disturbance or changes in land disturbance. Sub-watersheds less than 3,000 acres in size may be delineated for analysis if land disturbances are concentrated in those areas. |
| Methods and limitations of assessing CWE | There are a number of methods currently used to assess CWE where the primary direct impact of concern is an increase in sediment delivery to streams and other aquatic features. None of these methods can quantitatively predict the amount of sediment delivered to streams, the distance downstream that the sediment load will travel, or point in time and the duration when an increase in sediment delivery to aquatic features will occur. The reasons for this include the large variability in the magnitude of direct effects from a given land disturbance, inability to predict secondary or indirect effects, lack of data on recovery rates for land disturbances, difficulty of validating predictive models on-the-ground, and the uncertainty of future events such as the size and timing of large storms. As a result, an assessment of CWE is frequently reported as an indicator of the overall <i>risk</i> of cumulative effects occurring in a watershed (Reid 1993; MacDonald 2000). |
| Magnitude or severity of CWE | The magnitude or severity of CWE following land disturbance depends largely on an event that cannot be prevented and the exact timing of which cannot be accurately predicted. It is whether a “large storm event” occurs within several years after land disturbances when the ground surface is vulnerable to erosion. If a large storm event does not occur within several after the land disturbance, the CWE to aquatic features will be minor, negligible, or absent. As a result of the importance of large storm events in determining actual erosion, sediment delivery to streams, turbidity and suspended sediment levels of streams, the land disturbances themselves in the watersheds play only a partial role in the severity of impacts to aquatic resources. |
| Method of CWE used in the Eldorado National Forest | The method selected for this CWE analysis is the method of Equivalent Roaded Acres (ERA). This method was developed by Region 5 of the U.S. Forest Service and adapted by the Eldorado National Forest (ENF). The method was specifically developed to assess the <i>risk</i> of CWE in forested watersheds where timber harvest and roads are major land disturbances. The ERA method has been used in the ENF for over 15 years, and nearly all of the 155 watersheds in the ENF have been evaluated with this method. This allows all of the watersheds in the ENF to be compared relative to each other in terms of the risk of CWE. |
| Description of the method of Equivalent Roaded Acres (ERA) | An index is calculated for an entire watershed that expresses most land uses in terms of the percent of the watershed covered by roads. Based on the percent ERA and a threshold of concern (TOC), a given watershed is assigned a relative risk – <i>low</i> , <i>moderate</i> , <i>high</i> , or <i>very high</i> - of cumulative impacts. A <i>very high risk</i> is merely a warning that cumulative impacts – such as an increase in sediment delivery to streams – might occur. The ERA method has the same limitations as previously described for all commonly used CWE methods where an increase in sediment delivery to streams is the primary concern. |

¹ One well-documented cumulative effect is the reduction in the amount and quality of spawning habitat for resident fish as a result of fine-grained sediment deposited in the stream channel.

The ERA method of assessing the risk of CWE

| Summary |
|--|
| <p>The risk of cumulative watershed effects (CWE) is assessed using the Equivalent Roaded Acre (ERA) method developed by R5 USFS. The process was further refined and adapted for the Eldorado National Forest (Carlson and Christiansen 1993). In this method, an index is calculated for an entire watershed that expresses most land use in terms of the percent of the watershed covered by roads. Based on the ERA and a threshold of concern (TOC), a given watershed is assigned a relative risk – low, moderate, high, or very high - of CWE. The primary cumulative impact of concern is an increase in sediment delivery to streams and degradation of aquatic habitat.</p> |
| Important aspects of the ERA method |
| <ul style="list-style-type: none"> ▪ Roads, which are considered to have the greatest potential to increase runoff and sediment to streams, are given a value of 1.0. The number of acres of roads in a watershed is divided by the size of the entire watershed (in acres). This gives the percent of the watershed covered by roads. ▪ For each land disturbance activity other than roads, the number of acres is multiplied by a number less than 1.0. The result (for each land disturbance activity) is then divided by the number of acres of the entire watershed. This gives the percent of the “equivalent roaded acres” in the watershed for each type of land disturbance. ▪ The values for equivalent roaded acres for all of the land disturbance activities are added together. The final number represents the percent of the watershed that is covered by the ‘equivalent’ of roads. ▪ The threshold of concern (TOC) is usually between 10 and 18 percent. That is, when 10 to 18 percent of a watershed is covered by the equivalent of roads, there is a “high risk” that increased peak flows of streams and sediment delivery to streams will occur. This does not mean these effects will occur precisely when the ERA reaches the TOC, or that an increase in peak flows and sediment delivery to streams will automatically result in a degradation of fish habitat or diminish the experience of recreationists. It is merely a warning that cumulative effects might occur. |
| Assumptions and limitations of the ERA method |
| <ul style="list-style-type: none"> ▪ The method is intended for watersheds between 3,000 and 10,000 acres in size, although the method is commonly used for watersheds slightly outside of this range. ▪ ERA values, as well as the TOC, are only indicators of the risk of cumulative impacts occurring. They cannot be used to determine the percent or numerical amount of increase of sediment delivery to streams, stream channel eroded, fish habitat degraded or lost, or any other change in watershed condition. Such quantitative assessments require additional analysis. ▪ The location of land disturbance activities within a watershed is not considered. For example, roads near streams are treated exactly the same as roads that are far from streams. In reality, roads located within or next to riparian areas contribute more sediment to streams than roads in upland areas. ▪ Recovery of the watershed from land disturbing activities occurs with time. For timber harvest activities, hydrologic recovery is assumed to be thirty years (i.e. ERA contribution is zero thirty years after timber harvest.) ▪ The ERA calculations do not take into account site specific Best Management Practices. ▪ ERA values start one year after a land use is implemented. |
| Risk categories |
| <ul style="list-style-type: none"> ▪ Low risk of CWE - ERA is less than 50% of TOC ▪ Moderate risk of CWE - ERA is between 50% and 80% of TOC ▪ High risk of CWE - ERA is between 80% and 100% of TOC ▪ Very high risk of CWE - ERA is greater than TOC |

HYDROLOGY - APPENDIX C. USFS BEST MANAGEMENT PRACTICES (BMPs)

| BMP Number | BMP Practice | BMP Objective |
|-----------------------------------|---|---|
| 12.21 Road Management BMPs | | |
| 2.1 | Travel Management Planning and Analysis | Use the travel analysis and road management planning processes to develop measures to avoid, minimize, and mitigate adverse impacts to water, aquatic, and riparian resources during road management activities, contribute toward restoration of water quality where needed, and identify the road system which can be effectively maintained. |
| 2.2 | General Guidelines for the Location and Design of Roads | Locate roads to minimize problems and risks to water; aquatic, and riparian resources. Incorporate measures that prevent or reduce impacts, through design for construction, reconstruction, and other route system improvements. |
| 2.3 | Road Construction and Reconstruction | Minimize erosion and sediment delivery from roads during road construction or reconstruction, and their related activities. |
| 2.4 | Road Maintenance and Operations | To ensure water-quality protection by providing adequate and appropriate maintenance and by controlling road use and operations. |
| 2.7 | Road Decommissioning | <p>Stabilize, restore, and vegetate unneeded roads to a more natural state as necessary to protect and enhance NFS lands, resources, and water quality. The end result is that the decommissioned road will not represent a significant impact to water quality by:</p> <ol style="list-style-type: none"> 1. Reducing erosion from road surfaces and slopes and related sedimentation of streams; 2. Reducing risk of mass failures and subsequent impact on water quality; 3. Restoring natural surface and subsurface drainage patterns; 4. Restoring stream channels at road crossings and where roads run adjacent to channels |
| 2.8 | Stream Crossings | Minimize water, aquatic, and riparian resource disturbances and related sediment production when constructing, reconstructing, or maintaining temporary and permanent water crossings. |
| 2.10 | Parking and Staging Areas | Construct, install, and maintain an appropriate level of drainage and runoff treatment for parking and staging areas to protect |

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| | | water, aquatic, and riparian resources. |
| 2.11 | Equipment Refueling and Servicing | Prevent fuels, lubricants, cleaners, and other harmful materials from discharging into nearby surface waters or infiltrating through soils to contaminate groundwater resources. |
| 2.13 | Erosion Control Plan | <p>Effectively limit and mitigate erosion and sedimentation from any ground-disturbing activities, through planning prior to commencement of project activity, and through project management and administration during project implementation.</p> <ol style="list-style-type: none"> 1. Provide seamless transition between planning-level (NEPA) mitigation descriptions and on-the-ground implementation of erosion-control measures tailored to site conditions. 2. Ensure that all disturbance-related mitigation requirements and provisions for field revisions or modifications are accurately captured in one comprehensive document for each project or activity. 3. Activities include, but are not limited to: timber sale harvest; facility site, road, bridge, trail and appurtenance construction, reconstruction, and maintenance; watershed improvement; road and trail decommissioning; legacy site restoration, administratively permitted activities; and vegetation and fuels management activities. 4. Comply with overarching area plans, such as Northwest Forest Plan and Sierra Nevada Framework Plan Amendment. |
| 12.41 Recreation BMPs | | |
| 4.4 | Control of Sanitation Facilities | To protect surface and subsurface water from bacteria, nutrients, and chemical pollutants resulting from the collection, transmission, treatment, and disposal of sewage at Forest Service sites. |
| 4.5 | Control of Solid Waste Disposal | To protect water from nutrients, bacteria, and chemicals associated with solid waste disposal. |
| 4.7 | Best Management Practices for Off-Highway Vehicle Facilities and Use (BMPs 4.7.1 to 4.7.9) | See the individual OHV BMPs on the following pages for specific objectives. |
| 4.9 | Protection of Water Quality within Developed and Dispersed Recreation Areas | To protect water quality by regulating the discharge and disposal of potential pollutants. |
| 12.51 Vegetation Manipulation BMPs | | |

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| 5.1 | Soil-disturbing Treatments on the Contour | To decrease sediment production and stream turbidity, while mechanically treating slopes. |
| 5.3 | Tractor Operation Limitation in Wetlands and Meadows | To limit turbidity and sediment production resulting from compaction, rutting, runoff concentration, and subsequent erosion by excluding the use of mechanical equipment in wetland and meadows except for the purpose of restoring wetland and meadow function. |
| 5.4 | Revegetation of Surface-disturbed Areas | To protect water quality by minimizing soil erosion through the stabilizing influence of vegetation foliage and root network. |
| 5.6 | Soil Moisture Limitations for Mechanical Equipment Operations | To prevent compaction, rutting, and gullyng, with resultant sediment production and turbidity. |
| 12.71 Watershed Management BMPs | | |
| 7.1 | Watershed Restoration | To repair degraded watershed conditions, and improve water quality and soil stability. |
| 7.3 | Protection of Wetlands | To avoid adverse water-quality impacts associated with destruction, disturbance, or modification of wetlands. |
| 7.4 | Forest and Hazardous Substance Spill Prevention Control and Countermeasure Plan | To prevent contamination of waters from accidental spills. |
| 7.7 | Management by Closure to Use (Seasonal, Temporary, and Permanent) | To exclude activities that could result in damages to either resources or improvements, such as roads and trails, resulting in impaired water quality. |
| 7.8 | Cumulative Off-site Watershed Effects | To protect the identified beneficial uses of water from the combined effects of multiple management activities which individually may not create unacceptable effects, but collectively may result in degraded water-quality conditions. |

Table developed from the *Water Quality Management Handbook (USDA, 2011)*

HYDROLOGY - APPENDIX D - RIPARIAN CONSERVATION AREAS (RCAs)

Desired Conditions

The desired future condition of RCAs would be to have riparian areas meet or exceed the goals of the Clean Water Act and Safe Drinking Water Act by providing water that is fishable, swimmable, and suitable for drinking after normal treatment. Riparian areas would support viable populations of native plant, desired non-native plant, invertebrate, and vertebrate riparian and aquatic-dependent species. Species composition and structural diversity of plant and animal communities in riparian areas, wetlands, and meadows would further provide desired habitat conditions and ecological function. The distribution and health of biotic communities in special aquatic habitats sustains their functions and diversity. Spatial and temporal connectivity for riparian and aquatic-dependent species within and between watersheds would provide physically, chemically and biologically unobstructed movement for their survival, migration and reproduction.

Connections of floodplains, channels, and water tables would distribute flood flows and sustain diverse habitats. Soils with favorable infiltration characteristics and diverse vegetative cover would absorb and filter precipitation and sustain favorable conditions of stream flows. In-stream flows are sufficient to sustain desired conditions of riparian, aquatic, wetland, and meadow habitats and keep sediment regimes as close as possible to those with which aquatic and riparian biota evolved. The physical structure and condition of stream banks and shorelines would minimize erosion and sustain desired habitat diversity.

The ecological status of meadow vegetation is late seral and a diversity of age classes of hardwood shrubs is present and regeneration is occurring. Meadows are hydrologically functional and sites of accelerated erosion (e.g. gullies and headcuts) are stabilized and recovering. Meadows with perennial and intermittent streams have the following characteristics: 1) stream energy from high flows is dissipated, reducing erosion and improving water quality, 2) streams filter sediment and capture bedload, aiding in floodplain development, 3) meadow conditions enhance floodwater retention and groundwater recharge, and 4) root masses stabilize stream banks against scouring and undercutting.

The management intent is to meet Standards and Guidelines associated with RCOs through management objectives so that desired future conditions are obtainable. The abbreviated management objectives are:

- To maintain and restore water quality.
- To maintain and restore habitat to support viable populations of native and

desired non-native plant, invertebrate, and vertebrate riparian-dependent species.

- To maintain and restore the species composition and structural diversity of animal communities in riparian areas, wetlands, and meadows to provide desired habitats and ecological functions.
- To maintain and restore the distribution and health of biotic communities in special aquatic habitats (such as springs, seeps, vernal pools, fens, bogs, and marshes) to perpetuate their unique functions and biological diversity.
- To maintain and restore spatial and temporal connectivity for aquatic and riparian species within and between watersheds.

Background

The Sierra Nevada Forest Plan Amendment Record of Decision (SNFPA ROD) of 2004 identified aquatic, riparian, and meadow ecosystems and associated species as one of five problem areas in the region and established goals and strategies for addressing these areas. In response, an Aquatic Management Strategy (AMS) was developed to address this problem area and consists of nine goals that provide a comprehensive framework for establishing desired conditions (see table below). Meeting the goals should improve ecosystem conditions by restoring and maintaining the physical, chemical and biological integrity of the region's waters as mandated by the Clean Water Act, and would support the Forest Service's mission to provide habitat for riparian - and aquatic-dependent species under the National Forest Management Act, Organic Act, Safe Drinking Water Act, Endangered Species Act, and Electric Consumers Protection Act.

| Aquatic Management Strategy (AMS) Goals | |
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| Goal | Description |
| 1. Water Quality | Maintain and restore water quality to meet goals of the Clean Water Act and Safe Drinking Water Act, providing water that is fishable, swimmable, and suitable for drinking after normal treatment. |
| 2. Species Viability | Maintain and restore habitat to support viable populations of native and desired non-native plant, invertebrate, and vertebrate riparian-dependent species. Prevent new introductions of invasive species. Where invasive species are adversely affecting the viability of native species, work cooperatively with appropriate State and Federal wildlife agencies to reduce impacts to native populations. |
| 3. Plant and Animal Community Diversity | Maintain and restore the species composition and structural diversity of plant and animal communities in riparian areas, wetlands, and meadows to provide desired habitats and ecological functions. |

| Aquatic Management Strategy (AMS) Goals | |
|--|--|
| Goal | Description |
| 4. Special Habitats | Maintain and restore the distribution and health of biotic communities in special aquatic habitats (such as springs, seeps, vernal pools, fens, bogs, and marshes) to perpetuate their unique functions and biological diversity. |
| 5. Watershed Connectivity | Maintain and restore spatial and temporal connectivity for aquatic and riparian species within and between watersheds to provide physically, chemically and biologically unobstructed movement for their survival, migration and reproduction. |
| 6. Floodplains and Water Tables | Maintain and restore the connections of floodplains, channels, and water tables to distribute flood flows and sustain diverse habitats. |
| 7. Watershed Condition | Maintain and restore soils with favorable infiltration characteristics and diverse vegetative cover to absorb and filter precipitation and to sustain favorable conditions of stream flows. |
| 8. Streamflow Patterns and Sediment Regimes | Maintain and restore in-stream flows sufficient to sustain desired conditions of riparian, aquatic, wetland, and meadow habitats and keep sediment regimes as close as possible to those with which aquatic and riparian biota evolved. |
| 9. Stream Banks and Shorelines | Maintain and restore the physical structure and condition of stream banks and shorelines to minimize erosion and sustain desired habitat diversity. |

Table developed from pages 32 and 33 of the 2004 SNFPA ROD.

An important key element of the aquatic, riparian, and meadow ecosystem strategy are six RCOs that are linked to individual AMS goals and have one or more associated standards and guidelines. The SNFPA ROD requires the USFS to manage these ecosystems consistent with these RCOs and their associated standards and guidelines. Therefore, activities that occur within RCAs are required to have a site specific analysis conducted to determine the type and extent of activities that can occur within RCAs (see table below). RCA widths are essentially buffers designed to limit or prevent activities with potential adverse effects from occurring in close proximity to aquatic features. They vary based on

the type of aquatic feature and can be adjusted at the project level if a landscape analysis has been completed and a site-specific RCO analysis demonstrates a need for different widths. Management activity, stream condition, soil type, and slope conditions among other variables are often considered when adjusting RCA widths.

| Riparian Conservation Areas (RCAs) | |
|---|---|
| Aquatic feature | RCA width |
| Perennial Streams | 300 feet on each side of the stream, measured from the bank full edge of the stream |
| Seasonally Flowing Streams (includes intermittent and ephemeral streams) | 150 feet on each side of the stream, measured from the bank full edge of the stream. |
| Streams in Inner Gorge ¹ | top of inner gorge |
| Special Aquatic Features ² or Perennial Streams with Riparian Conditions extending more than 150 feet from edge of streambank or Seasonally Flowing streams with riparian conditions extending more than 50 feet from edge of streambank | 300 feet from the edge of the features or riparian vegetation, whichever width is greater |
| Other hydrological or topographic depressions without a defined channel | RCA width and protection measures determined through project level analysis. |

Table developed from page 42 of the 2004 SNFPA ROD.

¹ Inner gorge is defined by stream adjacent slopes greater than 70 percent gradient

² Special Aquatic Features include: lakes, wet meadows, bogs, fens, wetlands, vernal pools, and springs

HYDROLOGY - APPENDIX E. CONSISTENCY WITH RIPARIAN CONSERVATION OBJECTIVES

| Consistency of Alternatives with Riparian Conservation Objectives (RCOs) | | | | | |
|---|--|--|--|--|---|
| RCO # | Alternatives 1 | Alternative 2 | Modified Alternative 3 | Alternative 4 | Alternatives 5 & 6 |
| 1 - Beneficial Uses | <u>Not likely to meet this objective</u> based on potential water quality and aquatic habitat degradation associated with wet season use. | <u>Not likely to meet this objective</u> based on continued water quality and aquatic habitat degradation during wet season use, at low-water crossings, during runoff periods, and in close proximity to lentic (i.e. wetlands, lakes) features. | Likely to meet this objective based on the saturated soil management strategy for addressing erosion control feature effectiveness. | <u>Not likely to meet this objective</u> based on the potential delivery of petroleum products to nearby wetlands and the potential delivery of petroleum products to the Little Rubicon River and Spider Lake associated with new routes proposed within the RCAs. | Likely to meet this objective. Wet season closure, closure of routes, and a single 50 foot wide easement would provide adequate protection for water quality and aquatic habitat. |
| 2 - Maintain or Restore Geomorphic & Biological Characteristics | <u>Not likely to meet this objective</u> based on potential water quality and aquatic habitat degradation associated with wet season use. | <u>Not likely to meet this objective</u> based on continued impacts to geomorphic and biological characteristics at stream crossings and from uses in close proximity to lentic features. | Likely to meet this objective based on the saturated soil management strategy for addressing erosion control feature effectiveness. | <u>Not likely to meet this objective</u> based on the potential delivery of petroleum products to nearby wetlands and the potential delivery of petroleum products to the Little Rubicon River and Spider Lake associated with new routes proposed within the RCAs. | Likely to meet this objective. Closure of routes, a single 50 foot wide easement, and decreased use in close proximity to lentic features would benefit geomorphic and biological characteristics. |
| 3 - Large Woody Debris | Likely to meet this objective. | | | | |
| 4 - Enhance or Maintain Physical & Biological Characteristics | <u>Not likely to meet this objective</u> based on potential water quality and aquatic habitat degradation associated with wet season use. | <u>Not likely to meet this objective</u> based on continued impacts to physical and biological characteristics at stream crossings and from uses in close proximity to lentic features. | Likely to meet this objective based on the saturated soil management strategy for addressing erosion control feature effectiveness. | <u>Not likely to meet this objective</u> based on the potential delivery of petroleum products to nearby wetlands and the potential delivery of petroleum products to the Little Rubicon River and Spider Lake associated with new routes proposed within the RCAs. | Likely to meet this objective. This alternative would maintain physical and biological characteristics through a wet season closure, closure of routes, and a single 50 foot wide easement. |

| Consistency of Alternatives with Riparian Conservation Objectives (RCOs) | | | | | |
|--|--|--|--|--|---|
| RCO # | Alternatives 1 | Alternative 2 | Modified Alternative 3 | Alternative 4 | Alternatives 5 & 6 |
| 5 - Preserve, Restore, or Enhance Features | <i>Likely to meet this objective</i> based on route closures and trail improvements. | <u>Not likely to meet this objective</u> based on continued sediment and contaminant delivery to nearby lakes and wetlands. | <i>Likely to meet this objective</i> based on the saturated soil management strategy for addressing erosion control feature effectiveness. | <u>Not likely to meet this objective</u> based on the potential delivery of petroleum products to nearby wetlands and the potential delivery of petroleum products to the Little Rubicon River and Spider Lake associated with new routes proposed within the RCAs. | <i>Likely to meet this objective.</i> This alternative would preserve and restore lakes and wetlands through a wet season closure, closure of routes, and a single 50 foot wide easement. |
| 6 - Restoration Actions | <i>Likely to meet this objective</i> based on route closures and trail improvements. | <u>Not likely to meet this objective</u> based on continued trail degradation. | <i>Likely to meet this objective</i> based on the saturated soil management strategy for addressing erosion control feature effectiveness. | <u>Not likely to meet this objective</u> based on the amount of route additions within RCAs. | <i>Likely to meet this objective.</i> Similar to Alternative 1. |

HYDROLOGY - APPENDIX F. RIPARIAN CONSERVATION (RCAs & RCOs) STANDARDS and GUIDELINES

| Riparian Conservation Areas and Critical Aquatic Refuges | |
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| Standard and Guideline | Analysis with respect to Proposed Action |
| <p>91. Designate riparian conservation area (RCA) widths as described in the RCA table on the preceding page. The RCA widths displayed in the table may be adjusted at the project level if a landscape analysis has been completed and a site-specific RCO analysis demonstrates a need for different widths.</p> | <p>All Alternatives</p> <p>RCA widths for the project area would be designated as such in accordance with the RCA table in Appendix D. The existing features and activities proposed under the alternatives would occur within RCAs.</p> |
| <p>92. Evaluate new proposed management activities within CARs and RCAs during environmental analysis to determine consistency with the riparian conservation objectives at the project level and the AMS goals for the landscape. Ensure that appropriate mitigation measures are enacted to (1) minimize the risk of activity-related sediment entering aquatic systems and (2) minimize impacts to habitat for aquatic- or riparian-dependent plant and animal species.</p> | <p>Alternatives 1, 3, 4, 5, 6</p> <p>Under Alternatives 1, 3, 4, 5, and 6; some of the proposed activities are designed to reduce sediment delivery to aquatic systems and reduce impacts to habitat for aquatic- and riparian-dependent plant and animal species.</p> <p>Alternatives 3, 5, and 6</p> <p>In addition to above, these alternatives would include seasonal restrictions designed to further minimize the potential for water quality degradation associated with wet season use.</p> <p>Alternative 2</p> <p>With the exception of completing initiated maintenance activities, no additional management activities are proposed under this alternative and sediment associated with the trail would continue to enter aquatic systems. In addition, impacts to habitat for aquatic- and riparian-dependent plant and animal species would continue.</p> |
| <p>93. Identify existing uses and activities in CARs and RCAs during landscape analysis. At the time of permit reissuance, evaluate and consider actions needed for consistency with RCOs.</p> | <p>All Alternatives</p> <p>Under all alternatives; dispersed camping, foot traffic, winter recreation, and OHV use would occur on the Rubicon Trail. Indicator Measure 4 in the Hydrology and Riparian Resources section analyzes the consistency of RCOs with regards to the alternatives.</p> |

| <p>94. As part of project-level analysis, conduct peer reviews for projects that propose ground-disturbing activities in more than 25 percent of the RCA or more than 15 percent of a CAR.</p> | <p>All Alternatives</p> <p>Under all alternatives, proposed activities and existing features would be within RCAs. A high degree of ground disturbance currently exists within RCAs.</p> <p>Alternatives 1, 3, 4, 5, and 6</p> <p>Proposed activities would result in very little additional ground disturbance but would involve trail improvements, toilets, bridges, route closures, and route additions in previously disturbed areas.</p> |
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| <p>Riparian Conservation Objective #1: Ensure that identified beneficial uses for the water body are adequately protected. Identify the specific beneficial uses for the project area, water quality goals from the Regional Basin Plan, and the manner in which the standards and guidelines will protect the beneficial uses. (AMS goals: 1, 2, 7)</p> | |
| <p>Standard and Guideline</p> | <p>Analysis with respect to Proposed Action</p> |
| <p>95. For waters designated as “Water Quality Limited” (Clean Water Act Section 303(d)), participate in the development of Total Maximum Daily Loads (TMDLs) and TMDL Implementation Plans. Execute applicable elements of completed TMDL Implementation Plans.</p> | <p>All Alternatives</p> <p>There are no waters on the 303 (d) list in the project area, however the South Fork American River below Slab Creek Reservoir is listed as impaired due to mercury. Loon Lake and its tributaries are tributary to the South Fork American River via the Loon Lake diversions that route flows from Loon Lake to Gerle Creek Reservoir to Union Valley Reservoir.</p> |
| <p>96. Ensure that management activities do not adversely affect water temperatures necessary for local aquatic- and riparian-dependent species assemblages.</p> | <p>Alternatives 1, 3, 4, 5, 6</p> <p>Under Alternatives 1, 3, 4, 5, and 6; some of the proposed activities are designed to reduce sediment delivery to nearby water bodies, reduce streambank and shoreline bank failures, and reduce riparian vegetation loss; thereby maintaining water temperatures for local aquatic- and riparian-dependent species assemblages. Excessive quantities of sediment can negatively impact geomorphic shape and function by filling in pools through aggradation, which in turn affects water depth and temperature. Streambank failures often result in sedimentation and channel widening which affects pool depths and water temperature. Streambanks, shoreline banks, and riparian vegetation also provide effective cover for maintaining water temperatures.</p> <p>Alternative 2</p> <p>Under this alternative, excessive sedimentation, streambank and shoreline bank failures, and riparian vegetation loss would continue; thereby adversely affecting water temperatures necessary for local aquatic- and riparian-dependent species assemblages.</p> |

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| <p>97. Limit pesticide applications to cases where project level analysis indicates that pesticide applications are consistent with riparian conservation objectives.</p> | <p>All Alternatives</p> <p>Pesticide applications are not currently proposed.</p> |
| <p>98. Within 500 feet of known occupied sites for the California red-legged frog, Cascades frog, Yosemite toad, foothill yellow-legged frog, mountain yellow-legged frog, and northern leopard frog, design pesticide applications to avoid adverse effects to individuals and their habitats.</p> | <p>All Alternatives</p> <p>Pesticide applications are not currently proposed.</p> |
| <p>99. Prohibit storage of fuels and other toxic materials within RCAs and CARs except at designated administrative sites and sites covered by a Special Use Authorization. Prohibit refueling within RCAs and CARs unless there are no other alternatives. Ensure that spill plans are reviewed and up-to-date.</p> | <p>All Alternatives</p> <p>Under all alternatives, the storage and use of fuels and toxic materials would occur within RCAs associated with OHV use. OHV users are required to carry spill prevention kits and follow spill prevention measures for refueling and servicing vehicles.</p> <p>Alternatives 1, 3, 4, 5, 6</p> <p>Under Alternatives 1, 3, 4, 5, and 6; some of the proposed activities would involve vehicular operations within RCAs such as bridge and toilet installation and the installation and maintenance of erosion control features. During these activities, the storage of fuels could occur within RCAs but would be limited to staging areas.</p> |
| <p>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. (AMS goals: 2, 3, 4, 5, 6, 8, 9)</p> | |
| <p>Standard and Guideline</p> | <p>Analysis with respect to Proposed Action</p> |

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| <p>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 water flow paths. Implement corrective actions where necessary to restore connectivity.</p> | <p>Alternatives 1, 3, 4, 5, 6</p> <p>Under Alternatives 1, 3, 4, 5, and 6; the installation and maintenance of trail erosion control features are designed to maintain and restore the hydrologic connectivity of nearby streams, meadows, wetlands, and lakes; and improve flow paths that intersect the trail and are tributary to these features.</p> <p>Alternative 2</p> <p>Under this alternative, flow paths that intersect the trail would continue to be altered and the hydrologic connectivity of nearby streams, meadows, wetlands, and lakes disrupted.</p> |
| <p>101. Ensure that culverts or other stream crossings do not create barriers to upstream or downstream passage for aquatic-dependent species. Locate water drafting sites to avoid adverse effects to in stream flows and depletion of pool habitat. Where possible, maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows, wetlands, and other special aquatic features.</p> | <p>Alternatives 1, 3, 4, 5, 6</p> <p>Under Alternatives 1, 3, 4, 5, and 6; the Ellis Creek bridge installation and the Buck Island bridge installation or low-water crossing are designed to improve channel function and aquatic passage by minimizing channel widening and sedimentation of pools.</p> <p>Alternative 2</p> <p>Under this alternative, stream crossings would continue to widen from bank failures and sedimentation, and pools would fill in with sediments; thereby adversely impacting aquatic passage.</p> |
| <p>102. Prior to activities that could adversely affect streams, determine if relevant stream characteristics are within the range of natural variability. If characteristics are outside the range of natural variability, implement mitigation measures and short-term restoration actions needed to prevent further declines or cause an upward trend in conditions. Evaluate required long-term restoration actions and implement them according to their status among other restoration needs.</p> | <p>Alternatives 1, 3, 4, 5, 6</p> <p>Under Alternatives 1, 3, 4, 5, and 6; some of the proposed activities are designed to improve degraded conditions by slowing runoff velocities, minimizing trail erosion, minimizing streambank failures and riparian vegetation loss, and minimizing sediment and contaminant delivery to nearby water bodies.</p> <p>Alternative 2</p> <p>Under this alternative, water quality degradation and geomorphic alterations of streams would continue. Many of the stream crossings along the Rubicon Trail have been severely altered by past activities and ongoing uses.</p> |

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| <p>103. Prevent disturbance to streambanks and natural lake and pond shorelines caused by resource activities (for example, livestock, off-highway vehicles, and dispersed recreation) from exceeding 20 percent of stream reach or 20 percent of natural lake and pond shorelines. Disturbance includes bank sloughing, chiseling, trampling, and other means of exposing bare soil or cutting plant roots. This standard does not apply to developed recreation sites, sites authorized under Special Use Permits and designated off-highway vehicle routes.</p> | <p>Alternatives 1, 3, 4, 5, 6</p> <p>Under Alternatives 1, 3, 4, 5, and 6; some of the proposed activities are designed to reduce streambank and shoreline bank disturbances by improving stream crossings and minimizing dispersed vehicle uses in close proximity to streams, lakes, and wetlands.</p> <p>Alternative 2</p> <p>Under this alternative, disturbance to streambanks and shoreline banks would continue from OHV use and associated dispersed uses in close proximity to these features.</p> |
| <p>104. In stream reaches occupied by, or identified as “essential habitat” in the conservation assessment for, the Lahontan and Paiute cutthroat trout and the Little Kern golden trout, limit streambank disturbance from livestock to 10 percent of the occupied or “essential habitat” stream reach. (Conservation assessments are described in the record of decision.) Cooperate with State and Federal agencies to develop streambank disturbance standards for threatened, endangered, and sensitive species. Use the regional streambank assessment protocol. Implement corrective action where disturbance limits have been exceeded.</p> | <p>All Alternatives</p> <p>These salmonid species do not occur within the project area.</p> |
| <p>105. At either the landscape or project-scale, determine if the age class, structural diversity, composition, and cover of riparian vegetation are within the range of natural variability for the vegetative community. If conditions are outside the range of natural variability, consider implementing mitigation and/or restoration actions that will result in an upward trend. Actions could include restoration of aspen or other riparian vegetation where conifer encroachment is identified as a problem.</p> | <p>Alternatives 1, 3, 4, 5, 6</p> <p>Under Alternatives 1, 3, 4, 5, and 6; some of the proposed activities are designed to reduce streambank and shoreline bank disturbances by improving stream crossings and minimizing dispersed vehicle uses in close proximity to streams, lakes, and wetlands; thereby maintaining or improving riparian vegetation cover.</p> <p>Alternative 2</p> <p>Under this alternative, riparian vegetation loss would continue from OHV use and associated dispersed uses in close proximity to these features.</p> |

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| <p>106. Cooperate with Federal, Tribal, State and local governments to secure in stream flows needed to maintain, recover, and restore riparian resources, channel conditions, and aquatic habitat. Maintain in stream flows to protect aquatic systems to which species are uniquely adapted. Minimize the effects of stream diversions or other flow modifications from hydroelectric projects on threatened, endangered, and sensitive species.</p> | <p>All Alternatives</p> <p>The alternatives do not involve any water rights or flow modification related activities.</p> |
| <p>107. For exempt hydroelectric facilities on national forest lands, ensure that special use permit language provides adequate in stream flow requirements to maintain, restore, or recover favorable ecological conditions for local riparian- and aquatic-dependent species.</p> | <p>All Alternatives</p> <p>This standard and guideline is not applicable with regards to the alternatives.</p> |
| <p>Riparian Conservation Objective #3: Ensure a renewable supply of large down logs that: (1) can reach the stream channel and (2) provide suitable habitat within and adjacent to the RCA. (AMS goals: 2, 3)</p> | |
| <p>Standard and Guideline</p> | <p>Analysis with respect to Proposed Action</p> |
| <p>108. Determine if the level of coarse large woody debris (CWD) is within the range of natural variability in terms of frequency and distribution and is sufficient to sustain stream channel physical complexity and stability. Ensure proposed management activities move conditions toward the range of natural variability.</p> | <p>All Alternatives</p> <p>The proposed activities involve the placement of coarse material and woody debris along the trail to convey flows, reduce runoff velocities, and to capture sediment. Currently no in-channel large woody debris additions are proposed as part of the proposed activities.</p> |
| <p>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. (AMS goals: 2, 7)</p> | |
| <p>Standard and Guideline</p> | <p>Analysis with respect to Proposed Action</p> |

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| <p>109. Within CARs, in occupied habitat or “essential habitat” as identified in conservation assessments for threatened, endangered, or sensitive species, evaluate the appropriate role, timing, and extent of prescribed fire. Avoid direct lighting within riparian vegetation; prescribed fires may back into riparian vegetation areas. Develop mitigation measures to avoid impacts to these species whenever ground-disturbing equipment is used.</p> | <p>All Alternatives</p> <p>No prescribed fire is proposed.</p> |
| <p>110. Use screening devices for water drafting pumps. (Fire suppression activities are exempt during initial attack.) Use pumps with low entry velocity to minimize removal of aquatic species, including juvenile fish, amphibian egg masses and tadpoles, from aquatic habitats.</p> | <p>All Alternatives</p> <p>Water drafting is not proposed with this project.</p> |
| <p>111. Design prescribed fire treatments to minimize disturbance of ground cover and riparian vegetation in RCAs. In burn plans for project areas that include, or are adjacent to RCAs, identify mitigation measures to minimize the spread of fire into riparian vegetation. In determining which mitigation measures to adopt, weigh the potential harm of mitigation measures, for example fire lines, against the risks and benefits of prescribed fire entering riparian vegetation. Strategies should recognize the role of fire in ecosystem function and identify those instances where fire suppression or fuel management actions could be damaging to habitat or long-term function of the riparian community.</p> | <p>All Alternatives</p> <p>Prescribed fire treatments are not proposed.</p> |
| <p>112. Post-wildfire management activities in RCAs and CARs should emphasize enhancing native vegetation cover, stabilizing channels by non-structural means, minimizing adverse effects from the existing road network, and carrying out activities identified in landscape analyses. Post-wildfire operations shall minimize the exposure of bare soil.</p> | <p>All Alternatives</p> <p>Post-wildfire management activities are not expected to occur in conjunction with the alternatives.</p> |

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| <p>113. Allow hazard tree removal within RCAs or CARs. Allow mechanical ground disturbing fuels treatments, salvage harvest, or commercial fuelwood cutting within RCAs or CARs when the activity is consistent with RCOs. Utilize low ground pressure equipment, helicopters, over the snow logging, or other non-ground disturbing actions to operate off of existing roads when needed to achieve RCOs. Ensure that existing roads, landings, and skid trails meet Best Management Practices. Minimize the construction of new skid trails or roads for access into RCAs for fuel treatments, salvage harvest, commercial fuelwood cutting, or hazard tree removal.</p> | <p>All Alternatives</p> <p>At this time, no known hazard tree removal is proposed.</p> |
| <p>114. As appropriate, assess and document aquatic conditions following the Regional Stream Condition Inventory protocol prior to implementing ground disturbing activities within suitable habitat for California red-legged frog, Cascades frog, Yosemite toad, foothill and mountain yellow-legged frogs, and northern leopard frog.</p> | <p>All Alternatives</p> <p>Although none have been observed, aquatic features along and adjacent to the trail provide suitable habitat for Sierra Nevada yellow-legged frogs.</p> |
| <p>115. During fire suppression activities, consider impacts to aquatic- and riparian-dependent resources. Where possible, locate incident bases, camps, helibases, staging areas, helispots, and other centers for incident activities outside of RCAs or CARs. During pre-suppression planning, determine guidelines for suppression activities, including avoidance of potential adverse effects to aquatic- and riparian-dependent species as a goal.</p> | <p>All Alternatives</p> <p>Fire suppression activities are not proposed.</p> |

| <p>116. Identify roads, trails, OHV trails and staging areas, developed recreation sites, dispersed campgrounds, 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.</p> | <p>Alternatives 1, 3, 5, 6</p> <p>Under Alternatives 1, 3, 5, and 6; some of the proposed activities are designed to close and rehabilitate unauthorized routes, improve hydrologic connectivity, and improve water quality and habitat for aquatic- and riparian-dependent species.</p> <p>Alternative 2</p> <p>Under this alternative, water quality and habitat for aquatic- and riparian-dependent species would continue to degrade.</p> <p>Alternative 4</p> <p>While this alternative would involve some trail improvements and closure of some unauthorized routes similar to Alternatives 1, 3, 5, and 6; it would also involve the addition of some routes to the National Forest Transportation System within RCAs.</p> |
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| <p>Riparian Conservation Objective #5: Preserve, restore, or enhance special aquatic features, such as meadows, lakes, ponds, bogs, fens, and wetlands, to provide the ecological conditions and processes needed to recover or enhance the viability of species that rely on these areas. (AMS goals 1, 2, 3, 4, 7, 9)</p> | |
| <p>Standard and Guideline</p> | <p>Analysis with respect to Proposed Action</p> |
| <p>117. Assess the hydrologic function of meadow habitats and other special aquatic features during range management analysis. Ensure that characteristics of special features are, at a minimum, at Proper Functioning Condition, as defined in the appropriate Technical Reports (or their successor publications): (1) "Process for Assessing PFC" TR 1737-9 (1993), "PFC for Lotic Areas" USDI TR 1737-15 (1998) or (2) "PFC for Lentic Riparian-Wetland Areas" USDI TR 1737-11 (1994).</p> | <p>All Alternatives</p> <p>This project does not involve range management.</p> |

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| <p>118. Prohibit or mitigate ground-disturbing activities that adversely affect hydrologic processes that maintain water flow, water quality, or water temperature critical to sustaining bog and fen ecosystems and plant species that depend on these ecosystems. During project analysis, survey, map, and develop measures to protect bogs and fens from such activities as trampling by livestock, pack stock, humans, and wheeled vehicles. Criteria for defining bogs and fens include, but are not limited to, presence of: (1) sphagnum moss (<i>Spagnum spp.</i>), (2) mosses belonging to the genus <i>Meessia</i>, and (3) sundew (<i>Drosera spp.</i>) Complete initial plant inventories of bogs and fens within active grazing allotments prior to re-issuing permits.</p> | <p>All Alternatives</p> <p>Bog and fen ecosystems do not occur within the project area.</p> |
| <p>119. Locate new facilities for gathering livestock and pack stock outside of meadows and riparian conservation areas. During project-level planning, evaluate and consider relocating existing livestock facilities outside of meadows and riparian areas. Prior to re-issuing grazing permits, assess the compatibility of livestock management facilities located in riparian conservation areas with riparian conservation objectives.</p> | <p>All Alternatives</p> <p>This project does not involve range management.</p> |

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| <p>120. Under season-long grazing:</p> <ul style="list-style-type: none"> • For meadows in early seral status: limit livestock utilization of grass and grass-like plants to 30 percent (or minimum 6-inch stubble height). • For meadows in late seral status: limit livestock utilization of grass and grass-like plants to a maximum of 40 percent (or minimum 4-inch stubble height). <p>Determine ecological status on all key areas monitored for grazing utilization prior to establishing utilization levels. Use Regional ecological scorecards and range plant list in regional range handbooks to determine ecological status. Analyze meadow ecological status every 3 to 5 years. If meadow ecological status is determined to be moving in a downward trend, modify or suspend grazing. Include ecological status data in a spatially explicit Geographical Information System database.</p> <p>Under intensive grazing systems (such as rest-rotation and deferred rotation) where meadows are receiving a period of rest, utilization levels can be higher than the levels described above if the meadow is maintained in late seral status and meadow-associated species are not being impacted. Degraded meadows (such as those in early seral status with greater than 10 percent of the meadow area in bare soil and active erosion) require total rest from grazing until they have recovered and have moved to mid- or late seral status.</p> | <p>All Alternatives</p> <p>This project does not involve range management.</p> |
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| <p>121. Limit browsing to no more than 20 percent of the annual leader growth of mature riparian shrubs and no more than 20 percent of individual seedlings. Remove livestock from any area of an allotment when browsing indicates a change in livestock preference from grazing herbaceous vegetation to browsing woody riparian vegetation.</p> | <p>All Alternatives</p> <p>This project does not involve range management.</p> |
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| <p>Riparian Conservation Objective #6: Identify and implement restoration actions to maintain, restore or enhance water quality and maintain, restore, or enhance habitat for riparian and aquatic species. (AMS goals: all)</p> | |
| <p>Standard and Guideline</p> | <p>Analysis with respect to Proposed Action</p> |
| <p>122. Recommend restoration practices in: (1) areas with compaction in excess of soil quality standards, (2) areas with lowered water tables, or (3) areas that are either actively down cutting or that have historic gullies. Identify other management practices, for example, road building, recreational use, grazing, and timber harvests, which may be contributing to the observed degradation.</p> | <p>Alternatives 1, 3, 5, 6</p> <p>Under Alternatives 1, 3, 5, and 6; some of the proposed activities are designed to close and rehabilitate unauthorized routes, improve hydrologic connectivity, and improve water quality and habitat for aquatic- and riparian-dependent species. These activities would slow runoff velocities, reduce trail erosion, and reduce sediment and contaminant delivery potential to nearby water bodies.</p> <p>Alternative 2</p> <p>Under this alternative, water quality and habitat for aquatic- and riparian-dependent species would continue to degrade.</p> <p>Alternative 4</p> <p>While this alternative would involve some trail improvements and closure of some unauthorized routes similar to Alternatives 1, 3, 5, and 6; it would also involve the addition of some routes to the National Forest Transportation System within RCAs.</p> |

Table developed from Standards and Guidelines on pages 62-66 of the 2004 SNFPA ROD.

