SECTION B
SURFACE AND POINT SOURCE EROSION
ROADS AND 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 Albion River watershed, the watershed analysis unit (WAU). This analysis was done following methods suggested in the Watershed Analysis Manual (Version 4.0, Washington Forest Practices Board). The surface erosion analysis is based on a combination of predictive equations and field observations.

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.), ravel and small gullies are considered surface erosion. In contrast, larger discrete erosion events such as landslides are considered mass wasting.

This module examines the impacts of surface erosion depositing sediment into watercourses. Fine sediments from surface erosion can get trapped in porous streambed gravels, increasing water turbidity and suspended sediment concentrations. This can reduce the survival of salmonids in redds or affect physiological characteristics of rearing salmonids. Excessive surface 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 from roads or skid trails.

SURFACE AND POINT SOURCE EROSION FROM ROADS
METHODS

A 100% road inventory of the roads in the Albion WAU was conducted in 1998. 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.

Point source erosion delivered to watercourses from roads was observed. The volume of erosion was converted to a weight assuming a soil bulk density of 100 lbs/cubic foot. Sheetwash erosion

from roads was not directly estimated in the field, this was estimated using the predictive equations in the Surface Erosion module of the Watershed Analysis Manual (Version 4.0, Washington Forest Practices Board) as described below.

Surface erosion from the road surface is influenced by the road type (mainline, active secondary, etc.), amount of traffic, the type of road surface material, and amounts of precipitation and vegetative cover (Reid et. al., 1981). The Watershed Analysis Manual (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 investigations determined the length of the road delivering sediment to a watercourse, the road surface material and the type of road (mainline, active secondary, abandoned, etc.) to aid in the surface erosion calculations. For a complete description of all of the parameters used in calculating surface erosion from roads see the Watershed Analysis Manual (Version 4.0, Washington Forest Practices Board).

The following parameters were used to calculate surface erosion from roads in the Albion WAU (Table B-1). Most of the observed roads were assumed to be older than 2 years, for which a base erosion rate of 60 tons/acre/year was used. For a road under 2 years old a base rate of 110 tons/acre/year was used. The initial value was altered by the factors in Table B-1 in an attempt to model the actual sediment volume contributed by a given road segment. Characteristics determining the factors used were observed in the field and subsequently extrapolated into calculations for non-field observed roads. Road cutslopes and fillslopes usually 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). Approximately 15% of the road use occurs during wet time periods. Because of this, a lower traffic precipitation factor was used than one based on the annual rainfall at the Albion River (about 55 in. per year). In this case a factor weighted toward 85% traffic in the less than 1200 mm (47 in.) per year category and 15% traffic in the 1200-3000 mm (47-118 in.) per year category was used.

Table B-1. Parameters Used for Calculation of Surface Erosion from Roads in the Albion WAU. (Most calculations begin with a base erosion rate of 60 tons/ac/yr.)

Traffic/Precipitation Factor for Road Classes

Road Class:	Active/Mainline	Active/Secondary	Light/Nonactive	No Traffic/ Abandoned
Factor:	24.5	2.3*	1	0.025

Vegetative Cover Factor for Cut/Fill Slopes

% Vegetative Cover:	80	50	30	20	10	0
Factor:	0.18	0.37*	0.53	0.63	0.77	1.0

Surface Material Factor for Road Tread

Road Type:	n (native surface)	n-2 (< 2" rock)	2 (2-6" rock)
Factor:	1.0	0.75*	0.5

* Most common factor used; based on field observation.

Average Weighted Proportion of Delivery Factors for Tread and Cut/Fill Slopes

Prism Section:	Tread	Cut and Fill Slopes
Factor:	0.95	0.55

* Most common factor used; based on field observation.

Because of local rock sources in the Albion WAU many road segments are rocked. Nonetheless many of the roads in the MRC ownership have native surfaces. However, there is a considerable rock component in the cut banks of these roads. During cut and fill road construction a lot of this rock is placed in the road surface. Therefore most estimates of the road surface were based on the mean between a natural and 2-6 in. rock road. Vegetation on road treads and cut and fill slopes were visually estimated in the field and a weighted average of these parameters was used in sediment delivery calculations.

The estimated road surface erosion from the calculations described above was added to the field measurements of point source erosion for total erosion from each road. Field measurements were of observable erosional features, the majority of which had occurred in the last five years, especially on roads with regular maintenance. The field observed erosion was assumed to have occurred and been repaired repeatedly. This assumption is justified because while some field observed erosion may have gone unrepaired for the last twenty years, other erosional features were not recorded due to recent repairs. An assumed recurrence interval of five years was used. The surface erosion totals for each road are used in the sediment input summary for the Albion WAU and to delineate road erosion hazard classes.

Future or potential point source erosion (gully or road fill wash-outs, not sheetwash) 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.

A prioritization of potential point source erosion sites for the Albion WAU is presented (Appendix B). This prioritization is based on amount of controllable erosion of the site and the treatment immediacy. Sites with no controllable erosion observed in 1998 are not included in the prioritization list. The controllable erosion amounts will be updated in a subsequent road inventory in approximately 10 years.
Proper culvert sizing is another important characteristic for consideration of road erosion potential. Culverts that do not have the capacity to pass debris, water and sediment in high flow

events can plug creating road prism failures with high sediment inputs. MRC currently designs all new culvert installations to pass the 100 year flood to ensure enough capacity in the pipe to pass water, debris and sediment in high flows. To determine if culvert sizing is appropriate for existing culverts the area behind each culvert inventoried was determined from topography data in the MRC Geographic Information System (GIS). The regression equation for the North Coast region (Waananen and Crippen, 1977) is used to predict the 50 and 100 year peak flow. A culvert sizing nomograph is used to determine the appropriate size for 50 and 100 year peak flow magnitudes and the predicted size are compared to the existing culvert sizing to determine if the culvert is large enough.

Finally, with this information each road in the Albion WAU is assigned an erosion hazard class. The erosion hazard class is used to classify the roads in the Albion WAU by their current and potential erosion hazard. 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.

SURFACE AND POINT SOURCE EROSION FROM ROADS
RESULTS AND DISCUSSION

The results for the road erosion calculations are summarized in Chart B-1. Road density in the Albion WAU is summarized in Table B-3. The sediment delivery rate for surface and point source erosion from roads in the South Fork Albion Planning Watershed is greater than that for the other planning watersheds. Middle Fork Albion, Lower Albion and Upper Albion Planning Watersheds all deliver less than 100 tons/sq. mi./year while South Fork Albion delivers approximately 130 tons/sq. mi./year of road surface erosion derived sediment. In the previous version of the Albion WAU the South Fork Albion planning watershed was shown to have considerably more surface erosion. However, the use of surface bonding treatments (such as lignin) on the mainline road in the South Fork (Keene Summit) and erosion control work conducted since that original watershed analysis have caused this new estimate of erosion to be lower.

Chart B-1. Road Surface Erosion Sediment Delivery for MRC Ownership in each Planning
Watershed of the Albion WAU over the 1978-98 Time Period.

Road Related Surface Erosion (tons/sq mi/year)
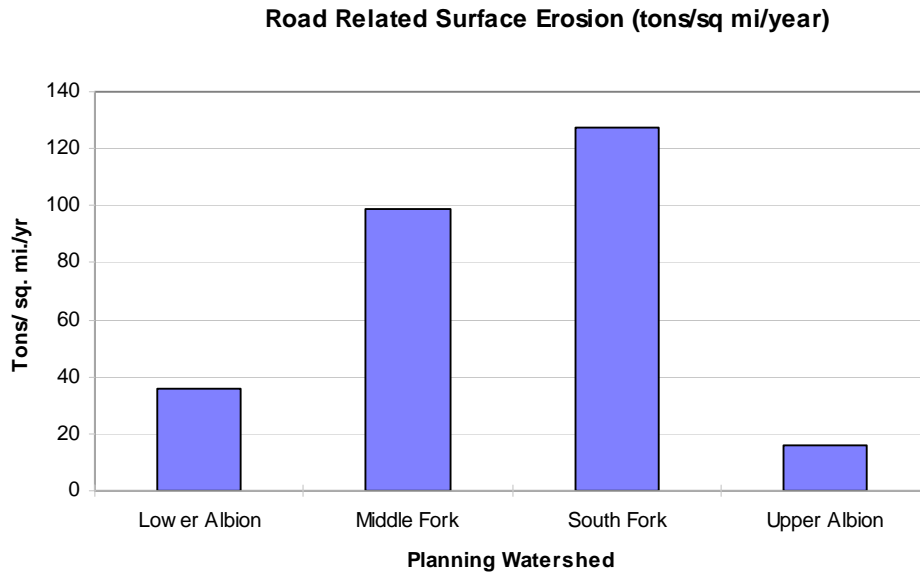
The field observation of erosion in most cases only shows recent erosion on roads. However, as
mentioned in the methods section of this report, the field observed erosion is assumed to have
occurred and been repaired several times. Road grading, maintenance and time often removes
evidence of past erosive events which could be seen in the field. The best preserved of these
events or processes is road failures or slides. Field observed erosion in the Albion WAU
comprises only a small proportion from roads, and much of this is due to slides rather than the
surface erosion process of rilling or gullying. Results from field observations suggest that most
of the maintained roads have minimal delivering field observable point source erosion; probably
because of good road construction. Those roads that are currently not maintained, for the most
part, have few if any fill for rills and gullies to erode.

It was determined that there are approximately 175 miles of truck roads in the Albion WAU.
Road Density in the Albion WAU is presented in Table B-3. South Fork Albion planning
watershed has both the highest road density and the highest sediment delivery rate. However the
difference in sediment delivery between South Fork Albion and the other planning watersheds is
not particularly comparable to the more modest difference in road density for these planning
watersheds.

Table B-3. Road Density for MRC Ownership in each Planning Watershed of the Albion WAU.

Planning Watershed	Lower Albion	Middle Albion	South Fork Albion	Upper Albion
Road Density (mi./sq. mi.)	6.3	6.1	7.8	7.4

Road placement is an alternative explanation for the differences in sediment delivery of the
planning watersheds. In most cases, roads in close proximity to watercourses tend to have much

higher sediment delivery rates. This is true even for well constructed and well maintained roads.
Alternatively, roads built high on hillslopes, which avoid crossing watercourses have a lower
surface erosion rate. The Lower Albion planning watershed benefits from road placement. Most
of the roads in this planning watershed are situated on an uplifted marine terrace with few
watercourse crossings; the result is a sediment delivery rate of about 40 tons/sq. mi./yr. The
South Fork Albion planning watershed has a high amount of road adjacent to the South Fork of
the Albion River, as well as many mid-slope roads with somewhat frequent watercourse
crossings. It is estimated the South Fork Albion planning watershed receives approximately 130
tons/sq. mi./yr. road surface erosion sediment delivery. Road placement appears to be an
important factor in the amount of sediment delivery in a given area.

Road usage also contributed significantly to the high sediment delivery of South Fork Albion
planning watershed. Road usage is significant for two reasons: 1) The amount of fine sediment
generated on the surface of an active road is much greater than that on a less active road, and 2)
waterbars and rolling dips are less abundant on active roads leading to longer sediment
contributing road lengths. South Fork Albion planning watershed contains a high amount of
frequently used active-mainline roads; far higher than any other planning watershed in the Albion
WAU.

Road Surface Erosion Hazard Class

The erosion hazard classification for each road in the WAU is presented on Map B-1 and in the
appendix of this module. 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 either 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 near watercourses: a result of too few waterbars and/or rolling dips. Erosion may also be
a product of problem areas such as watercrossing wash-outs, poor road drainage, plugged road
watercrossings, 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
either 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 watercrossing 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
either 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 maps B-2 for the Albion 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 Albion WAU. In the Albion WAU 13 controllable erosion sites have high treatment immediacy, 71 controllable erosion sites have moderate treatment immediacy and 142 have low or undetermined treatment immediacies (note, if no controllable erosion at a site it is not counted). The site identification, treatment immediacy and amount of controllable erosion estimated are found in Appendix B of this report.

The future potential for point source erosion was evaluated in the Albion WAU. This potential erosion or controllable erosion was identified during the road inventory during 1998. Following road upgrades from 1999-2003 a total of 23, 240 cubic yards of controllable erosion remains to be controlled in the Albion WAU (Table B-4).

The culvert size analysis has determined that of the 230 culverts analyzed 105 culverts are potentially too small to pass the 50 year flood (46%) and an additional 115 culverts (50%) will not pass the 100 year flood. The analysis of culvert sizing is only an estimate based on culvert location from the MRC road inventory and area behind the culvert based on MRC GIS topographic data. A field review will be required at each site to determine if the culvert is indeed under-sized, as our confidence in the analysis is low. However, the identification of these culverts as under-sized is a good hypothesis to work from and provides information to address potential road problems in Albion WAU. These culverts identified as potentially too small need to be a high priority for upgrade if after field review the culverts are determined to be under-sized. The culvert sizing results are found in Appendix B of this report.

Table B-4. Controllable Erosion Estimates by Road Feature for the Albion WAU, 2003.

Feature	Controllable Erosion Treatment Immediacy (yd^3)			
	High	**Moderate**	**Low/Undetermined**	*Totals*
Culverts	2295	1731	16389	20415
Crossings	35	44	335	414
Landings	198	528	274	1000
Erosion Features	0	120	29	149
Road slides	782	402	78	1262
Albion WAU Total	*3310*	*2825*	*17105*	*23240*
Percent of total	14%	12%	74%	

The majority of controllable erosion sites are at culverts. The majority of the high treatment immediacy sites have been corrected in 1999-2002. Low treatment immediacy sites typically do not need immediate erosion control work and often can be controlled through appropriated inspections and maintenance.

Road Associated Erosion Control Measures for the Albion River WAU 1999-2003

During the time period 1999 through 2003 MRC conducted considerable erosion control and road upgrade work in the Albion WAU to address and improve identified controllable erosion sites. During 1999-2003 road work has controlled 54,108 cubic yards of controllable erosion. This section summarizes those road updates and erosion control projects done by MRC.

The road associated erosion control work is summarized by road number (Table B-5) for the road work performed in the Albion WAU 1999-2003. The number of treatment types of road associated erosion control is also summarized for the Albion WAU 1999-2003 (Table B-6).

Table B-5. Treated Controllable Erosion by Road Number for the Albion WAU, 1999-2003.

Road Number	Controlled Erosion (cu yds)	Road Number	Controlled Erosion (cu yds)
78-AR	105	78-KS-034	25
78-AR-031	300	78-KS-034-13	29
78-AR-031-04	40	78-KS-045	620
78-AR-031-16	200	78-MR-004-04	18270
78-DM	225	78-MR-004-04-01	20
78-GB	60	78-TC	285
78-GB-003	20	78-TF	2342
78-GG	40	78-TF-028	50
78-GG-002	40	78-TF-028	40
78-J-016	780	78-TM-006	515
78-KS	1407	78-TR-006-13	40
78-KS-016	1439	78-WG	400
78-KS-028	8230	78-WG-018-05	30
78-KS-028-13	8030	78-WG-024	100
78-KS-030	4721	78-KS-034	25
72-BD	4100	78-WG	1235
78-KS-013-09	20	78-WG-015	100

Table B-6. Summary of Treatments for the Road Associated Erosion Control Work Performed in the Albion WAU, 1999-2003.

Treatment Type	Year Work Completed	Volume Controlled (yd^3)
Installed energy dissipators at culvert outlets.	1999	35
Removed perched materials	1999	18480
Removed culverts and installed bridges.	1999	407
Installed rocked dipped crossings	1999	10
Abandoned roads.	1999	4400
Road surface improvements	1999	3457
Removed culverts and installed bridges.	2000	1400
Removed culverts and made rocked rolling dips.	2000	940
Removed culverts and restored channels to natural grade.	2000	40
Rocked culvert fills at outlet side	2000	20
Culverts replaced with larger sizes	2000	15
Rocked dipped crossings	2000	35
Installed dipped crossings	2000	10
Installed rocked dipped crossings	2000	115
Removed perched materials	2000	16409
Removed culverts and made rocked rolling dips.	2001	140
Culverts replaced with larger sizes	2001	160
Installed dipped crossings	2001	180
Removed culverts and installed bridges.	2001	400
Removed culverts and restored natural channels.	2001	315
Altered drainage problems	2001	30
Removed perched materials	2001	10
Corrected road slides	2002	50
Installed dipped crossings	2002	30
Removed culverts and made rocked rolling dips.	2002	90
Removed culverts and restored channels to natural grade.	2002	115
Replace culverts	2002	110
Rocked culvert fills at outlet side	2002	50
Removed perched materials	2002	950
Removed culverts and installed bridges.	2003	4000
Replace culverts	2003	330
Installed rocked dipped crossings	2003	20
Corrected road slides	2003	5
Removed perched materials	2003	1350
Miles of road tread rocked.	1999-2003	4.5 miles
Miles of road decommissioned	1999-2003	0.95 miles

Treated Controllable Erosion Total for Albion WAU 1999 = 26,789 cubic yards
Treated Controllable Erosion Total for Albion WAU 2000 = 18,984 cubic yards
Treated Controllable Erosion Total for Albion WAU 2001 = 1,235 cubic yards
Treated Controllable Erosion Total for Albion WAU 2002 = 1,395 cubic yards
Treated Controllable Erosion Total for Albion WAU 2003 = 5,705 cubic yards
Treated Controllable Erosion Total for Albion WAU 1999-2002 = 54,108 cubic yards

In the Sediment Input Summary of the previous Albion River Watershed Analysis (1999) the South Fork Albion was determined to have the highest road sediment yield. A considerable amount of road work was concentrated in the South Fork Albion because of this. The estimates on reduction of sediment inputs will have to be confirmed by monitoring the road segments over time, however the South Fork Albion should have considerably less sediment yield because this work. The combination of removal of fish barriers, decommissioning roads and the road erosion control work throughout the entire Albion WAU has likely produced a significant improvement to the fishery resource in the watershed.

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 in previous MRC watershed analyses (MRC, 1998 and MRC, 2000). Aerial photographs were analyzed from 1987 and 1996.

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 from sediment delivery rates during previous watershed analyses by MRC (MRC, 1998 and MRC, 2000). A combination of surface erosion modeling and field observations of point source erosion from skid trails, from previous watershed analysis, was used to develop the skid trail estimates. High skid trail density is estimated to contribute 600 tons/square mile/year of sediment. Moderate skid trail density is estimated to contribute 400 tons/square mile/year of sediment, while low skid trail density contributing 100 tons/square mile/year. Results from the South Fork Caspar Creek in the early 1970's suggested that high density tractor logging, with practices used at that time, generated approximately 600 tons/square mile/year (Rice et. al., 1979).

For each photo year the area in each skid trail density category was multiplied by the sediment delivery rate for that density. The estimate was then divided by the MRC ownership in each Calwater planning watershed to provide a sediment rate (tons/square mile/year) for each planning watershed. The estimated rate was then assumed to represent the decade previous to the photo year observed (i.e. 1987 photos represent activity back to 1977).

SURFACE AND POINT SOURCE EROSION FROM SKID TRAILS
RESULTS AND DISCUSSION

The results by time period for the skid trail sediment delivery estimates are summarized in Table B-8 and Chart B-2. The estimates should be considered only a minimum possible sediment delivery for skid trails constructed in the ten years prior to aerial photo coverage (i.e. 1987 and

1996). (In the case of data based on the 1987 aerial photos; the results reflect only nine years of surface erosion prior to this year.) Undoubtedly, some if not many, sediment delivering skid trails were vegetated enough to be overlooked during the inventory; in particular those trails constructed in the first few years after interpretation of aerial photographs. It is possible that sediment from these roads is not evaluated at all.

