ATTACHMENT A - SEDIMENT AND HABITAT ASSESSMENT

Sediment and Habitat Data and Bank Erosion Assessment

Lower Gallatin TMDL Planning Area

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1.0 INTRODUCTION

The Lower Gallatin TMDL Planning Area (TPA) encompasses an area of approximately 997 square miles in Gallatin County in southwestern Montana. The Lower Gallatin TPA is within the fourth-level hydrologic unit code (HUC) 10020008 and includes the area of the Gallatin River watershed extending from the confluence with Spanish Creek at the northern end of Gallatin Canyon downstream to where the Gallatin River joins the Madison and Jefferson rivers to form the Missouri River. The Lower Gallatin TPA also includes the entire East Gallatin River watershed.

Under Montana law, an impaired water body is defined as a water body for which sufficient and credible data indicates non-compliance with applicable water quality standards (MCA 75-5-103). Section 303 of the Federal Clean Water Act requires states to submit a list of impaired water bodies or stream segments to the U.S. Environmental Protection Agency (EPA) every two years. The Montana Water Quality Act further directs states to develop TMDLs for all water bodies appearing on the 303(d) list as impaired or threatened by "pollutants" (MCA 75-5-703).

Within the Lower Gallatin TPA, there are 11 water body segments listed on the 2012 303(d) List for sediment-related impairments. Two of the water bodies, Camp Creek and Godfrey Creek, are tributaries to the Gallatin River. The other nine water bodies are tributaries to the East Gallatin River, and they include Bear Creek, Bozeman (Sourdough) Creek, Dry Creek, Jackson Creek, Reese Creek, Rocky Creek, Smith Creek, Stone Creek, and Thompson Springs Creek. South Cottonwood Creek, a tributary to the Gallatin River, is not listed as impaired for sediment, but contains a DEQ reference site and is included to provide reference data.

A detailed sediment and habitat assessment of streams in the Lower Gallatin TPA was conducted to facilitate development of sediment TMDLs. During this assessment, streams were first analyzed in GIS using color aerial imagery and broken into similar reaches based on landscape characteristics. Following the aerial assessment reach stratification process, field data was collected at 30 monitoring sites during August, 2009. Field data collected during this effort was then used to quantify the existing condition of streams within the Lower Gallatin TPA and to estimate sediment loads from eroding streambanks to facilitate the development of sediment TMDLs.

The three main components of this project are presented in the following sections: aerial assessment reach stratification, sediment and habitat assessment, and streambank erosion assessment.

2.0 Aerial Assessment Reach Stratification

2.1 Methods

An aerial assessment of streams in the Lower Gallatin TPA was conducted using National Agricultural Imagery Program (NAIP) color imagery from 2005 in GIS along with other relevant data layers, including the National Hydrography Dataset (NHD) 1:100,000 stream layer and United States Geological Survey 1:24,000 Topographic Quadrangle Digital Raster Graphics. GIS data layers were used to stratify streams into distinct reaches based on landscape and land-use factors following techniques described in *Watershed Stratification Methodology for TMDL Sediment and Habitat Investigations* (DEQ, 2008).

The reach stratification methodology involves breaking a water body **stream segment** into **stream reaches** and **sub-reaches**. Montana DEQ tracks stream health by stream segment, which may encompass the entire stream or just a portion of the stream. Each of the stream segments in the Lower Gallatin TPA was initially divided into distinct reaches based on four landscape factors: ecoregion, valley gradient, Strahler stream order, and valley confinement. Stream reaches classified by these four criteria were then further divided into sub-reaches based on the surrounding vegetation and land-use characteristics, including predominant vegetation type, adjacent land-use, riparian health, anthropogenic influences on streambank erosion, level of development, and the presence of anthropogenic (human) activity within 100 feet of the stream channel. This resulted in a series of stream reaches and sub-reaches delineated based on landscape and land-use factors which were compiled into an Aerial Assessment Database for the Lower Gallatin TPA.

2.1.1 Reach Types

The aerial assessment reach stratification process involved dividing each stream segment into distinct reaches based on four landscape factors: ecoregion, valley gradient, Strahler stream order, and valley confinement. Each individual combination of the four landscape factors is referred to as a "**reach type**" in this report based on the following definition:

Reach Type - *Unique combination of ecoregion, gradient, Strahler stream order and confinement*

Reach types were described using the following naming convention based on the reach type identifiers presented in **Table 2-1**:

Level III Ecoregion – Valley Gradient – Strahler Stream Order – Confinement

Table 2-1. Reach Type Identifiers.

Landscape Factor	Stratification Category	Reach Type Identifier
Level III Ecoregion	Middle Rockies	MR
Valley Gradient	0-<2%	0
	2-<4%	2
	4-<10%	4
	>10%	10
Strahler Stream Order	first order	1
	second order	2
	third order	3
	fourth order	4

Confinement	unconfined	U
	confined	C

Thus, a stream reach identified as MR-0-3-U is a low gradient (0-<2%), 3rd order, unconfined stream in the Middle Rockies Level III ecoregion.

2.2 RESULTS

A total of 121 reaches were delineated during the aerial assessment reach stratification process covering 116.4 miles of stream, excluding South Cottonwood Creek, which was assessed for potential reference conditions (**Table 2-2**). Based on the level III ecoregion, there were a total of 20 distinct reach types delineated in the Lower Gallatin TPA. The complete Aerial Assessment Database is provided in **Attachment AA**.

Table 2-2. Aerial Assessment Stream Segments.

Water Body Segment	Number of Reaches	Number of Reaches and Sub-Reaches	Length (Miles)
Bear Creek	28	34	10.1
Bozeman Creek	18	26	15.8
Camp Creek	15	51	25.3
Dry Creek	12	29	16.2
Godfrey Creek	3	5	7.1
Jackson Creek	11	19	7.8
Reese Creek	15	23	7.4
Rocky Creek	7	16	7.5
Smith Creek	1	6	6.3
Stone Creek	13	21	5.6
Thompson Creek	2	9	7.2

3.0 Sediment and Habitat Assessment

3.1 Methods

Sediment and habitat data was collected following the approach described in *Longitudinal Field Methods for the Assessment of TMDL Sediment and Habitat Impairments* (DEQ, 2009a). Field monitoring sites were typically selected in relatively low-gradient portions of the study streams where sediment deposition is likely to occur. Other considerations in selecting field monitoring sites included representativeness of the reach to other reaches of the same slope, order, confinement and ecoregion, the extent of anthropogenic impacts relative to other reaches, and ease of access, as outlined in *Lower Gallatin River TMDL Planning Area Sediment Monitoring Sampling and Analysis Plan* (DEQ, 2009b).

Sediment and habitat assessments were performed at 30 field monitoring sites, which were selected based on the aerial assessment in GIS and on-the-ground reconnaissance. Sediment and habitat data was collected within nine reach types, with the complete sediment and habitat assessment performed at 23 monitoring sites and only the streambank erosion portion of the assessment performed at seven sites (**Table 3-1**, **Figures 3-1** and **3-2**). Monitoring sites were assessed progressing upstream and the length of the monitoring site was based on the bankfull channel width. A monitoring site length of 500 feet was used at five sites in which the bankfull width was less than 10 feet and a monitoring site length of 1,000 feet was used at 25 sites in which the bankfull width was between 10 feet and 50 feet. Each monitoring site was divided into five equally sized study cells in which a series of sediment and habitat measurements were performed. Study cells were numbered 1 through 5 progressing in an upstream direction. The following sections provide brief descriptions of the various field methodologies employed during the sediment and habitat assessment. A more in-depth description of the methods is available in *Longitudinal Field Methods for the Assessment of TMDL Sediment and Habitat Impairments* (DEQ, 2009a).

Table 3-1. Reach Types and Monitoring Sites.

Reach Type	Number of Reaches	Number of Monitoring Sites	Monitoring Sites
MR-0-4-C	1		
MR-2-3-C	1		
MR-4-3-U	1		
MR-10-2-U	1		
MR-0-3-C	2		
MR-2-4-U	2		
MR-10-1-C	3		
MR-0-1-U	4	1	THOM01-04*
MR-2-2-C	4	2	BEAR18-01, STON08-01
MR-2-1-U	5		
MR-4-1-C	5	1	JACK04-01
MR-4-2-C	5		
MR-2-3-U	6	2	SCOT25-02, CAMP13-02*
MR-10-1-U	7		
MR-0-4-U	8	6	CAMP15-04, DRY12-06, REES15-06, ROCK03-01, SMIT01-05, ROCK07-03*
MR-4-1-U	10		
MR-4-2-U	10	1	BEAR20-01
MR-0-3-U	13	9	BEAR26-02, BOZE18-04, CAMP14-05, CAMP14-12, DRY09-05, GOD03-01, ROCK02-01, SCOT31-02, BOZE18-05*
MR-0-2-U	14	5	BOZE14-01, GOD02-01, REES06-01, THOM02-03, BOZE15-01*
MR-2-2-U	19	3	JACK10-02, STON13-02, STON11-02*

*Streambank erosion assessment only.

Figure 3-1. Aerial Assessment Reach Stratification.

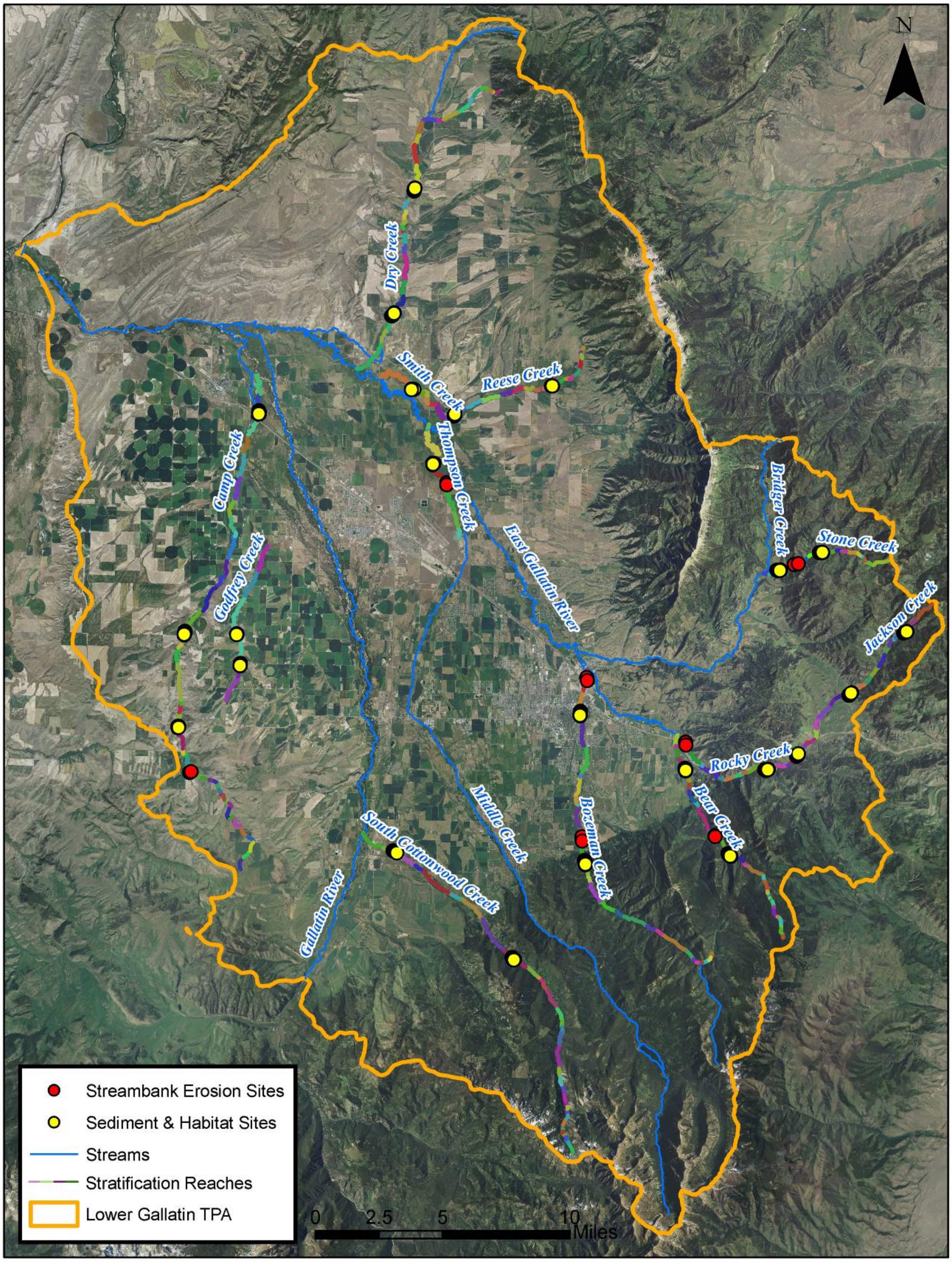
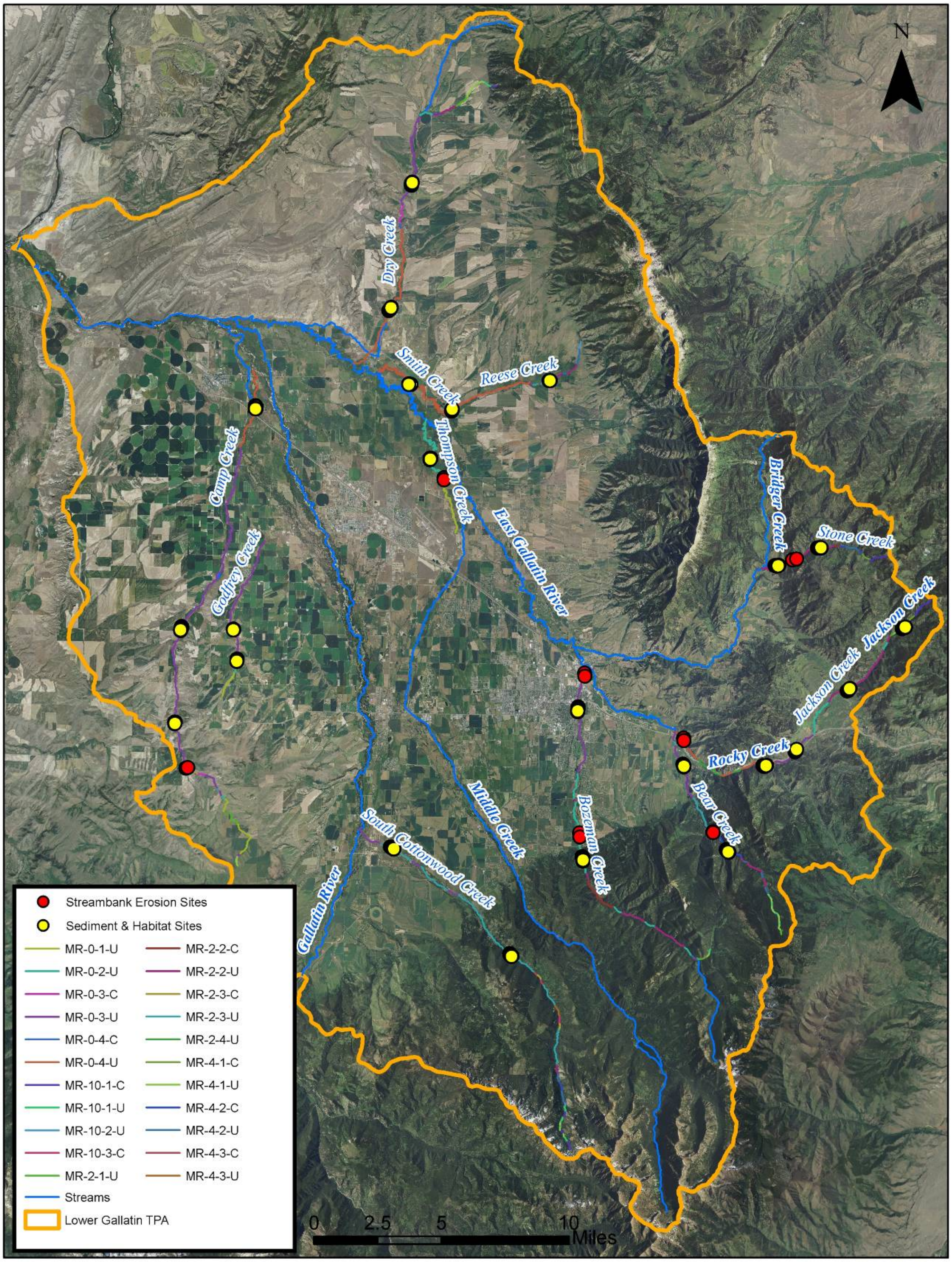


Figure 3-2. Aerial Assessment Reach Types.



3.1.1 Channel Form and Stability Measurements

Channel form and stability measurements include the field determination of bankfull, channel cross-sections, floodprone width, and surface water slope.

3.1.1.1 Field Determination of Bankfull

The bankfull elevation was determined for each monitoring site. Bankfull is a concept used by hydrologists to define a regularly occurring channel-forming high flow. One of the first generally accepted definitions of bankfull was provided by Dunne and Leopold (1978):

> "The bankfull stage corresponds to the discharge at which channel maintenance is the most effective, that is, the discharge at which moving sediment, forming or removing bars, forming or changing bends and meanders, and generally doing work that results in the average morphologic characteristics of channels."

Indicators that were used to estimate the bankfull elevation included scour lines, changes in vegetation types, tops of point bars, changes in slope, changes in particle size and distribution, staining of rocks, and inundation features. Multiple locations and bankfull indicators were examined at each site to determine the bankfull elevation, which was then applied during channel cross-section measurements.

3.1.1.2 Channel Cross-sections

Channel cross-section measurements were performed at the first riffle in each cell using a line level and a measuring rod. At each cross-section, depth measurements at bankfull were performed across the channel at regular intervals, which varied depending on channel width. The thalweg depth was recorded at the deepest point of the channel independent of the regularly spaced intervals.

3.1.1.3 Floodprone Width Measurements

The floodprone elevation was determined by multiplying the maximum depth value by two (Rosgen, 1996). The floodprone width was then measured by stringing a tape from the bankfull channel margin on both the right and left banks until the tape (pulled tight and "flat") touched the ground at the floodprone elevation. When dense vegetation or other features prevented a direct line of tape from being strung, the floodprone width was estimated by pacing or making a visual estimate.

3.1.1.4 Water Surface Slope

Water surface slope measurements were estimated using a clinometer. This measurement was used to evaluate the slope assigned in GIS based on the aerial assessment. The field measured slope was used when evaluating the Rosgen stream type at each monitoring site.

3.1.2 Fine Sediment Measurements

Fine sediment measurements include the riffle pebble count, riffle grid toss, pool tail-out grid toss, and the riffle stability index.

3.1.2.1 Riffle Pebble Count

One Wolman pebble count (Wolman, 1954) was performed at the first riffle encountered in cells 1, 3 and 5, providing a minimum of 300 particles measured within each assessment reach. Particle sizes were measured along their intermediate length axis (b-axis) and results were grouped into size categories. The pebble count was performed from bankfull to bankfull using the "heel to toe" method.

3.1.2.2 Riffle Grid Toss
The riffle grid toss was performed at the same location as the pebble count measurement. The riffle grid toss measures fine sediment accumulation on the surface of the streambed. Grid tosses were performed prior to the pebble count to avoid disturbances to surface fine sediments.

3.1.2.3 Pool Tail-out Grid Toss
A measurement of the percent of fine sediment in pool tail-outs was taken using the grid toss method at each pool in which potential spawning gravels were identified. Three measurements were taken in each pool with appropriate sized spawning gravels using a 49-point grid. The spawning potential was recorded as “Yes” (Y) or “Questionable” (Q). No grid toss measurements were made when the substrate was observed to be too large to support spawning. Grid toss measurements were performed when the substrate was observed to be too fine to support spawning since the goal of this assessment is to quantify fine sediment accumulation in spawning areas.

3.1.2.4 Riffle Stability Index
In streams that had well-developed point bars, a Riffle Stability Index (RSI) evaluation was performed. For streams in which well-developed point bars were present, a total of three RSI measurements were conducted, which consisted of intermediate axis (b-axis) measurements of 15 particles determined to be among the largest size group of recently deposited particles that occur on over 10% of the point bar. During post-field data processing, the riffle stability index was determined by calculating the geometric mean of the dominant bar particle size measurements and comparing the result to the cumulative particle distribution from the riffle pebble count in an adjacent or nearby riffle.

3.1.3 Instream Habitat Measurements
Instream habitat measurements include channel bed morphology, residual pool depth, pool habitat quality and woody debris quantification.

3.1.3.1 Channel Bed Morphology
The length of each monitoring site occupied by pools and riffles was recorded progressing in an upstream direction. The upstream and downstream stations of “dominant” riffle and pool features were recorded. Features were considered “dominant” when occupying over 50% of the bankfull channel width.

3.1.3.2 Residual Pool Depth
At each pool encountered, the maximum depth and the depth of the pool tail crest at its deepest point was measured. The difference between the maximum depth and the tail crest depth is considered the residual pool depth. No pool tail crest depth was recorded for dammed pools.

3.1.3.3 Pool Habitat Quality
Qualitative assessments of each pool feature were undertaken, including pool type, size, formative feature, and cover type, along with the depth of any undercut banks associated with the pool. The total number of pools was also quantified.

3.1.3.4 Woody Debris Quantification
The amount of large woody debris (LWD) within each monitoring site was recorded. Large pieces of woody debris located within the bankfull channel that were relatively stable so as to influence the channel form were counted as either single, aggregate or "willow bunch". A single piece of large woody debris was counted when it was greater than 9 feet long or spanned two-thirds of the wetted stream width, and 4 inches in diameter at the small end (Overton et al., 1997).