Appendix C. Comment Letters

Appendix C

Public and Agency Comments

The Notice of Availability of the Draft Environmental Impact Statement (DEIS) was published in the Federal Register on December 16, 2011 and copies of the DEIS were mailed to over 84 individuals, organizations, tribes, and government agencies. The comment period ended on January 30, 2012. Approximately 15 people submitted comments during the comment period. The commenters are listed below in numerical order. Following the commenters' names are 5 letters received on the DEIS from federal, state, and local agencies, federally recognized tribes, and elected officials.

1. Rusty Folena
2. Wendy Wyels, Central Valley Regional Water Quality Control Board
3. Jesse Barton, Gallery and Barton, Rubicon Trails Foundation (RTF)
4. Jim Bramham, California Association of four Wheel Drive Clubs, Inc.
5. Amy Granat, California Off-Road Vehicle Access (CORVA)
6. Patricia Port, USDI
7. Rich Platt
8. Monte Hendricks
9. Karen Schambach, Public Employees for Environmental Responsibility (PEER); Center for Sierra Nevada conservation; Center for Biological Diversity; Maidu Group, Sierra Club; and The Wilderness Society
10. Dan Canfield, California State Parks – Off-Highway Motor Vehicle Recreation Division
11. Edward Knapp, El Dorado County Office of the County Counsel
12. Annie Walker
13. Ken Hower
14. Kathleen Martyn Goforth, United States Environmental Protection Agency, Region 9
15. Marcus Libkind, Snowlands Network and Winter Wildlands Alliance
16. Darrel Cruz, Washoe Tribe of Nevada and California

Kathryn D. Hardy, Forest Supervisor
Eldorado National Forest
100 Forni Road
Placerville, CA 95667

Subject: Central Valley Water Board Comments on the December 2011 Rubicon Trail Easement and Resource Improvement Draft Environmental Impact Statement (DEIS)

Central Valley Water Board staff has reviewed the DEIS to evaluate compliance with Cleanup and Abatement Order (CAO) R5-2009-0030, which was issued to El Dorado County and the US Forest Service. Alternatives 1, 3, 4, and 5 could result in compliance with the CAO if sediment, sanitation, and spills are adequately addressed and the operating agreement between El Dorado County Department of Transportation and the Eldorado National Forest is followed. It is noted that the winter closure concept may still be necessary if the actions described in the County's Saturated Soils Water Quality Protection Plan do not protect water quality.

We have the following additional comments on the DEIS:

1. The reference to the Rubicon Trail Cleanup and Abatement Order (CAO) number on Pages 11 and 49 are incorrect. The correct CAO Number is R5-2009-0030.
2. The reference to El Dorado County's Saturated Soil Water Quality Protection Plan is dated 14 December 2010. Major updates to this plan were included in an amendment to the Water Board on 28 January 2011, and references to the Saturated Soil Water Quality Protection Plan should state "as amended on 28 January 2011".
3. Under the Hydrology and Riparian Resources Section on Pages 56, 63, and 77, the Aquatic Resources Section on Page 98, and the Reference Section on Page 311, the DEIS references a Water Board study that is not a published document, and as a result of 26 April 2009 Water Board meeting, this study was removed from the public record. We request that you eliminate this reference from the Final EIS.
4. The County's Saturated Soil Water Quality Protection Plan provides results of sediment yield due to Off Highway Vehicle use of the Rubicon Trail, and this document may be a better reference to cite in the Final EIS.

Please feel free to contact Marty Hartzell at mhartzell@waterboards.ca.gov if you have any questions.

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United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Pacific Southwest Region

333 Bush Street, Suite 515

San Francisco, CA 94104

IN REPLY REFER TO:
(ER 11/1150)

Filed Electronically

30 January 2012

Ms. Laura Hierholzer

El Dorado National Forest

7887 Highway 50

Pollock Pines, CA 95726

Subject: Review of the USFS Draft Environmental Impact Statement (DEIS), Rubicon Trail Easement and Resource Improvement Project, Construction and Operation, Right-of-Way Grant, Eldorado National Forest, Pacific Ranger District, El Dorado County, CA

Dear Ms. Hierholzer:

The Department of the Interior has received and reviewed the subject document and has the no comments to offer.

Thank you for the opportunity to review this project.

Sincerely,

Patricia Sanderson Port
Regional Environmental Officer

cc:

Director, OEPC

Lisa Treichel, OEPC staff contact



DEPARTMENT OF PARKS AND RECREATION
Off-Highway Motor Vehicle Recreation Division
1725 23rd Street, Suite 200
Sacramento, California 95816

Ruth Coleman, Director

January 30, 2012

Ms. Kathryn D. Hardy
USFS Eldorado National Forest
100 Forni Road
Placerville, CA 95667

Subject: Comment letter regarding Rubicon Draft Environmental Impact Statement.

Dear Ms. Hardy,

The California Department of Parks and Recreation, Off-Highway Motor Vehicle Recreation (OHMVR) Division appreciates the opportunity to comment on the Rubicon Draft Environmental Impact Statement (DEIS). The OHMVR Division has a legislative mandate to ensure the citizens of California have sustainable opportunities for off-highway vehicle (OHV) recreation. The OHMVR Division has a long standing cooperative relationship with the Eldorado National Forest in support of effectively managed OHV recreation.

The Rubicon Trail is recognized as one of the premiere OHV trails in North America. It is an extremely valuable recreational resource for the people of El Dorado County and the State of California. The OHMVR Division, through the Grants and Cooperative Agreements Program, has provided substantial financial assistance in support of the Rubicon trail. The Rubicon DEIS is being partially funded through a cooperative agreement between the Division and the El Dorado National Forest.

Following are the OHMVR Division comments on the Rubicon DEIS;

1. In regards to the proposed easement width, the OHMVR Division supports a variable easement width that supports resource conservation and sustaining OHV Recreation relative to the Rubicon Trail. A variable easement width allows for the reality of the local terrain as opposed to a rigid line on a map.
2. The OHMVR Division supports the construction of additional restroom facilities along the Rubicon Trail to ensure sanitary trail conditions and quality of recreational experience. The continued use of personal sanitation methods should be promoted until such time that additional restroom facilities are constructed.
3. The OHMVR Division supports the addition of identified routes to the Eldorado NF Travel Management System to sustain reasonable and managed motorized access to camping facilities. These additional routes should be classified as open

to off-highway licensed vehicles and highway licensed vehicles. Also the additional routes should have a “yearlong” season of use to accommodate the season of use on the Rubicon trail.

4. The OHMVR Division is concerned that a rigid seasonal closure would unnecessarily detract from the recreational resource of the Rubicon trail while adding very little to the management or resource protection of the trail.
5. On Table S-3, Alternative 5 identifies “Number of Vault Toilets to be constructed” as 9. Also on Table 2-1, Alternative 5 identifies “Number of Vault Toilets to be constructed” as 9. The balance of the document identifies that Alternative 5 would involve no construction of vault toilets?
6. On page 20, first paragraph, the OHMVR Division is incorrectly identified as the “OHV Division”. This same error occurs on page 248, third paragraph.
7. On page 163, first paragraph, the DEIS states; “The area surrounding the Rubicon Trail is currently utilized fully OHVs with no authorized trails, creation of new trails and OHV use occurring in open areas off any trails.”. This statement is confusing since the Forest land surrounding the Rubicon trail is closed to cross-county travel.

We appreciate the opportunity to provide these comments and look forward to working cooperatively with the Eldorado National Forest to ensure this outstanding and irreplaceable recreational resource is sustained.

Sincerely,



Dan Canfield, Planning Manager
OHMVR Division

cc: Phil Jenkins, OHMVR Division Chief

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January 30, 2012

Kathryn D. Hardy
Forest Supervisor
Rubicon Trail Easement DEIS
Eldorado National Forest
100 Forni Road
Placerville, CA 95667

Re: Comments of El Dorado County on "Eldorado National Forest Rubicon Trail Easement and Resource Improvement Project DEIS"

Dear Ms. Hardy:

Thank you for the opportunity to comment on the Eldorado National Forest (hereafter "ENF") Draft EIS for the Rubicon Trail Easement and Resource Improvement Project (hereafter "DEIS"). El Dorado County has the following comments.

1. Width of Proposed Ellis Creek Bridge

El Dorado County has been planning on building a new bridge over Ellis Creek near where the historic Rubicon Trail currently crosses the creek at grade. On April 30, 2009, the Central Valley Regional Water Quality Control Board issued a Cleanup and Abatement Order (No. R5-2009-0030) requiring El Dorado County and the Eldorado National Forest to cease the discharge of sediment and other wastes due to motorized use of Rubicon Trail, and one of the actions specifically required by the CAO is the construction of a bridge at Ellis Creek. A bridge crossing at Ellis Creek would reduce the amount of particles that enter the creek from vehicles crossing the creek as well as from vehicles on the trail approaches, and reduce the turbidity of the creek from tires disturbing the natural stream bed, and it therefore environmentally beneficial.

The plan is to build a 16 feet wide bridge about 60 to 75 feet downstream from the current grade crossing. Apparently a comment was received by the ENF during the DEIS scoping period that a bridge only 12 feet wide would be better. The EIS on page iii has "Table S-1: List of Significant Issues," in which Item number 4 states "Overly large bridge at Ellis Creek will

cause adverse impacts to riparian areas and species and is inconsistent with the historic nature of the trail.” Alternate 5 includes the easement for the Trail in a modified form, and, as stated on page 25, “The bridge at Ellis Creek would be constructed to a width of 12 feet.” On page 16, among the significant issues list is number 4, which states “Overly large bridge proposed at Ellis Creek will cause adverse impacts to riparian areas and species and is inconsistent with the historic nature of the trail.” We are not aware of any support for the assumption that a 16 foot wide bridge would cause any more impacts to riparian areas and species than a 12 foot wide bridge would, because the abutments and approaches would be the same, and it makes no sense that a slightly narrower bridge would be more or less consistent with the historic nature of the trail than a slightly wider bridge would be. El Dorado County hereby comments that the proposed bridge must be 16 feet wide under applicable bridge design standards, the lengthy and expensive planning process which been completed over the past several years would be wasted if the plan were to change at this late date, the delay caused by a redesign at this point would likely be fatal to the funding source and thus end any hope of replacing the grade crossing with a bridge, and that reducing the bridge width by 4 feet would not provide any environmental benefits.

The reason the bridge was planned for a width of 16 feet is that this is the minimum width allowed by applicable bridge design standards. The El Dorado County General Plan Transportation and Circulation Element dated July 2004 and amended on January 2009, includes Policy TC-1, which requires that road design standards for County-maintained roads shall be based on the American Association of State Highway and Transportation Officials (AASHTO) standards, and supplemented by California Department of Transportation (Caltrans) design standards and by County Department of Transportation standards. The federal and state transportation funding programs which have provided funding for the bridge project also require that the bridge design must meet the AASHTO standards. During the County’s preliminary design process and its CEQA process for the bridge proposal, the County consulted with ENF staff. The County design took into consideration the USFS bridge design guidelines entitled “Standards for Bridge Design, Construction, Inspection and Maintenance Northern Region August 14, 2008,” which adopts the standards for bridge design, construction, and inspection that have been established by AASHTO. The Forest Service has adopted these standards, which apply to all bridges located on NFS lands, regardless of bridge ownership or road jurisdiction, to ensure public safety and resource protection. Forest Service policy (FSM 7736) directs the agency to follow the requirements of the Federal Highway Safety Act of 1968, et seq., and direction provided via the National Bridge Inspection Standards (NBIS, 23 CFR Part 650) on National Forest System (NFS) roads open to public use. Under the USFS rules, the bridge design must be completed in accordance with the latest edition of AASHTO Specifications for Highway Bridge Design. Under the AASHTO guidelines, at a minimum the bridge design must include appropriate approach roadways and site drainage, topographical site surveys, hydraulic and scour analysis, and geotechnical evaluation. Additional design criteria and guidance for bridge widths, approach roadways, and railing shall be in accordance with AASHTO Guidelines for Geometric Design of Very Low-Volume Local Roads. The bridge design must accommodate a 100-year flood, with appropriate freeboard for debris, and to allow for passage of aquatic

wildlife. At a minimum, abutments shall be located outside the bank-full stream channel and installed so as to minimize resource damage.

The 2001 AASHTO “Guidelines for Geometric Design of Very Low-Volume Local Roads” were consulted during the design of the Ellis Creek bridge project. In Chapter four, entitled Design Guidelines, the section that discusses bridge width and design states the following on page 21: “One-lane bridges may be provided on single-lane roads and two lane roads with ADT less than 100 veh/day where the designer finds that a one-lane bridge can operate effectively. The minimum width of a one-lane bridge should be 15 ft unless the designer concludes that a narrower bridge can function effectively.” Dropping below these safety design standards requires a formal “design exception” be approved because the minimum 15 foot width is considered necessary for public safety.

The proposed bridge over Ellis Creek was designed with 16 foot spacing between the two structural support trusses, leaving an approximate 15 foot clear passage inside the structural steel-truss and its protective inside railing, as required by the AASHTO standards. Since the drive-through two-truss design is a fracture critical structure, severe damage to one truss can potentially lead to a structure collapse, so that proper clear space and inside railings to shield the truss members are important safety features. Thus under USFS regulations, and the terms of the grants for the bridge, and under proper bridge engineering practices for public safety, the AASHTO guidelines must be followed, and they require a minimum of 15 foot spacing between the trusses, and that is how the Ellis Creek bridge was designed.

The plans for the bridge minimize the project construction footprint. The bridge abutments will be located in the uplands outside the ordinary high watermark (OHWM) of Ellis Creek in order to obtain the bridge height and span length necessary to pass 100-year flows. The foundation type for the bridge abutments will be spread footings landing on competent native rock for minimal foundation size. The new bridge will be 70 feet long, and will be located downstream of the existing grade crossing because that location avoids two ephemeral channels, the section of Ellis Creek is better suited to passing floods, and the southern approach to the bridge will make use of areas that have already been disturbed. Subsequent to the preliminary design approval, the plan was modified slightly to reduce the rock slope protection originally proposed for the protection of bridge abutments to further minimize potential impacts to the aquatic environment. The bridge plans now show rock slope protection outside the OHWM and no water diversion is required for construction. There is no riparian vegetation within the OHWM or seasonal wetland area at the project site. The rock slope protection does not extend into the channel or seep as identified on the approved Preliminary Wetland Delineation Map. With these proposed project modifications, all potential discharges within or below the OHWM have been eliminated.

The proposal to reduce the bridge width to 12 feet in DEIS Alternative 5 would require a “design exception” for lowering public safety design standards. A design exception would take a long time and cost a great deal of money, and there is no reason for undertaking these steps. Reducing the planned width to 12 feet would result in no measurable difference in impacts to the

riparian areas, and does not appear to be any more or less consistent or representative of the historic nature of the trail. Any historical impacts are taken care of through the Programmatic Agreement with SHPO. There is no reason to believe that a reduced width bridge would reduce the number of vehicles using the Rubicon Trail because the expected traffic would be accommodated by a bridge of either width, and the wider bridge would not increase the expected vehicular traffic because usage is determined by many other factors and the width of one bridge on the route would make no difference.

The plans for a 16 foot wide bridge have been prepared at great expense over the past few years, and it would not be possible to alter the plans at this late date to reduce the width without setting the timing of the project back significantly, which would threaten the continued availability of the current funding. The proposed bridge construction project is funded with a combination of County local transportation funds and Federal Highway Administration (FHWA) Funds administered through the California State Department of Transportation (Caltrans) Division of Local Assistance. El Dorado County also received a grant from the California Department of Parks and Recreation Division of Off-Highway Motor Vehicle Recreation for planning a new crossing for the Rubicon Trail over Ellis Creek that would reduce pollution of sediment and petroleum products in Ellis Creek. The lengthy delay that would inevitably be caused by a redesign this late in the process would most likely be the death knell for the funding, which would eliminate all of the environmental benefits that would result from a bridge taking vehicles out of the creek bed.

The design for a bridge 16 feet wide has already been approved in a number of public processes. About 1 year ago, on February 8, 2011, El Dorado County approved a Mitigated Negative Declaration (MND) under the California Environmental Quality Act (CEQA) entitled "Rubicon Trail at Ellis Creek Bridge Low Water Crossing Conversion Project." The project was a 16 foot wide bridge. During the public review period, only one comment was received on the MND, and was from the El Dorado County Historical Society requesting that the site be examined by a qualified archaeologist and that research be conducted at the County's Historical Museum. This was accomplished and also was discussed in the MND. No one raised any issues about reducing the width, and the MND was certified for a bridge 16 feet wide.

Reducing the bridge width from 16 feet to 12 feet would not provide any benefits whatsoever, and would be contrary to applicable bridge design standards, and would more than likely result in the loss of funding and the ultimate loss of the bridge.

2. Width of Easement

The description of the easement requested by the County is described on page 18, first paragraph, as follows: "The easement would generally be 25 feet from centerline with several variant widths identified." It is important to note that the requested easement is generally 25 feet on each side of the defined centerline, for a total width of 50 feet, except at Little Sluice and at Postpile.

On page 21, Alternative 3 refers to a “short bypass on the North side of Little Sluice.” The North side has what is commonly referred to as the long bypass (Route 1.8) which has the typical 50 foot width. The South side of Little Sluice has what has been called the short bypass. Alternative 3 proposes to reduce the easement on the south side of Little Sluice to 75 feet. El Dorado County's application for an easement at this location depicted a main Trail centerline through Little Sluice with a dimension of 25 feet on each side of the centerline, plus an additional easement width of 175' from the southerly edge of the main trail easement to cover the short south bypass section and the dispersed use access area. The total easement on the south side of the main route through Little Sluice, measured from the centerline of the main route through Little Sluice, would include the 25 foot easement on the south side of the centerline, plus the additional 175 feet, for a total of 200 feet south of the centerline of the main Little Sluice route. The easement on the north side of the main route is 25 feet from the centerline. El Dorado County believes that an easement of 200 feet south of the centerline of the main Little Sluice route is necessary to accommodate the activities which have and will take place there, and a narrower easement in that area would be insufficient.

3. Seasonal Closure

On page 35, the seventh bulleted assumption is that El Dorado County DOT would implement and enforce a seasonal closure. El Dorado County has stated many times that it does not believe that State law would allow it to seasonally close a non-county-maintained road, and no one has provided any analysis that would contradict this legal position. Furthermore, a seasonal closure is not necessary because the El Dorado County engineers have designed the erosion control features so that wet season usage will not create unacceptable sedimentation. Also that assumption and the following one appear to say that the Rubicon Trail is in the San Joaquin River basin, which it is not.

4. Misuse of Term “Wetland”

In several places, the DEIS uses the term “wetland” to describe a variety of different areas. This term appears to be used indiscriminately in the DEIS to describe a diverse set of different areas, and does not appear to have been used in any of its legally-defined ways. In several instances, the verbal discussion of “wetlands” in the DEIS does not accord with the wetlands depicted on the accompanying maps. See, *e.g.*, page 42 where it refers to something called the “Gerle Creek Wetland.” It is not clear how the term “wetland” is defined, or exactly what it is referring to, or whether it is used in different places in the DEIS to describe different areas. The paragraph on page 42 says the Trail “bisects an edge of Gerle Wetlands,” but the soil indicator map shows something labeled Gerle Creek Wetland a considerable distance south of the Trail. Different symbols on the maps for wet areas or wetlands are confusing, and do not appear to be used consistently. On page 43, reference is made to something called the Little Sluice Wetland, and the statement is made that the Trail crosses a “wetland area” yet the map depicts a wet area north of the Trail. It is not clear what the difference is between the terms wet soil, wetland, wetland complex, *etc.* The term wetland is fraught with meaning and legal implications in different contexts, and El Dorado County requests that the DEIS be more

scrupulous in the use of terms like wetland and wet soil, and that it be more careful in its depiction of the location of wet areas in relation to the actual location of the Rubicon Trail.

5. Sedimentation

On page 56, reference is made that the Coe and Hartzell report of 2009 estimated approximately 100 cubic yards of sediment per year were caused by use of the Rubicon Trail. The protocols used in the Coe report for sediment production were never validated, and its validity has not been established, and therefore estimates in that report such as 100 cubic yard per year are not reliable and should not be used.

In regard to the pebble counts in Ellis Creek, the Rubicon Trail Foundation arranged for a pebble count study that is more reliable and which contradicts many of the assumptions in the DEIS concerning the effort of vehicles crossing Ellis Creek. El Dorado County requests that the DEIS use that pebble count study. The estimate of a 50-fold difference in erosion rates between logging roads and the Rubicon Trail is scientifically unsupported, factually incorrect, and should not be used.

6. Miscellanea

In various places, the DEIS refers to the “construction” of erosion control features on the Rubicon Trail. See, *e.g.*, page 19, last paragraph, which is entitled “Construction of Erosion Control Features.” The County suggests that the word “construction” be changed everywhere it is used in the DEIS to “installation” of erosion control features, in order to avoid confusion with the issue of which road maintenance activities fall into the category of “maintenance” and which fall into “construction” for purposes of NEPA categorical exclusions and other purposes.

On page 21, the description of Alternative 2, the no action alternative, correctly states that with no formal written easement from the USFS, El Dorado County will continue to assert its RS 2477 rights, but it incorrectly states that if no easement is granted then no additional erosion control features would be constructed from Wentworth Springs Campground to the county line with Placer County. If no formal written easement is granted, the County would continue to assert its RS 2477 rights (which the USFS has stated are the equivalent of an easement), which include the right to maintain the road, and therefore without a formal written easement El Dorado County will continue to install erosion control measures along the Rubicon Trail just as it has been doing over the past few years.

On page 25, in the description of Alternative 5, it is stated that “No toilets would be constructed.” On page v, in the Summary of Environmental Consequences, the column for alternate 5 shows 9 toilets to be constructed. This dichotomy should be resolved. We interpret Alternative 5 to include no new toilets. The construction of new toilets, when coupled with the education campaign concerning sanitation, would be environmentally beneficial.

On page 38, first paragraph, the statement is made that approximately 17 miles of the Rubicon Trail are situated in El Dorado County. Starting at Wentworth Springs Campground

and proceeding easterly, a more accurate figure would be that there is about 8 miles of trail, plus about 2 miles of variant, in the county.

Attached hereto is a map produced by El Dorado County entitled "Rubicon Trail Comparison" which superimposes the route of the county's easement application in red, over the U.S.G.S. quadrangle map from 1897, which depicts the Rubicon Trail as it existed in 1897. The overlay shows that the routes are essentially identical. This supports the statement in the DEIS at page 272 that the modern route of the Rubicon Trail overlays in most part the historic wagon road. This also establishes that the easement applied for is essentially the same as the RS 2477 right of way claimed by the county. In regard to the RS 2477 right-of-way, the DEIS at page 10 accurately notes that the location of the trail changed a little each season, which supports the claim of right of way over variant routes. The DEIS at page 272 also recognizes the many different types of travel that have been used over the years, and correctly notes that "all of these modes of transportation have either necessitated or desired slightly different routes." The use of each of these different routes established a legal right of way over that route under RS 2477. The easement, if granted, will allow the county to channel use into one main route with a few carefully selected and maintained variant routes, which will lessen the impact of vehicular use in the Eldorado National Forest.

Sincerely,

LOUIS B. GREEN
County Counsel

By: _____


Edward E. Knapp
Chief Ass't. County Counsel



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, CA 94105-3901

2012 JAN 31 PM 12:57

JAN 30 2012

Kathryn D. Hardy
Forest Supervisor
El Dorado Forest
100 Forni Road
Placerville, California 95667

Subject: Draft Environmental Impact Statement for the Rubicon Trail Easement, El Dorado County, California (CEQ# 20110417)

Dear Ms. Hardy:

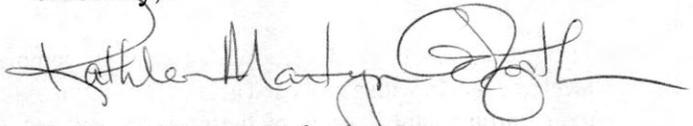
The Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (EIS) for the above project. Our review and comments are pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

The Draft EIS evaluates the impacts of issuing a right-of-way easement to El Dorado County for improvements along the Rubicon Trail within Eldorado National Forest, Pacific Ranger District. The project includes constructing a bridge at Ellis Creek and hardening the crossing at Buck Island to reduce sediment delivery, constructing vault toilets to address sanitation issues along the trail, and implementing various erosion control measures. EPA supports the project's goals of reducing erosion and runoff from the historic Rubicon Trail into nearby creeks and wetlands. Overall, the Draft EIS contains valuable information useful to both the public and decision maker(s) and we have rated the Draft EIS as Lack of Objections (LO) (see enclosed "*Summary of Rating Definitions*").

While we have no objections to the project, EPA recommends that the Forest Service elaborate on the Best Management Practices (BMPs) that will be used on a site-specific basis along the 6.7 miles of the Rubicon Trail. Appendix C contains descriptions of BMPs that will be used to reduce sediment and contaminant delivery to hydrologic features in the project area but does not identify which measures will be used to address specific erosion and sediment problems identified in the Draft EIS. One example is the Winter Camp Wetland, which is noted as a problem area because of severely incised and exposed banks, high disturbance, and sanitation issues. The Draft EIS states that the installation and maintenance of erosion control features will reduce sediment and contaminant delivery to these wetland features. We recommend that the Final EIS identify the specific features that will be employed at Winter Camp Wetland, as well as the other areas listed on page 42, and discuss their effectiveness for reducing erosion and sediment delivery to streams.

We appreciate the opportunity to review this Draft EIS. When the Final EIS is released for public review, please send one hard copy and one CD to the address above (mail code: CED-2). Should you have any questions regarding our comments, please contact me at (415) 972-3521, or contact Stephanie Skophammer, the lead reviewer for the project. Stephanie can be reached at (415) 972-3098 or skophammer.stephanie@epa.gov.

Sincerely,



Kathleen Martyn Goforth, Manager
Environmental Review Office

Enclosures: Summary of EPA Rating Definitions

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

ADEQUACY OF THE IMPACT STATEMENT

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

Washoe Tribe of Nevada and California

Tribal Historic Preservation Office



February 17, 2012

Jordan Serin, Heritage Resource Specialist
Eldorado National Forest

Subject: Rubicon Trail Easement and Resource Improvement Project

Dear Mr. Serin,

Thank you for consulting with the Washoe Tribe of Nevada and California on the proposed project undertaking. The project is within the ancestral territory of the Washoe Tribe and there are numerous heritage resources valuable to the Washoe Tribe.

Although we are concerned with project effects to Washoe heritage resources we are equally concerned with environmental concerns as well. We are pleased to see remediation efforts under way to preserve water quality.

Please see the following list of questions and comments from the Washoe Tribe.

- Will there be monitoring plan that monitors off road traffic to ensure with USFS directives?
- At risk archeological sites: I am not sure if the proposed mitigation measures would be adequate enough to keep people out and causing further destruction. I propose protecting by installing large boulders to keep vehicles out and on the main road.
- I would like to visit the at risk sites to get a better understanding of the adverse impacts and make a mitigation plan.
- The flagging should only be put up during construction work and take down when no construction activities to keep looters from finding the locations.
- If there is to be any site excavations, we prefer no data recovery, but leave in place or relocate to a safe place. Unless eminent threat of loss. Any artifact removal diminishes our presence and our history. Things must be left in place to preserve the integrity.
- Will there be ARPA signage at the trailheads? The public must be informed of cultural sensitivity.

- Will there be a site monitor in the at risk sites when ground disturbance activities take place?
- The closure and addition of roads: Is there any archeological resources within the proposed new road additions?
- Will the closed roads be rehabilitated?

The tribe wishes to keep involved with this project and be consulted with on protection of archeological resources.

Thank you and call me if you have any questions at (775) 888-0936

Respectfully,



Darrel Cruz, CRO/THPO

Cc; Washoe Cultural Resources Advisory Council

Appendix D. Response to Comments

Appendix D. Response to Comments

Response to Comments ---

Table of Contents

Alternative 1
Alternative 2
Alternative 3
Alternative 4
Alternative 5
Alternatives
Assumptions
Aquatics
Botany
Bridges
CAO
Cultural Resources
DEIS errors
Dispersed Use
Easement
Ellis Bridge
Forest Plan
Hydrology
Information
Mitigation
Monitoring
New Routes
Noxious Weeds
Oil and Petroleum
Over the Snow Travel
Purpose and Need
Recreation
RCO
Sanitation
Soils
Seasonal Closure
Supplemental DEIS
Wetlands
Wildlife

Alternative 1

PEER - Alternative 1– The Forest must explain in a supplemental draft EIS what wet season closures, if any, are proposed, and analyze the impacts of wet weather use in any areas where wet season closures are not proposed. As the Forest is well aware, motorized travel on trails in the wet season causes significantly more damage to soils, water resources, and species habitats than in the dry seasons.

Response: The FEIS has been modified to display the seasonal closures by alternative as shown in Table 2-1, Chapter 2 of the FEIS. The analyses in Chapter 3 have been modified to reflect the seasonal closures included in each alternative. The need for a supplemental DEIS is addressed under the Response to Comments section titled “Supplemental DEIS”.

PEER - Alternative 1 includes a vault toilet on Walker Hill, west of Soup Bowl. A supplemental draft EIS must analyze the direct and indirect effects on the environment of placing a toilet in this location. A supplemental draft EIS should state whether the county or Eldorado NF will enter into a contract with the Rubicon Trail Foundation for cleaning of this and any other toilets, and the details of that contract. A Forest Service sanitation specialist, Dan Totheroh, provided a report detailing the difficulties of cleaning and maintaining vault toilets on the difficult terrain; the supplemental draft EIS must disclose how the proposal will address those issues. (Rubicon Trail Human Waste Removal, Exhibit F).

Response: Chapter 2 of the FEIS has been modified to describe the maintenance of the toilets proposed to be installed in various alternatives. The difficulty in maintaining these toilets is recognized; however, as described in the environmental effects analyses in Chapter 3, there are benefits to the installation of these toilets. Mr. Totheroh’s report suggested installation of a toilet at Loon Lake trailhead, installation of additional vault toilets, and use of personal portable toilets (RubiCANS). A toilet has been installed at Loon Lake trailhead and at Ellis Creek, and education efforts have resulted in increased use of personal portable toilets and WAG bags. Mr. Totheroh suggested using a helicopter to transfer waste from the vault toilets, which would be difficult maintenance. Rubicon Trail Foundation has acquired and equipped a vehicle to pump vault toilets along the Rubicon Trail, for transfer to a holding tank at Ellis Creek.

PEER - A supplemental draft EIS must explain why straw bales and signs are the only barricades proposed for defining the parking areas at Little Sluice, as opposed to rock and log barriers in the other parking areas. It must analyze the effectiveness of straw bales and signs, in light of their historical ineffectiveness and relatively short life spans, as described in the Aquatics BE. “Presently at the popular Little Sluice overlook, vehicles can drive off the road within 75 feet of Spider Lake, although fallen

carsonite signs and decaying hay bales limit parking outside the RCA of Spider Lake” (Aquatics BE, P. 17).

Response: Alternative 6 has been added which includes the placement of permanent rock barriers and markers in the area of Little Sluice. The environmental effects are described in Chapter 3.

Alternative 2

Snowlands Network - Even if the County were to prove their R.S. 2477 rights, that action would not preclude the Forest Service from limiting use of lands they administer in order to protect the environment from degradation. Therefore the No Action alternative should include words to the affect that the Forest Service will continue to have the authority to limit and restrict use of the Trail as necessary to ensure that the trail and surrounding lands are not subject to environmental damage.

Response: The description of Alternative 2 in Chapter 2 identifies that there will continue to be a lack of clarity regarding responsibility for management of the trail if El Dorado County continues to assert R.S. 2477 rights. The description of Alternative 2 does not limit the Forest Service's ability to administer the lands adjacent to the Rubicon Trail.

PEER - Alternative 2: We assume this alternative is only included to describe baseline conditions. It obviously does not meet the Purpose and Need.

Response: Correct; Alternative 2 does not meet the Purpose and Need, and is used as a baseline for analysis of effects.

Alternative 3

CORVA - Between the 5 alternatives, other than Alternative 2 (the no action alternative) the differences are subtle but important to continued use and good condition of the trail. CORVA endorses the selection of a modified Alternative 3 as the preferred alternative, or Alternative#4.

Response: Correct; there are subtle, but important differences between the various alternatives which respond to the issues brought forward by the public.

CORVA - The planned construction of 6 toilets in Alternative 3 is a very welcome addition to the easement plan. Again, acknowledging current traffic and use of the Rubicon Trail enabled planners to more accurately assess the needs of the trail, and plan for the correct amount of toilet facilities.

Response: The addition of toilets will provide for better management of sanitation needs along the Rubicon Trail.

CA4WDC - The proposed bridge at Buck Island is unneeded and unwarranted. We are pleased that the preferred alternative does not include this bridge.

Response: The EIS examines several options for crossing the Little Rubicon River in response to comments received from the public and in order to provide the decision-maker and the public with a range of alternatives to consider.

CA4WDC - Our Association has been proactive about the concerns of human waste along the route. We have supported efforts to modify longstanding user activities and to promote and educate users about alternative practices of human waste management. To this end, we are glad to see the number of toilets in Alternative 3 and feel the locations will serve the public well.

Response: The addition of toilets will provide for better management of sanitation needs along the Rubicon Trail.

Barton - It is unclear why NSRELD-63D-A is being proposed to be added to the NFS (see Map 2 of Alternative 3). This is the "short bypass" of Little Sluice and the County has slated it for closure for safety reasons and because it requires frequent maintenance in order to remain open (there is steep drop off at the bottom that requires concrete work every few years).

Response: Alternative 3 has been modified to remove this route as suggested by the commenter.

Barton - We are pleased to see that Alternative 3 does not include a bridge at Buck Island Lake. Such a bridge would be totally unnecessary.

We are pleased to see that Alternative 3 includes five more toilets than Alternative 1 and one more than Alternative 4. Each toilet appears to be in a good location.

Response: The addition of toilets will provide for better management of sanitation needs along the Rubicon Trail. The elevated rock ford, rather than a bridge was included in Modified Alternative 3 for the Little Rubicon River crossing at Buck Island Reservoir to provide differences between the various alternatives in response to the issues brought forward by the public.