Chart B-2. Skid Trail Sediment Delivery for MRC Ownership in Three Planning Watersheds of the Albion WAU.
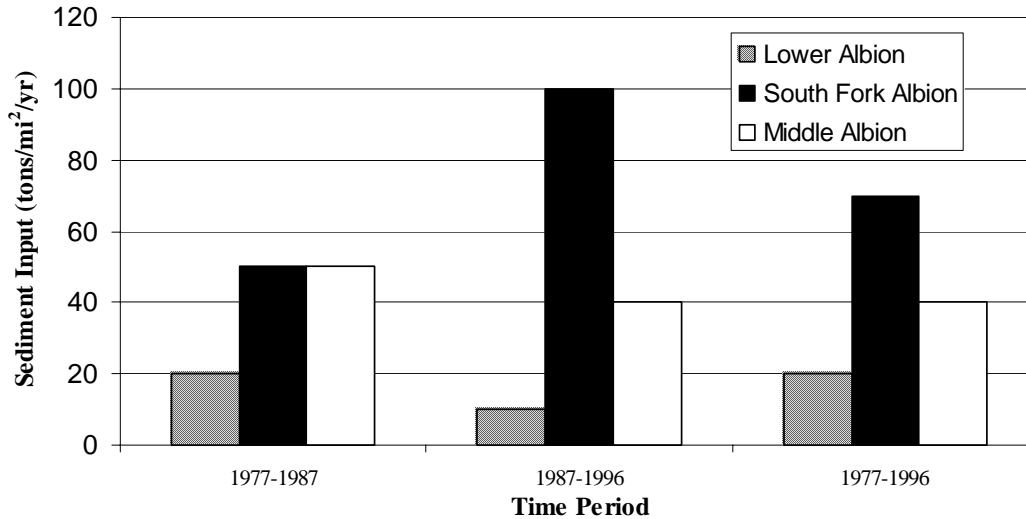
During the 1977-1987 time period both the Middle Albion and South Fork Albion Planning Watersheds are estimated to have delivered 50 tons/sq. mi./yr, while Lower Albion planning watershed contributed only 20 tons/sq. mi./yr. Sediment delivered by skid trails in the Middle Albion and Lower Albion planning watershed decreased slightly during the following time period (1987-1996). However, delivery in South Fork Albion almost doubled during the following nine year time frame. No measurable area of skid trail construction was found in the Upper Albion.

Table B-8. Skid Trail Sediment Delivery Rates for Different Time Periods in the Albion Watershed Analysis Unit.

Planning Watershed	1977-1987 (tons/sq. mi./yr)	1987-1996 (tons/sq. mi./yr)	Total (tons/sq. mi./yr)
Lower Albion	20	10	20
South Fork Albion	50	100	70
Middle Albion	50	40	40

The increase of sediment input from skid trails in the South Fork Planning Watershed is a direct response to increased tractor trail activity in that area, as are the decreases in Lower and Middle Albion sediment inputs. No changes in tractor and skid trail construction practices were recognized over the time frame observed.

The overall sediment input of tractor and skid trails is relatively low and represents only a small proportion of the total surface erosion sediment input. The lack of abundant watercrossings in those areas harvested by tractors is likely the main factor for the low delivery of surface erosion.

CONCLUSIONS

Road related surface erosion and skid trail erosion was estimated to be highest in the South Fork planning watershed, with 130 tons/mi^2/yr and 70 tons/mi^2/yr surface erosion respectively. The Middle Albion planning watershed had the next highest road and skid trail erosion rates, with 100 tons/mi^2/yr and 40 tons/mi^2/yr surface erosion respectively. The Lower and Upper Albion planning watersheds both had low road and skid trail erosion rates.

A considerable amount of erosion control work has been performed on road by MRC in the Albion WAU. From 1999-2004 approximately 54,108 cubic yards of controllable erosion has been controlled. Currently there are an estimated 10, 386 cubic yards of controllable erosion remaining to be treated. This controllable erosion total is found in 13 sites with high treatment immediacy, 71 sites have moderate treatment immediacy, and 142 with low or undetermined treatment immediacies (note, if no controllable erosion at a site it was not counted).

The skid trail erosion rates throughout the Albion WAU were low. The skid trail erosion rates varied between 10 to 100 tons/mi^2/yr, depending on frequency of skid trail use.

LITERATURE CITED

Reid, L.M., Dunne, T., and Cedarholm, C.J. 1981. Application of sediment budget studies to the evaluation of logging road impact. Journal of Hydrology, New Zealand, Vol. 20, pp. 49-62.

Rice, Raymond M.; Tilley, Forest B.; Datzman, Patricia A. 1979. A watershed's response to logging and roads: South Fork of Caspar Creek, California, 1967-1976. Res. Paper PSW-146. Berkeley, CA: Pacific Southwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture; 12 p.

Waananen, A.O. and J.R. Crippen. 1977. Magnitude and flood frequency of floods in California. U.S. Geological Survey. Water Resources Investigation 77-21. Menlo Park, CA 96 p.

Washington Forest Practice Board. 1995. Standard methodology for conducting watershed analysis. Version 4.0. WA-DNR Seattle, WA. Insert Map B-1

Appendix B

Albion River Watershed Analysis Unit

Map B-1 Road Erosion Hazard Classifications

This map presents an erosion hazard rating for the MRC roads. High erosion hazard roads have either the highest amount of recent deliverable surface erosion to watercourses or 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.
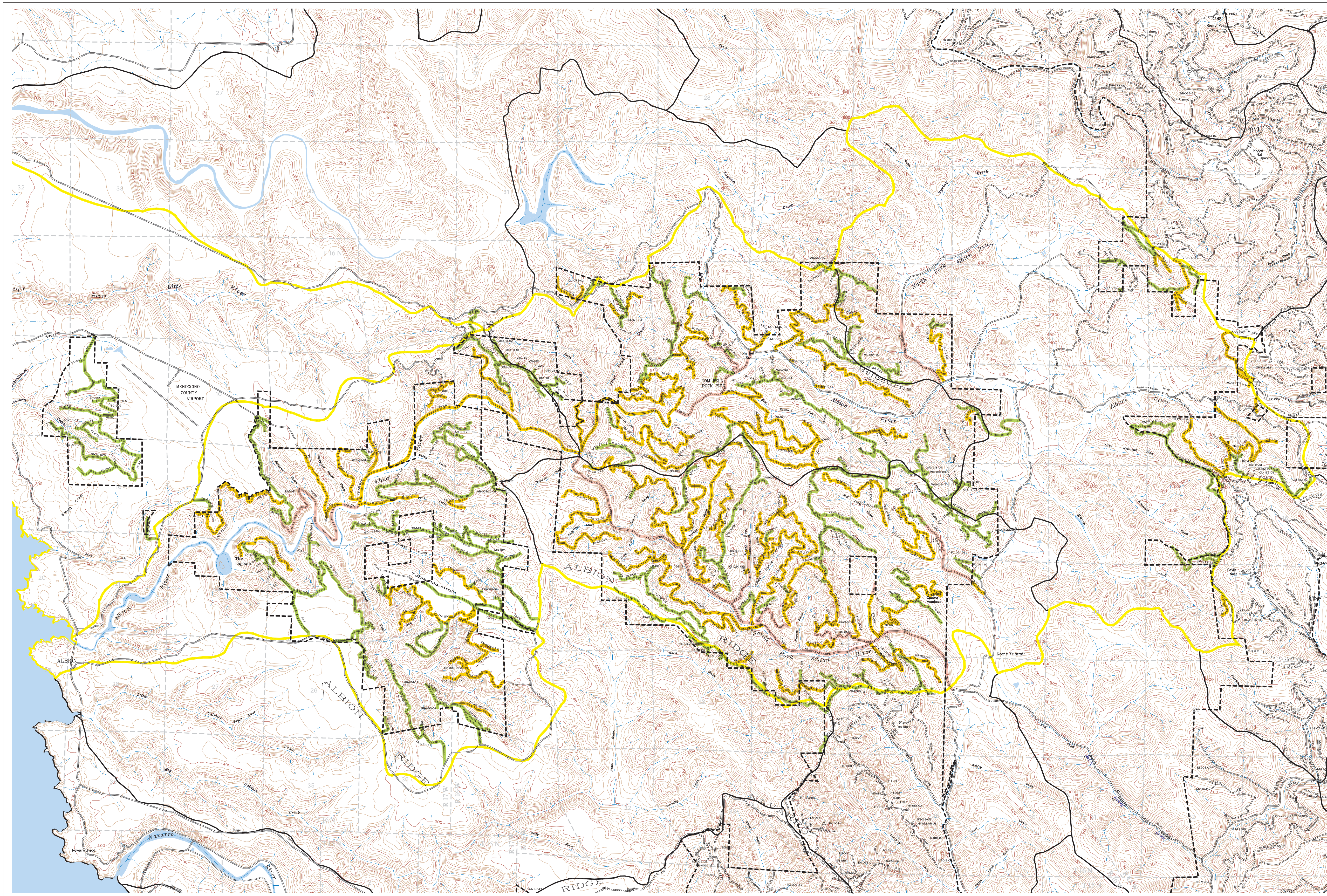
Erosion Hazard Rating
- Low
- Moderate
- High

Transportation
- Paved Road
- Rocked Road
- Native Road
- Jeep Trail

- MRC Ownership
- Planning Watershed Boundary
- Albion River Watershed Boundary

Flow Class
- Class I
- Class II
- Class III

0   1/2   1 Mile

June 2004
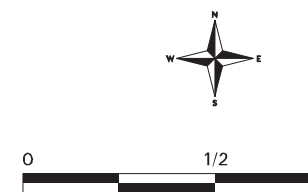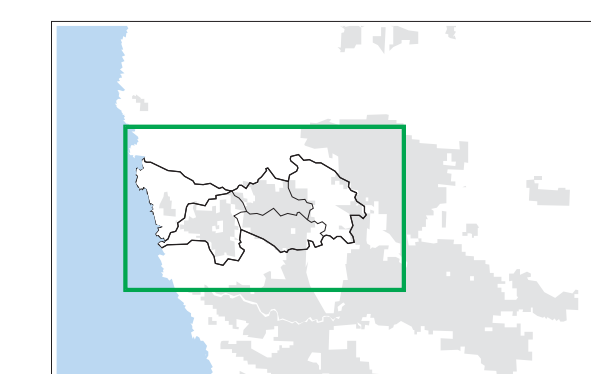
Albion River
Watershed Analysis
Unit

Map B-2
Road Feature
Treatment Immediacy

This map presents the status of features in the Albion WAU from the MRC road inventory as of the end of year 2003. The entire road network and road features were initially mapped using geographic positioning system (GPS) in 1998; updates to this inventory were performed each year following. For each feature with the potential to deliver sediment (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.
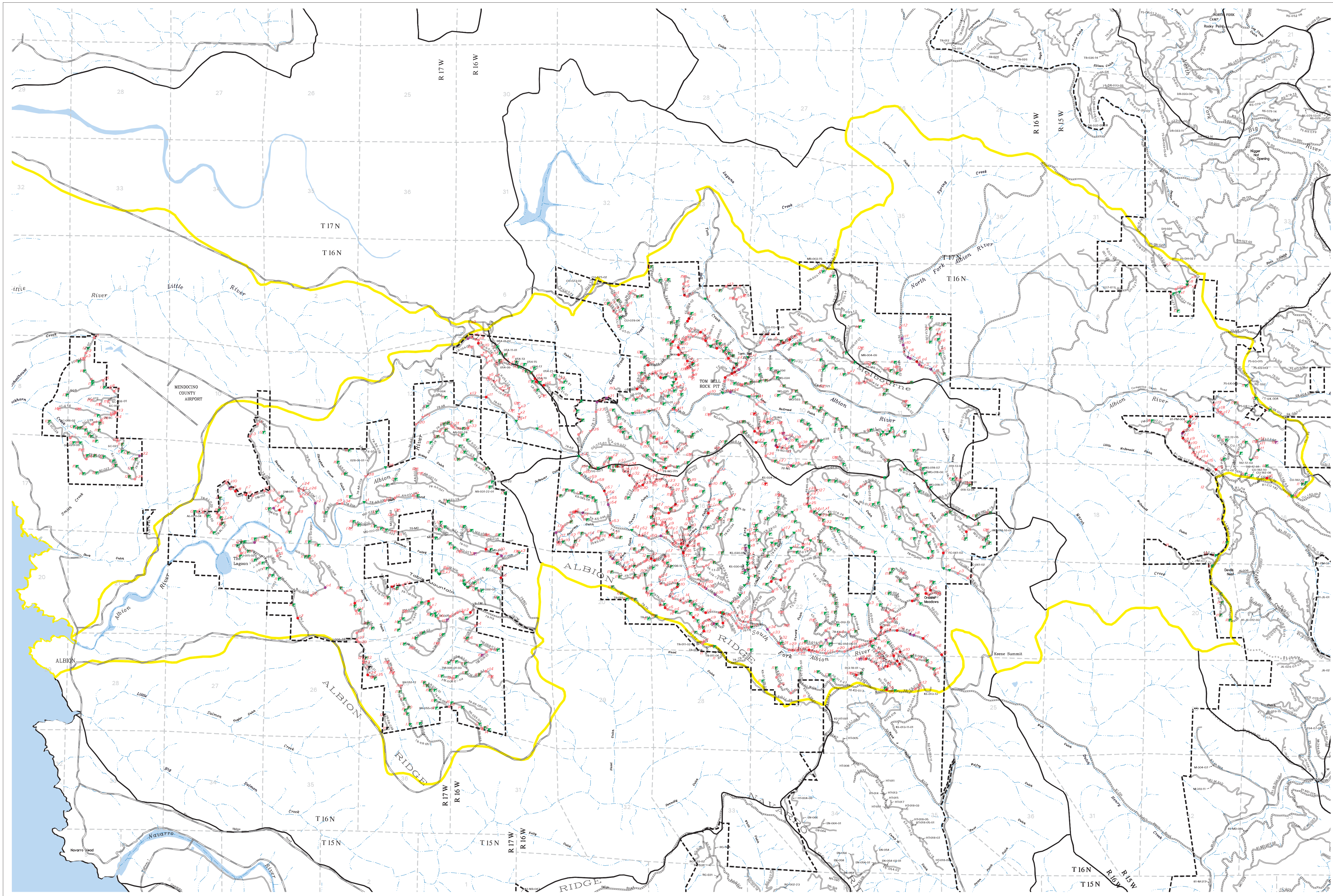
Culverts
- High
- Moderate
- Low
- None
- Undetermined

Crossings
- High
- Moderate
- Low
- None
- Undetermined

Landings
- High
- Moderate
- Low
- None
- Undetermined

Transportation
- Paved Road
- Rocked Road
- Native Road
- Jeep Trail
- MRC Ownership
- Planning Watershed Boundary
- Albion River Watershed Boundary

Flow Class
- Class I
- Class II
- Class III

June 2004
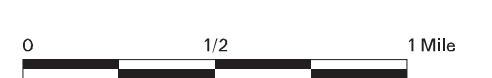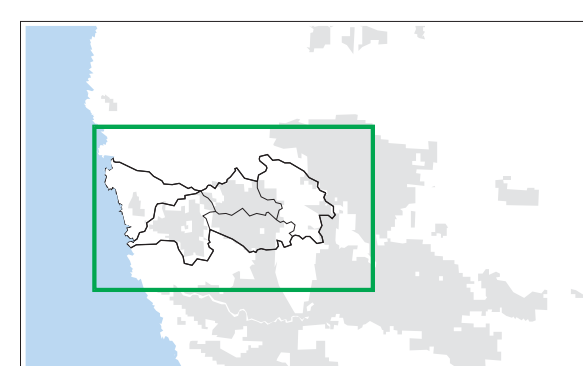
Road Number	Site Number	Mile Post	Culvert Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd^3)
78-SS-012	3	0.228	watercourse	yes, road	high	160
78-SC-029	8	0.82099998	watercourse	no div. potential	high	150
78-NG	23	2.334000111	watercourse	yes, ditch	high	124
78-J-006	13	1.258999944	watercourse	yes, ditch	high	93
78-J-016	1	0.079999998	watercourse	yes, ditch	high	82
78-DM-015	1	0.063000001	watercourse	yes, ditch	high	72
78-CU-106	4	0.296000004	watercourse	yes, ditch	high	64
78-TF	8	0.419999987	watercourse	yes, ditch	high	56
78-J-006	24	2.339999914	watercourse	yes, ditch	high	55
78-DM-012	8	0.731000006	watercourse	yes, ditch	high	50
81-PM	20	1.447000027	ditch relief	yes, ditch	high	50
78-SS-012	5	0.52700001	watercourse	yes, ditch	high	44
78-NG-037	5	0.448000014	watercourse	yes, ditch	high	42
78-DM-012	6	0.579999983	watercourse	yes, ditch	high	41
78-TF	6	0.338	watercourse	yes, ditch	high	37
78-TR-006-13	7	0.527999997	watercourse	yes, ditch	high	36
78-WG	8	0.731999993	watercourse	yes, road	high	33
78-WG	8	0.731999993	undetermined	undetermined	high	33
78-TM-008	8	0.805000007	watercourse	yes, ditch	high	27
78-WG-018-14	1	0.108000003	watercourse	yes, road	high	27
81-PM	4	0.377999991	ditch relief	yes, ditch	high	26
81-PM	5	0.474999994	ditch relief	yes, ditch	high	26
78-DH	6	0.331	ditch relief	undetermined	high	20
81-PM	7	0.542999983	ditch relief	yes, ditch	high	20
78-AR	13	1.328999996	watercourse	yes, ditch	high	18
78-MD-021	1	0.021	watercourse	yes, ditch	high	18
78-SS	10	0.954999983	ditch relief	undetermined	high	18
81-PM	2	0.241999999	ditch relief	yes, ditch	high	18
78-KS	10	0.902999997	ditch relief	yes, road	high	17
78-NG-037	9	0.829999983	watercourse	yes, road	high	17
78-TC-008	4	0.365999997	ditch relief	undetermined	high	17
78-TR	6	0.465999991	ditch relief	undetermined	high	17
78-TR-006	10	0.764999986	ditch relief	yes, ditch	high	16
78-TR-006	2	0.188999996	ditch relief	undetermined	high	16
78-TR-006-13	1	0.143999994	ditch relief	undetermined	high	16
78-WG	7	0.663999975	ditch relief	yes, ditch	high	16
81-PM	21	0.286000013	ditch relief	yes, ditch	high	16
78-KS	45	3.617000103	ditch relief	undetermined	high	15
78-NG	6	0.486000001	ditch relief	undetermined	high	15
81-PM	16	1.04400003	ditch relief	yes, road	high	15
78-MR	5	0.215000004	ditch relief	undetermined	high	14
78-KS	15	1.20599997	ditch relief	undetermined	high	13
78-KS	24	1.853999972	ditch relief	undetermined	high	13
78-KS	7	0.625999987	ditch relief	undetermined	high	13
78-KS-013	10	0.773000002	ditch relief	undetermined	high	13
78-KS-028	8	0.778999984	ditch relief	yes, ditch	high	13
78-MD	6	0.611999989	ditch relief	undetermined	high	13
78-MR	4	0.143999994	ditch relief	undetermined	high	13
78-NG-015	5	0.545000017	ditch relief	undetermined	high	13
78-TC	11	0.893000007	ditch relief	undetermined	high	13
78-TC	12	0.992999971	ditch relief	undetermined	high	13
78-TC	14	1.207999945	ditch relief	undetermined	high	13
78-TC-008	2	0.114	ditch relief	undetermined	high	13
78-TM-008	1	0.079000004	watercourse	yes, road	high	13
78-TR-006	1	0.035	ditch relief	undetermined	high	13
78-TR-006-13	2	0.191	ditch relief	undetermined	high	13
78-KS	5	0.375999987	ditch relief	undetermined	high	12
78-AR	11	1.146999955	watercourse	yes, ditch	high	11
78-GG	16	0.763000011	ditch relief	undetermined	high	11
78-GG	18	1.003999949	ditch relief	undetermined	high	11
78-GG	19	1.06400001	ditch relief	undetermined	high	11
78-GG	20	1.120000005	ditch relief	undetermined	high	11
78-KS	57	4.822000027	ditch relief	undetermined	high	11
78-TC	1	0.059	ditch relief	undetermined	high	11
78-TC	5	0.545000017	ditch relief	undetermined	high	11
78-TC-008	5	0.395000011	ditch relief	undetermined	high	11
78-TC-011	2	0.112000003	ditch relief	undetermined	high	11
78-TC-011	3	0.167999998	ditch relief	undetermined	high	11
78-TF-028	5	0.465999991	watercourse	yes, ditch	high	11
78-TR	12	0.949999988	ditch relief	undetermined	high	11
78-TR	7	0.574999988	ditch relief	undetermined	high	11
78-TR-008	2	0.150999993	watercourse	yes, ditch	high	11
78-TR-008	6	0.486999989	watercourse	yes, ditch	high	11
78-GB	5	0.48300001	ditch relief	undetermined	high	9
78-GG	29	1.76699996	ditch relief	undetermined	high	9
78-GG	5	0.158999994	ditch relief	undetermined	high	9
78-GG	8	0.365999997	ditch relief	undetermined	high	9

