

Rubicon Trail Saturated Soil Water Quality Protection Plan

Department of Transportation

Prepared for the Board of Supervisors

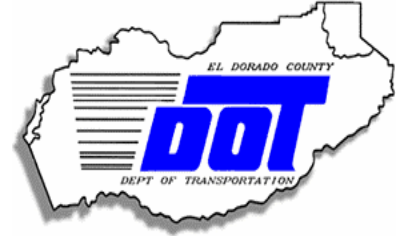
December 14, 2010

Legistar Item #10-1279





Agenda



➔ **Rubicon Trail CAO Item 2 Goal and Objectives**

Background

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Existing Conditions and Proposed Best Management Practices (BMP's)

Seasonal Closure

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Implementation/Monitoring

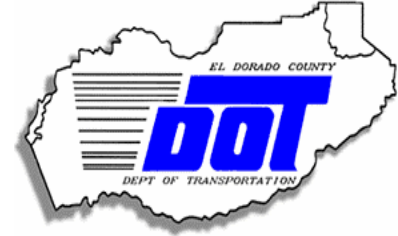
Department of Transportation Summation

Approve the Rubicon Trail Saturated Soil Water Quality Protection Plan

Questions



Rubicon Trail CAO Item 2 Goal and Objectives



Goal:

To adopt and approve the Saturated Soil Water Quality Protection Plan required within the Clean-up and Abatement Order (CAO), Item 2.

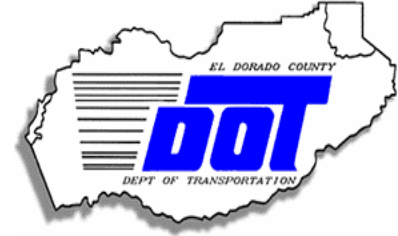
The CAO specifically requires: “The Saturated Soil Water Quality Protection Plan shall evaluate and where appropriate, propose means of addressing, water quality impacts caused by vehicle use during saturated soil conditions and by over-the-snow travel.”

Objectives:

1. El Dorado County Board of Supervisors adopt and approve a Saturated Soil Water Quality Protection Plan on the Rubicon Trail to satisfy a condition of the CAO.
2. Upon approval and adoption, the Plan will be used to guide the County’s future maintenance efforts on the Trail within the Long Term Management Plan due April 30, 2011.



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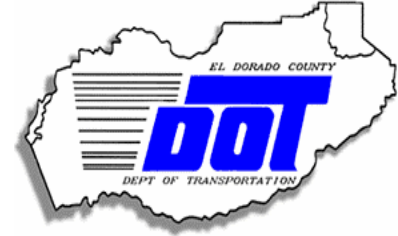
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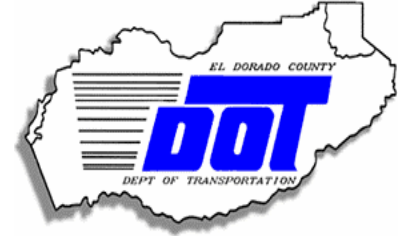
Background:



- April, 2009:
 - Clean-up and Abatement Order (“CAO”) No.R5-2009-0030 issued which required El Dorado County and the El Dorado National Forest, United States Forest Service (“USFS”) to cleanup and abate the impacts resulting from OHV use on the Rubicon Trail
- July, 2009
 - California Geologic Survey (“CGS”) Report issued to County which depicted a trail centerline and variants with water quality problems and potential Best Management Practices (“BMP’s”) solutions
- May-October, 2009
 - County completed several field surveys to locate and install BMP’s from the Intertie to Ellis Creek
- July, 2010
 - County receives State OHV Grant for Ground Operations work
- July-September 2010
 - The Department of Transportation Maintenance Division Installs BMP’s as part of the State OHV Phase 1 Ground Operations grant at the following trail sections: Loon Lake Intertie to Wentworth Springs Rd. Intx., Wentworth Springs Campground to the Loon Lake Intertie Intx., and Ellis Creek to Walker Hill



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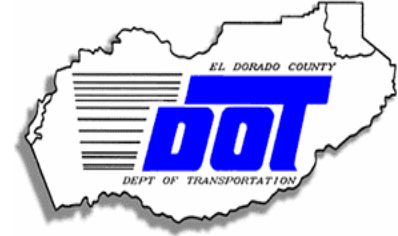
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Plan Goals and Objectives

Goal:

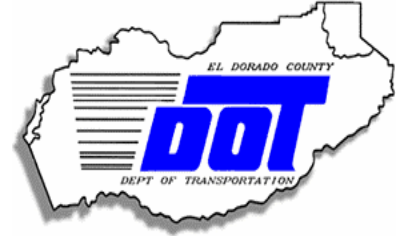
To provide a comprehensive BMP Maintenance Plan for implementation in accordance with the Clean-up and Abatement Order (CAO).