PEER - Alternative 3- A bridge at the Buck Island outlet is clearly needed to protect hydrological and aquatic resources; the hardened crossing will not accomplish this, as shown in the hydrological report. It is ridiculous to assert that a bridge here (under an existing large concrete dam) would degrade the view, when the same alternative includes a 16-ft bridge at Ellis Creek. The bypass north of Little Sluice would continue impacts to wetlands: “The Long Bypass next to Little Sluice is composed primarily of granite bedrock slabs with drainage pathways between slabs. Oil spots left on the rocks by vehicles could drain oil pollutants into the Little Sluice wetland and Winter Camp wetland” (Aquatics BE, P. 14)

Placement of additional vault toilets should be analyzed for direct and indirect impacts that result from the placement, which will encourage concentrated use in those locations. Clarify who will maintain the additional toilets.

Response: The elevated rock ford, rather than a bridge was included in Alternative 3 for the Little Rubicon River crossing at Buck Island Reservoir to provide differences between the various alternatives in response to the issues brought forward by the public. The effects of a crossing rather than a bridge are included in Chapter 3. Alternatives 5 and 6 do not include issuance of an easement for any bypasses on the north side of Little Sluice. The effects of not authorizing any bypasses at the Little Sluice are described in Chapter 3. Chapter 2 of the FEIS has been modified to describe the maintenance of the toilets proposed to be installed in various alternatives. The difficulty in maintaining these toilets is recognized; however, as described in the environmental effects analyses in Chapter 3, there are benefits to the installation of these toilets. Toilet locations were selected based on areas of existing concentrated use as stated in the Modified Alternative 3 description in Chapter 2. The potential for encouraging or increasing concentrated use at these locations is addressed in the Recreation section in Chapter 3.

Alternative 4

Folena - I would like to support of the above Alternative # 4, with some additions from Alternative #3 and others Alternatives

From Alt #3- The easement would include addition of the short bypass on the north side of Little Sluice and reduce the easement width on the south side of Little Sluice to 75 feet.

From Alt #1- **Ellis Bridge:** Construct a new 16 feet wide, 70 feet long prefabricated steel truss bridge approximately 60 feet downstream of the existing Ellis Creek ford. Bridge abutments would be located in the uplands outside the ordinary high watermark of Ellis Creek. The foundation type for the bridge abutments would be spread footings. Rock slope protection would be placed around the bridge abutments and upstream of the proposed bridge along the outside curve of Ellis Creek to prevent scour. The rock slope protection would extend from the bridge abutments to the toe of the Ellis Creek bank below the high watermark. Large boulders would be placed at both bridge approaches to guide vehicles to the bridge and protect the bridge from being damaged.

From Alt #1- **FOTR Bridge:** Remove the existing timber structure and replace with a three sided bottomless arch. Remove existing rock ford crossing downstream of the existing crossing structure and install erosion control features including rock slope protection, rock lined channel, rock fill, and delineate trail with rock boulders and logs. Reconfigure channel and stabilize banks with rip-rap, matting, wattles, and riparian vegetation.

From Alt #1- **Addition of vehicle access for dispersed recreation:** Specific unauthorized routes listed in the Comparison of the Alternatives below will be added to the National Forest Transportation System (NFTS) and be designated for 4WD trail vehicle use in order to provide vehicle access for dispersed activities such as camping. Rock/log barriers and signs would be used to define limits vehicles may travel off of the designated routes. Unauthorized routes added to the NFTS will be designated as 4WD trails open to high clearance vehicles and will follow the seasonal restrictions established in the 2008 Travel Management Record of Decision. These routes will be shown on the updated Motor Vehicle Use Map following the final decision. The following list identifies the locations where unauthorized routes will be added to the NFTS: the Soup Bowl, Buck Island Dam Site, North Shore Buck Island Spur, Eagle View, East Buck Island A and B Spurs and Buck Island Overlook (displayed on maps below).

Response: Alternative 4 does not include the short bypass at Little Sluice based on comments from El Dorado County and many user groups, due to the steepness.

Alternative 4 does include a 16' bridge at Ellis Creek, replacement of the FOTR bridge, and additional vehicle access for dispersed recreation.

CA4WDC - The CA4WDC finds that Alternative 4 most closely reflects the stated goal of the County and the recreating public who wish to enjoy this route. The County has stated it will accept responsibility and has demonstrated its willingness to work cooperatively with all parties to insure the integrity of the route. The USFS does not adequately explain its rejection of the County's request for the scope of the Easement by making Alternative 3 the preferred action.

Response: Alternative 1 reflects the easement request received from El Dorado County. Alternative 4 includes additional elements to better meet public use and needs along and adjacent to the Rubicon Trail. The easement and route for the Rubicon Trail are the same in Alternatives 1 and 4. Chapter 3 of the FEIS describes the environmental effects of implementing each of the alternatives. The Record of Decision will explain the rationale for the selection of the selected alternative.

CA4WDC - We remain convinced that Alternative 4 would create a better managed, more user friendly, and environmentally sound way forward. The analysis the USFS did of Alternative 4 continues to claim new impacts even though all proposed routes and dispersed camp areas have decade's long history. The funneling of use to less area is not prudent. The USFS has not adequately defended its rejection of the desires of the County and trail users set forth in Alternative 4. Alternative 3 comes closer to addressing these desires than the Proposed Project. Please reconsider Alternative 4 or at a minimum include the concerns we have raised. I am available for additional information or context as you develop the Final Environmental Impact Statement.

Response: The environmental effects analysis in Chapter 3 has been modified to reflect where impacts are continuing to occur or where there will be new impacts. There are subtle, but important differences between Alternatives 3 and 4 which respond to the issues brought forward by the public. The environmental effects of concentrating use in these two alternatives have been analyzed and are displayed in Chapter 3.

Barton - Table 2-3 summarizes the environmental impacts of each alternative, and suggests that Alternative 4 will not be consistent with RCOs 1-6. Page 85 of the DEIS outlines why the USFS does not believe Alternative 4 meets RCOs 1,2,4 or 6. However, the "routes" that USFS proposes to "add" under Alternative 4 are not new routes. These routes have been used, and are currently used, so the suggestion that use of these routes will lead to "increased" use, "new disturbances," or additional degradation is unfounded. The use of these routes is part of the baseline of the project, and instead of looking at the impacts of the baseline, the USFS should be looking at the impacts that will result from removing these routes from use. Removal

of these routes could lead to increased use of the remaining routes, which has not been adequately discussed in the DEIS.

Response: The environmental effects analysis in Chapter 3 has been modified to reflect where impacts are continuing to occur or where there will be new impacts. The SNFPA requires the USFS to analyze the impact of new activities, such as the addition of new routes (i.e. those that do not exist or those that exist but are not currently recognized as part of the NFTS) within RCAs for consistency with RCOs. Based on field reconnaissance and available GIS data, it was determined that portions of the 3 routes in Alternative 4 that are not in Modified Alternative 3 would be within RCAs as defined in the SNFPA. While additional sediment and contaminant delivery associated with use of these routes may be minor, it would still be additive in terms of cumulative watershed effects if only for a short duration and at a localized scale.

Barton - As discussed above, on balance, Alternative 3 is better than the Proposed Project, but Alternative 4 embraces more of the County's and the off-highway community's concerns, and the USFS has provided no compelling reason for rejecting it. Alternative 4 will not result in any new impacts as suggested by the USFS. Therefore, we encourage the USFS to incorporate our suggestions into the final EIS and select Alternative 4 as the project. If during the course of drafting the final environmental impact statement you need additional information from us, please let us know.

Response: The Record of Decision will explain the rationale for the selection of the selected alternative.

PEER - Alternative 4 fails to meet the SNFPA RCOs

This alternative has all the impacts of Alternative 1, with additional impacts from the designation of new user-created routes within the RCAs:

Alt. 4 fails to meet RCO #1: "Use of the 14N34B spur may continue to degrade road conditions leading to sediment delivery to Ellis Creek. Use of NSRELD-63-V near Spider Lake could lead to sediment and contaminant delivery to Spider Lake and associated wetlands. Proposed route NSRELD-63-U is within the RCA of the Little Rubicon River and could result in new disturbances that increase sediment and contaminant delivery potential thereby adversely impacting water quality and fisheries habitat" (Hydrology Report, P. 30)

Alt. 4 fails to meet RCO #2: "Under Alternative 4, there would be allowed use of 14N34B in close proximity to Ellis Creek, NSRELD-63-V would be in close proximity to Spider Lake, and NSRELD-63-U would be in close proximity to the Little Rubicon River. Use of 14N34B could degrade road conditions leading to sediment delivery to Ellis Creek and the filling in of pools which would alter aquatic habitat and geomorphic conditions. NSRELD-63-V would be within the RCA of Spider Lake and its

associated wetland and pond habitat that could lead to increased use along the shoreline resulting in a reduction of riparian vegetation, and compaction and bank failures. These impacts would degrade shoreline habitat, alter shoreline geomorphic processes, and disturb young fish and larval amphibians that use these shallow water areas. NSRELD-63-U is within the RCA of the Little Rubicon River and could result in new disturbances that increase sediment and contaminant delivery potential thereby degrading biological and geomorphic conditions and impacting the aquatic species that reside there” (Hydrology Report, P. 30).

Alt. 4 fails to meet RCO #4: “The effects to physical and biological characteristics associated with aquatic- and riparian-dependent species under this alternative would be similar to those under Alternative 1 with some exceptions. Under Alternative 4, there would be allowed use of 14N34B in close proximity to Ellis Creek, NSRELD-63-V would be in close proximity to Spider Lake, and NSRELD-63-U would be in close proximity to the Little Rubicon River. As described in RCO #1 and RCO under this alternative, these routes would likely be within the RCAs of Ellis Creek, the Winter Camp Wetland, Spider Lake, and the Little Rubicon River and have the potential to adversely impact water quality, geomorphic processes, and aquatic and riparian habitat” (Hydrology Report, P. 31).

Alt. 4 fails to meet RCO #5: “The new route providing access to Spider Lake would not likely preserve, restore, or enhance meadows, lakes, and wetlands. Therefore, the new route providing access to Spider Lake would therefore not provide the ecological conditions and processes needed to recover or enhance the viability of species that rely on the Spider Lake” (Hydrology Report, P. 31).

Alt. 4 fails to meet RCO #6: “The effects under this alternative would be similar to those under Alternative 1 with a few exceptions. Under Alternative 4, there would be allowed use of 14N34B in close proximity to Ellis Creek, NSRELD-63-V would be in close proximity to Spider Lake, and NSRELD-63-U would be in close proximity to the Little Rubicon River. While many of the activities proposed under Alternative 4 would improve water quality, aquatic habitat, geomorphic processes, and hydrologic connectivity; the allowed use of 14N34B, use of NSRELD-63-V and NSRELD-63-U would not. As described in RCO #1 and RCO #2 under this alternative, these additional activities would not maintain, restore, or enhance water quality and habitat for riparian and aquatic species” (Hydrology Report, P. 31).

Response: Correct, as identified in Chapter 3 of the FEIS, Alternative 4 fails to meet RCO # 1, 2, 4, 5 and 6.

Alternative 5

Snowlands Network - Contamination of the environment due to the discharge of petroleum products from 4x4 vehicles on the Rubicon Trail is the result of the degradation of the Trail and intentional use of vehicles in areas where it is likely that damage will occur to the oil pan or transmission, or due to over-turning of the vehicle. We refer to "Mud on the Rubicon 4x4 Trail" where poor judgment on the part of drivers results in environmental pollution. This pollution can be stopped while maintaining the historical use of the trail by adoption of a "single route easement" that is suitable for street legal vehicles. In fact, the DEIS states: "The single route easement would reduce water quality degradation associated with petroleum products being delivered to the Little Sluice and Winter Camp wetlands from the long bypass. Sediment and contaminant delivery potential to hydrologic features near Little Sluice and the Little Rubicon River would be reduced. "

Yet the Forest Service's Proposed Alternative fails to implement a single route easement.

Response: The environmental effects of implementing the various alternatives, including a single route easement, is presented in Chapter 3 of the FEIS. The rationale for the selection of the selected alternative will be provided in the ROD.

PEER - In principle, we support the Buck Island Bridge and replacement of the FOTR bridge to minimize impacts from motorized vehicle use on forest resources.

However, there is no explanation for, or analysis of, the need for a 16-foot bridge at Ellis Creek. This large a bridge needlessly disturbs more riparian vegetation at the site than would a smaller bridge and is visually incompatible with a trail experience. A 12-ft bridge, such as proposed at Buck Island, would be more than ample for trail use, would minimize disturbance in a riparian area and is visually more appropriate. The Forest should look at a smaller alternative in a supplemental draft EIS.

Response: Chapter 3 provides a comparison of effects between Alternatives 1 and 5 regarding the differences in constructing a 16' wide bridge and a 12' wide bridge. Modified Alternative 3 includes construction of a 16 foot wide bridge at Ellis Creek. Public comments expressed concerns about riparian disturbance from construction of a 16 foot wide bridge. El Dorado County has received funding for the bridge through Federal Highways Administration administered through CalTrans Highway Bridge Project. The federal and state transportation funding programs require the bridge design must meet the American Association of State Highway and Transportation Officials (AASHTO) standards for Geometric Design of Very Low-Volume Local Roads. The 2001 AASHTO "Guidelines for Geometric Design of Very Low-Volume Local Roads" were consulted during the design of the Ellis Creek bridge project. In Chapter four, entitled Design Guidelines, the section that discusses bridge width and design states

the following on page 21: "One-lane bridges may be provided on single-lane roads and two lane roads with ADT less than 100 vehicles/day where the designer finds that a one-lane bridge can operate effectively. The minimum width of a one-lane bridge should be 15 feet unless the designer concludes that a narrower bridge can function effectively." Dropping below these safety design standards requires a formal "design exception" be approved because the minimum 15 foot width is considered necessary for public safety. The proposed bridge over Ellis Creek was designed with 16 foot spacing between the two structural support trusses, leaving an approximate 15 foot clear passage inside the structural steel-truss and its protective inside railing, as required by the AASHTO standards for safety. A 16 foot wide bridge would impact 0.05 acres of riparian habitat versus a 12 foot bridge would impact 0.03 acres of riparian habitat. I selected Modified Alternative 3 because the impacts to riparian habitat from building a 16 foot wide bridge versus a 12 foot wide bridge would be 0.02 acres.

PEER - The DEIS is inconsistent in its description of Alt. 5. In some places it states toilet facilities would be installed under this alternative; in others it states no toilet facilities would be built. This inconsistency frustrates the public's ability to comment on the alternative. The DEIS identifies as Significant Issue #1: "Use during the wet season causes damage to resources." Only Alternative 5 specifically addresses this issue.

Response: The comparison table in Chapter 2 has been corrected with respect to the number of toilets proposed in each alternative. The FEIS has been modified to display the seasonal closures by alternative as shown in Table 2-1, Chapter 2 of the FEIS. The analyses in Chapter 3 have been modified to reflect the seasonal closures included in each alternative.

PEER - As currently designed, all alternatives violate NFMA because they fail to comply with the SNFPA Standards and Guidelines for Riparian Conservation Areas and noxious weeds. None of the Alternatives sufficiently addresses the many and complex issues on the Rubicon Trail. Alternative 5 could potentially be amended in a supplemental draft EIS to include feasible ways to deal with human waste and noxious weeds and potentially meet the required standards.

Response: Mitigation measures for the spread of invasive plant species have been added to all of the action alternatives. Consistency with RCO standards and guidelines by alternative is displayed in Appendix B.

The SNFPA does not state that activities cannot occur within RCAs, but that such activities must be analyzed for consistency with RCOs, and appropriate mitigation and protective measures identified. Components of the alternatives were formulated based on scoping comments and are an attempt to address consistency with RCOs by improving RCA conditions. There are components within the alternatives that are designed to at the least maintain conditions and in some cases restore or enhance

these conditions. This information was used to complete the analysis regarding which individual RCOs would be met by each alternative.

PEER - Alternative 5 best meets the SNFPA RCOs:

RCO #1: “The seasonal closure would reduce rutting, displacement, vegetation loss, soil compaction, and trail widening associated with wet season use; thereby reducing wet weather soil impacts which in turn could affect water quality. Direct water quality effects from turbidity and petroleum products associated with driving through standing water on the trail, driving through flowing trail segments, and low-water crossings would be reduced. Closure of unauthorized routes and trail variants could lead to natural recovery over time as groundcover increases and vegetation becomes reestablished; which would eventually reduce soil loss and sediment delivery to nearby hydrologic features.

“The single route easement would reduce water quality degradation associated with petroleum products being delivered to the Little Sluice and Winter Camp wetlands from the long bypass. Sediment and contaminant delivery potential to hydrologic features near Little Sluice and the Little Rubicon River would be reduced” (Hydrology Report, P. 32).

Riparian Conservation Objective #4: “The seasonal closure would reduce rutting, displacement, vegetation loss, channeling of flows, compaction, and trail widening associated with wet season use. The seasonal closure would also reduce the disruption of flow patterns which affect hydrologic connectivity. In addition unauthorized routes and some trail variants would be closed allowing for vegetation reestablishment and improved groundcover. As mentioned in RCO #1 and RCO #2 under this alternative, activities within RCAs would be reduced and in some cases RCA conditions improved thereby maintaining the physical and biological characteristics associated with aquatic- and riparian-dependent species through improved water quality, hydrologic connectivity, geomorphic processes, and aquatic and riparian habitat” (Hydrology Report, P. 33).

Riparian Conservation Objective #5: “As described in RCO #1 and RCO #2 under this alternative, these activities would improve water quality, aquatic habitat, geomorphic processes, and Hydrologic connectivity. Activities proposed under Alternative 5 would preserve, restore, and in some cases enhance meadows, lakes, and wetlands; thereby providing the ecological conditions and processes needed to recover or enhance the viability of species that rely on these areas” (Hydrology Report, P. 33).

Riparian Conservation Objective #6: “As described in RCO #1 and RCO #2 under this alternative, these activities would improve water quality, aquatic habitat, geomorphic processes, and Hydrologic connectivity. This alternative would maintain, restore, and in some cases enhance water quality and habitat for riparian and aquatic species” (Hydrology Report, P. 34).

Response: Alternative 5 is consistent with RCO # 1, 4, 5 and 6.

Alternatives

Snowlands Network -

Of the five alternatives, four are "action" alternatives. Of those, alternatives 1, 3 and 4 are almost the same. The only differences are how the Buck Island crossing is dealt with, the number of toilets and the exact mileage of unauthorized routes closed or added.

All substantial differences are lumped into Alternative 5. This alternative includes (1) a wet season closure and (2) a single route without variants. Alternative 5 does not include a requirement that the single route be navigable by street legal vehicles.

Limit use of the Trail to street legal vehicles only was an alternative proposed by the public during scoping to reduce the trail to one route and eliminate the need for variants to bypass the areas that are difficult to maneuver. Alternative 5 addresses this concern by issuing an easement for one route without variants; therefore it was eliminated from detailed study.

The public recommended limiting the Trail to street legal vehicles AND making the Trail a single route that is navigable by street legal vehicles. However, the single route with no variants shown on the map for Alternative 5 shows it going through the Little Sluice Box, which is not navigable by street legal vehicles. Furthermore, the description of Alternative 5 does not include any language that indicates that any changes would be made to the Little Sluice Box that would make it passable by street legal vehicles.

Therefore the range of alternatives is not adequate and not all issues were analyzed in sufficient detail to determine whether they are in the environment's best interest.

Response: Modifications have been made to the EIS to address comments and information raised during the public comment period, including addition of Alternative 6 which proposes restoration of Little Sluice so that it is passable by all motorized vehicles.

Assumptions

Hendricks - Three of the assumptions on which the analysis is based are flawed. The assumptions are stated on page 35 of the DEIS. The second assumption listed is "The public would follow the rules": There are no facts stated to back up this assumption and is contrary to the correct statement on page 250 in the Recreation section, under Visitor Management - "A major reason underlying participation is to get away from the controls and constraints of the everyday world." And, this is graphically illustrated by what is going on out on the Rubicon Trail. Unacceptable behavior is rampant and celebrated out on the Trail.

Platt - The Basic Assumptions (DEIS pg. 35) applied to all sections of the DEIS are flawed and address for the most part, the hypothetical rather than the reality of the past, present and future situation on the Rubicon. The assumptions are predicated on the belief that the public will follow the rules. The bulk of the problems associated with the Rubicon are a result of non-compliance with rules and regulations by users. Observations on the trail testify to this fact. Evidence of barriers being moved or driven over is apparent. Carsonite signage restricting use to the trail in many instances is ignored, vandalized or destroyed, resulting in new user created trails and play areas, trail widening and damage to the National Forest.

Response: We have removed those assumptions from the document. Signs and route barriers proposed under several alternatives will help reduce unauthorized use. In addition, while unauthorized use is expected to continue, enforcement and education are expected to further reduce that use over time.

Hendricks - Assumption three listed is: "The county has stated parking within the easement would be allowed anywhere within the 25 feet from the centerline either side as long as it doesn't damage resources. The assumption is that the public would follow the rules and damage will not continue." My comments above also apply to this flawed assumption.

To eliminate trail widening and resource damage outside of the narrow travel way this must be required in the easement: Define on the ground the authorized travel way and turnouts with barrier rocks and logs, supported by signs and trail markers. Clearly mark and maintain the outer boundaries of the Easement with identifiable signage.

Platt - It is false to assume that drainage structures will keep vehicles on the trail thereby preventing damage to banks. Trail widening is a direct result of user attitude and behavior, period.

The assumptions that this analysis should be based upon are the 3E's: Engineer, Educate and Enforce. Identify the problem, engineer a solution, educate and inform the users and most importantly, protect the investment through strict law

enforcement. Responsible trail users deserve to have their trail and recreation experience protected.

Response: This assumption has been removed from the final document. Mitigation measures have been incorporated in the action alternatives that restrict access of the Rubicon Trail in sensitive areas. Alternative 6 has been added which includes defining the trail on the ground with barrier rocks and logs, supported by signs and trail markers. The environmental effects of implementing these alternatives are shown in Chapter 3.

Hendricks - The seventh assumption listed is: "El Dorado County would implement and enforce a seasonal closure as needed In order to meet the terms of the CAO issued by the state of California Regional Water Quality Control Board, Central Valley Region and to fulfill water quality standards in the Water Quality Control Plan (Basin Plan) for the Sacramento River Basin established by the California Regional Water Quality Control Board, Central Valley Region. (Cleanup and Abatement Order No. RS-2009-0030, page 8 -#2)"

This assumption is flawed because seasonal closure for protection of all resources is too important of an issue to leave out of the requirements of this proposed easement. Leaving this requirement out with the expectation that El Dorado County will handle it is an abdication of the Forest's duty to protect watersheds and resources in the public's behalf. El Dorado County has commonly resorted to the claim that they cannot legally adopt any requirements of users of the Rubicon Trail, including seasonal closure. This is a weak legal opinion that has never been tested in the courts.

Platt - The assumption that Seasonal Closures would be the responsibility of El Dorado County Department of Transportation, if they see the need to implement, is irresponsible to say the least. The Rubicon Trail lies on National Forest Lands and it is the responsibility of the Forest Service to implement a seasonal closure as supported by the analysis in this DEIS, Forest Service policy and regulations, Best Management Practices and the Forest's Land and Resource Management Plan.

Response: The assumption regarding El Dorado County's responsibility to implement and enforce a seasonal closure has been removed from the final document. The alternative descriptions have been modified to describe the seasonal closures included in each alternative and the effects analysis in Chapter 3 describes the effects.

Aquatics

Barton - On page 71 of the DEIS, the USFS suggests that the proposed 200-foot easement between Little Sluice and Spider Lake could lead to increased use of the lake shore and the degradation of the shoreline. However, use of the shoreline has decreased since 2004 and has stabilized at a lower level under current conditions despite regular use of the proposed 200-foot easement area. The widening of the easement at this location then would simply recognize existing conditions and would not lead to increased use. This result is confirmed in the DEIS at the top of page 289. Furthermore, the DEIS states that the 200-foot easement would be within the RCA of Spider Lake. However, the 175-foot easement chosen by the County would be outside the RCA of Spider Lake.

Response: While this easement may not necessarily increase visitation, acceptance of it would be inconsistent with the SNFPA. The SNFPA requires the USFS to analyze the impact of new activities, such as the addition of new routes or easements (i.e. those that do not exist or those that exist but are not currently recognized as part of the NFTS) within RCAs for consistency with RCOs. Based on field reconnaissance and available GIS data, it was determined by the RCO team (consisting of Botany, Aquatics, and Hydrology) that this area would likely be within RCAs as defined in the SNFPA and that activities within this area could potentially have adverse impacts on RCA conditions. El Dorado County's easement request in the vicinity of Spider Lake was for a total width of 200 feet (175 feet in addition to the 25 foot standard width).

Barton - On page 95 of the DEIS, the USFS asserts that the low trout biomass on the Little Rubicon River can be attributed to two causes, recreational fishing or impacts from off-highway vehicles. The USFS fails to consider several other possibilities, such as competition from the golden shiners, spills from Buck Island Lake (see page 100 of DEIS), the lack of fish planting present in other streams, and improper comparisons.

Response: Correct, there are other reasons that may be affecting trout populations in the Little Rubicon River besides the two that were given. Spills from Buck Island Lake, along with reduced macroinvertebrate assemblages, which could be caused by the spills, result with less food for trout. The habitat downstream is comprised of bedrock chutes which tend to be poor habitat structure for trout species, plus there is very little spawning gravel (DTA and Stillwater 2005). Many additive impacts have caused cumulative effects for trout, resulting with their difficulty to survive in this reach. Competition from golden shiners may not be a significant factor, though, as trout will eat golden shiners (D.Hanson, 2012, pers.comm.), although they do compete for other available food, such as small surface invertebrates. The analysis in Chapter 3 has been modified to include these factors.

PEER - Like the Hydrology Report, the Aquatic BE appears to assume a wet season closure, with only an unquantified amount of winter use by private landowners. A

supplemental draft EIS is needed to clarify which alternatives include wet season use and the amount of that use, and evaluate the impacts to resources based on accurate assumptions regarding wet season use.

Sierra Nevada Yellow-legged frog-The Sierra Nevada yellow legged frog is a candidate species for protection under the ESA and the California ESA, and we expect that the species will be provided full protection under the California ESA within the next few months as recommended by the California Department of Fish and Game (See Exhibit G, Status Review, November 28, 2011; February 2, 2012 California Fish and Game Commission agenda, Item 6(a)(<http://www.fgc.ca.gov/meetings/2012/020212agd.pdf>)). The Aquatic Biological Evaluation and Management Indicator Species of the Rubicon Trail Easement (Aquatic BE) for the DEIS admits the presence of suitable habitat within the analysis area for Sierra Nevada yellow-legged frog. "Potential Sierra Nevada yellow-legged frog habitat within ½ mile of the Rubicon Trail includes Gerle Creek wetland, Winter Camp ponds and wetland, Little Sluice wetland, Spider Lake and associated wetlands, and Big Sluice spring and wetland. There are 64.6 acres of water bodies and ½ mile of Ellis Creek, all within ¼ mile of the Rubicon Trail; these aquatic features would be the most likely suitable habitat for Sierra Nevada yellow-legged frog affected by the Rubicon Trail" (Aquatics BE, P. 11).

These same ponds and wetlands are also those most impacted by the trail: "The ponds and wetlands which had aquatic species habitat most affected by the Rubicon Trail were Gerle Creek wetland, Winter Camp ponds and wetland, Little Sluice wetland, Spider Lake and associated wetlands, and Big Sluice spring and wetland" (Aquatics BE, P. 10).

The Aquatics biologist, Jann Williams, concluded, "It is my determination that Alternative 4 of the Rubicon Trail Easement may affect individuals, but is not likely to result in a trend toward listing or loss of viability for the Sierra Nevada yellow-legged frog in the Forest Plan area" (Aquatic BE, P. 20). This statement makes little sense given that the species is clearly on a "trend towards listing" and any additional impacts to individuals and habitat will adversely contribute to that trend. California ESA protection.

Moreover, the plain terms of this determination show that the Eldorado cannot select Alternative 4, because it creates a high risk to the species: "For species that have declined substantially, such as yellow-legged frog, any management actions that could affect local population dynamics are considered high risk for the species as a whole." (DEIS, p. 96).

Moreover, it does not appear that any site specific surveys were conducted in these areas to determine the presence of SNMYLF or other imperiled aquatic species. Where incomplete or insufficient information is available for a through environmental

analysis, NEPA requires the agency to do the necessary work to obtain it where possible. 40 C.F.R. §1502.22; see National Parks & Conservation Ass'n

v. Babbitt, 241 F.3d 722, 733 (9 th Cir. 2001) (“lack of knowledge does not excuse the preparation of an EIS; rather it requires [the agency] to do the necessary work to obtain it.”) Because additional survey data is needed to thoroughly assess the impacts to the SNYLF and other aquatic species, Eldorado should do the work to obtain that information and provide that data and additional analysis in a supplemental draft EIS.

Response: The assumption regarding El Dorado County’s responsibility to implement and enforce a seasonal closure has been removed from the final document. The alternative descriptions have been modified to describe the seasonal closures included in each alternative and the effects analysis in Chapter 3 describes the effects. Waterbodies/ponds/streams within ¼ mile of the Rubicon Trail were surveyed from Wentworth Springs to Buck Island Reservoir on September 27-29, 2010, Walker Hill to Little Sluice on July 18, 2011, Airport Flat to Wentworth Springs Campground on August 11, 2011, and Miller Creek to Ellis Creek on September 20, 2011. There is no established protocol for Sierra Nevada yellow-legged frogs, therefore the standard Visual Encounter Survey was used for surveying aquatic features within ¼ mile of the trail. These features included Ellis Creek, Gerle Creek wetland, Winter Camp ponds and wetland, Little Sluice wetland, Spider Lake and associated wetlands, Big Sluice spring and wetland, and the Little Rubicon River. Ellis Creek, Gerle Creek, and Little Rubicon River have trout which makes these streams unsuitable for Sierra Nevada yellow-legged frogs (Knapp and Matthews 2000), although SNYLF have been observed 1.7 miles from Ellis Creek crossing but on another stream where trout reside.

The Aquatic Biologist determined Alternative 4 may affect individuals, but is not likely to result in a trend toward listing or loss of viability for the Sierra Nevada yellow-legged frog based on the following:

Alternative 4 would add 0.72 miles of trail and close 1.24 miles of trail within the RCA; this closure of 1.24 miles of trail within the RCA would likely benefit aquatic species. Three routes to be added are within the RCAs; one at Spider Lake, one at Ellis Creek, and one at Little Rubicon River. All of these routes would cause an increase in adverse impacts to aquatic species from public use at these lakes and streams. Dispersed camping near Spider Lake would likely cause fecal contamination to the wetlands associated with Spider Lake and shoreline disturbance to aquatic species and their habitat. Perennial wetlands that are suitable habitat for Sierra Nevada yellow-legged frogs could be impacted by petroleum products from vehicle use during wet trail conditions during spring runoff, if they are there. In Alternative 4, there are no wet crossings that have suitable habitat downstream for Sierra Nevada yellow-legged frogs.

Botany

PEER - Sensitive Plants—Only features within 100 feet of occurrences were carried forward in the analysis to capture potential indirect effects. The 100-foot distance was based on the judgment that indirect effects from compaction, changes to drainage patterns, and potential spread of invasive plant species were mostly likely to occur within that distance. (Sensitive Plant BE, P. 22) (Exhibit D) However, the DEIS and Sensitive Plant BE disclose impacts to sensitive plants beyond the 100-foot distance. For example, an occurrence of Stebbins Phacelia (PHST6_4) occurs where fire rings are present and is approximately 150 feet from the edge of the Rubicon Trail prism. As a result, it is clear that a wider area must be analyzed regarding indirect effects to sensitive plants. The presence of the unauthorized routes that damage sensitive plants and other resources is further evidence that vehicles, in the absence of physical barriers, do not stay on the trail.

Response: Old campfire rings are present near Stebbins' phacelia occurrence PHST6_4, which is approximately 150 feet from the edge of the Rubicon Trail easement (refer to Table 7 in the Sensitive Plant BE). These old campfire rings are evidence, at a minimum, of past dispersed use; however, no evidence of vehicle use was documented. The potential for indirect effects were disclosed for several occurrences. Without a history of surveys or documentation of effects within the analysis area, no justification existed for a greater survey area. Mitigation measures have been incorporated into all of the action alternatives, including installing rock or log barriers to restrict vehicle access off of the Rubicon Trail in the vicinity of sensitive plant occurrences.

Bridges

Hendricks - The analysis in the various sections of Chapter 3 on affected environments adamantly support the need for the three bridges discussed: Ellis Creek, replacement of the FOTR bridge, and a bridge over the little Rubicon at the Buck Island dam outlet. I agree that these three bridges are needed and support this going forward. There is, though, a great unexplained discrepancy in the width of the proposed Ellis bridge. The historic bridge across the Rubicon River is 10 feet wide. The proposed new bridge at Buck Island is 12 feet wide. There is no reasonable argument to support the 16 feet width proposed for the Ellis Creek bridge or to incur the extra cost for a wider bridge. A width of 16 feet is unnecessary and out of line with the character of a narrow mountain road and a historic trail. The bridge at Ellis Creek needs to be 12 feet wide. Concern is mentioned in the DEIS that a bridge over the little Rubicon would degrade the view. This bridge would be placed directly below a large concrete dam and spillway. The surrounding riparian area is damaged by dispersed camping. A bridge along with eliminating camping within the RCA and restoration of the area will greatly improve the view.

Response: Alternative 6 was developed and includes a 12' wide bridge at Ellis Creek, replacement of the FOTR bridge and construction of a 12' wide bridge at Little Rubicon River. Alternative 6 also includes eliminating camping within the RCA at Little Rubicon River. The environmental effects of implementing this alternative are described in Chapter 3.

Platt - The construction of new bridges at Ellis Creek and Buck Island outlet, and the replacement of the FOTR Bridge with a box culvert, are essential to provide for vehicle access and to maintain water quality. The bridge at Ellis Creek has a design width of 16 feet. This width is not consistent with the 12 foot design standards for the FOTR bridge replacement, or the proposed bridge at Buck Island outlet, or the existing historic 10 foot wide bridge crossing the Rubicon River near Rubicon Springs. A 12 foot wide structure would adequately protect the creek and provide safe access for both users and County maintenance equipment. I have long recognized the need for a bridge at Ellis Creek, and I have provided written support to the County to help acquire funding for its construction. This support was based on the premise that the bridge was for summer season access only and stream course protection, not to facilitate or encourage access during saturated soil conditions.

I find it interesting that in Alternative 3, visual quality concerns at Buck Island outlet are driving the need for a low water crossing in lieu of a bridge. A bridge would provide the protection necessary to meet RCOs and a low water crossing would not, as stated in the DEIS pg. 83:

The improved low-water crossing could impact biological characteristics downstream if contaminants are delivered during vehicular crossings. This low water crossing could

also impact geomorphic characteristics by dispersing flow at the crossing (e.g. channel widening, shallow pools) and reduce aquatic passage at the crossing during low flow conditions.

The location of the new bridge would essentially be in the shadow of a massive concrete dam, which has already impacted visual quality. The logic that a bridge would adversely affect the Visual Quality Objectives for this area is inconsistent with user support for the placement of toilets in some of the most scenic locations along the trail, and the construction of a 16 foot wide bridge at Ellis Creek.

Response: Alternative 6 was developed and includes a 12' wide bridge at Ellis Creek, replacement of the FOTR bridge and construction of a 12' wide bridge at Little Rubicon River. The environmental effects of implementing this alternative are described in Chapter 3.

CAO

PEER - Compliance with the Cleanup and Abatement Order -The Central Valley Regional Water Quality Control Board's Cleanup and Abatement Order of April 30, 2009(CAO) (Exhibit C) requires, among other things, "The Responsible Parties will take all reasonable steps to cease the discharge of sediment and other wastes due to motorized use of the Rubicon Trail to waters of the State, including Gerle Creek, Ellis Creek, Loon Lake and its tributaries, and to the Rubicon River and its tributaries" (CAO, p. 8, emphasis added). The DEIS alternatives offer various levels of reducing sediment and other waste products, but the Hydrological Report and Aquatic BE indicate Alternative 5 best meets the requirement to "cease" discharges.

Response: Correct, the alternatives presented in the environmental analysis offer various levels of reducing sediment and other waste products and address the CAO.

PEER - The CAO includes several references to enforcement, including the use of wag bags, spill kits, and the enforcement of trail regulations with regard to water quality (CAO, p.10). The DEIS needs to discuss compliance with these requirements as well.

Response: Mitigation measures have been added to all of the action alternatives, addressing education, monitoring and enforcement.

Cultural Resources

Washoe – At risk archeological sites: I am not sure if the proposed mitigation measures would be adequate enough to keep people out and causing further destruction. I propose protecting by installing large boulders to keep vehicles out and on the main road.

Response: Boulders or other natural barriers will be used to protect archaeological sites from unauthorized OHV traffic, and these protection measures will be incorporated into the final cultural resource report more explicitly.

Washoe: I would like to visit the at risk sites to get a better understanding of the adverse impacts and make a mitigation plan.

Response: We will schedule a visit to the at-risk sites for this upcoming field season so you are familiar with the sites and so that we can be more specific about protection measures at each site. It is understood that protection measures and authorizations for certain types of project activities may change based on our monitoring during the site visits. During the site visits we will identify locations where site monitors should be present during project implementation.

Washoe: The flagging should only be put up during construction work and taken down when no construction activities to keep looters from finding the locations.

Response: Flagging will be hung and removed appropriately according to the project implementation schedule.

Washoe: If there is to be any site excavation, we prefer no data recovery, but leave in place or relocate to a safe place. Unless eminent threat of loss. Any artifact removal diminishes our presence and our history. Things must be left in place to preserve the integrity.

Response: During our site visits we can identify which, if any, sites would be candidates for treatment under the CARIDAP program or other evaluation procedures depending on the effectiveness of protection measures. We will consult with you if any excavation is planned and follow your request to leave artifacts in place or relocate to a safe place.

Washoe: Will there be ARPA signage at the trailheads? The public must be informed of cultural sensitivity.

Response: Kiosks with visitor information at the trailhead locations at Wentworth Springs Campground and at Loon Lake would be good places for ARPA signage. This recommendation will be included in the final cultural resource report and communicated to the project leader.

Washoe: Will there be a site monitor in the at risk sites when ground disturbance activities take place?

Response: FS Site 05-03-55-710 is in the vicinity of the proposed Road NSRELD-63 in Alternative 4. Boulders will be used as barriers to prevent OHV traffic through the site if Alternative 4 is chosen.

Washoe: The closure and addition of roads: Is there any archeological resources within the proposed new road additions? Will the closed roads be rehabilitated?

Response: The extent of rehabilitation efforts on routes that are proposed for closure will vary. The specific rehabilitation activities will be designed to avoid adverse effects to archaeological sites. There are no known archaeological sites with a prehistoric component along roads proposed for closure and rehabilitation.

DEIS errors

Howser - The document refers to the Rubicon Trail in several places. The Rubicon is a county road, and therefore should be address as such.

Such as here: Minimal impacts to habitat, potential impacts to species from noise and use of trail

Change to: Minimal impacts to habitat, potential impacts to species from noise and use of road.