Road Number	Site Number	Mile Post	Culvert Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd^3)
78-KS-013	16	1.557000041	ditch relief	undetermined	high	9
78-KS-013	6	0.5	ditch relief	undetermined	high	9
78-KS-013	7	0.541000009	ditch relief	undetermined	high	9
78-KS-013	8	0.610000014	ditch relief	undetermined	high	9
78-KS-013-04	8	0.317000002	ditch relief	undetermined	high	9
78-KS-013-16	1	0.009	ditch relief	undetermined	high	9
78-KS-013-18	2	0.237000003	ditch relief	undetermined	high	9
78-KS-028	6	0.632000029	ditch relief	yes, road	high	9
78-KS-045	17	1.669999957	ditch relief	undetermined	high	9
78-SS	2	0.093000002	ditch relief	undetermined	high	9
78-TC	3	0.224000007	ditch relief	undetermined	high	9
78-TC	4	0.398000002	ditch relief	undetermined	high	9
78-TF-028	3	0.27700001	watercourse	yes, ditch	high	9
78-WG	1	0.143000007	ditch relief	yes, ditch	high	9
78-WG	1	0.143000007	undetermined	undetermined	high	9
78-GB	11	1.077999949	ditch relief	undetermined	high	7
78-KS-013-04	2	0.029999999	ditch relief	undetermined	high	7
78-TC-011	5	0.247999996	ditch relief	undetermined	high	7
78-GB	7	0.727999985	ditch relief	undetermined	high	6
78-GB-009-01	1	0.068000004	ditch relief	undetermined	high	6
78-GG	37	2.224999905	ditch relief	undetermined	high	6
78-LR-054	9	0.703999996	ditch relief	no div. potential	high	6
78-NG	2	0.082999997	ditch relief	undetermined	high	6
78-TF	5	0.307999998	ditch relief	undetermined	high	6
78-J	2	0.216999993	ditch relief	undetermined	high	5
78-LR-054	14	1.42900002	ditch relief	no div. potential	high	5
78-LR-054	15	1.462000012	ditch relief	already diverted	high	5
78-GG	33	2.032000065	ditch relief	undetermined	high	4
78-MD	10	0.935000002	ditch relief	undetermined	high	4
78-MD	11	1.06400001	ditch relief	undetermined	high	4
81-CU-182-06	6	0.078000002	ditch relief	no div. potential	high	4
78-KS	46	3.625	ditch relief	undetermined	high	3
78-LR-054	16	1.549999952	ditch relief	no div. potential	high	3
78-TF	7	0.340000004	watercourse	yes, ditch	high	0
78-KS	81	3.66899991	watercourse	yes, ditch	moderate	407
78-TR-006-13	10	0.708000004	watercourse	yes, road	moderate	177
78-SC	22	2.187000036	watercourse	no div. potential	moderate	150
78-J-006	21	2.059000015	watercourse	yes, ditch	moderate	148
78-J-006	4	0.354000002	watercourse	yes, ditch	moderate	85
78-DM-015	2	0.143000007	watercourse	yes, ditch	moderate	81
78-MD	9	0.884000003	watercourse	yes, ditch	moderate	62
78-TM-006	7	0.731000006	watercourse	yes, ditch	moderate	55
78-KS	8	0.723999977	watercourse	yes, road	moderate	53
78-DM-012	10	0.800999999	watercourse	yes, ditch	moderate	33
78-KS	49	3.921999931	watercourse	yes, ditch	moderate	27
78-KS-045	8	0.833999991	watercourse	yes, ditch	moderate	27
78-NG-037	6	0.470999986	watercourse	yes, ditch	moderate	27
78-NG	39	3.921999931	watercourse	yes, ditch	moderate	26
78-TR	8	0.72299999	watercourse	yes, ditch	moderate	26
78-TF	10	0.716000021	watercourse	yes, ditch	moderate	23
78-KS	39	3.160000086	watercourse	yes, ditch	moderate	22
78-KS	9	0.763999999	ditch relief	undetermined	moderate	22
78-DH	10	0.574000001	ditch relief	undetermined	moderate	19
78-DH	5	0.289999992	ditch relief	undetermined	moderate	19
78-DH	7	0.405000001	watercourse	yes, road	moderate	17
78-J-014	1	0.097000003	watercourse	yes, ditch	moderate	17
78-KS	38	3.049000025	watercourse	yes, ditch	moderate	17
78-KS-030-04	1	0.033	watercourse	yes, road	moderate	17
78-WG	44	4.366000175	watercourse	yes, road	moderate	17
78-KS	54	4.673999786	ditch relief	undetermined	moderate	15
78-NG	28	2.84800005	watercourse	yes, road	moderate	14
78-DH	11	0.639999986	ditch relief	undetermined	moderate	13
78-DH	2	0.162	ditch relief	undetermined	moderate	13
78-DH	8	0.430999994	ditch relief	undetermined	moderate	13
78-KS-030	7	0.663999975	watercourse	yes, ditch	moderate	13
78-KS-045-06	1	0.071000002	ditch relief	undetermined	moderate	11
78-KS	34	2.361999989	ditch relief	undetermined	moderate	10
81-PM	6	0.49000001	watercourse	yes, ditch	moderate	10
78-DM	27	2.473999977	ditch relief	undetermined	moderate	9
78-J-016	2	0.144999996	ditch relief	undetermined	moderate	9
78-TF	12	1.192000031	watercourse	yes, ditch	moderate	9
78-TF	12	1.192000031	watercourse	yes, ditch	moderate	9
78-LR-054-06	1	0.082999997	watercourse	no div. potential	moderate	5
78-TF	4	0.259000003	ditch relief	undetermined	moderate	4
78-TF	10	0.716000021	watercourse	undetermined	moderate	0
78-TC	6	0.575999975	ditch relief	undetermined	none	17

Road Number	Site Number	Mile Post	Culvert Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd^3)
78-GB	3	0.404000014	ditch relief	undetermined	none	0
78-GB	6	0.671000004	ditch relief	undetermined	none	0
78-GG	24	1.449000001	ditch relief	undetermined	none	0
78-GG	24	1.449000001	ditch relief	undetermined	none	0
78-GG	50	1.504999995	ditch relief	undetermined	none	0
78-GG	51	1.855999947	ditch relief	undetermined	none	0
78-KS-028	11	1.228999972	ditch relief	undetermined	none	0
78-KS-028	51	1.34800005	ditch relief	undetermined	none	0
78-KS-028	53	1.947000027	watercourse	yes, ditch	none	0
78-KS-028-13	9	0.90200001	watercourse	yes, ditch	none	0
78-KS-030	1	0.130999997	watercourse	yes, ditch	none	0
78-KS-030	11	0.967000008	ditch relief	undetermined	none	0
78-KS-030	4	0.419999987	watercourse	yes, ditch	none	0
78-TC	53	0.67900002	ditch relief	undetermined	none	0
78-TC	6	0.575999975	ditch relief	undetermined	none	0
78-TM-006	3	0.287999988	watercourse	yes, ditch	none	0
78-TM-006	4	0.296999991	watercourse	yes, ditch	none	0
78-WG-018-05	1	0.119999997	watercourse	yes, road	none	0
78-WG-024	4	0.375	watercourse	yes, road	none	0
78-AR	2	0.254999995	watercourse	undetermined	undetermined	0
78-KS	80	2.582000017	watercourse	yes, ditch	low	1388
78-SC-029	7	0.683000028	watercourse	no div. potential	low	600
78-KS	35	2.585000038	watercourse	undetermined	low	320
78-SC	13	1.284000039	watercourse	no div. potential	low	311
78-TR-006	4	0.384000003	watercourse	yes, ditch	low	310
78-KS-013-04	4	0.127000004	watercourse	yes, road	low	290
78-TM-008-01	4	0.416999996	watercourse	yes, ditch	low	283
78-SC-029	4	0.365999997	watercourse	no div. potential	low	280
78-AL-020-04	1	0.064000003	watercourse	yes, ditch	low	244
78-SC	1	0.035999998	watercourse	no div. potential	low	240
81-PM	19	1.386999965	watercourse	yes, road	low	220
81-PM	19	1.386999965	watercourse	yes, road	low	220
78-TM-008	2	0.188999996	watercourse	yes, ditch	low	207
78-KS-013-09	3	0.289999992	watercourse	yes, ditch	low	195
78-DM	26	2.290999889	watercourse	yes, ditch	low	177
78-RR-055-04	3	0.296000004	watercourse	yes, ditch	low	166
78-TM-008-01	8	0.833000004	watercourse	yes, ditch	low	166
78-SS-012	4	0.261000007	watercourse	yes, road	low	160
78-KS-013-09	2	0.129999995	watercourse	yes, ditch	low	156
78-KS-016	3	0.298000008	watercourse	yes, ditch	low	154
78-KS-028	15	1.388000011	watercourse	yes, ditch	low	148
78-RR-055	6	0.59799999	watercourse	yes, ditch	low	145
78-TR-008	5	0.456	watercourse	yes, ditch	low	145
78-AR-032	7	0.737999976	watercourse	yes, ditch	low	142
78-AR-031	33	3.328999996	watercourse	yes, ditch	low	139
78-SC	16	1.503000021	watercourse	no div. potential	low	133
78-WG	5	0.492000014	watercourse	yes, ditch	low	133
78-WG	4	0.428000003	watercourse	yes, road	low	120
78-CU-113	9	0.943000019	watercourse	yes, ditch	low	114
81-CU-182-03	2	0.180000007	watercourse	no div. potential	low	110
78-KS-013-24	10	0.958999991	watercourse	yes, ditch	low	105
78-DM-012	11	0.864000022	watercourse	yes, ditch	low	104
78-DM-012	4	0.284000009	watercourse	yes, ditch	low	104
81-PM	1	0.096000001	watercourse	no div. potential	low	100
78-DM	24	2.236000061	watercourse	yes, ditch	low	98
78-DM	25	2.237999916	watercourse	yes, ditch	low	98
78-AR-031	32	3.153000116	watercourse	yes, road	low	93
78-CU-113	12	1.177999973	watercourse	yes, ditch	low	93
78-AL-020	8	0.703999996	watercourse	yes, road	low	90
78-J-006	14	1.343999982	watercourse	yes, ditch	low	89
78-KS-030	8	0.779999971	watercourse	yes, road	low	89
81-CU-182-03	1	0.027000001	watercourse	no div. potential	low	85
81-CU-182-03	3	0.218999997	watercourse	no div. potential	low	82
78-NG	43	4.285999775	watercourse	yes, road	low	78
78-TR-006-13	11	0.736000001	watercourse	yes, ditch	low	77
78-DM-012	7	0.592999995	watercourse	yes, ditch	low	74
78-KS-016	27	2.519999981	watercourse	yes, ditch	low	73
78-CU-113	11	1.082999945	watercourse	yes, ditch	low	72
78-J-006	2	0.188999996	watercourse	yes, ditch	low	72
78-KS-028	17	1.73300004	watercourse	yes, ditch	low	72
78-LR-054	11	0.889999986	watercourse	yes, ditch	low	70
78-NG	13	1.273000002	watercourse	yes, ditch	low	66
78-SC	9	0.824000001	watercourse	no div. potential	low	66
78-CU-135	7	0.675000012	watercourse	yes, ditch	low	62
78-KS-013-04	1	0.006	watercourse	yes, ditch	low	61
78-DH	12	0.75	watercourse	yes, ditch	low	60

Road Number	Site Number	Mile Post	Culvert Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd^3)
78-LR-054	8	0.672999978	watercourse	yes, ditch	low	60
78-SC	15	1.337000012	watercourse	no div. potential	low	60
81-CU-182-12	11	1.105999947	watercourse	no div. potential	low	60
78-AR-031	30	2.950999975	watercourse	yes, ditch	low	59
78-KS	53	4.484000206	watercourse	yes, ditch	low	57
78-KS-013-04	3	0.055	watercourse	yes, ditch	low	57
78-WG-017	7	0.671000004	watercourse	yes, ditch	low	53
78-DM-012	2	0.115000002	watercourse	yes, ditch	low	52
78-SC-018	1	0.101999998	watercourse	no div. potential	low	50
81-PM	20	1.447000027	ditch relief	yes, ditch	low	50
78-AL-020	10	0.791000009	watercourse	yes, ditch	low	49
78-AL-020-04	2	0.134000003	watercourse	yes, ditch	low	49
78-CU-106	6	0.419	watercourse	yes, road	low	49
78-KS-028	14	1.363000035	watercourse	yes, ditch	low	49
78-NG	11	0.777999997	watercourse	yes, road	low	49
78-WG-017	4	0.356999993	watercourse	yes, ditch	low	49
78-DH	9	0.504000008	watercourse	yes, ditch	low	47
78-DM-012	1	0.039999999	watercourse	yes, ditch	low	47
78-DM-012	3	0.231000006	watercourse	yes, ditch	low	47
78-TF-028	1	0.138999999	watercourse	yes, road	low	47
78-NG	44	4.296999931	watercourse	yes, road	low	46
78-TR-006	18	1.77699995	watercourse	yes, ditch	low	46
78-TR-006	8	0.633000016	watercourse	yes, ditch	low	46
78-GG	14	0.64200002	ditch relief	undetermined	low	45
78-CU-135	5	0.485000014	watercourse	yes, ditch	low	44
78-KS-028	5	0.481000006	watercourse	yes, ditch	low	44
78-KS-013-24	8	0.848999977	watercourse	yes, ditch	low	43
78-KS-045	14	1.34800005	watercourse	yes, road	low	43
78-NG-015	17	1.654000044	watercourse	yes, ditch	low	42
78-WG-015	5	0.488999993	watercourse	yes, ditch	low	42
78-DM-012	5	0.421999991	watercourse	yes, road	low	41
78-TR-006	13	0.98299998	watercourse	yes, ditch	low	41
78-KS-016	22	2.167000055	ditch relief	undetermined	low	40
78-NG-015	8	0.785000026	watercourse	yes, ditch	low	40
78-NG-015-11	2	0.240999997	watercourse	yes, ditch	low	40
78-SC	25	2.454999924	watercourse	no div. potential	low	40
81-PM	10	0.675999999	watercourse	yes, ditch	low	40
78-KS-016	25	2.443000078	watercourse	yes, ditch	low	39
78-KS-045	13	1.110999942	watercourse	yes, ditch	low	39
78-KS-045	6	0.546000004	watercourse	yes, ditch	low	39
78-KS-045	15	1.41900003	watercourse	yes, ditch	low	36
78-TF	11	1.148000002	watercourse	yes, ditch	low	35
81-PM	9	0.629999995	ditch relief	yes, road	low	35
78-DM	22	2.15199995	watercourse	yes, road	low	33
78-DM	3	0.252000004	watercourse	yes, ditch	low	33
78-KS-016	28	2.562999964	watercourse	yes, ditch	low	33
78-KS-016-24	1	0.041000001	watercourse	yes, road	low	33
78-KS-045	10	0.93599999	watercourse	yes, ditch	low	33
78-MR	3	0.093999997	watercourse	yes, road	low	33
78-TM-008	3	0.25	watercourse	yes, ditch	low	33
78-TR-008	4	0.393999994	watercourse	yes, ditch	low	33
78-WG	8	0.731999993	watercourse	yes, road	low	33
78-WG	8	0.731999993	undetermined	undetermined	low	33
78-WG-015	8	0.763000011	watercourse	yes, ditch	low	33
78-J-006	25	2.394000053	ditch relief	undetermined	low	32
78-CU-106	3	0.257999986	watercourse	yes, ditch	low	31
78-CU-135	6	0.578999996	watercourse	yes, ditch	low	31
78-KS-016	26	2.457999945	ditch relief	undetermined	low	31
78-KS-030	10	0.828999996	watercourse	yes, road	low	31
78-TR-008	11	1.06400001	watercourse	yes, road	low	31
78-GG	27	1.659000039	ditch relief	undetermined	low	30
78-GG	32	2.01699996	ditch relief	undetermined	low	30
78-J-006	23	2.200999975	ditch relief	undetermined	low	30
78-KS	26	1.963999987	watercourse	yes, road	low	30
78-KS	27	1.968000054	watercourse	yes, road	low	30
78-KS	28	1.972000003	watercourse	yes, road	low	30
78-LR-054	4	0.365999997	watercourse	no div. potential	low	30
78-LR-054	6	0.601000011	watercourse	no div. potential	low	30
78-MR-004	1	0.005	watercourse	yes, road	low	30
78-NG-015	18	1.679999948	watercourse	yes, road	low	30
78-NG-037	3	0.344999999	watercourse	yes, ditch	low	30
78-NG-037	4	0.398000002	watercourse	yes, ditch	low	30
78-SC	6	0.639999986	watercourse	no div. potential	low	30
78-TR-006	16	1.296000004	watercourse	yes, ditch	low	30
78-TR-006	7	0.589999974	watercourse	yes, ditch	low	30
78-TR-006-13	4	0.303000003	watercourse	yes, road	low	30

Road Number	Site Number	Mile Post	Culvert Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd^3)
78-TR-006-13	8	0.566999972	watercourse	yes, ditch	low	30
81-CU-182-12	19	1.815999985	watercourse	yes, road	low	30
78-KS-028	9	0.882000029	watercourse	yes, ditch	low	29
78-SS	3	0.191	watercourse	yes, ditch	low	28
78-SS	4	0.273000002	watercourse	yes, ditch	low	28
78-DM	19	1.868999958	watercourse	yes, ditch	low	27
78-DM	34	3.378000021	watercourse	yes, ditch	low	27
78-GG	11	0.485000014	watercourse	yes, road	low	27
78-GG	34	2.076999903	ditch relief	undetermined	low	27
78-GG	36	2.173000097	ditch relief	undetermined	low	27
78-KS-013-24	4	0.388000011	watercourse	yes, ditch	low	27
78-KS-016	24	2.365999937	watercourse	yes, road	low	27
78-KS-045	16	1.511000037	watercourse	yes, ditch	low	27
78-NG-015	14	1.396000028	watercourse	yes, road	low	27
78-TM-006	5	0.335999995	watercourse	yes, ditch	low	27
78-TR-008	1	0.037999999	watercourse	yes, ditch	low	27
81-CU-182-12	14	1.417000055	watercourse	no div. potential	low	27
78-CU-135	8	0.702000022	watercourse	yes, ditch	low	26
78-NG	8	0.551999986	watercourse	yes, road	low	26
81-PM	3	0.34799999	ditch relief	yes, ditch	low	26
78-CU-078-03	3	0.256000012	watercourse	yes, road	low	25
78-CU-106	5	0.360000014	watercourse	yes, road	low	25
78-TM-008-01	14	1.440000057	watercourse	yes, ditch	low	25
78-TR-006-13	5	0.40200001	watercourse	yes, road	low	25
81-CU-182-12	18	1.74000001	watercourse	no div. potential	low	25
78-NG-015	15	1.465000033	watercourse	yes, ditch	low	23
78-TF	10	0.716000021	watercourse	yes, ditch	low	23
78-TM-008	12	1.248000026	watercourse	yes, road	low	23
78-TR	2	0.209999993	watercourse	yes, ditch	low	23
78-TR-008	12	1.138000011	watercourse	yes, ditch	low	23
78-NG-015-11	6	0.624000013	watercourse	yes, road	low	22
78-TR-006	5	0.47299999	watercourse	yes, ditch	low	22
78-AL-020	6	0.629000008	watercourse	yes, road	low	21
78-SC	8	0.773999989	watercourse	no div. potential	low	21
75-SK	1	0.01	ditch relief	yes, road	low	20
75-SK	6	0.550999999	watercourse	yes, road	low	20
78-AL-020	11	0.850000024	ditch relief	yes, road	low	20
78-DM	1	0.090999998	watercourse	yes, ditch	low	20
78-GB	4	0.437999994	watercourse	yes, road	low	20
78-KS-016	4	0.437000006	watercourse	yes, ditch	low	20
78-NG-015-11	5	0.538999975	watercourse	yes, road	low	20
78-NG-037-08	2	0.104000002	watercourse	yes, road	low	20
78-TR-006	11	0.805000007	ditch relief	yes, ditch	low	20
78-TR-006	15	1.266000032	ditch relief	undetermined	low	20
78-TR-006	6	0.515999973	ditch relief	yes, ditch	low	20
78-TR-008	8	0.762000024	watercourse	yes, ditch	low	20
81-PM	11	0.745999992	watercourse	yes, ditch	low	20
81-PM	8	0.586000025	ditch relief	yes, ditch	low	20
78-DH	3	0.248999998	ditch relief	undetermined	low	19
78-DH	4	0.264999986	ditch relief	undetermined	low	19
78-GB	9	0.837000012	ditch relief	undetermined	low	19
78-KS-013-24	2	0.237000003	ditch relief	undetermined	low	19
78-KS-045	9	0.934000015	watercourse	yes, ditch	low	19
78-NG	7	0.550999999	watercourse	yes, road	low	19
78-TC-008	3	0.229000002	ditch relief	undetermined	low	19
78-WG	11	1.088999987	ditch relief	undetermined	low	19
78-J-014	5	0.481000006	watercourse	yes, ditch	low	18
78-KS	13	1.108999968	ditch relief	undetermined	low	18
78-KS-045	5	0.49000001	watercourse	yes, ditch	low	18
78-NG	1	0.041999999	ditch relief	undetermined	low	18
78-TC	8	0.753000021	ditch relief	undetermined	low	18
81-PM	14	0.846000016	ditch relief	yes, road	low	18
81-PM	15	0.91900003	ditch relief	yes, road	low	18
78-AL-020	9	0.764999986	ditch relief	undetermined	low	17
78-CU-078-03	1	0.115000002	ditch relief	undetermined	low	17
78-DH	1	0.112000003	ditch relief	undetermined	low	17
78-DM	23	2.213000059	watercourse	yes, ditch	low	17
78-GG	4	0.119999997	watercourse	yes, ditch	low	17
78-J-017	1	0.126000002	ditch relief	undetermined	low	17
78-KS	11	0.97299999	ditch relief	undetermined	low	17
78-KS	19	1.488999963	ditch relief	undetermined	low	17
78-KS	30	2.052999973	ditch relief	undetermined	low	17
78-KS	31	2.138999939	ditch relief	undetermined	low	17
78-KS	32	2.177000046	ditch relief	undetermined	low	17
78-KS	33	2.29399991	ditch relief	undetermined	low	17
78-KS	48	3.782000065	ditch relief	undetermined	low	17

