

## **SECTION B**

### **SURFACE AND POINT SOURCE EROSION (ROADS/SKID TRAILS)**

#### **INTRODUCTION**

The surface and point source erosion module examines the past and present soil erosion from roads and skid trails of the Mendocino Redwood Company (MRC) ownership in the Hollow Tree Creek watershed, the Hollow Tree watershed analysis unit (WAU). This module also provides a hazard assessment of the potential for future surface and point source erosion from roads in the Hollow Tree WAU. The potential erosion assessment is to assist in development of mitigation measures and actions to minimize future soil erosion from the road network. The road data that is the basis for most of this analysis was collected by MRC during a 100% road inventory of the Hollow Tree WAU. The erosion estimates utilize a combination of field observations and the use of the surface erosion model presented in the Standard Methodology for Conducting Watershed Analysis (Version 4.0, Washington Forest Practices).

Surface erosion is defined as the removal of soil particles from the surface of the soil. Processes such as rill erosion, sheetwash, biogenic transport (animal burrows, treefall, etc.) and ravel are considered surface erosion. Gullies, road crossing wash-outs, and large erosion features created by erosion from overland flow of water are considered point source erosion. In contrast, the largest discrete erosion events, landslides, are considered mass wasting.

This report examines road and skid trail associated surface and point source erosion delivering sediment into watercourses. Excessive levels of fine sediments from surface and point source erosion can get trapped in porous streambed gravels; and can increase water turbidity and suspended sediment concentrations. Excessive coarse sediments from point source erosion can adversely affect stream channel morphology. These can reduce the survival of salmonid in their redds or affect habitat needs and physiological characteristics of rearing salmonids. Excessive surface and point source erosion when delivered to a watercourse can also affect other downstream uses such as water supplies, agricultural diversions and recreation users. It is important that best management practices be utilized in forest management operations to minimize the impacts of surface and point source erosion.

#### **SURFACE AND POINT SOURCE EROSION FROM ROADS**

##### **Methods**

A 100% road inventory of the roads with the Hollow Tree WAU was conducted from 2001-2003. The road inventory consisted of traveling all roads with a Global Positioning System (GPS) unit and identifying, mapping and inventorying all major features of the road network. Some of the features that are inventoried include watercourse-crossings and crossing structures (culverts, bridges, etc.), landings, erosion features and controllable erosion amounts (as defined below). Information relating to erosion and sediment delivery from the road inventory is analyzed in this report. Dimensions of the road network such as length, width and sediment contributing road lengths are also summarized. The road inventory

collects information on the entire road infrastructure. This road infrastructure information allows for better management and tracking of the road network.

All road features (watercourse crossings, landings, road fill, etc.), during the road inventory, have the past deliverable point source erosion volume estimated for each feature. Deliverable point source erosion from a road is defined as road crossing wash-outs, major rills or gully erosion which is observed in close proximity to a watercourse or which showed evidence of eroding directly into a watercourse. These measurements were used to calculate the volume of point source erosion delivered from the road. The volume of erosion was converted to a weight (in tons) assuming a soil bulk density of 100 lbs/cubic foot. All observed sediment delivery from surface or point source erosion is assumed to have occurred within the past 10 years, unless there is information otherwise.

Future or potential point source erosion observations were collected during the road inventory. This potential future erosion is called controllable erosion, a term developed by the North Coast Regional Water Quality Control Board for Total Maximum Daily Load (TMDL) purposes. Controllable erosion is defined as soil that could potentially deliver to a watercourse in the next 40 years (the duration of a TMDL), is human created, and can be reasonably controlled by human actions. Typically, controllable erosion is a measure of the fill material from a road that could erode if a road feature is left un-maintained or fails in the next 40 years. The controllable erosion amount is the volume of soil that can be controlled with high design standards for a road feature (i.e. watercourse crossing, side-cast fill, etc.).

The controllable erosion sites are further designated by the potential for sediment delivery and the immediacy of treatment for the site. Both the sediment delivery potential and the treatment immediacy are ranked low, moderate, or high. The ranking of each controllable erosion site by these variables provides a hazard or risk assessment of the controllable erosion. This allows prioritization of road improvements and erosion control work based on potential point source erosion hazard.

Another important variable of potential future point source erosion from a road is the likelihood of diversion of water down the road prism. This diversion potential, as it is called, was evaluated for every watercourse crossing of every road in the Hollow Tree WAU. A site has a diversion potential if when the watercourse crossing plugged, dammed or failed water could be diverted out of the “natural” watercourse channel and down the road prism. Water diverted out of its “natural” channel would erode the road prism creating potentially high sediment delivery. Sites with a diversion potential can be engineered such that the diversion of water down a road prism does not occur if the watercourse crossing plugged, dammed, or failed.

A prioritization of potential point source erosion sites for the Hollow Tree WAU is presented (Appendix B). This prioritization is based on amount of controllable erosion of the site, the treatment immediacy, and diversion potential.

Surface erosion (minor rills or sheetwash) from roads was not directly estimated in the field. The contributing length or extent of road that delivers erosion to a watercourse is measured in the field then used for surface erosion calculations. The contributing length of a road is the length of road prism that drains water and associated eroded soil into a watercourse. Thus it defines the length of surface erosion of any particular site on the road. The model used to calculate surface erosion from roads is from the Standard Methodology for Conducting Watershed Analysis (Version 4.0, Washington Forest Practices Board) and is described below.

Surface erosion from the road surface is influenced by the amount of road traffic (high use mainline, moderate use active secondary, etc.), the type of road surface material, precipitation, width and size of road (the more surface area to erode, the more erosion), and vegetative cover (Reid, 1981). The Standard

Methodology for Conducting Watershed Analysis (Version 4.0, Washington Forest Practices Board) provides relationships based on these factors to estimate the amount of surface erosion from different road types and conditions.

Field observations from the road inventory determined the length of the road delivering sediment to a watercourse (contributing length) from individual features of the road (culverts and crossings), the road width, the road surface material and the type of road (seasonal or temporary) to aid in the surface erosion calculations.

The road inventory lacked contributing road length for road segments adjacent to a watercourse but not associated with a culvert or crossing. Using an analysis from GIS the amount of road within 50 feet, 50-100 feet and 100-200 feet of a watercourse was determined. It was assumed that within 50 feet, 100 percent of erosion from the road delivers sediment to a watercourse. At 50-100 feet 35 percent and at 100-200 feet 10 percent of erosion from the road was assumed to deliver sediment to a watercourse. These assumptions were based on sediment delivery ratios used in a road erosion model called SEDMOD.

The following model parameters were used to calculate surface erosion from roads in the Hollow Tree WAU. All of the observed roads were assumed to be older than 2 years, a base erosion rate of 60 tons/acre/year was used. This initial value was altered (multiplied) by the factors of traffic on the road, cut- and fill-slope vegetation cover, road surface type, annual precipitation, and road type in an attempt to model the actual sediment volume contributed by a given road segment. The road tread width was determined in the field during the road inventory and is assumed to be 40% of the road prism. The cut- and fill-slopes are assumed to 60% of the road prism; their dimensions for the surface erosion model were determined by multiplying the tread width by 1.5.

Road cut- and fill-slopes had approximately 50% vegetative cover, giving a cover factor of 0.37. The majority of hauling on roads occurs during drier times of the year (i.e. late spring, summer and early fall). Therefore the lowest annual precipitation category is used (<47 in. precipitation annually). In this annual precipitation category a road with at least a 6 inch rock surface is given a factor of 0.2, while a native surface road has a factor of 1.

There were 3 traffic factors used in surface erosion modeling:

- 1) *Major roads (or mainlines)* have a factor of 2; these roads are the primary roads used for log haul traffic.
- 2) *Seasonal roads* have a traffic factor of 1.2; these are tributary roads which receive moderate log haul traffic 1-2 years each decade and light traffic the remainder of the time.
- 3) *Temporary roads* receive a traffic factor of 0.61; these roads receive moderate log haul traffic 1-2 times per every 1-2 decades with little to no use in between.

The result of the surface erosion modeling is added to the point source erosion<sup>1</sup> observed during the road inventory from a given road and presented as tons/year of sediment delivery (see Appendix B for erosion estimates of each road in the Hollow Tree WAU). For relative sediment contributions from each planning watershed for roads for sediment input evaluation the tons/year calculations for all roads was totaled by planning watershed and normalized by dividing by the MRC ownership, in square miles, for the planning watershed. The result is a tons/square mile of MRC ownership/year estimate of road surface and point source erosion.

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<sup>1</sup> Point source erosion is divided by 10 to calculate tons/year. We assume we are observing these erosion features for past 10 years.

Finally, with this information each road in the Hollow Tree WAU is assigned an erosion hazard class. The erosion hazard class is used to classify the roads in the Hollow Tree WAU by their current and potential erosion hazard if the road was not modified or decommissioned. The erosion hazard class was determined by the amount of erosion a road produced and the likelihood for that erosion to be delivered to a watercourse. High levels of traffic, road surface, proximity to the stream, high past point source erosion, and high modeled surface erosion all were considered when ranking roads for their erosion hazard. The roads with the highest risk of sediment delivery and soil erosion were given a high erosion hazard classification. The roads with medium risk of sediment delivery and soil erosion were given a moderate erosion hazard classification. The roads with the lowest risk of sediment delivery and soil erosion were given a low erosion hazard classification. A description of what each erosion hazard classification means can be found in the results and discussion sub-section of this report.

In addition to the road inventory conducted by MRC a similar road assessment was conducted by Pacific Watershed Associates as funded through Trout Unlimited by the California Department of Fish and Game. The road assessment documents road conditions and potential point source erosion and suggests methods to improve the road point conditions. The report from this effort is located in the appendix of this section (Appendix B). From this assessment Trout Unlimited, the California Department of Fish and Game, United States Fish and Wildlife Service, and the National Marine Fishery Service have funded road and stream restoration work in the Hollow Tree Creek watershed. This restoration is proposed in 3 phases, with the first phase in progress at the date of this watershed analysis release (2003). The roads and watercourse crossings that have been upgraded or decommissioned are documented in the results. Further the current mapped treatment immediacy and road erosion hazard (Maps B-1 and B-2) reflect the road work completed by the end of 2003.

Two culverts within the Hollow Tree WAU have been identified as partial fish passage barriers. The culverts presented may not be the only fish passage barriers rather it represents sites which have been identified to date as barriers. The culverts discussed are on road crossings of Walters Creek and South Fork Redwood Creek.

## **Results and Discussion - Roads**

The road erosion hazard rating for each road in the Hollow Tree WAU is presented on Map B-1(a) and B-1(b) and for each individual road in Appendix B of this report. The categorizing of roads into hazard classes is intended to identify current problem areas, consider reconstruction and prioritize maintenance. The following are the definitions for each road erosion hazard class.

High Road Erosion Hazard Class - These roads have the highest amount of recent deliverable surface erosion to watercourses and a high potential for future deliverable erosion. These roads can be active, abandoned or closed. Often roads in this class are close to watercourses creating a high sediment delivery potential. Erosion is typically due to long contributing road lengths or road with native surfaces near watercourses: a result of too few waterbars and/or rolling dips or lack of rock surface. Erosion may also be a product of problem areas such as watercourse crossing wash-outs, poor road drainage, plugged road watercourse crossings, water diverted down the road surface, culverts not fitted with downspouts, etc. Active roads in this class should get the highest priority for maintenance or improvements. Closed roads in this class will need improvements before opening again. Opening abandoned roads in this class should be avoided.

Moderate Road Erosion Hazard Class - These roads have moderate amounts of recent deliverable surface erosion to watercourses and potential for future deliverable erosion. These roads can be active, abandoned or closed. Erosion problems on roads in this class can usually be handled with good road

maintenance. Erosion is typically from problem areas such as poor road drainage, water diverted down the road surface, culverts not fitted with downspouts, and an occasional plugged culvert or watercourse crossing wash-out. Active roads in this class should be a priority for maintenance. Closed or abandoned roads in this class will need some improvements before opening again.

Low Road Erosion Hazard Class - These roads have low amounts of recent deliverable surface erosion to watercourses and low potential for future deliverable erosion. These roads can be active, abandoned or closed. Active roads in this class do not need to be a priority for maintenance. Closed or abandoned roads in this class will need only some improvements before opening again.

The mapped roads and road features (culverts, crossings, and landings) are presented in map B-2 for the Hollow Tree WAU. The associated treatment immediacy of the road feature is also shown on these maps. Potential controllable (point source) erosion sites were identified and prioritized in the Hollow Tree WAU. The site identification, treatment immediacy and amount of controllable erosion estimated are found in Appendix B of this report.

It was determined that there are 178.8 miles of truck roads in the Hollow Tree WAU (skid trails not included). This represented an average road density of 5.4 miles of road per square mile. Approximately 34.6 miles of road contributes surface erosion to watercourses (defined as contributing road length). This represents approximately 19% of the total road length in the Hollow Tree WAU. Table B-1 breaks down the road lengths and densities by planning watershed for the Hollow Tree WAU.

Table B-1. Road Lengths, Contributing Road Length, and Road Density by Planning Watershed for the Hollow Tree WAU.

<b>Planning Watershed</b>	<b>Road Length (miles)</b>	<b>Contributing Road Length (miles)</b>	<b>Road Density (mi/sq mi)</b>
Lower Hollow Tree Creek	29.2	3.8	10.3
Middle Hollow Tree Creek	83.7	15.3	5.2
Upper Hollow Tree Creek	43.4	11.6	4.1
Mill Creek	8.3	1.4	7.3
Low Gap Creek	5.6	0.8	4.8
Jack of Hearts	8.6	1.7	7.7
<b><i>Hollow Tree WAU Total</i></b>	<b><i>178.8</i></b>	<b><i>34.6</i></b>	<b><i>5.4</i></b>

The road densities range from approximately 4-10 miles per square mile of MRC ownership. The highest road densities occur in watersheds where MRC owns the least amount of land (Lower Hollow Tree Creek, Mill Creek, and Jock of Hearts Creek). This is due to the access constraint smaller parcels will create. Of the roads in the Hollow Tree WAU approximately 19% of their length contributes surface erosion. Not all roads can be abandoned, but by converting many of these roads to a temporary status or putting them to bed after use, the amount of road that can contribute erosion at any given time can be reduced.

The surface and point source erosion estimates by planning watershed are presented in Table B-2. The breakdown of estimated erosion, road lengths and hazard rating by individual roads is in Appendix B of this report. Roads in the Hollow Tree WAU are estimated to generate, on average, 420 tons/mi<sup>2</sup>/yr of sediment from road-associated surface and point source erosion.

**Table B-2** Road Associated Surface and Point Source Erosion Estimates by Planning Watershed for the Hollow Tree WAU, Hollow Tree WAU.

<b>Planning Watershed</b>	<b>MRC Owned (sq mi)</b>	<b>Surface Erosion (tons/sq mi/yr)</b>	<b>Point Source Erosion (tons/sq mi/yr)</b>	<b>Total (surface +point source) (tons/sq mi/yr)</b>
Lower Hollow Tree Creek	2.8	160	310	460
Middle Hollow Tree Creek	16.2	160	210	370
Upper Hollow Tree Creek	10.5	210	220	430
Mill Creek	1.1	250	420	680
Low Gap Creek	1.2	100	440	540
Jack of Hearts	1.1	220	330	550
<b><i>Hollow Tree WAU Total</i></b>	<b><i>32.9</i></b>	<b><i>180</i></b>	<b><i>240</i></b>	<b><i>420</i></b>

As with the road density the highest amount of total surface and point source erosion from roads occurs in the planning watersheds where MRC has the least amount of land. However, these results are skewed by an abnormally high amount of point source erosion in these watersheds. This probably indicates older legacy roads that are having a high amount of culvert or landing failures or inappropriate drainage creating gully erosion. Further, the planning watersheds with less MRC land in the Hollow Tree WAU have received less monitoring and maintenance of the road network.

The future potential for point source erosion was evaluated in the Hollow Tree WAU. This potential erosion or controllable erosion was identified during the road inventory during 2001-2003 then adjusted by road erosion control work performed in 2003. A total of 108,167 cubic yards of controllable erosion was identified in the Hollow Tree WAU in the initial road inventory. In 2003 13,167 yards of controllable erosion was treated through road erosion control work. As of the end of 2003 there are 95,000 cubic yards of controllable erosion to be treated in the Hollow Tree WAU (Tables B-3 and B-4).

**Table B-3.** Controllable Erosion by Treatment Immediacy for the Hollow Tree WAU.

<b>Location</b>	<b>Controllable Erosion Treatment Immediacy (yd<sup>3</sup>)</b>		
	<b>High</b>	<b>Moderate</b>	<b>Low</b>
Culverts	17817	3973	10760
Crossings	2827	8024	17491
Landings	2300	1578	6503
Erosion Features	1995	1033	3174
Road slides	11010	2917	3598
<b><i>Total</i></b>	<b><i>35949</i></b>	<b><i>17525</i></b>	<b><i>41526</i></b>

**Table B-4.** Controllable Erosion Estimates by Calwater Planning Watershed, Road Feature and Treatment Immediacy for the Hollow Tree WAU, 2003.

<b>PLWS Name</b>	<b>Treatment Immediacy</b>	<b>Culverts (yd<sup>3</sup>)</b>	<b>Crossings (yd<sup>3</sup>)</b>	<b>Landings (yd<sup>3</sup>)</b>	<b>Erosion Sites (yd<sup>3</sup>)</b>	<b>Road Slides (yd<sup>3</sup>)</b>	<b>Total (yd<sup>3</sup>)</b>
Jack of Hearts Creek	high	5257	220				<b>5477</b>
Jack of Hearts Creek	moderate	147	326			46	<b>519</b>
Jack of Hearts Creek	low	1574	592	24	10	0	<b>2200</b>
Low Gap Creek	high	1860					<b>1860</b>
Low Gap Creek	moderate	260					<b>260</b>
Low Gap Creek	low		1175	50	521	880	<b>2626</b>
Lower Hollow Tree Creek	high	3087	1310	580	880	530	<b>6387</b>
Lower Hollow Tree Creek	moderate	1970	3770	800	590	260	<b>7390</b>
Lower Hollow Tree Creek	low	4001	3426	772	613	175	<b>8987</b>
Middle Hollow Tree Creek	high	5262	1289	1520	1115	10480	<b>19666</b>
Middle Hollow Tree Creek	moderate	1446	3093	578	288	1614	<b>7019</b>
Middle Hollow Tree Creek	low	2146	7951	1877	1085	1104	<b>14163</b>
Mill Creek	high	790					<b>790</b>
Mill Creek	moderate					450	<b>450</b>
Mill Creek	low	800	1515	663	441	470	<b>3889</b>
Upper Hollow Tree Creek	high	1561	8	200	0		<b>1769</b>
Upper Hollow Tree Creek	moderate	150	835	1088	155	547	<b>2775</b>
Upper Hollow Tree Creek	low	2239	2832	2229	504	969	<b>8773</b>
<b>Total (yd<sup>3</sup>)</b>		<b>32550</b>	<b>28342</b>	<b>10381</b>	<b>6202</b>	<b>17525</b>	<b>95000</b>

The majority of controllable erosion sites are at culvert and watercourse crossings (Tables B-3 and B-4). However, a large amount of controllable erosion is associated with road slides primarily in the Middle Hollow Tree Creek planning watershed. The Middle Hollow Tree planning watershed had the highest amount of total controllable volume and primarily due to greater amount of MRC land.

#### ***Fish passage barriers from culverts in the Hollow Tree WAU***

Two culverts within the Hollow Tree WAU have been identified as partial fish passage barriers. The culverts are on road crossings of Walters Creek and South Fork Redwood Creek.

## **SURFACE AND POINT SOURCE EROSION FROM SKID TRAILS METHODS**

Sediment delivery from surface and point source erosion from skid trails was determined from aerial photograph interpretation and sediment delivery estimates developed from a surface erosion model from the Standard Methodology for Conducting Watershed Analysis (Version 4.0, Washington Forest Practices Board). The aerial photographs taken in 1978, 1990 and 2000 were utilized.

The aerial photograph interpretation for skid trail activity consisted of determining the area harvested by ground based yarding by skid trail density (high, moderate, low) for each photo year. High-density skid trail activity is defined as having greater than 100 watercourse crossings per square mile. Moderate-density skid trail activity is defined as having between 50-100 watercourse crossings per square mile. Light skid trail density has less than 50 watercourse crossings per square mile or trails with significant re-vegetation observed in the aerial photograph.

The amount of sediment delivery from the various densities of skid trail activity was estimated by use of a surface erosion model discussed in the road surface and point source erosion section of this module. Skid trails were assumed to have a width of 12 feet, a traffic factor similar to a temporary road, and a contributing length of 100 feet per crossing. This calculation estimates a high skid trail density to contribute 500 tons/square mile/year of sediment, moderate skid trail density contributes 300 tons/square mile/year, while low skid trail density contributes 50 tons/square mile/year. For each photo year the area in each skid trail density category was multiplied by the sediment delivery rate for that density. The estimated rate was then assumed to represent the decade previous to the photo year observed (i.e. 1978 photo represent activity in the 1970s).

### **Results and Discussion - Skid Trail Erosion**

The results by time period for the skid trail sediment delivery estimates are summarized in Table B-3, and Figure B-1. The estimates should be considered a minimum sediment delivery for skid trails constructed and used in the decade. Undoubtedly, some if not many, sediment delivering skid trails were vegetated enough to be overlooked during the inventory. In particular are those trails constructed or used greater than five years prior to aerial photograph reconnaissance.

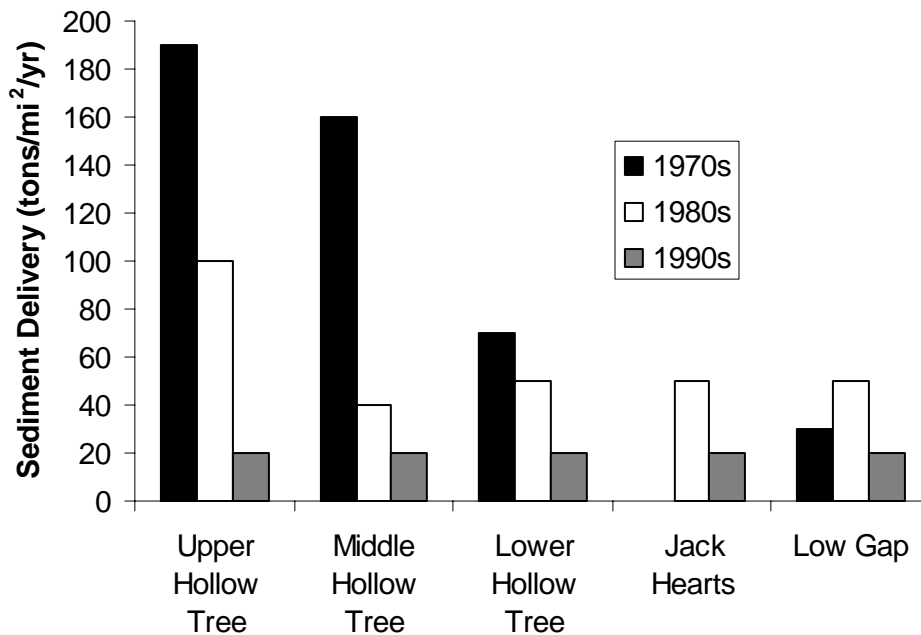
**Table B-3.** Skid Trail Sediment Delivery Estimates by Planning Watershed\* of the Hollow Tree WAU by Decade 1970-2000 (units are tons sediment/square mile/year).