Abstract for Alt 5 has an error. Alternative 5 proposes the same activities as Alternative 1 except the easement would be a single route without variants, a seasonal closure from November 1 to July 1 would be included, the bridge at Ellis Creek would be constructed to a width of 12 feet, no vault toilets would be constructed, and no additional routes would be added. When in fact the summary chart says 9 (the highest number) would be constructed

Response: The table in Chapter 2 has been corrected to list the correct number of toilets proposed in each alternative. The easement application submitted by El Dorado County referred to the route as the Rubicon Trail and intends to manage the route for high-clearance trail vehicles.

Folena - I also would like to add that this DEIS Document is very hard for the lay person to understand, which I believe is done on purpose to confuse the public that is supposed to comment on it. This process for a dirt road is absurd; there is good scientific evidence that is ignored that proves that what is being said is false.

This DEIS Document itself is full of miss information on locations it is hard to tell where an area is that is being referenced buy the document.

Response: This document was written in the least technical terms possible in order for the public to understand. Mr. Folena's concern about locations and the confusion they present is warranted due to the scale of the project and the high proportion of important resource features. However, given the number of observations and impacts observed the current product represents a simplified version of resource conditions to allow the reader to follow along. To include all available information at this time would be extremely confusing for the lay person. Observations and occurrences were noted frequently along the Rubicon Trail during spring snowmelt, summer, and fall conditions to capture changing resource conditions and the impacts associated with varying seasonal conditions.

Central Valley Water Board - The reference to the Rubicon Trail Cleanup and Abatement Order (CAO) number on Pages 11 and 49 are incorrect. The correct CAO Number is R5-2009-0030.

Response: The correction has been made.

Central Valley Water Board - The reference to El Dorado County's Saturated Soil Water Quality Protection Plan is dated 14 December 2010. Major updates to this plan were included in an amendment to the Water Board on 28 January 2011, and references to the Saturated Soil Water Quality Protection Plan should state "as amended on 28 January 2011".

Response: The correction has been made.

Central Valley Water Board - Under the Hydrology and Riparian Resources Section on Pages 56, 63, and 77, the Aquatic Resources Section on Page 98, and the Reference Section on Page 311, the DEIS references a Water Board study that is not a published document, and as a result of 26 April 2009 Water Board meeting, this study was removed from the public record. We request that you eliminate this reference from the Final EIS.

Response: The first three paragraphs on page 56 have been removed. The reference to Coe and Hartzell in the first bullet on page 63 has been removed. The reference to Cedarholm on page 77 has been removed. These references on pages 310-311 and the reference to Luce and Black on page 317 have been removed.

CORVA - There are two different terminologies that are referred to regarding the hardening of the Buck Island crossing of the Little Rubicon River. In different areas of the document it is referred to as 'hardening' and in another as 'ford', and in another as a 'hardened ford'. It would be very helpful to the public if the terminology used be consistent. We endorse the use of the hardened ford for the Buck Island crossing, rather than a bridge, which we deem unnecessary.

Response: The terminology has been corrected and is consistent throughout the document.

CORVA - The smaller area for the Little Sluice easement proposed for Alternative #3 is labeled as a 'dispersed use access area' on the map for Alternative #3, but not on any of the maps for the other alternatives. This is an unexplained inconsistency.

Response: The increased width of easement in the vicinity of Little Sluice in Alternatives 1, 3, 4 and 6 is to allow for motor vehicle use and parking. The symbol for motor vehicle use areas has been removed at Little Sluice in Alternatives 1, 3, 4, and 6 and only the easement width is displayed.

CA4WDC - The Mud Lake east of the Little Sluice remains the same as when mapped by the USGS more than 50 years ago. The trail in that area is on a shelf of solid rock that has not changed significantly in 30 years. The lake is dry most summers and would seem to fall well short of a wetlands definition. We are requesting a better description of its location, clarification of its proximity to the trail, and hydrological connections and quantities leading from the trail. We are also requesting a discussion of the definition of wetland within the USFS guidelines and regulations that would apply to this area, and how the USFS scientifically determined that all stated wetlands have met this definition.

Response: A definition for wetlands, as the term is used in this EIS, has been added to the Glossary. Mud Lake was not identified as a wetland, but rather is shown as depicted on existing topographic base maps.

California State Parks - On Table S-3, Alternative 5 identifies “Number of Vault Toilets to be constructed’ as 9. Also on Table 2-1, Alternative 5 identifies “Number of Vault Toilets to be constructed’ as 9. The balance of the document identifies that Alternative 5 would involve no construction of vault toilets?

Response: These tables have been corrected.

California State Parks - On page 20, first paragraph, the OHMVR Division is incorrectly identified as the “OHV Division”. This same error occurs on page 248, third paragraph.

Response: This correction has been made.

Barton - On page 56 of the DEIS, the USFS makes reference to sediment delivery estimations and a "pebble count" performed by the Central Valley Regional Water Quality Control Board. This examination was based upon a visual and arbitrary estimation. This office supplied the USFS with an actual pebble count performed by a fishery biologist in our October 3, 2011, NOI comment letter. This pebble count was performed using transects and multiple randomly selected sample sites. The conclusions of the fishery biologist directly contradict the estimations made by the Regional Board's geologist. In other words, it turned out that there was more siltation of Ellis Creek *above* the Trail crossing than below it. It also turned out that there was higher quality spawning habitat *below* the Trail crossing. Not only are federal agencies supposed to use the "best information available" when preparing a NEPA analysis, those same agencies are required to acknowledge and discuss any flaws with that information. The USFS reference to the Regional Board's study without discussing the flaws and unreliability of that study is an abuse of discretion.

Response: These references have been removed from the document.

Barton - Table 2-1 of the DEIS suggests that Alternative 5 will have nine vault toilets installed, but in later description, the number of toilets installed will be zero. The final EIS should declare which is the correct number.

Response: This table has been corrected.

Barton - On page 15 of the DEIS, the USFS makes reference to the Rubicon Trail being listed as a Candidate National Recreation Trail. RTF requested documentation regarding the candidacy of the Rubicon Trail as a National Recreation Trail and there was either no response from your office on the matter, or the response was that the Rubicon Trail is not listed as a candidate NRT, depending upon to whom we spoke. Please remove this statement from the EIS or provide full documentation of the listing.

Response: The Eldorado National Forest Land and Resource Management Plan lists the Rubicon Trail as a candidate National Recreation Trail (page 4-142) and provides further direction to prepare an establishment report recommending designation of the Rubicon Trail as a National Recreation Trail (page 4-144). The establishment report was not initiated and this route has not been designated. The use of the term "candidate" does not carry any level of designation but rather was used to identify that the trail should be further evaluated.

Barton - On page 43 of the DEIS, the USFS refers to a "Devil's Peak" incision. This area has been well known as Walker Hill for several decades. Renaming it confuses the reader.

Response: The text has been modified to reduce the confusion.

El Dorado County - On page 56, reference is made that the Coe and Hartzell report of 2009 estimated approximately 100 cubic yards of sediment per year were caused by use of the Rubicon Trail. The protocols used in the Coe report for sediment production were never validated, and its validity has not been established, and therefore estimates in that report such as 100 cubic yard per year are not reliable and should not be used.

In regard to the pebble counts in Ellis Creek, the Rubicon Trail Foundation arranged for a pebble count study that is more reliable and which contradicts many of the assumptions in the DEIS concerning the effort of vehicles crossing Ellis Creek. El Dorado County requests that the DEIS use that pebble count study. The estimate of a 50-fold difference in erosion rates between logging roads and the Rubicon Trail is scientifically unsupported, factually incorrect, and should not be used.

Response: This reference has been removed from the document.

El Dorado County - In various places, the DEIS refers to the "construction" of erosion control features on the Rubicon Trail. See, e.g., page 19, last paragraph, which is entitled "Construction of Erosion Control Features." The County suggests that the

word "construction" be changed everywhere it is used in the DEIS to "installation" of erosion control features, in order to avoid confusion with the issue of which road maintenance activities fall into the category of "maintenance" and which fall into "construction" for purposes of NEPA categorical exclusions and other purposes.

Response: This modification has been made to the text of the document.

El Dorado County - On page 21, the description of Alternative 2, the no action alternative, correctly states that with no formal written easement from the USFS, El Dorado County will continue to assert its RS 2477 rights, but it incorrectly states that if no easement is granted then no additional erosion control features would be constructed from Wentworth Springs Campground to the county line with Placer County. If no formal written easement is granted, the County would continue to assert its RS 2477 rights (which the USFS has stated are the equivalent of an easement), which include the right to maintain the road, and therefore without a formal written easement El Dorado County will continue to install erosion control measures along the Rubicon Trail just as it has been doing over the past few years.

Response: The Forest Service recognizes that under its claim of R.S. 2477 rights, El Dorado County could conduct maintenance within the travel way of the Rubicon Trail.

El Dorado County - On page 25, in the description of Alternative 5, it is stated that "No toilets would be constructed." On page v, in the Summary of Environmental Consequences, the column for Alternative 5 shows 9 toilets to be constructed. This dichotomy should be resolved. We interpret Alternative 5 to include no new toilets. The construction of new toilets, when coupled with the education campaign concerning sanitation, would be environmentally beneficial.

Response: This table has been corrected.

El Dorado County - On page 38, first paragraph, the statement is made that approximately 17 miles of the Rubicon Trail are situated in El Dorado County. Starting at Wentworth Springs Campground and proceeding easterly, a more accurate figure would be that there is about 8 miles of trail, plus about 2 miles of variant, in the county.

Response: The text referenced has been corrected.

PEER - The information regarding vault toilets in Alternative 5 is inconsistent; in some places the DEIS states there would be nine toilets under this alternative; other places indicate no toilets. A supplemental draft EIS must clarify this inconsistency and provide the needed analysis.

Response: The table has been corrected.

Dispersed Use

Hendricks - There are three areas that are heavily impacted by dispersed camping along the Rubicon Trail-the so called Winter Camp, the area adjacent to the little Sluice wetland, and the area along the little Rubicon River at the outlet of the Buck Island dam. All of the sites are in riparian areas or adjacent to wetlands. All of them show extreme damage, denuding of vegetation, soil compaction, death of trees, and other human caused impacts. Please see Attachment 20 for photos of conditions west of little Sluice Box and Attachment 21 for conditions along little Rubicon River. All of these sites are inappropriate for camping. All of these sites need the camping use eliminated and moved to other areas that have a chance of withstanding the use. These sites all need to be restored to a proper, functioning condition. These changes must be required in the easement.

Response: Alternative 6 addresses minimizing impacts to resources from dispersed camping in several areas by eliminating camping near Soup Bowl, Winter Camp, and the Little Rubicon River.

Easement

CORVA - Include a wider access area near Little Sluice in Alternative #3, which the public is already accustomed to using for parking and associated uses. In the Rubicon Recognition Project completed by El Dorado County, a wider area was included for public access in acknowledgment of the current patterns of usage. Members of the public have chosen to populate the area around Little Sluice as part of their enjoyment of the trail. Arbitrarily limiting that area to 75' rather than 175' (as requested by the county) serves little purpose, and would prove difficult to enforce. There is an implication on page 70 of the DEIS that additional footage around Little Sluice would lead to increased visitation to Spider Lake. The stated affects of the 175' easement as opposed to the 75' easement are all conjecture and hypothesis, specifically, there are no studies cited to support these conclusions. The supposition that a smaller easement might limit public intrusion on Spider lake is flawed logic, and not likely to be true.

Response: El Dorado County's easement request in the vicinity of Spider Lake was for a total width of 200 feet (175 feet in addition to the 25 foot standard width). While this easement may not necessarily increase visitation, acceptance of it would be inconsistent with the SNFPA. The SNFPA requires the USFS to analyze the impact of new activities, such as the addition of new routes or easements (i.e. those that do not exist or those that exist but are not currently recognized as part of the NFTS) within RCAs for consistency with RCOs. Based on field reconnaissance and available GIS data, it was determined by the RCO team (consisting of Botany, Aquatics, and Hydrology) that this area would likely be within RCAs as defined in the SNFPA and the vehicle use would be inconsistent with RCOs #1 and 2. The reduced width of the easement at Little Sluice in Modified Alternative 3 was in response to public comments and resource concerns identified by the ID team. The purpose of the different alternatives is to display the effects of implementing different management actions. In this case, the effects of implementing a narrower easement, and reducing the area where motor vehicle travel would be allowed are described in the Aquatics, Hydrology, Botany, Wildlife and Recreation sections. The ID Team evaluated the effects of reducing the easement and considered the likely effect on public use at Spider Lake. The estimation that use at Spider Lake would decrease if motor vehicle access closer to the lake is prohibited is based on observations by professional staff and public use patterns.

CA4WDC - At Little Sluice the County requested 175' of easement in an area of primarily solid rock. The reduction to 75 feet is not well justified in the DEIS. This area is used by clubs and groups for hiking, sightseeing, picnicking as well as camping. The proximity to Spider Lake and midway point from the western trail entrances to Rubicon Springs makes this a natural spot to congregate. On page 71, the USFS seems to try to justify the reduction of the 200' easement between Spider

Lake and the Little Sluice stating it would lead to increased impacts and use of the shore line. This was addressed in 2004 and the current use levels are stable yet dramatically lower than the pre-2004 levels. Also, on page 289, the DEIS asserts that a 200' easement would encroach on the Spider Lake RCA. While this may be true, the 175' requested by the County is clearly outside the RCA of Spider Lake.

Response: El Dorado County's easement request in the vicinity of Spider Lake was for a total width of 200 feet (175 feet in addition to the 25 foot standard width). While this easement may not necessarily increase visitation, acceptance of it would be inconsistent with the SNFPA. The SNFPA requires the USFS to analyze the impact of new activities, such as the addition of new routes or easements (i.e. those that do not exist or those that exist but are not currently recognized as part of the NFTS) within RCAs for consistency with RCOs. Based on field reconnaissance and available GIS data, it was determined by the RCO team (consisting of Botany, Aquatics, and Hydrology) that this area would likely be within RCAs as defined in the SNFPA and the vehicle use would be inconsistent with RCOs #1, 2, and 5.

California State Parks - In regards to the proposed easement width, the OHMVR Division supports a variable easement width that supports resource conservation and sustaining OHV Recreation relative to the Rubicon Trail. A variable easement width allows for the reality of the local terrain as opposed to a rigid line on a map.

Response: The different alternatives considered in this environmental analysis include various options for varying the width of the easement, ranging from the variable width proposed by El Dorado County (Alternative 1) to a single width along the entire route (Alternative 5). The effects analyses presented in Chapter 3 of the EIS describe the effects associated with implementing various easement widths.

Barton - The reason behind reducing the dispersed use access area at Little Sluice to 75 feet is not adequately explained. El Dorado County requested 175 feet in their easement application and it seems that if the County is willing to maintain access, the USFS should not unnecessarily or unjustifiably restrict such access. The area under discussion is made of solid rock and supports few biological resources. We recommend that the dispersed use access area at Little Sluice be restored to 175 feet as requested by the County.

Response: El Dorado County's easement request in the vicinity of Spider Lake was for a total width of 200 feet (175 feet in addition to the 25 foot standard width). Some of the public comments received during the initial scoping period identified the desire for a narrower easement width at the Little Sluice. The project must be consistent with the Forest Land and Resource Management Plan (as amended) which requires meeting standards and guidelines. To meet the standards and guidelines from the SNFPA, the USFS must analyze the impact of new activities, such as the addition of new routes or easements (i.e. those that do not exist or those that exist but are not currently

recognized as part of the NFTS) within RCAs for consistency with RCOs. Based on field reconnaissance and available GIS data, it was determined by the RCO team (consisting of Botany, Aquatics, and Hydrology) that this area would likely be within RCAs as defined in the SNFPA and the vehicle use would be inconsistent with RCOs #1, 2, and 5.

El Dorado County - The description of the easement requested by the County is described on page 18, first paragraph, as follows: "The easement would generally be 25 feet from centerline with several variant widths identified." It is important to note that the requested easement is generally 25 feet on each side of the defined centerline, for a total width of 50 feet, except at Little Sluice and at Postpile.

On page 21, Alternative 3 refers to a "short bypass on the North side of Little Sluice." The North side has what is commonly referred to as the long bypass (Route 1.8) which has the typical 50 foot width. The South side of Little Sluice has what has been called the short bypass. Alternative 3 proposes to reduce the easement on the south side of Little Sluice to 75 feet. El Dorado County's application for an easement at this location depicted a main Trail centerline through Little Sluice with a dimension of 25 feet on each side of the centerline, plus an additional easement width of 175' from the southerly edge of the main trail easement to cover the short south bypass section and the dispersed use access area. The total easement on the south side of the main route through Little Sluice, measured from the centerline of the main route through Little Sluice, would include the 25 foot easement on the south side of the centerline, plus the additional 175 feet, for a total of 200 feet south of the centerline of the main Little Sluice route. The easement on the north side of the main route is 25 feet from the centerline. El Dorado County believes that an easement of 200 feet south of the centerline of the main Little Sluice route is necessary to accommodate the activities which have and will take place there, and a narrower easement in that area would be insufficient.

Response: Different alternatives were developed in order to respond to the issues brought forward by the public. Some of the public comments received during the initial scoping period identified the desire for a narrower easement width at the Little Sluice. The project must be consistent with the Forest Land and Resource Management Plan (as amended) which requires meeting standards and guidelines. To meet the standards and guidelines from the SNFPA, the USFS must analyze the impact of new activities, such as the addition of new routes or easements (i.e. those that do not exist or those that exist but are not currently recognized as part of the NFTS) within RCAs for consistency with RCOs. Based on field reconnaissance and available GIS data, it was determined by the RCO team (consisting of Botany, Aquatics, and Hydrology) that this area would likely be within RCAs as defined in the SNFPA and the vehicle use would be inconsistent with RCOs #1, 2, and 5.

Hendricks - The major issue with this easement was not addressed in the DEIS and has yet to be resolved in federal court, that is the issue of access. An easement for a public road is meant to give access to the public at large. The whole concept of RS2477 rights is meant to give access to the public both to and through federally managed public lands. The Rubicon Trail was historically a road that provided that access. Yes, it became rougher as it fell into disuse, but it was still negotiable with street legal vehicles although four wheel drive was required for some sections. That has changed. The Trail is no longer a public road as claimed by El Dorado County. It is now taken over by non street legal extreme vehicles. This use has damaged the Trail and is misplacing and denying access to the traditional users, the public. I own a slightly modified 4x4 vehicle that I travel with throughout the west. I regularly travel rough 4x4 roads. I would never travel the Rubicon Trail. I am denied access because the Rubicon Trail is no longer a road but an OHV park. El Dorado County is requesting an easement for a public road and has claimed RS2477 rights to assure public access. Allowing non-street legal vehicles and the associated damage to the road surface denies access to the traditional user and the public at large. I would love to be able to drive this public road to access my public lands in this area. I cannot. A road is a travel way to get a vehicle from point A to point B. An OHV park is a place to go to "play" with your vehicle. The Forest Service has been asked for an easement for a public road not a special use permit for an OHV park. The Forest Service must revisit the comments made during scoping and insist on requirements in the easement -such as licensed street legal vehicles only and the route restored to a standard that stock 4x4 vehicles can travel-that assure the Rubicon Trail is a public road.

Response: The easement which El Dorado County has applied for and which the Forest Service is considering issuing is under the authority of the National Forest Roads and Trails Act (NFRTA). This easement does not restrict vehicle types to only highway licensed vehicles, nor does it restrict the purpose or type of use of the easement. The easement need not be solely for the purpose of allowing travelers to get from point A to point B. The NFRTA recognizes recreation as one of the uses of National Forest System lands. Recreational use of roads and trails has long been an accepted use of these travel ways, including driving for pleasure and off-highway vehicle travel. Limiting the type of vehicles using the trail to highway licensed vehicles only was suggested during the initial public scoping for this analysis and was considered as one of the alternatives. Alternatives 1, 3 and 4 provide for a bypass at the Little Sluice to allow capable vehicles to operate around Little Sluice and still traverse the Trail. Alternative 6 has been added to display the analysis of restoring the Little Sluice to a drivable condition for typical 4WD vehicles (in contrast with extreme 4WD vehicles).

Hendricks - I have always been a proponent of one route for the Rubicon Trail. As the Trail has changed into an OHV park, the use of extreme vehicles has damaged the route to the extent that sections became impassable for street legal vehicles. Two

examples are the Little Sluice Box and the old true Sluice Box. The historic users were forced to find bypasses around these damaged sections. Another issue is the proliferation of off route "playground" areas pioneered by extreme vehicle users looking for a "challenge". The Soup Bowl area is an excellent example and the ongoing damage here is appalling. Because an individual can build one of these extreme vehicles does not mean its use is appropriate or should be allowed on our public lands or our public roads. As an example, I could build an Indy style race car capable of extreme high speed and cornering ability. Common sense and law prevents me from driving it down Sly Park Road (another El Dorado County road).

A single route would assure these two issues are prevented, bypasses searching out areas for destruction and destruction of once usable road sections necessitating the traditional user to look for bypasses. Rich Platt and I presented this viewpoint before the El Dorado County Board of Supervisors on 26 January 2010 when the issue of the route of the Rubicon Trail was decided (please see Attachment 13).

Response: Alternative 5 analyzed for the benefits and impacts of limiting the Rubicon Trail to a single route and not designating any additional bypasses or other routes. One of the purposes of this environmental analysis described in Chapter 1 of the EIS and a purpose for issuing an easement to El Dorado County is to identify the specific route or routes where motor vehicle use will be allowed and to provide for better enforcement to prevent users from travelling off of the designated routes. The proliferation of bypasses or off-trail "playgrounds" will be better avoided through clarifying the authorized routes and the responsibilities of the different managing agencies.

Platt - The location of the R/W and the corresponding closing of unauthorized routes and variants should be consistent with the 11/26/2010 BOS decision, as I have stated previously. (See attachment 2) To be consistent with this decision, the Easement should be confined to a 50 foot R/W in the vicinity of East Wentworth and Post Pile areas to accommodate the main trail and its single variant. The DEIS provides no explanation for the need for a wider easement in this very sensitive, steep and highly erodible area.

It is also inappropriate and inconsistent to consider allowing vehicle access off the established trail at the Soup Bowl. Soup Bowl has become an extreme vehicle play area showing signs of unacceptable resource damage. Specialist analysis throughout the DEIS describe impacts from vehicle use in these areas as having negative effects on soil, hydrology, terrestrial and botanical resources. Restoration projects should be implemented as mitigation measures in these areas of concern, in lieu of the establishment of a play area resembling an OHV park.

The Easement in the Little Sluice area should be confined to 75 feet, incorporating the historic route and the southern variant (ELD-63-E). This action would also require

that boulders deliberately and illegally pulled into the trail be resized, providing access to this trail icon for all vehicles travelling on the Rubicon.

Response: Alternative 6 has been added to the FEIS in order to better display the environmental consequences of implementing the suggestions made, including limiting the easement width in the vicinity of East Wentworth and the Post Pile, eliminating the access area at Soup Bowl, and reducing the easement width near Little Sluice. The environmental effects are described in Chapter 3. Alternative 3 was also modified to eliminate the motor vehicle use area in the vicinity of Soup Bowl.

Snowlands Network - Alternative 2, the No Action alternative, states: “The LRMP would continue to guide management of the project area. No easement would be issued to El Dorado County; the Rubicon Trail would stay in the current alignment across Ellis Creek and no bridge built; the FOTR bridge would not be replaced with a culvert and vehicles would continue to cross the bridge and downstream ford; Buck Island bridge would not be built; additional erosion control features would not be constructed from Wentworth Springs Campground to the county line; no additional toilet would be installed, unauthorized routes would not be closed and rehabilitated; and no additional routes would be added to the NFTS to accomplish the purpose and need. El Dorado County will continue to assert their RS 2477 claims. “

The Forest Service implies that through El Dorado County's assertion of R.S. 2477 claims the County would be able to ensure continued access to the existing Rubicon Trail. If that were the case, why is the County requesting an easement? The assertion of R.S. 2477 claims is not equivalent to the County having R.S. 2477 rights.

The exact opposite is true. Without an easement the Forest Service retains all rights to manage the lands on which the Rubicon Trail passes. They would retain the right to designate a wet season closure and a single route that is navigable by street legal vehicles.

On March 12, 2009, Edward Knapp, Counsel for El Dorado County, stated that El Dorado County claims that the Rubicon Trail is a public road, not a county road or county highway. The County further claims that it does not have the obligation and little or no authority to manage, maintain, or regulate use of the Rubicon Trail.

The Rubicon Trail is USDA Forest Service land. Unless El Dorado County has applied for pursuant to RS 2477 and subsequently been granted by the Forest Service jurisdiction to manage the right-of-way known as the Rubicon Trail, the Forest Service retains sole jurisdiction over the right-of-way and has the sole responsibility and authority to manage, maintain, and regulate its use. RS 2477, passed in 1866, gave states the right to build roads on federal lands. Though repealed in 1976, the law still applies to "highways" that were in use before the repeal. On June 29, 2007, District Court Judge Bruce Jenkins ruled that a federal agency does not have the power to grant R.S. 2477 rights-of-way. Rather, counties must prove their claims.

El Dorado County has not applied for jurisdiction over the right-of-way known as the Rubicon Trail pursuant to R.S. 2477. Therefore, jurisdiction over the right-of-way is held by the Forest Service and they alone have the sole responsibility and authority to manage, maintain, and regulate its use. El Dorado County has absolutely no responsibility or authority over the Rubicon Trail. This is in keeping with the statements by Edward Knapp, Counsel for El Dorado County on March 12, 2009.

The County has no basis for requesting an easement because they have not have rights under R.S. 2477. Therefore the subject DEIS is premature. The Forest Service retains all rights to manage the Rubicon Trail.

Response: El Dorado County has applied for an easement and the Forest Service has the authority to issue an easement under the National Forest Roads and Trails Act (NFRTA) of 1964. El Dorado County is not required to demonstrate rights under R.S. 2477 in order to apply for an easement. Therefore this analysis is not considered to be premature.

Under Alternative 2, the status quo would continue. El Dorado County would continue to assert its R.S. 2477 claims and there would continue to be a lack of clarity regarding responsibility for management of the trail. The commenter has claimed that Alternative 2 does not accurately reflect the No-Action Alternative, in that the Forest Service has more authority and responsibility than described in the Alternative. However, some of the points raised include actions the Forest Service could take in the future, but which are not part of current management, such as the implementation of a seasonal closure on the Rubicon Trail. The intent of the No Action alternative is to display the effects of no action, in order to compare with various action alternatives. One of the alternatives considered but not analyzed in detail is that the Forest Service manage the Rubicon Trail and not issue an easement to El Dorado County. This alternative was not analyzed in detail since it left unresolved issues such as authority to conduct maintenance on the Rubicon Trail. There is not a clearly defined process for issuing R.S. 2477 rights, nor is there a requirement that an entity apply for R.S. 2477 rights. Rather, El Dorado County could file suit to quiet title against the United States, or request an easement as the County has done. Alternative 2, as described, is considered to properly reflect the No-Action alternative.

PEER - The easement must be limited to the route as adopted by the Board of Supervisors on January 26, 2010. (Exhibit A)

Response: The easement described in Alternative 1 reflects El Dorado County's understanding of the route adopted by the Board of Supervisors during their meeting on January 26, 2010. However, Alternative 6 has been added to the FEIS in order to better display the environmental consequences of implementing the suggestion made to limit the Rubicon Trail and easement to the route adopted by the Board of Supervisors as understood by the commenter.

PEER - The specialists' reports disclose the "Long Bypass" would allow petroleum products to continue to contaminate the Winter Camp and Little Sluice wetlands: "the use of the Long Bypass would also allow contaminants such as petroleum products to be delivered to the two nearby wetlands" (Hydrology Report, p. 20); and "Alternative 1 includes the Long Bypass next to Little Sluice. This variant is composed of primarily granite bedrock slabs with drainage pathways between slabs. Oil spots left on the rocks by vehicles could drain oil pollutants into the Little Sluice wetland and Winter Camp wetland, causing petroleum effluents to settle on the surface of the water, potentially affecting aquatic species swimming there" (Aquatics BE, P. 14). The Long Bypass fails to meet the RCO objectives and must be closed.

Response: While the Aquatics BE recognizes petroleum effluents potentially affecting aquatic species, the RCO analysis concluded that the RCOs were being met. Petroleum products could be delivered to these water bodies if a runoff event were to occur following deposition of such products. However, given the timing of such events there is potential for deposited products to decompose prior to a runoff event. These effects are described in the Hydrology and Aquatics sections of Chapter 3 of the FEIS and in the RCO Analysis.

Ellis Bridge

El Dorado County - El Dorado County has been planning on building a new bridge over Ellis Creek near where the historic Rubicon Trail currently crosses the creek at grade. On April 30, 2009, the Central Valley Regional Water Quality Control Board issued a Cleanup and Abatement Order (No. RS-2009-0030) requiring El Dorado County and the Eldorado National Forest to cease the discharge of sediment and other wastes due to motorized use of Rubicon Trail, and one of the actions specifically required by the CAO is the construction of a bridge at Ellis Creek. A bridge crossing at Ellis Creek would reduce the amount of particles that enter the creek from vehicles crossing the creek as well as from vehicles on the trail approaches, and reduce the turbidity of the creek from tires disturbing the natural stream bed, and it therefore environmentally beneficial. The plan is to build a 16 feet wide bridge about 60 to 75 feet downstream from the current grade crossing. Apparently a comment was received by the ENF during the DEIS scoping period that a bridge only 12 feet wide would be better. The EIS on page iii has "Table S-1: List of Significant Issues," in which Item number 4 states "Overly large bridge at Ellis Creek will cause adverse impacts to riparian areas and species and is inconsistent with the historic nature of the trail" Alternate 5 includes the easement for the Trail in a modified form, and, as stated on page "The bridge at Ellis Creek would be constructed to a width of 12 feet." On page 16, among the significant issues list is number 4, which states "Overly large bridge proposed at Ellis Creek will cause adverse impacts to riparian areas and species and is inconsistent with the historic nature of the trail." We are not aware of any support for the assumption that a 16 foot wide bridge would cause any more impacts to riparian areas and species than a 12 foot wide bridge would, because the abutments and approaches would be the same, and it makes no sense that a slightly narrower bridge would be more or less consistent with the historic nature of the trail than a slightly wider bridge would be. El Dorado County hereby comments that the proposed bridge must be 16 feet wide under applicable bridge design standards, the lengthy and expensive planning process which been completed over the past several years would be wasted if the plan were to change at this late date, the delay caused by a redesign at this point would likely be fatal to the funding source and thus end any hope of replacing the grade crossing with a bridge, and that reducing the bridge width by 4 feet would not provide any environmental benefits.

Response: The alternatives display bridge widths at Ellis Creek of 12 and 16 feet, based on issues raised by the public during initial scoping. The effects of implementing these different alternatives are presented in Chapter 3.

Forest Plan

Snowlands Network - The LRMP states "Manage the areas principally for their recreation use substantially in their natural condition. Preserve the integrity of the special interest features for which the areas were established."

The DEIS fails to define what is the baseline "natural condition" and implement an easement that favors the natural condition.

Given that the easement is for the Rubicon Trail it follows that one should look at the condition of the trail in its early days. For example, slide 68 in "Mud on the Rubicon 4x4 Trail" is an early 1900s photograph of vehicles traversing the Little Sluice Box section of the Trail. Slides 69, 70 and 71 show that section today and the extreme changes that have taken place.

In order to provide recreation in the area's natural condition as stated in the LRMP the Rubicon Trail must be returned to its earlier state where street legal vehicles can traverse it. The current condition of the Trail precludes the vast majority of forest visitors from enjoying this area while benefiting only a very small minority who own non-street legal vehicles.

Response: The text cited is from the Management Emphasis which describes the emphasis for all Special Areas, not just the Rubicon Trail. More specific management direction is provided under specific management practices. Under Management Practice 27 – Restricted Off-Road Vehicle Management, the standard and guideline is to use restricted access as a means of protection. Designation of specific routes to allow for dispersed recreation adjacent to the Rubicon Trail, closure of other routes and a prohibition of travel off of designated routes meets this standard and guideline. Management Practice 27 also recognizes that the Rubicon Trail should be managed expressly for 4WD vehicles. The standard and guideline does not distinguish between highway licensed 4WD vehicles and non-highway registered vehicles. However, the intent is to provide for a 4WD recreation opportunity, not a travel way for highway licensed passenger vehicles. Alternatives 1, 3 and 4 provide for a bypass at the Little Sluice to allow capable vehicles to operate around Little Sluice and still traverse the Trail. Alternative 6 has been added to display the analysis of restoring the Little Sluice to a drivable condition for typical 4WD vehicles (in contrast with extreme 4WD vehicles).

Hydrology

Howser - In addition to sediment; petroleum and other contaminants are likely being delivered both from runoff and from vehicles crossing. Dispersed camping sites that are encroaching on Ellis Creek have resulted in compacted, denuded surfaces and dispersed restroom use has resulted in fecal matter being available for delivery to Ellis Creek.

Likely? Either it is or it isn't. If there is no evidence, it should be removed.

Resulted? What were the results of the test? Human fecal? Animal? Fish? Either produce the results of a test or remove speculation.

Response: There is evidence of sediment and toxic material being delivered to water bodies. Photographic evidence of oil sheen on the surface of Ellis Creek during vehicle crossings is available. In addition, photographic evidence of increases in turbidity during vehicle crossings and associated with snowmelt are available. Photographic evidence of fecal matter and toilet paper in close proximity to Ellis Creek exists as well as documentation of counts of fecal material in dispersed use areas along the Rubicon Trail performed by rangers.

Barton - Also on page 43, the USFS refers to impacts at Winter Camp. USFS provides no documentation for the assertion that there was, in fact, a perennial water table in this area. It is our understanding, based upon decades of use and firsthand experience, that water has always seasonally flowed in this area. Labeling this area as "perennial" is inappropriate. Furthermore, references to the Winter Camp wetland are confusing and contradictory. For example, there is a marked feature on the USGS maps that refers to a "Mud Lake" that seems to be the "Winter Camp" wetland. This lake is perennial but it is some distance away from Winter Camp. Water flow into the lake is interrupted by several fallen trees, which block sediment that may have been observed by USFS staff. The "creek bed" that the trail follows just upstream and prior to this Mud Lake has seen little change in erosion over several decades. Thus, a better description of just where this wetland is, and why it is a wetland, would be appreciated.

Response: The reference to a perennial water table refers to the groundwater, not surface water flow, and is based on observations of soil exposures made by the Soil Scientist. The Winter Camp wetlands is shown on the Alternative Maps, is described in the Hydrology section of Chapter 3, and is not the same as Mud Lake. A definition of wetlands, as used in this document is provided in the Glossary.

Snowlands Network - Snowlands Network and WWA are very pleased that the Central Valley Regional Water Quality Control Board issued a cleanup and abatement order (CAO) for the Rubicon Trail because it brought to light the issues at hand and started the review process of which this DEIS is a consequence. But while the Board focused

on sedimentation in streams and lakes, an equally large problem is basic erosion that has gone unchecked.

The Water Quality Control Board determined that in at least one location sedimentation is 50 times greater than should be expected and that this is due to the use of 4x4 vehicles. Through photographs Snow lands and WW A will show that erosion "in general" is rampant and that a primary goal of the Forest Service should be to end such erosion in addition to sedimentation. This can only be accomplished by a moratorium on motorized use of the Trail in the wet season. As will be discussed further, this is the only alternative that is consistent with the "Eldorado National Forest Public Wheeled Motorized Travel Management EIS" (hereafter, Travel Management EIS).

At the same time changes must be made to prevent the future discharge of oil and petroleum products into the environment -all the environment, not just into streams.

Response: The need to reduce sediment discharge and discharge of other wastes into the waters of the State from the Rubicon Trail, and the need to address wet season use are elements within the Purpose and Need for this project, as identified in Chapter 1. The alternatives include different approaches to address these needs, including implementation of erosion control measures as part of the SSWQPP, implementation of seasonal operating periods, construction of bridges or other means of crossing streams, installation of toilets to address sanitation, etc. Erosion control measures being installed and maintained by the county are designed to minimize mechanical erosion associated with trail use, convey and direct runoff off of the trail, and to capture sediment generated along the trail. The effects of implementing the various measures in each alternative are described in Chapter 3.

PEER - The project Hydrology Report is clear in its assessment that impacts to RCA hydrological and riparian resources will continue if wet weather use is allowed:

“During wet season use; trail widening, vegetation loss, soil compaction, and soil displacement could occur on some segments of the trail, trail variants, and unauthorized routes and the impacts would vary based on the soil type and depth, vegetation condition, and effective groundcover. These impacts would occur in areas where vehicles avoid obstacles such as snowdrifts to continue, and where exposed soils lack effective groundcover in the form of rocks, vegetation, adequate snow cover, and downed woody debris. Impacts to soil conditions could lead to the formation of ruts, rills, gullies, and compacted surfaces. Ruts, rills, and gullies channel runoff increasing hillslope erosion rates and delivering sediment concentrated flow to nearby hydrologic features while compacted surfaces have decreased infiltration rates and thereby accelerate hillslope runoff and erosion rates. “ (Hydrology Report, P. 15).

The Hydrology Report also discloses, “Vehicle use during periods of wet trail conditions would result in an increase in sediment and contaminant delivery to hydrologic

features associated with the creation of ruts, compaction, and from direct vehicular contact with flowing water bodies or flowing trail surfaces“ (Hydrology Report, P. 13, emphasis added).

The Hydrology Report states, “During project implementation, erosion and sedimentation control techniques (BMP features) described in the Saturated Soil Water Quality Protection Plan (El Dorado County, 2010b) would be installed and maintained to protect water quality and aquatic habitat. In addition, applicable DRAFT Best Management Practices (BMPs) in Appendix C of this document and described in Water Quality Management for Forest System Lands in California, Best Management Practices (USDA, September 2000) would be adhered to during project implementation.” (P. 13)

We agree with the first assumption; vehicles on wet soils cause sedimentation and hydrological damage. But as to the second assumption, El Dorado County has not yet provided a report on the effectiveness of its BMP implementation and the Regional Water Board has changed the report date for the County’s first annual review to October 1, 2012, so there is no evidence the County’s BMPs will be effective. In fact, our own review of the trail following a storm in October 2010 showed that, while some of the maintenance structures were functioning, others were not. Some of the sediment basins had filled up in a single storm event and werespilling.¹

The assumption that the project would adhere to “applicable” Draft Forest Service BMPs is vague and not reassuring. Without specificity, the public cannot know which BMPs are proposed to be applied, and so cannot comment as to their potential effectiveness. Since the DEIS has rejected monitoring, the public can’t know if BMPs are successful at protecting, enhancing and restoring water quality and riparian habitat. The DEIS also rejects any enforcement component, therefore the public can’t assume proposed management elements will be implemented.

Response: The assumptions have been removed from Chapter 3, including specific assumptions in each section. The Hydrology section in Chapter 3 has been edited to describe the environmental effects of the modifications to the seasonal operating periods in the various alternatives. In addition, the Forest Service BMPs that were shown as Draft in the DEIS have now been finalized and discussed further in the Hydrology section of Chapter 3. These USFS BMPs are primarily practices designed to meet state water quality objectives while the County’s erosion control features are physical structures designed to meet state water quality objectives. With similar goals and objectives, the erosion control features being installed and maintained by the County would therefore be consistent with many of the USFS BMPs. Erosion control feature effectiveness was observed in June 2011 by USFS personnel, El Dorado County DOT personnel, and members of the Water Board. It is expected that similar monitoring events involving primarily those three agencies would continue annually following spring snowmelt. The California Regional Water Quality Control Board,

Central Valley Region informed the Eldorado National Forest Supervisor and El Dorado County DOT Deputy Director that the Water Board had found that the SSWQPP submitted by El Dorado County adequately addressed water quality impacts caused by vehicle use during saturated soil conditions and by over-the-snow travel on the Rubicon Trail and the specific bypass routes identified by the County (letter dated January 5, 2012). Further, in the comments submitted by the Water Board, in response to the DEIS, the Water Board clarified that a seasonal closure is not needed at this time to comply with the CAO, but that a seasonal closure may be needed if the actions described in the County's SSWQPP do not protect water quality.