Road Number	Site Number	Mile Post	Culvert Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd^3)
78-KS	56	4.782000065	watercourse	yes, ditch	low	17
78-KS-045	11	0.947000027	watercourse	yes, ditch	low	17
78-KS-045	4	0.379999995	watercourse	yes, road	low	17
78-KS-045	7	0.723999977	watercourse	yes, ditch	low	17
78-NG	26	2.561000109	watercourse	yes, ditch	low	17
78-NG	40	3.944000006	watercourse	yes, ditch	low	17
78-NG	45	4.532000065	watercourse	yes, road	low	17
78-NG-037	8	0.773000002	watercourse	yes, ditch	low	17
78-SC	2	0.211999997	watercourse	no div. potential	low	17
78-SS	5	0.381999999	ditch relief	undetermined	low	17
78-SS-012	1	0.054000001	ditch relief	undetermined	low	17
78-TC	6	0.575999975	ditch relief	undetermined	low	17
78-TF-028	6	0.566999972	watercourse	yes, road	low	17
78-TM-008-01	6	0.586000025	watercourse	yes, ditch	low	17
78-TR	1	0.142000005	ditch relief	undetermined	low	17
78-TR-006-13	9	0.649999976	watercourse	yes, road	low	17
78-TR-008	7	0.561999977	watercourse	yes, ditch	low	17
81-CU-182-12	17	1.672999978	watercourse	no div. potential	low	17
78-GG	3	0.061999999	watercourse	yes, ditch	low	16
78-J-006-05	3	0.277999997	watercourse	yes, ditch	low	16
78-J-014	2	0.232999995	watercourse	undetermined	low	16
78-TR	3	0.238999993	ditch relief	undetermined	low	16
78-TR	4	0.291000009	ditch relief	undetermined	low	16
78-TR	5	0.400000006	ditch relief	undetermined	low	16
78-TR-006	17	1.348999977	ditch relief	undetermined	low	16
78-TR-006	3	0.291999996	ditch relief	undetermined	low	16
78-TR-006	9	0.700999975	ditch relief	yes, ditch	low	16
81-PM	12	0.782999992	ditch relief	yes, road	low	16
78-KS	43	3.371000051	ditch relief	undetermined	low	15
78-KS	44	3.453000069	ditch relief	undetermined	low	15
78-KS	47	3.701999903	ditch relief	undetermined	low	15
78-NG	5	0.240999997	watercourse	yes, road	low	15
78-NG	9	0.59799999	watercourse	yes, road	low	15
78-SC	14	1.307999969	ditch relief	yes, ditch	low	15
78-TC-011	7	0.361000001	ditch relief	undetermined	low	15
78-TC-011	8	0.407999992	ditch relief	undetermined	low	15
78-AL-020	7	0.633000016	ditch relief	yes, road	low	14
78-CU-113	3	0.273000002	ditch relief	undetermined	low	14
78-GB-009	1	0.075000003	ditch relief	undetermined	low	14
78-KS	16	1.327000022	ditch relief	undetermined	low	14
78-KS-034	6	0.565999985	watercourse	yes, ditch	low	14
81-PM	13	0.814999998	ditch relief	yes, road	low	14
78-AR	4	0.388999999	ditch relief	undetermined	low	13
78-AR-031	3	0.282999992	watercourse	yes, ditch	low	13
78-AR-031-04	1	0.027000001	watercourse	yes, ditch	low	13
78-CU-113-02	2	0.138999999	watercourse	yes, ditch	low	13
78-DM-012	9	0.788999975	ditch relief	undetermined	low	13
78-J-006	22	2.171000004	ditch relief	undetermined	low	13
78-J-017	2	0.167999998	ditch relief	undetermined	low	13
78-KS	14	1.174000025	ditch relief	undetermined	low	13
78-KS	17	1.388000011	ditch relief	undetermined	low	13
78-KS	18	1.417999983	watercourse	yes, road	low	13
78-KS	20	1.562999964	ditch relief	undetermined	low	13
78-KS	21	1.679999948	ditch relief	undetermined	low	13
78-KS	22	1.761999965	ditch relief	undetermined	low	13
78-KS	23	1.825000048	ditch relief	undetermined	low	13
78-KS	25	1.92900002	ditch relief	undetermined	low	13
78-KS	29	2.01699996	ditch relief	undetermined	low	13
78-KS	36	2.63499999	ditch relief	undetermined	low	13
78-KS	37	2.724999905	ditch relief	undetermined	low	13
78-KS	40	3.174999952	ditch relief	undetermined	low	13
78-KS	41	3.196000099	ditch relief	undetermined	low	13
78-KS	42	3.243999958	ditch relief	undetermined	low	13
78-KS	50	4.052999973	ditch relief	undetermined	low	13
78-KS	51	4.124000072	ditch relief	undetermined	low	13
78-KS	52	4.15500021	ditch relief	undetermined	low	13
78-KS	55	4.722000122	ditch relief	undetermined	low	13
78-KS	6	0.467999995	ditch relief	undetermined	low	13
78-KS-013	13	1.243000031	ditch relief	undetermined	low	13
78-KS-013-24	7	0.677999973	ditch relief	undetermined	low	13
78-KS-016	6	0.630999982	watercourse	yes, road	low	13
78-KS-030	5	0.467999995	watercourse	yes, road	low	13
78-MR-004-13	2	0.206	watercourse	yes, ditch	low	13
78-NG	37	3.717000008	watercourse	yes, road	low	13
78-NG	38	3.74000001	watercourse	yes, road	low	13
78-TF	23	2.345999956	watercourse	yes, ditch	low	13

Road Number	Site Number	Mile Post	Culvert Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd^3)
78-TM-008	4	0.335000008	ditch relief	undetermined	low	13
78-TM-008	5	0.515999973	watercourse	yes, ditch	low	13
78-TM-008	7	0.741999984	watercourse	yes, ditch	low	13
78-TR-006	12	0.924000025	ditch relief	yes, ditch	low	13
78-TR-006	14	1.059000015	ditch relief	undetermined	low	13
78-TR-006-13	3	0.272000015	ditch relief	undetermined	low	13
78-TR-008	9	0.774999976	watercourse	yes, road	low	13
78-TR-011	1	0.135000005	ditch relief	undetermined	low	13
78-KS	3	0.252000004	ditch relief	undetermined	low	12
78-KS	4	0.307000011	ditch relief	undetermined	low	12
78-GB	8	0.796000004	ditch relief	undetermined	low	11
78-GG	12	0.513999999	ditch relief	undetermined	low	11
78-GG	13	0.57099998	ditch relief	undetermined	low	11
78-GG	15	0.675999999	ditch relief	undetermined	low	11
78-GG	17	0.848999977	ditch relief	undetermined	low	11
78-GG	2	0.043000001	ditch relief	undetermined	low	11
78-GG	21	1.258999944	ditch relief	undetermined	low	11
78-GG	22	1.302999973	ditch relief	undetermined	low	11
78-GG	23	1.350000024	ditch relief	undetermined	low	11
78-GG	25	1.55400002	ditch relief	undetermined	low	11
78-GG	9	0.407999992	ditch relief	undetermined	low	11
78-KS	12	1.029999971	ditch relief	undetermined	low	11
78-KS	58	4.947000027	ditch relief	undetermined	low	11
78-KS	59	4.995999813	ditch relief	undetermined	low	11
78-KS	60	5.114999771	ditch relief	undetermined	low	11
78-KS-013	1	0.109999999	ditch relief	undetermined	low	11
78-KS-013	12	1.182000041	ditch relief	undetermined	low	11
78-KS-013	4	0.333000004	ditch relief	undetermined	low	11
78-KS-016	23	2.263999939	ditch relief	undetermined	low	11
78-KS-028	1	0.123000003	ditch relief	undetermined	low	11
78-KS-028	10	1.018000007	ditch relief	yes, road	low	11
78-MR	1	0.032000002	ditch relief	undetermined	low	11
78-MR	2	0.079999998	ditch relief	yes, ditch	low	11
78-MR	6	0.270999998	ditch relief	undetermined	low	11
78-NG-037-08	1	0.068000004	ditch relief	yes, road	low	11
78-TC	10	0.843999982	ditch relief	undetermined	low	11
78-TC	2	0.103	ditch relief	undetermined	low	11
78-TC-008	1	0.057999998	ditch relief	undetermined	low	11
78-TC-011	1	0.009	ditch relief	undetermined	low	11
78-TC-011	4	0.231000006	ditch relief	undetermined	low	11
78-TC-011	6	0.312000006	ditch relief	undetermined	low	11
78-TR	10	0.860000014	ditch relief	undetermined	low	11
78-TR	11	0.910000026	ditch relief	undetermined	low	11
78-TR	9	0.791000009	ditch relief	undetermined	low	11
78-TR-006-13	6	0.465000004	ditch relief	undetermined	low	11
78-TR-011-06	1	0.086000003	ditch relief	undetermined	low	11
78-WG	10	0.977999985	ditch relief	undetermined	low	11
78-LR-054	10	0.760999978	ditch relief	no div. potential	low	10
78-LR-054	12	0.977999985	ditch relief	no div. potential	low	10
78-AR	3	0.326999992	ditch relief	undetermined	low	9
78-AR-031	31	3.128999949	ditch relief	undetermined	low	9
78-AR-031-04	2	0.219999999	watercourse	yes, ditch	low	9
78-CU-078	1	0.148000002	ditch relief	undetermined	low	9
78-GB-009	2	0.105999999	ditch relief	undetermined	low	9
78-GG	1	0.003	ditch relief	undetermined	low	9
78-GG	26	1.625	ditch relief	undetermined	low	9
78-GG	28	1.707999945	ditch relief	undetermined	low	9
78-GG	30	1.805999994	ditch relief	undetermined	low	9
78-GG	31	1.914999962	ditch relief	undetermined	low	9
78-GG	6	0.224999994	ditch relief	undetermined	low	9
78-GG	7	0.294	ditch relief	undetermined	low	9
78-J-014	4	0.425999999	ditch relief	undetermined	low	9
78-KS-013	2	0.157000005	ditch relief	undetermined	low	9
78-KS-013	3	0.213	ditch relief	undetermined	low	9
78-KS-013	5	0.393000007	ditch relief	undetermined	low	9
78-KS-013	9	0.709999979	ditch relief	undetermined	low	9
78-KS-013-04	5	0.160999998	ditch relief	undetermined	low	9
78-KS-013-04	6	0.195999995	ditch relief	undetermined	low	9
78-KS-013-04	7	0.246999994	ditch relief	undetermined	low	9
78-KS-013-04	9	0.335000008	ditch relief	undetermined	low	9
78-KS-013-09	1	0.039999999	ditch relief	undetermined	low	9
78-KS-045	12	1.092000008	ditch relief	undetermined	low	9
78-MR-003	1	0.07	ditch relief	undetermined	low	9
78-MR-004	10	0.991999984	ditch relief	undetermined	low	9
78-MR-004-04	10	0.952000022	ditch relief	undetermined	low	9
78-NG	12	0.939999998	ditch relief	undetermined	low	9

Road Number	Site Number	Mile Post	Culvert Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd^3)
78-NG	4	0.215000004	ditch relief	undetermined	low	9
78-SL	9	0.917999983	ditch relief	undetermined	low	9
78-SS	1	0.041999999	ditch relief	undetermined	low	9
78-SS	11	1.123999953	ditch relief	undetermined	low	9
78-SS	6	0.490999997	ditch relief	undetermined	low	9
78-SS	7	0.521000028	ditch relief	undetermined	low	9
78-SS-012	2	0.189999998	ditch relief	undetermined	low	9
78-TF	12	1.192000031	watercourse	yes, ditch	low	9
78-TF	12	1.192000031	watercourse	yes, ditch	low	9
78-TF	17	1.700999975	watercourse	yes, ditch	low	9
78-WG	1	0.143000007	ditch relief	yes, ditch	low	9
78-WG	1	0.143000007	undetermined	undetermined	low	9
78-WG	2	0.226999998	ditch relief	yes, ditch	low	9
78-WG	3	0.337000012	ditch relief	yes, ditch	low	9
78-CU-078-05	1	0.067000002	ditch relief	undetermined	low	8
78-CU-078-05	2	0.116999999	ditch relief	undetermined	low	8
78-TC	13	1.139000058	ditch relief	undetermined	low	7
78-TF	2	0.150999993	ditch relief	undetermined	low	7
78-TR-011	3	0.254000008	ditch relief	undetermined	low	7
78-CU-078-05	3	0.194999993	ditch relief	undetermined	low	6
78-CU-113-02	1	0.064000003	ditch relief	undetermined	low	6
78-GG	35	2.117000103	ditch relief	undetermined	low	6
78-MD	7	0.713	ditch relief	undetermined	low	6
78-NG	27	2.704999924	ditch relief	undetermined	low	6
78-NG	3	0.119999997	ditch relief	undetermined	low	6
78-TF	1	0.101000004	ditch relief	undetermined	low	6
78-TF	3	0.187000006	ditch relief	undetermined	low	6
78-TR-011-04	1	0.061999999	ditch relief	undetermined	low	6
78-GG-023	3	0.312999994	watercourse	yes, ditch	low	5
78-LR-054	13	1.034000039	ditch relief	yes, road	low	5
78-LR-054	7	0.646000028	ditch relief	no div. potential	low	5
78-GG-023	2	0.191	ditch relief	undetermined	low	4
78-NG-015	13	1.322999954	ditch relief	undetermined	low	4
78-TC	9	0.787999988	ditch relief	undetermined	low	3
78-TF	9	0.458999991	ditch relief	undetermined	low	2
75-DH-027	10	0.981999993	ditch relief	undetermined	low	0
75-DH-027	8	0.837000012	ditch relief	undetermined	low	0
75-DH-027	9	0.893000007	ditch relief	undetermined	low	0
78-GG	10	0.458999991	ditch relief	undetermined	low	0
78-GG	24	1.449000001	ditch relief	undetermined	low	0
78-GG	24	1.449000001	ditch relief	undetermined	low	0
78-J-006	11	1.09800005	watercourse	undetermined	low	0
78-J-006	18	1.764999986	watercourse	undetermined	low	0
78-J-006	19	1.835000038	watercourse	undetermined	low	0
78-J-006	20	1.863999963	watercourse	undetermined	low	0
78-KS-028	52	1.552000046	ditch relief	undetermined	low	0
78-KS-028-13	5	0.474999994	ditch relief	undetermined	low	0
78-KS-030	6	0.492000014	watercourse	yes, ditch	low	0
78-KS-030	9	0.791999996	watercourse	yes, ditch	low	0
78-NG	10	0.768999994	watercourse	yes, road	low	0
78-TC	51	0.270999998	ditch relief	undetermined	low	0
78-TC	52	0.460000008	ditch relief	undetermined	low	0
78-TC	6	0.575999975	ditch relief	undetermined	low	0
78-TF	10	0.716000021	watercourse	undetermined	low	0
78-TF	51	0.097000003	watercourse	yes, road	low	0
78-WG-024	3	0.330000013	watercourse	yes, road	low	0
78-WG-024	6	0.56400001	watercourse	yes, ditch	low	0

Road Number	Site Number	Mile Post	Culvert Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd^3)
78-TM-008	14	1.389000058	dipped	undetermined	high	35
78-KS-016-05	2	0.179000005	other	undetermined	moderate	23
78-TF	23	2.25	other	undetermined	moderate	17
78-TF	21	2.14199996	dipped	undetermined	moderate	4
81-PM-016	6	0.540000021	dipped	no div. potential	low	65
78-GG-002	5	0.409000009	other	undetermined	low	55
81-PM-016	5	0.476000011	dipped	no div. potential	low	26
78-LR-054-10-01	8	0.593999982	other	yes, road	low	25
78-TF	26	2.559000015	other	undetermined	low	22
78-AR-006	2	0.079000004	other	yes, road	low	20
78-AR-006	3	0.142000005	other	no div. potential	low	20
78-LR-054-10-01	6	0.493000001	dipped	no div. potential	low	20
78-GB	3	0.291000009	dipped	undetermined	low	10
78-LR-054	3	0.294999987	dipped	no div. potential	low	10
78-LR-054	11	1.125	ditch relief	no div. potential	low	10
78-GB	2	0.211999997	dipped	undetermined	low	9
78-GB-003	2	0.214000002	dipped	undetermined	low	6
78-LR-054-10-01	2	0.089000002	dipped	no div. potential	low	5
78-LR-054-10-01	3	0.177000001	dipped	no div. potential	low	5
78-LR-054-21	2	0.224999994	dipped	no div. potential	low	5
78-GB-003	1	0.064000003	dipped	undetermined	low	4
78-SC	3	0.27700001	low water (temp)	no div. potential	low	3
78-LR-054-10-01	1	0.055	dipped	no div. potential	low	2
78-LR-054-10-01	4	0.193000004	dipped	no div. potential	low	1
78-AR	19	1.863999963	other	undetermined	low	0
78-AR	20	1.963000059	other	undetermined	low	0
78-AR	28	2.773000002	other	undetermined	low	0
78-AR-006	1	0.048999999	other	no div. potential	low	0
78-GB-003	4	0.428000003	dipped	undetermined	low	0
78-GB-003	6	0.58099997	dipped	undetermined	low	0
78-GG	15	1.504999995	dipped	undetermined	low	0
78-GG	18	1.843000054	dipped	undetermined	low	0
78-GG	19	1.856999993	dipped	undetermined	low	0
78-GG-002	4	0.349999994	dipped	undetermined	low	0
78-GG-002	6	0.634000003	dipped	undetermined	low	0
78-GG-002	10	1.006999969	dipped	undetermined	low	0
78-GG-010	3	0.312999994	dipped	undetermined	low	0
78-KS-013	1	0.012	bridge	undetermined	low	0
78-KS-013-09	4	0.397000015	undetermined	undetermined	low	0
78-KS-013-09	5	0.442999989	undetermined	undetermined	low	0
78-KS-034	4	0.435000002	dipped	undetermined	low	0
78-KS-034-13	5	0.483999997	dipped	undetermined	low	0
78-KS-034-13	7	0.712000012	dipped	undetermined	low	0
78-KS-034-13-01	1	0.048	dipped	undetermined	low	0
78-LR-054-10-01	5	0.252000004	dipped	no div. potential	low	0
78-LR-054-10-01	7	0.541000009	dipped	no div. potential	low	0
78-MR-004-04	7	0.726999998	dipped	undetermined	low	0
78-MR-004-04	9	0.938000023	dipped	undetermined	low	0
78-MR-004-04	11	1.139999986	dipped	undetermined	low	0
78-TC	3	0.270999998	dipped	undetermined	low	0
78-TC	7	0.67900002	dipped	undetermined	low	0
75-DH-027	8	0.819000006	dipped	undetermined	none	0
75-DH-027	9	0.851000011	dipped	undetermined	none	0
75-DH-027-09	1	0.054000001	dipped	undetermined	none	0
78-AR	5	0.49000001	dipped	undetermined	none	0
78-AR	8	0.750999987	dipped	undetermined	none	0
78-AR	13	1.328999996	dipped	undetermined	none	0
78-AR	25	2.548000097	dipped	undetermined	none	0
78-AR-031	1	0.061000001	other	undetermined	none	0
78-CU-106	1	0.025	low water (temp)	undetermined	none	0
78-DM-026	1	0.025	other	undetermined	none	0
78-GB	1	0.01	dipped	undetermined	none	0
78-GB	4	0.404000014	dipped	undetermined	none	0
78-GB	5	0.437999994	dipped	undetermined	none	0
78-GB	7	0.671999991	dipped	undetermined	none	0