	<b>1970s</b>	<b>1980s</b>	<b>1990s</b>	<b>1970-2000</b>
<b>Upper Hollow Tree</b>	190	100	20	100
<b>Middle Hollow Tree</b>	160	40	20	70
<b>Lower Hollow Tree</b>	70	50	20	50
<b>Jack of Hearts</b>	0	50	20	20
<b>Low Gap</b>	30	50	20	30

\* - Data not available for MRC land in Mill Creek planning watershed of the Hollow Tree WAU.



**Figure B-1.** Skid Trail Sediment Delivery Estimates by Planning Watershed of the Hollow Tree WAU for the 1970s, 1980s and 1990s



Almost the entire Hollow Tree WAU has been harvested using tractor based yarding at some point in the past. This high level of skid trail construction and use is estimated to contribute a high level of sediment delivery. Generally sediment delivery rates were highest during the 1970s and have decreased in subsequent decades (See Figure B-1). The exception is in Jack of Hearts Creek and Low Gap Creek planning watersheds where there was greater skid trail activity in the 1980s, however, relatively less in magnitude than 1970s skid trail sediment delivery in other planning watersheds..

In the 1980s a change in skid trail design likewise changed sediment delivery rates. A “Herringbone” type layout abandoned the low-slope trail designs of earlier times and placed the trails along ridges and branched out down the slopes. This produced a significant drop in skid trail watercourse crossings. The Herringbone pattern affected the designation of low, moderate and high skid trail usage. Further, greater use of cable yarding has lowered the use of skid trails and associated sediment delivery.

In the 1990s skid trail sediment delivery rates diminished in all watersheds. This is a result of a combination of less harvest activity and stricter regulations on tractor based yarding use. Future skid trail sediment delivery rates will be lower than past rates because California Forest Practice Rules and MRC policy mandate better managed tractor yarding activities. Better erosion control measures are used on skid trails such as increased water bar spacing and a practice by MRC of packing the trails with logging debris (slash), when available, after operations to prevent surface erosion. Furthermore, skid trail operation is limited next to watercourses and prohibited directly in watercourses.

**Appendix B**

# Hollow Tree Creek Watershed Analysis Unit

## Map B-1 Road Erosion Hazard Classifications

This map presents an erosion hazard rating for the MRC roads. Also shown are roads decommissioned in 2003 as part of an ongoing restoration of the road network. High erosion hazard roads have the highest amount of recent deliverable surface erosion to watercourses and a high potential for future deliverable erosion. Active roads in this class should get the highest priority for maintenance or improvements. Closed roads in this class will need improvements before opening again. Opening abandoned roads in this class should be avoided. Moderate erosion hazard roads have moderate amounts of recent deliverable surface erosion to watercourses and potential for future deliverable erosion. Active roads in this class should be a priority for maintenance. Closed or abandoned roads in this class will need some improvements before opening again. Low Erosion Hazard roads have low amounts of recent deliverable surface erosion to watercourses and low potential for future deliverable erosion. Roads in this class only need small improvements before use.

### Erosion Hazard Rating

- Low
- Moderate
- High

### Transportation

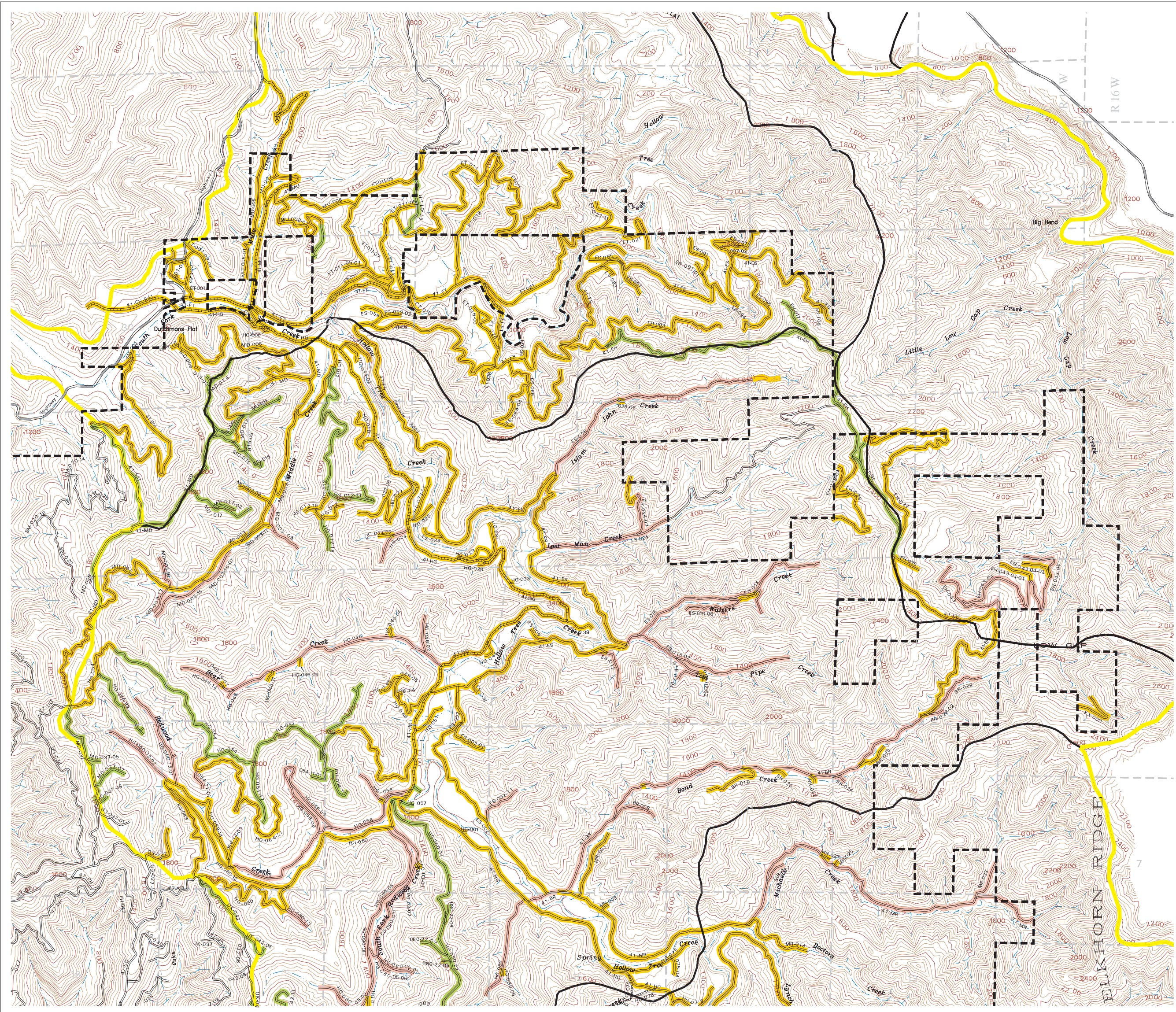
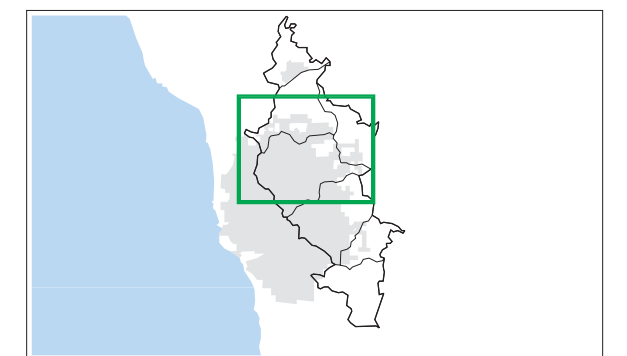
- Paved Road
- Rocked Road
- Native Road
- Jeep Trail
- Road Decommissioned in 2003

- MRC Ownership
- Planning Watershed Boundary
- Hollow Tree Creek Watershed Analysis Unit Boundary

### Flow Class

- Class I
- Class II
- Class III

Sheet 1



# Hollow Tree Creek Watershed Analysis Unit

## Map B-2 Road Feature Treatment Immediacy

This map presents select results from MRC's road inventory. The entire road network and road features were mapped using geographic positioning system (GPS) from 2000-2002. For each feature with the potential to create erosion (culverts, landings, crossings) the treatment immediacy for the feature was assigned. The treatment immediacy represents the level of concern for either upgrading or maintenance to the feature.

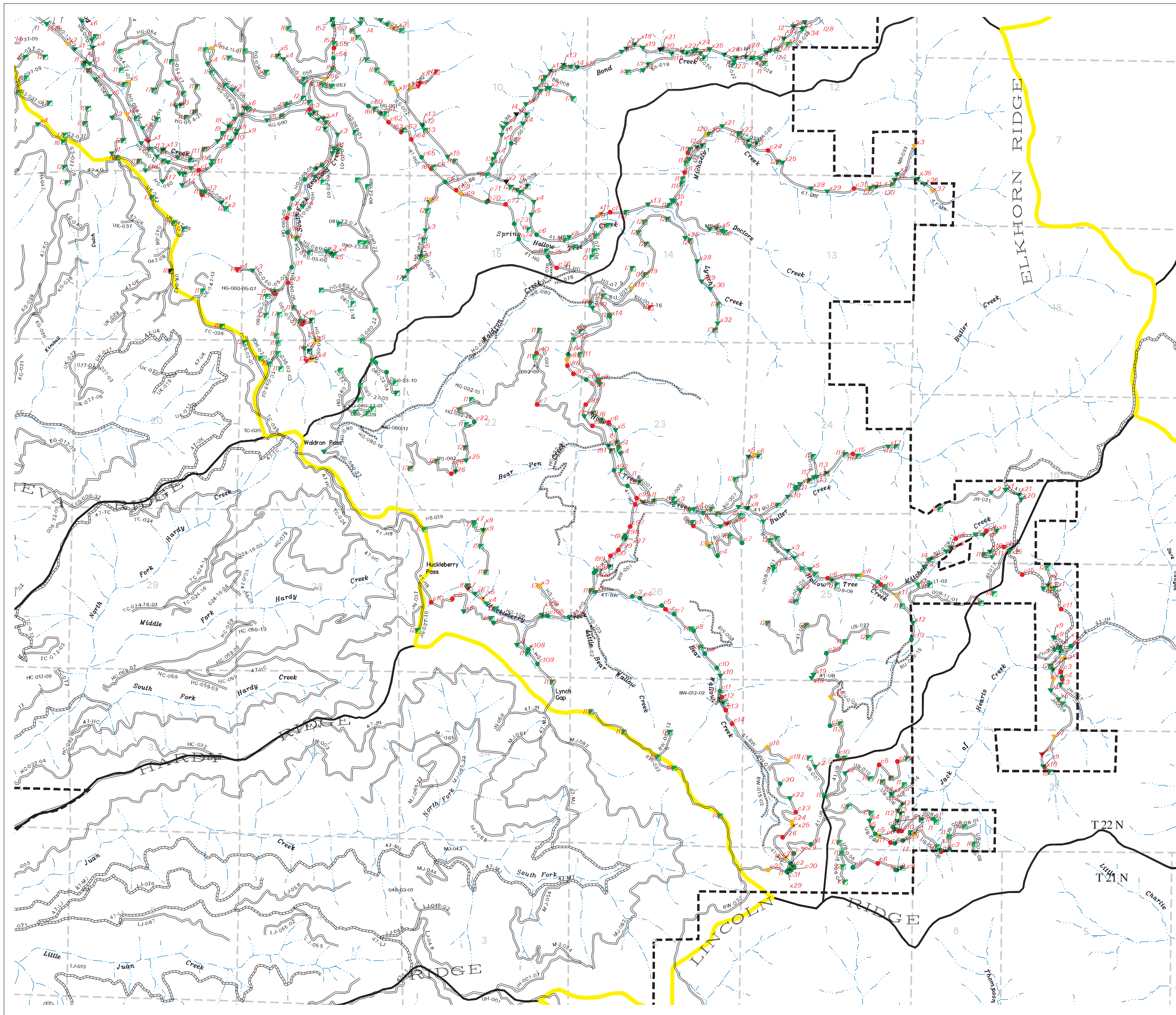
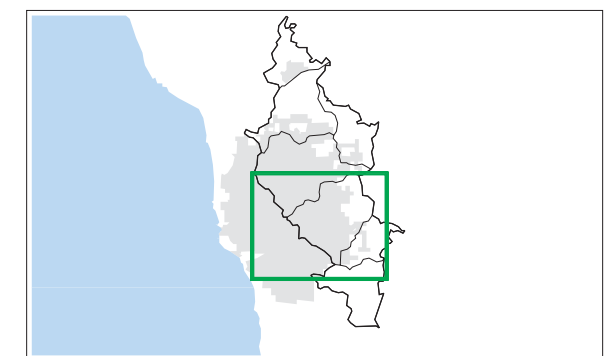
- | Culverts       | Crossings      | Landings       |
|----------------|----------------|----------------|
| • High         | ▼ High         | ■ High         |
| • Moderate     | ▼ Moderate     | ■ Moderate     |
| • Low          | ▼ Low          | ■ Low          |
| • None         | ▼ None         | ■ None         |
| • Undetermined | ▼ Undetermined | ■ Undetermined |

- Transportation
- Paved Road
  - Rocked Road
  - Native Road
  - - - Jeep Trail
  - ..... Road Decommissioned in 2003

- - - MRC Ownership
- Planning Watershed Boundary
- Hollow Tree Creek Watershed Analysis Unit Boundary

- Flow Class
- Class I
  - Class II
  - Class III

Sheet 2



# Hollow Tree Creek Watershed Analysis Unit

## Map B-2 Road Feature Treatment Immediacy

This map presents select results from MRC's road inventory. The entire road network and road features were mapped using geographic positioning system (GPS) from 2000-2002. For each feature with the potential to create erosion (culverts, landings, crossings) the treatment immediacy for the feature was assigned. The treatment immediacy represents the level of concern for either upgrading or maintenance to the feature.

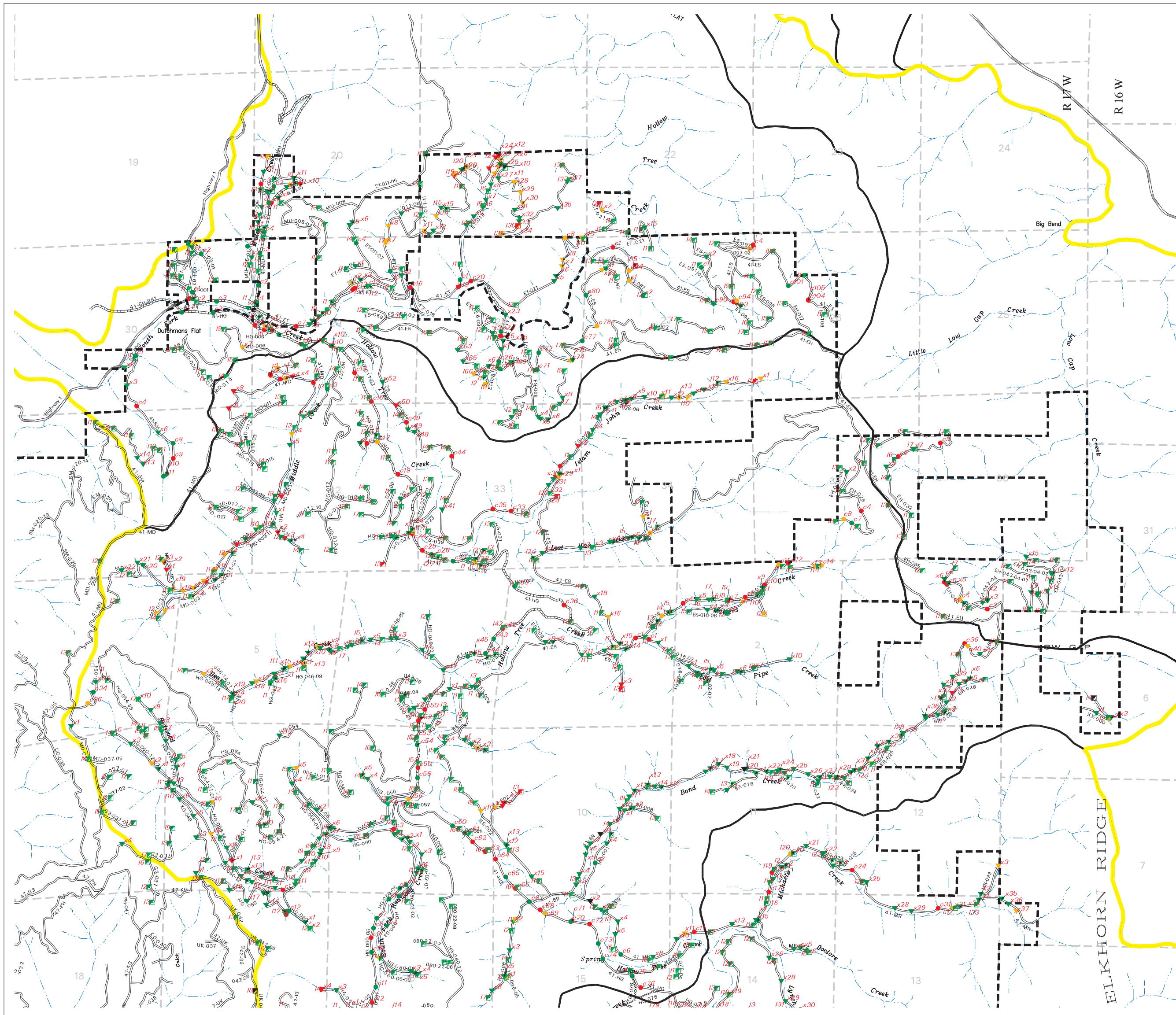
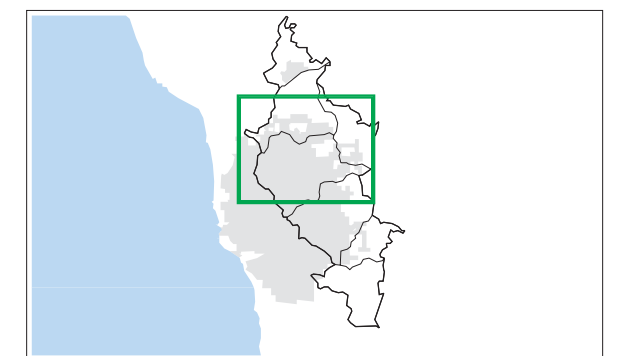
Culverts	Crossings	Landings
• High	▼ High	■ High
• Moderate	▼ Moderate	■ Moderate
• Low	▼ Low	■ Low
• None	▼ None	■ None
• Undetermined	▼ Undetermined	■ Undetermined

Transportation
— Paved Road
--- Rocked Road
— Native Road
=== Jeep Trail
..... Road Decommissioned in 2003

--- MRC Ownership
— Planning Watershed Boundary
— Hollow Tree Creek Watershed Analysis Unit Boundary

Flow Class
— Class I
— Class II
— Class III

Sheet 1



# Hollow Tree Creek Watershed Analysis Unit

## Map B-1 Road Erosion Hazard Classifications

This map presents an erosion hazard rating for the MRC roads. Also shown are roads decommissioned in 2003 as part of an ongoing restoration of the road network. High erosion hazard roads have the highest amount of recent deliverable surface erosion to watercourses and a high potential for future deliverable erosion. Active roads in this class should get the highest priority for maintenance or improvements. Closed roads in this class will need improvements before opening again. Moderate erosion hazard roads have moderate amounts of recent deliverable surface erosion to watercourses and potential for future deliverable erosion. Active roads in this class should be a priority for maintenance. Closed or abandoned roads in this class will need some improvements before opening again. Low Erosion Hazard roads have low amounts of recent deliverable surface erosion to watercourses and low potential for future deliverable erosion. Roads in this class only need small improvements before use.

### Erosion Hazard Rating

- Low
- Moderate
- High

### Transportation

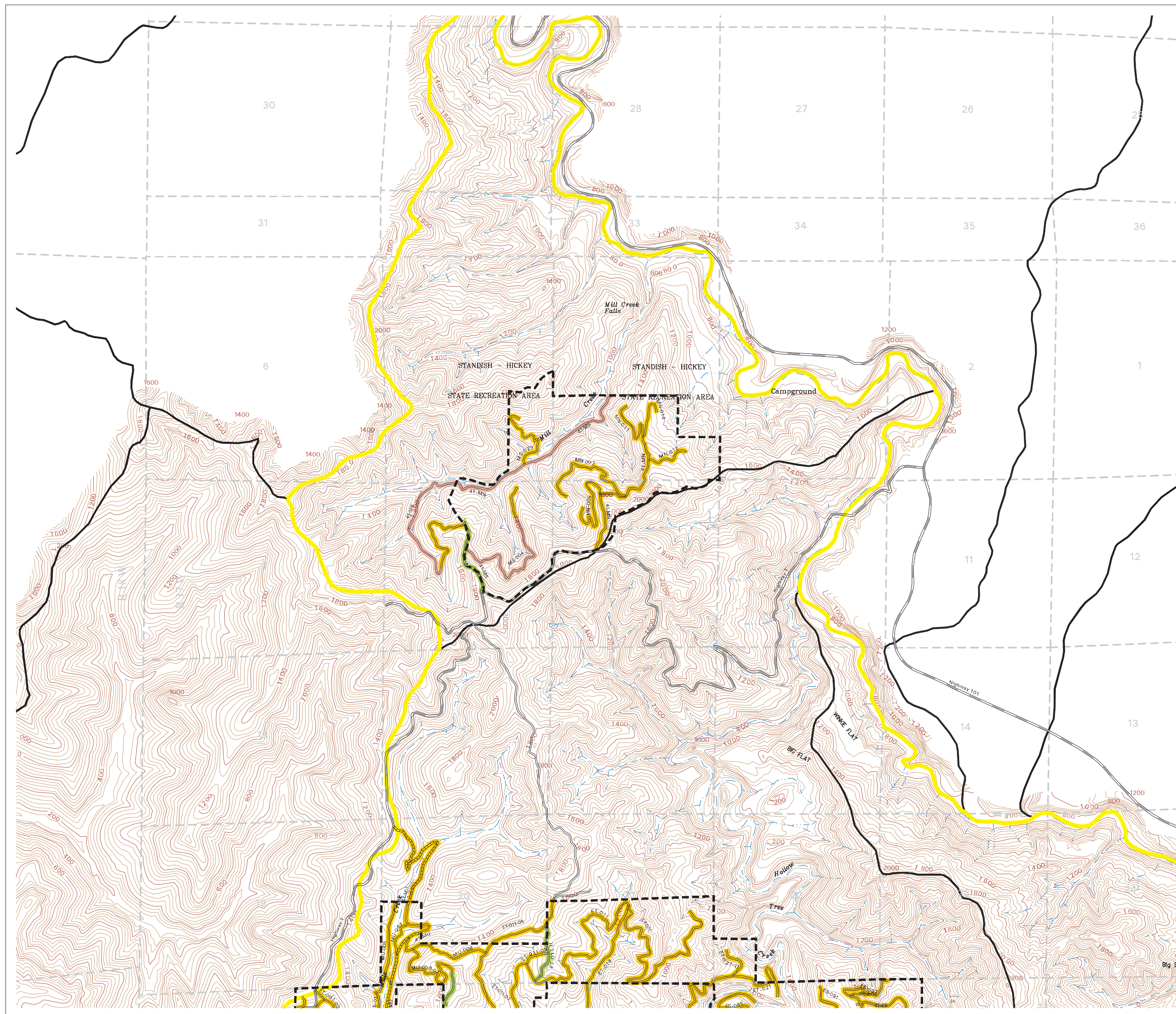
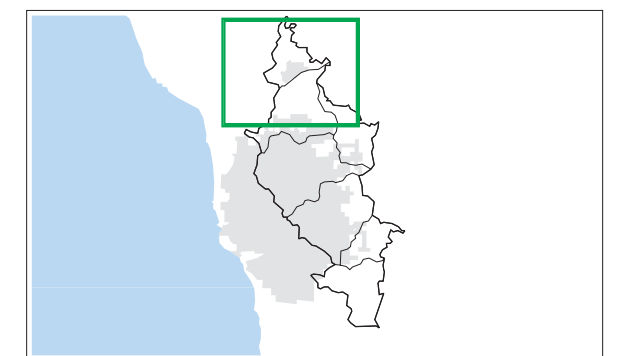
- Paved Road
- Rocked Road
- Native Road
- Jeep Trail
- Road Decommissioned in 2003

- MRC Ownership
- Planning Watershed Boundary
- Hollow Tree Creek Watershed Analysis Unit Boundary

### Flow Class

- Class I
- Class II
- Class III

Sheet 3



# Hollow Tree Creek Watershed Analysis Unit

## Map B-1 Road Erosion Hazard Classifications

This map presents an erosion hazard rating for the MRC roads. Also shown are roads decommissioned in 2003 as part of an ongoing restoration of the road network. High erosion hazard roads have the highest amount of recent deliverable surface erosion to watercourses and a high potential for future deliverable erosion. Active roads in this class should get the highest priority for maintenance or improvements. Closed roads in this class will need improvements before opening again. Moderate erosion hazard roads have moderate amounts of recent deliverable surface erosion to watercourses and potential for future deliverable erosion. Active roads in this class should be a priority for maintenance. Closed or abandoned roads in this class will need some improvements before opening again. Low Erosion Hazard roads have low amounts of recent deliverable surface erosion to watercourses and low potential for future deliverable erosion. Roads in this class only need small improvements before use.