3.1.4 Riparian Health Measurements
Riparian health measurements include the riparian greenline assessment.

3.1.4.1 Riparian Greenline Assessment
Along each monitoring site, an assessment of riparian vegetation cover was performed. Vegetation types were recorded at 10 to 20-foot intervals, depending on the bankfull channel width. The riparian greenline assessment described the general vegetation community type of the groundcover, understory and overstory on both banks. At 50-foot intervals, the riparian buffer width was estimated on either side of the channel. The riparian buffer width corresponds to the belt of vegetation buffering the stream from adjacent land uses.

3.2 RESULTS

In the Lower Gallatin TPA, sediment and habitat parameters were assessed in August, 2009 at 30 monitoring sites. Out of the 20 reach types delineated in GIS, sediment and habitat assessments were performed in nine reach types, with a focus on low gradient reach types. A statistical analysis of the sediment and habitat data is presented by reach type and for individual monitoring sites in the following sections. The complete sediment and habitat dataset is presented in **Attachment AB**.

3.2.1 Reach Type Analysis
This section presents a statistical analysis of sediment and habitat base parameters for each of the reach types assessed in the Lower Gallatin TPA. Reach type discussions are based on median values, while summary statistics for the minimum, 25th percentile, 75th percentile and maximum values are also provided since these may be more applicable for developing sediment TMDL criteria. Sediment and habitat base parameter analysis is provided by reach type for the following parameters:

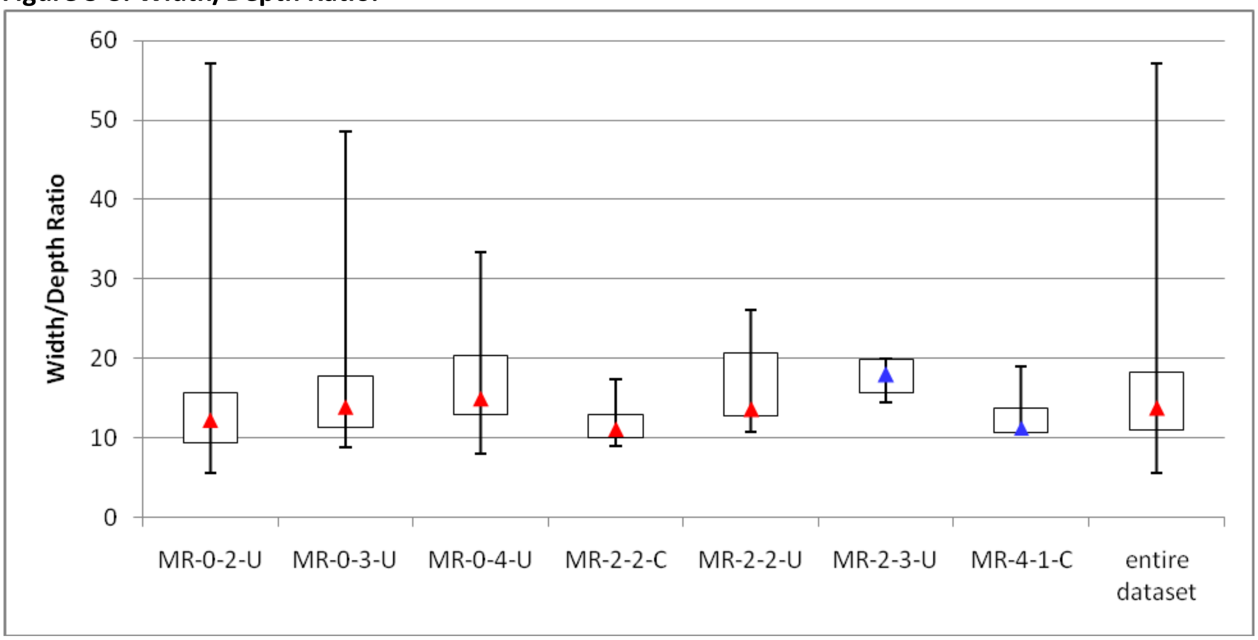
- width/depth ratio
- entrenchment ratio
- riffle pebble count <2mm
- riffle pebble count <6mm
- riffle grid-toss <6mm
- pool tail-out grid toss <6mm
- residual pool depth
- pool frequency
- LWD frequency
- greenline understory shrub cover
- greenline bare ground

3.2.1.1 Width/Depth Ratio

The channel width/depth ratio is defined as the channel width at bankfull height divided by the mean bankfull depth (Rosgen, 1996). The channel width/depth ratio is one of several standard measurements used to classify stream channels, making it a useful variable for comparing conditions between reaches with the same stream type (Rosgen, 1996). A comparison of observed and expected width/depth ratios is also a useful indicator of channel over-widening and aggradation, which are often linked to excess streambank erosion and/or sediment inputs from sources upstream of the study reach. Channels that are over-widened are often associated with excess sediment deposition and streambank erosion, contain shallower and warmer water, and provide fewer deepwater habitat refugia for fish.

Median width/depth ratios for assessed reach types ranged from 11.1 in MR-2-2-C to 17.9 in MR-2-3-U (**Figure 3-3, Table 3-2**). In the Lower Gallatin TPA, the width/depth ratio tends to increase as stream order increases.

Figure 3-3. Width/Depth Ratio.



Reach types with only one monitoring site denoted in blue. Reach types with greater than one monitoring site denoted in red.

Table 3-2. Width/Depth Ratio.

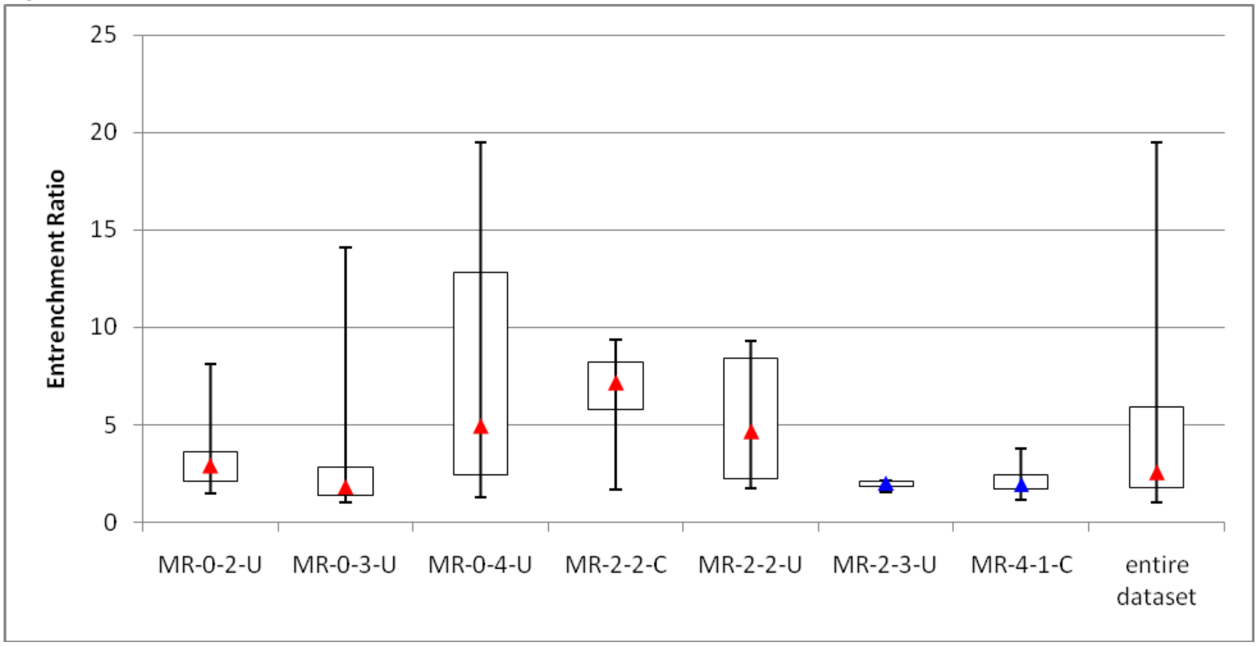
Statistical Parameter	Reach Type							
	MR-0-2-U	**MR-0-3-U**	**MR-0-4-U**	**MR-2-2-C**	**MR-2-2-U**	**MR-2-3-U**	**MR-4-1-C**	**entire dataset**
# of Monitoring Sites	4	8	5	2	2	1	1	23
Sample Size	14	39	21	10	10	4	4	102
Minimum	5.6	8.9	8.0	8.9	10.7	14.4	10.3	5.6
25th Percentile	9.3	11.2	12.9	10.0	12.7	15.7	10.6	11.0
Median	12.2	13.9	14.9	11.1	13.6	17.9	11.3	13.8
75th Percentile	15.7	17.8	20.4	12.9	20.7	19.8	13.7	18.3
Maximum	57.0	48.6	33.3	17.4	26.0	20.0	19.0	57.0
Monitoring Sites	BOZE14-01, GOD02-01, REES06-01, THOM02-03	BEAR26-02, BOZE18-04, CAMP14-05, CAMP14-12, DRY09-05, GOD03-01, ROCK02-01, SCOT31-02	CAMP15-04, DRY12-06, REES15-06, ROCK03-01, SCOT31-02	BEAR18-01, STON08-01	JACK10-02, STON13-02	SCOT25-02	JACK04-01	

3.2.1.2 Entrenchment Ratio

A stream's entrenchment ratio is equal to the floodprone width divided by the bankfull width (Rosgen, 1996). The entrenchment ratio is used to help determine if a stream shows departure from its natural stream type and is an indicator of stream incision that describes how easily a stream can access its floodplain. Streams can become incised due to detrimental land management activities or may be naturally incised due to landscape characteristics. A stream that is overly entrenched generally is more prone to streambank erosion due to greater energy exerted on the banks during flood events. Greater scouring energy along incised channels results in higher sediment loads derived from eroding banks. If the stream is not actively degrading (down-cutting), the sources of human caused incision may be historical in nature, though sediment loading may continue to occur. The entrenchment ratio is an important measure of channel conditions since it relates to sediment loading and habitat condition.

The median entrenchment ratio for assessed reach types ranged from 1.8 in MR-0-3-U to 7.2 in MR-2-2-C (**Figure 3-4, Table 3-3**).

Figure 3-4. Entrenchment Ratio.



Reach types with only one monitoring site denoted in blue. Reach types with greater than one monitoring site denoted in red.

Table 3-3. Entrenchment Ratio.

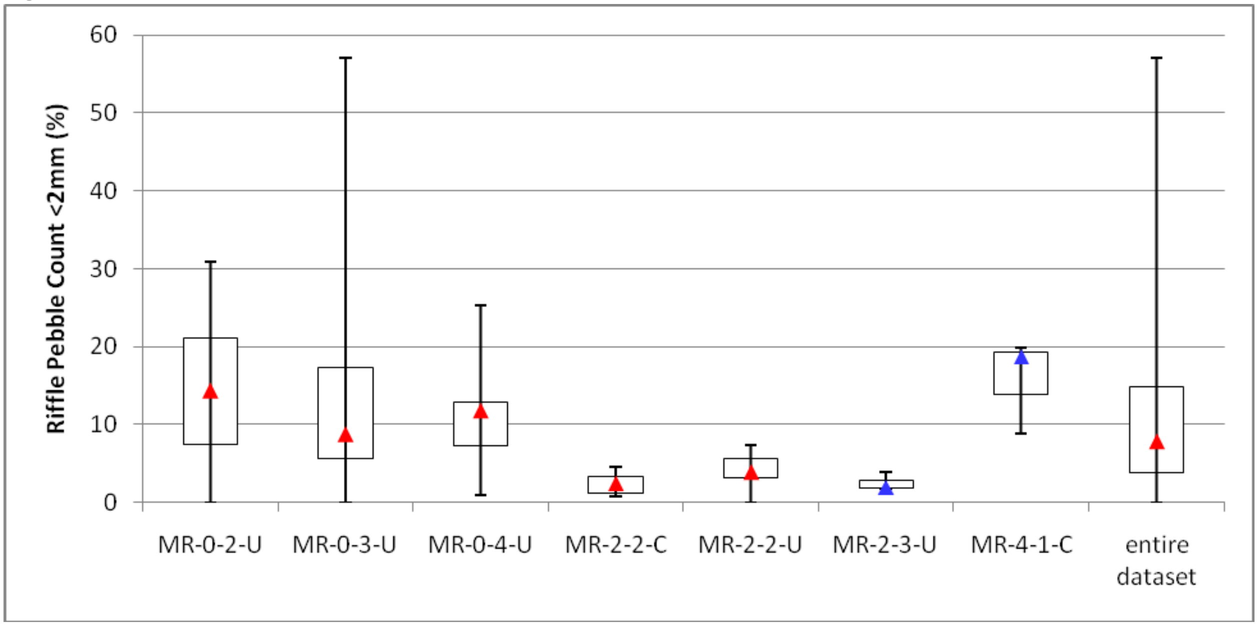
Statistical Parameter	Reach Type							
	MR-0-2-U	**MR-0-3-U**	**MR-0-4-U**	**MR-2-2-C**	**MR-2-2-U**	**MR-2-3-U**	**MR-4-1-C**	**entire dataset**
# of Monitoring Sites	4	8	5	2	2	1	1	23
Sample Size	14	39	21	10	10	4	4	102
Minimum	1.5	1.0	1.3	1.7	1.8	1.5	1.2	1.0
25th Percentile	2.1	1.4	2.4	5.8	2.2	1.8	1.7	1.8
Median	2.9	1.8	4.9	7.2	4.7	2.0	1.9	2.6
75th Percentile	3.6	2.8	12.8	8.2	8.4	2.1	2.4	5.9
Maximum	8.1	14.1	19.5	9.3	9.3	2.1	3.8	19.5
Monitoring Sites	BOZE14-01, GOD02-01, REES06-01, THOM02-03	BEAR26-02, BOZE18-04, CAMP14-05, CAMP14-12, DRY09-05, GOD03-01, ROCK02-01, SCOT31-02	CAMP15-04, DRY12-06, REES15-06, ROCK03-01, SCOT31-02	BEAR18-01, STON08-01	JACK10-02, STON13-02	SCOT25-02	JACK04-01	

3.2.1.3 Riffle Pebble Count <2mm

Percent surface fine sediment provides a good measure of the siltation occurring in a river system. Surface fine sediment measured using the Wolman (1954) pebble count method is one indicator of aquatic habitat condition and can signify excessive sediment loading. The Wolman pebble count provides a survey of the particle distribution of the entire channel width, allowing investigators to calculate a percentage of the surface substrate (as frequency of occurrence) composed of fine sediment.

Median values for the percent of fine sediment <2mm based on riffle pebble counts ranged from 2% in MR-2-2-C and MR-2-3-U to 19% in MR-4-1-C (**Figure 3-5**, **Table 3-4**).

Figure 3-5. Riffle Pebble Count <2mm.



Reach types with only one monitoring site denoted in blue. Reach types with greater than one monitoring site denoted in red.

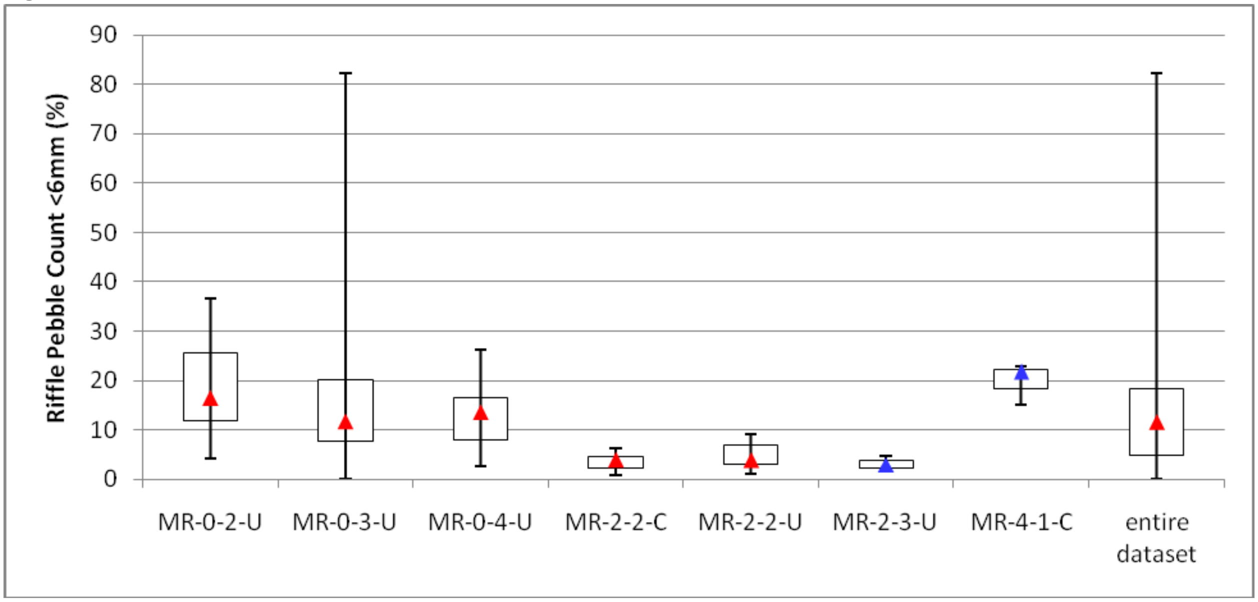
Table 3-4. Riffle Pebble Count <2mm.

Statistical Parameter	Reach Type							
	MR-0-2-U	MR-0-3-U	MR-0-4-U	MR-2-2-C	MR-2-2-U	MR-2-3-U	MR-4-1-C	entire dataset
# of Monitoring Sites	4	8	5	2	2	1	1	23
Sample Size	12	24	13	6	6	3	3	67
Minimum	0	0	1	1	0	2	9	0
25th Percentile	7	6	7	1	3	2	14	4
Median	14	9	12	2	4	2	19	8
75th Percentile	21	17	13	3	6	3	19	15
Maximum	31	57	25	5	7	4	20	57
Monitoring Sites	BOZE14-01, GOD02-01, REES06-01, THOM02-03	BEAR26-02, BOZE18-04, CAMP14-05, CAMP14-12, DRY09-05, GOD03-01, ROCK02-01, SCOT31-02	CAMP15-04, DRY12-06, REES15-06, ROCK03-01, SCOT31-02	BEAR18-01, STON08-01	JACK10-02, STON13-02	SCOT25-02	JACK04-01	

3.2.1.4 Riffle Pebble Count <6mm

As with surface fine sediment <2mm, an accumulation of surface fine sediment <6mm may indicate excess sedimentation. Median values for the percent of fine sediment <6mm based on pebble counts conducted in riffles ranged from 3% in MR-2-3-U to 22% in MR-4-1-C (**Figure 3-6, Table 3-5**). The percent of fine sediment <6mm followed the same general trend as the percent of fine sediment <2mm.

Figure 3-6. Riffle Pebble Count <6mm.



Reach types with only one monitoring site denoted in blue. Reach types with greater than one monitoring site denoted in red.

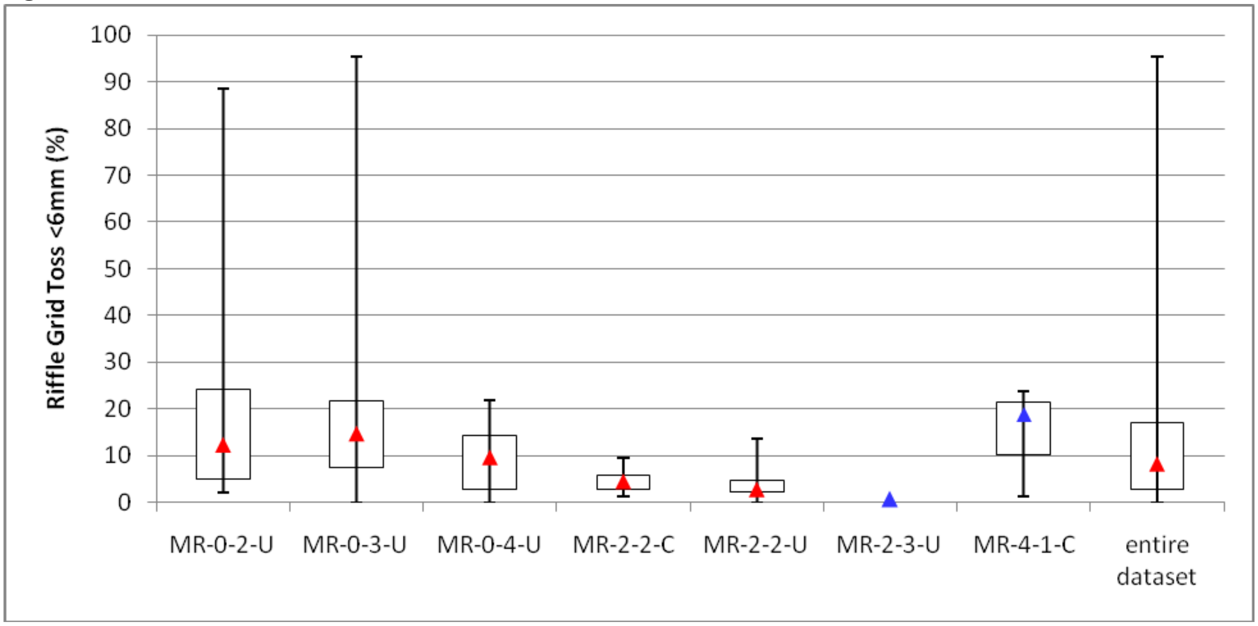
Table 3-5. Riffle Pebble Count <6mm.