Road Number	Site Number	Mile Post	Culvert Type	Diversion Potential	Treatment Immediacy	Controllable Volume (yd^3)
78-KS	12	1.149999976	bridge	undetermined	none	0
78-KS	29	2.861000061	bridge	undetermined	none	0
78-KS	37	3.677000046	bridge	undetermined	none	0
78-KS	42	4.245999813	bridge	undetermined	none	0
78-KS	51	5.135000229	bridge	undetermined	none	0
78-KS	54	5.373000145	bridge	undetermined	none	0
78-KS-014	3	0.34799999	bridge	undetermined	none	0
78-KS-016-24	1	0.077	other	undetermined	none	0
78-KS-028	12	1.228999972	dipped	undetermined	none	0
78-KS-028	13	1.34800005	dipped	undetermined	none	0
78-KS-028	16	1.552000046	dipped	undetermined	none	0
78-KS-028	19	1.947000027	dipped	undetermined	none	0
78-KS-028-13	5	0.474999994	dipped	undetermined	none	0
78-KS-028-13	9	0.90200001	dipped	undetermined	none	0
78-KS-030	1	0.130999997	dipped	undetermined	none	0
78-KS-030	2	0.243000001	dipped	undetermined	none	0
78-KS-030	3	0.337000012	dipped	undetermined	none	0
78-KS-030	4	0.419999987	dipped	undetermined	none	0
78-KS-030	5	0.467999995	dipped	undetermined	none	0
78-KS-030	6	0.492000014	dipped	undetermined	none	0
78-KS-030	7	0.540000021	dipped	undetermined	none	0
78-KS-030	8	0.648000002	dipped	undetermined	none	0
78-KS-030	9	0.663999975	dipped	undetermined	none	0
78-KS-030	10	0.768000007	dipped	undetermined	none	0
78-KS-030	11	0.781000018	dipped	undetermined	none	0
78-MD-008	3	0.286000013	other	undetermined	none	0
78-TF	1	0.096000001	bridge	undetermined	none	0
78-TF	17	1.657999992	dipped	undetermined	none	0
78-TF	18	1.822000027	dipped	undetermined	none	0
78-TM-006	3	0.287999988	dipped	undetermined	none	0
78-TM-006	4	0.296999991	dipped	undetermined	none	0
78-TM-006	5	0.335999995	dipped	undetermined	none	0
78-TM-006	6	0.345999986	dipped	undetermined	none	0
78-TM-006	7	0.731000006	dipped	undetermined	none	0
78-TM-006	8	0.745999992	dipped	undetermined	none	0
78-TM-008	6	0.57099998	dipped	undetermined	none	0
78-TR	1	0.109999999	bridge	undetermined	none	0
78-WG	4	0.428000003	bridge	undetermined	none	0
78-WG	5	0.492000014	bridge	undetermined	none	0
78-WG	42	4.171000004	other	undetermined	none	0
78-WG	44	4.447000027	low water (temp)	undetermined	none	0
78-WG-015	5	0.488999993	undetermined	undetermined	none	0
78-WG-015	8	0.763000011	undetermined	undetermined	none	0
78-WG-018-05	1	0.119999997	dipped	undetermined	none	0
78-WG-024	3	0.330000013	dipped	undetermined	none	0
78-WG-024	4	0.375	dipped	undetermined	none	0
78-WG-024	6	0.56400001	dipped	undetermined	none	0
81-CU-182-12	10	0.985000014	dipped	no div. potential	none	0
81-CU-182-12	11	1.118000031	dipped	no div. potential	none	0
81-CU-182-12	12	1.220999956	other	no div. potential	none	0
75-DH-028-03-01	2	0.186000004	dipped	undetermined	undetermined	0
75-X-001	2	0.150000006	dipped	undetermined	undetermined	0
75-X-001	3	0.187000006	dipped	undetermined	undetermined	0
75-X-001	4	0.221000001	dipped	undetermined	undetermined	0
75-X-001	5	0.263999999	dipped	undetermined	undetermined	0
75-X-001	6	0.298000008	dipped	undetermined	undetermined	0
78-GG-002	3	0.256000012	dipped	undetermined	undetermined	0
78-J-016	1	0.079999998	dipped	undetermined	undetermined	0
78-J-016	2	0.144999996	dipped	undetermined	undetermined	0
78-KS-030	12	0.791999996	dipped	undetermined	undetermined	0
78-KS-030	13	0.828999996	dipped	undetermined	undetermined	0
78-KS-030	14	0.967000008	dipped	undetermined	undetermined	0
78-TC	5	0.463	dipped	undetermined	undetermined	0
78-TF	11	1.141000032	dipped	undetermined	undetermined	0
78-TF	12	1.159999967	dipped	undetermined	undetermined	0

Road Number	Site Number	Mile Post	Perched Material	Fill Condition	Treatment Immediacy	Controllable Volume (yd^3)	Distance from Stream (ft)
78-KS-034-22	2	0.203999996	no	unstable	high	124	>200
78-KS-045	5	0.465000004	no	unstable	high	74	50-200
81-CU-182-12-06	2	0.194000006	no	unstable	moderate	230	0-50
78-NG	40	3.984999895	no	unstable	moderate	93	>200
78-MD-011	2	0.156000003	yes	unstable	moderate	60	>200
78-TM-008	4	0.386999995	yes	unstable	moderate	59	>200
78-TM-008-01	9	0.884000003	no	stable	moderate	50	>200
78-KS-013-04	4	0.368999988	yes	unstable	moderate	36	>200
78-LR-054-10-01	8	0.773999989	undetermined	stable	low	140	0-50
78-AR-006	2	0.193000004	undetermined	stable	low	80	0-50
78-KS-045	7	0.745999992	no	stable	low	26	50-200
78-TM-008-01	15	1.531999946	no	stable	low	22	>200
78-MD-008	3	0.300000012	no	stable	low	6	0-50
CR-M223-1	169	16.90600014	no	stable	none	0	>200
75-CU-185	1	0.050000001	no	stable	none	0	>200
75-DH-027-09	1	0.120999999	no	stable	none	0	50-200
75-DH-027-09	3	0.296000004	no	stable	none	0	>200
75-SG-002	1	0.017000001	no	stable	none	0	>200
75-SK-002	1	0.022	no	stable	none	0	>200
75-SK-002	2	0.216999993	no	stable	none	0	>200
75-SK-002	3	0.331	no	stable	none	0	>200
75-SK-002-01	1	0.145999998	no	stable	none	0	>200
75-SK-003	1	0.050999999	no	stable	none	0	>200
78-AL-020	10	0.95599997	no	stable	none	0	>200
78-AL-020	5	0.52700001	no	stable	none	0	>200
78-AL-020	7	0.660000026	no	stable	none	0	>200
78-AL-020	8	0.726999998	no	stable	none	0	>200
78-AL-020	9	0.833000004	no	stable	none	0	>200
78-AL-020-03	1	0.046	no	stable	none	0	>200
78-AL-020-04	2	0.159999996	no	stable	none	0	>200
78-AR-031	21	2.065000057	no	stable	none	0	>200
78-AR-031	24	2.407999992	no	stable	none	0	>200
78-AR-031	28	2.785000086	no	stable	none	0	>200
78-AR-031	31	3.051000118	no	stable	none	0	>200
78-AR-031	32	3.089999914	no	stable	none	0	>200
78-AR-031	33	3.28399992	no	stable	none	0	>200
78-AR-031	34	3.434999943	no	stable	none	0	>200
78-AR-031	7	0.74000001	no	stable	none	0	>200
78-AR-031-04	3	0.272000015	no	stable	none	0	50-200
78-AR-031-09	1	0.075999998	no	stable	none	0	>200
78-AR-031-11	2	0.150000006	yes	stable	low	0	>200
78-AR-031-13	1	0.143999994	yes	stable	low	0	>200
78-AR-031-16	2	0.204999998	undetermined	undetermined	undetermined	0	undetermined
78-AR-031-16	4	0.389999986	undetermined	undetermined	undetermined	0	undetermined
78-AR-031-22	1	0.119999997	no	stable	none	0	>200
78-AR-031-22	3	0.326999992	no	stable	none	0	>200
78-AR-031-22-01	1	0.034000002	no	stable	none	0	>200
78-AR-031-24	3	0.25	no	stable	none	0	>200
78-AR-031-26	1	0.001	no	stable	none	0	>200
78-AR-031-26	2	0.128999993	no	stable	none	0	>200
78-AR-031-26	3	0.208000004	no	stable	none	0	>200
78-AR-031-28	1	0.094999999	no	stable	none	0	>200
78-AR-031-28	3	0.296000004	no	stable	none	0	>200
78-AR-031-29	1	0.068999998	no	stable	none	0	>200
78-AR-032	1	0.135000005	no	stable	none	0	>200
78-AR-032	4	0.426999986	no	stable	none	0	>200
78-AR-032	6	0.578999996	no	stable	none	0	>200
78-AR-032	8	0.84799999	no	stable	none	0	>200
78-CU-078	2	0.222000003	no	stable	none	0	>200
78-CU-078-02	1	0.024	no	stable	none	0	>200
78-CU-078-03	3	0.344000012	no	stable	none	0	>200
78-CU-078-03	4	0.386000007	no	stable	none	0	>200
78-CU-078-05	1	0.015	no	stable	none	0	>200
78-CU-078-05	2	0.204999998	no	stable	none	0	>200
78-CU-078-05-01	1	0.104999997	undetermined	undetermined	undetermined	0	undetermined
78-CU-106	5	0.497999996	yes	stable	low	0	>200
78-CU-113	10	0.976999998	yes	stable	low	0	>200
78-CU-113	13	1.258999944	no	stable	none	0	>200
78-CU-113-10	2	0.177000001	yes	stable	low	0	>200
78-CU-117	1	0.048999999	no	stable	none	0	>200
78-CU-121	1	0.105999999	yes	stable	low	0	>200
78-CU-135	10	0.958000004	no	stable	none	0	>200
78-CU-135	11	1.085999966	no	stable	none	0	>200
78-CU-135	2	0.223000005	no	stable	none	0	>200
78-CU-135	5	0.451000005	no	stable	none	0	>200
78-CU-135	6	0.617999971	no	stable	none	0	50-200
78-CU-135	8	0.815999985	no	stable	none	0	>200
78-CU-135-10	2	0.162	no	stable	none	0	>200
78-DM	12	1.228999972	no	stable	none	0	>200
78-DM	17	1.674000025	no	stable	none	0	>200
78-DM-001	2	0.169	no	stable	none	0	>200
78-DM-011	1	0.028000001	no	stable	none	0	>200

Road Number	Site Number	Mile Post	Perched Material	Fill Condition	Treatment Immediacy	Controllable Volume (yd^3)	Distance from Stream (ft)
78-DM-015	2	0.185000002	no	stable	none	0	>200
78-GB	13	1.317999959	no	stable	none	0	>200
78-GB	2	0.180000007	no	stable	none	0	>200
78-GB	5	0.537	no	stable	none	0	>200
78-GB	7	0.686999977	no	stable	none	0	>200
78-GB-003	1	0.007	no	stable	none	0	>200
78-GB-003	10	0.949999988	no	stable	none	0	>200
78-GB-003	2	0.133000001	no	stable	none	0	>200
78-GB-003	6	0.601999998	no	stable	none	0	>200
78-GB-003	7	0.727999985	no	stable	none	0	>200
78-GB-003-01	1	0.119000003	no	stable	none	0	>200
78-GB-009	1	0.011	no	stable	none	0	>200
78-GB-009	3	0.27700001	no	stable	none	0	>200
78-GB-011	1	0.030999999	no	stable	none	0	>200
78-GB-013	1	0.142000005	no	stable	none	0	>200
78-GB-013	2	0.199000001	no	stable	none	0	>200
78-GG	10	1.047999978	no	stable	none	0	>200
78-GG	12	1.228000045	yes	stable	low	0	>200
78-GG	13	1.340999961	yes	stable	low	0	>200
78-GG	15	1.542000055	yes	stable	low	0	>200
78-GG	22	2.23300004	no	stable	none	0	>200
78-GG	23	2.325000048	no	stable	none	0	>200
78-GG	3	0.347000003	no	stable	none	0	>200
78-GG	6	0.602999985	no	stable	none	0	>200
78-GG	7	0.746999979	no	stable	none	0	>200
78-GG	9	0.855000019	no	stable	none	0	>200
78-GG-002	10	1.029000044	no	stable	none	0	>200
78-GG-002	2	0.246000007	no	stable	none	0	>200
78-GG-002	3	0.333000004	no	stable	low	0	0-50
78-GG-002	5	0.540000021	no	stable	none	0	>200
78-GG-002	8	0.782999992	no	stable	none	0	>200
78-GG-002	9	0.908999979	no	stable	none	0	>200
78-GG-019	1	0.115000002	no	stable	none	0	>200
78-GG-023	1	0.07	no	stable	none	0	>200
78-GG-023	2	0.165000007	no	stable	none	0	>200
78-GG-023	4	0.386999995	no	stable	none	0	>200
78-GG-023	5	0.472000003	no	stable	none	0	>200
78-J	11	1.14199996	no	stable	none	0	>200
78-J	4	0.352999985	no	stable	none	0	>200
78-J-006	10	1.034999967	no	stable	none	0	>200
78-J-006	13	1.289999962	no	stable	none	0	>200
78-J-006	14	1.383000016	no	stable	none	0	>200
78-J-006	16	1.588000059	no	stable	none	0	>200
78-J-006	21	2.138999939	no	stable	none	0	>200
78-J-006	24	2.426000118	no	stable	none	0	>200
78-J-006-05	3	0.298999995	no	stable	none	0	>200
78-J-006-05	6	0.551999986	no	stable	none	0	>200
78-J-006-05-01	1	0.043000001	no	stable	none	0	>200
78-J-006-05-02	1	0.001	no	stable	none	0	>200
78-J-006-15	1	0.122000001	no	stable	none	0	>200
78-J-006-21	1	0.123999998	undetermined	undetermined	undetermined	0	undetermined
78-J-007	1	0.017000001	no	stable	none	0	>200
78-J-009	1	0.048	no	stable	none	0	>200
78-J-011	1	0.028999999	no	stable	none	0	>200
78-J-013	1	0.043000001	no	stable	none	0	>200
78-J-014	1	0.134000003	no	stable	none	0	>200
78-J-014	2	0.244000003	no	stable	none	0	>200
78-J-015	1	0.079999998	no	stable	none	0	>200
78-J-016	2	0.188999996	no	stable	moderate	0	>200
78-J-017	1	0.002	no	stable	none	0	>200
78-J-017	2	0.033	no	stable	none	0	>200
78-J-017	3	0.083999999	no	stable	none	0	>200
78-J-017	4	0.194999993	no	stable	none	0	>200
78-KS-013	15	1.463000059	no	stable	none	0	>200
78-KS-013-01	1	0.017000001	no	stable	none	0	>200
78-KS-013-07	1	0.101000004	no	stable	none	0	>200
78-KS-013-09	1	0.072999999	no	stable	none	0	>200
78-KS-013-09	2	0.239999995	no	stable	none	0	>200
78-KS-013-09	4	0.377999991	no	stable	none	0	>200
78-KS-013-16	1	0.022	no	stable	none	0	>200
78-KS-013-18	2	0.180999994	no	stable	none	0	>200
78-KS-013-18	3	0.287999988	no	stable	low	0	>200
78-KS-013-22	2	0.195999995	no	stable	none	0	undetermined
78-KS-013-22	3	0.270000011	undetermined	stable	none	0	>200
78-KS-013-22	4	0.402999997	no	stable	none	0	>200
78-KS-013-24	11	1.055999994	no	stable	none	0	>200
78-KS-013-24-01	1	0.133000001	no	stable	none	0	>200
78-KS-013-26-01	1	0.081	no	stable	none	0	>200
78-KS-013-26-02	1	0.119999997	no	stable	none	0	>200
78-KS-016	12	1.154999971	no	stable	none	0	>200
78-KS-016	13	1.245000005	no	stable	none	0	>200