### Erosion Hazard Rating

- Low
- Moderate
- High

### Transportation

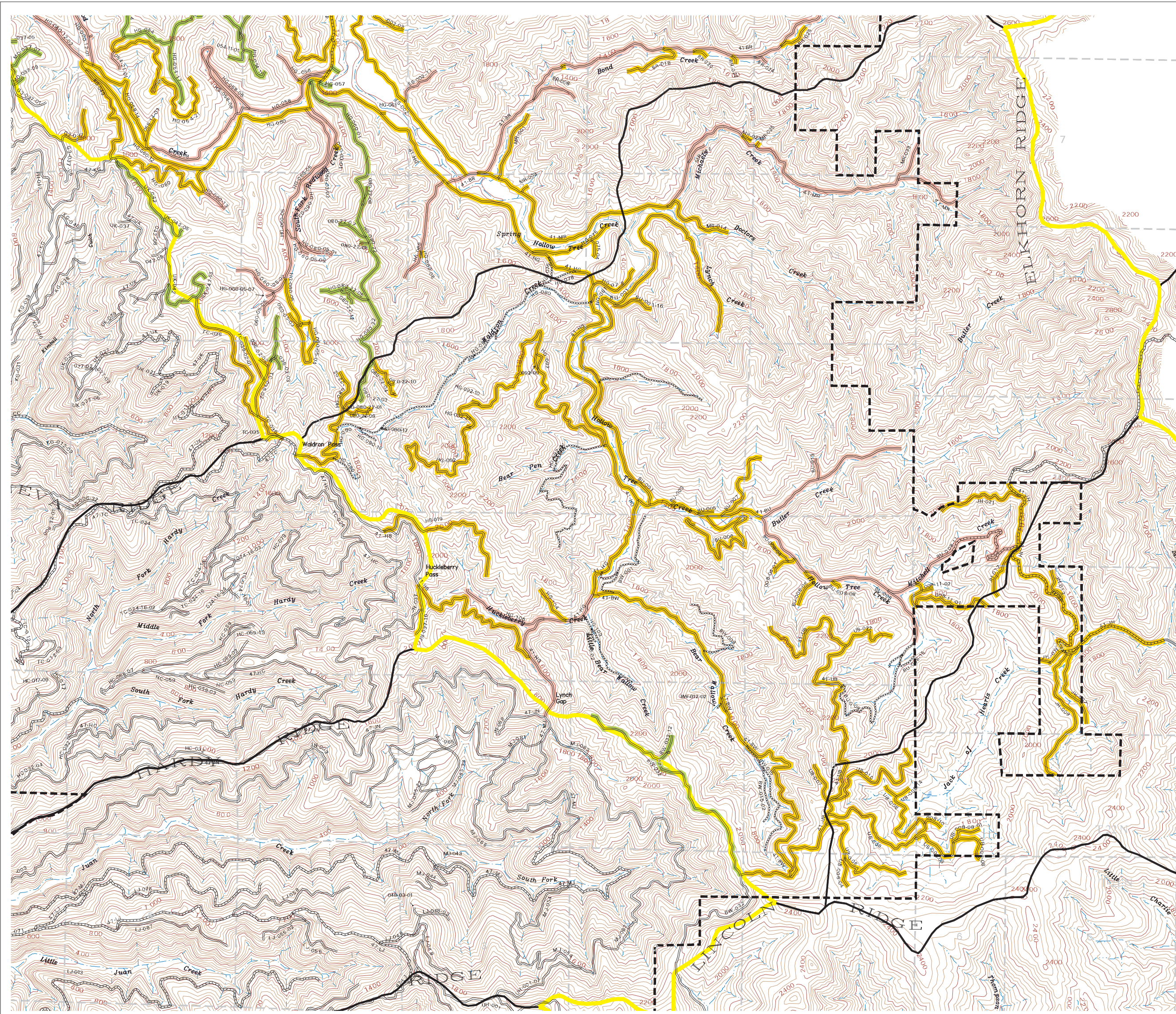
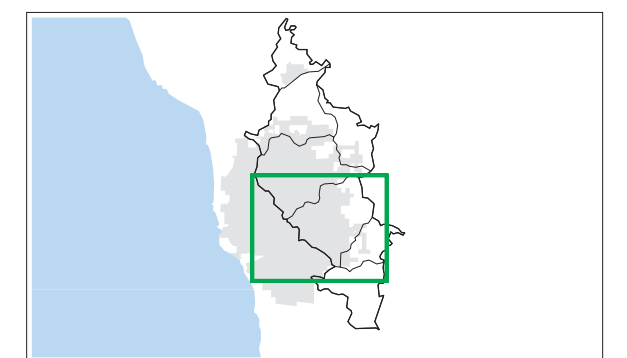
- Paved Road
- Rocked Road
- Native Road
- Jeep Trail
- Road Decommissioned in 2003

- MRC Ownership
- Planning Watershed Boundary
- Hollow Tree Creek Watershed Analysis Unit Boundary

### Flow Class

- Class I
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Sheet 2



# Hollow Tree Creek Watershed Analysis Unit

## Map B-2 Road Feature Treatment Immediacy

This map presents select results from MRC's road inventory. The entire road network and road features were mapped using geographic positioning system (GPS) from 2000-2002. For each feature with the potential to create erosion (culverts, landings, crossings) the treatment immediacy for the feature was assigned. The treatment immediacy represents the level of concern for either upgrading or maintenance to the feature.

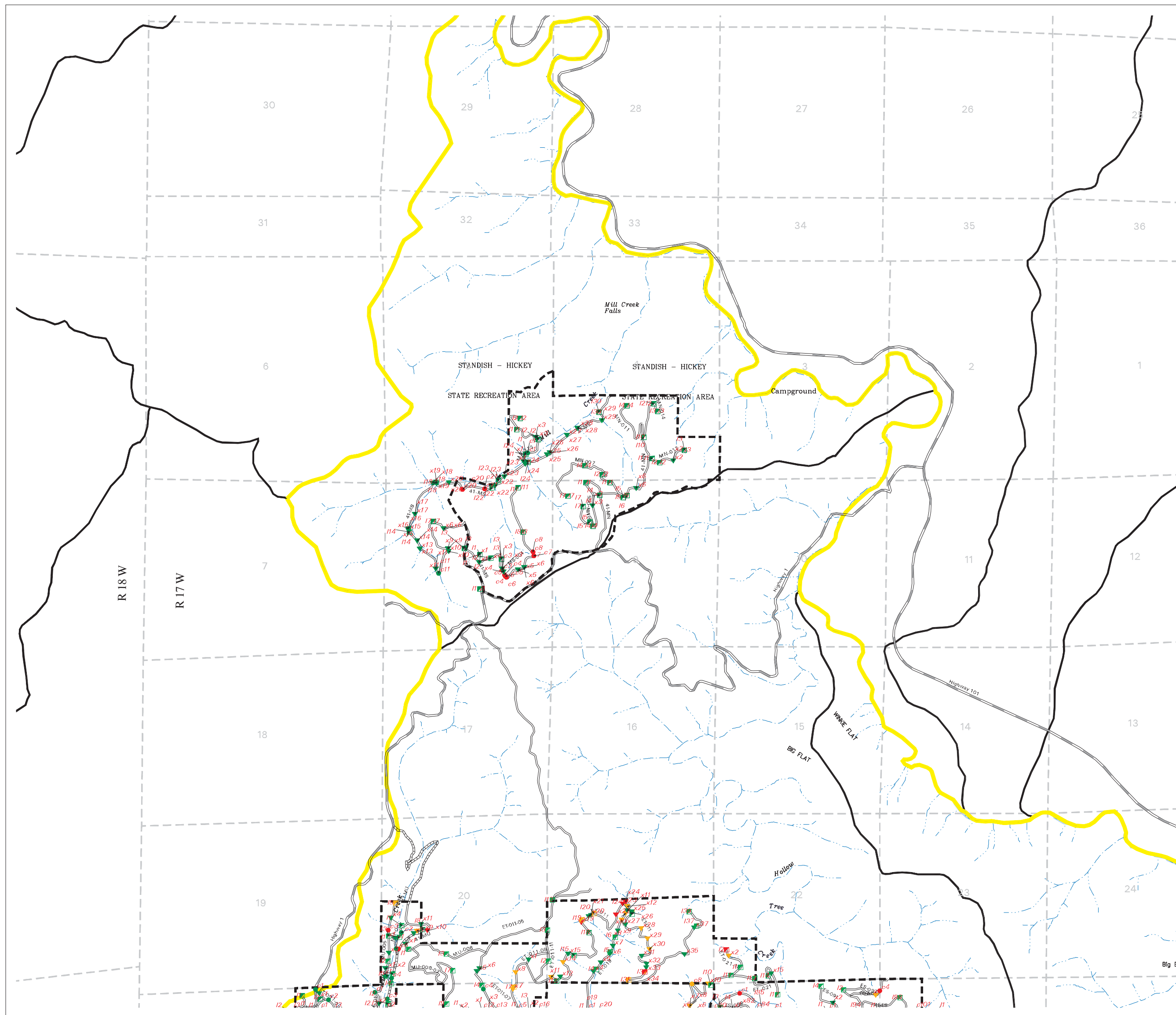
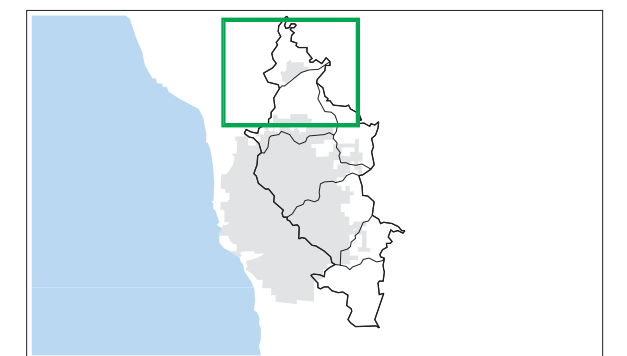
Culverts	Crossings	Landings
• High	▼ High	■ High
• Moderate	▼ Moderate	■ Moderate
• Low	▼ Low	■ Low
• None	▼ None	■ None
• Undetermined	▼ Undetermined	■ Undetermined

Transportation
— Paved Road
--- Rocked Road
— Native Road
==== Jeep Trail
----- Road Decommissioned in 2003

--- MRC Ownership
— Planning Watershed Boundary
— Hollow Tree Creek Watershed Analysis Unit Boundary

Flow Class
--- Class I
--- Class II
--- Class III

Sheet 3





Road Number	Site Number	Mile Post	Culvert Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	2003 work
41-UB-006	6	0.645	watercourse	no div. potential	high	2700	
41-ES-016-02	1	0.057	watercourse	no div. potential	high	2500	
41-EH-043	6	0.567	watercourse	no div. potential	high	800	
41-EH-043	5	0.54	watercourse	no div. potential	high	650	
41-UB-010	5	0.534	watercourse	no div. potential	high	650	
41-ET	16	1.552	watercourse	no div. potential	high	600	
41-UB-010	8	0.783	watercourse	no div. potential	high	550	
41-UB-008	7	0.574	watercourse	already diverted	high	500	
41-ES	93	9.275	watercourse	yes, road	high	475	
41-ET	20	1.993	watercourse	yes, road	high	460	
41-UB-008	11	1.038	watercourse	no div. potential	high	450	
41-MS	20	1.973	watercourse	no div. potential	high	400	
41-ES	105	10.37	watercourse	no div. potential	high	350	
41-BU-006	1	0.142	watercourse	no div. potential	high	300	
41-HG-055	3	0.25	watercourse	no div. potential	high	270	
41-MR	31	3.05	watercourse	no div. potential	high	250	
41-ES	104	10.367	watercourse	no div. potential	high	250	
41-BR	36	3.555	watercourse	already diverted	high	210	
41-EH-032	6	0.604	watercourse	yes, road	high	200	
41-ES-028	1	0.06	watercourse	already diverted	high	180	
41-EH-043	2	0.172	watercourse	yes, road	high	180	
41-ES-085	1	0.115	watercourse	yes, road	high	160	
41-UB-008	10	1.018	watercourse	yes, ditch	high	160	
41-EH-028	4	0.43	watercourse	yes, road	high	150	
41-ET	11	1.121	watercourse	no div. potential	high	150	
41-ET	19	1.91	watercourse	yes, road	high	150	
41-ES	44	4.429	ditch relief	no div. potential	high	150	
41-JH	15	1.457	watercourse	yes, ditch	high	140	
41-MU-005	3	0.336	watercourse	no div. potential	high	135	
41-MR	11	1.107	watercourse	no div. potential	high	120	
41-MD-003	1	0.01	watercourse	no div. potential	high	110	
41-MS	21	2.113	watercourse	no div. potential	high	110	
41-HG-018	1	0.065	watercourse	yes, road	high	100	
41-HG-046-11	1	0.025	watercourse	no div. potential	high	100	
41-HB	8	0.825	ditch relief	yes, road	high	100	
41-HB	10	1.003	watercourse	yes, road	high	100	
41-ET	12	1.139	watercourse	no div. potential	high	100	
41-HG-046	8	0.765	watercourse	no div. potential	high	95	
41-ES-097	4	0.394	watercourse	no div. potential	high	92	
41-MS-004	7	0.647	watercourse	no div. potential	high	90	
41-ES-016	12	1.16	watercourse	no div. potential	high	90	
41-MR	24	2.403	watercourse	no div. potential	high	90	
41-ES	49	4.877	watercourse	no div. potential	high	85	
41-MS-004	6	0.397	watercourse	no div. potential	high	80	
41-ES	35	3.454	watercourse	yes, road	high	80	
41-ES-016	4	0.426	watercourse	yes, road	high	75	
41-MU	6	0.626	watercourse	yes, road	high	65	
41-HG	55	5.354	ditch relief	yes, ditch	high	65	
41-HG-055-s1	1	0.02	watercourse	yes, road	high	60	
41-BU-001	9	0.881	watercourse	no div. potential	high	60	
41-BU	15	1.484	watercourse	no div. potential	high	60	
41-BW	26	2.559	ditch relief	no div. potential	high	55	
41-BU-008	6	0.604	ditch relief	no div. potential	high	50	
41-ET	7	0.701	ditch relief	yes, road	high	50	
41-MR	18	1.803	watercourse	yes, ditch	high	50	
41-ET	25	2.442	ditch relief	already diverted	high	50	
41-ES-016	7	0.699	watercourse	no div. potential	high	48	
41-SM	9	0.844	watercourse	yes, road	high	45	
41-HG	64	6.305	ditch relief	yes, ditch	high	45	
41-HG-055-05	9	0.799	watercourse	yes, road	high	44	
41-ES-016	1	0.062	watercourse	yes, road	high	43	
41-HG	5	0.526	ditch relief	yes, ditch	high	42	
41-HG-055-05-06	1	0.015	watercourse	no div. potential	high	40	
41-HG-055-12	1	0.062	watercourse	no div. potential	high	40	
41-BU-001	4	0.403	watercourse	no div. potential	high	40	
41-MS-004	4	0.378	watercourse	yes, road	high	40	

Road Number	Site Number	Mile Post	Culvert Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	2003 work
41-SM	4	0.442	watercourse	yes, road	high	40	
41-UB-008	12	1.066	watercourse	no div. potential	high	40	
41-MR	17	1.686	watercourse	no div. potential	high	40	
41-HG	50	4.981	ditch relief	yes, ditch	high	40	
41-HG	66	6.52	ditch relief	yes, ditch	high	37	
41-MS-004	5	0.387	watercourse	yes, ditch	high	30	
41-BU-001	6	0.567	watercourse	no div. potential	high	30	
41-BU-008-11	6	0.554	watercourse	no div. potential	high	30	
41-EH-032	9	0.927	watercourse	no div. potential	high	30	
41-ES	33	3.342	watercourse	no div. potential	high	30	
41-HG	52	5.059	ditch relief	yes, ditch	high	30	
41-JH	11	1.071	watercourse	yes, road	high	28	
41-UB-008-08	2	0.241	watercourse	already diverted	high	27	
41-BU-008-11	8	0.752	ditch relief	yes, road	high	25	
41-MS-004	8	0.672	watercourse	no div. potential	high	25	
41-BU-008-11	12	1.195	ditch relief	already diverted	high	25	
41-BW	14	1.337	ditch relief	no div. potential	high	25	
41-HG	68	6.716	ditch relief	yes, road	high	25	
41-HG-046-09	1	0.036	watercourse	already diverted	high	24	
41-HG	19	1.935	watercourse	no div. potential	high	20	
41-HG	42	4.243	ditch relief	yes, ditch	high	20	
41-HG	62	6.116	ditch relief	yes, ditch	high	20	
41-BW	13	1.238	ditch relief	no div. potential	high	18	
41-ET	1	0.019	watercourse	already diverted	high	15	
41-MS-004	3	0.346	watercourse	no div. potential	high	15	
41-HG	6	0.593	ditch relief	yes, ditch	high	15	
41-HG	36	3.645	ditch relief	yes, road	high	15	
41-HG	63	6.208	ditch relief	yes, ditch	high	13	
41-HG-006	1	0.064	ditch relief	yes, ditch	high	12	
41-BU-008	10	0.937	ditch relief	no div. potential	high	12	
41-HG	25	2.509	watercourse	yes, road	high	12	
41-MD-006	1	0.061	ditch relief	yes, road	high	10	
41-HG-055-05	12	1.193	watercourse	no div. potential	high	10	
41-HG	71	6.923	ditch relief	yes, road	high	10	
41-HG	72	7.027	ditch relief	yes, ditch	high	10	
41-HG	76	7.555	ditch relief	yes, ditch	high	10	
41-HG	97	9.648	ditch relief	no div. potential	high	10	
41-ES-016	8	0.805	watercourse	yes, road	high	9	
41-HG	12	1.249	ditch relief	yes, road	high	9	
41-JH-007	2	0.192	ditch relief	yes, road	high	8	
41-HG	15	1.45	ditch relief	yes, ditch	high	8	
41-MD-006	2	0.068	watercourse	yes, ditch	high	6	
41-ES-016	10	0.952	ditch relief	yes, road	high	6	
41-HG	99	9.809	ditch relief	no div. potential	high	6	
41-MD	5	0.477	watercourse	no div. potential	high	5	
41-HG	10	1.019	ditch relief	yes, road	high	5	
41-HG	24	2.391	ditch relief	yes, road	high	5	
41-HG	95	9.474	ditch relief	no div. potential	high	5	
41-JH-007	4	0.237	ditch relief	yes, road	high	4	
41-HG	51	5.041	ditch relief	yes, ditch	high	4	
41-HG-055-05-03	1	0.01	watercourse	no div. potential	high	0	
41-BW	12	1.159	ditch relief	no div. potential	high	0	
41-HG	89	8.776	ditch relief	no div. potential	high	0	
41-ES	78	7.802	watercourse	yes, road	moderate	1000	
41-ES	84	8.438	watercourse	no div. potential	moderate	600	
41-EH-028	8	0.795	watercourse	yes, road	moderate	350	
41-HG-054	36	3.562	watercourse	no div. potential	moderate	350	
41-EH-043	4	0.366	watercourse	no div. potential	moderate	260	
41-ES-016	11	1.097	watercourse	no div. potential	moderate	250	
41-ES-016	14	1.378	watercourse	yes, road	moderate	175	
41-ES-087	1	0.118	watercourse	yes, road	moderate	150	
41-ES-024	6	0.629	watercourse	no div. potential	moderate	150	
41-ET-021	8	0.803	watercourse	no div. potential	moderate	150	
41-UB-008	6	0.492	watercourse	no div. potential	moderate	80	
41-HG	17	1.7	watercourse	no div. potential	moderate	75	
41-ES	94	9.329	watercourse	yes, road	moderate	70	