Field observations and the SSWQPP provide evidence that the erosion control features being installed and maintained by the County are effective at capturing sediment and contaminants and at minimizing erosional processes. However, it is important to recognize the need for continued maintenance and reconstruction of such erosion control features to ensure they remain effective. In addition, it is expected that annual monitoring involving the USFS, El Dorado County DOT, and the Water Board will continue.

PEER - Under Alternative 3, past, present, and foreseeable future activities would be similar to Alternative 1. It is expected that during high flows, contaminants such as petroleum products and solvents could be washed from the undercarriage of vehicles crossing the Little Rubicon River and delivered downstream; thereby impacting water quality and aquatic habitat. (Hydrology Report, P. 29)

Response: Alternative 1 includes a bridge across the Little Rubicon River and so vehicles will not be driving through the river. Modified Alternative 3 includes an elevated rock ford across the Little Rubicon River, such that vehicles will not be driving through the river except during periods of higher flow. This is believed to be true based on the logic of the undercarriage of OHVs being submerged below the water surface. However, this would only occur at those times when the undercarriage is submerged or splashed during crossing. In late summer and fall, the water level at the Buck Island Lake Outlet is likely lower than in early season. The elevated rock ford would be designed to convey flows while minimizing vehicular contact with running water.

Information

Walker - Weeds in Gerle Quarry are: Klamath weed, cheat grass, sweet clover, bullthistle, Jerusalem oak, and mullein. Bull thistle and mullein are common on the Forest, and though they are aggressive and invasive nuisances, are eventually limited by the regrowth of native shrubs and trees. Jerusalem oak is already common to roadside gravels on the Forest and known from near Loon Lake. Klamath weed is a invasive weed which can infiltrate wetlands, though it is fairly inoffensive compared to some others. Sweet clover, (*Melilotus* spp.) both yellow and white is the real invader on the District. During the early 90s I noticed an abundance of sweet clover on main roads in the district, and understood they were introduced in road gravels. It colonized the road shoulders of Ice House Road for a few years and still persists there. It can now be found on many if not most, of the secondary roads on the Eldorado. In the fall of 2010, I saw sweet clover on 13N22 near Hay Meadow in Van Vleck area. This occurrence is growing in a small amount of imported gravel which serves to stabilize the road as it edges close to the riparian zone bordering Hay Meadow. The plant community of the Rubicon trail is generally much the same as Van Vleck, with red fir, lodgepole, and riparian/meadow zones. So it could easily establish on the Rubicon Trail in the disturbed areas. Sweet clover is a vicious pest. It not only grows to a height of more than six feet, but will grow in a dense thicket, dominating the habitat, and drying out in the fall, just at the height of fire season. It would be a shame to introduce it to the Rubicon Trail.

Response: This information has been added to the project file and is reflected in the analysis.

Central Valley Water Board - Central Valley Water Board staff has reviewed the DEIS to evaluate compliance with Cleanup and Abatement Order (CAO) R5-2009-0030, which was issued to El Dorado County and the US Forest Service. Alternatives 1, 3, 4, and 5 could result in compliance with the CAO if sediment, sanitation, and spills are adequately addressed and the operating agreement between El Dorado County Department of Transportation and the Eldorado National Forest is followed. It is noted that the winter closure concept may still be necessary if the actions described in the County's Saturated Soils Water Quality Protection Plan do not protect water quality.

Response: Based on information received during the comment period, the seasonal operating periods for each alternative have been modified and the effects of implementing these different seasonal operating periods are displayed in Chapter 3.

Central Valley Water Board - The County's Saturated Soil Water Quality Protection Plan provides results of sediment yield due to Off Highway Vehicle use of the Rubicon Trail, and this document may be a better reference to cite in the Final EIS.

Response: This recommended change has been made.

California State Parks - The Rubicon Trail is recognized as one of the premiere OHV trails in North America. It is an extremely valuable recreational resource for the people of El Dorado County and the State of California. The OHMVR Division, through the Grants and Cooperative Agreements Program, has provided substantial financial assistance in support of the Rubicon Trail. The Rubicon DEIS is being partially funded through a cooperative agreement between the Division and the El Dorado National Forest.

Response: Correct, State OHV trust funds have been used to help fund management of the Rubicon Trail and adjacent lands by both El Dorado County and the Eldorado National Forest.

El Dorado County - Attached hereto is a map produced by El Dorado County entitled "Rubicon Trail Comparison" which superimposes the route of the county's easement application in red, over the U.S.G.S. quadrangle map from 1897, which depicts the Rubicon Trail as it existed in 1897. The overlay shows that the routes are essentially identical. This supports the statement in the DEIS at page 272 that the modern route of the Rubicon Trail overlays in most part the historic wagon road. This also establishes that the easement applied for is essentially the same as the RS 2477 right of way claimed by the county. In regard to the RS 2477 right-of-way, the DEIS at page 10 accurately notes that the location of the trail changed a little each season, which supports the claim of right of way over variant routes. The DEIS at page 272 also recognizes the many different types of travel that have been used over the years, and correctly notes that "all of these modes of transportation have either necessitated or desired slightly different routes." The use of each of these different routes established a legal right of way over that route under RS 2477. The easement, if granted, will allow the county to channel use into one main route with a few carefully selected and maintained variant routes, which will lessen the impact of vehicular use in the Eldorado National Forest.

Response: This map has been added to the project record.

Mitigation

EPA - While we have no objections to the project, EPA recommends that the Forest Service elaborate on the Best Management Practices (BMPs) that will be used on a site-specific basis along the 6.7 miles of the Rubicon Trail. ... We recommend that the Final EIS identify the specific features that will be employed at Winter Camp Wetland, as well as the other areas listed on page 42, and discuss their effectiveness for reducing erosion and sediment delivery to streams.

Response: The project record contains the location of specific erosion control features called for in El Dorado County's SSWQPP and the SSWQPP Implementation Plan. The County erosion control features (referred to in the SSWQPP as BMPs) are designed to meet State water quality objectives and have been accepted by the Water Board, and would therefore meet the goals and objectives of applicable USFS BMPs. These erosion control features are designed to minimize erosion, capture sediment, and effectively convey flows across the trail; thereby minimizing offsite erosion and sedimentation associated with the trail and associated routes.

PEER - In addition, the DEIS fails to address the need for the Forest to require use of weed-free rock, gravel or other materials in all construction and maintenance activities undertaken pursuant to the proposed easement. The available sources of clean materials should be listed and use required. Eldorado National Forest cannot allow the use of weed-infested rock and gravel to be transported across and to National Forest lands for use as fill material or otherwise. A supplemental Draft EIS must include alternatives to avoid and minimize such risks to protect forest resources.

Response: Mitigation measures have been added to all action alternatives specific to invasive plant species and rock, gravel or other imported fill material.

Monitoring

PEER - The proposed easement must include a monitoring and enforcement plan as well. The DEIS dismisses this as an alternative outside the scope of the project; that is a ludicrous statement. Monitoring is not an alternative, it is the way the Eldorado National Forest and the public can determine whether the purpose and needs are being met and whether additional protections are needed to protect forest resources. For example, if maintenance structures fail, water quality will suffer. If illegal use continues, soil damage and hydrological impacts will continue and impacts to wildlife and plants may be greater than anticipated in the DEIS. Monitoring is also necessary to ensure the amount of human waste entering the waters is actually reduced (and ultimately eliminated) as required by the California Regional Water Quality Control Board's Cease and Desist Order (discussed further below). The Eldorado NF cannot grant an easement and then abandon its responsibilities to protect public resources.

Response: Monitoring of water quality protection measures, as described in El Dorado County's SSWQPP, has been included in all action alternatives. The California Regional Water Quality Control Board, Central Valley Region has approved the County's SSWQPP which includes monitoring of erosion control feature effectiveness. Other monitoring for invasive plants and cultural resources has also been added to the action alternatives. In addition, all action alternatives include an operating agreement with El Dorado County that includes a monitoring and enforcement plan.

New Routes

CORVA - Alternative 4 includes the addition of 3 very small spur trails that have been described in the DEIS as having potential for sediment delivery into the watersheds of Spider Lake, Ellis Creek and the Little Rubicon River. Terminology is used to describe the potential for “new disturbances” and “increased use”. Since the use of these routes, NSRELD-63-U, NSRELD-63-V and 14N34B, very small spur trails, are already in use, there could be no occurrences of either of the aforementioned conditions. If sedimentation issues are not evident at the present time while access to these areas is open, the likelihood of continued use would not change the status quo. Page 107 definitively states that the addition of these routes “would cause an increase in adverse impacts”. Accurately reporting these conditions would also enable Alternative 4 to be in compliance with Riparian Conservation Objectives, increasing the attractiveness of this alternative.

Response: The text has been revised to more accurately reflect that there have been impacts from these routes and that with designation of these routes, impacts may continue at a level comparable to current impacts. However, the inclusion of the three routes within RCAs would not likely meet the RCO #4 because these routes contribute sediment and petroleum products to water bodies. Designating routes within the RCA may continue to encourage users to recreate adjacent to the Little Rubicon River, which could lead to introduction of fecal waste that would impact aquatic species. While additional sediment and contaminant delivery associated with use of these routes may be minor, it would still be additive in terms of cumulative watershed effects if only for a short duration and at a localized scale.

CA4WDC - The exclusion of NSRELD-63_FBB, NSRELD-63-FBD, NSRELD-63-FBE (also referred to as 16, 17, and 18) is problematic. These routes create a loop that serves well established campsites and traverse an area well above lake level. They are solid and, to our knowledge, have shown no sign of deterioration or erosion in more than 30 years. History would foretell that user desire to have this access will remain high and the risk of environmental impacts is extremely low. Please reconsider their exclusion.

Response: During one of the field visits conducted by the ID Team in Fall 2011, the team determined that these routes are in close proximity to the high water mark of Buck Island Reservoir, and were not considered to be “well above lake level”. These routes were determined to be within the RCA for Buck Island Reservoir. The trail surfaces appear stable; however there is a likelihood that petroleum products would continue to be transported to Buck Island Reservoir if use continued on these routes so they were not recommended for designation. In addition, camping along the shoreline of Buck Island Reservoir increases the likelihood of the introduction of fecal waste, along with petroleum products that would impact the aquatic species that live in the reservoir and at the shoreline. These locations are therefore considered to be

inconsistent with SNFPA standard and guideline #116. While negative impacts associated with use of these routes may be believed by some to be minor, these impacts would still be additive in terms of cumulative watershed effects if only for a short duration and at a localized scale and is therefore not consistent with RCO #4. Other routes have been proposed for designation to provide access for dispersed camping while still maintaining a suitable buffer from aquatic habitat to reduce impacts.

CA4WDC - Camping and day use of the area below the Buck Island dam has been historically very high. It is highly desirable to have as much dispersed camping in the area as possible. Please include the route that is just east of the proposed Buck Island Bridge that runs north west to some long established campsites.

Response: This route, identified as NSRELD-63-U in the DEIS, is included in Alternative 4 and the environmental effects are described in Chapter 3. A portion of this route is located within the riparian conservation area (RCA) along the Little Rubicon River. This route was not included in the selected alternative based on the impacts from the use and location of this route, including potential delivery of petroleum products.

California State Parks - The OHMVR Division supports the addition of identified routes to the Eldorado NF Travel Management System to sustain reasonable and managed motorized access to camping facilities. These additional routes should be classified as open to off-highway licensed vehicles and highway licensed vehicles. Also the additional routes should have a “yearlong” season of use to accommodate the season of use on the Rubicon Trail.

Response: The routes to be added to the National Forest Transportation System (NFTS) are proposed to have a seasonal restriction consistent with the other native surface roads and trails within the Eldorado National Forest. This seasonal closure is to assure that use on these trails is consistent with the standard and guideline in the ENF LRMP that calls for implementing seasonal restrictions on use of native surface roads and trails during the wet season, and to minimize damage to forest resources consistent with 36 CFR 212.55(b). In addition, the seasonal closure meets the requirement in the CAO that calls for implementing measures to protect water quality during periods of saturated soil conditions.

Barton - It is unclear why routes NSRELD-63-FBB, NSRELD-63-FBD, NSRELD-63-FBE are not being added to the NFS. (See Map 3 of Alternative 3.) (These routes had previously been labeled 16, 17; and 18 in the Notice of Intent.) These spurs are all on high ground well above the lake level, form a loop that encompasses several viable existing campsites, and are naturally armored with 3" to 10" cobble that is common to the area. They have been in existence for at least 25 years that we personally know of and have not deteriorated in that time. Since the potential for use is high and the

potential for environmental impacts is low, we see no reason they should not be added to the NFS.

Response: During one of the field visits conducted by the ID Team in Fall 2011, the team determined that these routes are in close proximity to the high water mark of Buck Island Reservoir, and were not considered to be “well above lake level”. These routes were determined to be within the RCA for Buck Island Reservoir. The trail surfaces appear stable; however there is a likelihood that petroleum products would continue to be transported to Buck Island Reservoir if use continued on these routes so they were not recommended for designation. In addition, camping along the shoreline of Buck Island Reservoir increases the likelihood of the introduction of fecal waste, along with petroleum products that would impact the aquatic species that live in the reservoir and at the shoreline. These locations are therefore considered to be inconsistent with SNFPA standard and guideline #116. While negative impacts associated with use of these routes may be believed by some to be minor, these impacts would still be additive in terms of cumulative watershed effects if only for a short duration and at a localized scale and is therefore not consistent with RCO #4. Other routes have been proposed for designation to provide access for dispersed camping while still maintaining a suitable buffer from aquatic habitat to reduce impacts.

Barton - The new route we identified as "Spur IX" in our October 3, 2011, NOI comment letter has not been added to the NFS. It appears that it may have been added to Map 3 of Alternative 4, but its location is slightly different from what we suggested. This spur should be added to the NFS. It is approximately 360 feet long and runs in a northwesterly direction just east of the proposed bridge at Buck Island. It is all on granite, has an area in which to turn around, and has established dispersed campsites in the area. For ease in reference, we have attached the map that we included as an exhibit to our October 3, 2011, NOI comment letter. The map, attached to this letter as Exhibit A, shows the new routes we discuss in our third and fourth points above.

Response: The location of this route is correct on the maps. This route, identified as NSRELD-63-U in the DEIS, is included in Alternative 4 and the environmental effects are described in Chapter 3. A portion of this route is located within the riparian conservation area (RCA) along the Little Rubicon River. Additionally, dispersed camping along Little Rubicon River increases the likelihood of the introduction of fecal waste and petroleum products that would impact the aquatic species that live there.

PEER - There is no “need” to add routes to the Forest Service route system. The Eldorado has not even begun an analysis of a minimum road system; no roads should be added until that process has been completed. Nor does the DEIS make a case for the need for additional routes. The specialists’ reports all indicate these additional

routes would be harmful to wildlife, soils, water quality and plants. Site-specific Riparian Conservation Objectives analyses must also be completed for the proposed easement and each route proposed for addition to the Eldorado's road system.

Response: The explanation for the need for limited additions to the NFTS is provided in the Purpose and Need section of Chapter 1 and in the description of Alternative 1 in Chapter 2. These routes are proposed to be added to the NFTS as 4WD trails, consistent with the nature of the access, the type of use these routes receive and the management objective for these routes. Additional clarification has been added to the text of the FEIS to explain the purpose of each route. A travel analysis has been completed for this project and is included in the project record. This travel analysis considered the transportation system in the project area and travel needs. This travel analysis considered the transportation system in the project area and travel needs. This travel analysis will be used to inform the Forest Supervisor regarding whether to add these trails to the NFTS and the class of vehicles for which the trails would be designated for. The RCO Analysis for this project did consider each of the routes to be added to the NFTS for each alternative. Not all routes were determined to be within RCAs or to have potential adverse impacts to RCAs. This determination is based on field observations, measurements, and GIS analysis.

PEER - We oppose the designation of new routes; analysis for the additional routes is lacking and designation of additional routes is premature prior to the Forest completing Travel Analysis. A supplemental draft EIS must explain how the promised seasonal closures of these additions to the FS road system would be enforced, if the Rubicon Trail itself has no wet season closure, or different closure dates. Since monitoring and enforcement are not considered within the scope of the project, the Forest must address in a supplemental draft EIS the inevitable violation of seasonal closures of these new routes, if they are designated.

Response: A travel analysis has been completed for this project, and is included in the project record. This travel analysis considered the transportation system in the project area and travel needs. This travel analysis will be used to inform the Forest Supervisor regarding whether to add these trails to the NFTS and the class of vehicles for which the trails would be designated for. The routes to be added to the NFTS will follow the seasonal restrictions established in the 2008 Travel Management Record of Decision, as described in the Alternative 1 description in Chapter 2. This seasonal restriction calls for closing the native surface trails from January 1 through March 31 of each year, and allows for the seasonal closure to be extended, based on site conditions. Differing seasonal operating periods and seasonal closure dates for the Rubicon Trail are included in different alternatives. Many of the routes proposed to be added to the NFTS would not likely receive use during periods when snow covers the Rubicon Trail, since they provide access for dispersed camping and other day use access. Education and enforcement efforts will be the primary means of maintaining

the effectiveness and level of compliance with the seasonal closure. Education and enforcement elements have been added to each of the action alternatives, as described in Chapter 2.

Noxious Weeds

Walker - I am making these comments after reading the Biological Evaluation (Plants) for the Rubicon Trail DEIS. In this document, Susan Durham gives the project a moderate risk for noxious weeds. On page 35, she states that the following Noxious Weed Management Standards and Guidelines (USDA FS, 2004b) would not be met because: The document lacks any criteria to prevent introducing weeds; no control measures are listed for existing weeds; and there are no stipulations about cleaning equipment; and no mitigation measures for existing noxious weeds. I don't see any either. Is there a reason no attention is given to noxious weeds?

Also mentioned as being present in the quarry is cheatgrass. Cheatgrass is an exotic annual grass that has infiltrated rangelands and waste places everywhere. It can produce more than 10,000 plants per square yard and is highly flammable. Despite many studies, there is simply no good way to get rid of it. In the absence of a viable method of eradication, let us not introduce it to the Rubicon Trail.

The BE states that the current list of ENF WEEDS is currently under revision. If that is the case, then draw from the more current one when available. Regarding this list, it is my opinion that sweet clover and cheat grass ought to be elevated in status to the A list.

Response: Design Criteria to prevent the introduction of invasive plant species have been added to the FEIS.

PEER - Noxious Weeds-The proposed project violates Executive Order 13112, the Forest Service Manual and Sierra Nevada Forest Plan Amendment Standards and Guidelines (and thus the National Forest Management Act) because it is likely to introduce and cause the spread of weeds to the project area.

According to the DEIS and Sensitive Plant BE, "the greatest risk for the introduction of invasive plant species is imported material such as rock and gravel for trail maintenance" (DEIS, P. 233)(Sensitive Plant BE, P. 24) The DEIS and Sensitive Plant BE disclose the source of El Dorado County's fill material for maintenance on the RT is weed-infested. "Four invasive plant species of concern to the ENF (Priority 1 to 3) were identified at the Gerle Creek Adit quarry where El Dorado County Department of Transportation acquires material for roadwork on the Rubicon Trail. The species are *Bromus tectorum* (cheatgrass), *Hypericum perforatum* (Klamathweed), *Melilotus officinalis* (yellow sweetclover), and *Cirsium vulgare* (bull thistle). Other invasive plant species included *Chenopodium botrys* (Jerusalem-oak goosefoot) and *Verbascum thapsus* (woollymullein). " (DEIS, p. 231 and Sensitive Plant BE, P. 1)

Alternatives 1, 2, 3 and 4 violate direction in the Forest Service Handbook. The Forest Service Handbook (FSM 2081.03 (USDA FS 1995) directs that "when any ground disturbing action or activity is proposed, determine the risk of introducing or

spreading noxious weeds associated with the proposed action. 1. For project shaving moderate to high risk of introducing or spreading noxious weeds, the project decision document must identify noxious weed control measures that must be undertaken during project implementation.”

Alternatives 1, 2, 3 and 4 violate Sierra Nevada Forest Plan Amendment Standards and Guidelines. The Sierra Nevada Forest Plan Amendment includes Standards and Guidelines regarding noxious weeds management.

Response: Design Criteria to prevent the introduction and spread of invasive plant species have been added to the FEIS. Standards and Guidelines listed above are met for the action alternatives.

Design Criteria to prevent the introduction of invasive plant species include equipment cleaning; use of weed-free rock, gravel, or other fill when available; use of certified weed-free mulch or straw; post-construction monitoring for invasive plant species at

Oil and Petroleum

Snowlands Network - The entrance of oil and other petroleum products into the environment is a problem resulting from the extreme ruggedness of the Rubicon Trail. Petroleum products enter the environment through exhaust⁶ and as a result of two additional causes.

4x4 vehicles regularly damage their oil pans and transmissions thereby releasing petroleum products into the environment. The first photo below shows the terrain that causes these accidents and the second and third photos are examples of oil residue left behind.

The oil and other petroleum products eventually find their way into streams and lakes.

Oil and other petroleum products are also discharged into the environment when 4x4 vehicles overturn. This is a common occurrence and in many cases viewed as "fun" within the 4x4 community. The following three photos are examples of overturns that result in petroleum product discharge into the environment. Notice the crowd of on-lookers enjoying the thrill of the overturn in the first photo.

To put an end to oil and other petroleum products entering the environment as a result of extreme 4x4 vehicle use (1) the Rubicon Trail must be restored to its original condition where street legal 4x4 vehicles are capable of traversing the trail, and (2) only street legal vehicles should be allowed on the Rubicon Trail. The restriction to street legal vehicles is the only alternative that is consistent with El Dorado County's designation of the Rubicon Trail as a county road. Only street legal vehicles are permitted on county roads.

Response: Alternative 6 was developed, which calls for restoring the trail segment of the Little Sluice to allow typical 4WDs (in contrast with extreme 4WDs) to negotiate this segment of the trail. The points raised in this comment have been considered by the ID Team and effects analyses incorporated these ideas.

Over the Snow Travel

CORVA - Page 134 of the document refers to snowmobile use in and around the trail during the winter season, and is again mentioned together with wheeled-over-the-snow travel in regards to the potential impact on the American Marten population on page 197. The only study that has been cited regarding either type of over-the-snow travel is the observation stated in Forest Service testimony that weather conditions self-limit travel on the Rubicon Trail. To insure continued use by both snowmobile and wheeled-over-the-snow vehicles, it is suggested that clear studies be cited that prove the affect on habitat, if not, then mention of any supposed impact be removed.

Response: The analysis in the FEIS for the American Marten states:

Trails for Competitors. Roads that are driven during the winter months may allow coyotes to enter into marten winter habitat, affecting marten through competition or direct mortality from predation. This has been identified as a significant threat within lynx habitat. Since both lynx and marten have unique morphologies that allow them to occupy deep snow habitats where they have a competitive advantage over carnivores such as coyotes and bobcats, human modifications of this habitat, such as winter road use, over-the-snow travel, and snowmobile trails, can eliminate this advantage, providing increased access for predators and competitors. This has been identified as a potentially significant risk factor in the Sierra Nevada, worthy of further investigation (draft Conservation Assessment, Rubicon Trail Terrestrial Wildlife Biological Evaluation, Appendix A).

The draft Conservation Assessment referenced in the FEIS is located in the Rubicon Trail Terrestrial Wildlife Biological Evaluation, Appendix A.

Barton - We are concerned about the lack of analysis of over-the-snow travel in this DEIS. We are aware of a suit recently filed by the Snowlands Network (Snowlands Network v. United States Forest Service) against the USFS for the alleged lack of NEPA analysis for the USFS Over-Snow-Vehicle program. While the project being examined in this DEIS is an easement application for the County of El Dorado, we wanted to express our concern about the lack of discussion.

Response: We recognize the point you have raised. This project is not included in any current litigation. Over-the-snow travel and the associated effects are analyzed in this EIS.

Purpose and Need

Howser - Page 12: There is a need to reduce sediment delivery to Ellis Creek.

Where is the evidence? Produce a study that says sediment is increased downstream and is causing harm.

Response: The project file for the Rubicon Trail Easement contains photographic evidence of sediment delivery to Ellis Creek during runoff and increases in turbidity associated with runoff delivery and vehicle crossings.

Snowlands Network - The Forest Service in the subject DEIS does not clearly analyze issues and the need for the easement.

As aforementioned, there is no clear authority for the El Dorado County having any management authority over the Rubicon Trail. Therefore, why is this easement being pursued?

"The Forest Service receives grant funding from the California State Parks Off-Highway Motor Vehicle Recreation Division grant program to help manage, operate, maintain, and develop OHV use on NFS lands." Why then does the Forest Service not take responsibility and use the State funds to manage and maintain the Rubicon Trail and their land?

The relevance of El Dorado County funding is not clearly stated or analyzed. [s funding from El Dorado County an issue? If so, then why is it an issue? Has the County legally committed to provide funding if the easement is granted?

What is the Rubicon Trail? Is it a county road? Is it a Forest Service road? What is meant by "public road?"

Response: The Purpose and Need in Chapter 1 has been modified to identify the lack of clarity as to the management responsibilities for the Rubicon Trail between the Forest Service and El Dorado County. El Dorado County has requested an easement, in part because there is no clearly defined process for issuing R.S. 2477 rights, nor is there a requirement that an entity apply for R.S. 2477 rights. El Dorado County could file suit to quiet title against the United States, or request an easement as the County has done. The Forest Service is responding to this request.

The Eldorado National Forest receives funds from the State OHV trust fund for management of activities adjacent to the Rubicon Trail, but not for maintenance and operation of the Rubicon Trail itself.

In the event that the Forest Service issues El Dorado County an easement for the Rubicon Trail, El Dorado County is responsible for meeting the terms of the easement,

which includes maintenance of the route. The easement does not require El Dorado County to provide funding.

As described in Chapter 1, the Rubicon Trail is an historic route that is now used by OHV enthusiasts and is open to other users. El Dorado County has submitted a description and survey of the Rubicon Trail in the easement request. A more complete description of the history and management of the Rubicon Trail is provided in Chapter 1. The definition of a public road is included in the Glossary.

Recreation

PEER - CSNC's scoping letter of September 25, 2011, asked that the EIS include a discussion and analysis of the Rubicon Trail's carrying capacity. The DEIS Appendix A, Scoping Comment Summary, states that the "the recreation analysis will address the use of the Rubicon Trail including numbers of users and types of users" (DEIS, P. 342). However, the recreation analysis does not include numbers of users, merely a reference to a summary of visitor counts in the project record. That summary should be part of the information in the EIS. Moreover, the DEIS has no discussion or analysis of the number of visitors and vehicles that can be accommodated on the trail and its environs without damage to resources. This should include a discussion of the Land Management Plan's requirements in Semi-primitive Motorized High Country Areas, which include "Provide for low concentrations of use. Provide developed recreation opportunities that blend with the environment."

Response: The Recreation section in Chapter 3 has been modified to include information regarding recent use of the trail. The Recreation section in Chapter 3 analyzed the effects of implementing the different alternatives based on the Recreation Opportunity Spectrum (ROS) consistent with the LRMP direction to manage Semi-primitive Motorized High Country for low concentrations of use. More specifically, the analysis in Chapter 3 considered social encounters as well as remoteness, visitor management and visitor impacts.

RCO

PEER - Riparian Conservation Objectives (RCO) Analysis –The RCO analysis does not support DEIS conclusions regarding the effects of the alternatives on hydrological, riparian and aquatic resources. Only Alternative 5 unqualifiedly meets the objectives.

Alternative 1 fails to satisfy the objectives for SNFPA Riparian Conservation Areas. Alternative 1– The RCO analysis admits Alternative 1 is not consistent with the RCO #1, to protect beneficial uses of water: Nor is Alternative 1 consistent with RCO #2: Nor does Alternative 1 meet RCO #5:

Alternative 3 does not satisfy the RCOs either. Nor does Alt. 3 meet RCO # 2:
“Alternative 3 fails RCO#4:

The EIS should explain that the term BMP, as used in the Forest Service Water Quality Management Plan, differs from the County’s use of the term, which refers to structures, not practices.

PEER - Summary of RCO findings: Alternatives 1, 2, 3 and 4 violate NFMA because they fail to comply with the SNFPA RCO Standards and Guidelines. Based on the statements and findings in the Hydrological Report, Table S-3, Page iv in the DEIS, “Summary of Environmental Effects,” is incorrect in concluding that Alternatives 1 and 3 are “likely to meet all” of the RCOs. Quite the opposite, the Hydrological Report is quite clear that those alternatives fall short of meeting the objectives. A supplemental draft EIS must correct that error. Also, an RCO analysis must determine whether an alternative meets an objective or not; “likely” or “unlikely” is not sufficiently definitive. A supplemental draft EIS must also analyze the degree of claimed “improvements” promised by some of the alternatives. Merely “improving” hydrological and habitat conditions that are presently far out of compliance with the RCOs may still not result in meeting the objectives.

Response: The term BMP with regards to the County’s erosion control features has been removed from the document. These features are now referred to as erosion control features. The term BMP with regards to the USFS refers to practices that are designed to meet State water quality objectives. The County’s erosion control features are physical structures that are also designed to meet State water quality objectives as well as the objectives of the USFS BMPs. The USFS BMPs are provided in the document to show what objectives are being met by installation and maintenance of the County’s erosion control features and as additional guidance for the County if needed.

The descriptions of the alternatives have been modified to clarify which alternatives include a seasonal operating period. Year round use was analyzed primarily for Alternatives 1, 2, and 4 that do not include a seasonal operating period. Modified

Alternative 3 includes a saturated soil management strategy that is designed to minimize the impacts of use on the trail when it is conveying runoff.

The determination was made by the RCO team that some impacts were of short-duration and negligible in scale. Such impacts would not result in an overall determination of that the activity is not consistent with RCOs. The RCO analysis is based on the best information available and includes on-the-ground review by professional hydrologists and soil scientists. Nevertheless, the analysis must necessarily work with limited quantitative data and rely on professional judgment to some extent. The RCOs are objectives, and the SNFPA does not prohibit activities within RCAs; it requires analysis of consistency and the identification of appropriate mitigation measures to minimize the risk of activity-related sediment entering aquatic systems and impacts to habitat for aquatic or riparian-dependent species, but that such activities must be analyzed and that justification for a determination must be given.

The RCO team determined that Alternatives 3, 5, and 6 would be consistent with all RCOs. Any RCO inconsistencies under these alternatives would be short-lived and have negligible impacts to resource conditions. Technically many activities on public lands may have short term impacts but these may be acceptable over a longer time frame. Many of these activities can and will violate RCOs on a short-term basis, but overall may have very little impact. The RCO team made these determinations based on duration of impacts under each alternative and it was determined that impacts under Alternatives 3, 5, and 6 would be acceptable based on the life of the potential impact.

The ford could result in RCO inconsistencies from petroleum products entering the Little Rubicon River, but only during high water conditions. The impact would be of short-duration and localized, therefore being minor in scale. The ford would be designed allow for flow conveyance while minimizing vehicular contact with running water. High flow conditions are primarily in response to spring snowmelt and are expected to be of short duration and during periods of the relatively low trail use.

The determination was made by the RCO team that some impacts were of short-duration and negligible in scale. Such impacts would not result in an overall determination of “not meeting”. Continued impacts and large scale impacts result in “not likely to meet”. The terms “not likely” and “likely” are used because the RCO analysis procedure is subjective in many ways that include the season of use, the type of vehicle present, professional judgment, and limited quantitative data. The SNFPA does not state that no activities can occur within RCAs, but that such activities must be analyzed and that justification for a determination must be given.

Sanitation

California State Parks - The OHMVR Division supports the construction of additional restroom facilities along the Rubicon Trail to ensure sanitary trail conditions and quality of recreational experience. The continued use of personal sanitation methods should be promoted until such time that additional restroom facilities are constructed.

Response: As stated in Chapter 1, El Dorado County and the Forest Service will continue to educate users about the need for use of WAG Bags and appropriate personal sanitation methods.

Hendricks - In the early days of the ROC, it was decided that individual use of WAG bags or similar human waste disposal systems was preferable over placement of toilets along the road. Reasons for this were that toilet placement would by default create a campground area around it and individuals carrying out their own waste would eliminate the cost of installing toilets, pumping out toilets, and related maintenance. To this end the County spent thousands of dollars of grant money purchasing and giving away free WAG bags to Trail users. Two things they did not do-monitor to evaluate usage or require that WAG bags be carried and used. Because there was no real incentive or requirement to use these products, they were treated as a novelty, and human waste issues continue on the Trail. In October of 2010, I overheard a conversation in a restaurant in Bridgeport (see Attachment 19) that reported once individuals got over the initial reluctance to handle their waste in a new way, they actually preferred this over toilets. The County was on the verge of victory in this approach, but dropped the ball in failing to make WAG bags a requirement -along with enforcement -and turned a possible big victory into a defeat.

I am resigned that the County is incapable of doing any better on this issue. They seem happy and eager to pay for installation of toilets and incur the continuing costs of maintenance and pumping. And, the Forest must be prepared to tackle and deal with the impacts that will occur around toilet placements along the Trail since they, in their analysis of Alternative 5, improperly negated the simple and beneficial aspects of individual responsibly for handling human waste with WAG bags. The Forest must also know that if the County fails in its upkeep and maintenance of toilets along the road, it will fall to the Forest to take over. Words and promises are always great at the beginning of a plan; things always change as time goes on and it is usually me, the taxpayer that ends up paying the bill. Since it appears that motorized users cannot use WAG bags, unlike climbers/hikers on Shasta and in other non-motorized areas, placement of toilets is the only solution.

Response: The description of the alternatives in Chapter 2 has been modified to clarify that the toilets will be maintained. In addition, mitigation measures have been added to the action alternatives that includes education of users about the need for use of WAG Bags and appropriate personal sanitation methods.

Platt - As stated previously, it is unfortunate that Rubicon users, unlike many back country enthusiasts, will not support personal responsibility for their own human waste by using a WAG Bag system. The only option left is the strategic placement of toilets along the trail. I accept this fact and recommend the placement of four vault toilets, one in the vicinity of Walker Hill Upper, one the south side of Little Sluice, and three at Buck Island.

Response: Alternatives 3, 4 and 6 include installation of toilets at the identified locations. The description of the action alternatives have been modified to include education of users about the need for use of WAG Bags and appropriate personal sanitation methods.

PEER - We agree that something must be done to address the issue of human waste, but adding vault toilets alone is unlikely to adequately address this issue as such facilities are likely to encourage use in the areas they are located. There is no analysis of the effects of the placement of toilet facilities on the environment. Each alternative that includes toilets must address such placement, and who will be responsible for cleaning and maintenance. Toilets should only be installed with the acknowledgement that these facilities will encourage concentrated use in the areas where these are located; and a supplemental draft EIS must analyze toilet placement, including direct and indirect impacts on sensitive resources.

Response: The description of the alternatives in Chapter 2 has been modified to clarify that the toilets will be maintained. In addition, mitigation measures have been added to the action alternatives that includes education of users about the need for use of WAG Bags and appropriate personal sanitation methods. The effects of installation and maintenance of toilets is presented in Chapter 3.

Soils

Hower - Page 43: On the terrace, nearly all vegetation except for residual trees is absent due to traffic and the soils are highly compacted.

Please change this sentence to more accurately reflect the area is dominated by Sandy soil. (your own admission: Page 43: Up to 1 meter of recent sandy deposits were noted adjacent to the Winter Camp wetland.

This area has no characteristics of a Wetland as defined by the EPA. By your own admission on Page 38 and 43, that Sandy soils are poor growing soil due to lack of nutrients and that this area is dominated by Sand! You can't have it both ways....it's a wetland cause we said so, and people have compacted the area, but also say it's sandy and has poor growing conditions.

Response: The text has been modified to reduce the confusion.

Hower - Page 44: *Big Sluice wetland*

Once again, this is another area that does not meet the EPA definition of a wetland. Just because an area has water, does not make it a wetland.

Most of the winter, I have a puddle in the dirt section of my driveway.....it's hardly a wetland.

Response: A definition of the term "wetlands", as it is used in this document has been added to the Glossary.

CA4WDC - On page 43 there is a reference to a portion of the trail as "Devil's Peak". This area has been referred to in public meetings, other documents, and by the public as Walker Hill. Renaming this for the purpose of this document will only create confusion.

Response: The text has been modified to reduce the confusion.

Seasonal Closure

California State Parks - The OHMVR Division is concerned that a rigid seasonal closure would unnecessarily detract from the recreational resource of the Rubicon Trail while adding very little to the management or resource protection of the trail.

Response: A purpose of examining a range of alternatives is so that the decision-maker and the public can see the impacts associated with the proposed action and alternatives in comparative form. A seasonal closure of the Rubicon Trail and the routes added to the NFTS was included in several alternatives because it meets the purpose and need and will provide a higher degree of protection to water quality and resources impacts associated with wet season use of the trail. The different alternatives considered in the EIS propose different seasonal operating periods and seasonal operating period dates and the effects of implementing these different seasonal operating periods are displayed in Chapter 3. The CAO issued by the California Regional Water Quality Control Board, Central Valley Region called for a saturated soil water quality protection plan (SSWQPP) to meet this objective and noted that the plan should consider a seasonal closure as well as other means to protect water quality. The California Regional Water Quality Control Board, Central Valley Region informed the Eldorado National Forest Supervisor and El Dorado County DOT Deputy Director that the Water Board had found that the SSWQPP submitted by El Dorado County adequately addressed water quality impacts caused by vehicle use during saturated soil conditions and by over-the-snow travel on the Rubicon Trail and the specific bypass routes identified by the County (letter dated January 5, 2012). The SSWQPP did not address the additional routes the Forest Service has proposed to add to the NFTS. Further, in the comments submitted by the Water Board, in response to the DEIS, the Water Board clarified that a seasonal closure is not needed at this time to comply with the CAO, but that a seasonal closure may be needed if the actions described in the County's SSWQPP do not protect water quality.

El Dorado County - On page 35, the seventh bulleted assumption is that El Dorado County DOT would implement and enforce a seasonal closure. El Dorado County has stated many times that it does not believe that State law would allow it to seasonally close a non-county-maintained road, and no one has provided any analysis that would contradict this legal position. Furthermore, a seasonal closure is not necessary because the El Dorado County engineers have designed the erosion control features so that wet season usage will not create unacceptable sedimentation. Also that assumption and the following one appear to say that the Rubicon Trail is in the San Joaquin River basin, which it is not.

Response: The assumption that El Dorado County will implement and enforce a seasonal closure of the Rubicon Trail has been deleted and the description of seasonal restrictions has been modified in the various Alternatives described in Chapter 2.