Statistical Parameter	Reach Type							
	MR-0-2-U	**MR-0-3-U**	**MR-0-4-U**	**MR-2-2-C**	**MR-2-2-U**	**MR-2-3-U**	**MR-4-1-C**	**entire dataset**
# of Monitoring Sites	4	8	5	2	2	1	1	23
Sample Size	12	24	13	6	6	3	3	67
Minimum	4	0	3	1	1	2	15	0
25th Percentile	12	8	8	2	3	2	18	5
Median	17	12	14	4	4	3	22	12
75th Percentile	26	20	16	5	7	4	22	18
Maximum	37	82	26	6	9	5	23	82
Monitoring Sites	BOZE14-01, GOD02-01, REES06-01, THOM02-03	BEAR26-02, BOZE18-04, CAMP14-05, CAMP14-12, DRY09-05, GOD03-01, ROCK02-01, SCOT31-02	CAMP15-04, DRY12-06, REES15-06, ROCK03-01, SCOT31-02	BEAR18-01, STON08-01	JACK10-02, STON13-02	SCOT25-02	JACK04-01	

3.2.1.5 Riffle Grid Toss <6mm

The riffle grid toss is a standard procedure frequently used in aquatic habitat assessment that provides complimentary information to the Wolman pebble count. Median values for riffle grid toss fine sediment <6mm in the Lower Gallatin TPA range from 1% in MR-2-3-U to 19% in MR-4-1-C (**Figure 3-7, Table 3-6**).

Figure 3-7. Riffle Grid Toss Fine Sediment <6mm.



Reach types with only one monitoring site denoted in blue. Reach types with greater than one monitoring site denoted in red.

Table 3-6. Riffle Grid Toss Fine Sediment <6mm.

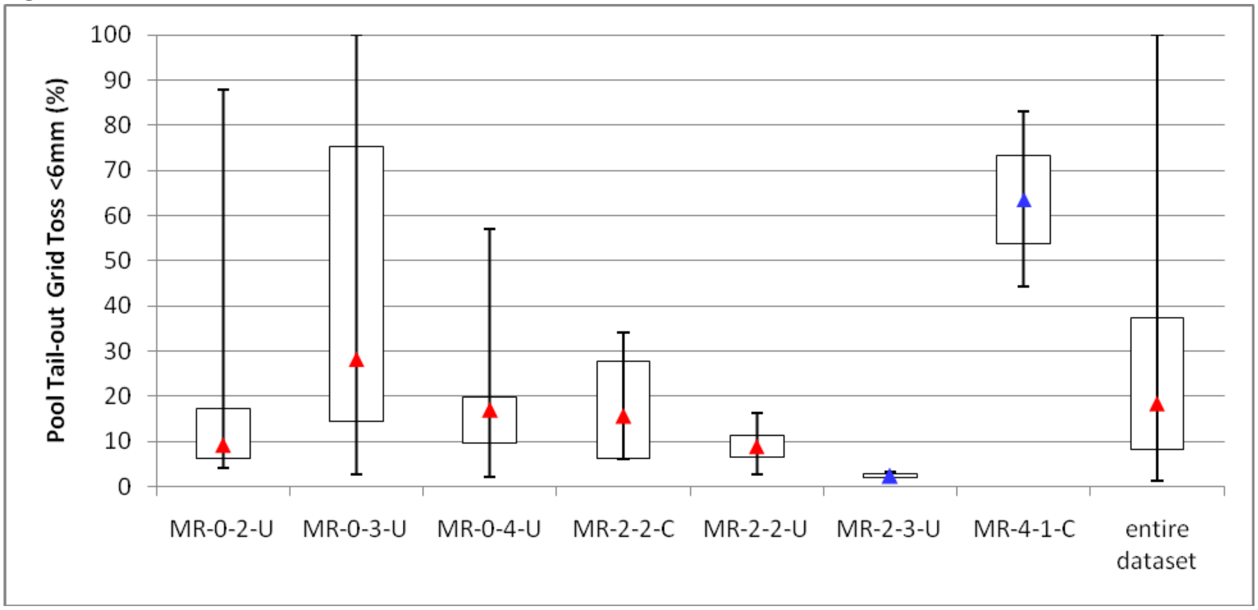
Statistical Parameter	Reach Type							
	MR-0-2-U	**MR-0-3-U**	**MR-0-4-U**	**MR-2-2-C**	**MR-2-2-U**	**MR-2-3-U**	**MR-4-1-C**	**entire dataset**
# of Monitoring Sites	4	8	5	2	2	1	1	23
Sample Size	12	24	13	6	6	3	3	67
Minimum	2	0	0	1	0	1	1	0
25th Percentile	5	7	3	3	2	1	10	3
Median	12	15	10	4	3	1	19	8
75th Percentile	24	22	14	6	5	1	21	17
Maximum	88	95	22	10	14	1	24	95
Monitoring Sites	BOZE14-01, GOD02-01, REES06-01, THOM02-03	BEAR26-02, BOZE18-04, CAMP14-05, CAMP14-12, DRY09-05, GOD03-01, ROCK02-01, SCOT31-02	CAMP15-04, DRY12-06, REES15-06, ROCK03-01, SCOT31-02	BEAR18-01, STON08-01	JACK10-02, STON13-02	SCOT25-02	JACK04-01	

3.2.1.6 Pool Tail-out Grid Toss <6mm

Grid toss measurements in pool tail-outs provide a measure of fine sediment accumulation in potential spawning sites, which may have detrimental impacts on aquatic habitat by cementing spawning gravels, preventing flushing of toxins in egg beds, reducing oxygen and nutrient delivery to eggs and embryos, and impairing emergence of fry (Meehan 1991). Weaver and Fraley (1991) observed a significant inverse relationship between the percentage of material less than 6.35mm and the emergence success of westslope cutthroat trout and bull trout.

Median values for pool tail-out grid toss fine sediment <6mm range from 2% in MR-2-3-U to 64% in MR-4-1-C (**Figure 3-8, Table 3-7**).

Figure 3-8. Pool Tail-out Grid Toss <6mm.



Reach types with only one monitoring site denoted in blue. Reach types with greater than one monitoring site denoted in red.

Table 3-7. Pool Tail-out Grid Toss <6mm.

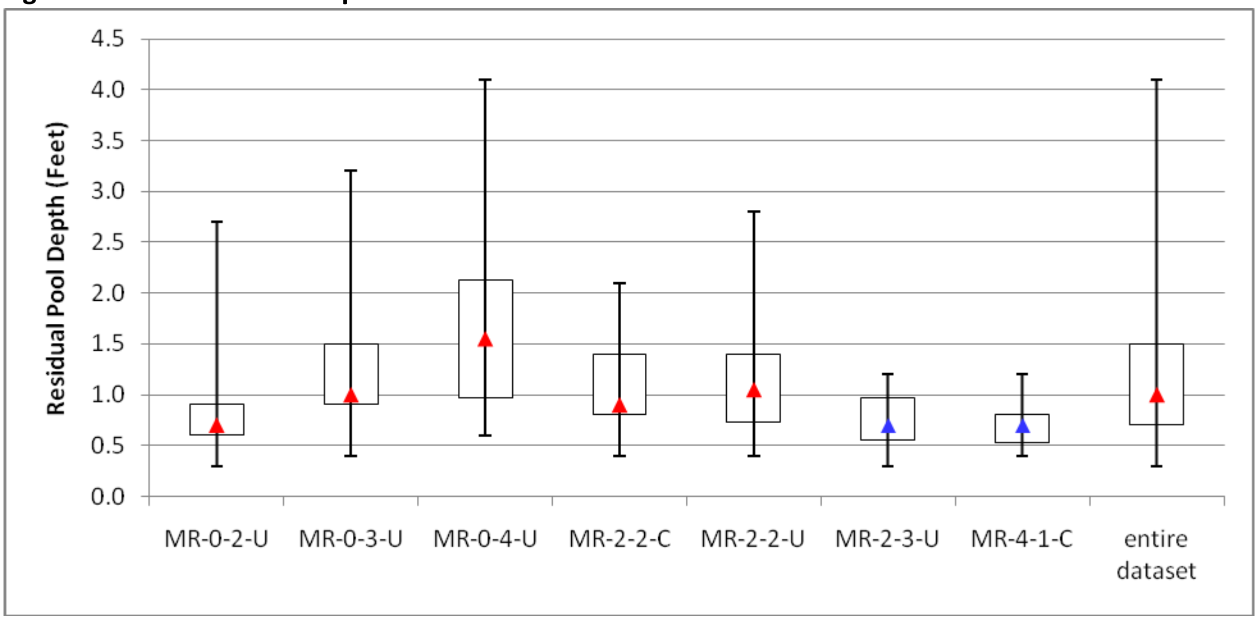
Statistical Parameter	Reach Type							
	MR-0-2-U	MR-0-3-U	MR-0-4-U	MR-2-2-C	MR-2-2-U	MR-2-3-U	MR-4-1-C	entire dataset
# of Monitoring Sites	4	8	5	2	2	1	1	23
Sample Size	14	38	14	5	6	2	2	81
Minimum	4	3	2	6	3	1	44	1
25th Percentile	6	14	10	6	6	2	54	8
Median	9	28	17	16	9	2	64	18
75th Percentile	17	75	20	28	11	3	73	37
Maximum	88	100	57	34	16	3	83	100
Monitoring Sites	BOZE14-01, GOD02-01, REES06-01, THOM02-03	BEAR26-02, BOZE18-04, CAMP14-05, CAMP14-12, DRY09-05, GOD03-01, ROCK02-01, SCOT31-02	CAMP15-04, DRY12-06, REES15-06, ROCK03-01, SCOT31-02	BEAR18-01, STON08-01	JACK10-02, STON13-02	SCOT25-02	JACK04-01	

3.2.1.7 Residual Pool Depth

Residual pool depth, defined as the difference between the maximum depth and the tail crest depth, is a discharge-independent measure of pool depth and an indicator of the quality of pool habitat. Deep pools are important resting and hiding habitat for fish, and provide refugia during temperature extremes and high flow periods. Residual pool depth is also an indirect measurement of sediment inputs to streams since an increase in sediment loading would be expected to cause pools to fill, thus decreasing residual pool depth over time.

Median residual pool depths ranged from 0.7 feet in MR-0-2-U, MR-2-3-U and MR-4-1-C to 1.6 feet in MR-0-4-U (**Figure 3-9, Table 3-8**). This analysis indicates that the deepest pools are found in low gradient 4rd order streams and that residual pool depth tends to increase as stream order increases in the Lower Gallatin TPA.

Figure 3-9. Residual Pool Depth.



Reach types with only one monitoring site denoted in blue. Reach types with greater than one monitoring site denoted in red.

Table 3-8. Residual Pool Depth.

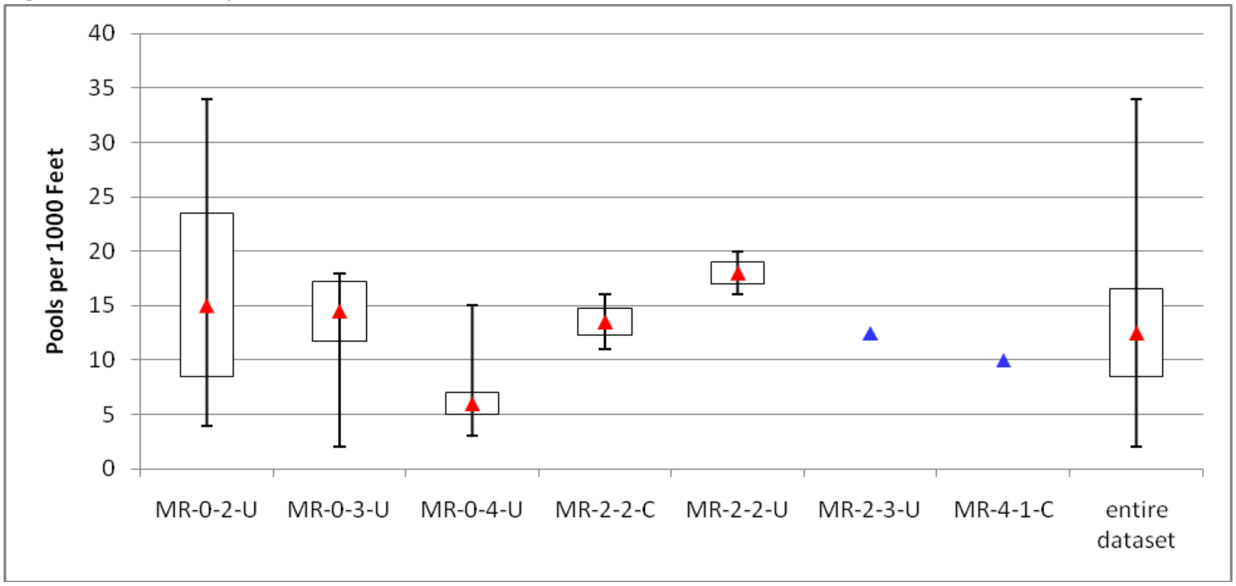
Statistical Parameter	Reach Type							
	MR-0-2-U	MR-0-3-U	MR-0-4-U	MR-2-2-C	MR-2-2-U	MR-2-3-U	MR-4-1-C	entire dataset
# of Monitoring Sites	4	8	5	2	2	1	1	23
Sample Size	37	95	36	27	34	10	10	249
Minimum	0.3	0.4	0.6	0.4	0.4	0.3	0.4	1
25th Percentile	0.6	0.9	1.0	0.8	0.7	0.6	0.5	8
Median	0.7	1.0	1.6	0.9	1.1	0.7	0.7	18
75th Percentile	0.9	1.5	2.1	1.4	1.4	1.0	0.8	37
Maximum	2.7	3.2	4.1	2.1	2.8	1.2	1.2	100
Monitoring Sites	BOZE14-01, GOD02-01, REES06-01, THOM02-03	BEAR26-02, BOZE18-04, CAMP14-05, CAMP14-12, DRY09-05, GOD03-01, ROCK02-01, SCOT31-02	CAMP15-04, DRY12-06, REES15-06, ROCK03-01, SCOT31-02	BEAR18-01, STON08-01	JACK10-02, STON13-02	SCOT25-02	JACK04-01	

3.2.1.8 Pool Frequency

Pool frequency is a measure of the availability of pools to provide rearing habitat, cover, and refugia for salmonids. Pool frequency is related to channel complexity, availability of stable obstacles, and sediment supply. Excessive erosion and sediment deposition can reduce pool frequency by filling in smaller pools. Pool frequency can also be adversely affected by riparian habitat degradation resulting in a reduced supply of large woody debris or scouring from stable root masses in streambanks.

The median value for the number of pools per 1,000 feet ranged from six (MR-0-4-U) to 18 (MR-2-2-U) (**Figure 3-10, Table 3-9**). Pool frequency tends to decrease as gradient decreases and stream order increases in the Lower Gallatin TPA.

Figure 3-10. Pools per 1000 Feet.



Reach types with only one monitoring site denoted in blue. Reach types with greater than one monitoring site denoted in red.

Table 3-9. Pools per 1000 feet.

Statistical Parameter	Reach Type							
	MR-0-2-U	MR-0-3-U	MR-0-4-U	MR-2-2-C	MR-2-2-U	MR-2-3-U	MR-4-1-C	entire dataset
# of Monitoring Sites	4	8	5	2	2	*1*	*1*	23
Sample Size	4	8	5	2	2	*1*	*1*	23
Minimum	4	2	3	11	16	*13*	*10*	2
25th Percentile	9	12	5	12	17	*13*	*10*	9
Median	15	15	6	14	18	*13*	*10*	13
75th Percentile	23	17	7	15	19	*13*	*10*	17
Maximum	34	18	15	16	20	*13*	*10*	34
Monitoring Sites	BOZE14-01, GOD02-01, REES06-01, THOM02-03	BEAR26-02, BOZE18-04, CAMP14-05, CAMP14-12, DRY09-05, GOD03-01, ROCK02-01, SCOT31-02	CAMP15-04, DRY12-06, REES15-06, ROCK03-01, SCOT31-02	BEAR18-01, STON08-01	JACK10-02, STON13-02	SCOT25-02	JACK04-01	

Reach types with only one monitoring site denoted in blue italics.

Pool frequency data is also provided as pools per mile in **Table 3-10** for future TMDL applications.

Table 3-10. Pools per Mile.

Statistical Parameter	Reach Type							
	MR-0-2-U	MR-0-3-U	MR-0-4-U	MR-2-2-C	MR-2-2-U	MR-2-3-U	MR-4-1-C	entire dataset
Minimum	21	11	16	58	84	*66*	*53*	11
25th Percentile	45	62	26	65	90	*66*	*53*	45
Median	79	77	32	71	95	*66*	*53*	66
75th Percentile	124	91	37	78	100	*66*	*53*	87
Maximum	180	95	79	84	106	*66*	*53*	180

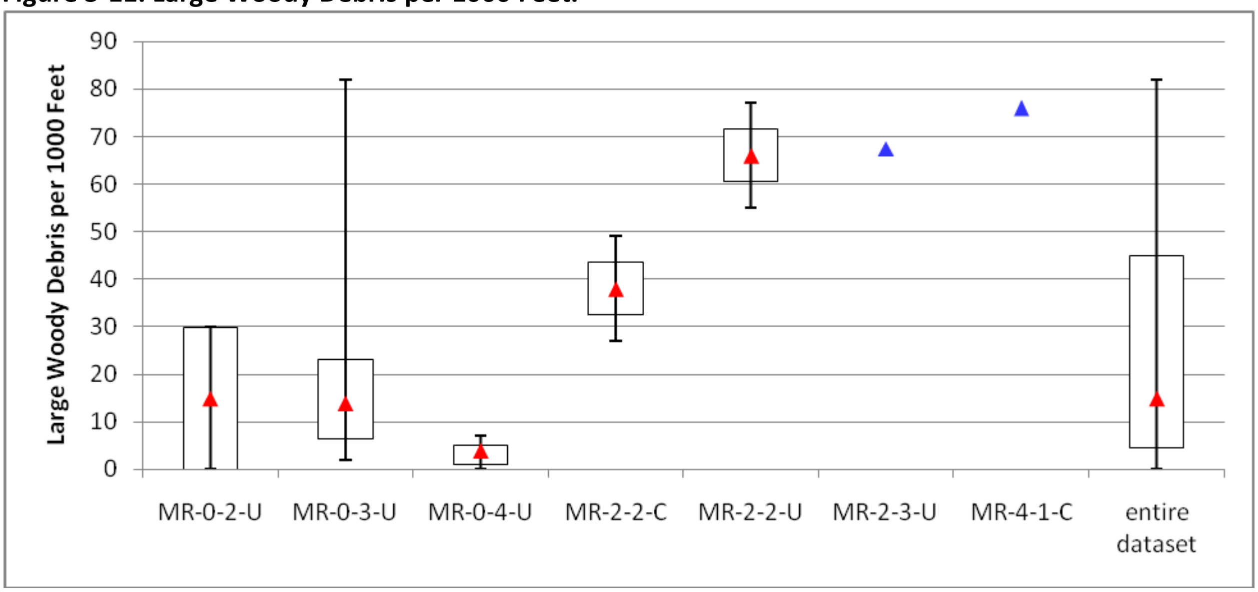
Reach types with only one monitoring site denoted in blue italics.

3.2.1.9 Large Woody Debris Frequency

Large woody debris (LWD) is a critical component of high-quality salmonid habitat, providing habitat complexity, quality pool habitat, cover, and long-term nutrient inputs. LWD also constitutes a primary influence on stream function, including sediment and organic material transport, channel form, bar formation and stabilization, and flow dynamics (Bilby and Ward, 1989). LWD frequency can be measured and compared to reference reaches or literature values to determine if more or less LWD is present than would be expected under optimal conditions.

The median value for the amount of large woody debris (LWD) per 1,000 feet ranged from four in MR-0-4-U to 76 in MR-4-1-C (**Figure 3-11, Table 3-11**). Note that "willow bunches" assigned in the field were tallied as large woody debris. Thus, this analysis makes no distinction as to the size of the woody material.

Figure 3-11. Large Woody Debris per 1000 Feet.



Reach types with only one monitoring site denoted in blue. Reach types with greater than one monitoring site denoted in red.

Table 3-11. Large Woody Debris per 1000 Feet.

Statistical Parameter	Reach Type							
	MR-0-2-U	MR-0-3-U	MR-0-4-U	MR-2-2-C	MR-2-2-U	MR-2-3-U	MR-4-1-C	entire dataset
# of Monitoring Sites	4	8	5	2	2	*1*	*1*	23
Sample Size	4	8	5	2	2	*1*	*1*	23
Minimum	0	2	0	27	55	*68*	*76*	0
25th Percentile	0	7	1	33	61	*68*	*76*	5
Median	15	14	4	38	66	*68*	*76*	15
75th Percentile	30	23	5	44	72	*68*	*76*	45
Maximum	30	82	7	49	77	*68*	*76*	82
Monitoring Sites	BOZE14-01, GOD02-01, REES06-01, THOM02-03	BEAR26-02, BOZE18-04, CAMP14-05, CAMP14-12, DRY09-05, GOD03-01, ROCK02-01, SCOT31-02	CAMP15-04, DRY12-06, REES15-06, ROCK03-01, SCOT31-02	BEAR18-01, STON08-01	JACK10-02, STON13-02	SCOT25-02	JACK04-01	

Reach types with only one monitoring site denoted in blue italics.

Data is also provided as large woody debris per mile in **Table 3-12** for future TMDL applications.

Table 3-12. Large Woody Debris per Mile.

Statistical Parameter	Reach Type							
	MR-0-2-U	MR-0-3-U	MR-0-4-U	MR-2-2-C	MR-2-2-U	MR-2-3-U	MR-4-1-C	entire dataset
Minimum	0	11	0	143	290	*356*	*401*	0
25th Percentile	0	34	5	172	319	*356*	*401*	24
Median	79	74	21	201	348	*356*	*401*	79
75th Percentile	158	121	26	230	378	*356*	*401*	238
Maximum	158	433	37	259	407	*356*	*401*	433

Reach types with only one monitoring site denoted in blue italics.