Road Number	Site Number	Mile Post	Culvert Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	2003 work
41-UB-008-08	1	0.016	watercourse	no div. potential	moderate	67	
41-BU-008	8	0.806	watercourse	no div. potential	moderate	60	
41-ES-016	3	0.276	watercourse	no div. potential	moderate	50	
41-MR	20	1.959	watercourse	no div. potential	moderate	50	
41-BW	24	2.444	watercourse	no div. potential	moderate	40	
41-HG-024	1	0.005	watercourse	no div. potential	moderate	28	
41-HG	28	2.843	watercourse	yes, ditch	moderate	16	
41-MD	4	0.442	watercourse	no div. potential	moderate	2	
41-BW	28	2.753	watercourse	no div. potential	moderate	0	
41-HG	69	6.747	watercourse	already diverted	moderate	0	
41-ES	68	6.789	watercourse	no div. potential	low	770	
41-BU-006	7	0.698	watercourse	no div. potential	low	700	
41-BU-006	4	0.392	watercourse	no div. potential	low	610	
41-ET-019	1	0.043	watercourse	no div. potential	low	600	
41-MS-025	1	0.074	watercourse	no div. potential	low	450	
41-BU-008-15	1	0.072	watercourse	no div. potential	low	400	
41-MS	11	1.099	watercourse	yes, road	low	350	
41-ES	101	10.084	watercourse	yes, road	low	350	
41-ES	90	9.014	watercourse	no div. potential	low	325	
41-HG-055	12	1.22	watercourse	yes, road	low	300	
41-UB-008	13	1.081	watercourse	yes, road	low	300	
41-UB-006	5	0.469	watercourse	no div. potential	low	280	
41-MU-007	2	0.151	watercourse	no div. potential	low	250	
41-UB-006	8	0.765	watercourse	no div. potential	low	220	
41-EH-028	7	0.742	watercourse	no div. potential	low	200	
41-UB-008	9	0.663	watercourse	no div. potential	low	200	
41-ES	77	7.654	watercourse	no div. potential	low	200	
41-ET-011	5	0.548	watercourse	no div. potential	low	190	
41-UB-008	8	0.603	watercourse	no div. potential	low	170	
41-ES-091-01	1	0.07	watercourse	yes, road	low	165	
41-UB	10	1.032	watercourse	no div. potential	low	150	
41-ET	13	1.216	watercourse	no div. potential	low	150	
41-HG	67	6.634	watercourse	no div. potential	low	150	
41-MU	4	0.447	watercourse	no div. potential	low	140	
41-MU-005-01	1	0.126	watercourse	no div. potential	low	110	
41-ES-087	2	0.244	watercourse	no div. potential	low	110	
41-UB-008	5	0.469	watercourse	yes, road	low	110	
41-ES-016	2	0.187	watercourse	no div. potential	low	100	
41-SM	11	0.975	watercourse	no div. potential	low	100	
41-UB-008-08	3	0.298	watercourse	no div. potential	low	90	
41-HG	56	5.414	ditch relief	yes, ditch	low	90	
41-ET	26	2.602	watercourse	no div. potential	low	85	
41-HG	1	0.062	watercourse	no div. potential	low	82	
41-BU-008	9	0.913	watercourse	no div. potential	low	80	
41-ET-011-05	4	0.354	watercourse	no div. potential	low	75	
41-UB-006	9	0.772	watercourse	no div. potential	low	75	
41-HG	43	4.324	watercourse	yes, ditch	low	75	
41-HG	65	6.43	watercourse	yes, road	low	71	
41-SM	8	0.755	watercourse	no div. potential	low	70	
41-ES	80	8.019	watercourse	yes, road	low	70	
41-UB	1	0.021	watercourse	no div. potential	low	68	
41-MU-007	1	0.036	watercourse	yes, road	low	65	
41-HG	7	0.688	watercourse	yes, ditch	low	63	
41-MU	3	0.322	watercourse	yes, road	low	60	
41-SM	10	0.947	watercourse	yes, road	low	56	
41-UB-008-10	1	0.089	watercourse	no div. potential	low	55	
41-HG	44	4.424	ditch relief	yes, ditch	low	55	
41-MU	1	0.029	watercourse	yes, road	low	50	
41-SM-001	1	0.028	watercourse	yes, road	low	50	
41-MU	2	0.128	watercourse	no div. potential	low	50	
41-JH	6	0.604	watercourse	yes, road	low	50	
41-ET	24	2.418	watercourse	yes, road	low	50	
41-HG	53	5.163	watercourse	yes, ditch	low	50	
41-MD-003-03	3	0.281	watercourse	yes, road	low	44	
41-HG-055-05	8	0.739	ditch relief	no div. potential	low	44	
41-HG-018	3	0.326	ditch relief	yes, road	low	43	

Road Number	Site Number	Mile Post	Culvert Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	2003 work
41-MR-001	2	0.233	watercourse	no div. potential	low	40	
41-HG	54	5.21	ditch relief	yes, ditch	low	40	
41-ES	71	7.062	watercourse	no div. potential	low	40	
41-HG	2	0.249	watercourse	yes, ditch	low	37	
41-HG-048	1	0.008	ditch relief	yes, ditch	low	35	
41-HG-054	34	3.424	watercourse	no div. potential	low	34	
41-HG	61	6.045	watercourse	yes, ditch	low	32	
41-HB-024	12	0.126	ditch relief	already diverted	low	30	
41-HG-055-05	6	0.537	ditch relief	no div. potential	low	30	
41-UB	20	1.97	watercourse	no div. potential	low	30	
41-HG	45	4.535	watercourse	yes, ditch	low	30	
41-HG	102	10.026	watercourse	no div. potential	low	30	
41-HG	27	2.707	watercourse	yes, ditch	low	26	
41-HG	105	10.5	watercourse	no div. potential	low	26	
41-MR	6	0.597	ditch relief	yes, road	low	25	
41-BW	10	0.975	watercourse	no div. potential	low	25	
41-HG	108	10.791	ditch relief	no div. potential	low	25	
41-HG	26	2.567	watercourse	yes, ditch	low	22	
41-JH-011	1	0.004	ditch relief	yes, road	low	20	
41-HG-055-05	5	0.446	ditch relief	yes, ditch	low	20	
41-HG	75	7.466	ditch relief	yes, road	low	20	
41-HG	109	10.894	ditch relief	no div. potential	low	17	
41-ES	72	7.166	watercourse	yes, road	low	16	
41-HG	33	3.31	ditch relief	yes, ditch	low	15	
41-HG	60	5.962	ditch relief	yes, ditch	low	15	
41-HG-055-05	4	0.403	ditch relief	no div. potential	low	12	
41-BW	3	0.259	ditch relief	no div. potential	low	10	
41-HG-055-05	7	0.677	watercourse	yes, road	low	10	
41-HG	8	0.835	ditch relief	no div. potential	low	10	
41-HG-055-05	10	0.885	watercourse	already diverted	low	10	
41-HG-055-05	11	1.095	ditch relief	yes, road	low	10	
41-UB	13	1.302	watercourse	no div. potential	low	10	
41-HG-046	14	1.428	watercourse	no div. potential	low	10	
41-HG	70	6.916	watercourse	no div. potential	low	10	
41-HG	73	7.159	ditch relief	yes, ditch	low	10	
41-HG	94	9.381	ditch relief	no div. potential	low	10	
41-HG	98	9.711	ditch relief	no div. potential	low	6	
41-JH-007	3	0.224	ditch relief	yes, road	low	4	
41-BW	6	0.49	ditch relief	no div. potential	low	0	yes
41-BW	4	0.308	watercourse	no div. potential	low	0	yes
41-BW	5	0.46	watercourse	no div. potential	low	0	yes
41-BW	7	0.551	watercourse	no div. potential	low	0	yes
41-BW	8	0.709	watercourse	no div. potential	low	0	yes
41-BW	9	0.864	watercourse	no div. potential	low	0	yes
41-BW	11	1.12	watercourse	no div. potential	low	0	yes
41-BW	16	1.637	watercourse	no div. potential	low	0	yes
41-BW	18	1.804	watercourse	no div. potential	low	0	yes
41-BW	23	2.268	watercourse	no div. potential	low	0	yes
41-BW	29	2.802	watercourse	no div. potential	low	0	yes
41-BW	32	2.988	watercourse	no div. potential	low	0	yes
41-HG	84	8.374	watercourse	no div. potential	low	0	yes
41-HG	85	8.404	ditch relief	no div. potential	low	0	yes
41-HG	86	8.442	watercourse	no div. potential	low	0	yes
41-HG	87	8.502	ditch relief	no div. potential	low	0	yes
41-HG	88	8.585	watercourse	no div. potential	low	0	yes
41-HG	90	8.928	ditch relief	no div. potential	low	0	yes
41-HG	92	9.248	watercourse	no div. potential	low	0	yes
41-HG	96	9.513	ditch relief	no div. potential	low	0	yes
41-HG	100	9.869	watercourse	no div. potential	low	0	yes
41-HG	101	10.01	watercourse	no div. potential	low	0	yes
41-HG	104	10.37	ditch relief	no div. potential	low	0	yes
41-HG-092	26	2.611	watercourse	no div. potential	low	0	yes
41-HG-092	7	0.653	watercourse	no div. potential	low	0	yes
41-HG-092	10	1.031	ditch relief	no div. potential	low	0	yes
41-HG-092	22	2.172	watercourse	no div. potential	low	0	yes
41-UB	2	0.052	watercourse	no div. potential	low	0	yes

Road Number	Site Number	Mile Post	Culvert Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	2003 work
41-UB	3	0.133	watercourse	no div. potential	low	0	yes
41-UB	4	0.348	ditch relief	no div. potential	low	0	yes
41-BW	20	2.04	watercourse	no div. potential	low	0	
41-BW	30	2.847	ditch relief	no div. potential	low	0	
41-BW	31	2.863	ditch relief	no div. potential	low	0	
41-HG	74	7.253	watercourse	yes, ditch	low	0	
41-ET	9	0.922	watercourse	yes, ditch	none	80	
41-HB-024	11	0.031	watercourse	yes, road	none	12	
41-BU-008	13	1.344	watercourse	no div. potential	none	0	yes
41-BU-008	17	1.695	watercourse	no div. potential	none	0	yes
41-BU-008	18	1.804	watercourse	no div. potential	none	0	yes
41-BU-008	19	1.851	watercourse	no div. potential	none	0	yes
41-BU-008	22	2.195	watercourse	no div. potential	none	0	yes
41-BU-008-14	1	0.115	watercourse	no div. potential	none	0	yes
41-BW-015	1	0.12	watercourse	no div. potential	none	0	yes
41-HG-080	5	0.456	ditch relief	no div. potential	none	0	yes
41-HG-080	6	0.576	watercourse	no div. potential	none	0	yes
41-HG-080	10	0.978	watercourse	no div. potential	none	0	yes
41-HG-080	11	1.019	ditch relief	no div. potential	none	0	yes
41-HG-080	12	1.08	ditch relief	no div. potential	none	0	yes
41-HG-080-17	1	0.02	watercourse	no div. potential	none	0	yes
41-HG-080-19	1	0.019	watercourse	no div. potential	none	0	yes
41-HG-080-s1	1	0.046	watercourse	no div. potential	none	0	yes
41-HG-103	1	0.101	watercourse	no div. potential	none	0	yes
41-HG-103	3	0.336	watercourse	no div. potential	none	0	yes
41-HG-103	4	0.425	watercourse	no div. potential	none	0	yes
41-HG-103	5	0.45	watercourse	no div. potential	none	0	yes

Road Number	Site Number	Mile Post	Crossing Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	2003 Work
41-HG-058-14	1	0.053	other	no div. potential	high	400	
41-ET-011	23	2.273	dipped	already diverted	high	350	
41-ET-011	22	2.196	dipped	already diverted	high	300	
41-ET-011	24	2.295	dipped	no div. potential	high	300	
41-MU	10	0.839	dipped	yes, road	high	200	
41-MD-003-07	1	0.048	other	no div. potential	high	175	
41-ET-011	19	1.851	humboldt	no div. potential	high	160	
41-ES-028	2	0.221	other	no div. potential	high	157	
41-ES-012	3	0.289	other	no div. potential	high	130	
41-JH-009	10	0.879	other	no div. potential	high	120	
41-ES	50	4.995	humboldt	no div. potential	high	100	
41-JH-009	8	0.795	other	already diverted	high	100	
41-MD-003-09	3	0.237	other	no div. potential	high	100	
41-ES	30	2.954	other	already diverted	high	58	
41-BR-028	3	0.235	dipped	no div. potential	high	40	
41-ES-002-11	2	0.143	other	already diverted	high	40	
41-MD	8	0.779	other	no div. potential	high	30	
41-MD-003-09	2	0.184	other	no div. potential	high	30	
41-MD-003-16	2	0.187	other	already diverted	high	10	
41-BU-006	10	1.049	other	no div. potential	high	8	
41-MD	4	0.399	dipped	no div. potential	high	6	
41-MD-003	13	1.144	dipped	no div. potential	high	5	
41-MD-003-15	1	0.009	other	no div. potential	high	3	
41-MD-003-16	1	0.138	other	already diverted	high	3	
41-MD	9	0.917	dipped	no div. potential	high	2	
41-BW-015	4	0.422	other	already diverted	high	0	
41-BW-015	6	0.574	other	no div. potential	high	0	
41-BW-015	8	0.763	other	no div. potential	high	0	
41-ES-002-11	3	0.162	other	already diverted	high	0	
41-HG-055-05	15	1.461	other	yes, road	high	0	
41-HG-055-05-02	4	0.39	humboldt	no div. potential	high	0	
41-HG-055-05-04	3	0.256	other	already diverted	high	0	
41-HG-055-05-07	1	0.019	humboldt	yes, road	high	0	
41-HG-106	7	0.524	humboldt	no div. potential	high	0	
41-ES	82	8.236	other	yes, road	moderate	650	
41-ES	29	2.923	other	no div. potential	moderate	450	
41-MR	37	3.568	other	no div. potential	moderate	300	
41-ES-097	4	0.356	dipped	no div. potential	moderate	270	
41-ET-011	29	2.686	humboldt	no div. potential	moderate	260	
41-ET-021	8	0.634	dipped	no div. potential	moderate	250	
41-ET-021-11	2	0.19	dipped	no div. potential	moderate	220	
41-HG-055-12-02	2	0.154	humboldt	no div. potential	moderate	212	
41-ET-011	7	0.722	other	yes, road	moderate	200	
41-ET-011	28	2.579	dipped	already diverted	moderate	200	
41-ET-019	12	0.837	dipped	no div. potential	moderate	200	
41-HG	56	5.561	bridge	no div. potential	moderate	200	
41-HG-055-05-04	4	0.297	other	already diverted	moderate	200	
41-HG-066-05	1	0.041	other	no div. potential	moderate	200	
41-HG-058-06	5	0.472	humboldt	no div. potential	moderate	190	
41-ET-021	7	0.594	dipped	yes, road	moderate	180	
41-BU-001	19	1.898	other	no div. potential	moderate	160	
41-BR	40	3.58	dipped	no div. potential	moderate	150	
41-BR-025	1	0.06	other	no div. potential	moderate	150	
41-BU-008	11	1.054	other	no div. potential	moderate	150	
41-ET-011	11	1.149	dipped	no div. potential	moderate	150	
41-ES	74	7.415	humboldt	no div. potential	moderate	145	
41-ES-028	11	0.864	dipped	no div. potential	moderate	130	
41-MU	9	0.782	dipped	yes, road	moderate	130	
41-ET-004	1	0.138	bridge	no div. potential	moderate	125	
41-ES-016	13	1.338	dipped	already diverted	moderate	120	
41-ES-028-s1	1	0.031	other	no div. potential	moderate	120	
41-ET-011	8	0.828	dipped	no div. potential	moderate	120	
41-ET-011	26	2.375	dipped	no div. potential	moderate	120	
41-XX-000	2	0.182	other	already diverted	moderate	120	
41-ES	16	1.629	other	no div. potential	moderate	110	
41-MR	31	3.138	bridge	no div. potential	moderate	100	

Road Number	Site Number	Mile Post	Crossing Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	2003 Work
41-JH-009	2	0.153	other	no div. potential	moderate	95	
41-MR-033	3	0.25	other	no div. potential	moderate	95	
41-ES-028	16	1.262	other	no div. potential	moderate	90	
41-ET-021	10	0.978	dipped	no div. potential	moderate	90	
41-JH-007	1	0.112	bridge	no div. potential	moderate	90	
41-ET-011	2	0.165	dipped	no div. potential	moderate	80	
41-ET-011	30	2.752	dipped	already diverted	moderate	80	
41-ES-028	13	0.956	dipped	already diverted	moderate	75	
41-ES-002	10	0.968	dipped	no div. potential	moderate	73	
41-ET-019	9	0.748	dipped	no div. potential	moderate	70	
41-ES-024-07	1	0.135	other	no div. potential	moderate	68	
41-ET-011	34	2.97	dipped	no div. potential	moderate	65	
41-JH-009	7	0.666	other	no div. potential	moderate	64	
41-ES-002-11	1	0.1	dipped	no div. potential	moderate	60	
41-ET-011	14	1.388	dipped	no div. potential	moderate	60	
41-HG-056	5	0.397	other	yes, road	moderate	60	
41-MR	11	1.048	other	no div. potential	moderate	60	
41-ES	66	6.604	humboldt	yes, road	moderate	55	
41-ES-002-03	3	0.22	other	no div. potential	moderate	55	
41-ET-019	10	0.794	dipped	no div. potential	moderate	50	
41-HG-055-12	6	0.645	other	yes, road	moderate	50	
41-JH-012	1	0.084	other	no div. potential	moderate	40	
41-JH-009	4	0.225	other	yes, road	moderate	37	
41-BU-001	18	1.788	other	no div. potential	moderate	30	
41-ES-016-08	1	0.069	other	no div. potential	moderate	20	
41-HG-046	11	0.833	other	no div. potential	moderate	20	
41-HG-046	14	1.034	other	no div. potential	moderate	17	
41-HG-046	17	1.257	humboldt	no div. potential	moderate	15	
41-MD-003	14	1.236	dipped	already diverted	moderate	10	
41-MD-003	17	1.516	dipped	no div. potential	moderate	9	
41-MD-003-15	2	0.139	dipped	no div. potential	moderate	9	
41-MD-003	19	1.645	dipped	no div. potential	moderate	7	
41-HG-046-14	2	0.235	other	already diverted	moderate	5	
41-MD-003	4	0.366	dipped	no div. potential	moderate	5	
41-MD-003	10	0.973	dipped	yes, road	moderate	5	
41-MD-003-16	3	0.198	other	already diverted	moderate	5	
41-ES	13	1.285	dipped	already diverted	moderate	4	
41-MD-003-15	4	0.35	other	yes, road	moderate	4	
41-MD-003	15	1.343	dipped	no div. potential	moderate	3	
41-MD-003	16	1.443	dipped	no div. potential	moderate	3	
41-MD-003	18	1.583	dipped	yes, road	moderate	3	
41-HG-046-09	1	0.026	other	no div. potential	moderate	2	
41-MD-006	1	0.124	other	no div. potential	moderate	2	
41-MD-006	7	0.683	other	yes, road	moderate	2	
41-BU-007	6	0.506	other	no div. potential	moderate	0	yes
41-BW	25	2.471	other	no div. potential	moderate	0	yes
41-UB	15	1.489	dipped	no div. potential	moderate	0	yes
41-BW-015	3	0.285	other	yes, road	moderate	0	
41-HB-019	9	0.773	dipped	yes, road	moderate	0	
41-HG-055-05-01	1	0.07	other	no div. potential	moderate	0	
41-HG-055-05-04	5	0.416	other	already diverted	moderate	0	
41-HG-058-14	5	0.455	other	no div. potential	moderate	0	
41-HG-104	3	0.252	other	no div. potential	moderate	0	
41-HG-106	5	0.419	dipped	no div. potential	moderate	0	
41-ES-016-08	4	0.358	dipped	no div. potential	low	350	
41-ES-068	7	0.652	dipped	no div. potential	low	350	
41-BU-006	3	0.309	other	no div. potential	low	300	
41-ES	1	0.099	bridge	no div. potential	low	300	
41-HG	10	1.026	bridge	no div. potential	low	300	
41-MS	18	1.76	other	no div. potential	low	300	
41-EH-032	5	0.499	other	no div. potential	low	270	
41-EH-032	7	0.702	other	no div. potential	low	260	
41-ES-016-08	2	0.192	dipped	no div. potential	low	250	
41-ES-016-08	3	0.294	dipped	no div. potential	low	250	
41-BR	38	3.226	other	no div. potential	low	230	
41-ES	65	6.462	humboldt	yes, road	low	185	

Road Number	Site Number	Mile Post	Crossing Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	2003 Work
41-JH	21	2	dipped	no div. potential	low	170	
41-JH	20	1.966	dipped	no div. potential	low	160	
41-BR-028	5	0.346	other	no div. potential	low	150	
41-EH-043-04	12	1.178	other	already diverted	low	150	
41-ET-026	2	0.092	humboldt	no div. potential	low	150	
41-MS	11	1.136	dipped	yes, road	low	150	
41-MS	22	2.18	dipped	no div. potential	low	150	
41-MU-008	1	0.05	dipped	no div. potential	low	150	
41-EH-043-04	3	0.144	other	yes, road	low	140	
41-ET-026	3	0.116	humboldt	no div. potential	low	140	
41-HG-048	2	0.148	dipped	no div. potential	low	140	
41-MS	9	0.932	dipped	no div. potential	low	140	
41-MU	11	0.922	dipped	already diverted	low	135	
41-ES-068	8	0.694	other	no div. potential	low	130	
41-EH-028-04	2	0.241	dipped	no div. potential	low	125	
41-ES-016-02-01	3	0.215	other	no div. potential	low	125	
41-MR	25	2.522	other	no div. potential	low	125	
41-BR-018	3	0.301	other	no div. potential	low	120	
41-BR-028	6	0.378	other	no div. potential	low	110	
41-BU-008-11	11	1.091	other	already diverted	low	110	
41-EH-043-04	1	0.112	other	no div. potential	low	110	
41-ET-011-05	6	0.498	dipped	yes, road	low	110	
41-MS	10	0.945	dipped	yes, road	low	110	
41-MR	36	3.5	other	no div. potential	low	106	
41-BU-001	29	2.9	other	no div. potential	low	100	
41-ES-016	9	0.928	dipped	yes, road	low	100	
41-HG	47	4.713	bridge	no div. potential	low	100	
41-HG-055-05-04	2	0.179	other	no div. potential	low	100	
41-UB-007	2	0.205	other	no div. potential	low	100	
41-MR	22	2.178	humboldt	no div. potential	low	92	
41-ES-002-03	1	0.133	dipped	yes, road	low	90	
41-ET-011	20	1.911	humboldt	no div. potential	low	90	
41-JH	8	0.741	other	no div. potential	low	88	
41-BU-008-11	8	0.721	other	already diverted	low	85	
41-BR-025	2	0.201	other	no div. potential	low	80	
41-ET-021	15	1.533	dipped	already diverted	low	80	
41-MS-025	1	0.016	other	no div. potential	low	80	
41-SM	13	1.289	dipped	no div. potential	low	80	
41-XX-000	3	0.202	other	no div. potential	low	80	
41-HG-055-05-01	3	0.285	other	yes, road	low	76	
41-ET-011-05	5	0.474	dipped	yes, ditch	low	75	
41-HG-058-08	4	0.363	humboldt	already diverted	low	75	
41-MS	6	0.623	other	yes, road	low	75	
41-BU-008-11	4	0.339	other	no div. potential	low	70	
41-BU-008-11	9	0.843	other	already diverted	low	70	
41-ET	9	0.808	humboldt	yes, ditch	low	70	
41-ET-011	15	1.448	dipped	no div. potential	low	70	
41-ET-011	35	3.523	dipped	yes, road	low	70	
41-HB	6	0.624	dipped	no div. potential	low	70	
41-HG	45	4.495	humboldt	yes, ditch	low	70	
41-MU	8	0.755	dipped	yes, road	low	70	
41-ES	75	7.432	dipped	no div. potential	low	65	
41-ES-028	6	0.512	dipped	already diverted	low	65	
41-MR	13	1.338	other	no div. potential	low	61	
41-BR	36	2.967	dipped	no div. potential	low	60	
41-BR	37	3.129	dipped	no div. potential	low	60	
41-BU-001	26	2.609	other	no div. potential	low	60	
41-BU-001	28	2.774	other	no div. potential	low	60	
41-EH-043-04	15	1.454	other	yes, road	low	60	
41-ES	14	1.347	bridge	no div. potential	low	60	
41-ES-002-03	2	0.18	dipped	no div. potential	low	60	
41-ES-016-02-01	1	0.076	other	no div. potential	low	60	
41-ES-016-10	1	0.029	other	no div. potential	low	60	
41-ES-028	5	0.46	other	already diverted	low	60	
41-ES-028	9	0.671	dipped	no div. potential	low	60	
41-ES-028	14	1.048	dipped	no div. potential	low	60	