Alternative 1 reflects El Dorado County's position that the County does not have the authority to close the Rubicon Trail, and so this alternative includes implementing the erosion control measures and other elements called for in the SSWQPP, but does not call for a seasonal closure. The California Regional Water Quality Control Board, Central Valley Region informed the Eldorado National Forest Supervisor and El Dorado County DOT Deputy Director that the Water Board had found that the Saturated Soil Plan submitted by El Dorado County adequately addressed water quality impacts caused by vehicle use during saturated soil conditions and by over-the-snow travel (letter dated January 5, 2012). However, in the comments submitted by the Water Board, in response to the DEIS, the Water Board clarified that a seasonal closure is not needed at this time to comply with the CAO, but that a seasonal closure may be needed if the actions described in the County's SSWQPP do not protect water quality. Accordingly, Alternative 3 includes a seasonal closure that will be implemented if monitoring demonstrates that the County's SSWQPP is not effective at protecting water quality.

Hendricks - The effects from wheeled vehicle use during the winter wet season has been well documented in the Eldorado National Forest Travel Management Final Environmental Impact Statement, Appendix D (please see Attachment 22). This analysis properly led to the seasonal closure of all native surface roads on the Eldorado Forest. I have documented the ongoing use of the Rubicon Trail without a needed seasonal closure and the effects of wet season use on the Rubicon Trail in several personal reports including one from Jan. 2009 (please Attachment 23).

Throughout the analysis in the DEIS are many statements about the negative effects of wet season use and also the benefits of a seasonal closure, such as: "Vehicle use during periods of wet trail conditions would result in an increase in sediment and contaminant delivery to hydrologic features associated with the creation of ruts, compaction, and from direct vehicular contact with flowing water bodies or flowing."

The County has been doing much good work with the installation of drainage structures and what they refer to as "bmps". Some will argue that these structures are fixing the problem and wet season use should be allowed. Please take a look at my report from Jan. 2011 (Attachment 24). All these photos are sections of the Rubicon Trail where all of El Dorado County's structures are in place. Water still runs down the Trail and flowing or ponding water still melts out the snow to the surface. There is little change.

The Forest's analysis has concluded that seasonal closure is necessary to protect the structures that the County has and plans to install on the Rubicon Trail. The Forest's analysis of wet season closures in Eldorado National Forest Travel Management Final Environmental Impact Statement, page D-1 (please see Attachment 22) states: " The primary objectives of the wet season closure are to protect the drainage structures from damage, to protect the road or trail tread from rutting and other damage, and to

minimize impacts to water quality at stream crossings or where drainage off of roads or trails becomes concentrated, carrying sediment and other deleterious materials into stream courses."

Without requiring a seasonal closure in the proposed easement, the USFS will be allowing these kinds of impacts to water quality and resources -to continue. This proposed easement must require a seasonal closure of the entire Trail from November 1 to July 1.

Response: Alternatives 5 and 6 have seasonal operating periods of the Rubicon Trail from July 1 to November 1 of each year, as suggested by the commenter. Each of the action alternatives also includes a seasonal closure of the trails to be added to the NFTS consistent with the direction in the 2008 Travel Management ROD. Modified Alternative 3 includes a saturated soil management strategy, whereby if the SSWQPP erosion control measures or other measures are not found to be effective, and if other measures cannot be implemented, the Rubicon Trail will be closed March 1 through May 15. The effects of implementing these different seasonal closures are displayed in Chapter 3. The California Regional Water Quality Control Board, Central Valley Region informed the Eldorado National Forest Supervisor and El Dorado County DOT Deputy Director that the Water Board had found that the SSWQPP submitted by El Dorado County adequately addressed water quality impacts caused by vehicle use during saturated soil conditions and by over-the-snow travel (letter dated January 5, 2012). However, in the comments submitted by the Water Board, in response to the DEIS, the Water Board clarified that a seasonal closure is not needed at this time to comply with the CAO, but that a seasonal closure may be needed if the actions described in the County's SSWQPP do not protect water quality.

Platt - During times when saturated soil conditions exist, it is imperative that a wet season closure be required for the Rubicon Trail system authorized by the Easement. This would include the historic route, variants and any additional new routes added to the system. This action would provide for consistency with the 2008 Travel Management Record of Decision, the Eldorado National Forest Land and Resource Management Plan, BMP's, RCO's and analysis by Specialists documented in this DEIS.

Appendix D of the Public Wheeled Motorized Travel Management EIS states:

- The Eldorado NF LRMP includes a standard and guideline under Forestwide Management Practice 27 that calls for instituting a closure for motorized use of roads and trails normally open for Off-Highway vehicle use during wet weather periods to reduce damage to native surface routes. This standard and guideline also calls for allowing roads and trails to be open when soil conditions permit. A wet season closure is a tool for protecting native surfaced roads and trails when they are susceptible to rutting and soil damage. Rutting causes direct damage

to travelway treads, concentrates runoff that can lead to gully erosion, and leads to trail widening. Wet season use can also damage drainage structures such as rolling dips, waterbars, and other waterbreaks. These structures are easily damaged when soils are too wet. The primary objectives of the wet season closure are to protect the drainage structures from damage, to protect the road or trail tread from rutting and other damage, and to minimize impacts to water quality at stream crossings or where drainage off of roads or trails becomes concentrated, carrying sediment and other deleterious materials into stream courses.

The impacts from wet season use are clearly identified in the Rubicon Easement DEIS as stated on page 63: "Vehicle use during periods of wet trail conditions would result in an increase in sediment and contaminant delivery to hydrologic features associated with the creation of ruts, compaction, and from direct vehicular contact with flowing water bodies or flowing trail surfaces."

The DEIS discusses further the cumulative effects of not implementing a seasonal closure on page 81 by stating: "Soil compaction, soil displacement, vegetation cover loss, and the development of water flow patterns would continue to occur during wet season vehicular use. The result would be accelerated erosion and sediment delivery to nearby hydrologic features during spring snowmelt. Stream channel morphology would continue to be altered at low-water crossings associated with sediment delivery and stream bank failures from mechanical erosion and riparian vegetation loss. Petroleum products and solvents would continue to be delivered to nearby hydrologic features during wet season use, low-water crossings, and dispersed vehicular use on unauthorized routes."

In the DEIS, the assumption is made that very little winter use occurs, and that use which does occur is primarily private land owner access to Spider Lake private property (see DEIS pg. 247). True, compared to summer use, winter use represents a small portion. What is not addressed is the disproportionate impact resulting from use during the winter and shoulder seasons. The majority of winter use is by extreme vehicle users that want the additional challenge of mud and snow, not private land owner access as stated in the DEIS. During the winter months, snow conditions restrict most vehicles to portions of the trail west of Walker Hill. It is very rare that wheeled vehicles can drive during winter months, over snow, to the private land parcels at Spider Lake. The snow is variable from 4-6 feet in many locations, eroded by water running down the trail to the dirt. Monte Hendricks and I presented a Power Point presentation to Forest Supervisor Ramiro Villalvazo to inform him of winter trail conditions. (See attachment 3) These conditions even inhibit over the snow vehicles such as snow cats or snowmobiles.

Unfortunately, the area between Wentworth Springs and Walker Hill has become a wet season play area. Little to no regard is given to "Tread Lightly Principles" or Forest

Regulations restricting vehicles to designated routes and the prohibition of off road travel. It is not uncommon for vehicles to travel off the trail in these areas causing resource damage as documented in Water Board Inspection Reports. (See attachment 4)

Response: Each of the action alternatives includes a seasonal closure of the trails to be added to the NFTS consistent with the direction in the 2008 Travel Management ROD, as suggested by the commenter. The various alternatives also include different seasonal restrictions and/or seasonal closure dates for the Rubicon Trail, including Alternatives 5 and 6 which have seasonal operating period of the Rubicon Trail from July 1 to November 1 of each year. Alternatives 1 and 4 include implementation of the erosion control measures and other measures and do not include a seasonal closure of the Rubicon Trail. Modified Alternative 3 includes a saturated soil management strategy, whereby if the SSWQPP erosion control measures or other measures are not found to be effective, and if other measures cannot be implemented, the Rubicon Trail will be closed March 1 through May 15. The effects of implementing these different seasonal closures are displayed in Chapter 3. The California Regional Water Quality Control Board, Central Valley Region informed the Eldorado National Forest Supervisor and El Dorado County DOT Deputy Director that the Water Board had found that the SSWQPP submitted by El Dorado County adequately addressed water quality impacts caused by vehicle use during saturated soil conditions and by over-the-snow travel (letter dated January 5, 2012). However, in the comments submitted by the Water Board, in response to the DEIS, the Water Board clarified that a seasonal closure is not needed at this time to comply with the CAO, but that a seasonal closure may be needed if the actions described in the County's SSWQPP do not protect water quality.

The assumption that El Dorado County will implement and enforce a seasonal closure, if needed has been removed from the document.

Snowlands Network - The use of 4x4 vehicles on the Rubicon Trail during the wet seasons (fall, winter and spring) causes excessive damage to the environment through erosion and sedimentation. Environmental degradation due to oil and other petroleum products being released into the environment should be stopped by restoring the Trail to its original condition where street legal 4x4 vehicles are capable of traversing it. In order to minimize degradation and erosion associated with this historic route only street legal vehicles should be allowed on it.

In the discussion of environmental consequences regarding the Proposed Action, Alternative I, the DEIS states: "During wet season use; trail widening, vegetation loss, soil compaction, and soil displacement could occur on some segments of the trail and trail variants and the impacts would vary based on the soil type and depth, vegetation condition, and effective groundcover. These impacts would occur in areas where vehicles avoid obstacles such as snow drifts to continue, and where exposed soils lack

effective groundcover in the form of rocks, vegetation, adequate snow cover, and downed woody debris.”

The damage to the environment caused by this type of winter use will continue regardless of the construction of a few bridges or the adding of toilets. Therefore, winter vehicle use of the Rubicon Trail must be prohibited in order to prevent continued erosion and sedimentation. In the shoulder seasons, fall and spring, the impacts of 4x4 vehicle use on the Rubicon Trail is just as destructive as winter and contributes to excessive erosion and sedimentation. The following two photos are typical of what occurs during these times. Yet the Proposed Alternative (Alternative 1), the Preferred Alternative (Alternative 3) and Alternative 4 fail to deal with erosion that is exacerbated by travel during the wet season.

Most glaring are the numbers for erosion that prove that the Forest Service claim that the impacts from wet season use of the Trail will be "minimal, short-term and localized" is false. Nearby to the Rubicon Trail erosion has been estimated to be 13 lbs./acre/year. On the Rubicon Trail it is 8000 lbs./acre/year⁴

The Forest Service's own hydrology report' supports the need for a wet season closure. The analysis contained in the report does not support the lack of a wet season closure as in alternatives 1, 2 and 4.

Based on the best available data the easement for the Rubicon Trail must include a wet season closure that covers the period in which erosion due to saturated soils is most likely to take place.

Response: As pointed out by the commenter, the Purpose and Need for Action in Chapter 1 recognizes that there is a need to reduce runoff from the Rubicon Trail and to reduce discharge of sediment and other wastes into the waters of the State. One of the significant issues identified through public scoping and presented in Chapter 1 is the use of the Rubicon Trail during the wet season, causing damage to resources. Based on this need and issue, the various alternatives include different seasonal restrictions and/or seasonal closure dates for the Rubicon Trail, including Alternatives 5 and 6 which have seasonal operating period of the Rubicon Trail from July 1 to November 1 of each year. Each of the action alternatives includes a seasonal closure of the trails to be added to the NFTS consistent with the direction in the 2008 Travel Management ROD, as suggested by the commenter. Alternatives 1 and 4 include implementation of the erosion control measures and other measures and do not include a seasonal closure of the Rubicon Trail. Modified Alternative 3 includes a saturated soil management strategy, whereby if the SSWQPP erosion control measures or other measures are not found to be effective, and if other measures cannot be implemented, the Rubicon Trail will be closed March 1 through May 15. The effects of implementing these different seasonal closures are displayed in Chapter 3. The California Regional Water Quality Control Board, Central Valley Region informed the

Eldorado National Forest Supervisor and El Dorado County DOT Deputy Director that the Water Board had found that the SSWQPP submitted by El Dorado County adequately addressed water quality impacts caused by vehicle use during saturated soil conditions and by over-the-snow travel (letter dated January 5, 2012). However, in the comments submitted by the Water Board, in response to the DEIS, the Water Board clarified that a seasonal closure is not needed at this time to comply with the CAO, but that a seasonal closure may be needed if the actions described in the County's SSWQPP do not protect water quality.

The DEIS had included an assumption that El Dorado County would implement and enforce a seasonal closure if the SSWQPP measures were not effective, in order to be in compliance with the CAO. This assumption was used in completing the environmental effects analyses in Chapter 3. This assumption has been removed from the document. The descriptions of the seasonal restrictions or seasonal operating period for each alternative have been modified to better reflect the range of management options and authorities. The effects analysis in Chapter 3 describes the anticipated effects from implementing the various alternatives.

Snowlands Network - The Record of Decision, April 2008, for the Eldorado National Forest Public Wheeled Motorized Travel Management EIS adopted a general winter motorized closure (Alternative B (Modified) because "it best provides for the protection of the resources while still addressing the other elements of purpose and need for the project." Thus, wheeled travel is prohibited on Eldorado routes from January 1 to March 31. Having adopted this general restriction, Eldorado National Forest cannot override such restriction without amending its motorized travel management plan.

Eldorado National Forest Supervisor Ramiro Villalvazo wrote in that Decision:

Implementation of the January 1 to March 31 seasonal closure in Modified B will provide protection to native surface roads and trails by minimizing rutting caused by vehicle travel on saturated roads as explained in Appendix D of the FEIS. I realize that the seasonal closure will restrict the number of months available to recreate in portions of the forest. I selected this closure period because it protects the roads and trails from damage during the periods they are most susceptible to impacts, yet minimizes impacts on public access to the forest.

In this Rubicon easement matter, the Forest Service violates its own rules in alternatives I, 3 and 4 for the Rubicon Trail in that they do not comply with Eldorado's recently adopted travel management policies. No creditable rationale has been set forth for why management of the Rubicon Trail should differ from that of other native soil roads on the Eldorado, and Eldorado has not amended its travel management policy to allow such an exception.

Given the clear benefit to a wet season closure and that Eldorado National Forest has adopted a general wet season closure applicable to all native soil routes on the forest,

the failure to include a wet season closure for the Rubicon easement is a violation of Eldorado's own policies, unreasonable, and arbitrary and capricious.

Response: Each of the action alternatives includes a seasonal closure of the trails to be added to the NFTS consistent with the direction in the 2008 Travel Management ROD, as suggested by the commenter. The same seasonal restriction is not included for the Rubicon Trail itself in all alternatives since the project includes implementation of the SSWQPP along the Rubicon Trail, the purpose of which is to address erosion and sedimentation from wet season use. These same measures are not proposed for each of the routes to be added to the NFTS, although they will receive appropriate mitigation measures and regular maintenance to ensure they meet standards for NFS trails. Additionally, the easement request from El Dorado County did not include a seasonal closure, so this requirement was not included in Alternative 1. The California Regional Water Quality Control Board, Central Valley Region informed the Eldorado National Forest Supervisor and El Dorado County DOT Deputy Director that the Water Board had found that the SSWQPP submitted by El Dorado County adequately addressed water quality impacts caused by vehicle use during saturated soil conditions and by over-the-snow travel (letter dated January 5, 2012). However, in the comments submitted by the Water Board, in response to the DEIS, the Water Board clarified that a seasonal closure is not needed at this time to comply with the CAO, but that a seasonal closure may be needed if the actions described in the County's SSWQPP do not protect water quality. Based on this information, Alternative 3 was modified to include a saturated soil management strategy whereby if the SSWQPP erosion control measures or other measures are not found to be effective, and if other measures cannot be implemented, the Rubicon Trail will be closed March 1 through May 15.

PEER - Due to potential impacts on forest resources, especially aquatic and riparian resources, a supplemental draft EIS must analyze and any easement must include wet weather closures. The hydrological and aquatic assessments clearly demonstrate significant damage to hydrological resources will continue unless motorized vehicle use on wet soils is curtailed. The DEIS, as written, gives the public the impression that only owners of private land will have winter access. For example, the Hydrology Report discloses, "Under Alternative 1, some wet season use of the trail would occur associated with access to privately owned lands"(Hydrology and Riparian Resources Report, p. 15). However, nowhere in the DEIS is even this limited vehicle use quantified. Other sections of the DEIS and background documents refer to the potential for seasonal closures "as needed." For example, the Aquatic BE notes, "Water quality of aquatic species habitat will be maintained, based on the ability of the County to implement a seasonal closure as needed to meet water quality objectives" (Aquatics BE, p. 14). (Exhibit E).

The DEIS fails, however, to inform the public of the extent or nature of the needed closures. The DEIS also implies the County will implement at least one seasonal

closure: “El Dorado County DOT would implement and enforce a seasonal closure as needed to meet the terms of the CAO issued by the Central Valley Regional Water Quality Control Board...” (DEIS, p. 35). Again, the DEIS implies there will be wet weather closures, but only Alternative 5 expressly addresses such a closure.

Response: The DEIS had included an assumption that El Dorado County would implement and enforce a seasonal closure if the SSWQPP measures were not effective, in order to be in compliance with the CAO (DEIS, p 35). Under this assumption, it was determined that public use would be restricted and only access for private landowners would be allowed. This assumption was used in completing the environmental effects analyses in Chapter 3. This assumption has been removed from the document. The descriptions of the seasonal restrictions or seasonal operating period for each alternative have been modified to better reflect the range of management options and authorities. The effects analysis in Chapter 3 describes the anticipated effects from implementing the various alternatives. Alternatives 5 and 6 include a seasonal operating period of the Rubicon Trail from July 1 to November 1 of each year, and the environmental effects of implementing those alternatives are described in Chapter 3. At this time, the California Regional Water Quality Control Board, Central Valley Region has found that the SSWQPP submitted by El Dorado County adequately addresses water quality impacts caused by vehicle use during saturated soil conditions and by over-the-snow travel (letter dated January 5, 2012). In the comments submitted by the Water Board, in response to the DEIS, the Water Board clarified that a seasonal closure is not needed at this time to comply with the CAO, but that a seasonal closure may be needed if the actions described in the County's SSWQPP do not protect water quality. Based on this information and other comments received during the comment period, Alternative 3 was modified to include a saturated soil management strategy whereby if the SSWQPP erosion control measures or other measures are not found to be effective, and if other measures cannot be implemented, the Rubicon Trail will be closed March 1 through May 15.

PEER - Because the DEIS is not clear about if or under what circumstances wet weather use would be allowed, those analyses based on the assumption of limited wet weather use are not valid for those alternatives that have no such limits.

Response: The descriptions of the seasonal operating periods or seasonal restrictions in the various alternatives have been modified to provide greater clarity and specificity, as suggested by the commenter. Modified Alternative 3 includes a saturated soil management strategy, whereby if the SSWQPP erosion control measures or other measures are not found to be effective, and if other measures cannot be implemented, the Rubicon Trail will be closed March 1 through May 15. The monitoring for effectiveness of the SSWQPP measures, which would trigger the need for a closure of the Rubicon Trail, is based on the monitoring described by El Dorado County in the SSWQPP, which has been accepted by the California Regional Water Quality Control Board, Central Valley Region.

Supplemental DEIS

PEER - The proposed action addresses El Dorado County's request for an easement across National Forest lands to maintain the current, but not necessarily historic, alignment of the Rubicon Trail. We support an easement for maintenance purposes to reduce impacts to the environmental resources, as such, any easement must include conditions sufficient to ensure the protection of public lands and natural and cultural resources, as well as address the impacts that trail users are having on other users of the public lands. None of the Alternatives presented in the DEIS sufficiently address or mitigate resource issues, particularly hydrological impacts and impacts to imperiled species and habitats. We urge the Forest Supervisor to consider an alternative that includes 12-foot-wide bridges at both Ellis Creek and the Buck Island outlet, wet season closures to protect soils and aquatic and riparian resources, and limits the easement to the route adopted by the El Dorado County Board of Supervisors on January 26, 2010 as a maximum. (Exhibit A) Because these alternatives and other issues were not adequately explored in the DEIS we urge the Forest to prepare and circulate a supplemental draft EIS.

Response: Forest Service Handbook 1909.15, 25.1 – Use of Comments on a Draft Environmental Impact Statement in a Final Environmental Impact Statement states:

“Review, analyze, evaluate, and respond to substantive comments on the draft EIS.

(a) An agency preparing a final environmental impact statement shall assess and consider comments both individually and collectively, and shall respond by one or more of the means listed below, stating its response in the final statement. Possible responses are to:

(1) Modify alternatives including the proposed action.

(2) Develop and evaluate alternatives not previously given serious consideration by the agency.

(3) Supplement, improve, or modify its analyses.

(4) Make factual corrections.

(5) Explain why the comments do not warrant further agency response, citing the sources, authorities, or reasons which support the agency's position and, if appropriate, indicate those circumstances which would trigger agency reappraisal or further response.

(b) All substantive comments received on the draft statement (or summaries thereof where the response has been exceptionally voluminous), should be attached to the final statement whether or not the comment is thought to merit individual discussion by the agency in the text of the statement.

(c) If changes in response to comments are minor and are confined to the responses described in paragraphs (a) (4) and (5) of this section, agencies may write them on errata sheets and attach them to the statement instead of rewriting the draft statement. In such cases only the comments, the responses, and the changes and not the final statement need be circulated (§1502.19). The entire document with a new cover sheet shall be filed as the final statement (§1506.9). (40 CFR 1503.4)”

Comments on the DEIS that we received were reviewed, analyzed, evaluated, and responded to in the following ways: Alternative 3 was modified; a new alternative (Alternative 6) was developed and evaluated; the analysis was supplemented, improved, and modified; factual corrections were made; and we address and explained why comments did not warrant further agency response.

PEER - Whatever El Dorado County may claim, the Forest Service, as landowner, has the right to impose any reasonable conditions and restrictions on any easement that is necessary to protect these lands and resources. See *Adams v. U.S.*, 3 F.3d 1254, 1258 n.1 (9th Cir. 1993) (easement for use of road over forest service lands is no bar to reasonable forest service regulations); *U.S. v. Vogler*, 859 F.2d 638, 642 (9th Cir.1988) (federal land owner may regulate the manner of use of an easement or right of way to conserve natural and cultural resources including wildlife). A supplemental draft EIS is needed to clarify which alternatives include wet weather vehicle use, quantify the amount of use expected under each alternative, and to analyze the impacts such use will have on hydrological, riparian and aquatic resources.

Response: The description of the alternatives has been modified to explain which alternatives have seasonal operating periods. The Recreation Section in Chapter 3 has been modified to describe the past use and anticipated changes in use under each alternative and the effects associated with implementing each of the alternatives are described in Chapter 3 for hydrologic, riparian and aquatic resources.

PEER - There is no enforcement section in the DEIS, despite the attention this issue has received for the past ten years. A supplemental Draft EIS must address this issue, including a description of enforcement methods attempted in the past, success or failure indicators, and how the Forest Service and the County intend to enforce in the future.

Response: The descriptions of the action alternatives have been modified to include monitoring and enforcement. The effects of implementing each of the alternatives are described in Chapter 3. Some of these analyses include consideration of the level of enforcement, such as in the Recreation section under Visitor Management.

Wetlands

Hower - Remove the word WETLAND where referring to Winter Camp. The definition of WETLAND: <http://water.epa.gov/type/wetlands/what.cfm> - On the EPA website, it clearly states: **Inland wetlands include marshes and wet meadows dominated by herbaceous plants, swamps dominated by shrubs, and wooded swamps dominated by trees.**

This is not the case at winter camp at all. The pond off from Little Sluice would be considered part of a wetland, but this area is off the trail.

In your own document on page 38 you state: Sandy soils have a poor plant nutrient. The road while wet during the run off, is very high in sand content, which is why nothing is growing there.

Response: The description in the Soils section of Chapter 3 has been modified to clarify the difference between wet soils and wetlands. Additionally, a definition of wetlands, as used in this document, has been added to the Glossary.

Hower - Page 43: This area consists of a downcut wetland in which the perennial water table has drained and converted to a seasonal wetland.

Please remove this sentence. The winter camp area is not a wetland, as defined by the EPA (Please see Comment 5).

Response: The text has been modified to address the confusion between wet soils and wetlands.

CA4WDC - There are many references to Wetland in the DEIS. There is no discussion of how the USFS distinguished a biological difference between ponding without an outlet or seasonal flow through areas with the surrounding higher soils.

Response: The description in the Soils section of Chapter 3 has been modified to clarify the difference between wet soils and wetlands. Additionally, a definition of wetlands, as used in this document, has been added to the Glossary.

CA4WDC - The wetland identified in the Little Sluice area is a snow pond in a solid rock formation. It is above the grade of the trail and has no impact on or from the trail or its use.

Response: This area meets the definition of a wetland as presented in the Glossary, and contains water dependent vegetation, perennial water, and saturated soils. It receives snowmelt and runoff from surrounding areas. These surrounding areas are often driven over by OHVs and therefore deposited compounds could reach this wetland during runoff periods.

Barton - We are concerned about the use of the word “wetland” through the DEIS. It appears to be used to generally describe any area that has water in or near it for any part of the year. According to the USFS publication, one of the identifying characteristics of wetlands, from both ecological and statutory points of view, is the presence of hydric, or wet, soils. Hydric soils are defined by the USDA Natural Resources Conservation Service as “soils that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part.”

We see no evidence that the USFS undertook the necessary investigation to determine whether seasonally saturated areas met this definition. To the contrary, we have looked at many of these areas and find them indistinguishable from areas of dry high ground. We are concerned that by loosely stating that these areas are “wetlands”, the document has unnecessarily and inappropriately created a new set of environmental concerns. We suggest that all references to the word “wetlands” be removed from the document in the absence of the empirical evidence that defines them as such.

Response: A definition of wetlands, as used in this document has been added to the Glossary. The Soil Scientist mapped hydric soils in the area based on observations of soil exposures. Perennial or intermittent water was observed in these features and riparian/wetland vegetation was observed at all of these features.

Barton - Also on page 43, the Little Sluice wetland is actually a pond just adjacent to and upgradient from the Rubicon Trail. Being above the Trail, it should be considered to not be impacted by it at all. The description of soils mapping density indicates that this is too small to have been captured on any map or soils survey as it is in a depression between rock outcroppings.

Response: The Soils section in Chapter 3 has been modified to eliminate this confusion.

El Dorado County - In several places, the DEIS uses the term "wetland" to describe a variety of different areas. This term appears to be used indiscriminately in the DEIS to describe a diverse set of different areas, and does not appear to have been used in any of its legally-defined ways. In several instances, the verbal discussion of "wetlands" in the DEIS does not accord with the wetlands depicted on the accompanying maps. See, *e.g.*, page 42 where it refers to something called the "Gerle Creek Wetland." It is not clear how the term "wetland" is defined, or exactly what it is referring to, or whether it is used in different places in the DEIS to describe different areas. The paragraph on page 42 says the Trail "bisects an edge of Gerle Wetlands," but the soil indicator map shows something labeled Gerle Creek Wetland a considerable distance south of the Trail. Different symbols on the maps for wet areas or wetlands are confusing, and do not appear to be used consistently. On page 43, reference is made to something called the Little Sluice Wetland, and the statement is made that the Trail crosses a "wetland

area" yet the map depicts a wet area north of the Trail. It is not clear what the difference is between the terms wet soil, wetland, wetland complex, *etc.* The term wetland is fraught with meaning and legal implications in different contexts, and EI Dorado County requests that the DEIS be more scrupulous in the use of terms like wetland and wet soil, and that it be more careful in its depiction of the location of wet areas in relation to the actual location of the Rubicon Trail.

Response: The description in the Soils section of Chapter 3 has been modified to clarify the difference between wet soils and wetlands. Additionally, a definition of wetlands, as used in this document, has been added to the Glossary.

Wildlife

California State Parks - On page 163, first paragraph, the DEIS states; “The area surrounding the Rubicon Trail is currently utilized fully OHVs with no authorized trails, creation of new trails and OHV use occurring in open areas off any trails”. This statement is confusing since the Forest land surrounding the Rubicon Trail is closed to cross-country travel.

Response: This sentence has been rewritten to eliminate the confusion.

Appendix E. California Regional Water Quality Control Board, Central Valley Region: Cleanup and Abatement Order (CAO) No. R5-2009-0030



**California Regional Water Quality Control Board
Central Valley Region
Katherine Hart, Chair**



Matthew Rodriguez
Secretary for
Environmental Protection

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Edmund G. Brown Jr.
Governor

5 January 2012

Tom Celio, Deputy Director
County of El Dorado DOT
2441 Headington Road
Placerville, CA 95667

Kathy Hardy, Forest Supervisor
Eldorado National Forest
100 Forni Road
Placerville, CA 95667

RUBICON TRAIL SATURATED SOIL WATER QUALITY PROTECTION PLAN, COUNTY OF EL DORADO DEPARTMENT OF TRANSPORTATION AND ELDORADO NATIONAL FOREST, EL DORADO COUNTY

Central Valley Water Board staff reviewed the following documents submitted by the County of El Dorado Department of Transportation (County) in support of the requirement to prepare and implement a Rubicon Trail Saturated Soil Water Quality Protection Plan:

| <u>Report Name</u> | <u>Date Received</u> |
|--|----------------------|
| Rubicon Trail 2010 Operations and Maintenance Plan (O&M Plan) | 1 October 2010 |
| Saturated Soil Water Quality Protection Plan (Saturated Soil Plan) | 31 December 2010 |
| Amendment #1 to the Saturated Soil Plan (Amendment #1) | 28 January 2011 |
| Responses to Water Board Comments letter (Response Letter) | 29 April 2011 |

Water Board staff provided an initial review of the Saturated Soil Plan and Amendment #1 in March 2011 and requested the County and the Forest Service to provide additional explanation on a few issues. In April 2011, the County submitted their Response Letter to address the requested items. The Response Letter provides a comprehensive description of the County's strategy to maintain the trail and provide added water quality protection including: constructing road armoring and road drainage structures along the length of the trail within El Dorado County; a discussion of why the County does not have the legal right to close the trail during saturated soil conditions; and addressing the County maintained segment of roadway from Airport Flat Campground to Wentworth Springs Campground. All submittals identify the County's commitment to continued trail monitoring and BMP installation and maintenance to improve water quality protection.

With the annual monitoring and BMP maintenance proposed in the Saturated Soil Plan and the O&M Plan, the complete Saturated Soil Plan appears adequate to address water quality impacts caused by vehicle use during saturated soil conditions and by over-the-snow travel. In our 13 December 2011 letter, the Executive Officer agreed to change the report date for the annual review of the Saturated Soil Plan to 1 October of each year starting on 1 October 2012.

Therefore, by **1 October 2012**, please provide a thorough review of work done to implement the Saturated Soil Plan and describe how successful BMP implementation was in terms of

protecting water quality, the types of enforcement activities completed to ensure the success, and any proposed changes to the Saturated Soil Plan or to on-the-ground BMPs prior to the next winter. Also, please include a review of the temporary erosion control plan implemented in 2010 and 2011 as described in the Response Letter.

Please contact Marty Hartzell at (916) 464-4630 or me at (916) 464-4631 with questions.



STEVE E. ROSENBAUM
Chief, Storm Water Compliance and Enforcement Unit

cc: Ed Knapp, El Dorado County Counsel, Placerville
Steve Kooyman, County of El Dorado Department of Transportation, Placerville
Vickie Sanders, El Dorado County, Placerville
Katy Parr, Eldorado National Forest, Pollock Pines
Debbie Gaynor, Eldorado National Forest, Pollock Pines
Daphne Greene, California State Parks, Sacramento
Scott Johnston, Rubicon Trail Foundation, Placerville
Jesse Barton, Gallery & Barton, Sacramento
Karen Schambach, Public Employees for Environmental Responsibility, Georgetown
Rich Platt, Pollock Pines
Monte Hendricks, Pollock Pines



California Regional Water Quality Control Board Central Valley Region

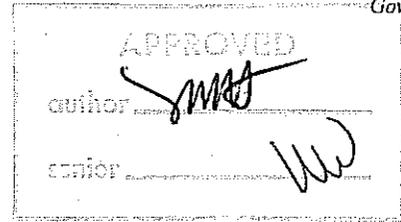
Karl E. Longley, ScD, P.E., Chair



Arnold
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30 April 2009

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Mr. Ed Knapp, Chief Assistant County Counsel
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Mr. Jeffrey Vail, Acting Forest Supervisor
Eldorado National Forest
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NOTICE

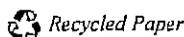
ADOPTED CLEANUP AND ABATEMENT ORDER FOR EL DORADO COUNTY AND THE UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE, ELDORADO NATIONAL FOREST RUBICON TRAIL EL DORADO COUNTY

Cleanup and Abatement Order (CAO) No. R5-2009-0030 for the above-named responsible parties was adopted by the Central Valley Regional Water Quality Control Board (Central Valley Regional Board) on 23 April 2009.

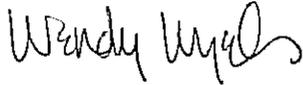
Please note that several submittals required by the CAO are due in the next few months. The first submittal is the first Quarterly Update for the *Rubicon Trail Saturated Water Quality Protection Plan* and the *Long Term Management Plan for the Rubicon Trail* that is due on 30 June 2009 and described in Item 7 of the CAO. The second required submittal is the *2009 Maintenance Training Plan* that is due by 15 July 2009 and described in Item 4 of the CAO. A number of additional submittals are required throughout the year; please refer to the attached CAO for due dates.

In order to conserve resources, this letter transmits paper copies of the documents to the Responsible Parties only. Interested persons may download the documents from the Regional Water Board's Internet website at:
[http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/]. Copies of these documents can also be obtained by contacting or visiting the Central Valley Water Board's office weekdays between 8:00 AM and 5:00 PM.

California Environmental Protection Agency



If you have any questions regarding the CAO, please contact Marty Hartzell at (916) 464-4630 or at mhartzell@waterboards.ca.gov.



WENDY WYELS, Supervisor
Compliance and Enforcement Section

Enclosure: CAO Order (Responsible Parties Only)

cc w/o enc: Steve Davey, Chief of Staff for Assembly Member Gaines, Sacramento
Reed Sato, Office of Enforcement, SWRCB, Sacramento
Patrick Pulupa, Office of the Chief Counsel, SWRCB, Sacramento
Lori Okun, Office of the Chief Counsel, SWRCB, Sacramento
Supervisor Ron Briggs, El Dorado County Board of Supervisors, Placerville
Supervisor Jack Sweeney, El Dorado County Board of Supervisors, Placerville
Tom Celio, Deputy Director, El Dorado County DOT, Placerville
Diane Rubiaco, Pacific Ranger District, Pollock Pines
Daphne Greene, State Parks OHV Recreation Division, Sacramento
Todd Gardner, CA Department of Fish and Game, Rancho Cordova
Karen Schambach, PEER, Georgetown
Rich Platt, Natural Resources Consulting, Pollock Pines
Monte Hendricks, Pollock Pines
Randy Burleson, Rubicon Trail Foundation, Fair Oaks
John Arenz, Rubicon Trail Foundation, Pollock Pines
Del Albright, Friends of the Rubicon, Mokelumne Hill
Pearse Umlauf, National Off-Road Association, Georgetown

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

CLEANUP AND ABATEMENT ORDER NO. R5-2009-0030
FOR

EL DORADO COUNTY
AND THE
UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE,
ELDORADO NATIONAL FOREST
RUBICON TRAIL
EL DORADO COUNTY

This Order is issued to El Dorado County and the U.S Department of Agriculture, Eldorado National Forest (hereafter "Dischargers" or "Responsible Parties") based on provisions of California Water Code (CWC) sections 13304 and 13267 which authorize issuance of Cleanup and Abatement Orders and the requirement to submit technical reports.

The Central Valley Regional Water Quality Control Board (Central Valley Water Board) finds, with respect to the Responsible Parties' acts, or failure to act, the following:

1. The Rubicon Trail is an internationally known, historic off-highway vehicle (OHV) route that crosses the Sierra Nevada Mountains, connecting the town of Georgetown in El Dorado County to Homewood on the west side of Lake Tahoe. The Rubicon Trail ranges in condition from a well-defined dirt road to granite domes, ledges, and rock debris that create moderate to difficult passage for street legal vehicles and OHVs.
2. There are currently two access points to the Rubicon Trail. The historic access originates at the Airport Flat Campground and extends easterly through the Wentworth Springs Campground to Ellis Creek. A second access, known as the Ellis Creek Intertie, starts at the Loon Lake Dam and extends in a northerly direction to its intersection with the trail near Ellis Creek. From that point, the trail runs easterly to the Little Sluice Box-Spider Lake area and the Buck Island Reservoir area, then northerly through the Rubicon Springs area to the El Dorado/Placer County line. This Order only addresses the portion of the Rubicon Trail within El Dorado County.
3. The majority of the Rubicon Trail crosses land owned by the United States, with a few shorter segments of the trail crossing land owned by private parties. El Dorado County, through its Department of Transportation (DOT), currently conducts maintenance operations and is planning improvements to the Rubicon Trail, while the United States is the primary owner of the land on either side of the trail and holds title to most of the land underlying the Rubicon Trail right-of-way. Many trail users park their vehicles and camp on land managed by the U.S. Forest Service. The trail also passes through some private land, over which El Dorado County has jurisdiction.

4. Pursuant to federal Revised Statute 2477, El Dorado County (County) asserted a right-of-way over federal land through an 1887 declaration; this right-of-way is known as the Rubicon Trail. In its adoption of Resolution 142-89 on 30 May 1989, the El Dorado County Board of Supervisors reaffirmed the 3 August 1887 declaration, and declared that the Rubicon Trail is a non-maintained public road in El Dorado County. The portion of the trail from Airport Flat Campground to Wentworth Springs Campground has been accepted into the County's maintained road system. For the Ellis Creek Intertie portion of the trail, the County has been granted deeded easements by the U.S. Forest Service and a private property owner.

BACKGROUND

5. The Rubicon Trail is open to OHV use throughout the year. The highest OHV trail use is during weekends and holidays between Memorial Day and Labor Day; however, OHV users also drive the trail when it is covered by snow and at times when saturated soil conditions exist during spring snowmelt and fall rains. Although OHV users groups hold workdays to maintain the trail, large segments of the trail are severely eroded, allowing runoff from rainfall and snowmelt events to discharge sediment to waters of the state. The trail has become incised due to the heavy use, and water from rainfall and snowmelt events is intercepted by the incised trail then transported along with sediment to stream crossings. Water also collects in large puddles and mud bog depressions in many locations along the trail. OHVs are driven through these mud bogs, thereby accelerating trail erosion and sedimentation of water bodies. Many of these puddles and bogs become hydrologically connected to the stream network when trail runoff exceeds the capacity of the depression.
6. Multiple OHV user groups, including the Rubicon Trail Foundation (RTF) and the Friends of the Rubicon (FOTR), have volunteered countless hours to repair, maintain, and clean up the trail. El Dorado County and the Eldorado National Forest have provided assistance for the OHV groups by organizing volunteer efforts and providing materials for trail maintenance. According to the County, it has received over \$700,000 in grant funding from the Off Highway Motor Vehicle Recreation Division of the State Department of Parks and Recreation (OHMVR Division), in addition to grants from other agencies such as the Integrated Waste Management Board and the Highway Bridge Program. According to the OHMVR Division, it has provided over \$1.2 million in grants between 1984 and 2006 for the El Dorado County portion of the trail.