3.3.1.10 Greenline Understory Shrub Cover

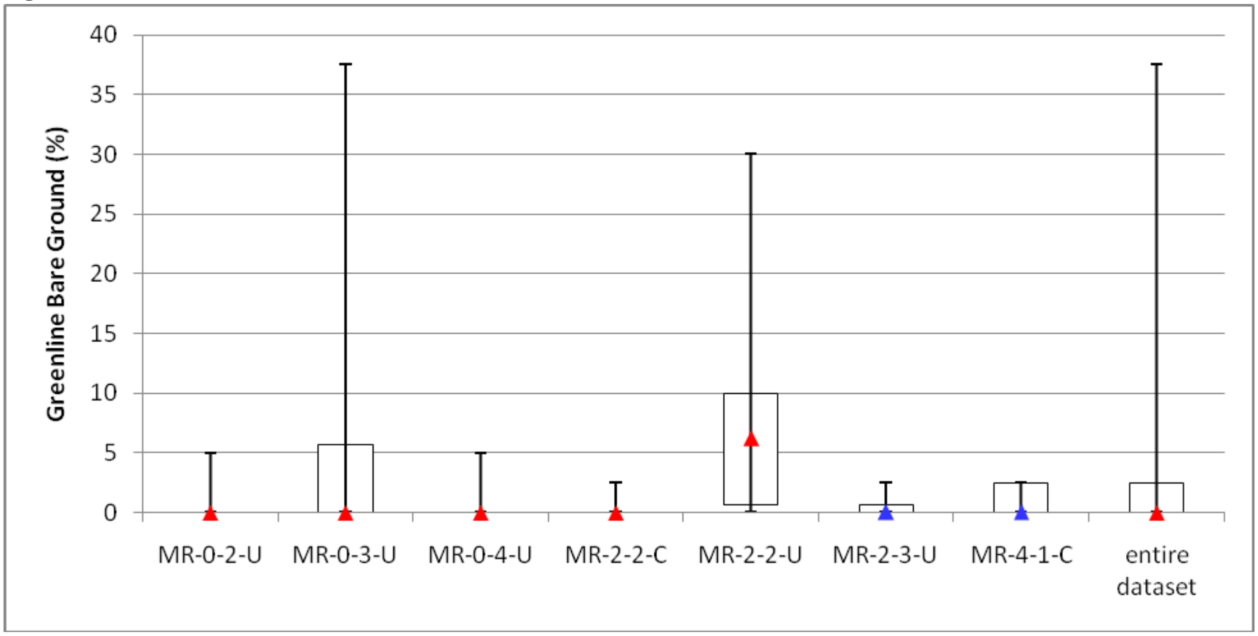
Riparian shrub cover is an important influence on streambank stability. Unfortunately, riparian shrub density data collected in the Lower Gallatin TPA was found to be in error at 17 out of the 23 assessed sites, which prevents a reach type analysis. Monitoring site analysis is provided in **Section 3.2.2.11** for sites in which the data was determined to be correct.

3.2.1.11 Greenline Bare Ground

Percent bare ground is an important indicator of erosion potential, as well as an indicator of land management influences on riparian habitat. Bare ground was noted in the greenline inventory in cases where recent ground disturbance has resulted in exposed bare soil. Bare ground is often caused by trampling from livestock or wildlife, fallen trees, recent bank failure, new sediment deposits from overland or overbank flow, or severe disturbance in the riparian area, such as from past mining, road-building, or fire. Ground cover on streambanks is important to prevent sediment recruitment to stream channels since sediment can wash in from unprotected areas during snowmelt, storm runoff and flooding. Bare areas are also much more susceptible to erosion from hoof shear. Most stream reaches have a small amount of naturally-occurring bare ground. As conditions are highly variable, this measurement is most useful when compared to reference values from best available conditions within the study area or literature values.

The median value for greenline bare ground was 0% in all of the reach types except MR-2-2-U, which had a median value of 6% (**Figure 3-12, Table 3-13**).

Figure 3-12. Greenline Bare Ground.



Reach types with only one monitoring site denoted in blue. Reach types with greater than one monitoring site denoted in red.

Table 3-13. Greenline Bare Ground.

Statistical Parameter	Reach Type							
	MR-0-2-U	**MR-0-3-U**	**MR-0-4-U**	**MR-2-2-C**	**MR-2-2-U**	**MR-2-3-U**	**MR-4-1-C**	**entire dataset**
# of Monitoring Sites	4	8	5	2	2	1	1	23
Sample Size	18	39	25	10	10	4	5	111
Minimum	0	0	0	0	0	0	0	0
25th Percentile	0	0	0	0	1	0	0	0
Median	0	0	0	0	6	0	0	0
75th Percentile	0	6	0	0	10	1	3	3
Maximum	5	38	5	3	30	3	3	38
Monitoring Sites	BOZE14-01, GOD02-01, REES06-01, THOM02-03	BEAR26-02, BOZE18-04, CAMP14-05, CAMP14-12, DRY09-05, GOD03-01, ROCK02-01, SCOT31-02	CAMP15-04, DRY12-06, REES15-06, ROCK03-01, SCOT31-02	BEAR18-01, STON08-01	JACK10-02, STON13-02	SCOT25-02	JACK04-01	

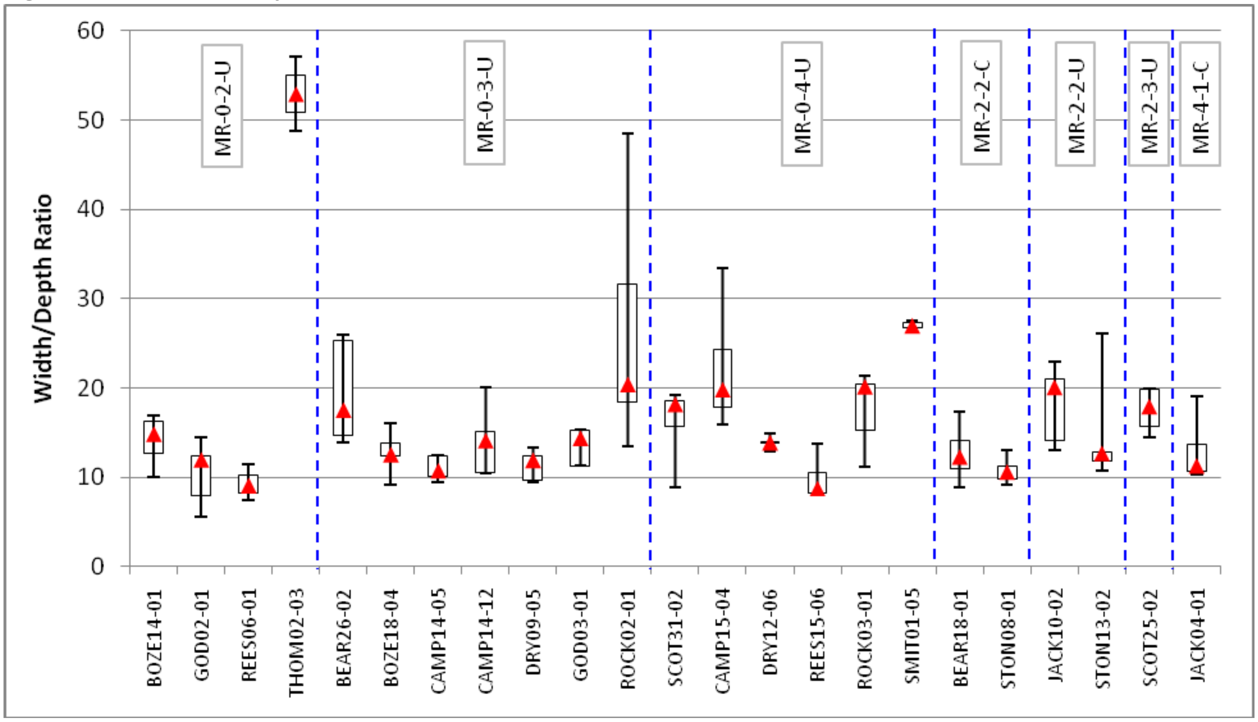
3.2.2 Monitoring Site Analysis

Sediment and habitat data collected at each monitoring site was reviewed individually in the following sections. Monitoring site discussions are based on median values. Summary statistics for the minimum, 25th percentile, 75th percentile and maximum values are presented graphically, since these may be more applicable for developing sediment TMDL criteria.

3.2.2.1 Width/Depth Ratio

The highest median width/depth ratio was observed in THOM02-03, which was a spring creek along which grazing has occurred (**Figure 3-13**). In the Lower Gallatin TPA, width/depth ratios generally increased in the downstream direction, which is the expected result as streams become larger.

Figure 3-13. Width/Depth Ratio.

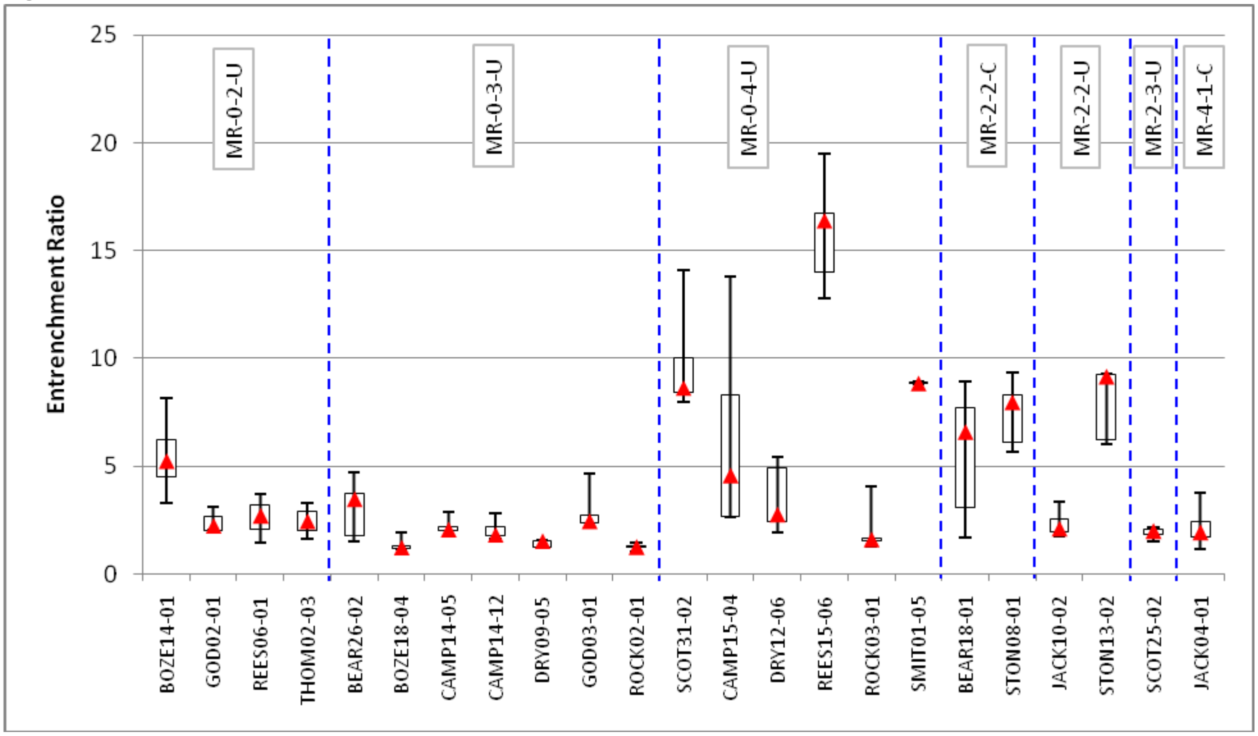


3.2.2.2 Entrenchment Ratio

Entrenchment ratio data collected within the Lower Gallatin TPA indicates the following (**Figure 3-14**):

1. REES15-06 along the lower portion of Reese Creek has the greatest amount of floodplain access out of the sites assessed.
2. Entrenched conditions were documented in CAMP14-05, CAMP14-12, DRY09-05, GOD03-01, REES06-01, ROCK02-01 and THOM02-03 as a result of historic and ongoing agricultural practices, including irrigation water transfers, channelization, channel re-location, livestock grazing, and crop production.
3. Entrenched conditions in GOD02-01 are the result of channelization due to road construction.

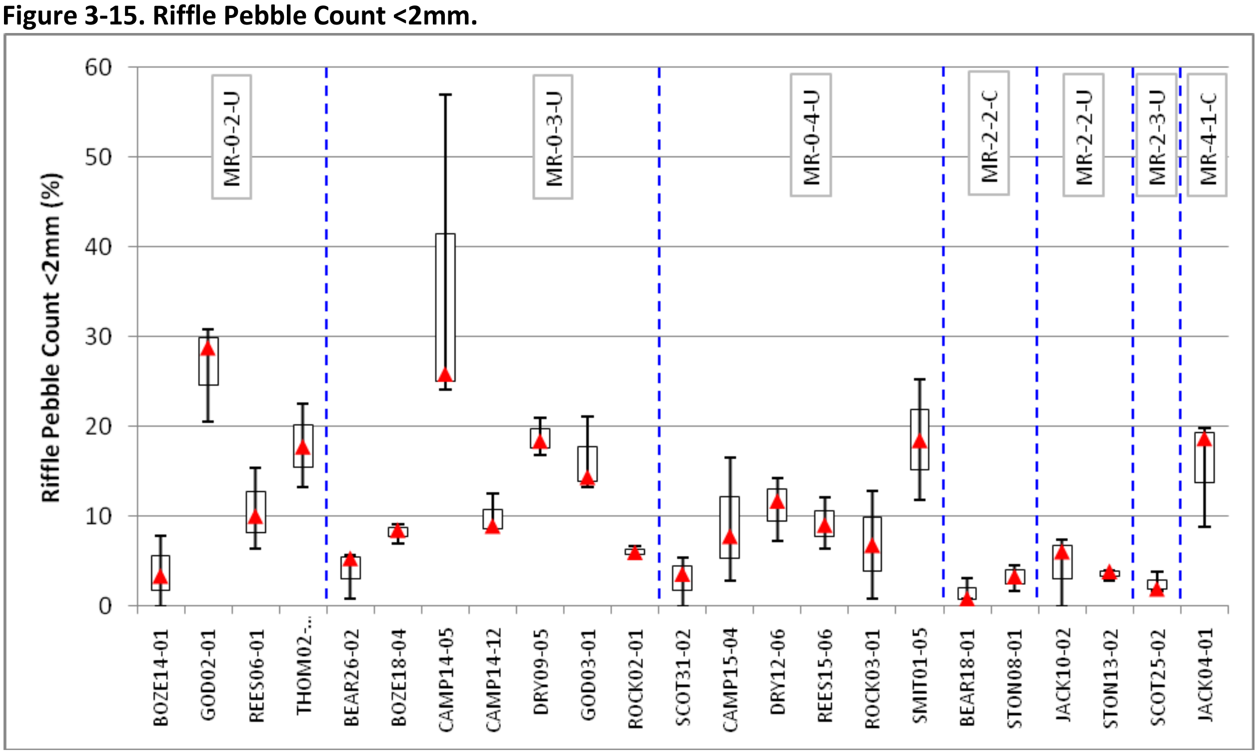
Figure 3-14. Entrenchment Ratio.



3.2.2.3 Riffle Pebble Count <2mm

The median percent of fine sediment in riffles <2mm as measured by a pebble count was highest in CAMP14-05 and GOD02-01 (**Figure 3-15**).

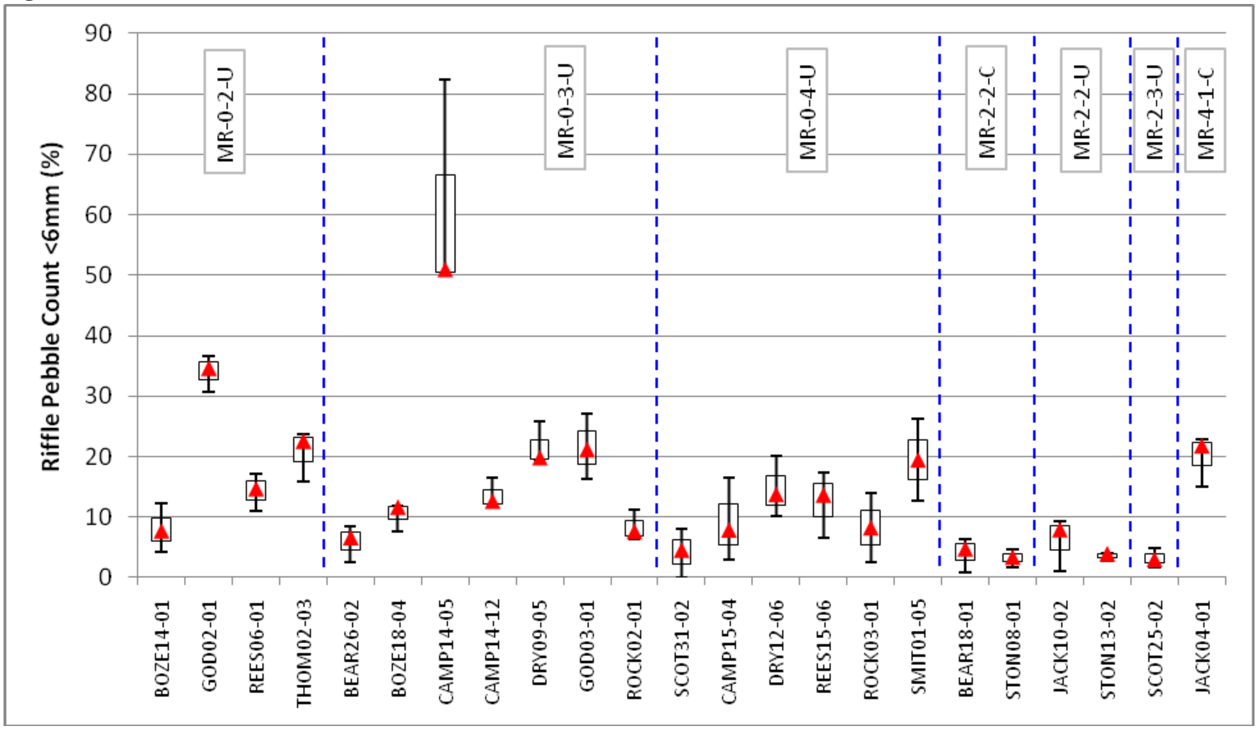
Figure 3-15. Riffle Pebble Count <2mm.



3.2.2.4 Riffle Pebble Count <6mm

The percent of fine sediment in riffles <6mm as measured by a pebble count followed a similar trend as the percent of fine sediment <2mm, with the highest median values in CAMP14-05 and GOD02-01 (**Figure 3-16**).

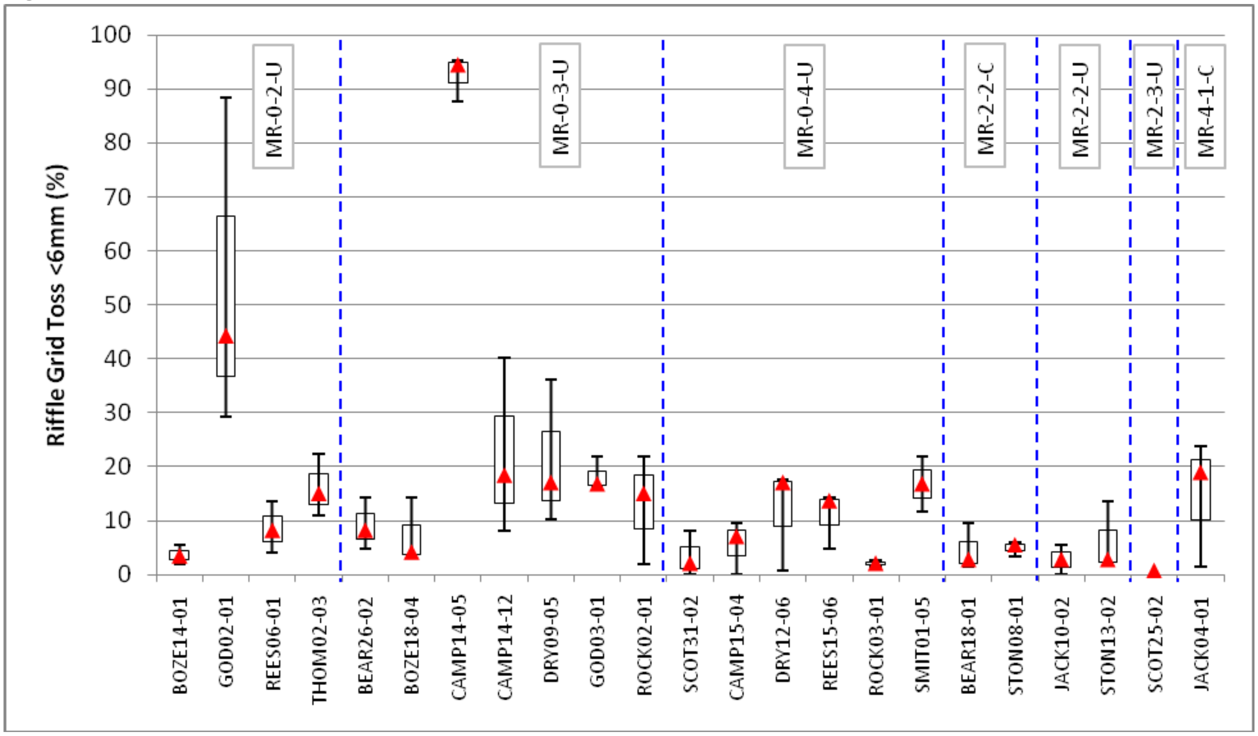
Figure 3-16. Riffle Pebble Count <6mm.



3.2.2.5 Riffle Grid Toss <6mm

The median percent of fine sediment in riffles <6mm as measured by a grid toss was highest in CAMP14-05 and GOD02-01 (**Figure 3-17**).