Road Number	Site Number	Mile Post	Crossing Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	2003 Work
41-ET-011	3	0.221	humboldt	no div. potential	low	60	
41-ET-011	37	3.73	dipped	no div. potential	low	60	
41-ET-011-05-01	1	0.087	dipped	no div. potential	low	60	
41-ET-011-09	1	0.028	humboldt	no div. potential	low	60	
41-ET-019	6	0.527	dipped	no div. potential	low	60	
41-MS-004	4	0.36	dipped	no div. potential	low	60	
41-BR	17	1.485	dipped	no div. potential	low	59	
41-BR	14	1.122	dipped	no div. potential	low	55	
41-BR	15	1.165	dipped	no div. potential	low	55	
41-BR	16	1.451	dipped	no div. potential	low	55	
41-BR	18	1.54	dipped	no div. potential	low	55	
41-ES-028	8	0.628	dipped	no div. potential	low	55	
41-MD-003	22	2.114	dipped	yes, road	low	55	
41-BR-022	1	0.04	other	no div. potential	low	53	
41-ES-024	6	0.492	other	already diverted	low	52	
41-JH-012	2	0.103	other	yes, road	low	52	
41-MR	10	0.992	other	no div. potential	low	52	
41-MR-014	4	0.414	other	already diverted	low	52	
41-BU-001	9	0.859	other	no div. potential	low	50	
41-EH-043	6	0.583	other	no div. potential	low	50	
41-ES-016-02	6	0.648	other	no div. potential	low	50	
41-ES-068	6	0.523	dipped	yes, road	low	50	
41-ET	10	0.853	humboldt	no div. potential	low	50	
41-ET-011	27	2.461	dipped	already diverted	low	50	
41-ET-011	33	2.943	dipped	no div. potential	low	50	
41-ET-019	7	0.577	dipped	no div. potential	low	50	
41-ET-021	6	0.519	dipped	no div. potential	low	50	
41-HG-048	1	0.048	other	yes, road	low	50	
41-HG-054-21	10	1.029	dipped	no div. potential	low	50	
41-MN	6	0.618	dipped	yes, road	low	50	
41-MR	3	0.266	bridge	no div. potential	low	50	
41-MR-001	4	0.375	other	no div. potential	low	50	
41-MR-033	1	0.001	other	yes, road	low	50	
41-MS	13	1.301	dipped	yes, road	low	50	
41-MS	26	2.567	dipped	yes, ditch	low	50	
41-MU-005	1	0.053	bridge	no div. potential	low	50	
41-UB-008	12	1.202	dipped	no div. potential	low	50	
41-UB-008	13	1.344	other	no div. potential	low	50	
41-XX-000	1	0.099	other	no div. potential	low	50	
41-JH-009	3	0.165	other	no div. potential	low	48	
41-UB-008	5	0.432	dipped	yes, road	low	47	
41-BR	12	0.99	dipped	no div. potential	low	45	
41-BR	28	2.236	other	no div. potential	low	45	
41-BR	33	2.606	dipped	no div. potential	low	45	
41-BU-001	4	0.358	other	no div. potential	low	45	
41-ES-028	4	0.354	other	yes, road	low	45	
41-ET	4	0.382	bridge	no div. potential	low	45	
41-ET	8	0.782	other	already diverted	low	45	
41-MN-005	3	0.28	dipped	yes, road	low	45	
41-BR	13	1.079	dipped	no div. potential	low	44	
41-MR	21	2.072	other	no div. potential	low	44	
41-ES	63	6.331	humboldt	yes, road	low	43	
41-BR	9	0.732	dipped	no div. potential	low	40	
41-BR	21	1.722	dipped	no div. potential	low	40	
41-BR	22	1.843	dipped	no div. potential	low	40	
41-BR	23	1.917	ditch relief	no div. potential	low	40	
41-BR	25	2.013	other	no div. potential	low	40	
41-BR	26	2.105	other	no div. potential	low	40	
41-BR	27	2.175	other	no div. potential	low	40	
41-BR-028	1	0.008	dipped	no div. potential	low	40	
41-BR-028	2	0.168	dipped	no div. potential	low	40	
41-BR-028	4	0.302	dipped	no div. potential	low	40	
41-BU-008-06	2	0.182	humboldt	no div. potential	low	40	
41-EH-043-04	11	1.058	other	yes, road	low	40	
41-ES-016-02	1	0.117	other	yes, road	low	40	
41-ES-016-02	5	0.496	other	no div. potential	low	40	

Road Number	Site Number	Mile Post	Crossing Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	2003 Work
41-ES-016-02-01	2	0.139	other	already diverted	low	40	
41-ES-068	4	0.444	dipped	no div. potential	low	40	
41-ES-082	1	0.013	other	already diverted	low	40	
41-ET-011	12	1.219	dipped	no div. potential	low	40	
41-ET-011	31	2.831	dipped	no div. potential	low	40	
41-ET-011	32	2.921	dipped	no div. potential	low	40	
41-HB	4	0.356	dipped	yes, road	low	40	
41-HG-054-21	8	0.838	dipped	no div. potential	low	40	
41-HG-055-05-01	4	0.311	other	no div. potential	low	40	
41-MR	23	2.281	other	no div. potential	low	40	
41-MR	35	3.451	other	yes, road	low	40	
41-MR-017	1	0.028	other	no div. potential	low	40	
41-MR-033	2	0.036	other	yes, road	low	40	
41-MS	28	2.787	dipped	no div. potential	low	40	
41-MR	15	1.497	other	no div. potential	low	39	
41-ES	41	4.06	other	already diverted	low	37	
41-MR	4	0.391	other	no div. potential	low	37	
41-MR	29	2.884	other	no div. potential	low	37	
41-JH	13	1.257	dipped	yes, road	low	36	
41-SM	14	1.337	dipped	no div. potential	low	36	
41-BR	39	3.323	dipped	no div. potential	low	35	
41-EH-043-04	7	0.664	other	yes, road	low	35	
41-ES-002	12	1.224	dipped	no div. potential	low	35	
41-ES-068	5	0.467	dipped	already diverted	low	35	
41-ET	23	2.317	low water (temp)	no div. potential	low	35	
41-HB	1	0.096	dipped	no div. potential	low	35	
41-HG-055-05-01	5	0.331	other	no div. potential	low	35	
41-MU-005	2	0.104	dipped	no div. potential	low	35	
41-MU-005	4	0.409	dipped	no div. potential	low	35	
41-UB-008-08	2	0.231	other	no div. potential	low	35	
47-KG-049	5	0.5	dipped	no div. potential	low	35	
41-ES-024	3	0.273	other	yes, road	low	34	
41-HG-046	3	0.348	dipped	no div. potential	low	33	
41-JH-009	5	0.291	other	no div. potential	low	33	
41-ES-016	6	0.585	dipped	yes, road	low	31	
41-BR	6	0.534	dipped	no div. potential	low	30	
41-BR	10	0.85	dipped	no div. potential	low	30	
41-BR	34	2.678	dipped	no div. potential	low	30	
41-BR	35	2.793	dipped	no div. potential	low	30	
41-BR	41	3.692	dipped	no div. potential	low	30	
41-BR-008	2	0.133	other	no div. potential	low	30	
41-ES	31	2.973	other	already diverted	low	30	
41-ES	48	4.791	humboldt	no div. potential	low	30	
41-ES-016-02	10	0.969	other	no div. potential	low	30	
41-ES-024	7	0.554	other	yes, road	low	30	
41-ET-011	21	1.927	dipped	yes, road	low	30	
41-ET-011	25	2.37	dipped	no div. potential	low	30	
41-ET-019	4	0.382	dipped	no div. potential	low	30	
41-ET-019	5	0.449	dipped	yes, road	low	30	
41-ET-019	8	0.678	dipped	no div. potential	low	30	
41-ET-019	11	0.812	dipped	no div. potential	low	30	
41-ET-021	5	0.487	dipped	yes, road	low	30	
41-HG-054	15	1.494	other	yes, road	low	30	
41-HG-055	15	1.491	dipped	no div. potential	low	30	
41-JH-021	1	0.073	other	no div. potential	low	30	
41-JH-021	2	0.189	other	no div. potential	low	30	
41-MR	5	0.468	other	no div. potential	low	30	
41-MR	32	3.183	other	already diverted	low	30	
41-MR-017	2	0.112	other	no div. potential	low	30	
41-MU-005	3	0.199	dipped	no div. potential	low	30	
41-HG-058-06	2	0.161	other	no div. potential	low	28	
41-BR	4	0.369	ditch relief	no div. potential	low	27	
41-BR	7	0.565	ditch relief	no div. potential	low	27	
41-BR-024	1	0.053	other	no div. potential	low	27	
41-BU-008	3	0.295	bridge	no div. potential	low	25	
41-BU-008	4	0.354	dipped	no div. potential	low	25	

Road Number	Site Number	Mile Post	Crossing Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	2003 Work
41-ES-028	10	0.748	dipped	no div. potential	low	25	
41-ES-028	15	1.113	dipped	no div. potential	low	25	
41-ET	25	2.477	dipped	yes, road	low	25	
41-HG-024	2	0.111	other	no div. potential	low	25	
41-HG-024-02	1	0.035	other	no div. potential	low	25	
41-HG-048-04	1	0.018	dipped	no div. potential	low	25	
41-HG-055	11	1.018	dipped	no div. potential	low	25	
41-HG-055	14	1.393	dipped	no div. potential	low	25	
41-HG-055	17	1.655	dipped	no div. potential	low	25	
41-HG-055	18	1.833	dipped	no div. potential	low	25	
41-HG-055-12-02	5	0.454	dipped	no div. potential	low	25	
41-HG-066	5	0.494	other	no div. potential	low	25	
41-HG-066	6	0.614	other	no div. potential	low	25	
41-JH	7	0.672	other	already diverted	low	25	
41-JH	16	1.635	other	yes, road	low	25	
41-JH-009	6	0.363	other	no div. potential	low	25	
41-JH-011	1	0.028	other	already diverted	low	25	
41-MS	17	1.536	ditch relief	yes, road	low	25	
41-MS	19	1.784	dipped	no div. potential	low	25	
47-KG-049	3	0.346	dipped	no div. potential	low	25	
41-BR-028-02	1	0.039	other	no div. potential	low	24	
41-JH-009	9	0.868	dipped	no div. potential	low	23	
41-BR	19	1.595	dipped	no div. potential	low	22	
41-ES-028	12	0.913	dipped	no div. potential	low	22	
41-HG-046	2	0.174	dipped	no div. potential	low	22	
41-HG-066	2	0.166	other	no div. potential	low	22	
41-MR	28	2.785	other	no div. potential	low	22	
41-UB-008	4	0.383	dipped	no div. potential	low	22	
41-MD-003	21	1.913	dipped	no div. potential	low	21	
41-BR	30	2.366	dipped	no div. potential	low	20	
41-BU-008-08	1	0.017	other	no div. potential	low	20	
41-BU-008-11	10	0.994	other	yes, road	low	20	
41-EH-043-04	8	0.816	dipped	yes, road	low	20	
41-EH-043-04-02	1	0.033	dipped	no div. potential	low	20	
41-ES-091	2	0.237	dipped	no div. potential	low	20	
41-ET-011-04	2	0.228	other	no div. potential	low	20	
41-HG-024	1	0.026	dipped	no div. potential	low	20	
41-HG-046	8	0.745	other	already diverted	low	20	
41-HG-055-03	4	0.305	other	already diverted	low	20	
41-HG-055-12-01	5	0.292	dipped	no div. potential	low	20	
41-HG-058	6	0.601	other	no div. potential	low	20	
41-MR-014	6	0.491	other	yes, road	low	20	
41-MS	16	1.441	dipped	no div. potential	low	20	
41-MS	20	1.869	dipped	no div. potential	low	20	
41-MS	25	2.547	dipped	no div. potential	low	20	
41-MS-004	5	0.5	dipped	yes, ditch	low	20	
47-KG-049	1	0.035	dipped	no div. potential	low	20	
41-ES-024	5	0.397	dipped	yes, road	low	19	
41-BR	3	0.306	dipped	already diverted	low	18	
41-BR-028-02	2	0.079	other	no div. potential	low	17	
41-ES-024	2	0.2	dipped	no div. potential	low	17	
41-BR	31	2.391	dipped	no div. potential	low	16	
41-BR	32	2.507	dipped	no div. potential	low	16	
41-HG-018	2	0.153	dipped	no div. potential	low	16	
41-MD-003	20	1.879	dipped	no div. potential	low	16	
41-BR	11	0.943	dipped	no div. potential	low	15	
41-BR	24	1.933	ditch relief	yes, ditch	low	15	
41-BR	29	2.279	other	no div. potential	low	15	
41-BU-001	30	2.969	other	no div. potential	low	15	
41-BU-008-11	5	0.455	other	no div. potential	low	15	
41-BU-008-11	6	0.488	humboldt	no div. potential	low	15	
41-BW-012-02	1	0.002	other	no div. potential	low	15	
41-EH-043	5	0.533	dipped	no div. potential	low	15	
41-ES	11	1.077	dipped	no div. potential	low	15	
41-ES	18	1.783	other	no div. potential	low	15	
41-ES-002	13	1.232	dipped	no div. potential	low	15	

Road Number	Site Number	Mile Post	Crossing Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	2003 Work
41-ES-016-02	7	0.748	other	already diverted	low	15	
41-ES-024	4	0.381	dipped	yes, road	low	15	
41-ES-028	1	0.013	other	no div. potential	low	15	
41-ES-028	7	0.581	dipped	no div. potential	low	15	
41-HG-046	6	0.613	bridge	no div. potential	low	15	
41-HG-055	10	0.828	dipped	no div. potential	low	15	
41-HG-055-12-01	1	0.041	other	no div. potential	low	15	
41-HG-058	11	0.878	other	yes, road	low	15	
41-HG-058	12	1.174	other	yes, road	low	15	
41-HG-066	3	0.338	humboldt	no div. potential	low	15	
41-MS	23	2.257	dipped	no div. potential	low	15	
41-MS	24	2.404	dipped	no div. potential	low	15	
41-MS	27	2.714	dipped	no div. potential	low	15	
41-MS-004	1	0.116	dipped	no div. potential	low	15	
41-MS-004	6	0.543	dipped	no div. potential	low	15	
41-MU-005-01	1	0.008	dipped	no div. potential	low	15	
41-MU-007	1	0.099	dipped	yes, road	low	15	
41-SM	6	0.648	other	no div. potential	low	15	
47-KG-049	6	0.633	dipped	yes, road	low	15	
41-JH	9	0.744	dipped	no div. potential	low	14	
41-HG-055-03	1	0.089	other	already diverted	low	13	
41-UB-010	2	0.242	other	no div. potential	low	13	
41-ES	32	3.018	other	already diverted	low	12	
41-ES	49	4.831	dipped	already diverted	low	12	
41-ES	52	5.159	humboldt	no div. potential	low	12	
41-ES-068-04	3	0.272	other	already diverted	low	12	
41-HG-022	1	0.149	dipped	no div. potential	low	12	
41-HG-046-11	1	0.031	dipped	no div. potential	low	12	
41-HG-055	9	0.778	dipped	no div. potential	low	12	
41-HG-055-12-01	6	0.424	dipped	no div. potential	low	12	
41-HG-046-11	2	0.07	dipped	no div. potential	low	11	
41-BR	5	0.492	dipped	no div. potential	low	10	
41-BU-001	5	0.5	other	no div. potential	low	10	
41-BU-001	14	1.428	other	no div. potential	low	10	
41-BU-008-04-01	1	0.103	other	no div. potential	low	10	
41-BU-008-11	3	0.294	other	no div. potential	low	10	
41-ES	67	6.716	other	already diverted	low	10	
41-ES-014	1	0.008	dipped	no div. potential	low	10	
41-HG	91	9.096	bridge	no div. potential	low	10	
41-HG-029	1	0.092	other	no div. potential	low	10	
41-HG-055-05	1	0.038	dipped	yes, road	low	10	
41-HG-055-12	1	0.109	other	no div. potential	low	10	
41-HG-055-12	3	0.251	other	yes, road	low	10	
41-HG-055-12	4	0.324	other	yes, ditch	low	10	
41-HG-055-12	5	0.453	other	yes, road	low	10	
41-HG-055-12-01	2	0.055	dipped	no div. potential	low	10	
41-HG-055-12-01	3	0.089	dipped	no div. potential	low	10	
41-HG-055-12-01	9	0.631	dipped	no div. potential	low	10	
41-HG-055-13	1	0.113	other	no div. potential	low	10	
41-HG-058	8	0.699	other	no div. potential	low	10	
41-HG-058-14	2	0.138	other	no div. potential	low	10	
41-MR	8	0.802	other	no div. potential	low	10	
41-MS	15	1.431	dipped	no div. potential	low	10	
41-HG-046	4	0.375	dipped	no div. potential	low	8	
41-HG-055-12-01	8	0.535	other	yes, road	low	8	
41-ES-002	15	1.468	dipped	no div. potential	low	7	
41-BU	17	1.708	other	no div. potential	low	6	
41-JH-007	3	0.272	dipped	yes, road	low	6	
41-EH-043-04	2	0.142	other	no div. potential	low	5	
41-ES	2	0.237	dipped	no div. potential	low	5	
41-HG-046	5	0.496	dipped	no div. potential	low	5	
41-HG-046	20	1.433	dipped	no div. potential	low	5	
41-HG-054	34	3.358	other	yes, road	low	5	
41-HG-055	8	0.759	ditch relief	no div. potential	low	5	
41-HG-055-12-02	3	0.325	other	yes, road	low	5	
41-HG-058	10	0.818	other	no div. potential	low	5	

Road Number	Site Number	Mile Post	Crossing Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	2003 Work
41-MD-037	1	0.127	dipped	no div. potential	low	5	
41-MU-005-01	2	0.201	dipped	no div. potential	low	5	
41-ES	9	0.848	dipped	yes, road	low	4	
41-HG-055-12-01	4	0.249	dipped	no div. potential	low	4	
41-MD-003-15-01	1	0.049	humboldt	no div. potential	low	4	
41-BU-008	12	1.248	other	no div. potential	low	3	
41-HG-046	16	1.135	dipped	no div. potential	low	3	
41-MD-003	5	0.429	dipped	no div. potential	low	3	
41-HG-046	7	0.639	dipped	no div. potential	low	2	
41-HG-046	9	0.76	dipped	no div. potential	low	2	
41-HG-046	10	0.818	dipped	no div. potential	low	2	
41-HG-046	12	0.896	dipped	no div. potential	low	2	
41-HG-046	15	1.077	dipped	no div. potential	low	2	
41-HG-046	19	1.414	dipped	no div. potential	low	2	
41-MD-003	8	0.785	dipped	no div. potential	low	2	
41-MD-003	11	0.995	dipped	no div. potential	low	2	
41-MD-003-09	4	0.276	other	no div. potential	low	2	
41-ET-026	1	0.007	other	no div. potential	low	1	
41-HG-046	13	0.939	dipped	no div. potential	low	1	
41-BU	4	0.378	other	no div. potential	low	0	yes
41-BU	5	0.442	dipped	no div. potential	low	0	yes
41-BU	7	0.66	other	no div. potential	low	0	yes
41-BU	8	0.707	dipped	no div. potential	low	0	yes
41-BU	9	0.716	dipped	no div. potential	low	0	yes
41-BU-007	5	0.469	other	no div. potential	low	0	yes
41-BW	10	1.031	other	no div. potential	low	0	yes
41-BW	12	1.195	other	no div. potential	low	0	yes
41-BW	22	2.18	other	no div. potential	low	0	yes
41-BW	29	2.861	other	no div. potential	low	0	yes
41-HG	89	8.854	ditch relief	no div. potential	low	0	yes
41-HG	83	8.28	humboldt	no div. potential	low	0	yes
41-HG	97	9.729	other	no div. potential	low	0	yes
41-HG-092	25	2.459	other	no div. potential	low	0	yes
41-HG-092	26	2.584	other	no div. potential	low	0	yes
41-UB	18	1.776	dipped	no div. potential	low	0	yes
41-UB	19	1.798	other	no div. potential	low	0	yes
41-BR-020	1	0.055	other	no div. potential	low	0	
41-BU	1	0.05	bridge	no div. potential	low	0	
41-BU	10	0.999	other	no div. potential	low	0	
41-BU	11	1.066	other	no div. potential	low	0	
41-BU	12	1.107	other	no div. potential	low	0	
41-BU	13	1.197	other	no div. potential	low	0	
41-BU	14	1.215	other	no div. potential	low	0	
41-BU-006	11	1.09	other	no div. potential	low	0	
41-BU-008	5	0.478	other	no div. potential	low	0	
41-BW	1	0.022	bridge	no div. potential	low	0	
41-BW-001	4	0.366	other	no div. potential	low	0	
41-BW-015-02	2	0.208	other	no div. potential	low	0	
41-ES	8	0.804	other	no div. potential	low	0	
41-ES	15	1.45	other	no div. potential	low	0	
41-ES	23	2.345	bridge	no div. potential	low	0	
41-ES-002	4	0.418	dipped	no div. potential	low	0	
41-HB-019	7	0.667	dipped	yes, road	low	0	
41-HB-019	8	0.76	dipped	no div. potential	low	0	
41-HG	80	7.964	bridge	no div. potential	low	0	
41-HG-046	18	1.285	dipped	no div. potential	low	0	
41-HG-055	5	0.517	dipped	no div. potential	low	0	
41-HG-055-03	2	0.116	other	no div. potential	low	0	
41-HG-055-03	3	0.218	other	already diverted	low	0	
41-HG-055-03	5	0.333	humboldt	yes, road	low	0	
41-HG-055-03	6	0.512	humboldt	no div. potential	low	0	
41-HG-055-03	7	0.723	humboldt	no div. potential	low	0	
41-HG-055-05-02	3	0.301	other	yes, road	low	0	
41-HG-055-12-02	1	0.102	other	already diverted	low	0	
41-HG-056	4	0.361	other	already diverted	low	0	
41-HG-101	1	0.026	other	no div. potential	low	0	