Road Number	Site Number	Mile Post	Perched Material	Fill Condition	Treatment Immediacy	Controllable Volume (yd^3)	Distance from Stream (ft)
78-KS-016	14	1.328999996	no	stable	none	0	>200
78-KS-016	15	1.447999954	yes	stable	low	0	>200
78-KS-016	18	1.827999949	no	stable	none	0	>200
78-KS-016	20	1.960000038	no	stable	none	0	>200
78-KS-016	22	2.20600009	no	stable	none	0	>200
78-KS-016	24	2.423000097	no	stable	none	0	50-200
78-KS-016	27	2.661999941	no	unstable	low	0	>200
78-KS-016	9	0.888000011	no	stable	none	0	>200
78-KS-016-04	1	0.115000002	no	stable	none	0	>200
78-KS-016-04	3	0.293000013	no	stable	none	0	>200
78-KS-016-04	4	0.414000005	yes	stable	low	0	>200
78-KS-016-05	3	0.261999995	no	stable	none	0	>200
78-KS-016-05	5	0.456999987	no	stable	none	0	>200
78-KS-016-05-01	1	0.023	no	stable	none	0	>200
78-KS-016-09	1	0.118000001	yes	stable	low	0	>200
78-KS-016-10	1	0.126000002	no	stable	none	0	>200
78-KS-016-11	1	0.089000002	no	stable	none	0	>200
78-KS-016-13	1	0.108999997	no	stable	none	0	>200
78-KS-016-22	1	0.123000003	no	stable	none	0	>200
78-KS-016-22	5	0.483999997	no	unstable	low	0	>200
78-KS-016-22	6	0.614000022	no	stable	none	0	>200
78-KS-016-22-01	1	0.030999999	no	stable	none	0	>200
78-KS-016-22-02	1	0.034000002	no	stable	none	0	>200
78-KS-016-24	1	0.018999999	no	stable	none	0	>200
78-KS-016-24	2	0.189999998	no	stable	none	0	>200
78-KS-016-24	4	0.372000009	no	stable	none	0	>200
78-KS-016-24	6	0.575999975	no	stable	none	0	>200
78-KS-022	1	0.057999998	no	stable	none	0	>200
78-KS-026	10	1.041000009	no	stable	none	0	>200
78-KS-026	6	0.61500001	no	stable	low	0	>200
78-KS-026	8	0.762000024	yes	stable	low	0	>200
78-KS-028	10	0.950999975	no	stable	none	0	>200
78-KS-028	16	1.639000058	no	stable	none	0	>200
78-KS-028	19	1.902999997	no	stable	none	0	>200
78-KS-028	21	2.114000082	no	stable	none	0	>200
78-KS-028	6	0.578999996	no	stable	none	0	>200
78-KS-028	7	0.708999991	no	stable	none	0	>200
78-KS-028-13	1	0.101999998	no	stable	none	0	>200
78-KS-028-13	10	0.984000027	no	stable	none	0	>200
78-KS-028-13	13	1.289000034	no	stable	low	0	>200
78-KS-028-13	8	0.79400003	no	stable	none	0	>200
78-KS-028-13-01	1	0.071999997	no	stable	none	0	>200
78-KS-028-13-01	2	0.214000002	no	stable	none	0	>200
78-KS-028-13-02	1	0.075999998	no	stable	none	0	>200
78-KS-028-24	2	0.223000005	no	stable	none	0	>200
78-KS-028-24-01	1	0.114	no	stable	none	0	>200
78-KS-028-24-01	2	0.243000001	no	stable	none	0	>200
78-KS-028-24-01	3	0.294	no	stable	none	0	>200
78-KS-028-24-01	5	0.467999995	no	stable	none	0	>200
78-KS-028-24-02	1	0.118000001	no	stable	none	0	>200
78-KS-028-25	1	0.086000003	no	stable	none	0	>200
78-KS-030	11	1.097000003	no	stable	none	0	>200
78-KS-030	8	0.788999975	no	stable	low	0	0-50
78-KS-030-04	1	0.061000001	no	stable	none	0	>200
78-KS-030-05	1	0.101000004	yes	unstable	moderate	0	>200
78-KS-034	10	1.037999988	yes	stable	none	0	>200
78-KS-034	12	1.190999985	no	stable	none	0	>200
78-KS-034	14	1.383000016	no	stable	none	0	>200
78-KS-034	16	1.570000052	no	stable	none	0	>200
78-KS-034	20	2.007999897	no	stable	none	0	>200
78-KS-034	3	0.335000008	no	stable	none	0	>200
78-KS-034	6	0.603999972	no	stable	none	0	>200
78-KS-034	8	0.796999991	no	stable	none	0	>200
78-KS-034-07	1	0.143000007	yes	stable	low	0	>200
78-KS-034-13	4	0.386000007	no	stable	none	0	>200
78-KS-034-13	6	0.597000003	no	stable	none	0	>200
78-KS-034-13	9	0.88499999	no	stable	none	0	>200
78-KS-034-13-01	2	0.193000004	no	stable	none	0	>200
78-KS-034-18	1	0.032000002	no	stable	none	0	>200
78-KS-045	10	0.996999979	no	stable	none	0	>200
78-KS-045	12	1.182000041	no	stable	none	0	>200
78-KS-045	13	1.291000009	no	stable	none	0	>200
78-KS-045	16	1.572999954	no	stable	none	0	>200
78-KS-045	17	1.694000006	no	stable	none	0	>200
78-KS-045	18	1.797999978	no	stable	none	0	>200
78-KS-045	3	0.312999994	no	stable	none	0	>200
78-KS-045	6	0.620999992	no	stable	none	0	>200
78-KS-045-06	10	0.786000013	no	stable	none	0	>200
78-KS-045-06	2	0.231000006	no	stable	none	0	>200
78-KS-045-06	4	0.354000002	no	stable	none	0	>200
78-KS-045-06	5	0.398000002	no	stable	none	0	>200

Road Number	Site Number	Mile Post	Perched Material	Fill Condition	Treatment Immediacy	Controllable Volume (yd^3)	Distance from Stream (ft)
78-KS-045-06	6	0.455000013	no	stable	none	0	>200
78-KS-045-06	7	0.531000018	no	stable	none	0	>200
78-KS-045-06	8	0.632000029	no	stable	none	0	>200
78-KS-045-06	9	0.693000019	no	stable	none	0	>200
78-LR-054	12	1.220999956	undetermined	stable	none	0	>200
78-LR-054	13	1.304999948	undetermined	stable	none	0	>200
78-LR-054	14	1.356999993	undetermined	stable	none	0	>200
78-LR-054-09	1	0.021	undetermined	stable	none	0	>200
78-LR-054-10	5	0.499000013	undetermined	stable	low	0	>200
78-LR-054-10	7	0.666999996	undetermined	stable	low	0	>200
78-LR-054-10-01	2	0.228	undetermined	stable	low	0	50-200
78-LR-054-11	1	0.143999994	undetermined	stable	none	0	>200
78-LR-054-11-01	1	0.032000002	undetermined	stable	none	0	>200
78-LR-054-11-02	1	0.050999999	undetermined	stable	none	0	>200
78-LR-054-13	1	0.048	undetermined	stable	none	0	>200
78-LR-054-14	1	0.116999999	undetermined	stable	none	0	>200
78-LR-054-14	2	0.221000001	undetermined	stable	none	0	>200
78-LR-054-14	3	0.312000006	undetermined	stable	low	0	>200
78-LR-054-15	1	0.054000001	undetermined	stable	none	0	>200
78-LR-054-17	1	0.055	undetermined	stable	none	0	>200
78-LR-054-19	1	0.028000001	undetermined	stable	none	0	>200
78-LR-054-21	3	0.289999992	undetermined	stable	none	0	>200
78-LR-054-21-01	1	0.089000002	undetermined	stable	none	0	>200
78-LR-054-21-02	1	0.032000002	undetermined	stable	none	0	>200
78-MD	7	0.748000026	no	stable	none	0	>200
78-MD-007	2	0.166999996	no	stable	none	0	>200
78-MD-011	3	0.312999994	yes	stable	low	0	>200
78-MD-011	4	0.393000007	no	stable	none	0	>200
78-MD-011	5	0.453999996	no	stable	none	0	>200
78-MD-012	1	0.028000001	no	stable	none	0	>200
78-MD-013	2	0.224999994	no	stable	none	0	>200
78-MD-015	1	0.082000002	no	stable	none	0	>200
78-MD-016	2	0.175999999	no	stable	none	0	>200
78-MD-016	4	0.360000014	yes	stable	low	0	>200
78-MD-016	5	0.48300001	no	stable	none	0	>200
78-MD-018	2	0.155000001	no	stable	none	0	>200
78-MD-020	1	0.093999997	no	stable	none	0	>200
78-MD-020	2	0.177000001	no	stable	none	0	>200
78-MD-020-01	1	0.126000002	no	stable	none	0	>200
78-MD-021	1	0.041999999	yes	stable	low	0	>200
78-MD-022	1	0.066	yes	stable	low	0	>200
78-MD-022	2	0.150999993	no	stable	none	0	>200
78-MD-022	3	0.277999997	no	stable	none	0	>200
78-MD-022	5	0.462000012	no	stable	none	0	>200
78-MD-022	6	0.523999989	no	stable	none	0	>200
78-MD-022	7	0.603999972	yes	stable	low	0	>200
78-MD-022-02	2	0.202000007	yes	stable	low	0	>200
78-MD-022-02	3	0.305999994	yes	stable	low	0	>200
78-MD-022-03	1	0.027000001	no	stable	none	0	>200
78-MD-022-04	2	0.232999995	no	stable	none	0	>200
78-MR-001	1	0.039000001	no	stable	none	0	>200
78-MR-003-12	2	0.213	no	stable	none	0	>200
78-MR-003-12	5	0.486999989	no	stable	none	0	>200
78-MR-003-15-01	1	0.079000004	no	stable	none	0	>200
78-MR-003-15-03	1	0.050999999	no	stable	none	0	>200
78-MR-004	1	0.136999995	no	stable	none	0	>200
78-MR-004	10	1.041000009	no	stable	none	0	>200
78-MR-004	13	1.33099997	no	stable	none	0	>200
78-MR-004	15	1.527999997	no	stable	none	0	>200
78-MR-004	4	0.40200001	no	stable	none	0	>200
78-MR-004	8	0.837000012	no	stable	none	0	>200
78-MR-004-02	1	0.044	no	stable	none	0	>200
78-MR-004-04	12	1.218000054	no	stable	none	0	>200
78-MR-004-04	13	1.279000044	no	stable	none	0	>200
78-MR-004-04	15	1.524999976	yes	stable	low	0	>200
78-MR-004-04	2	0.166999996	no	unstable	low	0	>200
78-MR-004-04	3	0.307000011	no	stable	none	0	>200
78-MR-004-04	4	0.395000011	no	stable	none	0	>200
78-MR-004-04	5	0.541000009	no	stable	none	0	>200
78-MR-004-04	7	0.67900002	no	stable	none	0	>200
78-MR-004-04	9	0.896000028	yes	unstable	low	0	>200
78-MR-004-04-01	1	0.059	no	stable	none	0	>200
78-MR-004-04-02	1	0.079999998	no	stable	none	0	>200
78-MR-004-07	4	0.42899999	no	stable	none	0	>200
78-MR-004-07-01	2	0.216999993	no	stable	none	0	>200
78-MR-004-07-02	1	0.021	no	stable	none	0	>200
78-MR-004-09	2	0.194999993	yes	stable	low	0	>200
78-MR-004-13	1	0.057	yes	stable	low	0	>200
78-MR-004-13	2	0.093000002	no	stable	none	0	>200
78-MR-004-13	3	0.191	no	stable	none	0	>200
78-MR-004-13	4	0.254000008	yes	stable	low	0	>200

Road Number	Site Number	Mile Post	Perched Material	Fill Condition	Treatment Immediacy	Controllable Volume (yd^3)	Distance from Stream (ft)
78-MR-004-13	5	0.307000011	no	stable	none	0	>200
78-NG	12	1.167000055	no	stable	none	0	>200
78-NG	15	1.519000053	no	stable	none	0	>200
78-NG	17	1.748999953	no	stable	none	0	>200
78-NG	22	2.16899991	no	stable	none	0	>200
78-NG	24	2.431999922	no	stable	none	0	>200
78-NG	27	2.678999901	no	stable	none	0	>200
78-NG	29	2.871000051	no	stable	none	0	>200
78-NG	31	3.051000118	no	stable	none	0	>200
78-NG	34	3.394999981	yes	unstable	low	0	>200
78-NG	36	3.588999987	no	stable	none	0	>200
78-NG	38	3.788000107	no	stable	none	0	>200
78-NG	41	4.098999977	no	unstable	low	0	>200
78-NG	43	4.261000156	no	stable	none	0	50-200
78-NG-015	10	1.021000028	no	stable	none	0	>200
78-NG-015	14	1.36500001	no	stable	none	0	>200
78-NG-015	15	1.531999946	yes	unstable	low	0	>200
78-NG-015	2	0.191	yes	stable	low	0	>200
78-NG-015	20	1.963999987	no	stable	none	0	>200
78-NG-015	3	0.291000009	no	stable	none	0	>200
78-NG-015	4	0.407000005	no	stable	none	0	>200
78-NG-015	6	0.566999972	no	stable	none	0	>200
78-NG-015	8	0.763999999	no	stable	none	0	>200
78-NG-015	9	0.870000005	no	stable	none	0	>200
78-NG-015-07	1	0.035	no	stable	none	0	>200
78-NG-015-07	2	0.122000001	no	stable	none	0	>200
78-NG-015-11	1	0.082000002	no	stable	none	0	>200
78-NG-015-11	4	0.379000008	no	stable	none	0	>200
78-NG-015-11	5	0.509000003	no	stable	none	0	>200
78-NG-015-11	6	0.578000009	no	stable	none	0	>200
78-NG-015-11	8	0.796999991	no	stable	none	0	>200
78-NG-015-11-02	1	0.032000002	no	stable	none	0	>200
78-NG-015-19	1	0.082000002	no	stable	none	0	>200
78-NG-015-21	1	0.041000001	no	stable	none	0	>200
78-NG-017	1	0.035999998	no	unstable	low	0	>200
78-NG-021	3	0.303000003	no	unstable	low	0	>200
78-NG-021	5	0.515999973	no	stable	none	0	>200
78-NG-035	1	0.108000003	no	stable	none	0	>200
78-NG-035	2	0.164000005	no	stable	none	0	>200
78-NG-035	3	0.238999993	no	stable	none	0	>200
78-NG-036	1	0.043000001	no	stable	none	0	>200
78-NG-037	10	0.98299998	no	stable	none	0	>200
78-NG-037	3	0.287999988	no	stable	none	0	>200
78-NG-037	5	0.523000002	no	stable	none	0	>200
78-NG-037	6	0.628000021	no	stable	none	0	>200
78-NG-037	8	0.751999974	no	stable	none	0	50-200
78-NG-037-08	3	0.25999999	no	unstable	high	0	>200
78-P-002	3	0.321999997	no	stable	none	0	>200
78-P-002-02	1	0.119999997	no	stable	none	0	>200
78-RR-039	1	0.088	undetermined	undetermined	undetermined	0	undetermined
78-RR-039	2	0.225999996	undetermined	undetermined	undetermined	0	undetermined
78-RR-051	10	0.874000013	no	stable	none	0	>200
78-RR-051	11	0.97299999	no	stable	none	0	>200
78-RR-051	12	1.067999959	no	stable	none	0	>200
78-RR-051	13	1.291000009	yes	stable	low	0	>200
78-RR-051	14	1.32099998	yes	stable	low	0	>200
78-RR-051	15	1.411999941	yes	stable	low	0	>200
78-RR-051	7	0.66900003	no	stable	none	0	>200
78-RR-051	8	0.782000005	no	stable	none	0	>200
78-RR-051	9	0.828000009	no	stable	none	0	>200
78-RR-051-06	1	0.105999999	no	stable	none	0	>200
78-RR-051-12	1	0.027000001	yes	stable	low	0	>200
78-RR-055	10	0.922999978	no	stable	none	0	>200
78-RR-055	11	0.963999987	no	stable	none	0	>200
78-RR-055	4	0.428000003	no	stable	none	0	>200
78-RR-055	6	0.550000012	no	stable	none	0	>200
78-RR-055	8	0.75	no	stable	none	0	>200
78-RR-055	9	0.867999971	no	stable	none	0	>200
78-RR-055-04	2	0.238999993	no	stable	none	0	>200
78-RR-055-04	3	0.326000005	no	stable	none	0	>200
78-RR-055-04	4	0.375	no	stable	none	0	>200
78-RR-055-07	1	0.085000001	no	stable	none	0	>200
78-RR-055-10	1	0.093000002	no	stable	none	0	>200
78-SC	11	1.105999947	yes	stable	low	0	>200
78-SC	15	1.534000039	yes	stable	none	0	>200
78-SC	16	1.606999993	no	stable	none	0	>200
78-SC	18	1.83099997	yes	unstable	low	0	>200
78-SC	19	1.947000027	no	stable	none	0	>200
78-SC	2	0.158000007	no	stable	none	0	>200
78-SC	21	2.068000078	yes	stable	none	0	>200
78-SC	22	2.236999989	no	stable	none	0	>200

Road Number	Site Number	Mile Post	Perched Material	Fill Condition	Treatment Immediacy	Controllable Volume (yd^3)	Distance from Stream (ft)
78-SC	23	2.338000059	no	stable	none	0	>200
78-SC	25	2.520999908	no	stable	none	0	>200
78-SC	27	2.70600009	no	stable	none	0	>200
78-SC	3	0.27700001	no	stable	low	0	0-50
78-SC	4	0.395000011	no	stable	none	0	>200
78-SC	5	0.527999997	no	stable	none	0	>200
78-SC	7	0.717999995	no	stable	none	0	>200
78-SC-004	1	0.057	yes	stable	none	0	50-200
78-SC-006	1	0.028000001	no	stable	none	0	>200
78-SC-006	3	0.331999987	no	stable	none	0	>200
78-SC-009	1	0.064000003	no	stable	low	0	>200
78-SC-012	1	0.104999997	no	stable	low	0	>200
78-SC-016	1	0.017000001	yes	stable	none	0	>200
78-SC-016	2	0.221000001	no	stable	low	0	>200
78-SC-016	4	0.432999998	no	stable	low	0	>200
78-SC-018	2	0.247999996	no	stable	none	0	>200
78-SC-018	3	0.303000003	undetermined	undetermined	undetermined	0	>200
78-SC-018	4	0.356000006	no	stable	none	0	>200
78-SC-018	5	0.395999998	no	stable	none	0	>200
78-SC-018	6	0.470999986	no	stable	none	0	>200
78-SC-018-02	1	0.027000001	no	stable	none	0	>200
78-SC-018-02	2	0.071999997	no	stable	none	0	>200
78-SC-022	1	0.043000001	no	stable	none	0	>200
78-SC-027	2	0.210999995	no	stable	none	0	>200
78-SC-027	4	0.363999993	no	stable	none	0	>200
78-SC-027	5	0.463	no	stable	none	0	>200
78-SC-028	1	0.048999999	no	stable	none	0	>200
78-SC-029	11	1.074000001	no	stable	none	0	>200
78-SC-029	2	0.151999995	no	stable	none	0	>200
78-SC-029	3	0.254999995	no	stable	none	0	>200
78-SC-029	4	0.331	no	stable	none	0	50-200
78-SC-029	5	0.465999991	no	unstable	low	0	50-200
78-SC-029-05	1	0.004	no	stable	none	0	>200
78-SC-029-05	2	0.075000003	no	stable	none	0	>200
78-SL	8	0.768000007	no	stable	none	0	>200
78-SS	10	1.042999983	no	stable	none	0	>200
78-SS	13	1.292999983	no	stable	none	0	>200
78-SS	15	1.544999957	yes	stable	low	0	>200
78-SS	17	1.675999999	yes	stable	none	0	>200
78-SS	18	1.718999982	no	stable	none	0	>200
78-SS-007	1	0.033	no	stable	none	0	>200
78-SS-009	3	0.280999988	no	stable	none	0	>200
78-SS-010	1	0.107000001	no	stable	none	0	>200
78-SS-012	4	0.367000014	yes	stable	low	0	>200
78-SS-012	6	0.617999971	no	stable	none	0	>200
78-TC	1	0.119999997	no	stable	none	0	>200
78-TC	12	1.174000025	no	stable	none	0	>200
78-TC	13	1.269999981	no	stable	none	0	>200
78-TC	15	1.450000048	no	stable	none	0	>200
78-TC	16	1.621000051	no	stable	none	0	>200
78-TC	21	2.115999937	undetermined	undetermined	undetermined	0	undetermined
78-TC	3	0.305999994	no	stable	none	0	>200
78-TC	8	0.824999988	no	stable	none	0	>200
78-TC-004	1	0.078000002	no	stable	none	0	>200
78-TC-004	2	0.130999997	no	stable	none	0	>200
78-TC-004-01	1	0.032000002	no	stable	none	0	>200
78-TC-006	1	0.001	no	stable	none	0	>200
78-TC-006	2	0.104000002	no	stable	none	0	>200
78-TC-006-01	1	0.025	no	stable	none	0	>200
78-TC-008	5	0.458000004	no	stable	none	0	>200
78-TC-010	1	0.035999998	undetermined	undetermined	undetermined	0	undetermined
78-TC-011	1	0.052999999	no	stable	none	0	>200
78-TC-011	2	0.185000002	no	stable	none	0	>200
78-TC-011	3	0.272000015	yes	stable	low	0	>200
78-TC-011	4	0.446999997	yes	unstable	low	0	>200
78-TC-013	1	0.057999998	undetermined	undetermined	undetermined	0	undetermined
78-TC-014	1	0.067000002	no	stable	none	0	>200
78-TC-018	2	0.163000003	undetermined	undetermined	undetermined	0	undetermined
78-TF-028	4	0.360000014	no	stable	none	0	>200
78-TF-028	5	0.505999982	no	stable	none	0	>200
78-TF-028	7	0.662	no	stable	none	0	>200
78-TM-004	1	0.114	no	stable	none	0	>200
78-TM-006	2	0.194000006	no	stable	none	0	>200
78-TM-006	4	0.379000008	no	stable	none	0	>200
78-TM-006	5	0.441000015	yes	stable	low	0	>200
78-TM-006	6	0.614000022	yes	stable	low	0	>200
78-TM-006	8	0.787	no	stable	none	0	50-200
78-TM-006-02	1	0.044	no	stable	none	0	>200
78-TM-006-04	1	0.067000002	no	stable	none	0	>200
78-TM-008	13	1.320000052	no	stable	none	0	>200
78-TM-008	15	1.529000044	no	stable	none	0	>200