Objectives:

1. Utilize the 2009 CGS Report, DOT 2010 Field Assessment, and BMP Toolbox developed by Resource Conservation District to identify the high priority areas along the Rubicon Trail that warrant BMP's to mitigate existing sedimentation and erosion problems.
2. Upon approval from the Central Valley Water Board, begin implementation of the Plan.



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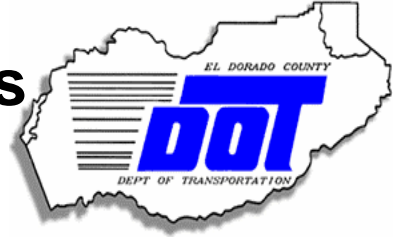
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Existing Conditions and Proposed BMP's



Loon Lake to Intertie past Gatekeeper



Existing Conditions

June 9, 2010



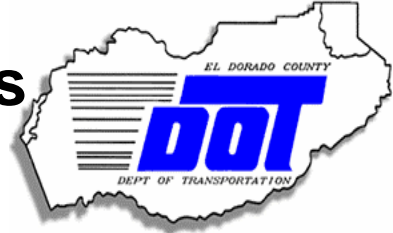
Post BMP

September 1, 2010

BMP Type: Rock Slope Protection (SC) and Rock Fill (SC)



Existing Conditions and Proposed BMP's



Wentworth Springs Rd Below Postpile



Existing Conditions

8/5/10



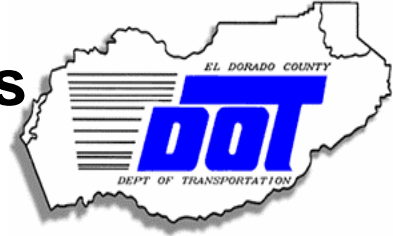
Post BMP

10/7/10

BMP Type: Rock Fill (SC) and Rock Ditch Xing (HD)



Existing Conditions and Proposed BMP's



Wentworth Springs Rd. Section



**Trail Erosion
and Un-lined
wing ditch**

Existing Conditions

8/5/10



**RIP, RDX, and
ROP**

Post BMP

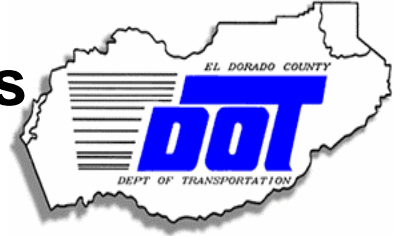
10/7/10

BMP Type: Rock Inlet Protection (SC), Rock Ditch Xing (HD), and Rock Outlet Protection (SC)

12/14/2010



Existing Conditions and Proposed BMP's



1.6 Variant after Ellis Creek



Existing Conditions

9/1/10



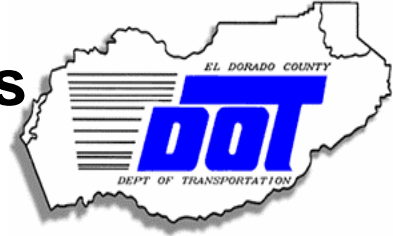
Post BMP

10/22/10

BMP Type: Rock and Log Barrier with forest ground cover (SC)



Existing Conditions and Proposed BMP's



After Ellis Creek Near 14N05 Access



Existing Conditions

9/7/10

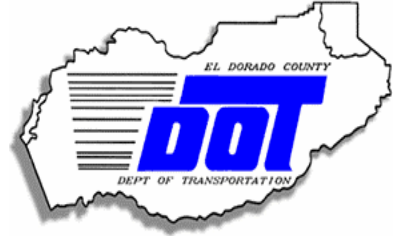
Post BMP

10/22/10

BMP Type: Rock Fill (SC)



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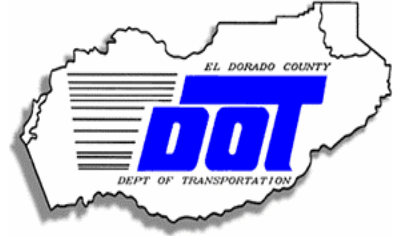
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Seasonal Closure



Assessment for Season Closure Goal:

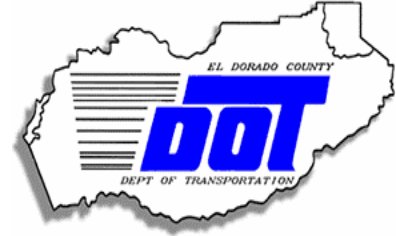
Within the CAO it states, “The Plan should consider, as one way of addressing water quality impacts, a seasonal closure involving hard dates (similar to those used in most portions of the Eldorado National Forest) or dates that are dependant upon weather conditions (such as the Eldorado National Forest’s Rock Creek closer method).”