Road Number	Site Number	Mile Post	Crossing Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	2003 Work
41-HG-103	1	0.027	bridge	no div. potential	low	0	
41-HG-106	6	0.471	other	yes, road	low	0	
41-MD-003	12	1.077	dipped	no div. potential	low	0	
41-MN-012	2	0.166	dipped	no div. potential	low	0	
41-MR-014	1	0.065	bridge	no div. potential	low	0	
41-MS	14	1.35	dipped	yes, road	low	0	
41-MS-004	3	0.34	dipped	no div. potential	low	0	
41-UB-008	11	1.127	other	already diverted	low	0	
41-BU-001	32	3.189	other	no div. potential	none	60	
41-SM	1	0.033	bridge	no div. potential	none	50	
41-MR-014	5	0.452	other	already diverted	none	25	
41-HG-055-05	2	0.091	other	already diverted	none	10	
41-HG-106	1	0.018	dipped	no div. potential	none	10	
41-HG-106	4	0.38	dipped	no div. potential	none	10	
41-HG-055-12-01	7	0.486	dipped	no div. potential	none	5	
41-HG-055-12-01	10	0.729	dipped	no div. potential	none	5	
41-BU-001-08	2	0.184	other	no div. potential	none	0	yes
41-BU-001-08	3	0.255	other	no div. potential	none	0	yes
41-BU-008	15	1.499	other	no div. potential	none	0	yes
41-BU-008	16	1.509	other	no div. potential	none	0	yes
41-BU-008	17	1.609	other	no div. potential	none	0	yes
41-BU-008	19	1.943	other	no div. potential	none	0	yes
41-BU-008	23	2.305	other	no div. potential	none	0	yes
41-BW-009	1	0.08	other	no div. potential	none	0	yes
41-BW-009	2	0.165	other	no div. potential	none	0	yes
41-BW-009	3	0.172	other	no div. potential	none	0	yes
41-BW-009	5	0.466	other	no div. potential	none	0	yes
41-BW-009	6	0.499	other	no div. potential	none	0	yes
41-HG-080	4	0.401	other	no div. potential	none	0	yes
41-HG-080	8	0.787	other	no div. potential	none	0	yes
41-HG-080	10	0.974	other	no div. potential	none	0	yes
41-HG-080	11	1.117	other	no div. potential	none	0	yes
41-HG-080	13	1.305	other	no div. potential	none	0	yes
41-HG-080	14	1.412	other	no div. potential	none	0	yes
41-HG-080	15	1.442	other	no div. potential	none	0	yes
41-HG-080	16	1.536	other	no div. potential	none	0	yes
41-HG-080	19	1.936	other	no div. potential	none	0	yes
41-HB-024	4	2.13	other	no div. potential	none	0	yes
41-HG-080-07	1	0.027	other	no div. potential	none	0	yes
41-HG-080-23	2	0.175	other	no div. potential	none	0	yes
41-HG-092-01	2	0.215	other	no div. potential	none	0	yes
41-HG-092-01	3	0.327	other	no div. potential	none	0	yes
41-HG-092-01	4	0.374	other	no div. potential	none	0	yes
41-HG-092-01	7	0.729	other	no div. potential	none	0	yes
41-HG-092-01	8	0.812	other	no div. potential	none	0	yes
41-HG-103	2	0.163	other	no div. potential	none	0	yes
41-HG-103	3	0.273	other	no div. potential	none	0	yes
41-HG-103	4	0.418	other	no div. potential	none	0	yes
41-HG-103	5	0.518	other	no div. potential	none	0	yes
41-BR-008	1	0.077	other	no div. potential	none	0	
41-BR-018	1	0.067	other	no div. potential	none	0	
41-BU	3	0.254	dipped	no div. potential	none	0	
41-BU-008	1	0.045	other	no div. potential	none	0	
41-BU-008-11	7	0.676	bridge	no div. potential	none	0	
41-BU-008-11-01	1	0.047	other	no div. potential	none	0	
41-BW-015-02	1	0.026	other	no div. potential	none	0	
41-HG	105	10.531	bridge	no div. potential	none	0	
41-HG-055-13	2	0.158	other	no div. potential	none	0	
41-HG-058	2	0.154	dipped	no div. potential	none	0	
41-HG-058	7	0.646	low water (temp)	no div. potential	none	0	
41-HG-058	9	0.754	other	no div. potential	none	0	
41-HG-058	13	1.271	other	no div. potential	none	0	
41-MD-003-03	1	0.048	other	no div. potential	none	0	
41-MD-003-09	1	0.057	low water (temp)	no div. potential	none	0	
41-MS	29	2.949	dipped	no div. potential	none	0	
41-SM	3	0.295	dipped	already diverted	none	0	

Road Number	Site Number	Mile Post	Crossing Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	2003 Work
41-BR	20	1.706	dipped	yes, ditch	undetermined	60	
41-BR	8	0.648	dipped	no div. potential	undetermined	37	
41-ES-016	5	0.511	dipped	undetermined	undetermined	0	
41-MR	2	0.184	other	undetermined	undetermined	0	

Road Number	Site Number	Mile Post	Perched Material	Fill Condition	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	Distance from Stream (ft)	2003 work
41-ES-012	3	0.317	no	stable	high	500	0-50	
41-ES-028	14	1.442	no	stable	high	400	0-50	
41-ET-021-11	2	0.231	no	unstable	high	300	0-50	
41-BU-001-16	3	0.259	no	stable	high	200	0-50	
41-ET-011	30	2.97	no	unstable	high	180	0-50	
41-ES-028-06	1	0.044	yes	stable	high	150	0-50	
41-ES-002-11	3	0.289	no	stable	high	150	0-50	
41-HG-024	3	0.281	no	stable	high	120	0-50	
41-ES-016	9	0.709	no	stable	high	100	0-50	
41-ES	28	2.774	no	stable	high	100	0-50	
41-ES	85	8.488	yes	stable	high	100	0-50	
41-HG-055-05-02	4	0.384	no	stable	high	0	0-50	
41-HG-103	4	0.439	no	unstable	high	0	0-50	
41-HG-103	5	0.53	no	unstable	high	0	0-50	
41-ET-011	31	3.089	no	unstable	moderate	300	50-200	
41-ES-016-10	2	0.188	no	stable	moderate	230	0-50	
41-BU-006	3	0.295	no	ailed-active	moderate	200	0-50	
41-HG-055-05-04	3	0.296	yes	stable	moderate	200	0-50	
41-ET-011	20	1.947	no	unstable	moderate	200	0-50	
41-ET-011	7	0.737	no	ailed-dorma	moderate	120	0-50	
41-ES-028	10	1.009	no	stable	moderate	110	0-50	
41-ET-011	19	1.864	no	unstable	moderate	80	0-50	
41-MU-005	5	0.504	no	ailed-active	moderate	70	0-50	
41-HG-066	1	0.147	no	stable	moderate	35	0-50	
41-ET-028	3	0.153	no	stable	moderate	30	0-50	
41-MD-003-17	2	0.171	no	stable	moderate	3	0-50	
41-HG-104	3	0.252	yes	unstable	moderate	0	0-50	
41-HG-055-05-04	5	0.415	no	stable	moderate	0	0-50	
41-BU-013	1	0.129	no	stable	low	1500	0-50	
41-HG	79	7.937	yes	unstable	low	550	50-200	
41-MS	14	1.42	no	stable	low	330	0-50	
41-ET-021	14	1.433	no	stable	low	300	0-50	
41-BR	35	3.481	yes	ailed-active	low	300	0-50	
41-BR-008	1	0.124	no	stable	low	200	0-50	
41-ES-024	6	0.597	yes	ailed-active	low	180	0-50	
41-HG-066	7	0.658	yes	stable	low	165	0-50	
41-MS	1	0.019	yes	stable	low	150	>200	
41-ES	70	7.048	no	stable	low	142	0-50	
41-ES-016-02	7	0.678	no	ailed-dorma	low	120	0-50	
41-ET-011-07	2	0.198	no	stable	low	100	0-50	
41-ET-011	18	1.778	no	stable	low	100	50-200	
41-MN-005	7	0.651	no	ailed-dorma	low	90	0-50	
41-ES-016-02	6	0.559	no	stable	low	80	0-50	
41-ES-028	12	1.214	no	stable	low	70	0-50	
41-MU	8	0.814	no	ailed-dorma	low	60	0-50	
41-MS	30	3.01	yes	stable	low	60	>200	
41-BR-028	5	0.47	no	stable	low	55	0-50	
41-XX-000	2	0.215	yes	ailed-dorma	low	50	0-50	
41-BU-008-08	1	0.066	no	stable	low	40	0-50	
41-ET-011	12	1.188	no	stable	low	40	0-50	
41-HG-055-05	15	1.441	yes	stable	low	40	0-50	
41-HG-055-05-01	1	0.085	no	stable	low	35	0-50	
41-HG-055-05-05	1	0.099	no	stable	low	35	0-50	
41-HG-046-02	2	0.227	no	stable	low	30	0-50	
47-KG-049	2	0.163	yes	stable	low	30	>200	
41-EH-043	7	0.677	yes	stable	low	30	50-200	
41-ET-011	24	2.383	yes	ailed-dorma	low	30	0-50	
41-BU-001	32	3.23	no	stable	low	30	0-50	
41-BU-006	1	0.003	no	stable	low	25	50-200	
41-ES-016-08	5	0.483	no	stable	low	25	0-50	
41-MS	23	2.217	no	stable	low	25	0-50	
41-BU-003	1	0.039	no	stable	low	20	>200	
41-EH-043-04	4	0.363	no	ailed-dorma	low	20	>200	
41-HG	97	9.724	no	stable	low	20	0-50	
41-BU-008-11	4	0.361	no	stable	low	15	50-200	
41-BU-001	19	1.904	no	stable	low	13	0-50	



Road Number	Site Number	Mile Post	Perched Material	Fill Condition	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	Distance from Stream (ft)	2003 work
41-ES-028	4	0.438	no	stable	low	12	50-200	
41-ES-028	1	0.145	no	stable	low	10	0-50	
41-HG-024-02	1	0.095	no	stable	low	10	0-50	
41-ES-004	2	0.108	no	stable	low	10	0-50	
41-MR-017	2	0.15	no	stable	low	10	0-50	
41-ES-016	3	0.237	no	stable	low	10	50-200	
41-MD-003-09	4	0.364	no	stable	low	10	0-50	
41-MD-003	8	0.753	no	stable	low	10	0-50	
41-JH-009	9	0.923	no	stable	low	10	0-50	
41-MS-004	8	0.811	no	stable	low	8	>200	
41-HG-046	11	1.061	no	stable	low	7	0-50	
41-ES-024	5	0.524	no	stable	low	6	0-50	
41-MR	32	3.154	no	stable	low	6	0-50	
41-HG-058-06	2	0.211	no	stable	low	5	0-50	
41-ES	25	2.491	no	stable	low	5	0-50	
41-JH-009	2	0.14	no	stable	low	4	0-50	
41-ES	1	0.059	no	stable	low	3	50-200	
41-ES-016	2	0.197	no	stable	low	3	50-200	
41-MD-003-09	2	0.221	no	stable	low	3	0-50	
41-BR-022	1	0.06	no	stable	low	2	0-50	
41-MD-003-08	2	0.203	no	stable	low	2	0-50	
41-MD-003-16	2	0.209	no	stable	low	2	0-50	
41-HG-022	3	0.305	no	stable	low	2	50-200	
41-UB-008	7	0.732	no	stable	low	2	50-200	
41-UB-008	8	0.843	no	stable	low	2	>200	
41-UB-008	13	1.249	no	stable	low	2	50-200	
41-HG	24	2.37	no	stable	low	2	0-50	
41-ES	49	4.932	no	stable	low	2	>200	
41-ES-004	1	0.05	no	stable	low	1	0-50	
41-ES-024-07	2	0.224	no	stable	low	1	0-50	
41-HG-018	2	0.231	no	stable	low	1	50-200	
41-MD-003-15	4	0.408	no	stable	low	1	0-50	
41-ES	19	1.9	no	stable	low	1	>200	
41-BU-008-11-02	1	0.073	no	stable	low	0	0-50	
41-BW-012	1	0.038	no	stable	low	0	0-50	
41-EH-032	1	0.144	no	stable	low	0	>200	
41-EH-043-04-01	1	0.029	no	filled-dormant	low	0	>200	
41-ES-016-02-02	1	0.069	no	stable	low	0	>200	
41-ES-094	1	0.029	no	stable	low	0	0-50	
41-ET-004-01	1	0.066	no	stable	low	0	>200	
41-ET-011-05-01	1	0.141	yes	stable	low	0	50-200	
41-HB	1	0.012	no	stable	low	0	0-50	
41-HG-022-06	1	0.058	no	stable	low	0	>200	
41-HG-048-04	1	0.048	yes	stable	low	0	50-200	
41-HG-048-06	1	0.061	no	stable	low	0	>200	
41-HG-054-10	1	0.051	yes	stable	low	0	>200	
41-HG-054-10-01	1	0.04	no	stable	low	0	>200	
41-HG-054-17	1	0.121	no	stable	low	0	>200	
41-HG-054-33-01	1	0.029	no	stable	low	0	>200	
41-HG-055-05-08	1	0.017	no	stable	low	0	50-200	
41-HG-055-12-01	1	0.056	no	stable	low	0	0-50	
41-HG-058-14-01	1	0.147	no	stable	low	0	0-50	
41-HG-075	1	0.09	no	stable	low	0	50-200	
41-HG-103	1	0.048	no	stable	low	0	0-50	
41-MD-003-07	1	0.129	no	stable	low	0	0-50	
41-MD-003-15-01	1	0.097	no	stable	low	0	0-50	
41-MD-006-16	1	0.055	no	stable	low	0	>200	
41-MD-011-02	1	0.02	no	stable	low	0	>200	
41-MD-014-03	1	0.051	no	stable	low	0	>200	
41-MD-037-07	1	0.107	no	stable	low	0	>200	
41-MN-005	1	0.128	no	stable	low	0	>200	
41-MN-007	1	0.14	no	stable	low	0	>200	
41-MN-012	1	0.024	no	stable	low	0	>200	
41-MR-003	1	0.055	no	stable	low	0	50-200	
41-MR-014	1	0.031	no	stable	low	0	50-200	
41-MS-004	1	0.077	no	stable	low	0	>200	

Road Number	Site Number	Mile Post	Perched Material	Fill Condition	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	Distance from Stream (ft)	2003 work
41-MS-025	1	0.061	no	stable	low	0	50-200	
41-MS-025-03	1	0.04	no	stable	low	0	>200	
41-SM-001	1	0.015	no	stable	low	0	50-200	
41-BW-032-12	2	0.164	no	stable	low	0	>200	
41-EH-027	2	0.158	no	stable	low	0	>200	
41-EH-043-04-01	2	0.196	no	filled-dormant	low	0	>200	
41-EH-043-04-02	2	0.213	no	stable	low	0	>200	
41-ES-016-02-01	2	0.198	no	stable	low	0	50-200	
41-ES-016-08	2	0.189	no	stable	low	0	0-50	
41-ES-087	2	0.248	no	stable	low	0	0-50	
41-HG-012-18	2	0.179	no	stable	low	0	>200	
41-HG-048	2	0.228	no	stable	low	0	>200	
41-HG-055	2	0.195	yes	stable	low	0	0-50	
41-HG-056	2	0.165	no	stable	low	0	50-200	
41-HG-058	2	0.232	no	stable	low	0	0-50	
41-HG-058-14	2	0.211	yes	stable	low	0	0-50	
41-MD-037-07	2	0.241	no	stable	low	0	>200	
41-MN-007	2	0.217	no	stable	low	0	>200	
41-MN-012	2	0.075	no	stable	low	0	>200	
41-MN-014	2	0.152	no	stable	low	0	>200	
41-MR	2	0.23	no	stable	low	0	50-200	
41-MS-004	2	0.192	no	filled-dormant	low	0	>200	
41-MS-025	2	0.201	no	stable	low	0	>200	
41-MS-025-03	2	0.189	no	stable	low	0	>200	
41-UB	2	0.047	no	stable	low	0	>200	
47-JN-037-10	2	0.154	no	stable	low	0	0-50	
47-UK-042-05	2	0.201	no	stable	low	0	>200	
41-BR	3	0.34	no	stable	low	0	0-50	
41-BU-008-06	3	0.252	no	stable	low	0	0-50	
41-EH-027	3	0.281	no	stable	low	0	>200	
41-EH-043	3	0.289	no	filled-dormant	low	0	>200	
41-ES-016-02-01	3	0.335	yes	filled-dormant	low	0	50-200	
41-HG-048	3	0.311	no	stable	low	0	>200	
41-HG-054-17	3	0.328	no	stable	low	0	>200	
41-HG-055-05-01	3	0.333	no	stable	low	0	0-50	
41-HG-055-12	3	0.276	yes	stable	low	0	50-200	
41-HG-058	3	0.337	no	stable	low	0	0-50	
41-HG-079	3	0.325	no	stable	low	0	>200	
41-HB-024-12	1	0.288	no	stable	low	0	>200	
41-MD	3	0.233	no	stable	low	0	50-200	
41-MN-012	3	0.266	no	stable	low	0	>200	
41-MN-014	3	0.203	no	stable	low	0	50-200	
41-MR	3	0.298	no	stable	low	0	50-200	
41-MS	3	0.318	no	stable	low	0	>200	
41-MS-004	3	0.276	no	stable	low	0	>200	
41-EH-032	4	0.43	no	stable	low	0	>200	
41-EH-043	4	0.327	no	stable	low	0	>200	
41-ES-002	4	0.382	no	stable	low	0	>200	
41-HB	4	0.392	no	stable	low	0	>200	
41-HG-054-10	4	0.417	no	stable	low	0	>200	
41-HG-054-11	4	0.381	no	stable	low	0	>200	
41-HG-054-17	4	0.403	no	stable	low	0	>200	
41-HG-054-33	4	0.416	no	stable	low	0	>200	
41-HG-055	4	0.422	no	stable	low	0	50-200	
41-HG-055-05-04	4	0.346	no	stable	low	0	0-50	
41-HG-055-12	4	0.385	no	stable	low	0	0-50	
41-HG-056	4	0.397	no	stable	low	0	0-50	
41-MD-015	4	0.412	no	stable	low	0	>200	
41-MN	4	0.353	no	stable	low	0	>200	
41-MN-005	4	0.42	no	stable	low	0	>200	
41-MN-007	4	0.398	no	stable	low	0	>200	
41-MN-011	4	0.361	no	stable	low	0	>200	
41-MR-001	4	0.436	no	stable	low	0	0-50	
41-UB-010	4	0.426	no	stable	low	0	>200	
41-EH-027	5	0.458	no	stable	low	0	>200	
41-ES-016-02	5	0.481	no	stable	low	0	>200	

Road Number	Site Number	Mile Post	Perched Material	Fill Condition	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	Distance from Stream (ft)	2003 work
41-ES-028	5	0.507	no	stable	low	0	50-200	
41-ES-096	5	0.466	no	stable	low	0	>200	
41-HG-058-14	5	0.485	yes	stable	low	0	0-50	
41-HG-106	5	0.541	no	stable	low	0	0-50	
41-MN	5	0.506	no	stable	low	0	>200	
41-MN-005	5	0.517	no	stable	low	0	0-50	
41-BW-009	6	0.637	no	stable	low	0	>200	
41-EH-032	6	0.576	no	stable	low	0	>200	
41-EH-043-04	6	0.57	no	stable	low	0	>200	
41-ES-028	6	0.647	no	stable	low	0	50-200	
41-HG-058	6	0.577	no	stable	low	0	0-50	
41-JH-021	6	0.55	no	stable	low	0	>200	
41-MN	6	0.531	no	stable	low	0	50-200	
41-UB-010	6	0.645	no	stable	low	0	>200	
41-EH-032	7	0.715	no	stable	low	0	50-200	
41-HG-054-21	7	0.687	no	stable	low	0	>200	
41-MN-007	7	0.743	no	stable	low	0	50-200	
41-MS	7	0.699	no	stable	low	0	>200	
47-G3-037-01	7	0.688	no	stable	low	0	>200	
41-EH-043-04	8	0.808	no	stable	low	0	>200	
41-ES-016-02	8	0.76	no	stable	low	0	50-200	
41-HG-058	8	0.761	no	stable	low	0	0-50	
41-UB-010	8	0.843	no	stable	low	0	>200	
47-G3-037	8	0.844	no	stable	low	0	>200	
41-BU	9	0.924	no	stable	low	0	0-50	
41-EH-043-04	9	0.917	no	stable	low	0	>200	
41-ES-028	9	0.855	no	stable	low	0	0-50	
41-HG-058	9	0.818	no	stable	low	0	0-50	
47-G3-037	9	0.927	no	stable	low	0	>200	
41-BU-008-11	10	1.036	no	stable	low	0	>200	
41-HG-055-12	10	0.997	no	stable	low	0	50-200	
41-HG-058	10	0.97	no	stable	low	0	0-50	
41-MN	10	0.976	no	stable	low	0	>200	
41-BU	11	1.079	no	stable	low	0	0-50	
41-EH-043-04	11	1.123	no	stable	low	0	>200	
41-HG-054-21	11	1.138	no	stable	low	0	>200	
41-HG-058	11	1.094	no	stable	low	0	0-50	
41-MS-004	11	1.108	no	stable	low	0	>200	
41-UB-008	11	1.057	no	stable	low	0	50-200	
41-BU	12	1.168	no	stable	low	0	0-50	
41-HG-054-21	12	1.205	no	stable	low	0	>200	
41-HG-055	12	1.239	no	stable	low	0	0-50	
41-MR	12	1.203	no	stable	low	0	>200	
41-UB-008	12	1.176	no	stable	low	0	50-200	
41-BU	13	1.278	no	stable	low	0	0-50	
41-EH-043-04	13	1.27	no	stable	low	0	>200	
41-HG-058	13	1.272	no	stable	low	0	0-50	
41-BU	14	1.441	no	stable	low	0	0-50	
41-EH-043-04	14	1.398	yes	failed-active	low	0	>200	
41-BU	15	1.518	no	stable	low	0	0-50	
41-HG-055	15	1.462	no	stable	low	0	>200	
41-MR	16	1.618	no	stable	low	0	0-50	
41-BU	18	1.758	no	stable	low	0	0-50	
41-HG-080	18	1.803	no	stable	low	0	0-50	
41-MS	18	1.776	no	stable	low	0	0-50	
41-HG-055	19	1.909	no	stable	low	0	>200	
41-MR	19	1.827	no	stable	low	0	50-200	
41-MR	20	1.979	no	stable	low	0	50-200	
41-BU-001	21	2.123	no	stable	low	0	50-200	
41-HB-024-11	16	2.155	no	stable	low	0	>200	
41-MR	22	2.189	no	stable	low	0	50-200	
41-MS	22	2.158	no	stable	low	0	0-50	
41-BU-001	24	2.449	no	stable	low	0	>200	
41-HG-092	24	2.377	no	stable	low	0	50-200	
41-MS	24	2.424	no	stable	low	0	50-200	
41-MR	25	2.498	no	stable	low	0	50-200	