These funds have been used for activities such as purchasing personal sanitation units and spill kits to distribute to the trail users, production of educational material, purchase of a law enforcement vehicle and paying for patrol time by law enforcement officers, consultant services for preparation of a master plan, land surveys, and the design, planning, and construction (anticipated in 2010) of two bridges. The County has also used its own funds and staff to perform trail maintenance work.

7. According to the Eldorado National Forest, it has taken actions over the last two decades to control the discharge of sediment and other pollutants from the National Forest lands adjacent to the Rubicon Trail, including (a) restoring impacted areas along the Ellis Creek intertie and near Ellis Creek, (b) working cooperatively with El Dorado County to obtain the permit needed for the installation of the toilet at the Loon Lake trailhead, (c) providing summer time law enforcement patrols along the Rubicon Trail and adjacent National Forest lands, (d) assisting OHV groups by providing material for trail maintenance, as well as coordinating and training volunteers, (e) providing a cabin to be used as an information station at the Loon Lake trailhead, (f) and issuing a Travel Management decision which prohibits motor vehicles from traveling off of roads or trails within the Eldorado National Forest and establishes a minimum seasonal closure period for native surface roads and trails from January 1 through March 31 of each year. The Travel Management decision does not apply to the Rubicon Trail because it has been declared an El Dorado County unmaintained road.

EL DORADO COUNTY PLANNING PROCESS

8. The Rubicon Oversight Committee (ROC) was established by the County in June 2002. It currently operates as an advisory body to the El Dorado County Department of Transportation and provides an opportunity for OHV user groups to coordinate their volunteer activities with the County. The ROC has met on a monthly basis since its formation and its members have worked on a variety of Rubicon Trail issues such as signage, winter use, sanitation, and the master planning process.
9. In June 2003, the El Dorado County contracted with Environmental Stewardship and Planning, Incorporated to conduct multiple workshops and prepare multiple interim documents that would become the basis for a Draft Environmental Impact Report (EIR) for the Rubicon Trail.
10. On 9 October 2007, El Dorado County distributed the Draft EIR with alternatives for the Rubicon Trail Master Plan for public review and comment. In the Draft EIR, El Dorado County identified the following tasks under Alternative A:
 - a) Water runoff best management practices (BMPs) would be implemented on the trail;
 - b) Annual monitoring reports of soil and water sampling along the trail would be provided to the Central Valley Water Board and Department of Toxic Substances Control, and should any observed values exceed concentration limits established in coordination with oversight agencies, El Dorado County would work with appropriate agencies to determine remediation and monitoring activities to mitigate identified contamination; and
 - c) The trail would be closed to recreational vehicles from November 1 to April 30 if El Dorado County and Rubicon Oversight Committee representatives determined that there is a potential for soil erosion to occur during saturated soil conditions.

The "No Project" and the "Alternative B" project alternatives of the Draft EIR do not ensure the implementation of these mitigations. Alternative B included several elective plan actions that the County could consider for implementation if adopted and identified fewer management responsibilities than Alternative A. Alternative B contained the following elective elements as resources allowed: water quality monitoring; an ordinance proclaiming that trail modification without the written approval, and authorization from, the County DOT would be in violation of the County Code; and trail and drainage improvement projects.

11. In September 2008, the El Dorado County staff informed the Water Board that work on the EIR/Master Plan process has stopped because of budget constraints and that there are no plans to reinstate the process. A final EIR/Master Plan for the Rubicon Trail has not been completed to date. The County now contends that it lacks the legal authority and/or legal obligation to implement some of the measures described in the Draft EIR on some sections of the Trail.
12. In the spring of 2008, El Dorado County began negotiations with the OHMVR Division and the California Geological Survey to complete a comprehensive survey of the Rubicon Trail, as related to erosion and sedimentation processes. The County will use this survey, expected to be released in April 2009, as the basis for a comprehensive maintenance plan for the Rubicon Trail. In addition, the survey will be a location-based repository for the information about Trail conditions as they evolve over time.

ENVIRONMENTAL IMPACTS

13. In July 2004, the El Dorado County Board of Supervisors issued a state of local emergency due to the significant amount of human fecal waste littered around the Spider Lake area. The amount of fecal waste was determined to pose a health and safety threat to users of the trail and to streams and lakes that are tributary to the Rubicon River and the Middle Fork American River. At the same time, the Eldorado National Forest Supervisor issued a Forest Order closing the National Forest System lands around Spider Lake. As a result, the Spider Lake area was closed to camping and all human access.
14. Through the cooperation of the Responsible Parties and trail user organizations, a vault toilet was installed at the Loon Lake Trailhead in October 2008. Currently, restroom facilities exist at each trailhead, but there are no public sanitation facilities along the Rubicon Trail or at the Ellis Creek, Spider Lake, or Buck Island Reservoir primitive camping areas. Privately-owned sanitation facilities may be available to Trail users in the Rubicon Springs area. Otherwise, once in the backcountry, trail users must rely on individual human waste disposal methods. Trail volunteers and County staff have provided human waste "WAG Bags" free of charge to trail users since 2003; however, the Responsible Parties have not initiated a program to require the use or tracking of the Wag Bags to determine if individual human waste disposal methods are working. A

human waste study conducted in 2001 estimates that 8,000 gallons/year of human waste are deposited on public land along the Rubicon Trail. During trail evaluations in July and August 2008, Water Board staff observed multiple areas along the trail with visible human excrement and toilet paper.

15. Section 3.6 of the County's Draft EIR provides details of preliminary water quality monitoring along the Rubicon Trail. Following a sampling effort in the summer of 2005, low levels of oil and grease were identified in water and soil samples collected along the Rubicon Trail, and low levels of copper and cadmium were identified in soil samples. This contamination is likely due to motor oil, grease, and other petroleum-based fluids spilling and leaking from OHVs that have overturned or have damaged mechanical components while traversing rocky segments of the trail. One water sample from Spider Lake also tested positive for fecal coliform following a high-use weekend in June.
16. Central Valley Water Board staff completed a rapid assessment sediment study along the Rubicon Trail during July and August 2008. Staff identified a few segments of the Rubicon Trail that are hydrologically connected to watercourses tributary to Loon Lake and the Rubicon River, and provided a relative estimate of the sediment volume along these trail segments by measuring the dust layer. With this information, staff made an order of magnitude estimation that between 60 and 80 cubic yards of sediment is being delivered from one mile of hydrologically connected trail to waters of the state annually. This estimate is an order of magnitude greater than sediment production rates from light traffic native surfaced roads and is within the same order of magnitude to other OHV trail production rates available in the literature. The draft sediment study is currently undergoing peer review.
17. Board staff also completed a pebble count survey at the Ellis Creek crossing of the Rubicon Trail and identified that the influx of sediment into this perennial fish-bearing stream is causing a fining of bed material downstream of the crossing. This increased sediment load can fill spawning gravels and reduce aquatic habitat, and has the potential to carry contaminants from vehicle operations on the trail into waters of the state.
18. The Erosion Study concludes that there is erosion of sediment from portions of the Rubicon Trail and that some of that eroded sediment enters surface waters. The pebble count indicates that, at one location, there were more fine bottom sediments downstream of the Trail than upstream of the Trail, possibly indicating an impact of Trail sediments on the streambed. The methodologies used in the study have been questioned by several commenters; however, the Study's conclusions that erosion of sediment from the Trail to streams is well corroborated by other evidence in the record, including photographic evidence. The quantification of that erosion at the specific locations and conditions in the Study are not critical to the Board's findings on this issue.
19. An accurate count, accepted by all of the user groups, of the number of the annual or seasonal users on the Rubicon Trail has not been completed to date. User counts and estimates vary widely. An accurate count of trail users is necessary for the Responsible

Parties to adequately manage the Rubicon Trail, especially with regard to the issue of human waste.

LEGAL CONSIDERATIONS

20. Due to the 1887 RS 2477 declaration (mentioned in Finding 4, *supra*), the Forest Service claims that it has limited ability to regulate El Dorado County's activities on this road, and therefore El Dorado County is responsible for operations and maintenance of the Trail. El Dorado County makes similar claims relative to its responsibility of the Trail, stating that because it does not hold a property interest in the trail, all of the activities it has thus far undertaken on the Trail have been completely voluntary. However, from the perspective of the Central Valley Water Board, it is clear that these two parties share primary responsibility for maintenance and management of the Trail.
21. A legal easement for the Rubicon Trail has not been recorded except for the portion from the Loon Lake Dam to near Ellis Creek (known as the Ellis Creek Intertie). Other than the Ellis Creek Intertie, the exact location and width of the Rubicon Trail has not been fully defined.

REGULATORY CONSIDERATIONS

22. The El Dorado County portion of the Rubicon Trail is at an elevation of 5,400 feet to 7,000 feet and traverses the eastern portion of the Sierra Nevada mountain range. This trail intersects the headwaters of Gerle Creek, Ellis Creek, and parts of the Rubicon River. Surface drainage is toward the south and west and is within the Middle Fork American River watershed, and via the Loon Lake diversions, also within the South Fork American River watershed.
23. The Water Quality Control Plan, Fourth Edition, for the Sacramento River Basin and the San Joaquin River Basin (hereafter Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.
24. The designated beneficial uses of the Middle Fork American River (source to Folsom Lake), as specified in the Basin Plan, are municipal and domestic supply, irrigation, stock watering, power, contact and non-contact water recreation, warm and cold freshwater habitat, coldwater spawning, and wildlife habitat. The designated beneficial uses of the South Fork American River (source to Placerville), as specified in the Basin Plan, are municipal and domestic supply, power, contact and non-contact water recreation, warm and cold freshwater habitat, coldwater spawning, and wildlife habitat. Gerle Creek, Ellis Creek, Loon Lake, and the Rubicon River, as tributaries to the Middle Fork and South Fork American River, share these beneficial uses.

25. The California Department of Fish and Game has identified at least seven fish species and one frog species as among the terrestrial and aquatic species that have known habitat in the Rubicon Trail area and are at risk from water quality impacts.

26. CWC section 13304(c)(1) provides that:

Any person who has discharged or discharges waste into waters of this state in violation of any waste discharge requirements or other order or prohibition issued by a Regional Water Board or the state board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the Regional Water Board clean up the waste or abate the effects of the waste, or, in the case of threatened pollution or nuisance, take other necessary remedial action, including but not limited to, overseeing cleanup and abatement efforts. ... Upon failure of any person to comply with the cleanup or abatement order, the Attorney General, at the request of the board, shall petition the superior court for that county for the issuance of an injunction requiring the person to comply with the order. In the suit, the court shall have jurisdiction to grant a prohibitory or mandatory injunction, either preliminary or permanent, as the facts may warrant.

27. The Rubicon Trail is not adequately drained and maintained. Runoff from the trail has discharged, and has the potential to discharge, sediment and other waste into waters of the state. There are human sanitation problems, soil contamination from metals, and water contamination from petroleum-based fluids. Thus, the Responsible Parties have caused or permitted waste to be discharged or deposited where it will be, or has the potential to be, discharged to waters of the state. The Responsible Parties have created or threaten to create a condition of pollution or nuisance.

28. CWC section 13267(b) provides that:

In conducting an investigation specified in subdivision (a), the Regional Water Board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste outside of its region that could affect the quality of waters of the state within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the Regional Water Board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports.

29. The technical reports required by this Order are necessary to assure compliance with this Order, and to protect human health and the environment. Existing data and information about the site indicates that waste has been discharged and will continue to be discharged along the Rubicon Trail, which is currently managed by the Responsible Parties.

30. The issuance of this Order is an enforcement action taken by a regulatory agency and is exempt from the provisions of the California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), pursuant to California Code of Regulations, title 14, section 15321(a)(2). The implementation of this Order is also an action to assure the restoration of natural resources and/or the environment and is exempt from the provisions of the CEQA, in accordance with California Code of Regulations, title 14, sections 15307 and 15308.

IT IS HEREBY ORDERED THAT, pursuant to CWC sections 13304 and 13267, El Dorado County and the Eldorado National Forest (hereafter "Dischargers" or "Responsible Parties") shall jointly cleanup and abate the impacts resulting from OHV use of the Rubicon Trail in accordance with the scope and schedule set forth below.

1. The Responsible Parties shall take all reasonable steps to cease the discharge of sediment and other wastes due to motorized use of the Rubicon Trail to waters of the state, including discharges to Gerle Creek, Ellis Creek, Loon Lake and its tributaries, and to the Rubicon River and its tributaries. This includes, but is not necessarily limited to, implementing all of the following actions. These actions shall apply to lands which are within the watersheds of the surface water bodies described above.
2. By **1 October 2010**, the Responsible Parties shall prepare a *Rubicon Trail Saturated Soil Water Quality Protection Plan*, which shall evaluate, and where appropriate, propose means of addressing, water quality impacts caused by vehicle use (excluding snowmobiles) during saturated soil conditions and by over-the-snow travel. This plan must clearly show how its implementation will protect water quality by minimizing or preventing the mobilization of sediment to surface waters. The plan should consider, as one way of addressing water quality impacts, a seasonal closure involving hard dates (similar to those used in most portions of the Eldorado National Forest) or dates that are dependant upon weather conditions (such as the Eldorado National Forest's Rock Creek closure method). In addition, the plan must propose an education component, an implementation component, and an enforcement component. Upon approval by the Executive Officer, the plan shall be immediately implemented.

Maintenance-related activities for 2009

3. El Dorado County shall continue to implement the following items, which it has previously committed to complete during 2009:
 - a) Installing water breaks, cross drains and rock filled rolling dips on a 2,000 foot section of the Rubicon Trail just west of the Ellis Creek Crossing;
 - b) Dispensing wag bags and cardboard commodes at the Loon lake Trailhead in cooperation with Rubicon Trail Foundation volunteers;

- c) Installing educational signage at Loon Lake Trailhead and Wentworth Springs campground to encourage "pack it in, pack it out" and the use of wag bags on the trail; and
 - d) Continuing with preliminary engineering and environmental review for the construction of bridges at Gerle Creek and Ellis Creek. The County shall take all reasonable steps to ensure that permitting activities take place by the fall of 2009, that the construction contract shall be out to bid in the spring of 2010, and that construction will begin in the summer of 2010.
4. By **15 July 2009**, the Responsible Parties shall submit a *2009 Maintenance Training Plan* describing procedures for training County, Federal, and volunteer groups to ensure that Rubicon Trail maintenance projects planned for the 2009 season will be installed to County or Forest Service road maintenance specifications (or equivalent).
 5. By **15 July 2010**, the Responsible Parties shall submit a *2010 Maintenance Training Plan* describing procedures for training County, Federal, and volunteer groups to ensure that Rubicon Trail maintenance projects planned for the 2010 season will be installed to County or Forest Service road maintenance specifications (or equivalent).

Long Term Management Plan

6. By **30 April 2011**, the Responsible Parties shall submit a *Long Term Management Plan for the Rubicon Trail* which shall address the following minimum information, and shall implement paragraphs (e), (f) and (i) by **30 April 2011**:
 - a) A clear definition of each party's responsibilities for the Rubicon Trail, including maintenance activities, education, enforcement, seasonal closure, and all other actions necessary to protect water quality.
 - b) The results of a Trail Use Count that shall be conducted during 2009 and/or 2010. The results shall describe the expected annual use of the Rubicon Trail, both in terms of vehicles and people.
 - c) An estimate of the number of people and vehicles who can use the Rubicon Trail, in its current condition, without adversely impacting water quality due to sediment, human waste, or petroleum discharges. Using this estimate and the Trail Use Count, determine whether there is a need to restrict use of the trail to protect water quality. Alternatively, determine whether certain specific improvements will result in the ability for the current number (or an increased number) of people and vehicles to use the trail without impacting water quality. If so, describe those improvements and provide a proposed timeline for their implementation.
 - d) Documentation of the actual location of the Rubicon Trail within El Dorado County, including the centerline and an agreed-upon width from each side of that line. The

documentation shall be in a form that shall be easily understood by both the public and law enforcement officials.

- e) A strategy to address human waste management on the Rubicon Trail. At a minimum, the Responsible Parties must effectively communicate to users the importance of using portable human waste collection devices and WAG bags. The Responsible Parties must also consider the use of portable human waste collection devices and "WAG" bags. This section must contain a feasibility study for installation of permanent toilet facilities along the trail, including information as to how human waste will be removed from the toilets and disposed of. The plan must also contain procedures for annually removing human waste that has been deposited on the ground, where feasible. If the annual human waste inspection does not show significant improvements, then the Responsible Parties must evaluate reducing the number of people using the trail.
- f) Procedures to enforce the use of spill kits for containment of liquid and solid wastes generated from vehicle use on the Rubicon Trail, as well as procedures for annually removing or mitigating petroleum contaminated soils and rocks, where feasible, on the trail.
- g) A discussion of the type of law enforcement officers and the frequency of their patrols that are needed to enforce trail regulations in regard to water quality. Evaluate options for providing this level of law enforcement, including funding from the Responsible Parties, an agreement with the OHMVR Division, partnering with OHV user groups, applying for grant funds, and the feasibility of collecting fees from the trail users.
- h) A discussion of the annual cost to implement the Long Term Management Plan and the Saturated Soil Water Quality Protection Plan. An evaluation of funding options shall be discussed, including a cooperative agreement with the OHMVR Division, availability of grant funds, and the feasibility of collecting fees from the trail users.
- i) A Construction and Maintenance Procedures Plan that shall contain (a) operating procedures for constructing, maintaining, and/or decommissioning drainage structures, stream crossings, and trail segments, and (b) procedures for training County, Federal, and volunteer groups to ensure that this work is completed to County or Forest Service road maintenance specifications (or equivalent).

Periodic Reports

7. Beginning **30 June 2009 and continuing through 30 December 2010**, the Responsible Parties shall submit quarterly updates describing the progress that has been completed to prepare the *Rubicon Trail Saturated Soil Water Quality Protection Plan* and the *Long Term Management Plan for the Rubicon Trail*.

8. By **15 December of each year (beginning in 2009)**, the Responsible Parties shall submit an *Annual Rubicon Trail Summary* describing trail and maintenance activities, educational activities, and enforcement activities completed during the previous season. The report shall also include (a) the results of an on-the-ground inspection taken after Labor Day to estimate the amount and general locations of human waste present on the trail, and (b) the results of an on-the-ground inspection taken after Labor Day to estimate the amount and general locations of petroleum products present along the trail. These results shall be compared to the results obtained during previous years. The report shall document the amount of human waste that has been picked up off the ground and removed from the trail area each fall, as well as the amount of petroleum contaminated soil which has been removed and/or remediated each fall. Finally, the report shall clearly describe the law enforcement presence on the trail during the year.
9. By **15 May of each year (beginning in 2010)**, the Responsible Parties shall submit an *Annual Trail Maintenance and Activities Plan* that lists the projects to be completed during the upcoming field season, including those projects proposed to be completed by volunteer groups. The report shall also evaluate the previous year's success in preventing and or removing the deposition of human waste and petroleum products, report on the status of projects described in the prior year's plan, and if needed to protect water quality, shall propose additional management practices for the upcoming season.
10. By **15 July of each year (beginning in 2011)**, the Responsible Parties shall submit an *Annual Review of the Saturated Soil Water Quality Protection Plan*. The report shall describe the steps taken to implement the Plan during the previous winter, how successful the implementation was in terms of protecting water quality, the types of enforcement activities to ensure the success, and any proposed changes for the next winter.

Three years after full implementation of the *Long Term Management Plan*, Water Board staff will evaluate (a) whether the Responsible Parties have taken all reasonable steps to protect water quality and (b) whether activities on the Rubicon Trail still impact, or threaten to impact, water quality. Using this information, staff will evaluate whether this Order should be rescinded.

If the Responsible Parties are unable to perform any activity or submit any document in compliance with the schedule set forth herein, or in compliance with any work schedule submitted pursuant to this Order, the Responsible Parties may request, in writing, an extension of the time specified. The extension request shall include justification for the delay. Any extension request shall be submitted as soon as the situation is recognized and no later than the compliance date. An extension may be granted by revision of this Order or by a letter from the Executive Officer. Extension requests not approved in writing by the Executive Officer with reference to this Order are denied.

In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under

the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Responsible Parties shall contain the professional's signature and/or stamp of the seal.

Any person signing a document submitted under this Order shall make the following certification: *"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my knowledge and on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."*

If, in the opinion of the Executive Officer, the Responsible Parties fail to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement or may issue a complaint for administrative civil liability.

Administrative Civil Liability of up to \$10,000 per violation per day may be imposed pursuant to the CWC sections 13268, 13350, and/or 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this action of the Central Valley Regional Water Board may petition the State Regional Water Board to review the action in accordance with CWC section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Regional Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Regional Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

I, Pamela C. Creedon, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the Central Valley Regional Water Quality Control Board, on 23 April 2009.



PAMELA C. CREEDON, Executive Officer

Appendix F. Rubicon Trail Operating Agreement between El Dorado County and ENF

COUNTY OF EL DORADO

DEPARTMENT OF TRANSPORTATION



MAINTENANCE DIVISION

2441 Headington Road
Placerville CA 95667
Phone: (530) 642-4909
Fax: (530) 642-9238

JAMES W. WARE, P.E.
Director of Transportation

Internet Web Site:
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MAIN OFFICE

2850 Fairlane Court
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Phone: (530) 621-5900
Fax: (530) 626-0387



December 30, 2011

Pamela C. Creedon
California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670

Attached is the current draft operating agreement under consideration by the County of El Dorado and the Eldorado National Forest in response to Clean Up and Abatement Order No. R5-2009-0030, Page 9 & 10, Item 6, a through i. Currently this is a draft copy, once a final recommended agreement is reached the agreement will have to go to the El Dorado County Board of Supervisors in January for approval. The Eldorado National Forest Supervisor Kathy Hardy will go through a similar approval process at the Forest Service for approval. Once all parties have approved, I will submit the final version.

El Dorado County appreciates the cooperation and continued support of your staff as we work through the many issues on the Rubicon Trail. This is a very important requirement of the Clean Up and Abatement Order and we do not take it lightly, therefore both agencies are following the proper procedures for approval.

Sincerely,

A handwritten signature in blue ink that reads "Tom Celio".

Tom Celio
Deputy Director
Maintenance & Operations
El Dorado County DOT
2441 Headington Road
Placerville, CA 95667

cc: John Knight, Board of Supervisors, District I
Ray Nutting, Board of Supervisors, District II
Jack Sweeney, Board of Supervisors, District III
Ron Briggs, Board of Supervisors, District IV
Norma Santiago, Board of Supervisors, District V
Terri Daly, El Dorado County Chief Administrative Office
Ed Knapp, El Dorado County County Counsel
Jim Ware, El Dorado County Department of Transportation
Steve Kooyman, El Dorado County Department of Transportation
Kathy Hardy, USDA El Dorado National Forest

TABLE OF CONTENTS

El Dorado County Submittal Letter.....1

Table of Contents.....2

6. a) Responsibility.....3

 b) Trail Count.....4

 c) Estimated use.....5

 d) Trail Location.....6

 e) Sanitation.....7

 f) Spills.....8

 g) Law Enforcement.....9

 h) Annual Cost.....10

 i) Construction & Maintenance Procedures.....11

Draft Memorandum of Understanding.....12

ATTACHMENTS

Trail Survey.....13

Rubicon Trail BMP Toolbox (Previously Submitted)



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Operating Agreement

CLEANUP AND ABATEMENT ORDER (CAO) No. R5-2009-0030
RUBICON TRAIL

6.
 - a) *A clear definition of each party's responsibilities for the Rubicon Trail, including maintenance activities, education, enforcement, seasonal closure, and all other actions necessary to protect water quality.*

See Draft Memorandum of Understanding, page 12.

b) The results of a Trail Use Count that shall be conducted during 2009 and/or 2010. The results shall describe the expected annual use of the Rubicon Trail, both in terms of vehicles and people.

Rubicon Trail Foundation conducted a trail count in 2009 and 2010.

The 2009 season count resulted in a total of 8,500 users with two people per vehicle average for a total of 4,250 vehicles. In the 2010 season there were 5,000 users with two people per vehicle average for a total of 2,295 vehicles.

It is evident from the count that use is dependent on the weather. In 2010 the snow melt was late and the trail was not desirable to most users until the snow melted. The snow also started early in September which shortened the season.

- c) *An estimate of the number of people and vehicles who can use the Rubicon Trail, in its current condition, without adversely impacting water quality due to sediment, human waste or petroleum discharges. Using the estimate and the Trail Use Count determine whether there is a need to restrict use of the trail to protect water quality. Alternatively, determine whether certain specific improvements will result in the ability for the current number (or an increased number) of people and vehicles to use the trail without impacting water quality. If so, describe those improvements and provide a proposed timeline for their implementation.*

The County of El Dorado estimates the Rubicon Trail can sustain the existing use level in its current condition, recognizing that the trail's condition today is vastly improved over the condition at the time of the order. Installation of the BMP's should be completed in 2012. The bridge schedule is as follows; Gerle in 2012, Ellis in 2013, and the season drainage at the FOTR crossing in 2013.

The trail can sustain the current and increasing use because of the BMP features that have been and will be installed and the bridge projects. The Forest Service and County will conduct annual monitoring. The County of El Dorado will provide routine maintenance to the BMP's and evaluate their effectiveness and make changes accordingly.

Annually volunteer groups provide a year end cleanup of the trail, removing litter and white flowers, cleanup of oil spills and any other routine maintenance needed. The amount of garbage and white flowers has been considerably reduced, but will continue to be monitored annually.

- d) *Documentation of the actual location of the Rubicon Trail within El Dorado County, including the centerline and an agreed-upon width from each side of that line. The documentation shall be in a form that shall be easily understood by both the public and law enforcement officials.*

The County of El Dorado completed a trail survey documenting the trail location. This survey was used when applying to the Forest Service for an easement.

Environmental analysis is being completed to authorize issuance of the easement. A combination of Rubicon Trail signs along the route, centerline reflectors/markers on the ground, and mile markers attached to trees along the trail have been installed and are being maintained. The trail location can be easily understood as the BMP's are completed on the trail.

DRAFT

- e) *A strategy to address human waste management of the Rubicon Trail. At a minimum, the Responsible Parties must effectively communicate to users the importance of using portable human waste collection devices and WAG bags. The Responsible Parties must also consider the use of portable human waste collection devices and “WAG” bags. This section must contain a feasibility study for installation of permanent toilet facilities along the trail, including information as to how human waste will be removed from the toilets and disposed of. The plan must also contain procedures for annually removing human waste that has been deposited on the ground, where feasible. If the annual human waste inspection does not show significant improvements, then the Responsible Parties must evaluate reducing the number of people using the trail.*

Two restrooms have been installed, one at Loon Lake and the other at Ellis Creek. The availability of these restrooms has greatly improved sanitation issues and there are more restrooms recommended as funding becomes available. Visitors are using WAG bags and portable toilets in greater numbers.

The County and the Forest Service will continue with the educational efforts regarding sanitation, spills and sedimentation with the bandana campaign. This promotion has been very successful and the Yellow Bandana Campaign will continue with kiosk signs, brochures, and handouts.

Results of the 2011 fall clean up by Friends of the Rubicon show that users are responding to the education efforts by cleaning up after themselves and others, and human waste and trash along the trail is decreasing. During the wet season, the County and Forest Service will continue educational efforts regarding trail conditions tread lightly and winter condition etiquette.

The Forest Service has identified additional locations for restroom facilities along the Trail. If approved in the EIS process they will be installed when funding becomes available.

- f) *Procedures to enforce the use of spill kits for containment of liquid and solid wastes generated from vehicle use on the Rubicon trail, as well as procedures for annually removing or mitigating petroleum contaminated soils and rocks, where feasible, on the trail.*

Spill kits will remain available at the Loon Lake kiosk and the County of El Dorado will continue the educational efforts of the Blue Bandana campaign. Hazardous waste material sheds are located at each of the three Rubicon trailheads, and are serviced by El Dorado County Environmental Management. Spill cleanup procedures are provided on the County DOT website and in the BMP Toolbox.

DRAFT

- g) A discussion of the type of law enforcement officers and the frequency of their patrols that are needed to enforce trail regulations in regard to water quality. Evaluate operations for providing this level of law enforcement, including funding from the responsible parties, an agreement with the OHMVR Division, partnering with OHV user groups, applying for grant funds, and the feasibility of collecting fees from the trail users.*

Currently Law Enforcement is provided every weekend during the Rubicon season by State Parks OHV Division. The season is usually Memorial Day to Labor Day. El Dorado County Sheriff's Department currently patrol Saturday and Sunday. The Forest Service had education and monitoring patrols Thursday through Monday last field season, and occasional law enforcement patrols.

El Dorado County and the Eldorado National Forest have received funding through the OHV Division of State Parks annually for law enforcement activities. The County and Forest Service will continue to seek grant funding for this activity. If the funding becomes unavailable, the county will look for alternative ways to fund law enforcement activities, such as in-lieu funding, or SMUD relicensing revenue. The Forest Service plans to have Forest Protection Officers and Recreation Technicians to patrol, monitor use and resources, and educate visitors.

- h) A discussion of the annual cost to implement the Long Term Management Plan and the Saturated Soil Water Quality Protection Plan. An evaluation of funding options shall be discussed, including a cooperative agreement with the OHMVR Division, availability of grant funds, and the feasibility of collecting fees from the trail users.*

The County of El Dorado has been fortunate to receive grant funding from State Parks, Off- Highway Motor Vehicle Division which provided funding for the maintenance activities, restroom, spill kits and the educational program. The County of El Dorado will continue to seek grant funding. Should the county be unsuccessful in obtaining grant funding, maintenance and operation activities will be funded through the use of in-lieu funding and revenue the county will receive once the SMUD relicensing is completed. Forest Service funding is dependent on Congressional appropriations and external grants.

DRAFT

- i) A Construction and maintenance Procedures Plan that shall contain (a) operating procedures for constructing, maintaining, and/or decommissioning drainage structures, stream crossings, and trail segments, and (b) procedures for training County, Federal, and volunteer groups to ensure that this work is completed to County or Forest Service road maintenance specification (or equivalent).*

The County of El Dorado prepared the Rubicon Trail BMP Toolbox which contains information on construction of BMP's for soil providing procedures for constructing, maintaining and/or decommissioning drainage structures, stream crossings, and trail segments. This toolbox also addresses sanitation and spills solutions. This toolbox provides the training for volunteer groups to ensure projects are to road maintenance specifications. The county has a liaison to work with the volunteer groups at each road maintenance volunteer project.

The County has also submitted the Saturated Soil Water Quality Protection Plan that details BMP features and their location along the Trail.

El Dorado County sponsored a Tread Lightly class on May 14, 2011. There will be additional Tread Lightly classes in the future as El Dorado County develops hiking trails in the county the issues are consistently the same, sanitation, garbage and trespass. The Forest Service conducted a G-Y-R trail and road condition training in June.

FS-1500-15 Memorandum of Understanding Sample



USDA Forest Service

OMB 0596-0217
FS-1500-15

FS Agreement No.

08-MU-11091313-
009

**MEMORANDUM OF UNDERSTANDING
Between The
COUNTY OF EL DORADO, DEPARTMENT OF TRANSPORTATION
And The
U.S. FOREST SERVICE,
ELDORADO NATIONAL FOREST**

This MEMORANDUM OF UNDERSTANDING (MOU) is hereby made and entered into by and between the El Dorado County Department of Transportation, hereinafter referred to as the County, and the U.S. Forest Service, Eldorado National Forest, hereinafter referred to as the Forest Service.

Title: Rubicon Trail Operating Agreement

I. PURPOSE: The purpose of this MOU is to document the cooperation between the parties for the operation and maintenance of the Rubicon Trail, in accordance with the following provisions.

II. STATEMENT OF MUTUAL BENEFIT AND INTERESTS:

The County and the Forest Service all have a desire to define each party's responsibilities for the Rubicon Trail, including maintenance activities, education, law enforcement, seasonal closure, and all other actions necessary to protect the resources.

In consideration of the above premises, the parties agree as follows:

III. THE EL DORADO COUNTY DEPARTMENT OF TRANSPORTATION SHALL:

- A. The County is responsible for road maintenance. The Department of Transportation has prepared the Saturated Soil Water Quality Protection Plan (SSWQPP) that is a living document. The SSWQPP documents the Best Management Practice (BMP's) that has been installed to protect water quality. This document also has a monitoring component which will be updated annually as the County maintains documents and analyzes the BMP's.
- B. The County will continue the effort to educate the public on spill cleanup. Spill kits will be available at the kiosk and maintenance of the Hazardous Materials Shed will continue. Spill

cleanup will take place annually as the county provides annual maintenance and at the yearend volunteer clean up.

- C. The County and the Forest Service will continue to provide education regarding sanitation issues on the trail. WAG Bags will be available at the kiosk as funding is provided. The two agencies will work together to provide restroom facilities as funding becomes available.
- D. The County has completed a survey and documentation of the trail. This survey was used to apply for the easement from the Forest Service. The county will prepare a map which will be located at the trail heads. The County will continue to work with the volunteers to provide trail markers where needed.
- E. The County will continue to work with the Forest Service and volunteer groups on the Rubicon Trail, recognizing the value of the volunteer their efforts and support are critical.
- F. The County will continue with a law enforcement presence on the Rubicon. The County will work with the Forest Service and State Parks to provide coverage through the Rubicon high-use season and during the winter as staffing allows.
- G. The County and the Forest Service will continue to work together to resolve issues as they develop on the trail, continue the educational bandana campaign and continue to work together for the preservation of the Rubicon Trail.

IV. THE FOREST SERVICE SHALL:

- A. The Forest Service and the County of El Dorado will continue to provide education regarding sanitation issues on the trail. WAG Bags will be available at the kiosk as funding is provided. The two agencies will work together to provide restroom facilities as funding becomes available.
- B. The Forest Service has accepted an application for an easement for the Rubicon Trail from the County and is completing NEPA analysis to issue the authorization.
- C. The Forest Service will continue to work with the County and volunteer groups on the Rubicon Trail, recognizing the value of the volunteer their efforts and support are critical.
- D. The Forest Service will continue with a law enforcement and education presence on the Rubicon. The Forest Service will work with the County Sheriff and State Parks to provide coverage through the Rubicon high-use season and during the winter as staffing allows.
- E. The Forest Service and the County will continue to work together to resolve issues as they develop on the trail, continue the educational bandana campaign and continue to work together for the preservation of the Rubicon Trail.
- F. Forest Service is responsible for dispersed camping and will manage it following the forest plan.

V. IT IS MUTUALLY UNDERSTOOD AND AGREED BY AND BETWEEN THE PARTIES THAT:

- A. PRINCIPAL CONTACTS. Individuals listed below are authorized to act in their respective areas for matters related to this instrument.

Principal Cooperator Contacts:

| | |
|---------------------------------|------------------------------|
| El Dorado County Contact | El Dorado DOT Contact |
|---------------------------------|------------------------------|

| | |
|--|---|
| Name: Jack Sweeney, Supervisor Address: City, State, Zip: Placerville, CA 95667 Telephone: 530- FAX: 530- Email: bosthree@edcgov.us | Name: Tom Celio Address: 2441 Headington Road City, State, Zip: Placerville, CA 95667 Telephone: 530-642-4905 FAX: 530-642-9238 Email: tom.celio@edcgov.us |
|--|---|

Principal Forest Service Contacts:

| Forest Service Program Contact | Forest Service Administrative Contact |
|---|--|
| Name: Kathryn Hardy Address: 100 Forni Road City, State, Zip: Placerville, CA 95667 Telephone: 530-621-5206 FAX: 530-621-5282 Email: kdhardy@fs.fed.us | Name: Address: City, State, Zip: Telephone: FAX: Email: |

- B. **NON-LIABILITY.** The Forest Service does not assume liability for any third party claims for damages arising out of this MOU.
- C. **NOTICES.** Any communications affecting the operations covered by this agreement given by the Forest Service or the Cooperator is sufficient only if in writing and delivered in person, mailed, or transmitted electronically by e-mail or fax, as follows:
- To the Forest Service Program Manager, at the address specified in the MOU.
- To Cooperator, at the Cooperator's address shown in the MOU or such other address designated within the MOU.
- Notices are effective when delivered in accordance with this provision, or on the effective date of the notice, whichever is later.
- D. **PARTICIPATION IN SIMILAR ACTIVITIES.** This MOU in no way restricts the Forest Service or the Cooperator(s) from participating in similar activities with other public or private agencies, organizations, and individuals.
- E. **ENDORSEMENT.** Any Cooperator contributions made under this MOU do not by direct reference or implication convey Forest Service endorsement of the Cooperator's products or activities.
- F. **NONBINDING AGREEMENT.** This MOU creates no right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity. The parties shall manage their respective resources and activities in a separate, coordinated and mutually beneficial manner to meet the purposes(s) of this MOU. Nothing in this MOU authorizes any of the parties to obligate or transfer funds. Specific projects or activities that involve the transfer of funds, services, or property among the parties

require execution of separate agreements and are contingent upon the availability of appropriated funds. These activities must be independently authorized by statute. This MOU does not provide that authority. Negotiation, execution, and administration of these agreements must comply with all applicable law. Each party operates under its own laws, regulations, and policies, subject to the availability of appropriated funds. Nothing in this MOU is intended to alter, limit, or expand the agencies' statutory and regulatory authority.

- G. MEMBERS OF U.S. CONGRESS. Pursuant to 41 U.S.C. 22, no United States member of, or United States delegate to, Congress shall be admitted to any share or part of this MOU, or benefits that may arise there from, either directly or indirectly.
- H. FREEDOM OF INFORMATION ACT (FOIA). Public access to MOU or agreement records must not be limited, except when such records must be kept confidential and would have been excepted from disclosure pursuant to Freedom of Information regulations (5 U.S.C. 552).
- I. TERMINATION. Any of the parties, in writing, may terminate this MOU in whole, or in part, at any time before the date of expiration.
- J. DEBARMENT AND SUSPENSION. The Cooperator shall immediately inform the Forest Service if they or any of their principals are presently excluded, debarred, or suspended from entering into covered transactions with the federal government according to the terms of 2 CFR Part 180. Additionally, should the Cooperator or any of their principals receive a transmittal letter or other official Federal notice of debarment or suspension, then they shall notify the Forest Service without undue delay. This applies whether the exclusion, debarment, or suspension is voluntary or involuntary.
- K. MODIFICATIONS. Modifications within the scope of this MOU must be made by mutual consent of the parties, by the issuance of a written modification signed and dated by all properly authorized, signatory officials, prior to any changes being performed. Requests for modification should be made, in writing, at least 30 days prior to implementation of the requested change.
- L. COMMENCEMENT/EXPIRATION DATE. This MOU is executed as of the date of the last signature and is effective through December 31, 2016 at which time it will expire, unless extended by an executed modification, signed and dated by all properly authorized, signatory officials.
- M. AUTHORIZED REPRESENTATIVES. By signature below, each party certifies that the individuals listed in this document as representatives of the individual parties are authorized to act in their respective areas for matters related to this MOU. In witness whereof, the parties hereto have executed this MOU as of the last date written below.

| | |
|---|------|
| JAMES D. SWEENEY, Supervisor El Dorado County Board of supervisors | Date |
|---|------|

TOM CELIO, Deputy Director
El Dorado County Department of Transportation

Date

KATHRYN D. HARDY, Forest Supervisor
U.S. Forest Service, Eldorado National Forest

Date

The authority and format of this instrument has been reviewed and approved for signature.