Figure 3-17. Riffle Grid Toss <6mm.



3.2.2.6 Riffle Stability Index

The mobile percentile of particles on the riffle is termed "Riffle Stability Index" (RSI) and provides a useful estimate of the degree of increased sediment supply to riffles. The RSI addresses situations in which increases in gravel bedload from headwater activities is depositing material on riffles and filling pools, and it reflects qualitative differences between reference and managed watersheds. In the Lower Gallatin TPA, RSI evaluations were performed in BEAR26-02, BOZE14-01, JACK10-02 and STON08-01 (**Table 3-14**).

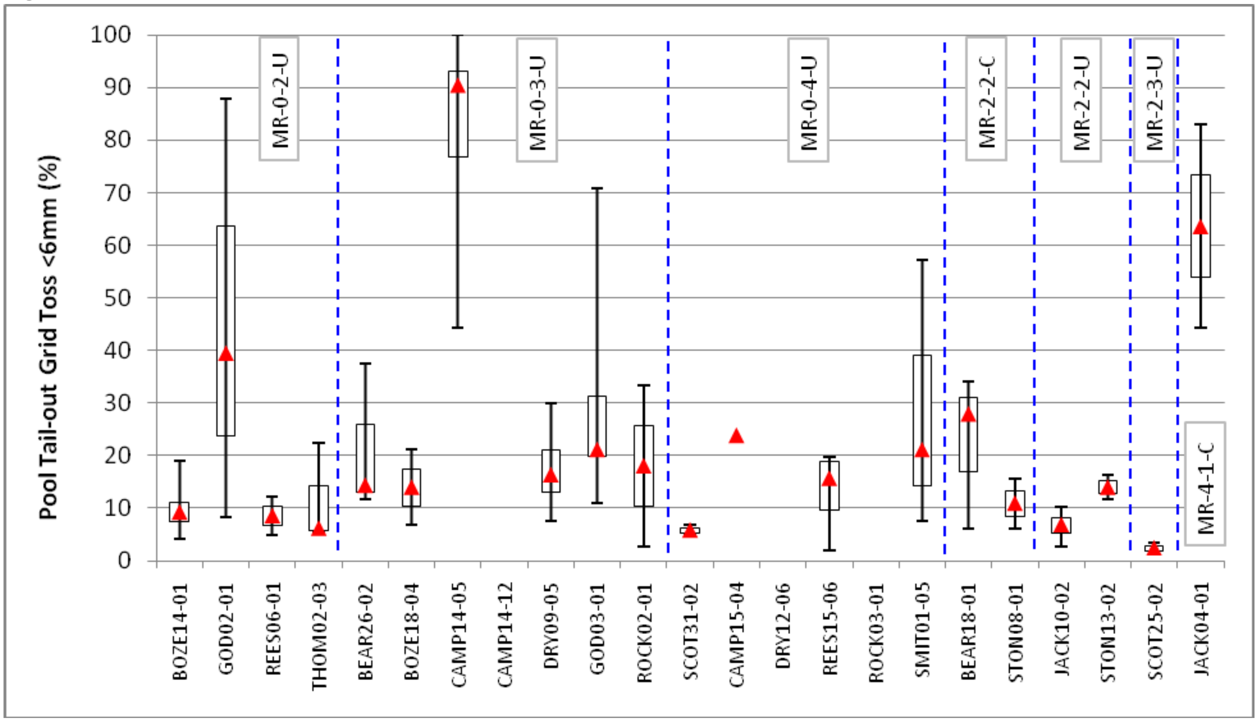
Table 3-14. Riffle Stability Index Summary.

Site	Mobile Particle Analysis		Pebble Count Analysis		RSI
	Cell	Geometric Mean	Cell	D50	
BEAR26-02	1	78	1	26	89
BOZE14-01	1	103	1	47	86
BOZE14-01	5	92	5	74	62
JACK10-02	1	79	1	55	63
STON08-01	2	123	1	59	88
STON08-01	3	99	3	70	65
STON08-01	4	118	5	44	84

3.2.2.7 Pool Tail-out Grid Toss <6mm

Fine sediment in pool tail-outs as measured by the grid toss followed the same general pattern as the riffle grid toss. The median percent of fine sediment in pool tail-outs as measured with the grid toss was highest in CAMP14-05 and JACK04-01 (**Figure 3-18**).

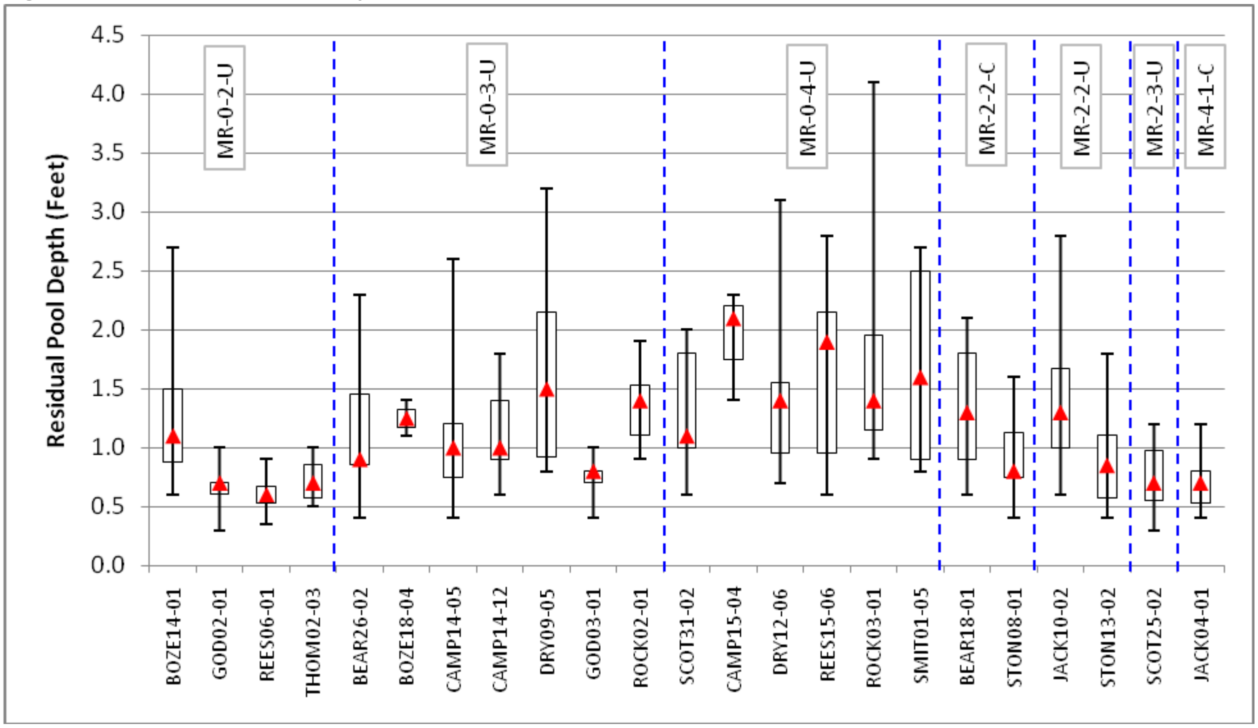
Figure 3-18. Pool Tail-out Grid Toss <6mm.



3.2.2.8 Residual Pool Depth

The greatest median residual pool depth was measured in CAMP15-04, followed by REES15-06 (**Figure 3-19**). The lowest residual pool depth was found in REES06-01 where the stream appeared to have been channelized historically. In general, residual pool depths increase in the downstream direction within the assessed streams.

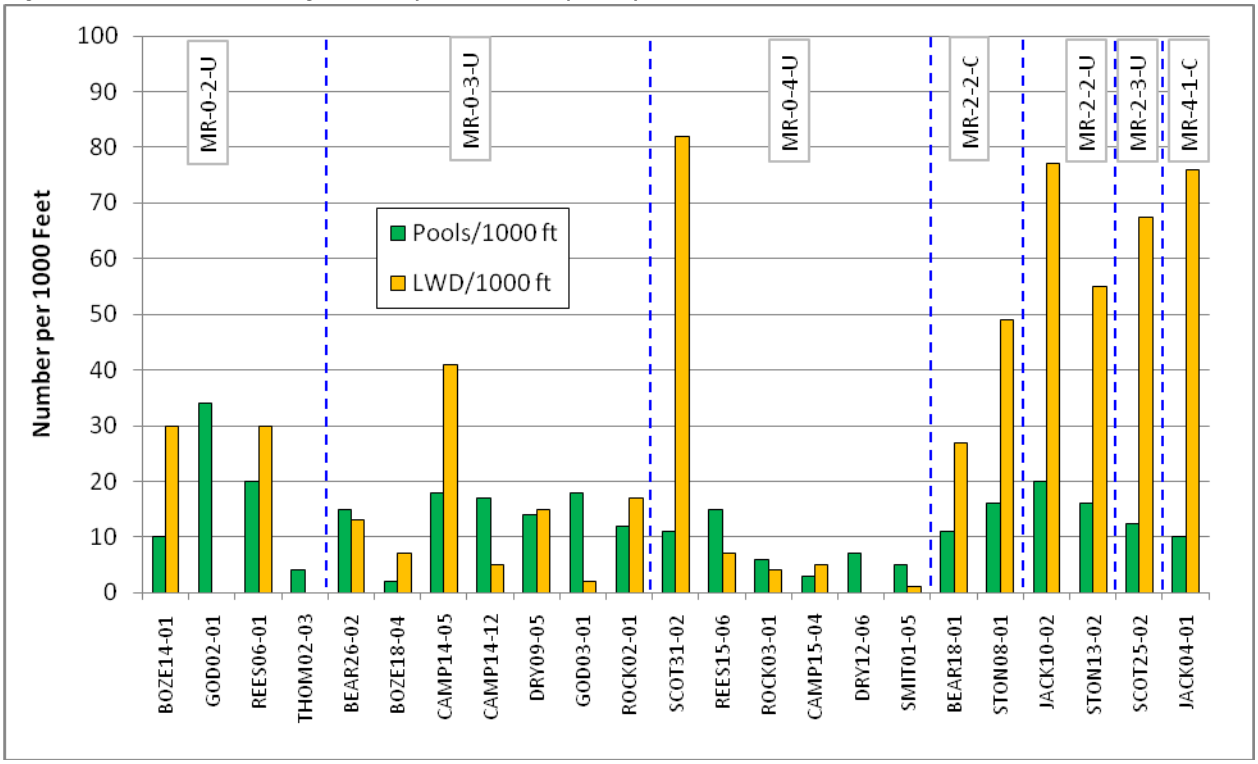
Figure 3-19. Residual Pool Depth.



3.2.2.9 Pool Frequency

Pool frequency generally decreased in the downstream direction within the assessed streams, which is the expected result as streams become larger (**Figure 3-20**).

Figure 3-20. Pool and Large Woody Debris Frequency.



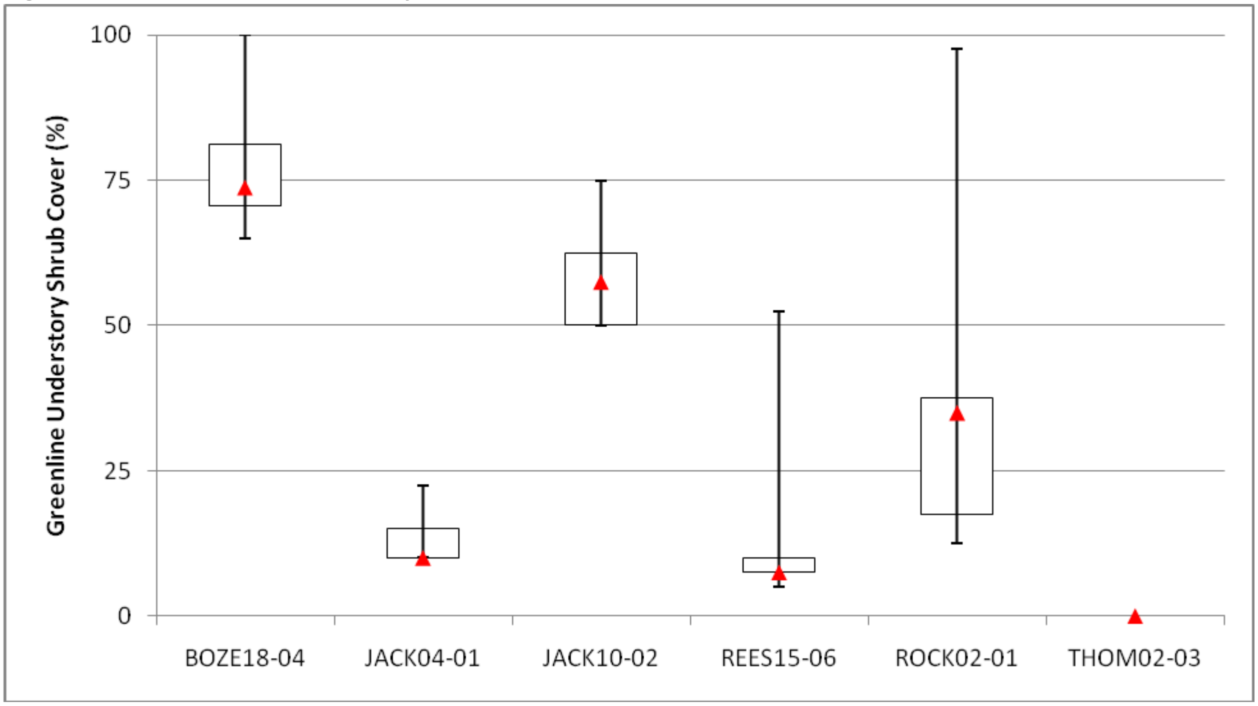
3.2.2.10 Large Woody Debris Frequency

No observable pattern was detected for large woody debris frequency (**Figure 3-20**). No LWD was found in DRY12-06, GOD02-01 or THOM02-03. It is likely that woody shrubs lined the streambanks at these sites historically and contributed woody material to the stream.

3.2.2.11 Greenline Understory Shrub Cover

Median understory shrub cover exceeded 50% in BOZE18-04 and JACK10-02, while median shrub density was less than 50% in JACK04-01, REES15-06, ROCK02-01 and THOM02-03 (**Figure 3-21**).

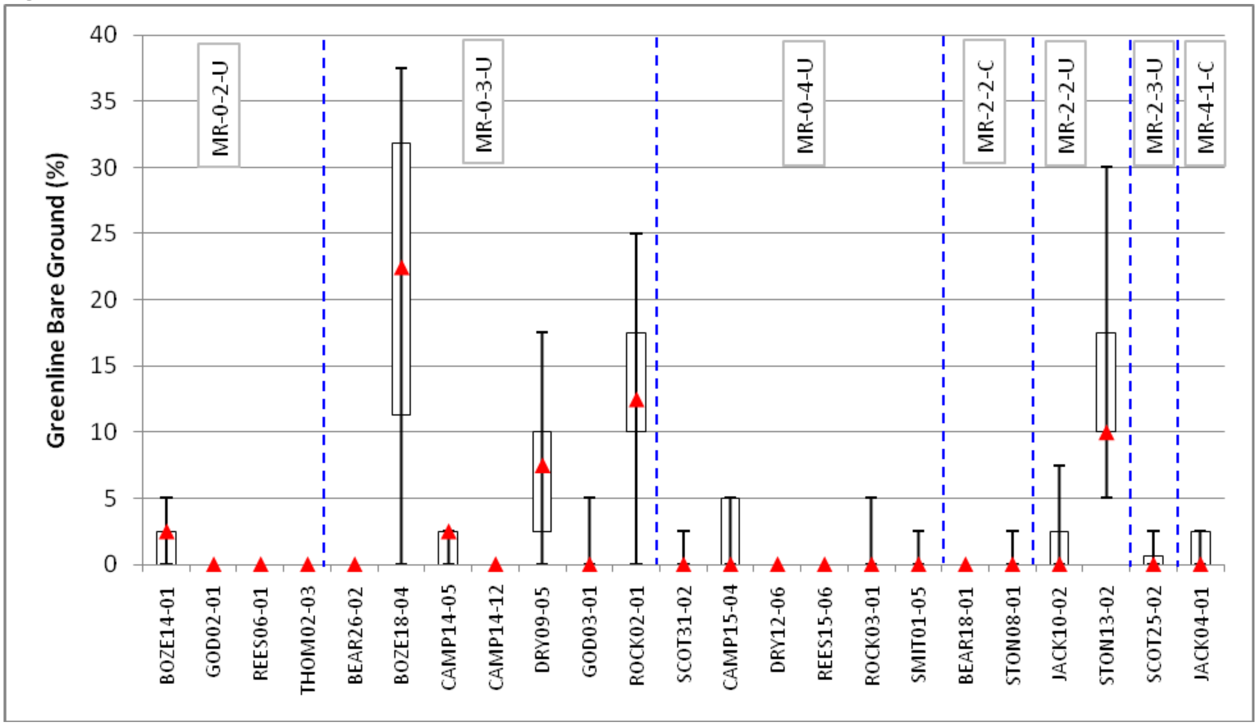
Figure 3-21. Greenline Understory Shrub Cover.



3.2.2.12 Greenline Bare Ground

Median bare ground values tended to range from 0-5%, though the amount of bare ground was only elevated in BOZE18-04, DRY09-05, ROCK02-01, and STON13-02 (**Figure 3-22**). Urban and residential development has led to increased bare ground in BOZE18-04, while historic and ongoing agricultural practices have led to increased bare ground in DRY09-05, ROCK02-01 and STON13-02.

Figure 3-22. Greenline Bare Ground.



4.0 STREAMBANK EROSION ASSESSMENT

4.1 METHODS

Streambank erosion data was collected at 23 monitoring sites in which the complete sediment and habitat assessment was performed. An additional assessment of streambank erosion was conducted at seven sites to increase the representativeness of the assessment. At each of the 30 total monitoring sites, eroding streambanks were assessed for erosion severity and categorized as either "actively/visually eroding" or "slowly eroding/vegetated/undercut". At each eroding bank, **Bank Erosion Hazard Index (BEHI)** measurements were performed and the **Near Bank Stress (NBS)** was evaluated (Rosgen, 1996, 2004). Bank erosion severity was rated from "very low" to "extreme" based on the BEHI score, which was determined based on the following six parameters: bank height, bankfull height, root depth, root density, bank angle, and surface protection. Near Bank Stress was also rated from "very low" to "extreme" depending on the shape of the channel at the toe of the bank and the force of the water (i.e. "stream power") along the bank. In addition, the source, or underlying cause, of streambank erosion was evaluated based on observed anthropogenic disturbances within the riparian corridor, as well as current and historic land-use practices observed within the surrounding landscape. The source of streambank instability was identified based on the following near-stream source categories: transportation, riparian grazing, cropland, mining, silviculture, irrigation, natural, and "historic or other". Naturally eroding streambanks were considered the result of "natural sources" while "historic or other" sources in the watershed include recreation, urban/residential development, and historic agriculture/vegetation removal. If multiple sources were observed, then a percent was noted for each source.

Streambank erosion data collected at **monitoring sites** were extrapolated to the **stream reach**, **stream segment**, and **sub-watershed** scales based on similar reach type characteristics as identified in the Aerial Assessment Database. Sediment load calculations were performed for monitoring sites, stream reaches, stream segments, and sub-watersheds which are distinguished as follows:

Monitoring Site	*- A 500, 1000, or 2000 foot section of a stream reach where field monitoring was conducted*
Stream Reach	*-Subdivision of the stream segment based on ecoregion, stream order, gradient and confinement as evaluated in GIS*
Stream Segment	*-303(d) listed segment*
Sub-watershed	*-303(d) listed segment and tributary streams based on 1:100,000 NHD data layer*

For each eroding streambank, the average annual sediment load was estimated based on the streambank length, mean height, and the annual retreat rate. The length and mean height were measured in the field, while the annual retreat rate was determined based on the relationship between the BEHI and NBS ratings. Annual retreat rates were estimated based on retreat rates from the Lamar River in Yellowstone National Park (Rosgen, 1996) (**Table 4-1**). The annual sediment load in cubic feet was then calculated from the field data (annual retreat rate x mean bank height x bank length), converted into cubic yards, and finally converted into tons per year based on the bulk density of streambank material, which was assumed to average 1.3 tons/yard^3 as identified in *Watershed*

Assessment of River Stability and Sediment Supply (WARSSS) (EPA, 2006, Rosgen, 2006). This process resulted in a sediment load for each eroding bank expressed in tons per year.

Table 4-1. Annual Streambank Retreat Rates (Feet/Year), Lamar River, Yellowstone National Park (adapted from Rosgen 1996).

BEHI	Near Bank Stress					
	very low	low	moderate	high	very high	extreme
very Low	0.002	0.004	0.009	0.021	0.050	0.12
low	0.02	0.04	0.10	0.24	0.57	1.37
moderate	0.10	0.17	0.28	0.47	0.79	1.33
high - very high	0.37	0.53	0.76	1.09	1.57	2.26
extreme	0.98	1.21	1.49	1.83	2.25	2.76

4.1.1 Streambank Erosion Sediment Load Extrapolation

Monitoring site sediment loads were extrapolated to the stream reach, stream segment and sub-watershed scales based on the aerial assessment reach type analysis. Streambank erosion data was extrapolated based on the following criteria:

1. Monitoring site sediment loads were extrapolated directly to the stream reach in which the monitoring site was located.

2. For un-assessed reaches with slopes <10%, streambank erosion sediment loads were applied based on reach type averages. Field data was collected within nine individual reach types that were delineated by confinement, stream order and gradient. The nine reach types were consolidated into four reach type groups based on stream order and average bankfull width (**Table 4-2)**. Average sediment loads from the field assessed reach type groups were applied to the corresponding un-assessed reach types as presented in **Table 4-2**. The reach type load from MR-4-2-U was not extrapolated to any un-assessed reaches since this site (BEAR20-01) was deemed to be unique within the Lower Gallatin TPA.