Road Number	Site Number	Mile Post	Perched Material	Fill Condition	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	Distance from Stream (ft)	2003 work
41-BU-001	26	2.643	no	stable	low	0	50-200	
41-EH	30	3.017	no	stable	low	0	>200	
41-EH	32	3.234	no	stable	low	0	>200	
41-HG	60	6.007	no	stable	low	0	>200	
41-HG	82	8.209	no	stable	low	0	50-200	
41-HG	91	9.132	no	stable	low	0	0-50	
41-HG	99	9.93	no	stable	low	0	0-50	
41-HG	101	10.138	no	stable	low	0	50-200	
41-XX-000	4	0.36	n/a	n/a	n/a	0	50-200	
41-BU-001	31	3.074	no	stable	none	888	0-50	
41-BR-008	3	0.295	no	stable	none	333	0-50	
41-ES-012	1	0.114	no	stable	none	2	50-200	
41-JH-009	1	0.028	no	stable	none	2	0-50	
41-UB-006-04	3	0.192	no	stable	none	2	50-200	
41-HG-046-14	4	0.351	no	stable	none	2	0-50	
41-MD-003	10	0.962	no	stable	none	2	50-200	
41-HG-046	14	1.447	no	stable	none	1	0-50	
41-MD-003	24	2.396	no	stable	none	1	>200	
41-HG-103	3	0.346	no	stable	none	0	0-50	yes
41-BU-008	19	1.899	no	stable	none	0	0-50	yes
41-BR-011	1	0.024	no	stable	none	0	0-50	
41-BR-020	1	0.092	no	stable	none	0	0-50	
41-BR-024	1	0.095	no	stable	none	0	0-50	
41-BR-025	1	0.072	no	stable	none	0	50-200	
41-BR-028-02	1	0.094	no	stable	none	0	0-50	
41-BU	1	0.121	no	stable	none	0	0-50	
41-BU-001	1	0.141	no	stable	none	0	50-200	
41-BU-005	1	0.099	no	stable	none	0	>200	
41-BU-008-04-01	1	0.12	no	stable	none	0	0-50	
41-BU-008-14	1	0.056	no	stable	none	0	0-50	
41-BW-012-02	1	0.045	no	stable	none	0	0-50	
41-BW-015-02	1	0.037	no	stable	none	0	0-50	
41-EH-003	1	0.065	no	stable	none	0	>200	
41-EH-017	1	0.018	no	stable	none	0	>200	
41-EH-027	1	0.012	no	stable	none	0	>200	
41-ES-002	1	0.053	no	stable	none	0	50-200	
41-ES-009	1	0.131	no	stable	none	0	>200	
41-ES-016-02	1	0.034	no	stable	none	0	0-50	
41-ES-016-10	1	0.037	no	stable	none	0	0-50	
41-ES-039	1	0.124	no	stable	none	0	50-200	
41-ES-057	1	0.027	no	stable	none	0	>200	
41-ES-059-02	1	0.112	no	stable	none	0	>200	
41-ES-071	1	0.056	no	stable	none	0	0-50	
41-ES-082	1	0.101	no	stable	none	0	50-200	
41-ES-091-01	1	0.088	no	stable	none	0	>200	
41-ES-096	1	0.121	no	stable	none	0	>200	
41-ES-103	1	0.031	no	stable	none	0	0-50	
41-ES-106	1	0.053	no	stable	none	0	>200	
41-ET-011	1	0.004	no	stable	none	0	50-200	
41-ET-011-04	1	0.009	no	stable	none	0	50-200	
41-ET-011-07	1	0.078	no	stable	none	0	0-50	
41-ET-019	1	0.138	no	stable	none	0	0-50	
41-ET-021-11	1	0.07	no	stable	none	0	50-200	
41-ET-026	1	0.082	no	stable	none	0	0-50	
41-ET-026-03	1	0.129	no	stable	none	0	>200	
41-ET-028	1	0.08	no	stable	none	0	>200	
41-HG-011-02	1	0.142	no	stable	none	0	50-200	
41-HG-012-16	1	0.08	no	stable	none	0	>200	
41-HG-022	1	0.06	no	stable	none	0	50-200	
41-HG-024	1	0.105	no	stable	none	0	0-50	
41-HG-028	1	0.047	no	stable	none	0	>200	
41-HG-029	1	0.054	no	stable	none	0	50-200	
41-HG-033	1	0.023	no	stable	none	0	>200	
41-HG-045	1	0.071	no	stable	none	0	50-200	
41-HG-046	1	0.099	no	stable	none	0	50-200	
41-HG-046-04	1	0.061	no	stable	none	0	0-50	

Road Number	Site Number	Mile Post	Perched Material	Fill Condition	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	Distance from Stream (ft)	2003 work
41-HG-046-09	1	0.05	no	stable	none	0	0-50	
41-HG-046-11	1	0.073	no	stable	none	0	0-50	
41-HG-046-14-01	1	0.042	no	stable	none	0	>200	
41-HG-051	1	0.061	no	stable	none	0	>200	
41-HG-054-11	1	0.12	no	stable	none	0	>200	
41-HG-054-21	1	0.144	no	stable	none	0	>200	
41-HG-054-21-01	1	0.129	no	stable	none	0	>200	
41-HG-054-33	1	0.045	no	stable	none	0	>200	
41-HG-055-03	1	0.029	no	stable	none	0	0-50	
41-HG-055-03-01	1	0.037	no	stable	none	0	0-50	
41-HG-055-03-02	1	0.088	no	stable	none	0	0-50	
41-HG-055-05-02	1	0.109	no	stable	none	0	0-50	
41-HG-055-05-07	1	0.058	no	stable	none	0	50-200	
41-HG-055-12-03	1	0.027	no	stable	none	0	50-200	
41-HG-057	1	0.028	no	stable	none	0	0-50	
41-HG-061	1	0.031	no	stable	none	0	>200	
41-HG-066-05	1	0.041	no	stable	none	0	0-50	
41-HG-075-04	1	0.078	no	stable	none	0	50-200	
41-HG-080-07	1	0.05	no	stable	none	0	50-200	
4-HB-024-06	1	0.079	no	stable	none	0	>200	
41-HB-024-08	1	0.089	no	stable	none	0	>200	
41-HB-024-11-02	1	0.027	no	stable	none	0	>200	
41-HB-024-11-04	1	0.121	no	stable	none	0	>200	
41-HB-024-06	1	0.019	no	stable	none	0	>200	
41-HB-024-13	1	0.044	no	stable	none	0	>200	
41-HB-024-11-05	1	0.135	no	stable	none	0	>200	
41-HG-092-01	1	0.03	no	stable	none	0	50-200	
41-HG-092-09	1	0.076	no	stable	none	0	>200	
41-HG-092-10	1	0.056	no	stable	none	0	>200	
41-HG-092-22	1	0.027	no	stable	none	0	>200	
41-HG-103-02	1	0.081	no	stable	none	0	50-200	
41-JH-012	1	0.054	no	stable	none	0	50-200	
41-MD	1	0.017	no	stable	none	0	>200	
41-MD-003-03	1	0.099	no	stable	none	0	50-200	
41-MD-003-09	1	0.13	no	stable	none	0	50-200	
41-MD-003-15	1	0.145	no	stable	none	0	0-50	
41-MD-003-17	1	0.009	no	stable	none	0	0-50	
41-MD-011	1	0.013	no	stable	none	0	>200	
41-MD-013	1	0.034	no	stable	none	0	>200	
41-MD-015-03	1	0.063	no	stable	none	0	>200	
41-MD-015-04	1	0.008	no	stable	none	0	>200	
41-MD-017-02	1	0.145	no	stable	none	0	>200	
41-MD-037-09	1	0.076	no	stable	none	0	>200	
41-MR	1	0.064	no	stable	none	0	50-200	
41-MR-023	1	0.062	no	stable	none	0	50-200	
41-MR-025	1	0.029	no	stable	none	0	50-200	
41-MU	1	0.017	no	stable	none	0	50-200	
41-MU-007	1	0.122	no	stable	none	0	0-50	
41-MU-008	1	0.104	no	stable	none	0	>200	
41-MU-011	1	0.038	no	stable	none	0	0-50	
41-UB	1	0.029	no	stable	none	0	>200	
41-UB-006-04	1	0.007	no	stable	none	0	>200	
41-UB-007	1	0.009	no	stable	none	0	>200	
41-UB-008-08-01	1	0.013	no	stable	none	0	>200	
41-UB-008-10	1	0.113	no	stable	none	0	50-200	
41-UB-008-14	1	0.078	no	stable	none	0	50-200	
41-UB-022	1	0.013	no	stable	none	0	>200	
47-TC-036-02-03	1	0.115	no	stable	none	0	>200	
47-TC-036-02-04	1	0.025	no	stable	none	0	>200	
47-UK-042-13	1	0.043	no	stable	none	0	>200	
41-BR-025	2	0.209	no	stable	none	0	0-50	
41-BU-008	2	0.195	no	stable	none	0	0-50	
41-BU-008-04	2	0.193	no	stable	none	0	0-50	
41-BW-001	2	0.229	no	stable	none	0	50-200	
41-EH-028	2	0.241	no	stable	none	0	>200	
41-EH-035	2	0.178	no	stable	none	0	>200	

Road Number	Site Number	Mile Post	Perched Material	Fill Condition	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	Distance from Stream (ft)	2003 work
41-ES	2	0.194	no	stable	none	0	0-50	
41-ES-002	2	0.171	no	stable	none	0	>200	
41-ES-012	2	0.183	no	stable	none	0	0-50	
41-ES-016-02	2	0.2	no	stable	none	0	50-200	
41-ES-059	2	0.238	no	stable	none	0	>200	
41-ES-068-04	2	0.23	no	stable	none	0	>200	
41-ES-096	2	0.237	no	stable	none	0	>200	
41-ES-097	2	0.151	no	stable	none	0	>200	
41-ET-011-11	2	0.156	no	stable	none	0	50-200	
41-ET-021	2	0.218	no	stable	none	0	50-200	
41-ET-026	2	0.167	no	stable	none	0	50-200	
41-ET-028	2	0.105	no	stable	none	0	50-200	
41-HG-012-13	2	0.181	no	stable	none	0	>200	
41-HG-022	2	0.192	no	stable	none	0	50-200	
41-HG-023-01	2	0.178	no	stable	none	0	50-200	
41-HG-029	2	0.186	no	stable	none	0	50-200	
41-HG-039	2	0.186	no	stable	none	0	50-200	
41-HG-045	2	0.119	no	stable	none	0	50-200	
41-HG-051	2	0.141	no	stable	none	0	>200	
41-HG-054-11-01	2	0.153	no	stable	none	0	>200	
41-HG-055-05	2	0.166	no	stable	none	0	0-50	
41-HG-055-05-06	2	0.168	no	stable	none	0	0-50	
41-HG-055-13	2	0.159	no	stable	none	0	0-50	
41-HG-057	2	0.078	no	stable	none	0	0-50	
41-HG-066	2	0.22	no	stable	none	0	0-50	
41-HG-075-04	2	0.114	no	stable	none	0	50-200	
41-HB-024-06	2	0.204	no	stable	none	0	>200	
41-HB-024-11-02	2	0.059	no	stable	none	0	>200	
41-HB-024-11-03	2	0.19	no	stable	none	0	>200	
41-HG-080-23	2	0.182	no	stable	none	0	0-50	
41-HG-092-01	2	0.219	no	stable	none	0	0-50	
41-JH-012	2	0.217	no	stable	none	0	50-200	
41-MD	2	0.135	no	stable	none	0	>200	
41-MD-003-15-01	2	0.248	no	stable	none	0	50-200	
41-MD-012	2	0.176	no	stable	none	0	>200	
41-MD-017	2	0.176	no	stable	none	0	>200	
41-MU	2	0.213	no	stable	none	0	50-200	
41-MU-005	2	0.151	no	stable	none	0	0-50	
41-MU-005-01	2	0.244	no	stable	none	0	0-50	
41-UB-006-04	2	0.092	no	stable	none	0	>200	
41-UB-008	2	0.158	no	stable	none	0	>200	
41-UB-008-08	2	0.206	no	stable	none	0	0-50	
41-UB-008-08-01	2	0.15	no	stable	none	0	>200	
41-UB-022	2	0.241	no	unstable	none	0	>200	
41-BR-018	3	0.25	no	stable	none	0	>200	
41-BU-001	3	0.264	no	stable	none	0	0-50	
41-BU-007	3	0.284	no	stable	none	0	>200	
41-BW-001	3	0.326	yes	stable	none	0	>200	
41-BW-015-02	3	0.345	no	stable	none	0	0-50	
41-EH-017	3	0.272	no	stable	none	0	>200	
41-EH-028-04	3	0.281	no	unstable	none	0	0-50	
41-ES	3	0.291	no	stable	none	0	50-200	
41-ES-002-03	3	0.277	no	stable	none	0	0-50	
41-ES-016-02	3	0.244	no	stable	none	0	0-50	
41-ES-024	3	0.273	no	stable	none	0	0-50	
41-ES-028	3	0.317	no	stable	none	0	0-50	
41-ES-068-04	3	0.349	no	stable	none	0	>200	
41-ES-085	3	0.287	no	stable	none	0	>200	
41-ET-011-04	3	0.268	no	stable	none	0	0-50	
41-ET-011-05-02	3	0.26	no	stable	none	0	>200	
41-ET-011-11	3	0.348	no	stable	none	0	50-200	
41-ET-026	3	0.253	no	stable	none	0	50-200	
41-HB-019	3	0.346	no	stable	none	0	>200	
41-HG-012-13	3	0.258	no	stable	none	0	>200	
41-HG-023-01	3	0.28	no	stable	none	0	50-200	
41-HG-029	3	0.224	no	stable	none	0	>200	

Road Number	Site Number	Mile Post	Perched Material	Fill Condition	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	Distance from Stream (ft)	2003 work
41-HG-031	3	0.297	no	stable	none	0	50-200	
41-HG-051	3	0.22	no	stable	none	0	>200	
41-HG-054-21	3	0.312	no	stable	none	0	>200	
41-HG-058-08	3	0.307	no	stable	none	0	0-50	
41-HG-075	3	0.272	no	stable	none	0	>200	
41-HB-024-07	3	0.256	no	stable	none	0	>200	
41-HB-024-11-01	3	0.315	no	stable	none	0	>200	
41-HG-106	3	0.314	no	stable	none	0	0-50	
41-MD-003	3	0.319	no	stable	none	0	50-200	
41-MD-003-03	3	0.302	no	stable	none	0	>200	
41-MD-006	3	0.284	no	stable	none	0	>200	
41-MD-011	3	0.252	no	stable	none	0	>200	
41-MU	3	0.294	no	stable	none	0	0-50	
41-MU-005	3	0.301	no	stable	none	0	0-50	
41-UB-006	3	0.273	no	stable	none	0	>200	
41-UB-007	3	0.253	no	stable	none	0	>200	
41-UB-008	3	0.333	no	stable	none	0	50-200	
47-TC-036-02	3	0.323	no	stable	none	0	>200	
41-BR-018	4	0.394	no	stable	none	0	>200	
41-BU	4	0.365	no	stable	none	0	0-50	
41-BU-001	4	0.386	no	stable	none	0	0-50	
41-BU-008	4	0.433	no	stable	none	0	50-200	
41-BW-032	4	0.355	no	stable	none	0	>200	
41-EH	4	0.376	no	stable	none	0	>200	
41-ES-016	4	0.323	no	stable	none	0	0-50	
41-ES-068	4	0.388	no	stable	none	0	>200	
41-ES-085	4	0.36	no	stable	none	0	>200	
41-ES-091	4	0.391	no	stable	none	0	>200	
41-ET-011-05	4	0.377	no	stable	none	0	50-200	
41-ET-019	4	0.402	no	stable	none	0	0-50	
41-HG-012-13	4	0.407	no	stable	none	0	>200	
41-HG-018	4	0.398	no	stable	none	0	>200	
41-HG-046	4	0.428	no	stable	none	0	50-200	
41-HG-055-12-02	4	0.446	no	stable	none	0	0-50	
41-HG-066	4	0.394	no	stable	none	0	50-200	
41-HG-075	4	0.418	no	stable	none	0	50-200	
41-HB-024	9	0.371	no	stable	none	0	>200	
41-HG-092-01	4	0.374	no	stable	none	0	0-50	
41-JH-009	4	0.404	no	stable	none	0	50-200	
41-JH-017	4	0.361	no	stable	none	0	>200	
41-MD-003-03	4	0.426	no	stable	none	0	>200	
41-MD-014	4	0.4	no	stable	none	0	>200	
41-MD-017	4	0.356	no	stable	none	0	>200	
41-MU	4	0.414	no	stable	none	0	0-50	
41-BU	5	0.53	no	stable	none	0	50-200	
41-BU-001	5	0.425	no	stable	none	0	0-50	
41-BU-007	5	0.535	no	stable	none	0	50-200	
41-BU-008	5	0.523	no	stable	none	0	50-200	
41-EH-003	5	0.51	no	stable	none	0	>200	
41-ES-002	5	0.49	no	stable	none	0	>200	
41-ES-016	5	0.338	no	stable	none	0	50-200	
41-ES-068-04	5	0.461	no	stable	none	0	>200	
41-ET-019	5	0.538	no	stable	none	0	0-50	
41-HG-046	5	0.548	no	stable	none	0	50-200	
41-HG-054-33	5	0.443	no	stable	none	0	>200	
41-HG-055-12-01	5	0.503	no	stable	none	0	0-50	
41-HG-058-08	5	0.457	no	stable	none	0	50-200	
41-HG-075	5	0.513	no	stable	none	0	50-200	
41-HB-024	11	0.548	no	stable	none	0	>200	
41-HG-092-01	5	0.483	no	stable	none	0	>200	
41-MD-014	5	0.511	no	stable	none	0	>200	
41-MD-017	5	0.453	no	stable	none	0	>200	
41-MR-014	5	0.511	no	stable	none	0	0-50	
41-MU	5	0.473	no	stable	none	0	0-50	
47-TC-036-02	5	0.461	no	stable	none	0	>200	
41-BU-001	6	0.615	no	stable	none	0	0-50	

Road Number	Site Number	Mile Post	Perched Material	Fill Condition	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	Distance from Stream (ft)	2003 work
41-BU-006	6	0.614	no	stable	none	0	>200	
41-ES-002	6	0.539	no	stable	none	0	50-200	
41-ES-016	6	0.519	no	stable	none	0	0-50	
41-ES-068	6	0.606	no	stable	none	0	>200	
41-ES-096	6	0.615	no	stable	none	0	>200	
41-ET-019	6	0.637	no	stable	none	0	0-50	
41-HG	6	0.626	no	stable	none	0	50-200	
41-HG-048	6	0.622	no	stable	none	0	50-200	
41-HG-054	6	0.571	no	stable	none	0	>200	
41-HG-054-33	6	0.477	no	stable	none	0	>200	
41-HG-092-01	6	0.643	no	stable	none	0	>200	
41-MR	6	0.551	no	stable	none	0	>200	
41-UB-008-08	6	0.571	no	stable	none	0	>200	
47-TC-036-02	6	0.504	no	stable	none	0	>200	
41-BU-001	7	0.679	no	stable	none	0	0-50	
41-BU-001-08	7	0.671	no	stable	none	0	0-50	
41-BU-008-11-01	7	0.72	no	stable	none	0	50-200	
41-BW	7	0.694	no	stable	none	0	0-50	
41-EH-003	7	0.726	no	stable	none	0	>200	
41-EH-027	7	0.711	no	stable	none	0	>200	
41-EH-028	7	0.7	no	stable	none	0	>200	
41-ES-002	7	0.69	no	stable	none	0	>200	
41-ES-016	7	0.611	no	stable	none	0	0-50	
41-ES-024	7	0.686	no	stable	none	0	50-200	
41-ES-096	7	0.682	no	stable	none	0	>200	
41-HB-019	7	0.684	no	stable	none	0	>200	
41-HG-022	7	0.694	no	stable	none	0	50-200	
41-HG-046	7	0.687	no	stable	none	0	50-200	
41-HG-055-12-01	7	0.729	no	stable	none	0	0-50	
41-HB-024-11	1	0.692	no	stable	none	0	>200	
41-MU-008-02	7	0.701	no	stable	none	0	>200	
47-TC-036-02	7	0.632	no	stable	none	0	>200	
41-BU-008	8	0.786	no	stable	none	0	50-200	
41-BW	8	0.826	no	stable	none	0	50-200	
41-BW-032	8	0.812	no	stable	none	0	>200	
41-EH	8	0.837	no	stable	none	0	>200	
41-EH-028	8	0.844	no	illed-dorma	none	0	>200	
41-ES-002	8	0.79	no	stable	none	0	>200	
41-ES-016	8	0.695	no	stable	none	0	0-50	
41-HG-092-01	8	0.772	no	stable	none	0	>200	
41-MR	8	0.778	no	stable	none	0	50-200	
41-UB-006	8	0.807	no	stable	none	0	50-200	
41-BR	9	0.918	no	stable	none	0	50-200	
41-BU-001	9	0.888	no	stable	none	0	0-50	
41-BU-006	9	0.945	no	stable	none	0	50-200	
41-BW-032	9	0.944	no	stable	none	0	>200	
41-EH-003	9	0.932	no	stable	none	0	>200	
41-ES-002	9	0.908	no	stable	none	0	>200	
41-ES-068	9	0.892	no	stable	none	0	>200	
41-ET	9	0.889	no	stable	none	0	50-200	
41-HB-019	9	0.86	no	stable	none	0	>200	
41-HG-055	9	0.853	yes	stable	none	0	0-50	
41-HB-024-11	4	0.925	no	stable	none	0	>200	
41-MD-006	9	0.887	no	stable	none	0	>200	
41-MU-008-02	9	0.927	no	stable	none	0	>200	
41-BU-008	10	0.966	no	stable	none	0	0-50	
41-ES-016	10	0.88	no	stable	none	0	0-50	
41-ET-021	10	0.991	no	stable	none	0	0-50	
41-HB-019	10	1.033	no	stable	none	0	>200	
41-HG	10	0.969	no	stable	none	0	50-200	
41-HG-055	10	0.994	yes	stable	none	0	0-50	
41-HG-080	10	0.985	no	stable	none	0	0-50	
41-HG-092-01	10	1.03	no	stable	none	0	>200	
41-UB	10	0.981	no	stable	none	0	>200	
41-BU-001	11	1.095	no	stable	none	0	0-50	
41-BU-008	11	1.123	no	stable	none	0	0-50	



Road Number	Site Number	Mile Post	Perched Material	Fill Condition	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	Distance from Stream (ft)	2003 work
41-ES	11	1.123	no	stable	none	0	>200	
41-ES-016	11	1.121	no	stable	none	0	50-200	
41-ET-021	11	1.129	no	stable	none	0	50-200	
41-HG	11	1.085	no	stable	none	0	50-200	
41-HG-012	11	1.064	no	stable	none	0	>200	
41-SM	11	1.137	yes	stable	none	0	>200	
41-BW-032	12	1.214	no	stable	none	0	>200	
41-EH	12	1.219	no	stable	none	0	>200	
41-ES-016	12	1.19	no	stable	none	0	50-200	
41-ET	12	1.226	no	stable	none	0	50-200	
41-ET-011-05	12	1.195	no	stable	none	0	50-200	
41-HG-012	12	1.155	no	stable	none	0	>200	
41-HG-092	12	1.174	no	stable	none	0	>200	
41-SM	12	1.173	no	stable	none	0	>200	
41-UB	12	1.238	no	stable	none	0	>200	
41-ES	13	1.273	no	stable	none	0	0-50	
41-ES-002	13	1.261	no	stable	none	0	50-200	
41-ET-021	13	1.266	no	stable	none	0	50-200	
41-HG	13	1.303	no	stable	none	0	50-200	
41-HG-092-01	13	1.349	no	stable	none	0	>200	
41-MD	13	1.32	no	stable	none	0	>200	
41-BU-001	14	1.437	no	stable	none	0	0-50	
41-EH	14	1.421	no	stable	none	0	>200	
41-ES-016	14	1.357	no	stable	none	0	0-50	
41-HG	14	1.425	no	stable	none	0	>200	
41-HG-054-21	14	1.391	no	stable	none	0	>200	
41-HG-055-05	14	1.35	no	stable	none	0	0-50	
41-MD-003	14	1.358	no	stable	none	0	50-200	
41-UB-008	14	1.341	no	stable	none	0	0-50	
41-BU-008	15	1.451	no	stable	none	0	50-200	
41-BW-032	15	1.468	no	stable	none	0	>200	
41-EH	15	1.508	no	stable	none	0	>200	
41-ES-002	15	1.52	no	stable	none	0	>200	
41-ET-011	15	1.488	no	stable	none	0	50-200	
41-HG-080	15	1.541	no	stable	none	0	0-50	
41-MD-006	15	1.51	no	stable	none	0	>200	
41-SM	15	1.504	yes	stable	none	0	>200	
41-UB-008	15	1.45	no	stable	none	0	50-200	
41-BU-001	16	1.571	no	stable	none	0	0-50	
41-BU-008	17	1.683	no	stable	none	0	0-50	
41-ES	17	1.675	no	stable	none	0	50-200	
41-ET-021	17	1.666	no	stable	none	0	0-50	
41-HG	17	1.665	no	stable	none	0	50-200	
41-HG-080	17	1.659	no	stable	none	0	0-50	
41-MD-006	17	1.709	no	stable	none	0	>200	
41-MR	17	1.644	no	stable	none	0	50-200	
41-SM	17	1.675	no	stable	none	0	>200	
41-BU-008	18	1.795	no	stable	none	0	50-200	
41-HG	18	1.816	no	stable	none	0	>200	
41-HG-012	18	1.757	no	unstable	none	0	>200	
41-HB--024-11	13	1.803	no	stable	none	0	>200	
41-MR	18	1.743	no	stable	none	0	50-200	
41-BR	19	1.881	no	stable	none	0	50-200	
41-HG-092	20	2.049	no	stable	none	0	>200	
41-BU-008	21	2.125	no	stable	none	0	>200	
41-MD-003	21	2.061	no	stable	none	0	50-200	
41-BU-001	22	2.211	no	stable	none	0	50-200	
41-BR	23	2.275	no	stable	none	0	0-50	
41-BU-001	23	2.286	no	stable	none	0	50-200	
41-ES	23	2.268	no	stable	none	0	>200	
41-BR	24	2.428	no	unstable	none	0	0-50	
41-BU-008	24	2.421	no	stable	none	0	>200	
41-ES	24	2.284	no	stable	none	0	50-200	
41-UB	25	2.473	no	stable	none	0	>200	
41-ET	26	2.629	no	stable	none	0	0-50	
41-HG	26	2.583	no	stable	none	0	>200	