Road Number	Site Number	Mile Post	Perched Material	Fill Condition	Treatment Immediacy	Controllable Volume (yd^3)	Distance from Stream (ft)
78-TM-008	16	1.618999958	yes	stable	low	0	>200
78-TM-008	5	0.54400003	no	stable	none	0	50-200
78-TM-008	6	0.612999976	no	stable	none	0	>200
78-TM-008	8	0.777999997	no	stable	none	0	50-200
78-TM-008	9	0.876999974	no	stable	none	0	>200
78-TM-008-01	1	0.143999994	no	stable	none	0	>200
78-TM-008-01	11	1.090999961	no	stable	none	0	>200
78-TM-008-01	12	1.202000022	no	stable	none	0	>200
78-TM-008-01	14	1.360000014	no	stable	none	0	>200
78-TM-008-01	6	0.568000019	no	stable	none	0	>200
78-TM-008-01-01	1	0.024	no	stable	none	0	>200
78-TM-008-01-01	2	0.222000003	no	stable	none	0	>200
78-TM-008-01-02	2	0.221000001	no	stable	none	0	>200
78-TM-008-01-03	1	0.134000003	no	stable	none	0	>200
78-TM-008-01-04	1	0.118000001	no	stable	none	0	>200
78-TM-008-01-04	2	0.162	yes	stable	low	0	>200
78-TM-008-01-04	3	0.275999993	no	stable	none	0	>200
78-TM-008-05	2	0.152999997	no	stable	none	0	>200
78-TM-008-05	3	0.261000007	no	unstable	low	0	>200
78-TM-008-05	6	0.593999982	no	stable	low	0	>200
78-TM-008-05	7	0.689999998	no	stable	none	0	>200
78-TM-008-07	3	0.282000005	no	stable	none	0	>200
78-TM-008-07	4	0.370000005	no	stable	none	0	>200
78-TM-008-09	1	0.093000002	no	stable	none	0	>200
78-TM-008-09	2	0.207000002	yes	stable	low	0	>200
78-TM-008-09	4	0.351000011	no	stable	none	0	>200
78-TM-008-09	5	0.442000002	no	stable	none	0	>200
78-TM-008-09-01	2	0.170000002	no	stable	none	0	>200
78-TR	11	1.052999973	no	stable	none	0	>200
78-TR	16	1.557999969	no	stable	none	0	>200
78-TR	18	1.840000033	no	stable	none	0	>200
78-TR	20	1.993000031	undetermined	undetermined	undetermined	0	undetermined
78-TR	21	2.105999947	undetermined	undetermined	undetermined	0	undetermined
78-TR	7	0.689999998	no	stable	none	0	>200
78-TR	9	0.916000009	no	stable	none	0	>200
78-TR-006	1	0.014	no	stable	none	0	>200
78-TR-006	12	1.233999968	no	stable	none	0	>200
78-TR-006	17	1.700999975	no	stable	none	0	>200
78-TR-006	18	1.817000031	no	stable	none	0	>200
78-TR-006	2	0.238000005	no	stable	none	0	>200
78-TR-006	3	0.347000003	no	stable	none	0	>200
78-TR-006	4	0.402999997	no	stable	none	0	>200
78-TR-006	8	0.786000013	no	stable	none	0	>200
78-TR-006-12	1	0.037	no	stable	none	0	>200
78-TR-006-13	2	0.238000005	no	stable	none	0	>200
78-TR-006-13	4	0.416000009	no	stable	none	0	>200
78-TR-006-13	6	0.635999978	no	stable	none	0	>200
78-TR-008	1	0.092	no	stable	none	0	>200
78-TR-008	10	0.95599997	no	stable	none	0	>200
78-TR-008	11	1.100999951	no	stable	none	0	>200
78-TR-008	13	1.281000018	no	stable	none	0	>200
78-TR-008	14	1.386999965	undetermined	undetermined	undetermined	0	undetermined
78-TR-008	2	0.143000007	undetermined	undetermined	undetermined	0	>200
78-TR-008	3	0.197999999	no	stable	none	0	>200
78-TR-008	4	0.361000001	no	stable	none	0	>200
78-TR-008	5	0.514999986	no	stable	none	0	>200
78-TR-008	7	0.716000021	no	stable	none	0	>200
78-TR-008	8	0.81400001	no	stable	none	0	>200
78-TR-011	4	0.409999996	no	stable	none	0	>200
78-TR-011	9	0.917999983	no	stable	none	0	50-200
78-TR-011-04	1	0.079999998	no	stable	none	0	>200
78-TR-011-06	1	0.131999999	no	stable	none	0	>200
78-TR-017	1	0.078000002	undetermined	undetermined	undetermined	0	undetermined
78-TR-019	1	0.057	undetermined	undetermined	undetermined	0	undetermined
78-WG	10	1.014000058	no	stable	none	0	>200
78-WG	12	1.162999988	no	stable	none	0	>200
78-WG	14	1.350000024	no	stable	none	0	>200
78-WG	19	1.914999962	no	stable	none	0	>200
78-WG	23	2.25999999	no	stable	none	0	>200
78-WG	24	2.384000063	no	stable	none	0	>200
78-WG	25	2.520999908	no	stable	none	0	>200
78-WG	27	2.654000044	no	stable	none	0	>200
78-WG	29	2.849999905	no	stable	none	0	>200
78-WG	30	2.878999949	no	stable	none	0	>200
78-WG	31	2.944000006	no	stable	none	0	>200
78-WG	32	3.036999941	no	stable	none	0	>200
78-WG	33	3.201999903	no	stable	none	0	>200
78-WG	34	3.34100008	no	stable	none	0	>200
78-WG	36	3.558000088	no	stable	none	0	>200
78-WG	37	3.627000093	no	stable	none	0	>200
78-WG	38	3.782000065	no	stable	none	0	>200

Road Number	Site Number	Mile Post	Perched Material	Fill Condition	Treatment Immediacy	Controllable Volume (yd^3)	Distance from Stream (ft)
78-WG	39	3.823999882	yes	stable	low	0	>200
78-WG	41	4.085000038	no	stable	none	0	>200
78-WG	8	0.758000016	no	stable	none	0	>200
78-WG-014	1	0.116999999	no	stable	none	0	>200
78-WG-015	3	0.314999998	no	stable	none	0	>200
78-WG-015	4	0.412999988	no	stable	none	0	>200
78-WG-015	7	0.657000005	no	stable	none	0	>200
78-WG-015-02	2	0.163000003	no	stable	none	0	>200
78-WG-015-04	1	0.125	no	stable	none	0	>200
78-WG-015-07	1	0.048999999	no	stable	none	0	>200
78-WG-015-11	1	0.034000002	no	stable	none	0	>200
78-WG-016	1	0.079000004	no	stable	none	0	>200
78-WG-017	4	0.44600001	no	stable	none	0	>200
78-WG-017	8	0.750999987	no	stable	none	0	>200
78-WG-017	9	0.827000022	no	stable	none	0	>200
78-WG-017-01	1	0.123000003	no	stable	none	0	>200
78-WG-017-01	4	0.372000009	no	stable	none	0	>200
78-WG-017-01-01	1	0.063000001	no	stable	none	0	>200
78-WG-017-03	1	0.068000004	no	stable	none	0	>200
78-WG-018	10	0.963	no	stable	none	0	>200
78-WG-018	13	1.345999956	no	stable	none	0	>200
78-WG-018	14	1.434000015	no	stable	none	0	>200
78-WG-018	16	1.58099997	no	stable	none	0	>200
78-WG-018	2	0.209000006	no	stable	none	0	>200
78-WG-018	5	0.521000028	no	stable	none	0	>200
78-WG-018	7	0.745999992	no	stable	none	0	>200
78-WG-018-05	1	0.082000002	no	stable	none	0	>200
78-WG-018-05	2	0.225999996	no	stable	none	0	>200
78-WG-018-07	1	0.037	no	stable	none	0	>200
78-WG-018-08	1	0.134000003	no	stable	none	0	>200
78-WG-018-09	1	0.043000001	no	stable	none	0	>200
78-WG-018-11	1	0.041999999	no	stable	none	0	>200
78-WG-018-12	1	0.068000004	no	stable	none	0	>200
78-WG-018-13-01	1	0.079000004	yes	stable	low	0	>200
78-WG-018-13-02	1	0.088	no	stable	none	0	>200
78-WG-018-13-03	1	0.016000001	yes	stable	low	0	>200
78-WG-018-13-04	1	0.032000002	no	stable	none	0	>200
78-WG-018-13-05	1	0.052999999	yes	stable	low	0	>200
78-WG-018-14	2	0.181999996	no	stable	none	0	>200
78-WG-018-15	3	0.333000004	no	stable	none	0	>200
78-WG-018-16	3	0.268000007	no	stable	none	0	>200
78-WG-018-16	4	0.319999993	no	stable	none	0	>200
78-WG-018-16	5	0.39199999	no	stable	none	0	>200
78-WG-018-16-01	1	0.041999999	no	stable	none	0	>200
78-WG-018-16-01	2	0.108999997	yes	stable	low	0	>200
78-WG-019	1	0.011	no	stable	none	0	>200
78-WG-019-04	1	0.114	no	stable	none	0	>200
78-WG-019-04	2	0.210999995	yes	stable	low	0	>200
78-WG-021	3	0.25	no	stable	none	0	>200
78-WG-024	2	0.194000006	no	stable	none	0	>200
78-WG-024	4	0.421999991	no	stable	none	0	>200
78-WG-024	5	0.462000012	no	stable	none	0	>200
78-WG-024	7	0.726000011	no	stable	none	0	>200
78-WG-024-02	1	0.079000004	no	stable	none	0	>200
78-WG-027	1	0.046	no	stable	none	0	>200
78-WG-029	1	0.061000001	no	stable	none	0	>200
78-WG-031	1	0.017000001	no	stable	none	0	>200
78-WG-033	1	0.090000004	no	stable	none	0	>200
78-WG-034	1	0.033	no	stable	none	0	>200
78-WG-035	2	0.179000005	no	stable	none	0	>200
78-WG-036	2	0.187999994	no	stable	none	0	>200
78-WG-036-01	1	0.037999999	no	stable	none	0	>200
78-WG-038	1	0.085000001	undetermined	undetermined	undetermined	0	undetermined
78-WG-040	1	0.039000001	no	stable	none	0	>200
78-WG-042	1	0.086000003	no	stable	none	0	>200
81-CU-182	1	0.083999999	no	stable	none	0	>200
81-CU-182	6	0.646000028	yes	stable	none	0	>200
81-CU-182-02	1	0.025	no	stable	none	0	>200
81-CU-182-04	4	0.412999988	yes	stable	none	0	>200
81-CU-182-05	1	0.025	no	stable	none	0	>200
81-CU-182-06	1	0.079000004	no	stable	none	0	>200
81-CU-182-10	1	0.079000004	no	stable	none	0	>200
81-CU-182-12	12	1.207999945	no	stable	low	0	0-50
81-CU-182-12	15	1.486999989	no	stable	low	0	0-50
81-CU-182-12	17	1.694000006	no	stable	low	0	0-50
81-CU-182-12	8	0.769999981	no	stable	none	0	>200
81-CU-182-12-01	1	0.052000001	no	stable	none	0	>200
81-CU-182-12-03	1	0.134000003	no	stable	none	0	>200
81-CU-182-12-04	1	0.107000001	no	stable	none	0	>200
81-CU-182-12-05	1	0.046	no	stable	none	0	>200
81-JS-012	8	0.818000019	no	stable	none	0	>200

Road Number	Site Number	Mile Post	Perched Material	Fill Condition	Treatment Immediacy	Controllable Volume (yd^3)	Distance from Stream (ft)
81-PM-004	1	0.055	yes	stable	none	0	>200
81-PM-011	2	0.202999994	no	stable	none	0	>200
81-PM-012	5	0.479000002	no	stable	none	0	>200
81-PM-012	7	0.727999985	no	stable	none	0	>200
81-PM-012	8	0.818000019	no	stable	none	0	>200
81-PM-012-02-01	1	0.136999995	yes	stable	low	0	>200
81-PM-012-02-01	5	0.467999995	no	stable	none	0	>200
81-PM-012-04	1	0.136999995	no	stable	low	0	>200
81-PM-012-04	2	0.178000003	no	stable	low	0	>200
81-PM-012-10	1	0.018999999	no	stable	none	0	>200
81-PM-012-10	2	0.097000003	no	stable	none	0	>200
81-PM-012-12	8	0.792999983	no	stable	none	0	>200
81-PM-016	14	1.381999969	no	stable	none	0	>200
81-PM-016	15	1.485000014	no	stable	none	0	>200
81-PM-016	16	1.646999955	no	stable	none	0	>200
82-HT	1	0.078000002	no	stable	none	0	>200
82-NR-044	2	0.158000007	no	stable	none	0	>200
82-NR-044-02	1	0.041000001	no	stable	none	0	>200
82-NR-047	1	0.030999999	no	stable	none	0	>200

Road Number	Site Number	Mile Post	Erosion Type	Treatment Immediacy	Controllable Volume (yd^3)
78-TM-006	6	0.560000002	gully	moderate	33
78-NG	11	1.077000022	gully	moderate	27
78-AR-006	3	0.112000003	gully	moderate	20
78-KS-045	4	0.398999989	major rilling	moderate	13
78-NG-037	2	0.165999994	gully	low	11
78-KS-030	3	0.342999995	gully	moderate	11
78-TF	13	1.273000002	undetermined	moderate	6
78-WG	6	0.648999989	gully	moderate	6
78-AR-006	1	0.017000001	gully	low	5
78-AR-006	4	0.175999999	gully	low	5
78-CU-135	6	0.588	major rilling	low	4
78-NG	23	2.295000076	major rilling	low	4
78-TF	16	1.621999979	undetermined	moderate	4
78-NG-037-08	2	0.155000001	major rilling	low	0
78-AR-006	2	0.028000001	gully	low	0
78-LR-054-10-01	6	0.617999971	gully	low	0

Road Number	Site Number	Mile Post	Road Slide Type	Treatment Immediacy	Controllable Volume (yd^3)	Distance from Stream (ft)
78-NG-037-08	2	0.180000007	fill	high	333	>200
78-NG-037	5	0.460999995	unknown	high	148	0-50
78-KS-045	11	1.08099997	fill	high	93	>200
78-KS-013-18	1	0.064999998	fill	high	78	>200
78-TM-008	3	0.287999988	unknown	high	74	>200
78-KS-030	3	0.324000001	fill	high	33	0-50
78-NG-015	16	1.633000016	fill	high	23	0-50
78-MR-004-04	11	1.093000054	fill	moderate	92	>200
78-NG-037	9	0.851999998	fill	moderate	74	>200
78-KS-013-24	4	0.432999998	fill	moderate	66	>200
81-PM-012-02	1	0.101999998	fill	moderate	30	>200
78-KS-013-24	8	0.80400002	cutbank	moderate	30	50-200
78-KS-030-05	1	0.075000003	fill	moderate	24	>200
78-WG-024	3	0.319000006	fill	moderate	20	50-200
78-TR-006-13	2	0.173999995	fill	moderate	19	>200
78-J-014	1	0.078000002	fill	moderate	16	50-200
78-TF	23	2.273000002	fill	moderate	13	0-50
78-KS-034-13	9	0.811999977	fill	moderate	9	50-200
78-AR-031	17	1.707999945	fill	moderate	9	>200
78-MR-004-04	2	0.197999999	unknown	moderate	0	>200
78-MR-004-04	3	0.270000011	unknown	moderate	0	>200
78-MR-004-04	4	0.335000008	unknown	moderate	0	>200
78-TC-008	3	0.301999986	unknown	moderate	0	50-200
78-TF-028	2	0.238000005	fill	moderate	0	50-200
78-GG-002	5	0.463	fill	moderate	0	>200
78-KS-013-18	2	0.107000001	fill	moderate	0	>200
78-KS-034-13	7	0.675999999	fill	moderate	0	>200
78-NG-015-11	6	0.611999989	fill	low	22	>200
78-DM	19	1.863999963	fill	low	22	0-50
78-KS-045	14	1.381999969	fill	low	20	>200
78-AR-031	31	3.135999918	cutbank	low	5	0-50
78-MR-004-04	7	0.663999975	fill	low	4	>200
78-KS-030	6	0.606999993	cutbank	low	3	0-50
78-KS-028	10	1	fill	low	2	>200
78-MR-004-07	3	0.308999985	cutbank	low	0	>200
78-MR-004-07	4	0.324999988	cutbank	low	0	>200
81-PM-011	1	0.086000003	cutbank	low	0	>200
81-PM-016	6	0.640999973	cutbank	low	0	>200
78-MR-004-04	1	0.046	fill	low	0	>200
78-MR-004-04	5	0.365999997	unknown	low	0	>200
78-MR-004-04-01	1	0.028999999	fill	low	0	>200
78-MR-004-07-01	1	0.093000002	fill	low	0	>200
78-NG-015	1	0.137999997	fill	low	0	>200
78-NG-015-11	1	0.147	fill	low	0	>200
78-TF-028	4	0.397000015	fill	low	0	>200
78-WG-024	1	0.143999994	fill	low	0	>200
78-WG-024	2	0.165999994	cutbank	low	0	>200
78-GG	15	1.476999998	fill	low	0	>200
78-GG	18	1.848999977	fill	low	0	>200
78-GG	22	2.157999992	cutbank	low	0	>200

Road Number	Site Number	Mile Post	Road Slide Type	Treatment Immediacy	Controllable Volume (yd^3)	Distance from Stream (ft)
78-GG-002	7	0.684000015	fill	low	0	>200
78-KS	34	3.397000074	cutbank	low	0	>200
78-KS-013-22	2	0.170000002	cutbank	low	0	>200
78-KS-013-24	1	0.078000002	cutbank	low	0	>200
78-KS-013-24	10	0.994000018	cutbank	low	0	>200
78-KS-013-24	2	0.169	cutbank	low	0	>200
78-KS-013-24	5	0.542999983	cutbank	low	0	>200
78-KS-026-08	2	0.158999994	cutbank	low	0	>200
78-KS-034-13	8	0.791999996	fill	low	0	>200
78-KS-045	1	0.07	cutbank	low	0	>200
78-NG	14	1.412999988	cutbank	low	0	>200
78-NG	5	0.5	cutbank	low	0	50-200
78-AR	13	1.300999999	unknown	low	0	50-200
78-AR-006	2	0.215000004	cutbank	low	0	50-200
78-AR-031	30	2.976000071	cutbank	low	0	>200
78-AR-031	4	0.419	fill	low	0	>200
78-AR-031	9	0.883000016	fill	low	0	>200
78-AR-031-11	1	0.105999999	fill	low	0	>200
78-DM	22	2.229000092	cutbank	low	0	0-50
78-LR-054-10-01	6	0.625999987	fill	low	0	0-50
78-LR-054-10-01	7	0.672999978	cutbank	low	0	>200
78-RR-055-10	1	0.008	fill	low	0	>200
78-TM-008-01-04	2	0.226999998	cutbank	low	0	>200
78-CU-078	4	0.416000009	fill	none	0	undetermined
78-KS	32	3.214999914	fill	none	0	50-200
78-WG	12	1.149999976	fill	none	0	>200
78-J-006-15	1	0.114	fill	none	0	>200