U.S. Forest Service Grants & Agreements
Specialist

Date

DRAFT

69.1 - Exhibit 01--Continued



USDA Forest Service

OMB 0596-0217
FS-1500-15

Burden Statement

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call toll free (866) 632-9992 (voice). TDD users can contact USDA through local relay or the Federal relay at (800) 877-8339 (TDD) or (866) 377-8642 (relay voice). USDA is an equal opportunity provider and employer.

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EXHIBIT 'B'

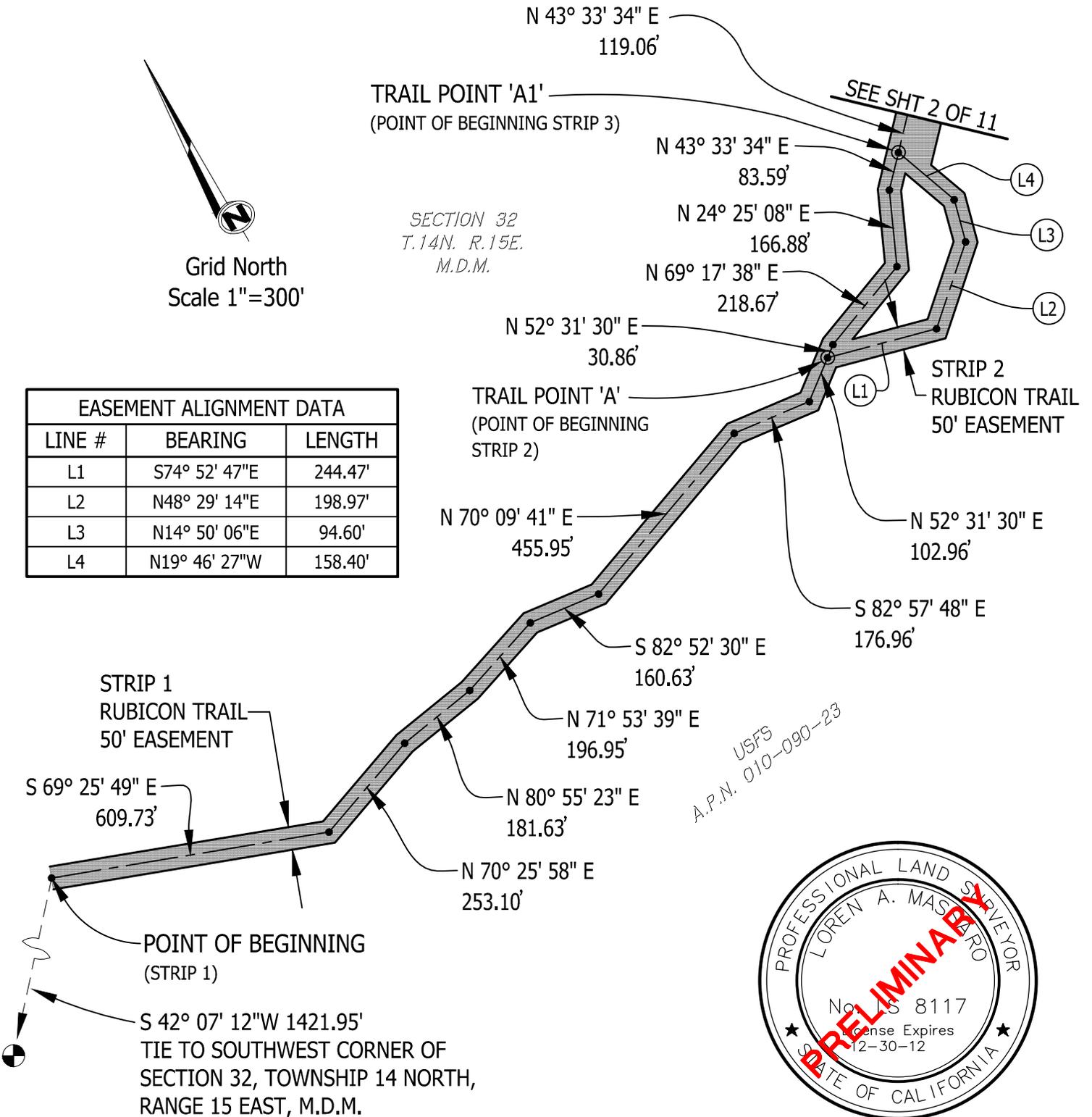
Situate in Sections 28, 32, 33, and 34 Township 14 North, Range 15 East, M.D.M. ,
 El Dorado County and Placer County, State of California and Section 2 Township 13
 North, Range 15 East, M.D.M. and Section 6 Township 13 North, Range 16 East, M.D.M.
 El Dorado County, State of California



Grid North
 Scale 1"=300'

SECTION 32
 T. 14N. R. 15E.
 M.D.M.

| EASEMENT ALIGNMENT DATA | | |
|-------------------------|---------------|---------|
| LINE # | BEARING | LENGTH |
| L1 | S74° 52' 47"E | 244.47' |
| L2 | N48° 29' 14"E | 198.97' |
| L3 | N14° 50' 06"E | 94.60' |
| L4 | N19° 46' 27"W | 158.40' |

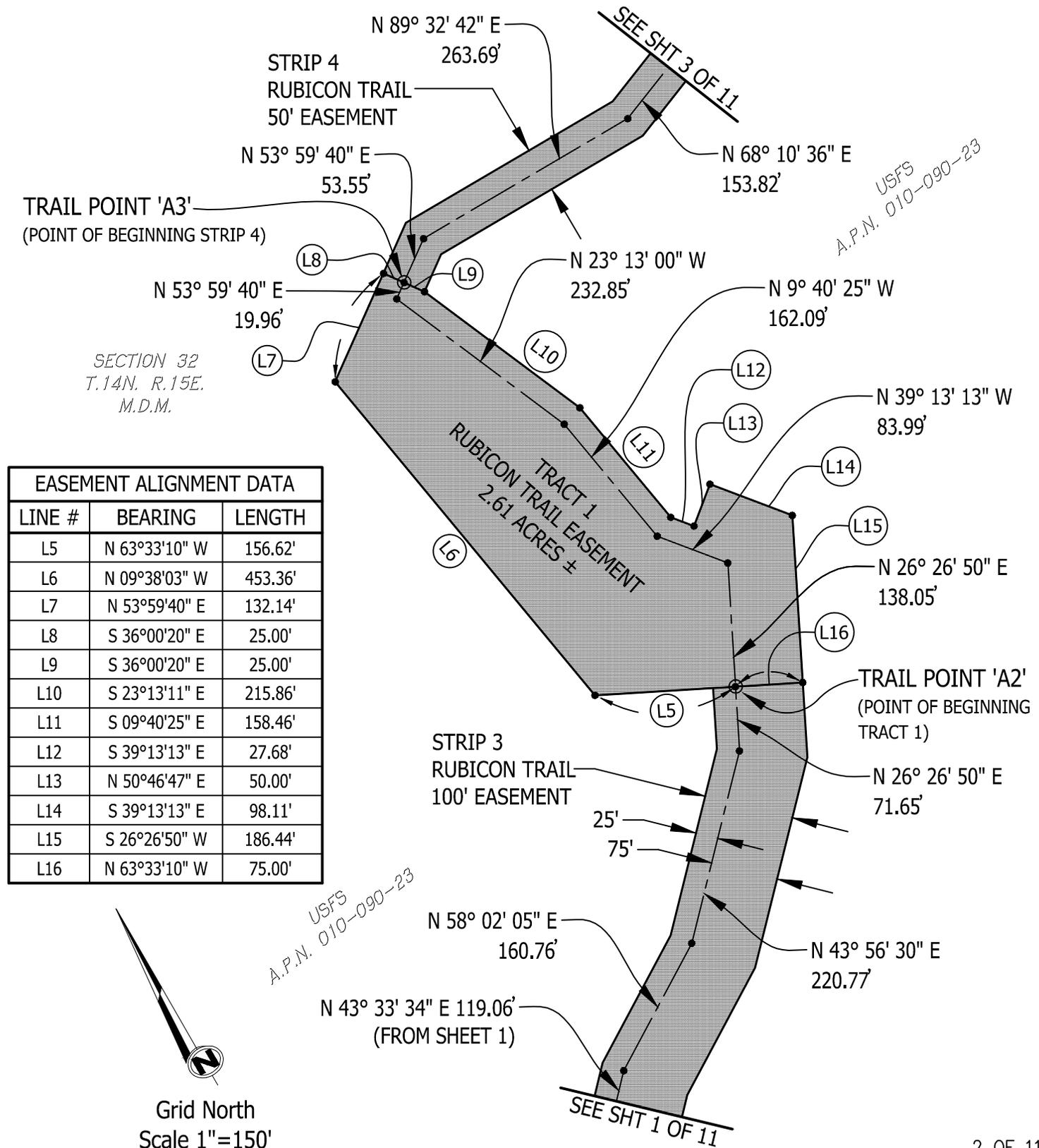


USFS
 A.P.N. 010-090-23



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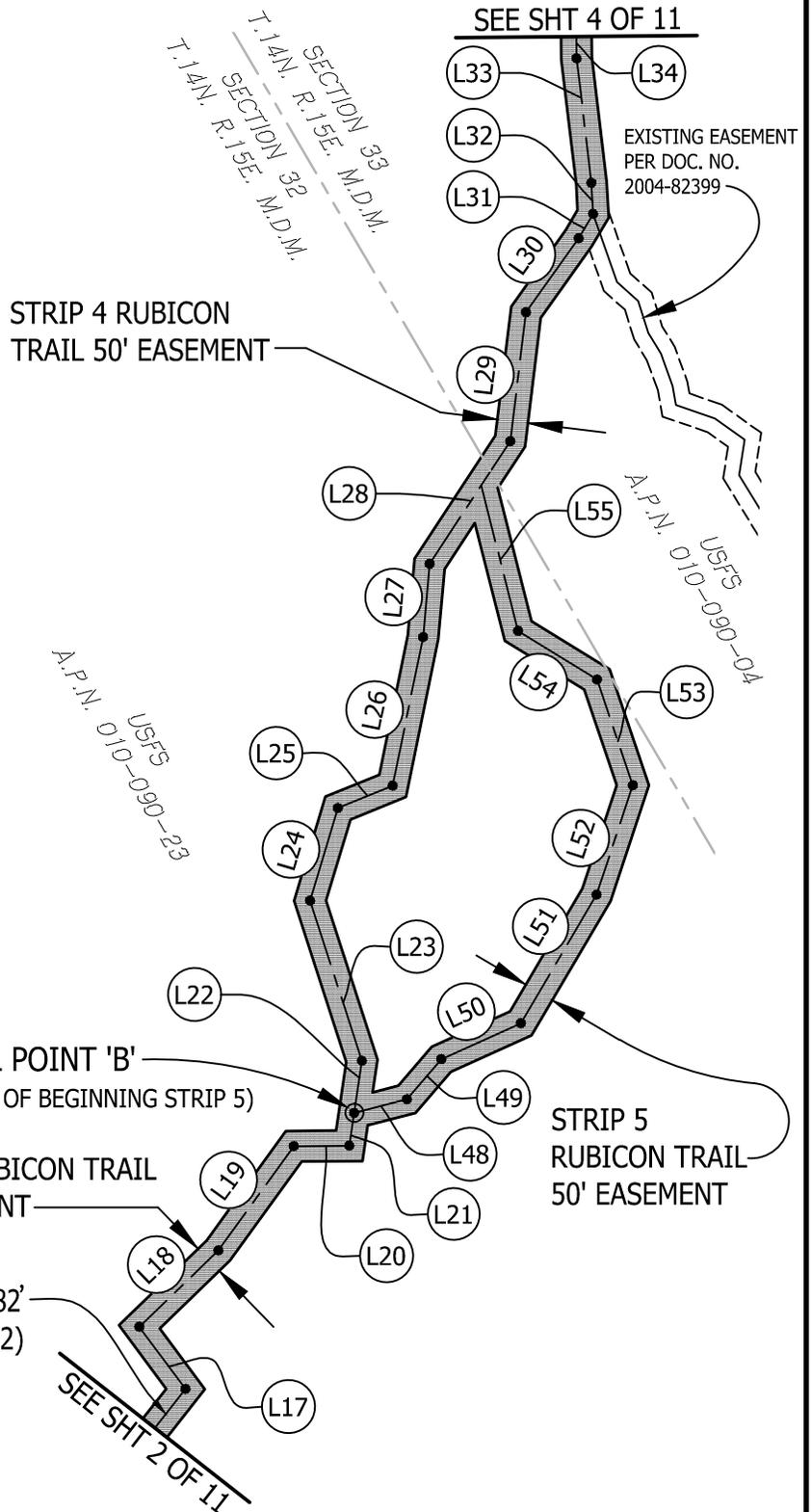


| EASEMENT ALIGNMENT DATA | | |
|-------------------------|---------------|---------|
| LINE # | BEARING | LENGTH |
| L5 | N 63°33'10" W | 156.62' |
| L6 | N 09°38'03" W | 453.36' |
| L7 | N 53°59'40" E | 132.14' |
| L8 | S 36°00'20" E | 25.00' |
| L9 | S 36°00'20" E | 25.00' |
| L10 | S 23°13'11" E | 215.86' |
| L11 | S 09°40'25" E | 158.46' |
| L12 | S 39°13'13" E | 27.68' |
| L13 | N 50°46'47" E | 50.00' |
| L14 | S 39°13'13" E | 98.11' |
| L15 | S 26°26'50" W | 186.44' |
| L16 | N 63°33'10" W | 75.00' |

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| EASEMENT ALIGNMENT DATA | | |
|-------------------------|-----------------|---------|
| LINE # | BEARING | LENGTH |
| L17 | N 6° 37' 15" W | 126.20' |
| L18 | N 75° 57' 16" E | 179.40' |
| L19 | N 65° 53' 22" E | 209.75' |
| L20 | S 60° 31' 04" E | 90.44' |
| L21 | N 38° 28' 48" E | 53.99' |
| L22 | N 38° 28' 48" E | 86.00' |
| L23 | N 12° 02' 55" E | 274.43' |
| L24 | N 46° 41' 45" E | 157.81' |
| L25 | S 82° 08' 30" E | 96.42' |
| L26 | N 41° 34' 13" E | 247.33' |
| L27 | N 35° 06' 11" E | 120.01' |
| L28 | N 63° 18' 49" E | 239.26' |
| L29 | N 36° 57' 48" E | 211.94' |
| L30 | N 65° 29' 42" E | 148.11' |
| L31 | N 60° 35' 35" E | 46.23' |
| L32 | N 26° 47' 27" E | 50.69' |
| L33 | N 23° 12' 07" E | 204.41' |
| L34 | N 29° 29' 14" E | 80.49' |
| L48 | S 74° 30' 54" E | 88.99' |
| L49 | N 70° 35' 32" E | 86.03' |
| L50 | S 84° 18' 53" E | 142.24' |
| L51 | N 60° 30' 11" E | 243.27' |
| L52 | N 48° 19' 03" E | 188.13' |
| L53 | N 11° 18' 59" E | 181.99' |
| L54 | N 28° 20' 44" W | 151.21' |
| L55 | N 15° 44' 26" E | 244.71' |



Grid North
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| EASEMENT ALIGNMENT DATA | | |
|-------------------------|-----------------|---------|
| LINE # | BEARING | LENGTH |
| L35 | N 44° 00' 09" E | 100.99' |
| L36 | N 40° 05' 11" E | 50.06' |
| L37 | N 32° 40' 56" E | 48.44' |
| L38 | N 26° 14' 06" E | 68.70' |
| L39 | N 18° 52' 21" E | 60.34' |
| L40 | N 08° 30' 06" E | 103.82' |
| L41 | N 04° 39' 09" E | 99.03' |
| L42 | N 10° 27' 39" E | 99.38' |
| L43 | N 00° 08' 34" W | 44.79' |
| L44 | N 13° 30' 32" E | 51.85' |
| L45 | N 09° 55' 47" E | 103.87' |
| L46 | N 26° 39' 04" E | 71.33' |
| L56 | N 03° 49' 01" E | 122.55' |
| L57 | N 42° 31' 09" E | 62.70' |
| L58 | N 19° 00' 24" E | 102.93' |
| L59 | N 31° 32' 18" E | 27.33' |
| L60 | N 17° 08' 26" W | 139.03' |
| L61 | N 16° 26' 25" E | 95.40' |
| L62 | N 34° 08' 37" E | 52.56' |
| L63 | N 49° 30' 50" E | 26.95' |
| L64 | N 86° 33' 51" E | 326.25' |
| L65 | S 71° 10' 48" E | 183.11' |
| L66 | S 78° 38' 03" E | 174.36' |
| L67 | N 26° 13' 09" E | 96.59' |
| L68 | S 77° 15' 21" E | 178.49' |
| L69 | N 57° 49' 19" E | 71.31' |
| L70 | S 85° 25' 28" E | 136.53' |

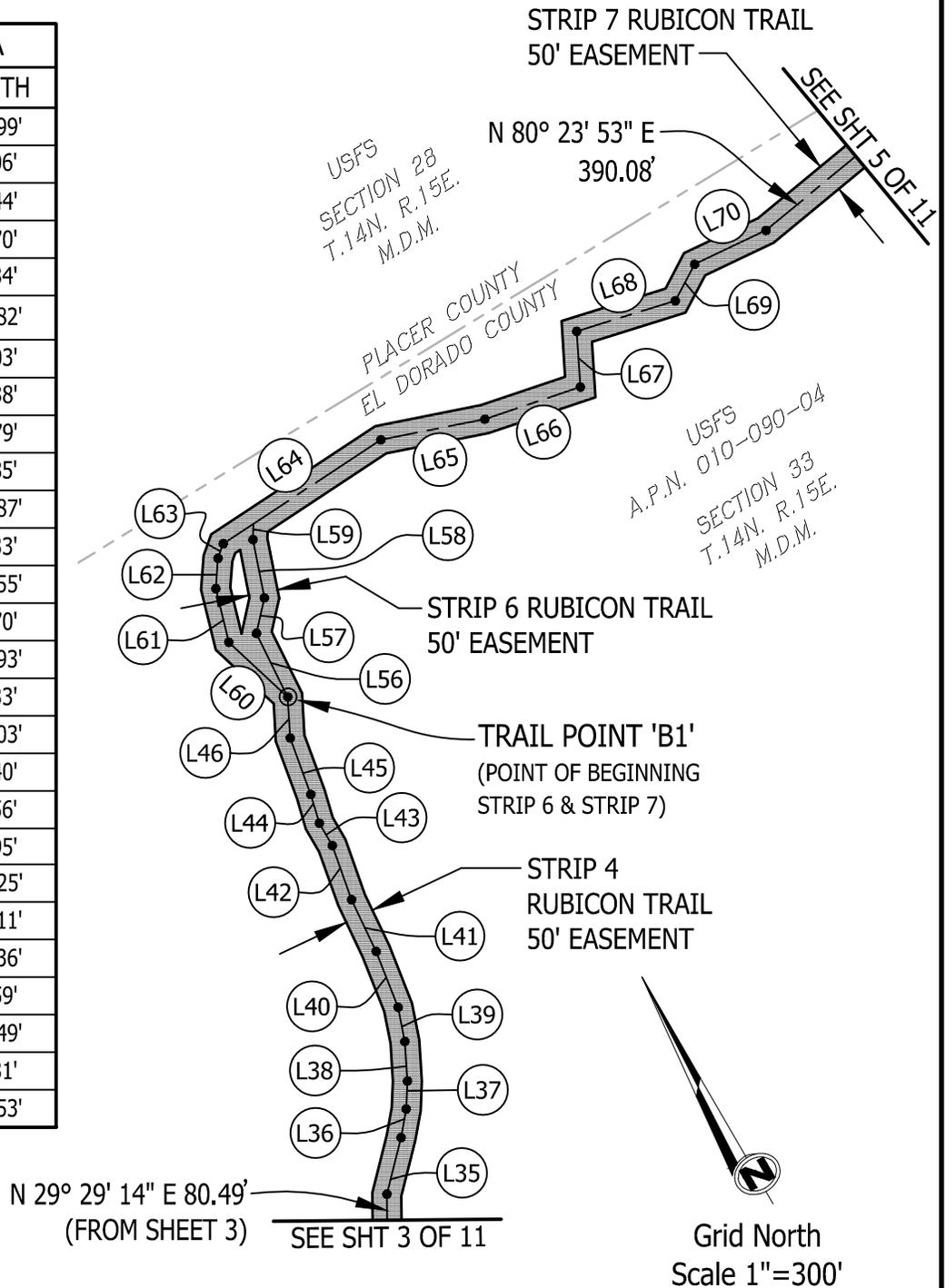


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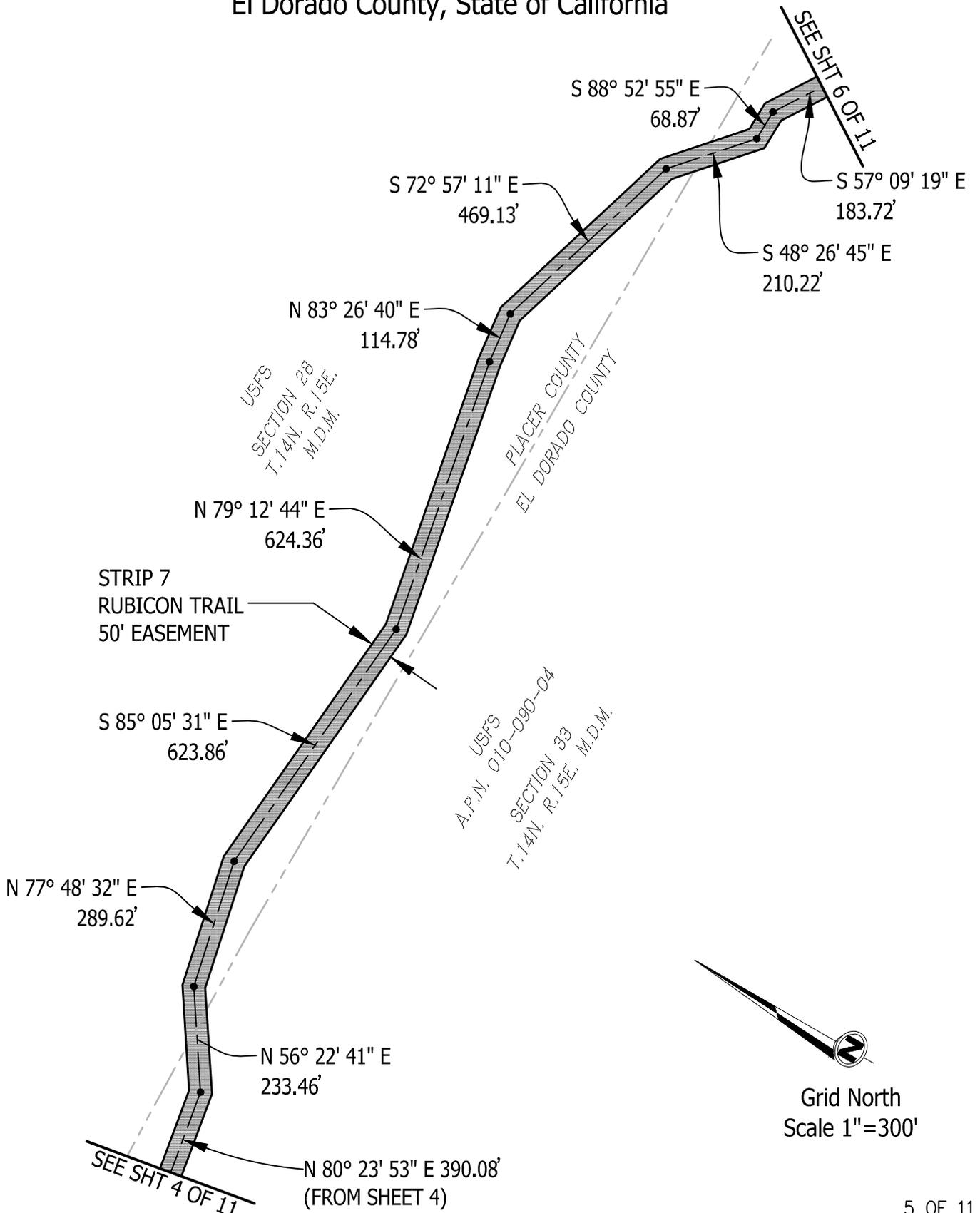


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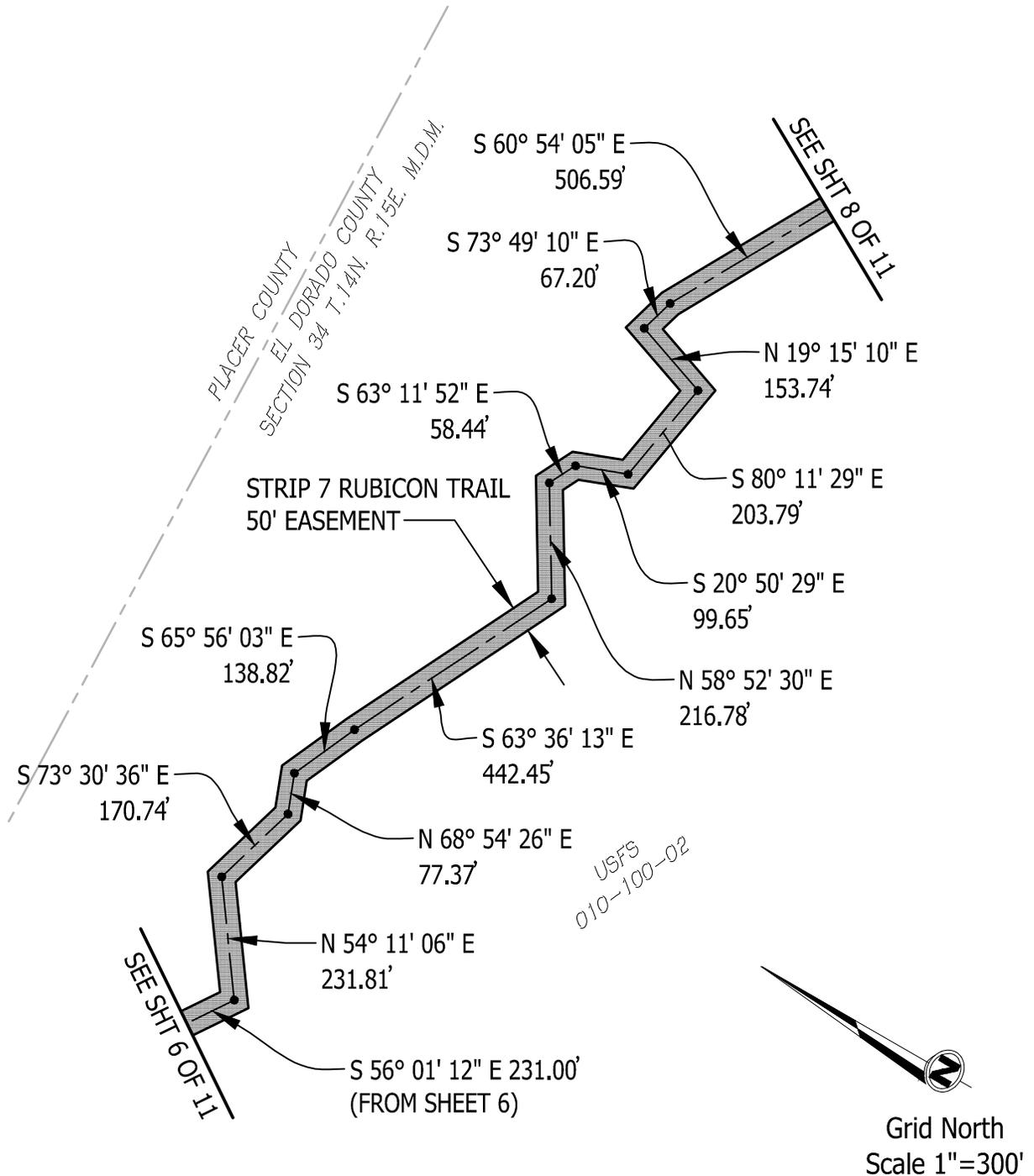


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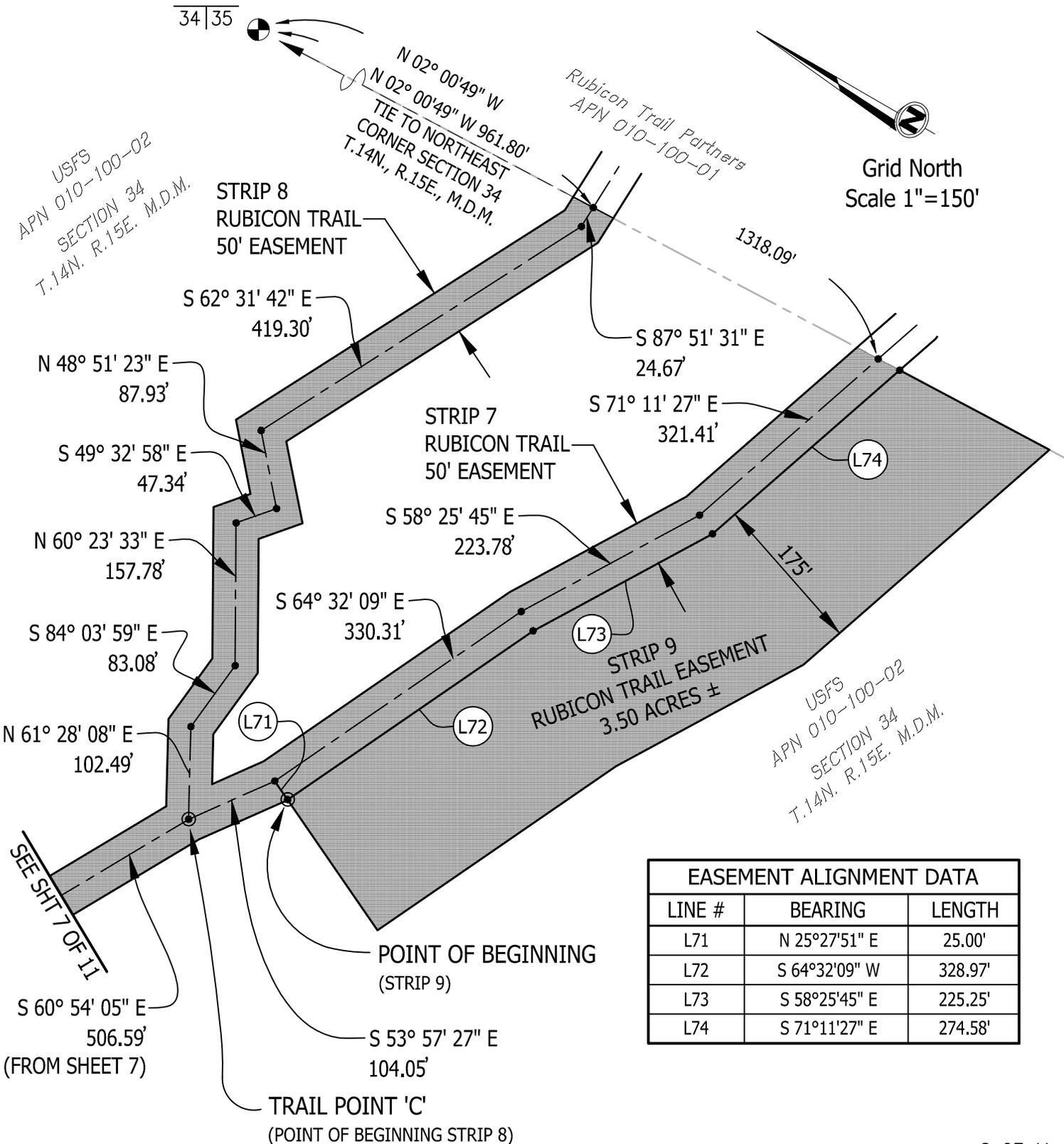


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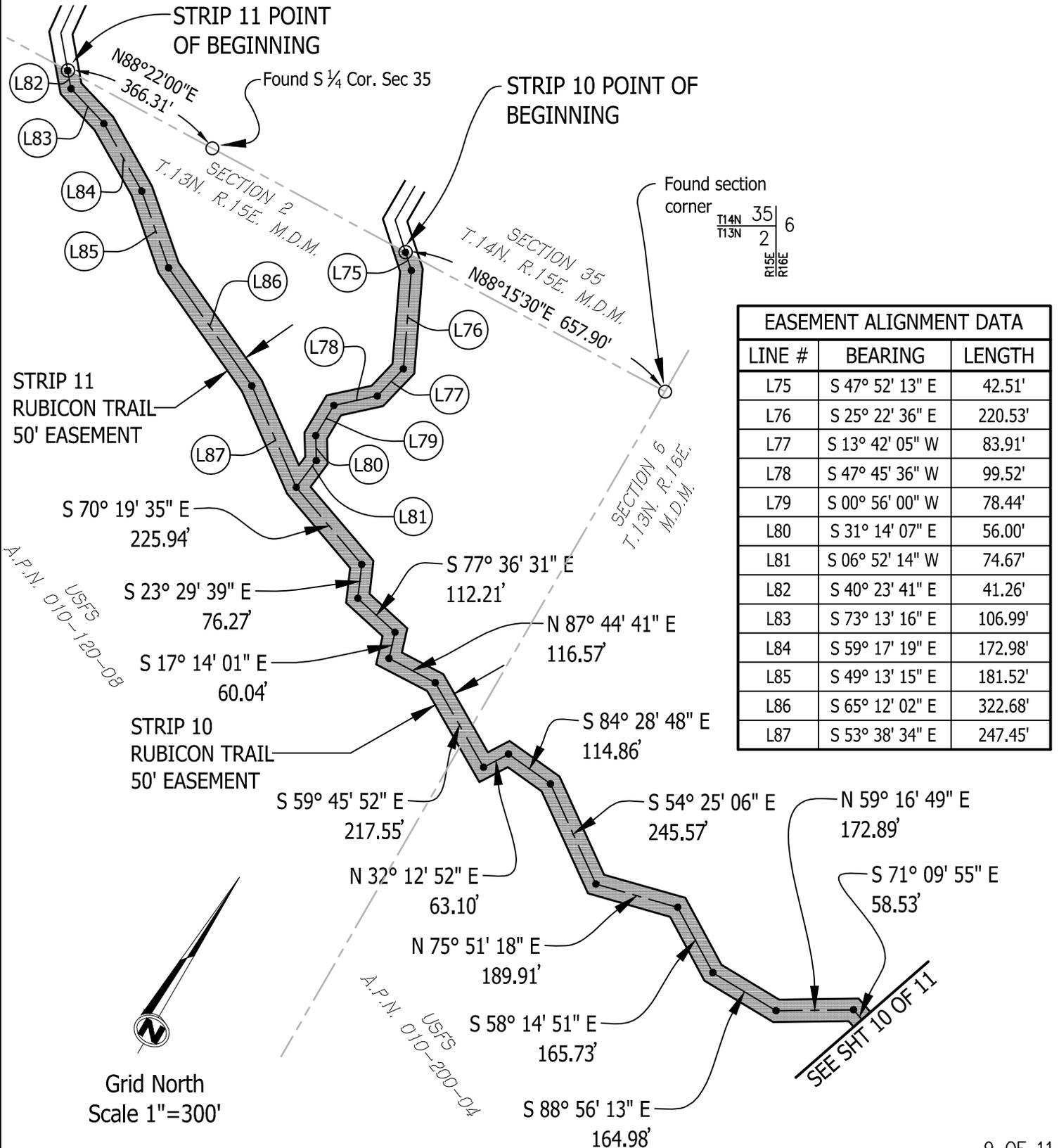


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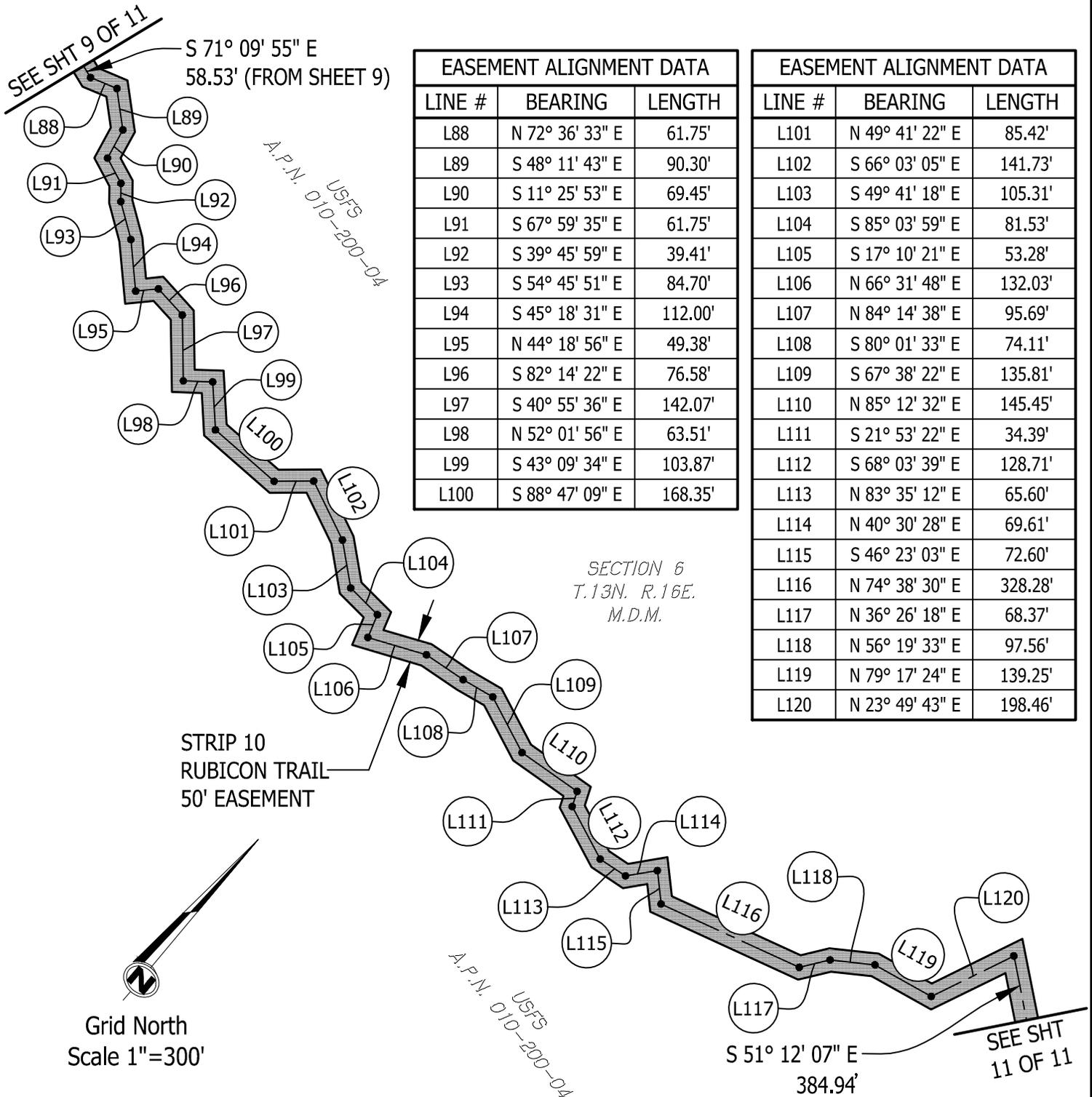


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