Table 4-2. Reach Type Streambank Erosion Sediment Loads by Reach Type Group.

Field Assessed Reach Type Group	Number of Monitoring Sites	Average Sediment Load per 1000 Feet (Tons/Year)	Un-Assessed Reach Types
MR-0-2-U, MR-2-2-U, MR-2-2-C	10	10.88	MR-4-2-U, MR-4-2-C, MR-4-3-U, MR-4-3-C
MR-0-3-U, MR-2-3-U, MR-0-4-U	17	19.40	MR-0-3-C, MR-2-3-C, MR-0-4-C, MR-2-4-U
MR-0-1-U, MR-4-1-C	2	1.97	MR-2-1-U, MR-4-1-U
MR-4-2-U	1	15.92	none

3. When streambank erosion sources exceeded 75% natural (as identified in the Aerial Assessment Database), erosion was assumed to be at the background rate per reach type grouping. The background rate is based on the assessment of the reference site on South Cottonwood Creek (SCOT25-02), and is based on 15% of the sediment load being derived from actively eroding streambanks and 85% of the sediment load being derived from slowly eroding streambanks. This

approach was also used for calculating load reductions and is discussed in more detail in **Section 4.2.3**.

4. For reach types with slopes >10%, a streambank erosion sediment load of 0.31 tons per 1000-feet was applied based on field data collected in the Upper Gallatin TPA. High gradient streams tend to be well armored by large substrate material and tend to contribute relatively little sediment from streambank erosion. Much of the Upper Gallatin TPA was comprised of high gradient streams since the entire West Fork Watershed is located in a mountain setting. In the Lower Gallatin TPA, high gradient streams comprised a relatively small portion of the study area and were not included in the field data collection effort. The sediment load from the Upper Gallatin TPA was applied to the following reach types in the Lower Gallatin TPA: MR-10-1-U, MR10-1-C, MR-10-2-U, and MR-10-3-C.

4.2 Results

4.2.1 Streambank Erosion Sediment Load Extrapolation

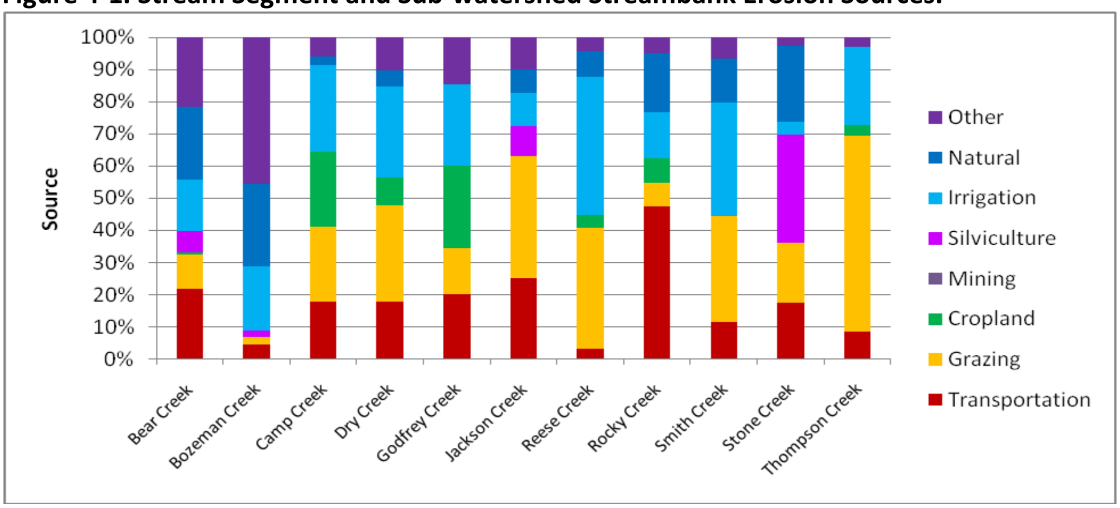
A total average annual sediment load of 418 tons/year was attributed to the 219 assessed eroding streambanks within the 30 monitoring sites. Predominant sources of streambank erosion observed during the field assessment include riparian grazing, cropland, irrigation, and urban development. Average annual sediment loads for each monitoring site were normalized to a length of 1,000 feet for the purpose of comparison and extrapolation. Sediment loads due to streambank erosion for each monitoring site are presented in **Table 4-3**. Monitoring site sediment loads per 1,000 feet ranged from 1.4 tons/year at THOM01-04 on Thompson Spring Creek to 61.6 tons/year at CAMP14-12 on Camp Creek.

Monitoring site sediment loads were extrapolated to the stream segment scale based on the reach type groups (**Table 4-2**). Stream segment sediment loads were estimated for all 116.4 miles of stream included in the Aerial Assessment Database (**Attachment AC**). An average annual sediment load of 8,725 tons/year was attributed to eroding streambanks at the stream segment scale. In the Lower Gallatin TPA, streambank erosion sediment loads ranged from 148.9 tons/year in Thompson Spring Creek to 2,493.8 tons/year in Camp Creek (**Attachment AC**). Rocky Creek has highest sediment load due to streambank erosion per mile of stream, followed by Camp Creek. Thompson Spring Creek has the lowest streambank erosion sediment per mile of stream. At the stream segment scale, this assessment indicates that irrigation, riparian grazing, and transportation are the greatest anthropogenic contributors of sediment loads due to streambank erosion in the Lower Gallatin TPA (**Figure 4-1**). Sources assessed at the stream segment scale were also applied at the sub-watershed scale.

Table 4-3. Monitoring Site Estimated Average Annual Sediment Loads due to Streambank Erosion.

Stream Segment	Reach ID	Reach Type	Length of Eroding Bank (Feet)	Monitoring Site Length (Feet)	Percent of Reach with Eroding Bank	Reach Sediment Load (Tons/Year)	Total Sediment Load per 1000 Feet (Tons/Year)
Bear Creek	BEAR18-01	MR-2-2-C	90	1000	5	2.3	2.3
	BEAR20-01	MR-4-2-U	182	300	30	4.8	15.9
	BEAR26-02	MR-0-3-U	326	1000	16	31.2	31.2
Bozeman Creek	BOZE14-01	MR-0-2-U	129	1000	6	8.0	8.0
	BOZE15-01	MR-0-2-U	183	1000	9	5.3	5.3
	BOZE18-04	MR-0-3-U	238	1000	12	17.4	17.4
	BOZE18-05	MR-0-3-U	327	1000	16	8.9	8.9
Camp Creek	CAMP13-02	MR-2-3-U	86	500	9	2.6	5.1
	CAMP14-05	MR-0-3-U	176	1000	9	15.3	15.3
	CAMP14-12	MR-0-3-U	323	1000	16	61.6	61.6
	CAMP15-04	MR-0-4-U	167	1000	8	3.0	3.0
Dry Creek	DRY09-05	MR-0-3-U	382	1000	19	31.4	31.4
	DRY12-06	MR-0-4-U	215	1000	11	17.6	17.6
Godfrey Creek	GOD02-01	MR-0-2-U	37	500	4	2.8	5.7
	GOD03-01	MR-0-3-U	128	500	13	4.7	9.5
Jackson Creek	JACK04-01	MR-4-1-C	93	1000	5	2.5	2.5
	JACK10-02	MR-2-2-U	242	1000	12	15.0	15.0
Reese Creek	REES06-01	MR-0-2-U	120	300	20	7.5	24.9
	REES15-06	MR-0-4-U	397	1000	20	17.1	17.1
Rocky Creek	ROCK02-01	MR-0-3-U	674	1000	34	25.4	25.4
	ROCK03-01	MR-0-4-U	247	1000	12	25.8	25.8
	ROCK07-03	MR-0-4-U	577	1000	29	39.6	39.6
South Cottonwood Creek	SCOT25-02	MR-2-3-U	200	800	13	5.3	6.6
	SCOT31-02	MR-0-3-U	138	1000	7	2.0	2.0
Smith Creek	SMIT01-05	MR-0-4-U	516	1000	26	12.4	12.4
Stone Creek	STON08-01	MR-2-2-C	270	1000	14	14.3	14.3
	STON11-02	MR-2-2-U	227	1000	11	7.6	7.6
	STON13-02	MR-2-2-U	319	1000	16	21.8	21.8
Thompson Spring Creek	THOM01-04	MR-0-1-U	60	700	4	1.0	1.4
	THOM02-03	MR-0-2-U	164	1000	8	4.0	4.0

Figure 4-1. Stream Segment and Sub-watershed Streambank Erosion Sources.



Average annual streambank erosion sediment loads at the sub-watershed scale were estimated for the assessed stream segments in the Lower Gallatin TPA based on the total length of stream within the sub-watershed. These sub-watershed sediment loads were estimated from the sum of the average annual streambank erosion sediment loads at the stream segment scale combined with an estimate of streambank erosion sediment loads from un-assessed streams. A total of 116.4 miles of stream were included in the Aerial Assessment Database and there are 531.0 miles of stream in the assessed sub-watersheds based on a modified version of the 1:100,000 NHD stream layer in which ditches were removed (**Table 4-4**). The majority of un-assessed streams were 1st and 2nd order tributaries. For the purposes of estimating an annual average sub-watershed streambank erosion sediment load, streambank erosion sediment inputs from un-assessed streams was assumed to be 10.4 tons per mile (1.97 tons/1000 feet) based on the average value of 1st order streams assessed in the Lower Gallatin TPA. A total sediment load of 13,036 tons per year was derived at the sub-watershed scale (**Table 4-4**).

Table 4-4. Sub-watershed Sediment Loads.

Stream Segment	Stream Length (Miles)	Stream Segment Sediment Load (Tons/Year)	Sub-watershed Stream Length (Miles)	Un-assessed Stream Length (Miles)	Sediment Load Applied to Un-assessed Stream Length (10.40 tons/year/mile)	Sub-watershed (Tons/Year)	Total Load per Mile (Tons/Year)
Bear Creek	10.1	682.7	17.33	7.2	74.8	757.5	43.7
Bozeman Creek	15.8	814.9	53.95	38.2	396.9	1211.9	22.5
Camp Creek	25.3	2493.8	85.48	60.1	625.4	3119.2	36.5
Dry Creek	16.2	1422.7	185.83	169.6	1763.8	3186.6	17.1
Godfrey Creek	7.1	430.4	16.31	9.2	95.5	525.9	32.3
Jackson Creek	7.8	344.6	12.87	5.1	52.9	397.6	30.9
Reese Creek	7.4	615.9	69.08	61.6	641.1	1257.0	18.2
Rocky Creek (excluding Jackson Creek sub-watershed)	7.5	897.1	31.73	24.2	251.6	1148.7	36.2
Smith Creek (excluding Reese Creek sub-watershed)	6.3	600.7	41.42	35.1	365.3	965.9	23.3
Stone Creek	5.6	273.5	9.77	4.2	43.6	317.1	32.5
Thompson Spring Creek	7.2	148.9	7.19	n/a*	n/a*	148.9	20.7
TOTAL	**116.4**	**8725**	**531.0**	**414.5**	**4311**	**13036**	
*tributaries identified on NHD layer were not included since this is a spring creek							

4.2.2 Streambank Composition

Streambank erosion sediment loads were evaluated based on streambank composition for the following particle size categories: coarse gravel, fine gravel and sand/silt. The percent of eroding streambank within each particle size category was evaluated for each monitoring site based on the sediment load from each eroding bank relative to the total sediment load for the monitoring site. Streambank composition data for each monitoring site was then used to evaluate streambank composition at the sub-watershed scale based on the sum of the monitoring site loads relative to the total sediment load from the assessed monitoring sites within each individual stream segment (**Table 4-5**). Thus, it is assumed that streambank composition assessed at the field monitoring sites is representative of each streams sub-watershed. This analysis will help guide implementation activities geared toward reducing sediment loads for specific particle size categories. In the Lower Gallatin TPA, sand/silt generally comprised the greatest portion of the streambank sediment load, comprising greater than 60% of the sediment load in all of the assessed streams.

Table 4-5. Stream Segment Streambank Composition.

Stream Segment	Number of Monitoring Sites	Coarse Gravel >6mm (Percent)	Fine Gravel <6mm & >2mm (Percent)	Sand/Silt <2mm (Percent)
Bear Creek	3	9	6	86
Bozeman Creek	4	27	10	63
Camp Creek	4	8	7	85
Dry Creek	2	4	6	91
Godfrey Creek	2	9	2	90
Jackson Creek	2	4	6	90
Reese Creek	2	10	4	86
Rocky Creek	3	13	6	81
Smith Creek	1	0	0	100
Stone Creek	3	20	10	70
Thompson Spring Creek	2	0	0	100

Streambank erosion sediment loads at the sub-watershed scale as presented in **Table 4-4** were analyzed based on the particle size distribution of the eroding streambanks. Sub-watershed sediment loads for each particle size class are presented in **Table 4-6**.

Table 4-6. Sub-watershed Sediment Loads due to Streambank Erosion for each Particle Size Class.

Stream Segment	Coarse Gravel >6mm Load (Tons/Year)	Fine Gravel <6mm & >2mm Load (Tons/Year)	Sand/Silt <2mm Load (Tons/Year)	Sub-watershed (Tons/Year)
Bear Creek	65.3	42.9	649.4	757.5
Bozeman Creek	330.5	121.2	760.2	1211.9
Camp Creek	240.0	213.8	2665.4	3119.2
Dry Creek	115.5	181.5	2889.5	3186.6
Godfrey Creek	45.3	8.1	472.4	525.9
Jackson Creek	15.5	22.8	359.3	397.6
Reese Creek	127.2	45.0	1084.9	1257.0
Rocky Creek	148.7	66.1	933.9	1148.7
Smith Creek	0.0	0.0	965.9	965.9
Stone Creek	63.1	31.4	222.6	317.1
Thompson Spring Creek	0.0	0.0	148.9	148.9

4.2.3 Streambank Erosion Sediment Load Reductions

The narrative water quality standards that apply to sediment relate to the naturally occurring condition, which is typically associated with either reference conditions or those that occur if all reasonable land, soil, and water conservation practices are applied. Therefore, to assist with TMDL development, the streambank erosion assessment also includes an estimation of sediment loading reductions that could be achieved via the implementation of Best Management Practices (BMPs). Streambank erosion sediment load reductions were evaluated based on field collected data and streambank erosion sources identified in the Aerial Assessment Database through the following process:

1. Anthropogenic activities that remove streamside vegetation tend to de-stabilize streambanks and increase the amount of active streambank erosion. Through the implementation of riparian

and streambank BMPs, streambanks can be stabilized and active erosion can be reduced. A reference site approach was used to identify an appropriate ratio of actively eroding streambanks compared to slowly eroding streambanks for streams in the Lower Gallatin TPA. The assessment from the one reference site included in this study (SCOT25-02) indicated that 10% of the streambank sediment load was derived from actively eroding streambanks. Based on this, the rate used to approximate the effect of BMP implementation and to calculate load reductions is 15% actively eroding and 85% slowly eroding banks. For the three primary reach type groups described in **Table 4-7** (i.e. all groups except MR-4-2-U), streambank erosion sediment load reductions were derived using the average values for both actively eroding streambanks and slowly eroding streambanks. For each reach type group, the expected streambank erosion sediment load when BMPs were applied was calculated based on 15% of the actively eroding streambanks and 85% of the slowly eroding streambanks using the following equation:

(0.15 x active) + (0.85 x slowly) = streambank erosion sediment load with BMPs

For example, the reach type group for 2nd order streams, which includes the MR-0-2-U, MR-2-2-U, and MR-2-2-C reach types, averaged 7.19 tons/year from actively eroding streambanks and 4.44 tons/year from slowly eroding streambanks for 1,000 feet of stream, resulting in a reduced sediment load of 4.85 tons/year, as follows:

(0.15 x 7.19) + (0.85 x 4.44) = 4.85

In this analysis, the data from all actively eroding banks was utilized, including the three monitoring sites in which no active streambank erosion was observed. For the slowly eroding streambanks, the zero values were removed from the dataset since these monitoring sites tended to be dominated by anthropogenic disturbances. Streambank erosion sediment load reductions are presented for each reach type category in **Table 4-7**.

Table 4-7. Reach Type Streambank Sediment Load Reductions with BMPs.

Field Assessed Reach Type Group	Average Sediment Load per 1000 Feet (Tons/Year)	Reduced Sediment Load per 1000 Feet (Tons/Year)	Un-Assessed Reach Types
MR-0-2-U, MR-2-2-U, MR-2-2-C	10.88	4.85	MR-4-2-U, MR-4-2-C, MR-4-3-U, MR-4-3-C
MR-0-3-U, MR-2-3-U, MR-0-4-U	19.40	5.16	MR-0-3-C, MR-2-3-C, MR-0-4-C, MR-2-4-U
MR-0-1-U, MR-4-1-C	1.97	1.95	MR-2-1-U, MR-4-1-U

2. For the reaches in which a monitoring site was located, the reach type category sediment load reduction was applied, except when this value exceeded the monitoring site value. In this case, the monitoring site sediment load was evaluated based on 15% of the actively eroding streambanks and 85% of the slowly eroding streambanks and this value was then applied to the entire reach in which the monitoring site was located.

3. Because they are assumed to be achieving the naturally occurring condition, no sediment load reductions were applied to reaches with >75% natural sources of erosion. In addition, no load reduction was applied to the natural load in reaches with <75% natural sources.

4. Because high gradient channels tend to be well armored and have a very low erosion rate, no sediment load reductions were applied to streams with slopes >10%.

5. Because little is known about the tributaries to the 303(d) listed stream segments and they are predominately 1^{st} and 2^{nd} order streams with a low streambank erosion load assigned during the extrapolation process, no sediment load reductions were applied to tributaries of the assessed 303(d) listed stream segments.

Based on the process described above, streambank erosion sediment load reductions for each sediment 303(d) listed sub-watershed in the Lower Gallatin TPA are provided in **Table 4-8**. Potential reductions in anthropogenic loading as a result of the application of BMPs range from 32% to 66%. The loading reductions listed in **Table 4-8** were calculated based on the achievable reductions in loading to the 303(d) listed water body segments, while additional reductions may also be possible from the tributaries to the listed water bodies.

Table 4-8. Sub-watershed Sediment Load Reductions with BMPs.

Stream Segment	Existing Sediment Load (Tons/Year)			Reduced Sediment Load through BMPs (Tons/Year)			Potential Reduction in Total Sediment Load (Total Existing-Total Reduced) (Tons/Year)	Percent Reduction in Total Sediment Load (Potential Reduction/Total Existing)	Potential Reduction in Anthropogenic Sediment Load (Anthropogenic Existing-Anthropogenic Reduced) (Tons/Year)	Percent Reduction in Anthropogenic Sediment Load (Potential Reduction/Anthropogenic Existing)
	Total Sub-watershed (Tons/Year)	Anthropogenic Sub-watershed Load (Tons/Year)	Natural Sub-watershed Load (Tons/Year)	Total Sub-watershed (Tons/Year)	Anthropogenic Sub-watershed Load (Tons/Year)	Natural Sub-watershed Load (Tons/Year)				
Bear Creek	757.5	585.3	172.2	373.6	201.4	172.2	383.9	51%	383.9	66%
Bozeman Creek	1211.9	900.8	311.1	842.2	531.1	311.1	369.7	31%	369.7	41%
Camp Creek	3119.2	3034.4	84.8	1280.8	1196.0	84.8	1838.4	59%	1838.4	61%
Dry Creek	3186.6	3027.4	159.2	2202.9	2043.7	159.2	983.7	31%	983.7	32%
Godfrey Creek	525.9	525.9	0.0	270.5	270.5	0.0	255.4	49%	255.4	49%
Jackson Creek	397.6	369.0	28.6	223.	194.	28.	174.	44%	174.	47%
Reese Creek	1257.	1156.	100.	863.	762.	100.	393.	31%	393.	34%
Rocky Creek (excluding Jackson Creek sub-watershed)	1148.	938.	210.	582.	372.	210.	566.	49%	566.	60%
Smith Creek (excluding Reese Creek sub-watershed)	965.	833.	132.	597.	465.	132.	368.	38%	368.	44%
Stone Creek	317.	241.	75.	200.	125.	75.	116.	37%	116.	48%
Thompson Creek	148.	148.	0.	57.	57.	0.	91.	61%	91.	61%
TOTAL	**1303**	**1176**	**127**	**749**	**622**	**127**	**554**	**43%**	**554**	**47%**

5.0 Assumptions and Uncertainty

This assessment assumes that different streams with similar reach type characteristics will have similar physical attributes and sediment loads due to streambank erosion. Since only a portion of the streams within the Lower Gallatin TPA were assessed in the field, a degree of uncertainty is unavoidable when extrapolating data from assessed sites to un-assessed sites. There is also some uncertainty in identifying streambank erosion sources from aerial imagery and a portion of the identified anthropogenic load is likely due to natural streambank erosion processes. Use of the USGS 1:100,000 NHD stream layer in GIS also creates uncertainty, since this layer was created from topographic maps and may not accurately represent conditions on the ground.

Sediment limitations in many streams in the Lower Gallatin TPA relate to the fine sediment fraction found on the stream bottom, while streambank erosion sediment modeling examined all sediment sizes. Since sediment source modeling may under-estimate or over-estimate sediment inputs due to selection of sediment monitoring sites and the extrapolation methods used, model results should not be taken as an absolutely accurate account of sediment production within each sub-watershed. Instead, the streambank erosion assessment model results should be considered an instrument for estimating sediment loads and making general comparisons of sediment loads from various sources.