Culvert Sizing Analysis for Albion Watercourse Culverts

| | | | | | | Mean Annual Precipitation (in.) 45 | | | | | |

Road Number	Site #	Culvert material	Culvert condition	Culvert Diameter (in)	Area (ac)	50 year flood (cfs)	100 year flood (cfs)	50 yr Culvert Size (in)	100 yr Culvert Size (in)	50 yr pass	100 yr pass
71-CO	c7	steel	functional	36	44	32	35	30	36	YES	YES
71-CO	c8	steel	functional	24	16	13	14	24	24	YES	YES
71-CO	c9	steel	functional	18	19	16	17	24	24	NO	NO
71-CO	c10	steel	functional	18	14	12	13	24	24	NO	NO
71-CO	c11	steel	functional	18	14	12	13	24	24	NO	NO
71-CO-005	c3	steel	functional	18	16	13	14	24	24	NO	NO
71-CO-005	c5	steel	functional	24	13	11	12	24	24	YES	YES
71-CO-006	c5	steel	functional	12	8	7	8	18	18	NO	NO
71-CO-006	c6	other	functional	12	7	7	7	18	18	NO	NO
71-CO-006-01	c12	steel	functional	18	11	10	10	24	24	NO	NO
71-NR-024	c1	steel	functional	18	21	17	18	24	24	NO	NO
78-TM-008	c1	steel	non-functional	18	5	5	5	18	18	YES	YES
78-TM-008	c2	steel	functional	18	3	3	3	18	18	YES	YES
78-TM-008	c3	steel	functional	18	9	8	9	18	24	YES	NO
78-TM-008	c5	steel	functional	18	16	13	14	24	24	NO	NO
78-TM-008	c7	steel	functional	12	8	7	8	18	18	NO	NO
78-TM-008	c8	steel	non-functional	18	8	7	8	18	18	YES	YES
78-TM-008	c12	steel	functional	18	6	6	6	18	18	YES	YES
78-TM-008-01	c4	steel	functional	48	96	64	68	42	42	YES	YES
78-TM-008-01	c6	steel	functional	18	12	10	11	24	24	NO	NO
78-TM-008-01	c8	steel	functional	18	38	28	31	30	30	NO	NO
78-TM-008-01	14	steel	functional	18	23	18	20	24	30	NO	NO
78-CU-078-03	c3	steel	functional	24	17	14	15	24	24	YES	YES
78-DM	c1	steel	functional	12	28	22	23	30	30	NO	NO
78-DM	c3	steel	functional	18	48	35	37	36	36	NO	NO
78-DM	c19	steel	functional	18	6	6	6	18	18	YES	YES
78-DM	c22	aluminum	functional	18	7	7	7	18	18	YES	YES
78-DM	c23	aluminum	functional	18	5	5	5	18	18	YES	YES
78-DM	c24	aluminum	functional	48	153	95	103	48	48	YES	YES
78-DM	c26	aluminum	functional	18	34	26	28	30	30	NO	NO
78-DM	c34	steel	functional	36	211	126	136	54	54	NO	NO
78-DM-012	c1	aluminum	functional	18	2	2	2	18	18	YES	YES
78-DM-012	c2	aluminum	functional	18	4	4	4	18	18	YES	YES
78-DM-012	c3	steel	functional	18	4	4	4	18	18	YES	YES
78-DM-012	c4	aluminum	functional	18	10	9	10	24	24	NO	NO
78-DM-012	c5	aluminum	functional	18	26	20	22	30	30	NO	NO
78-DM-012	c6	aluminum	functional	18	18	15	16	24	24	NO	NO
78-DM-012	c7	aluminum	functional	18	20	16	17	24	24	NO	NO
78-DM-012	c8	steel	non-functional	24	14	12	13	24	24	YES	YES
78-DM-012	c10	steel	functional	18	20	16	17	24	24	NO	NO
78-DM-012	c11	steel	functional	18	37	28	30	30	30	NO	NO
78-DM-015	c1	aluminum	functional	24	5	5	5	18	18	YES	YES
78-DM-015	c2	aluminum	functional	24	6	6	6	18	18	YES	YES
78-AR-031	c3	aluminum	functional	18	9	8	9	18	24	YES	NO
78-AR-031	c30	steel	functional	24	9	8	9	18	24	YES	YES
78-AR-031	c32	steel	functional	24	18	15	16	24	24	YES	YES
78-AR-031	c33	steel	functional	24	13	11	12	24	24	YES	YES
78-AR-031-04	c1	aluminum	functional	18	10	9	10	24	24	NO	NO
78-AR-031-04	c2	aluminum	functional	18	15	13	14	24	24	NO	NO
78-AR-032	c7	steel	functional	18	38	28	31	30	30	NO	NO
78-AR	c13	steel	non-functional	24	156	97	104	48	48	NO	NO
78-AL-020	c6	plastic	functional	18	7	7	7	18	18	YES	YES
78-AL-020	c8	aluminum	functional	18	7	7	7	18	18	YES	YES
78-AL-020	c10	aluminum	functional	24	7	7	7	18	18	YES	YES
78-AL-020-04	c1	aluminum	functional	24	10	9	10	24	24	YES	YES
78-AL-020-04	c2	aluminum	functional	24	5	5	5	18	18	YES	YES
78-DH	c7	steel	functional	18	21	17	18	24	24	NO	NO
78-DH	c9	steel	functional	36	116	75	81	42	48	NO	NO
78-DH	c12	steel	functional	36	194	117	126	54	54	NO	NO
78-CU-135	c5	steel	functional	18	5	5	5	18	18	YES	YES
78-CU-135	c6	steel	functional	12	4	4	4	18	18	NO	NO
78-CU-135	c7	steel	functional	18	6	6	6	18	18	YES	YES
78-CU-135	c8	steel	functional	12	3	3	3	18	18	NO	NO
78-J-006	c2	steel	functional	24	28	22	23	30	30	NO	NO
78-J-006	c4	steel	functional	36	47	34	37	30	36	YES	YES
78-J-006	**c11**	**undetermined**	**undetermined**	**0**	**53**	**38**	**41**	**36**	**36**	**NO**	**NO**
78-J-006	c13	steel	functional	24	30	23	25	30	30	NO	NO
78-J-006	c14	steel	functional	36	31	24	26	30	30	YES	YES
78-J-006	**c18**	**undetermined**	**undetermined**	**0**	**5**	**5**	**5**	**18**	**18**	**NO**	**NO**
78-J-006	**c19**	**undetermined**	**undetermined**	**0**	**12**	**10**	**11**	**24**	**24**	**NO**	**NO**
78-J-006	**c20**	**undetermined**	**undetermined**	**0**	**10**	**9**	**10**	**24**	**24**	**NO**	**NO**
78-J-006	c21	steel	functional	36	27	21	23	30	30	YES	YES
78-J-006	c24	steel	non-functional	16	19	16	17	24	24	NO	NO
78-J-006-05	c3	steel	functional	16	6	6	6	18	18	NO	NO
78-J-014	c1	steel	functional	16	8	7	8	18	18	NO	NO
78-J-014	c2	steel	functional	18	8	7	8	18	18	YES	YES
78-J-014	c5	steel	functional	18	7	7	7	18	18	YES	YES
78-KS	c8	aluminum	functional	36	33	25	27	30	30	YES	YES
78-KS	c18	steel	functional	18	30	23	25	30	30	NO	NO
78-KS	c26	steel	functional	24	166	102	110	48	48	NO	NO
78-KS	c35	steel	functional	24	23	18	20	24	30	YES	NO
78-KS	c38	steel	functional	12	10	9	10	24	24	NO	NO
78-KS	c39	steel	functional	18	18	15	16	24	24	NO	NO
78-KS	c49	steel	functional	24	17	14	15	24	24	YES	YES
78-KS	c53	steel	functional	60	297	170	183	60	60	YES	YES
78-KS	c56	steel	functional	24	38	28	31	30	30	NO	NO
78-SS	c3	aluminum	functional	18	7	7	7	18	18	YES	YES
78-SS	c4	steel	functional	18	11	10	10	24	24	NO	NO
78-SS-012	c3	steel	functional	18	4	4	4	18	18	YES	YES
78-SS-012	c4	steel	functional	18	7	7	7	18	18	YES	YES
78-SS-012	c5	steel	non-functional	18	12	10	11	24	24	NO	NO
78-KS-013-04	c1	steel	functional	36	34	26	28	30	30	YES	YES
78-KS-013-04	c3	steel	functional	36	27	21	23	30	30	YES	YES
78-KS-013-04	c4	steel	functional	36	23	18	20	24	30	YES	YES
78-KS-013-09	c2	steel	functional	18	7	7	7	18	18	YES	YES
78-KS-013-09	c3	steel	functional	18	9	8	9	18	24	YES	NO
78-KS-013-24	c4	steel	functional	18	4	4	4	18	18	YES	YES
78-KS-013-24	c8	steel	functional	18	10	9	10	24	24	NO	NO

Culvert Sizing Analysis for Albion Watercourse Culverts

Road Number	Site #	Culvert material	Culvert condition	Culvert Diameter (in)	Area (ac)	50 year flood (cfs)	100 year flood (cfs)	50 yr Culvert Size (in)	100 yr Culvert Size (in)	50 yr pass	100 yr pass
78-KS-013-24	c10	aluminum	functional	18	12	10	11	24	24	NO	NO
78-KS-016	c3	steel	functional	24	17	14	15	24	24	YES	YES
78-KS-016	c4	steel	functional	24	12	10	11	24	24	YES	YES
78-KS-016	c6	steel	functional	18	5	5	5	18	18	YES	YES
78-KS-016	c24	steel	functional	18	5	5	5	18	18	YES	YES
78-KS-016	c25	aluminum	functional	18	5	5	5	18	18	YES	YES
78-KS-016	c27	aluminum	functional	18	9	8	9	18	24	YES	NO
78-KS-016	c28	aluminum	functional	24	16	13	14	24	24	YES	YES
78-KS-016-24	c1	aluminum	functional	18	6	6	6	18	18	YES	YES
78-TR	c2	aluminum	functional	24	55	39	42	36	36	NO	NO
78-TR-006	c4	steel	functional	18	8	7	8	18	18	YES	YES
78-TR-006	c5	steel	functional	12	13	11	12	24	24	NO	NO
78-TR-006	c7	aluminum	functional	18	16	13	14	24	24	NO	NO
78-TR-006	c8	steel	functional	24	17	14	15	24	24	YES	YES
78-TR-006	c13	steel	functional	24	15	13	14	24	24	YES	YES
78-TR-006	c16	steel	functional	18	7	7	7	18	18	YES	YES
78-TR-006	c18	steel	functional	18	9	8	9	18	24	YES	NO
78-TR	c8	steel	functional	18	10	9	10	24	24	NO	NO
78-TR-008	c1	steel	functional	18	4	4	4	18	18	YES	YES
78-TR-008	c2	steel	non-functional	18	4	4	4	18	18	YES	YES
78-TR-008	c4	steel	functional	18	3	3	3	18	18	YES	YES
78-TR-008	c5	steel	functional	18	3	3	3	18	18	YES	YES
78-TR-008	c6	steel	non-functional	18	4	4	4	18	18	YES	YES
78-TR-008	c7	steel	functional	18	8	7	8	18	18	YES	YES
78-TR-008	c8	steel	functional	18	7	7	7	18	18	YES	YES
78-TR-008	c9	steel	functional	18	8	7	8	18	18	YES	YES
78-TR-008	c11	steel	functional	18	9	8	9	18	24	YES	NO
78-TR-008	c12	steel	functional	18	14	12	13	24	24	NO	NO
78-TR-006-13	c4	steel	functional	18	6	6	6	18	18	YES	YES
78-TR-006-13	c5	steel	functional	18	13	11	12	24	24	NO	NO
78-TR-006-13	c7	steel	non-functional	18	14	12	13	24	24	NO	NO
78-TR-006-13	c8	steel	functional	18	5	5	5	18	18	YES	YES
78-TR-006-13	c9	steel	functional	12	10	9	10	24	24	NO	NO
78-TR-006-13	c10	steel	functional	24	22	18	19	24	30	YES	NO
78-TR-006-13	c11	steel	functional	24	31	24	26	30	30	NO	NO
78-KS-028	c5	aluminum	functional	18	14	12	13	24	24	NO	NO
78-KS-028	c9	aluminum	functional	18	7	7	7	18	18	YES	YES
78-KS-028	c14	aluminum	functional	18	16	13	14	24	24	NO	NO
78-KS-028	c15	steel	functional	36	14	12	13	24	24	YES	YES
78-KS-028	c17	aluminum	functional	24	17	14	15	24	24	YES	YES
78-KS-030-04	c1	steel	functional	18	12	10	11	24	24	NO	NO
78-KS-034	c6	steel	functional	18	11	10	10	24	24	NO	NO
78-NG	c5	aluminum	functional	18	21	17	18	24	24	NO	NO
78-NG	c8	steel	functional	18	23	18	20	24	30	NO	NO
78-NG	c9	steel	functional	18	19	16	17	24	24	NO	NO
78-NG	c10	aluminum	functional	18	9	8	9	18	24	YES	NO
78-NG	c11	steel	undetermined	24	29	22	24	30	30	NO	NO
78-NG	c13	aluminum	functional	18	6	6	6	18	18	YES	YES
78-NG-015	c8	aluminum	functional	18	19	16	17	24	24	NO	NO
78-NG-015	c14	aluminum	functional	18	15	13	14	24	24	NO	NO
78-NG-015	c15	aluminum	functional	24	30	23	25	30	30	NO	NO
78-NG-015	c17	steel	functional	36	27	21	23	30	30	YES	YES
78-NG-015	c18	aluminum	functional	18	8	7	8	18	18	YES	YES
78-NG-015-11	c2	aluminum	functional	18	23	18	20	24	30	NO	NO
78-NG-015-11	c5	aluminum	functional	18	6	6	6	18	18	YES	YES
78-NG-015-11	c6	aluminum	functional	18	6	6	6	18	18	YES	YES
78-GG	c3	steel	functional	18	27	21	23	30	30	NO	NO
78-GG	c4	steel	functional	18	24	19	20	30	30	NO	NO
78-GG	c11	steel	functional	18	5	5	5	18	18	YES	YES
78-GG-023	c3	steel	functional	12	9	8	9	18	24	NO	NO
78-KS-045	c4	steel	functional	18	10	9	10	24	24	NO	NO
78-KS-045	c5	steel	functional	18	5	5	5	18	18	YES	YES
78-KS-045	c6	steel	functional	24	14	12	13	24	24	YES	YES
78-KS-045	c7	steel	functional	18	16	13	14	24	24	NO	NO
78-KS-045	c8	steel	functional	24	29	22	24	30	30	NO	NO
78-KS-045	c10	steel	functional	24	28	22	23	30	30	NO	NO
78-KS-045	c11	steel	functional	18	10	9	10	24	24	NO	NO
78-KS-045	c13	steel	functional	24	43	32	34	30	30	NO	NO
78-KS-045	c14	steel	functional	18	6	6	6	18	18	YES	YES
78-KS-045	c15	steel	functional	18	18	15	16	24	24	NO	NO
78-KS-045	c16	steel	functional	18	5	5	5	18	18	YES	YES
78-AR	c11	steel	non-functional	12	31	24	26	30	30	NO	NO
78-MD	c9	steel	functional	36	39	29	31	30	30	YES	NO
78-MD-021	c1	steel	non-functional	6	13	11	12	24	24	NO	NO
78-MR	c3	steel	functional	48	45	33	35	30	36	YES	YES
78-MR-004	c1	steel	functional	48	50	36	39	36	36	YES	YES
78-MR-004-13	c2	steel	functional	12	6	6	6	18	18	NO	NO
78-CU-113	c9	steel	functional	24	5	5	5	18	18	YES	YES
78-CU-113	c11	steel	functional	18	2	2	2	18	18	YES	YES
78-CU-113	c12	steel	functional	18	2	2	2	18	18	YES	YES
78-CU-113-02	c2	steel	functional	24	11	10	10	24	24	YES	YES
78-CU-106	c3	aluminum	functional	24	21	17	18	24	24	YES	YES
78-CU-106	c4	steel	non-functional	18	13	11	12	24	24	NO	NO
78-CU-106	c5	aluminum	functional	18	8	7	8	18	18	YES	YES
78-CU-106	c6	steel	functional	18	5	5	5	18	18	YES	YES
78-RR-055-04	c3	steel	functional	18	16	13	14	24	24	NO	NO
78-RR-055-05	c2	steel	functional	24	36	27	29	30	30	NO	NO
78-TF	c7	steel	functional	24	94	62	67	42	42	NO	NO
78-TF	c8	steel	functional	18	14	12	13	24	24	NO	NO
78-TF	c11	steel	functional	48	86	58	62	42	42	YES	YES
78-TF	c12	steel	functional	24	41	30	33	30	30	NO	NO
78-TF	c17	aluminum	functional	18	17	14	15	24	24	NO	NO
78-TF	c23	steel	functional	24	41	30	33	30	30	NO	NO
78-WG	c44	steel	functional	24	8	7	8	18	18	YES	YES
78-NG	c45	steel	functional	18	16	13	14	24	24	NO	NO
78-NG	c44	steel	functional	36	12	10	11	24	24	YES	YES
78-NG	c43	steel	functional	36	24	19	20	30	30	YES	YES
78-NG	c40	steel	functional	18	40	30	32	30	30	NO	NO

Culvert Sizing Analysis for Albion Watercourse Culverts

Mean Annual Precipitation (in.)
45

Road Number	Site #	Culvert material	Culvert condition	Culvert Diameter (in)	Area (ac)	50 year flood (cfs)	100 year flood (cfs)	50 yr Culvert Size (in)	100 yr Culvert Size (in)	50 yr pass	100 yr pass
78-NG	c39	steel	functional	18	44	32	35	30	36	NO	NO
78-NG	c38	steel	functional	18	15	13	14	24	24	NO	NO
78-NG	c37	steel	functional	18	12	10	11	24	24	NO	NO
78-NG-037	c3	steel	functional	24	20	16	17	24	24	YES	YES
78-NG-037	c4	steel	functional	24	8	7	8	18	18	YES	YES
78-NG-037	c5	steel	non-functional	24	16	13	14	24	24	YES	YES
78-NG-037	c6	steel	functional	18	9	8	9	18	24	YES	NO
78-NG-037	c8	steel	functional	18	5	5	5	18	18	YES	YES
78-NG-037	c9	steel	functional	18	4	4	4	18	18	YES	YES
78-NG-037-08	c2	steel	functional	18	8	7	8	18	18	YES	YES
78-TF-028	c1	plastic	functional	24	20	16	17	24	24	YES	YES
78-TF-028	c3	steel	non-functional	18	3	3	3	18	18	YES	YES
78-TF-028	c5	steel	non-functional	18	5	5	5	18	18	YES	YES
78-TF-028	c6	steel	functional	18	12	10	11	24	24	NO	NO
78-WG	c8	steel	functional	24	12	10	11	24	24	YES	YES
78-WG-015	c8	steel	functional	18	8	7	8	18	18	YES	YES
78-WG-015	c5	steel	functional	18	2	2	2	18	18	YES	YES
78-WG-017	c4	steel	functional	24	4	4	4	18	18	YES	YES
78-WG-017	c7	steel	functional	24	9	8	9	18	24	YES	YES
78-WG-018-14	c1	aluminum	non-functional	24	17	14	15	24	24	YES	YES
78-NG	c28	steel	functional	18	21	17	18	24	24	NO	NO
78-NG	c26	steel	functional	18	7	7	7	18	18	YES	YES
78-NG	c23	steel	functional	18	6	6	6	18	18	YES	YES
78-TF	c10	plastic	undetermined	24	26	20	22	30	30	NO	NO
78-SC	c13	steel	functional	36	104	68	73	42	42	NO	NO
78-SC	c9	steel	functional	30	37	28	30	30	30	YES	YES
78-SC	c8	aluminum	functional	18	20	16	17	24	24	NO	NO
78-SC	c6	aluminum	functional	18	13	11	12	24	24	NO	NO
78-SC	c2	aluminum	functional	24	25	20	21	30	30	NO	NO
78-SC-029	c8	steel	functional	24	27	21	23	30	30	NO	NO
78-SC-029	c7	aluminum	functional	18	8	7	8	18	18	YES	YES
78-SC-029	c4	aluminum	functional	24	44	32	35	30	36	NO	NO
78-SC-018	c1	aluminum	functional	18	7	7	7	18	18	YES	YES
78-SC	c25	steel	functional	18	14	12	13	24	24	NO	NO
78-SC	c22	aluminum	functional	24	51	37	39	36	36	NO	NO
78-SC	c16	steel	functional	18	8	7	8	18	18	YES	YES
78-SC	c15	aluminum	functional	18	5	5	5	18	18	YES	YES
78-SC	c1	aluminum	functional	24	58	41	44	36	36	NO	NO
									Percent "YES"	**54%**	**50%**

Oddballs:

Road Number		Diameter (in)	Comment
78-TF	c6	18	possible duplicate with 78TF0000000c7
78-KS-045	c9	18	possible duplicate with 78KS0450000c10
78-NG	c7	24	possible duplicate with 78NG0000000c8
78-KS	c27	24	possible duplicate with 78KS0000000c26 and 78KS0000000c28
78-KS	c28	24	possible duplicate with 78KS0000000c26 and 78KS0000000c27
78-DM	c25	48	possible duplicate with 78DM0000000c24