Assessment Summary:

- Minimal OHV use on the trail during saturated soil conditions (self regulated)
- Majority of the low volume OHV use during the saturated soil conditions gets as far as Buck Island from Loon Lake Intertie (self regulated)
- The maximum OHV use is during the summer months, dry conditions
- The majority of the Proposed BMP’s will mitigate the exiting sedimentation issues on the Trail at key areas without necessitating a seasonal closure



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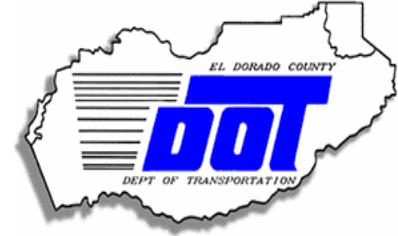
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Education



Education Goal:

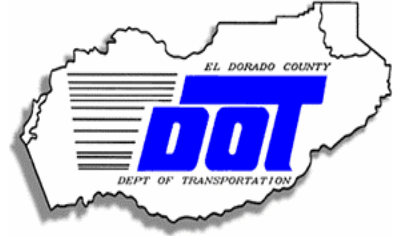
Within the CAO it states, “In addition, the plan must propose an education component....”

Education Summary:

- The DOT is currently embarking on the bandana campaign with respect to Sedimentation on the trail. The sedimentation educational campaign will follow the Yellow Bandana campaign for eradicating white flowers on the trail
- DOT has installed several information kiosks at trail head locations
- The County currently maintains a Rubicon Trail public website
- The DOT continues with a monthly Rubicon Oversight Committee meeting



Education

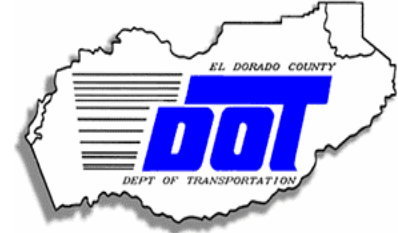


Movie Clip on the Rubicon Trail





Education



2012 Green Bandana Campaign on Sedimentation

Stay on designated route • Minimize Wheel Spin

SEDIMENTATION MITIGATION
on the Rubicon Trail

the answer is **CLEAR** water

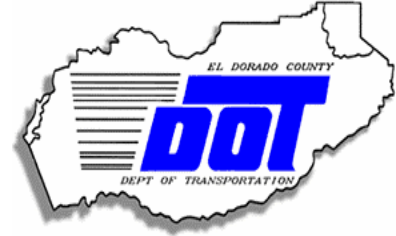
RUBICON TRAIL 2012

www.edcgov.us/Rubicon

concept, design & illustration © 2010 flyingfrog.com



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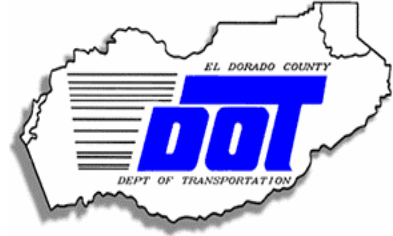
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Implementation



Implementation Goal:

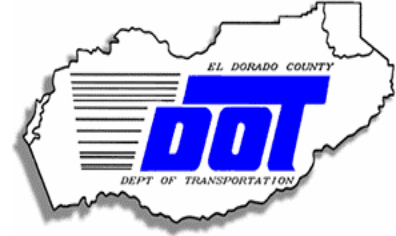
Within the CAO it states, “Upon approval by the Executive Officer, the plan shall be immediately implemented.”

Implementation Summary:

- The DOT has been working with the USFS and State Water Board staff as a coordinated effort to fast-track the implementation of the BMP’s as proposed within the plan
- The DOT has installed many BMP’s along the Phase 1 portion of the Plan as part of the State OHV grant program
- Anticipated Phase 1 BMP Implementation completion – September 2011
- Anticipated Phase 2 BMP Implementation completion – July 2012
- Funding for the Plan Development and Implementation will come from State OHV Grants, OHV In-Lieu funds, and the SMUD funds



Monitoring



Monitoring Goal:

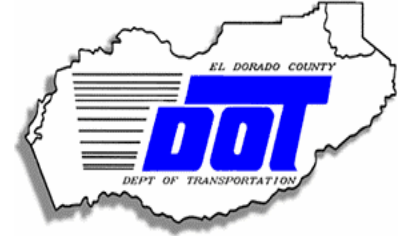
Within the CAO it states, “By 15 July of each year (beginning in 2011), the Responsible Parties shall submit an Annual Review of the Saturated Soil Water Quality Protection Plan.”