6.0 SUMMARY

The 2009 sediment and habitat assessment in the Lower Gallatin TPA provides a comprehensive analysis of existing sediment conditions within impaired stream segments and estimated streambank erosion sediment loads for use in TMDL development. A total of 121 reaches were delineated during the aerial assessment reach stratification process covering 116.4 miles of stream. Based on the level III ecoregion, there were a total of 20 distinct reach types and sediment and habitat parameters were assessed at 30 monitoring sites. Statistical analysis of the sediment and habitat data from the 30 monitoring sites will aid in developing sediment TMDL targets that are specific for the Lower Gallatin TPA, while streambank erosion data will be utilized in the sediment TMDL. Within the 30 monitoring sites, an average annual sediment load of 418 tons/year was attributed to the 219 assessed eroding streambanks and average annual sediment load of 8,725 tons/year was estimated for the listed stream segments. Out of the 531.0 miles of stream within the assessed sub-watersheds, a total sediment load of 13,036 tons per year was estimated at the sub-watershed scale. It is estimated that this sediment load can be reduced to 7,495 tons/year, which is a 43% reduction in sediment load from streambank erosion.

7.0 References

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Attachment AA - AERIAL ASSESSMENT DATABASE

STREAM	REACH_ID	REACH	SUBREACH	LENGTH_FT	PRI_ECOREG	SEC_ECOREG	STREAM_ORD	CONFINE	GRADIENT	HB_TRIGGER	SB_TRIGGER	DOMLU	LB_LANDUSE	LB_ANTHRO	LB_RP_VEG	LB_RP_HLTH	RB_LANDUSE	RB_ANTHRO	RB_RP_VEG	RB_RP_HLTH	ANTHRO_TRA	ANTHRO_GRA	ANTHRO_CRO	ANTHRO_MIN	ANTHRO_FOR	ANTHRO_IRR	ANTHRO_NAT	ANTHRO_OTH	REACH_TYPE
Bear Creek	BEAR 01-01	1	1	1090	17g		1	U	2-<4	START		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-2-1-U
Bear Creek	BEAR 02-01	2	1	951	17g		1	U	4-10	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-4-1-U
Bear Creek	BEAR 03-01	3	1	375	17g		1	U	>10	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-10-1-U
Bear Creek	BEAR 04-01	4	1	1826	17g		1	U	4-10	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-4-1-U
Bear Creek	BEAR 05-01	5	1	708	17g		1	U	>10	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-10-1-U
Bear Creek	BEAR 06-01	6	1	1682	17g		1	U	4-10	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-4-1-U
Bear Creek	BEAR 07-01	7	1	714	17g		1	U	>10	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-10-1-U
Bear Creek	BEAR 08-01	8	1	1117	17g		1	U	4-10	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-4-1-U
Bear Creek	BEAR 09-01	9	1	401	17g		1	U	>10	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-10-1-U
Bear Creek	BEAR 10-01	10	1	437	17g		1	U	4-10	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-4-1-U
Bear Creek	BEAR 11-01	11	1	1232	17g		2	U	4-10	STREAM ORDER	LULC	FOREST	FOREST	YES	MATURE CONIFEROUS	GOOD	FOREST	YES	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-4-2-U
Bear Creek	BEAR 11-02	11	2	331	17g		2	U	4-10		LULC	FOREST	HARVEST/FIRE	YES	GRASS	FAIR	HARVEST/FIRE	YES	GRASS	FAIR	20	0	0	0	60	0	20	0	MR-4-2-U
Bear Creek	BEAR 12-01	12	1	2333	17g		2	U	2-<4	GRADIENT		HARVEST	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	0	0	0	0	60	0	40	0	MR-2-2-U
Bear Creek	BEAR 13-01	13	1	627	17g		2	U	4-10	GRADIENT		HARVEST	HARVEST/FIRE	YES	SHRUBS	FAIR	HARVEST/FIRE	YES	SHRUBS	FAIR	20	0	0	0	70	0	10	0	MR-4-2-U
Bear Creek	BEAR 13-02	13	2	296	17g		2	U	4-10		RVC	HARVEST	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	20	0	0	0	70	0	10	0	MR-4-2-U
Bear Creek	BEAR 14-01	14	1	4039	17g		2	U	2-<4	GRADIENT		HARVEST	FOREST	YES	MATURE CONIFEROUS	FAIR	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	30	0	0	0	50	0	20	0	MR-2-2-U
Bear Creek	BEAR 15-01	15	1	826	17g		2	U	4-10	GRADIENT		FOREST	FOREST	YES	MATURE CONIFEROUS	FAIR	FOREST	YES	MATURE CONIFEROUS	FAIR	20	0	0	0	0	0	80	0	MR-4-2-U
Bear Creek	BEAR 16-01	16	1	1057	17g		2	U	2-<4	GRADIENT		FOREST	FOREST	YES	MATURE CONIFEROUS	FAIR	FOREST	NO	MATURE CONIFEROUS	GOOD	20	0	0	0	0	0	80	0	MR-2-2-U
Bear Creek	BEAR 17-01	17	1	992	17g		2	C	4-10	CONFINEMENT/GRADIENT		FOREST	ROAD	YES	MATURE CONIFEROUS	FAIR	FOREST	NO	MATURE CONIFEROUS	GOOD	0	40	0	0	0	0	60	0	MR-4-2-C
Bear Creek	BEAR 17-02	17	2	1743	17g		2	C	4-10		LULC	FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	ROAD	YES	MATURE CONIFEROUS	FAIR	50	0	0	0	0	0	50	0	MR-4-2-C
Bear Creek	BEAR 18-01	18	1	2320	17g		2	C	2-<4	GRADIENT		FOREST	ROAD	YES	SHRUBS	FAIR	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-2-2-C
Bear Creek	BEAR 19-01	19	1	1920	17g		2	C	4-10	GRADIENT		FOREST	ROAD	YES	MATURE CONIFEROUS	FAIR	FOREST	NO	MATURE CONIFEROUS	GOOD	50	0	0	0	0	0	50	0	MR-4-2-C
Bear Creek	BEAR 20-01	20	1	2378	17g		2	U	4-10	CONFINEMENT		FOREST	ROAD	YES	MATURE CONIFEROUS	FAIR	FOREST	YES	MATURE CONIFEROUS	FAIR	0	0	0	0	0	0	100	0	MR-4-2-U
Bear Creek	BEAR 21-01	21	1	746	17g		2	U	2-<4	GRADIENT	LULC	RURAL RESIDENCE	ROAD	YES	MATURE DECIDUOUS	FAIR	RURAL RES./HOBBY FARM	YES	MATURE DECIDUOUS	FAIR	50	0	0	0	0	0	0	50	MR-2-2-U
Bear Creek	BEAR 22-01	22	1	6268	17g		3	U	2-<4	STREAM ORDER		RURAL RESIDENCE	RURAL RES./HOBBY FARM	YES	MATURE DECIDUOUS	FAIR	RURAL RES./HOBBY FARM	YES	MATURE DECIDUOUS	FAIR	40	0	0	0	0	0	20	40	MR-2-3-U
Bear Creek	BEAR 23-01	23	1	1161	17w	17g	3	U	2-<4	ECOREGION		RURAL RESIDENCE	FOREST	YES	SHRUBS	FAIR	RURAL RES./HOBBY FARM	YES	SHRUBS	FAIR	0	20	0	0	0	0	40	40	MR-2-3-U
Bear Creek	BEAR 24-01	24	1	838	17w	17g	3	U	<2	GRADIENT		ROAD	FOREST	YES	MATURE CONIFEROUS	FAIR	ROAD	YES	SHRUBS	FAIR	60	0	0	0	0	0	40	0	MR-0-3-U
Bear Creek	BEAR 24-02	24	2	1607	17w	17g	3	U	<2		LULC	RURAL RESIDENCE	RURAL RES./HOBBY FARM	YES	SHRUBS	FAIR	RURAL RES./HOBBY FARM	YES	SHRUBS	FAIR	20	0	0	0	0	40	0	40	MR-0-3-U
Bear Creek	BEAR 25-01	25	1	2309	17w	17g	3			BEAVER POND		HAY	HAY/PASTURE	YES	SHRUBS	FAIR	ROAD	YES	SHRUBS	FAIR	40	0	0	0	0	40	20	0	
Bear Creek	BEAR 26-01	26	1	1516	17w	17g	3	U	<2	SAME AS ABOVE		HAY	HAY/PASTURE	YES	MATURE DECIDUOUS	FAIR	ROAD	YES	MATURE DECIDUOUS	FAIR	50	0	0	0	0	50	0	0	MR-0-3-U
Bear Creek	BEAR 26-02	26	2	5038	17w	17g	3	U	<2		RVC	HAY	HAY/PASTURE	YES	SHRUBS	FAIR	RURAL RES./HOBBY FARM	YES	SHRUBS	FAIR	0	40	0	0	0	40	0	20	MR-0-3-U
Bear Creek	BEAR 26-03	26	3	1156	17w	17g	3	U	<2		LULC	RURAL SUBDIVISION	URBAN	YES	SHRUBS	FAIR	RURAL RES./HOBBY FARM	YES	SHRUBS	FAIR	20	0	20	0	0	0	0	60	MR-0-3-U
Bear Creek	BEAR 27-01	27	1	995	17w	17g	3	U	2-<4	GRADIENT		RURAL SUBDIVISION	RURAL RES./HOBBY FARM	YES	MATURE DECIDUOUS	FAIR	URBAN	YES	MATURE DECIDUOUS	FAIR	10	0	0	0	0	20	0	70	MR-2-3-U
Bear Creek	BEAR 28-01	28	1	2486	17w	17g	3	U	<2	GRADIENT		RURAL SUBDIVISION	HAY/PASTURE	YES	SHRUBS	FAIR	URBAN	YES	SHRUBS	FAIR	40	0	0	0	0	30	0	30	MR-0-3-U
Bozeman Creek	BOZE 01-01	1	1	984	17g		1	U	>10	START		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-10-1-U
Bozeman Creek	BOZE 02-01	2	1	581	17g		1	U	4-10	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-4-1-U
Bozeman Creek	BOZE 03-01	3	1	1613	17g		1	C	4-10	CONFINEMENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-4-1-C
Bozeman Creek	BOZE 04-01	4	1	902	17g		1	U	2-<4	CONFINEMENT/GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-2-1-U
Bozeman Creek	BOZE 05-01	5	1	305	17g		2	U	2-<4	STREAM ORDER		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-2-2-U
Bozeman Creek	BOZE 06-01	6	1	942	17g		2	U	4-10	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-4-2-U
Bozeman Creek	BOZE 07-01	7	1	2222	17g		2	U	<2	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-0-2-U
Bozeman Creek	BOZE 08-01	8	1	6615	17g		2	U	2-<4	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-2-2-U
Bozeman Creek	BOZE 08-02	8	2	1127	17g		2	U	2-<4		RVC	FOREST	FOREST	YES	MATURE CONIFEROUS	FAIR	FOREST	YES	MATURE CONIFEROUS	FAIR	30	0	0	0	0	0	70	0	MR-2-2-U
Bozeman Creek	BOZE 09-01	9	1	2400	17g		2	U	<2	GRADIENT		FOREST	FOREST	YES	MATURE CONIFEROUS	FAIR	FOREST	YES	MATURE CONIFEROUS	FAIR	10	0	0	0	10	0	80	0	MR-0-2-U
Bozeman Creek	BOZE 10-01	10	1	5529	17g		2	U	2-<4	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	YES	MATURE CONIFEROUS	FAIR	20	0	0	0	0	0	80	0	MR-2-2-U
Bozeman Creek	BOZE 11-01	11	1	2097	17g		2	U	<2	GRADIENT		FOREST	FOREST	NO	SHRUBS	GOOD	FOREST	YES	MATURE CONIFEROUS	FAIR	10	0	0	0	0	0	90	0	MR-0-2-U
Bozeman Creek	BOZE 12-01	12	1	4378	17g		2	C	2-<4	CONFINEMENT/GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	ROAD	YES	SHRUBS	FAIR	50	0	0	0	0	0	50	0	MR-2-2-C
Bozeman Creek	BOZE 12-02	12	2	4200	17g		2	C	2-<4		RVC	FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-2-2-C
Bozeman Creek	BOZE 13-01	13	1	1529	17g		2	U	2-<4	CONFINEMENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-2-2-U
Bozeman Creek	BOZE 14-01	14	1	4901	17g		2	U	<2	GRADIENT	RVC	FOREST	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	40	0	60	0	MR-0-2-U
Bozeman Creek	BOZE 15-01	15	1	5754	17w	17g	2	U	<2	ECOREGION	LULC	HAY	HAY/PASTURE	YES	MATURE DECIDUOUS	FAIR	RURAL RES./HOBBY FARM	YES	MATURE DECIDUOUS	FAIR	0	20	0	0	0	40	0	40	MR-0-2-U
Bozeman Creek	BOZE 15-02	15	2	6057	17w	17g	2	U	<2		RVC	HAY	HAY/PASTURE	YES	SHRUBS	FAIR	HAY/PASTURE	YES	SHRUBS	FAIR	0	20	0	0	0	60	20	0	MR-0-2-U
Bozeman Creek	BOZE 16-01	16	1	678	17w	17g	2	U	2-<4	GRADIENT		HAY	HAY/PASTURE	YES	SHRUBS	FAIR	WETLAND	YES	SHRUBS	FAIR	10	0	0	0	0	90	0	0	MR-2-2-U
Bozeman Creek	BOZE 17-01	17	1	1140	17w	17g	2	U	<2	GRADIENT		HAY	HAY/PASTURE	YES	MATURE DECIDUOUS	FAIR	HAY/PASTURE	YES	MATURE DECIDUOUS	FAIR	0	0	0	0	0	80	20	0	MR-0-2-U
Bozeman Creek	BOZE 17-02	17	2	4607	17w	17g	2	U	<2		LULC	URBAN	HAY/PASTURE	YES	MATURE CONIFEROUS	FAIR	URBAN	YES	MATURE DECIDUOUS	FAIR	0	0	0	0	0	40	0	60	MR-0-2-U
Bozeman Creek	BOZE 18-01	18	1	1071	17w	17g	3	U	<2	STREAM ORDER		URBAN	FOREST	YES	MATURE DECIDUOUS	FAIR	FOREST	YES	MATURE DECIDUOUS	FAIR	0	0	0	0	0	0	70	30	MR-0-3-U
Bozeman Creek	BOZE 18-02	18	2	6310	17w	17g	3	U	<2		RVC	URBAN	URBAN	YES	MATURE CONIFEROUS	FAIR	URBAN	YES	MATURE CONIFEROUS	FAIR	0	0	0	0	0	30	0	70	MR-0-3-U
Bozeman Creek	BOZE 18-03	18	3	6489	17w	17g	3	U	<2		RVC	URBAN	URBAN	YES	MATURE DECIDUOUS	FAIR	URBAN	YES	MATURE DECIDUOUS	FAIR	0	0	0	0	0	30	0	70	MR-0-3-U
Bozeman Creek	BOZE 18-04	18	4	6024	17w	17g	3	U	<2		LULC	URBAN	URBAN	YES	BARE	POOR	URBAN	YES	BARE	POOR	0	0	0	0	0	0	0	100	MR-0-3-U
Bozeman Creek	BOZE 18-05	18	5	4910	17w	17g	3	U	<2		LULC	URBAN	URBAN	YES	SHRUBS	FAIR	URBAN	YES	SHRUBS	FAIR	0	0	0	0	0	0	0	100	MR-0-3-U