Road Number	Site Number	Mile Post	Perched Material	Fill Condition	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	Distance from Stream (ft)	2003 work
41-HG	27	2.619	no	stable	none	0	50-200	
41-BR	28	2.776	no	stable	none	0	0-50	
41-HG	28	2.658	no	stable	none	0	>200	
41-HG-092	28	2.756	no	stable	none	0	>200	
41-ES	29	2.815	no	stable	none	0	50-200	
41-HG	29	2.898	no	stable	none	0	>200	
41-UB	29	2.946	no	stable	none	0	>200	
41-BR	31	3.148	no	stable	none	0	50-200	
41-ES	32	3.246	no	stable	none	0	>200	
41-HG-092	32	3.204	no	stable	none	0	>200	
41-MR	33	3.283	no	stable	none	0	0-50	
41-ES	37	3.708	no	stable	none	0	>200	
41-ET-011	37	3.746	no	stable	none	0	0-50	
41-EH	38	3.843	no	stable	none	0	>200	
41-HG	38	3.766	no	stable	none	0	>200	
41-BR	39	3.854	no	stable	none	0	>200	
41-ES	39	3.882	no	stable	none	0	>200	
41-ET-011	39	3.899	no	stable	none	0	50-200	
41-ES	41	4.123	no	stable	none	0	>200	
41-HG	42	4.234	no	stable	none	0	>200	
41-ES	45	4.487	no	stable	none	0	>200	
41-ES	46	4.601	no	stable	none	0	>200	
41-HG	50	5.025	no	stable	none	0	0-50	
41-HG	51	5.1	no	stable	none	0	0-50	
41-HG	52	5.178	no	stable	none	0	>200	
41-HG	53	5.326	no	stable	none	0	>200	
41-HG	55	5.48	no	stable	none	0	50-200	
41-ES	57	5.67	no	stable	none	0	>200	
41-ES	60	6.011	no	stable	none	0	>200	
41-HG	62	6.225	no	stable	none	0	50-200	
41-ES	63	6.255	no	stable	none	0	>200	
41-HG	65	6.528	no	stable	none	0	>200	
41-ES	66	6.551	no	stable	none	0	50-200	
41-ES	69	6.874	no	stable	none	0	>200	
41-ES	75	7.54	no	stable	none	0	50-200	
41-ES	90	8.975	no	stable	none	0	50-200	
41-ES	94	9.421	no	stable	none	0	>200	
41-ES	98	9.849	no	stable	none	0	>200	
41-HG	110	11.036	no	stable	none	0	0-50	

Road Number	Site Number	Mile Post	Road Slide Type	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	Distance from Stream (ft)
41-ES-028-s1	2	0.168	streambank	high	5000	0-50
41-ES-002-03	1	0.038	fill	high	3000	>200
41-ES	35	3.468	fill	high	1200	>200
41-ES	41	4.076	fill	high	500	>200
41-ES	29	2.942	fill	high	400	0-50
41-ET	10	1.043	fill	high	350	50-200
41-ET-011	27	2.691	fill	high	180	50-200
41-ES	27	2.651	fill	high	150	50-200
41-ES-028	2	0.182	streambank	high	100	0-50
41-ES	55	5.351	fill	high	100	>200
41-ES	16	1.629	fill	high	20	50-200
41-HG	19	1.939	fill	high	10	0-50
41-ES-028-06	1	0.016	streambank	moderate	1000	0-50
41-MS	20	1.962	fill	moderate	450	0-50
41-BU-001	8	0.82	cutbank	moderate	300	0-50
41-HG-106	5	0.49	fill	moderate	217	0-50
41-HG-055-03	8	0.817	fill	moderate	210	50-200
41-MU	11	1.125	fill	moderate	150	50-200
41-HG-055-03	2	0.206	fill	moderate	133	50-200
41-ES-016	13	1.268	streambank	moderate	100	0-50
41-ES-016-08	1	0.147	streambank	moderate	60	0-50
41-ES	85	8.502	fill	moderate	60	50-200
41-ES	31	3.093	fill	moderate	60	50-200
41-ES	60	6.044	fill	moderate	50	>200
41-JH	14	1.391	fill	moderate	46	50-200
41-HG-046	8	0.842	fill	moderate	40	50-200
41-UB	27	2.606	fill	moderate	20	>200
41-BU-001	10	0.981	cutbank	moderate	10	0-50
41-ES	17	1.745	fill	moderate	5	>200
41-MD-003	23	2.329	fill	moderate	3	50-200
41-MD-003-15	2	0.214	fill	moderate	3	0-50
41-HG-012	12	1.183	fill	moderate	0	>200
41-HG-012	14	1.407	fill	moderate	0	>200
41-HG-012	15	1.471	fill	moderate	0	>200
41-HG-012	16	1.501	fill	moderate	0	>200
41-HG-012	17	1.521	fill	moderate	0	>200
41-HG-012	18	1.553	fill	moderate	0	>200
41-HG-012	19	1.712	fill	moderate	0	>200
41-HG	88	8.81	cutbank	moderate	0	50-200
41-HG-055	1	0.101	streambank	moderate	0	0-50
41-HG-092	6	0.626	fill	low	370	50-200
41-EH-032	6	0.616	fill	low	350	0-50
41-BU-001	17	1.67	cutbank	low	200	0-50
41-ES-016-02	9	0.805	fill	low	160	0-50
41-EH-043-04	5	0.293	fill	low	160	>200
41-EH-043	9	0.597	fill	low	130	50-200
41-MS-004	6	0.632	fill	low	120	50-200
41-ES-028	7	0.708	cutbank	low	110	50-200
41-MS	21	2.035	fill	low	100	0-50
41-MD-006	8	0.769	cutbank	low	100	50-200
41-HG-103	2	0.185	streambank	low	91	0-50
41-ES	54	5.327	fill	low	90	>200
41-MS-004	3	0.337	fill	low	80	0-50
41-EH-043	3	0.217	fill	low	80	>200
41-BU-008-04-01	1	0.098	cutbank	low	74	0-50
41-MR-017	1	0.103	fill	low	70	50-200
41-ES-016-02	11	0.852	fill	low	70	0-50
41-ES-016-02-01	2	0.058	streambank	low	70	0-50
41-MS	16	1.582	fill	low	70	0-50
41-MR-001	2	0.155	fill	low	60	50-200
41-EH-043	8	0.578	cutbank	low	60	50-200
41-ES-016-02	8	0.793	cutbank	low	60	0-50
41-ES	51	5.117	fill	low	55	>200
41-ES-085	2	0.2	fill	low	50	0-50
41-MS	27	2.736	fill	low	50	50-200
41-ES	28	2.671	cutbank	low	50	50-200

Road Number	Site Number	Mile Post	Road Slide Type	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	Distance from Stream (ft)
41-ES-087	1	0.076	fill	low	50	0-50
41-ES	80	7.957	fill	low	50	>200
41-ES-016-02-01	1	0.04	streambank	low	50	0-50
41-UB	26	2.576	fill	low	45	>200
41-MS-004-09	1	0.025	fill	low	40	>200
41-EH-043-04	3	0.261	fill	low	40	>200
41-BU-006	2	0.198	fill	low	40	>200
41-XX-000	2	0.126	streambank	low	40	50-200
41-ES	32	3.184	fill	low	35	50-200
41-ES-016-02	10	0.83	cutbank	low	30	0-50
41-XX-000	5	0.268	cutbank	low	30	50-200
41-EH-043	5	0.375	cutbank	low	30	50-200
41-HG-092	16	1.628	fill	low	29	>200
41-BU-001	31	3.104	fill	low	27	0-50
41-ES-024-07	1	0.115	fill	low	25	0-50
41-XX-000	3	0.155	streambank	low	20	50-200
41-EH-027	3	0.344	fill	low	20	>200
41-ES-012	2	0.155	cutbank	low	20	0-50
41-ES-097	3	0.344	cutbank	low	15	0-50
41-XX-000	4	0.252	cutbank	low	10	50-200
41-MS-004	7	0.675	cutbank	low	10	0-50
41-EH-032	3	0.349	fill	low	10	>200
41-ES	106	10.56	cutbank	low	10	50-200
41-UB	30	2.895	fill	low	10	>200
41-HG	2	0.198	cutbank	low	8	0-50
41-HG-046	12	1.159	fill	low	6	50-200
41-MR	23	2.259	fill	low	6	0-50
41-UB	25	2.515	cutbank	low	5	>200
41-UB	22	2.21	cutbank	low	2	>200
41-ES-024	5	0.479	cutbank	low	2	50-200
41-HG-011	1	0.097	cutbank	low	2	50-200
41-MD-017	4	0.412	fill	low	1	>200
41-UB-010	3	0.318	cutbank	low	0	>200
41-MR	24	2.445	fill	low	0	50-200
41-ES-097	4	0.433	cutbank	low	0	50-200
41-EH-043	2	0.203	cutbank	low	0	>200
41-UB	24	2.433	cutbank	low	0	>200
41-EH-043	1	0.111	fill	low	0	>200
41-XX-000	1	0.112	fill	low	0	>200
41-BU-006	3	0.21	cutbank	low	0	>200
41-UB	29	2.764	cutbank	low	0	>200
41-ET-011	4	0.369	fill	low	0	>200
41-UB-007	1	0.081	cutbank	low	0	>200
41-EH-028	2	0.209	fill	low	0	>200
41-EH-028-04	1	0.012	fill	low	0	>200
41-EH-028-04	3	0.146	fill	low	0	>200
41-UB	28	2.642	cutbank	low	0	>200
41-BU-007	1	0.04	cutbank	low	0	50-200
41-BU-001	32	3.15	cutbank	low	0	0-50
41-BU-001-08	5	0.501	cutbank	low	0	>200
41-EH-043-04	9	0.898	fill	low	0	>200
41-EH-043-04	4	0.268	cutbank	low	0	>200
41-EH-043-04	1	0.131	cutbank	low	0	>200
41-EH-043	4	0.265	cutbank	low	0	>200
41-BU-006	7	0.667	cutbank	low	0	50-200
41-EH-043	6	0.437	fill	low	0	>200
41-BU-008	22	2.207	cutbank	low	0	50-200
41-HB-024	6	0.086	fill	low	0	50-200
47-KG-049	3	0.31	fill	low	0	>200
41-HG-092	5	0.474	fill	low	0	>200
41-EH-043	7	0.456	fill	low	0	>200
41-EH-043-04-01	1	0.103	cutbank	low	0	>200
41-MD-003-03	4	0.358	cutbank	low	0	>200
41-ES	53	5.307	cutbank	low	0	>200
41-HG-022	6	0.629	fill	low	0	50-200
41-EH-028-04	2	0.096	fill	low	0	>200

Road Number	Site		Road Slide	Treatment	Controllable	Distance from
	Number	Mile Post	Type	Immediacy	Volume (yd <sup>3</sup> )	Stream (ft)
41-EH	41	4.082	cutbank	low	0	>200
41-ES-016-02	3	0.284	fill	low	0	50-200
41-ES	101	10.137	cutbank	low	0	0-50
41-ES	103	10.279	cutbank	low	0	>200
41-HG-012-13	1	0.108	fill	low	0	>200
41-ES	56	5.482	cutbank	low	0	>200
41-UB-010	5	0.451	cutbank	low	0	>200
41-ES	88	8.778	fill	low	0	>200
41-ES	61	6.131	cutbank	low	0	>200
41-ES	52	5.233	cutbank	low	0	>200
41-MD-006	12	1.236	fill	low	0	>200
41-ES	89	8.841	fill	low	0	>200
41-ES	36	3.492	cutbank	low	0	>200
41-EH-003	6	0.612	cutbank	low	0	>200
41-ES-016-02	6	0.602	fill	low	0	0-50
41-EH-003	7	0.693	cutbank	low	0	>200
41-EH-003	9	0.885	cutbank	low	0	>200
41-HG-066	1	0.06	cutbank	low	0	0-50
41-ES-096	5	0.508	cutbank	none	0	>200
41-HG-055-05	4	0.414	fill	none	0	0-50
41-EH-003	8	0.775	cutbank	none	0	>200
41-ES-028	14	1.41	fill	none	0	0-50
41-ES	102	10.196	cutbank	none	0	>200
41-BU-001	16	1.649	cutbank	none	0	50-200
41-MN-007	6	0.562	cutbank	none	0	>200

Road Number	Site Number	Mile Post	Erosion Type	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	2003 work
41-ES-028	12	1.171	gully	high	900	
41-ET-011	14	1.396	gully	high	530	
41-ET-011	23	2.256	gully	high	250	
41-HG-046-11	1	0.052	gully	high	120	
41-ET-011	13	1.244	gully	high	100	
41-HG-046	5	0.454	gully	high	50	
41-MD-003	12	1.159	gully	high	20	
41-ES	14	1.37	gully	high	20	
41-MD-003	20	1.865	gully	high	5	
41-HG-081	1	0.049	gully	high	0	
41-ES	93	9.302	gully	moderate	350	
41-BU-008	8	0.769	gully	moderate	130	
41-ET-011	9	0.863	gully	moderate	100	
41-ET-011	12	1.208	gully	moderate	80	
41-HG-011	1	0.07	gully	moderate	75	
41-ET-019	5	0.527	gully	moderate	60	
41-ES-016-02	1	0.016	gully	moderate	50	
41-MD-003-08	1	0.094	gully	moderate	50	
41-HG-046-02	2	0.164	gully	moderate	50	
41-BU-008	2	0.207	gully	moderate	25	
41-HG-046	2	0.217	gully	moderate	20	
41-HG-046	12	1.221	gully	moderate	17	
41-MD-017	4	0.367	gully	moderate	8	
41-ES	9	0.892	major rilling	moderate	4	
41-MD-003	17	1.61	gully	moderate	3	
41-ES	19	1.884	gully	moderate	3	
41-MD-003	19	1.821	major rilling	moderate	3	
41-MD-003	3	0.342	major rilling	moderate	2	
41-MD-003	13	1.327	gully	moderate	2	
41-ES-016	1	0.008	gully	moderate	1	
41-MD-003	15	1.548	gully	moderate	0	
41-EH-043-04	14	1.384	gully	low	300	
41-BU-001	32	3.216	gully	low	278	
41-ES	91	9.06	gully	low	250	
41-BR-028	3	0.344	gully	low	130	
41-ES-016-02	3	0.316	gully	low	130	
41-ES	72	7.191	major rilling	low	123	
41-MS-004	3	0.247	gully	low	120	
41-ES-016-02-01	1	0.106	gully	low	90	
41-ES	24	2.375	gully	low	90	
41-MS-025	1	0.053	major rilling	low	80	
41-MS-004	2	0.105	gully	low	80	
41-EH-043-04	13	1.279	gully	low	80	
41-HG-055-05-04	5	0.543	gully	low	75	
41-MR-033	2	0.172	gully	low	74	
41-ES	78	7.778	gully	low	70	
41-ET-011-11	1	0.017	major rilling	low	60	
41-ES-028	4	0.39	gully	low	60	
41-MS-004	4	0.297	gully	low	60	
41-BR-018	1	0.026	gully	low	55	
41-BR-008	2	0.155	gully	low	50	
41-HG-106	4	0.414	gully	low	45	
41-EH-003	6	0.642	gully	low	40	
41-ES	79	7.944	gully	low	40	
41-BU-001	28	2.774	gully	low	33	
41-EH-043	5	0.491	gully	low	30	
41-HG-055	14	1.446	gully	low	30	
41-BU-008-11	1	0.099	major rilling	low	25	
41-HG-066	2	0.204	gully	low	25	
41-ES-024	6	0.557	gully	low	25	
41-ES-016-02	9	0.862	gully	low	25	
41-EH-043-04	12	1.222	gully	low	25	
41-MS	16	1.565	gully	low	25	
41-ES	84	8.42	gully	low	25	
41-BR-008	3	0.257	gully	low	24	
41-EH-043-04	11	1.101	gully	low	22	

Road Number	Site Number	Mile Post	Erosion Type	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	2003 work
41-ES-016-08	1	0.094	gully	low	20	
41-HG-054-11	1	0.144	major rilling	low	20	
41-EH-043-04	4	0.411	gully	low	20	
41-MS	19	1.921	gully	low	20	
41-MS-004	1	0.068	gully	low	15	
41-EH-043-04-02	2	0.151	gully	low	15	
41-HG-058-08	4	0.418	gully	low	15	
41-ES-028	5	0.535	gully	low	15	
41-HG-054	8	0.781	major rilling	low	15	
41-ES-028	14	1.39	gully	low	15	
41-MD-003	22	2.036	major rilling	low	15	
41-EH-043-04-02	3	0.203	gully	low	12	
41-ES-028	8	0.763	gully	low	12	
41-MS	18	1.824	gully	low	12	
41-MD-003	21	1.982	gully	low	12	
41-ES	32	3.203	gully	low	12	
41-ES-024	7	0.635	gully	low	11	
41-MR	26	2.595	gully	low	11	
41-HB-024-06	1	0.097	major rilling	low	10	
41-ES-024-07	4	0.321	gully	low	10	
41-HB-019	9	0.911	gully	low	10	
41-JH	9	0.917	major rilling	low	10	
41-MR	9	0.9	gully	low	10	
41-MR	20	2.036	gully	low	10	
41-HG	38	3.814	gully	low	10	
41-ES	42	4.194	gully	low	10	
41-MD-003-07	1	0.118	gully	low	9	
41-MS-025	2	0.227	major rilling	low	8	
41-MS-025	3	0.326	gully	low	8	
41-MS	9	0.894	gully	low	8	
41-EH-043-04	10	1.024	gully	low	8	
41-ES-024	1	0.004	gully	low	7	
41-MR	23	2.319	gully	low	7	
41-ES-024-07	3	0.299	gully	low	6	
41-HG-024-02	1	0.068	gully	low	5	
41-ES-016-02-01	3	0.266	gully	low	5	
41-HG-058-08	3	0.286	gully	low	5	
41-ES-016-02-01	4	0.32	major rilling	low	5	
41-EH-043-04	6	0.581	gully	low	5	
41-ES-016-02	7	0.688	gully	low	5	
41-MS-004	7	0.686	gully	low	5	
41-MD-003	18	1.777	major rilling	low	5	
41-ES	64	6.43	gully	low	5	
41-HG-058-06	4	0.376	gully	low	4	
41-EH-032	6	0.562	gully	low	4	
41-MR	8	0.821	gully	low	3	
41-HG-055-05	13	1.345	gully	low	2	
41-ES	26	2.566	major rilling	low	2	
41-HG-018	1	0.104	major rilling	low	1	
41-HG-018	2	0.211	major rilling	low	1	
41-HG-012	3	0.283	major rilling	low	1	
41-HG-024	3	0.281	major rilling	low	1	
41-HG-012	5	0.456	major rilling	low	1	
41-HG-022	5	0.46	major rilling	low	1	
41-HG-012	6	0.556	major rilling	low	1	
41-HG-012	7	0.669	major rilling	low	1	
41-ES	15	1.49	major rilling	low	1	
41-MD-003	16	1.569	gully	low	1	
41-ES	17	1.666	major rilling	low	1	
41-BU	6	0.643	gully	low	0	yes
41-BU	7	0.689	gully	low	0	yes
41-BU-001-08	4	0.41	gully	low	0	yes
41-BU-001-08	5	0.455	gully	low	0	yes
41-BU-007	1	0.082	major rilling	low	0	yes
41-BU-007	5	0.452	gully	low	0	yes
41-BU-008	16	1.551	gully	low	0	yes

Road Number	Site Number	Mile Post	Erosion Type	Treatment Immediacy	Controllable Volume (yd <sup>3</sup> )	2003 work
41-BU-008	17	1.643	gully	low	0	yes
41-BU-008	19	1.92	gully	low	0	yes
41-BU-008	24	2.391	gully	low	0	yes
41-BW	8	0.801	gully	low	0	yes
41-BW	12	1.202	gully	low	0	yes
41-BW	13	1.282	gully	low	0	yes
41-BW	18	1.842	gully	low	0	yes
41-BW	22	2.242	gully	low	0	yes
41-BW	30	3.024	gully	low	0	yes
41-BW	32	3.154	gully	low	0	yes
41-BW-015	4	0.351	gully	low	0	yes
41-HG	83	8.281	gully	low	0	yes
41-HG	84	8.331	gully	low	0	yes
41-HG	88	8.756	gully	low	0	yes
41-HG	101	10.101	gully	low	0	yes
41-HB-024	3	2.188	gully	low	0	yes
41-UB	1	0.083	major rilling	low	0	yes
41-UB	16	1.627	major rilling	low	0	yes
41-UB	17	1.658	major rilling	low	0	yes
41-HG-092-01	1	0.087	gully	low	0	
41-HG-104	1	0.072	gully	low	0	
41-BW-015	2	0.177	gully	low	0	
41-ES-016-10	2	0.158	gully	low	0	
41-HG-055-05	2	0.197	gully	low	0	
41-HG-058-06	2	0.222	gully	low	0	
41-HG-104	2	0.165	gully	low	0	
41-JH-011	2	0.158	gully	low	0	
41-BW-015	3	0.223	gully	low	0	
41-HG-022	3	0.316	major rilling	low	0	
41-HG-066	3	0.312	gully	low	0	
41-HG-092	4	0.427	gully	low	0	
41-HG-022	6	0.485	major rilling	low	0	
41-BW-032	7	0.737	major rilling	low	0	
41-EH-032	7	0.632	gully	low	0	
41-MS	7	0.741	major rilling	low	0	
41-HG-092-01	9	0.864	gully	low	0	
41-HG-046	13	1.294	gully	low	0	
41-HG-092-01	13	1.267	gully	low	0	
41-HG-080	18	1.788	gully	low	0	
41-HB-024	5	1.977	gully	low	0	