Monitoring Summary:

- The DOT has developed a Monitoring Plan which describes the procedures and methodologies that will be followed to provide trail information regarding the implementation of the Plan as part of the CAO and State OHV Grant requirements
- The DOT will complete a Spring/Fall assessment of the installed BMP's using a GPS data collector and digital photos and input all data into the DOT's GIS system
- The information will compiled within an Annual Report and submitted to the Water Board staff by the July 15th deadline



Monitoring



Rock Energy Dissipator's Near Ellis Creek

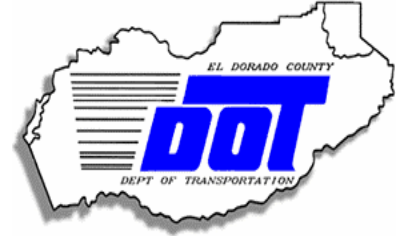


Along the relatively flat rolling section of the Rubicon Trail from the Ellis Creek Intertie to Ellis Creek there are several new drainage structures incorporating water bars with sediment collecting basins. These two worked but are now almost filled after only one storm event.





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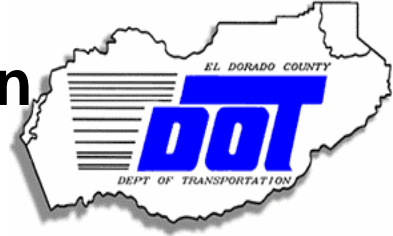
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Plan Summary

The DOT has prepared the Saturated Soil Water Quality Protection Plan in accordance with the CAO requirements for approval and adoption by the Board of Supervisors

The Plan provides the location, type, and detail of various erosion control and sediment capturing BMP's to mitigate the existing erosion and sedimentation problems identified by the 2009 CGS Report and 2010 DOT field assessment

The DOT considered a seasonal closure as part of the Plan development, as a way to address water quality impacts, which is not being recommended

The DOT is currently embarking on the educational campaign for sedimentation on the trail

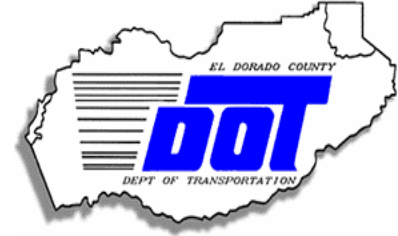
The DOT has completed various BMP's proposed within the Plan within the Phase 1 portion of the trail

The DOT has completed a Monitoring Plan to assess the BMP's

The DOT is completing the Final Technical Report for submittal to the Water Board by December 31, 2010 with the Approved/Adopted Plan



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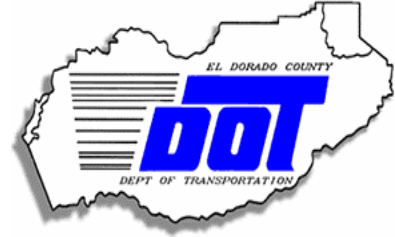
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Rubicon Trail

Saturated Soil Water Quality Protection Plan



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DEPARTMENT OF TRANSPORTATION
COUNTY OF EL DORADO, CA

PROJECT PLANS FOR THE IMPLEMENTATION OF

RUBICON TRAIL SATURATED SOIL WATER QUALITY PROTECTION PLAN

IN THE COUNTY OF EL DORADO, DISTRICT IV
IN THE CRYSTAL BASIN OF THE EL DORADO NATIONAL FOREST

DECEMBER 14, 2010

SITE LOCATION

VICINITY MAP
COUNTY OF EL DORADO

BOARD OF SUPERVISORS

JOHN KOCHT
RAY RUTTING
JAMES SWENEY
ROH V. BRIGGS
NORMA SANTIAGO

**COUNTY OF EL DORADO
DEPARTMENT OF
TRANSPORTATION**

(530) 821-5800
2850 FAIRLAKE CT
PLACERVILLE, CA
95867

DATE: 11/24/10

BY: [Signature]

SITE PLAN
SCALE: 1"=1800'

REVISIONS

NO.	DATE	BY	DESCRIPTION

FUNDING AGENCY

STATE PARKS OHMVRD
SACRAMENTO MUNICIPAL UTILITY
DISTRICT FUNDS

PROJECT NO. 98-028

**RUBICON TRAIL SATURATED
SOIL WATER QUALITY
PROTECTION PLAN**

TITLE SHEET

SHEET 1 OF 20

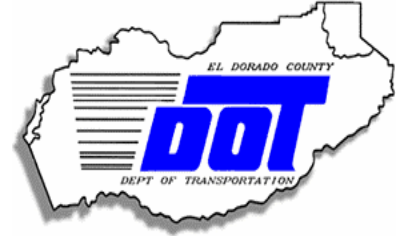
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