STREAM	REACH_ID	REACH	SUBREACH	LENGTH_FT	PRI_ECOREG	SEC_ECOREG	STREAM_ORD	CONFINE	GRADIENT	HB_TRIGGER	SB_TRIGGER	DOMLU	LB_LANDUSE	LB_ANTHRO	LB_RP_VEG	LB_RP_HLTH	RB_LANDUSE	RB_ANTHRO	RB_RP_VEG	RB_RP_HLTH	ANTHRO_TRA	ANTHRO_GRA	ANTHRO_CRO	ANTHRO_MIN	ANTHRO_FOR	ANTHRO_IRR	ANTHRO_NAT	ANTHRO_OTH	REACH_TYPE
Camp Creek	CAMP 01-01	1	1	1888	17w		1	U	4-10	START		RANGE	RANGE	YES	GRASS	FAIR	RANGE	YES	BARE	POOR	0	100	0	0	0	0	0	0	MR-4-1-U
Camp Creek	CAMP 02-01	2	1	899	17w		1			LAKE		RANGE	RANGE	YES	GRASS	FAIR	RANGE	YES	BARE	POOR	0	100	0	0	0	0	0	0	
Camp Creek	CAMP 03-01	3	1	1985	17w		1	U	<2	GRADIENT		DRYLAND	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	0	50	0	50	0	0	0	0	MR-0-1-U
Camp Creek	CAMP 03-02	3	2	1953	17w		1	U	<2		RVC	DRYLAND	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	0	40	60	0	0	0	0	0	MR-0-1-U
Camp Creek	CAMP 03-03	3	3	2555	17w		1	U	<2		LULC	DRYLAND	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	10	30	60	0	0	0	0	0	MR-0-1-U
Camp Creek	CAMP 03-04	3	4	459	17w		1	U	<2		RVC	DRYLAND	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	50	50	0	0	0	0	0	MR-0-1-U
Camp Creek	CAMP 03-05	3	5	1175	17w		1	U	<2		RVC	DRYLAND	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	20	80	0	0	0	0	0	MR-0-1-U
Camp Creek	CAMP 04-01	4	1	3715	17w		1	U	2-<4	GRADIENT	RVC	DRYLAND	HAY/PASTURE	YES	BARE	POOR	RANGE	YES	BARE	POOR	0	50	50	0	0	0	0	0	MR-2-1-U
Camp Creek	CAMP 05-01	5	1	925	17w		1	C	4-10	CONFINEMENT/GRADIENT		DRYLAND	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	RANGE	YES	GRASS	FAIR	0	70	30	0	0	0	0	0	MR-4-1-C
Camp Creek	CAMP 05-02	5	2	1024	17w		1	C	4-10		RVC	RANGE	RANGE	YES	MATURE CONIFEROUS	FAIR	RANGE	YES	MATURE CONIFEROUS	FAIR	0	60	0	0	0	0	40	0	MR-4-1-C
Camp Creek	CAMP 06-01	6	1	1515	17w		1	U	<2	GRADIENT	RVC	RANGE	RANGE	YES	BARE	POOR	RANGE	YES	BARE	POOR	0	100	0	0	0	0	0	0	MR-0-1-U
Camp Creek	CAMP 06-02	6	2	1534	17w		1	U	<2		RVC	RANGE	RANGE	YES	SHRUBS	FAIR	RANGE	YES	SHRUBS	FAIR	0	70	0	0	0	0	30	0	MR-0-1-U
Camp Creek	CAMP 07-01	7	1	1388	17w		2	U	<2	STREAM ORDER		RANGE	RANGE	YES	SHRUBS	FAIR	RANGE	YES	SHRUBS	FAIR	0	70	0	0	0	0	30	0	MR-0-2-U
Camp Creek	CAMP 08-01	8	1	960	17w		3	U	<2	STREAM ORDER		DRYLAND RL, RANGE RR	AGRICULTURE (ROW CROPS)	YES	SHRUBS	FAIR	RANGE	YES	SHRUBS	FAIR	0	40	40	0	0	0	20	0	MR-0-3-U
Camp Creek	CAMP 09-01	9	1	968	17w		3	U	2-<4	GRADIENT	LULC	DRYLAND RL, RANGE RR	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	RANGE	YES	GRASS	FAIR	0	40	50	0	0	0	10	0	MR-2-3-U
Camp Creek	CAMP 10-01	10	1	505	17w		3	U	<2	GRADIENT		DRYLAND RL, RANGE RR	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	RANGE	YES	GRASS	FAIR	0	50	40	0	0	0	10	0	MR-0-3-U
Camp Creek	CAMP 10-02	10	2	1912	17w		3	U	<2		LULC	HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	10	20	70	0	0	0	0	0	MR-0-3-U
Camp Creek	CAMP 10-03	10	3	1093	17w		3	U	<2		RVC	DRYLAND	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	40	40	0	0	0	20	0	MR-0-3-U
Camp Creek	CAMP 10-04	10	4	408	17w		3	U	<2		RVC	RANGE	RANGE	YES	SHRUBS	FAIR	RANGE	YES	SHRUBS	FAIR	0	70	0	0	0	0	30	0	MR-0-3-U
Camp Creek	CAMP 11-01	11	1	877	17w		3	C	<2	CONFINEMENT		RANGE	RANGE	YES	SHRUBS	FAIR	RANGE	YES	SHRUBS	FAIR	0	70	0	0	0	0	30	0	MR-0-3-C
Camp Creek	CAMP 11-02	11	2	764	17w		3	C	<2		RVC	RANGE	RANGE	YES	MATURE CONIFEROUS	GOOD	RANGE	YES	MATURE CONIFEROUS	GOOD	0	50	0	0	0	0	50	0	MR-0-3-C
Camp Creek	CAMP 12-01	12	1	1983	17w		3	C	2-<4	GRADIENT		RANGE	RANGE	YES	MATURE CONIFEROUS	FAIR	RANGE	YES	MATURE CONIFEROUS	FAIR	0	50	0	0	0	0	50	0	MR-2-3-C
Camp Creek	CAMP 13-01	13	1	621	17w		3	U	2-<4	CONFINEMENT		DRYLAND	RANGE	YES	SHRUBS	FAIR	RANGE	YES	SHRUBS	FAIR	20	30	40	0	0	0	10	0	MR-2-3-U
Camp Creek	CAMP 13-02	13	2	665	17w		3	U	2-<4		RVC	RANGE	RANGE	YES	MATURE CONIFEROUS	FAIR	RANGE	YES	MATURE CONIFEROUS	FAIR	20	60	0	0	0	0	20	0	MR-2-3-U
Camp Creek	CAMP 14-01	14	1	3888	17w		3	U	<2	GRADIENT		DRYLAND	RANGE	YES	SHRUBS	FAIR	RANGE	YES	SHRUBS	FAIR	40	60	0	0	0	0	0	0	MR-0-3-U
Camp Creek	CAMP 14-02	14	2	786	17w		3	U	<2		LULC	HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	10	40	50	0	0	0	0	0	MR-0-3-U
Camp Creek	CAMP 14-03	14	3	1168	17w		3	U	<2		LULC	RURAL RESIDENCE/ROAD	RURAL RES/HOBBY FARM	YES	BARE	POOR	RURAL RES/HOBBY FARM	YES	BARE	POOR	0	60	0	0	0	0	0	40	MR-0-3-U
Camp Creek	CAMP 14-04	14	4	4358	17w		3	U	<2		LULC	DRYLAND	ROAD	YES	BARE	POOR	AGRICULTURE (ROW CROPS)	YES	BARE	POOR	30	20	30	0	0	0	0	20	MR-0-3-U
Camp Creek	CAMP 14-05	14	5	2211	17w		3	U	<2		RVC	DRYLAND	HAY/PASTURE	YES	SHRUBS	FAIR	AGRICULTURE (ROW CROPS)	YES	SHRUBS	FAIR	20	40	40	0	0	0	0	0	MR-0-3-U
Camp Creek	CAMP 14-06	14	6	2201	17w		3	U	<2		RVC	DRYLAND	RANGE	YES	GRASS	FAIR	ROAD	YES	GRASS	FAIR	50	30	20	0	0	0	0	0	MR-0-3-U
Camp Creek	CAMP 14-07	14	7	1848	17w		3	U	<2		RVC	DRYLAND	ROAD	YES	GRASS	FAIR	ROAD	YES	GRASS	FAIR	80	20	0	0	0	0	0	0	MR-0-3-U
Camp Creek	CAMP 14-08	14	8	924	17w		3	U	<2		RVC/LULC	RURAL RESIDENCE	HAY/PASTURE	YES	SHRUBS	FAIR	RURAL RES/HOBBY FARM	YES	SHRUBS	FAIR	20	40	0	0	0	0	0	40	MR-0-3-U
Camp Creek	CAMP 14-09	14	9	8617	17w		3	U	<2		LULC/RVC	DRYLAND	ROAD	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	30	20	20	0	0	30	0	0	MR-0-3-U
Camp Creek	CAMP 14-10	14	10	3839	17w		3	U	<2		LULC	DRYLAND	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	50	0	0	0	50	0	0	MR-0-3-U
Camp Creek	CAMP 14-11	14	11	1594	17w		3	U	<2		LULC	RURAL RESIDENCE	RURAL RES/HOBBY FARM	YES	BARE	POOR	RURAL RES/HOBBY FARM	YES	BARE	POOR	0	0	0	0	0	0	0	100	MR-0-3-U
Camp Creek	CAMP 14-12	14	12	8753	17w		3	U	<2		LULC	DRYLAND/ROWCROP	AGRICULTURE (ROW CROPS)	YES	BARE	POOR	ROAD	YES	BARE	POOR	0	0	20	0	0	80	0	0	MR-0-3-U
Camp Creek	CAMP 14-13	14	13	6851	17w		3	U	<2		LULC	DRYLAND/ROWCROPS(?)	HAY/PASTURE	YES	BARE	POOR	ROAD	YES	BARE	POOR	50	20	0	0	0	30	0	0	MR-0-3-U
Camp Creek	CAMP 14-14	14	14	3384	17w		3	U	<2		LULC	RURAL SUBDIVISION	URBAN	YES	GRASS	FAIR	RANGE	YES	GRASS	FAIR	50	50	0	0	0	0	0	0	MR-0-3-U
Camp Creek	CAMP 14-15	14	15	3390	17w		3	U	<2		LULC/RVC	RURAL RESIDENCES	RURAL RES/HOBBY FARM	YES	BARE	POOR	URBAN	YES	BARE	POOR	40	20	0	0	0	0	0	40	MR-0-3-U
Camp Creek	CAMP 14-16	14	16	6334	17w		3	U	<2		LULC	ROWCROPS	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	ROAD	YES	GRASS	FAIR	50	0	50	0	0	0	0	0	MR-0-3-U
Camp Creek	CAMP 14-17	14	17	1562	17w		3	U	<2		RVC	ROWCROPS	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	10	70	10	0	0	0	10	0	MR-0-3-U
Camp Creek	CAMP 14-18	14	18	3765	17w		3	U	<2		RVC	ROWCROPS	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	0	20	80	0	0	0	0	0	MR-0-3-U
Camp Creek	CAMP 14-19	14	19	2483	17w		3	U	<2		LULC	ROWCROPS	RURAL RES/HOBBY FARM	YES	BARE	POOR	RURAL RES/HOBBY FARM	YES	BARE	POOR	0	20	0	0	0	0	0	80	MR-0-3-U
Camp Creek	CAMP 14-20	14	20	1584	17w		3	U	<2		LULC	ROWCROPS	AGRICULTURE (ROW CROPS)	YES	BARE	POOR	AGRICULTURE (ROW CROPS)	YES	BARE	POOR	0	0	100	0	0	0	0	0	MR-0-3-U
Camp Creek	CAMP 14-21	14	21	5441	17w		3	U	<2		LULC	ROWCROPS	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	AGRICULTURE (ROW CROPS)	YES	BARE	POOR	0	20	60	0	0	0	0	20	MR-0-3-U
Camp Creek	CAMP 14-22	14	22	7020	17w		3	U	<2		RVC	ROWCROPS/HAY	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	30	20	50	0	0	0	0	0	MR-0-3-U
Camp Creek	CAMP 15-01	15	1	4325	17w		4	U	<2	STREAM ORDER		ROWCROPS/HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	10	40	0	0	0	50	0	0	MR-0-4-U
Camp Creek	CAMP 15-02	15	2	4050	17w		4	U	<2		RVC	HAY/ROW CROPS	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	10	30	30	0	0	30	0	0	MR-0-4-U
Camp Creek	CAMP 15-03	15	3	622	17w		4	U	<2		LULC	HIGHWAY	ROAD	YES	GRASS	FAIR	ROAD	YES	GRASS	FAIR	100	0	0	0	0	0	0	0	MR-0-4-U
Camp Creek	CAMP 15-04	15	4	5940	17w		4	U	<2		LULC	HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	10	40	0	0	0	40	10	0	MR-0-4-U
Camp Creek	CAMP 15-05	15	5	5118	17w		4	U	<2		RVC	HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	10	40	0	0	0	40	10	0	MR-0-4-U
Dry Creek	DRY 01-01	1	1	1229	17g		1	C	>10	START		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-10-1-C
Dry Creek	DRY 02-01	2	1	407	17g		1	U	>10	CONFINEMENT	RVC	FOREST	FOREST	YES	MATURE CONIFEROUS	FAIR	FOREST	YES	MATURE CONIFEROUS	FAIR	0	50	0	0	0	0	50	0	MR-10-1-U
Dry Creek	DRY 03-01	3	1	1282	17w	17g	1	U	>10	ECOREGION		RANGE	RANGE	YES	BARE	POOR	RANGE	YES	BARE	POOR	0	60	0	0	0	0	40	0	MR-10-1-U
Dry Creek	DRY 04-01	4	1	954	17w	17g	1	U	4-10	GRADIENT		RANGE	RANGE	YES	BARE	POOR	RANGE	YES	BARE	POOR	0	60	0	0	0	0	40	0	MR-4-1-U
Dry Creek	DRY 04-02	4	2	3183	17w	17g	1	U	4-10		LULC	DRYLAND	AGRICULTURE (ROW CROPS)	YES	BARE	POOR	AGRICULTURE (ROW CROPS)	YES	BARE	POOR	10	20	70	0	0	0	0	0	MR-4-1-U
Dry Creek	DRY 04-03	4	3	738	17w	17g	1	U	4-10		RVC	DRYLAND	RANGE	YES	SHRUBS	FAIR	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	0	40	40	0	0	0	20	0	MR-4-1-U
Dry Creek	DRY 05-01	5	1	2954	17w	17g	1	U	2-<4	GRADIENT		DRYLAND	AGRICULTURE (ROW CROPS)	YES	SHRUBS	FAIR	AGRICULTURE (ROW CROPS)	YES	SHRUBS	FAIR	0	0	80	0	0	0	20	0	MR-2-1-U
Dry Creek	DRY 06-01	6	1	3657	17w	17g	2	U	2-<4	STREAM ORDER	RVC	DRYLAND	AGRICULTURE (ROW CROPS)	YES	SHRUBS	FAIR	AGRICULTURE (ROW CROPS)	YES	SHRUBS	FAIR	0	20	70	0	0	0	10	0	MR-2-2-U
Dry Creek	DRY 07-01	7	1	2021	17w	17g	2			BEAVER POND		DRYLAND	AGRICULTURE (ROW CROPS)	YES	SHRUBS	FAIR	RANGE	YES	SHRUBS	FAIR	0	50	40	0	0	0	10	0	
Dry Creek	DRY 08-01	8	1	3249	17w	17g	2	U	<2	GRADIENT	LULC	HAY	HAY/PASTURE	YES	SHRUBS	FAIR	RANGE	YES	SHRUBS	FAIR	10	40	40	0	0	0	10	0	MR-0-2-U
Dry Creek	DRY 09-01	9	1	3487	17w	17g	3	U	<2	STREAM ORDER	RVC	HAY RL/RANGE RR	RURAL RES/HOBBY FARM	YES	GRASS	FAIR	RANGE	YES	GRASS	FAIR	30	30	0	0	0	30	10	0	MR-0-3-U
Dry Creek	DRY 09-02	9	2	2686	17w	17g	3	U	<2		RVC	RANGE	RANGE	YES	GRASS	FAIR	RANGE	YES	GRASS	FAIR	10	70	0	0	0	0	20	0	MR-0-3-U
Dry Creek	DRY 09-03	9	3	5586	17w	17g	3	U	<2		RVC	HAY	HAY/PASTURE	YES	GRASS	FAIR	RANGE	YES	GRASS	FAIR	10	40	0	0	0	40	10	0	MR-0-3-U
Dry Creek	DRY 09-04	9	4	5193	17w	17g	3	U	<2		RVC	DRYLAND RR/HAY RL	HAY/PASTURE	YES	GRASS	FAIR	RANGE	YES	GRASS	FAIR	0	40	0	0	0	40	10	10	MR-0-3-U
Dry Creek	DRY 09-05	9	5	4650	17w	17g	3	U	<2		LULC	HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	30	0	0	0	50	0	20	MR-0-3-U
Dry Creek	DRY 09-06	9	6	2653	17w	17g	3	U	<2		LULC	RANGE	ROAD	YES	GRASS	FAIR	ROAD	YES	GRASS	FAIR	50	40	0	0	0	0	10	0	MR-0-3-U
Dry Creek	DRY 10-01	10	1	1484	17w	17g	3	C	<2	CONFINEMENT		RANGE	RANGE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	40	0	0	0	40	20	0	MR-0-3-C
Dry Creek	DRY 10-02	10	2	2137	17w	17g	3	C	<2		LULC	RANGE	RANGE	YES	GRASS	FAIR	ROAD	YES	GRASS	FAIR	50	40	0	0	0	0	10	0	MR-0-3-C
Dry Creek	DRY 10-03	10	3	509	17w	17g	3	C	<2		RVC/LULC	HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	10	40	0	0	0	50	0	0	MR-0-3-C
Dry Creek	DRY 11-01	11	1	1338	17w	17g	4	C	<2	STREAM ORDER		RANGE	RANGE	YES	GRASS	FAIR	ROAD	YES	GRASS	FAIR	50	40	0	0	0	0	10	0	MR-0-4-C
Dry Creek	DRY 12-01	12	1	2572	17w	17g	4	U	<2	CONFINEMENT		RANGE	RANGE	YES	GRASS	FAIR	ROAD	YES	GRASS	FAIR	50	40	0	0	0	0	10	0	MR-0-4-U
Dry Creek	DRY 12-02	12	2	2555	17w	17g	4	U	<2		LULC	RANGE	RANGE	YES	GRASS	FAIR	RURAL RES/HOBBY FARM	YES	GRASS	FAIR	30	30	0	0	0	0	0	40	MR-0-4-U
Dry Creek	DRY 12-03	12	3	6456	17w	17g	4	U	<2		RVC	DRYLAND	HAY/PASTURE	YES	SHRUBS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	40	20	0	0	0	40	0	0	MR-0-4-U
Dry Creek	DRY 12-04	12	4	3709	17w	17g	4	U	<2		RVC	HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	10	30	0	0	0	60	0	0	MR-0-4-U
Dry Creek	DRY 12-05	12	5	4054	17w	17g	4	U	<2		LULC	DRYLAND	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	10	0	90	0	0	0	0	0	MR-0-4-U
Dry Creek	DRY 12-06	12	6	2850	17w	17g	4	U	<2		LULC/RVC	RURAL RESIDENCE	RANGE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	10	40	0	0	0	0	0	50	MR-0-4-U
Dry Creek	DRY 12-07	12	7	2977	17w	17g	4	U	<2		RVC	HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	30	0	0	0	70	0	0	MR-0-4-U
Dry Creek	DRY 12-08	12	8	2571	17w	17g	4	U	<2		LULC	HAY	RURAL RES/HOBBY FARM	YES	MATURE DECIDUOUS	FAIR	HAY/PASTURE	YES	MATURE DECIDUOUS	FAIR	20	0	0	0	0	60	0	20	MR-0-4-U
Dry Creek	DRY 12-09	12	9	8540	17w	17g	4	U	<2		RVC/LULC	PASTURE	RURAL RES/HOBBY FARM	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	20	20	0	0	0	30	0	30	MR-0-4-U

STREAM	REACH_ID	REACH	SUBREACH	LENGTH_FT	PRI_ECOREG	SEC_ECOREG	STREAM_ORD	CONFINE	GRADIENT	HB_TRIGGER	SB_TRIGGER	DOMLU	LB_LANDUSE	LB_ANTHRO	LB_RP_VEG	LB_RP_HLTH	RB_LANDUSE	RB_ANTHRO	RB_RP_VEG	RB_RP_HLTH	ANTHRO_TRA	ANTHRO_GRA	ANTHRO_CRO	ANTHRO_MIN	ANTHRO_FOR	ANTHRO_IRR	ANTHRO_NAT	ANTHRO_OTH	REACH_TYPE
Godfrey Creek	GOD 01-01	1	1	5639	17w		1	U	<2	START		ROW CROPS	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	AGRICULTURE (ROW CROPS)	YES	GRASS	FAIR	20	20	20	0	0	20	0	20	MR-0-1-U
Godfrey Creek	GOD 02-01	2	1	3149	17w		2	U	<2	STREAM ORDER		ROW CROPS	RURAL RES./HOBBY FARM	YES	BARE	POOR	RURAL RES./HOBBY FARM	YES	BARE	POOR	20	20	20	0	0	20	0	20	MR-0-2-U
Godfrey Creek	GOD 03-01	3	1	15867	17w		3	U	<2	STREAM ORDER	LULC/RVC	ROW CROPS/HAY	ROAD	YES	BARE	POOR	RURAL RES./HOBBY FARM	YES	BARE	POOR	20	20	20	0	0	20	0	20	MR-0-3-U
Godfrey Creek	GOD 03-02	3	2	6879	17w		3	U	<2		LULC	URBAN RL/ROWCROP RR	ROAD	YES	BARE	POOR	AGRICULTURE (ROW CROPS)	YES	BARE	POOR	20	20	20	0	0	20	0	20	MR-0-3-U
Godfrey Creek	GOD 03-03	3	3	6071	17w		3	U	<2		LULC	ROWCROPS	AGRICULTURE (ROW CROPS)	YES	BARE	POOR	AGRICULTURE (ROW CROPS)	YES	BARE	POOR	20	0	40	0	0	40	0	0	MR-0-3-U
Jackson Creek	JACK 01-01	1	1	5072	17i		1	C	>10	START		HARVEST	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	30	0	0	0	50	0	20	0	MR-10-1-C
Jackson Creek	JACK 02-01	2	1	1622	17i		1	C	4-10	GRADIENT		FOREST	FOREST	YES	MATURE CONIFEROUS	FAIR	ROAD	YES	GRASS	FAIR	40	30	0	0	30	0	0	0	MR-4-1-C
Jackson Creek	JACK 02-02	2	2	362	17i		1	C	4-10		RVC	HARVEST	HARVEST/FIRE	YES	GRASS	FAIR	ROAD	YES	GRASS	FAIR	40	30	0	0	30	0	0	0	MR-4-1-C
Jackson Creek	JACK 03-01	3	1	563	17i		1	U	4-10	CONFINEMENT		HARVEST	HARVEST/FIRE	YES	GRASS	FAIR	HARVEST/FIRE	YES	GRASS	FAIR	40	30	0	0	30	0	0	0	MR-4-1-U
Jackson Creek	JACK 04-01	4	1	2134	17i		1	C	4-10	CONFINEMENT		HARVEST	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	HARVEST/FIRE	YES	GRASS	FAIR	0	50	0	0	50	0	0	0	MR-4-1-C
Jackson Creek	JACK 05-01	5	1	997	17i		1	U	4-10	CONFINEMENT		HARVEST	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	0	50	0	0	50	0	0	0	MR-4-1-U
Jackson Creek	JACK 06-01	6	1	1113	17i		1	U	2-<4	GRADIENT	RVC	HARVEST	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	ROAD	YES	MATURE CONIFEROUS	FAIR	40	30	0	0	30	0	0	0	MR-2-1-U
Jackson Creek	JACK 07-01	7	1	1228	17i		2	U	2-<4	STREAM ORDER	LULC/RVC	FOREST	FOREST	YES	MATURE CONIFEROUS	FAIR	ROAD	YES	SHRUBS	FAIR	40	40	0	0	20	0	0	0	MR-2-2-U
Jackson Creek	JACK 08-01	8	1	2074	17i		2	U	<2	GRADIENT		HARVEST	HARVEST/FIRE	YES	SHRUBS	FAIR	HARVEST/FIRE	YES	SHRUBS	FAIR	40	30	0	0	30	0	0	0	MR-0-2-U
Jackson Creek	JACK 09-01	9	1	2794	17i		2	U	2-<4	GRADIENT		HARVEST	ROAD	YES	MATURE CONIFEROUS	FAIR	ROAD	YES	SHRUBS	FAIR	50	20	0	0	30	0	0	0	MR-2-2-U
Jackson Creek	JACK 09-02	9	2	3137	17i		2	U	2-<4		RVC/LULC	HARVEST	HARVEST/FIRE	YES	SHRUBS	FAIR	ROAD	YES	SHRUBS	FAIR	40	20	0	0	20	0	20	0	MR-2-2-U
Jackson Creek	JACK 09-03	9	3	1829	17i		2	U	2-<4		RVC	FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	ROAD	YES	SHRUBS	FAIR	40	20	0	0	0	0	40	0	MR-2-2-U
Jackson Creek	JACK 10-01	10	1	2228	17w	17i	2	U	2-<4	ECOREGION		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	RANGE	YES	SHRUBS	FAIR	10	50	0	0	0	0	40	0	MR-2-2-U
Jackson Creek	JACK 10-02	10	2	2548	17w	17i	2	U	2-<4		LULC/RVC	HAY	HAY/PASTURE	YES	SHRUBS	FAIR	HAY/PASTURE	YES	SHRUBS	FAIR	10	40	0	0	0	50	0	0	MR-2-2-U
Jackson Creek	JACK 10-03	10	3	2849	17w	17i	2	U	2-<4		LULC/RVC	HAY	HAY/PASTURE	YES	SHRUBS	FAIR	HAY/PASTURE	YES	SHRUBS	FAIR	10	40	0	0	0	40	0	10	MR-2-2-U
Jackson Creek	JACK 10-04	10	4	1666	17w	17i	2	U	2-<4		RVC	RANGE	RANGE	YES	GRASS	FAIR	RANGE	YES	GRASS	FAIR	30	70	0	0	0	0	0	0	MR-2-2-U
Jackson Creek	JACK 11-01	11	1	4163	17w	17i	2	U	<2	GRADIENT		RANGE	RANGE	YES	SHRUBS	FAIR	RANGE	YES	SHRUBS	FAIR	20	50	0	0	0	0	0	30	MR-0-2-U
Jackson Creek	JACK 11-02	11	2	2059	17w	17i	2	U	<2		RVC	RURAL RESIDENCE	RURAL RES./HOBBY FARM	YES	SHRUBS	FAIR	RANGE	YES	SHRUBS	FAIR	0	40	0	0	0	20	0	40	MR-0-2-U
Jackson Creek	JACK 11-03	11	3	2665	17w	17i	2	U	<2		RVC	RURAL RESIDENCE	RURAL RES./HOBBY FARM	YES	GRASS	FAIR	RANGE	YES	SHRUBS	FAIR	30	40	0	0	0	0	0	30	MR-0-2-U
Reese Creek	REES 01-01	1	1	1077	17w		2	U	>10	START		RANGE	RANGE	YES	MATURE DECIDUOUS	FAIR	RANGE	YES	MATURE DECIDUOUS	FAIR	0	70	0	0	0	0	30	0	MR-10-2-U
Reese Creek	REES 01-02	1	2	557	17w		2	U	>10		RVC	RANGE	RANGE	YES	SHRUBS	FAIR	RANGE	YES	SHRUBS	FAIR	10	70	0	0	0	0	20	0	MR-10-2-U
Reese Creek	REES 02-01	2	1	759	17w		2	U	4-10	GRADIENT		RANGE	RANGE	YES	SHRUBS	FAIR	RANGE	YES	SHRUBS	FAIR	0	80	0	0	0	0	20	0	MR-4-2-U
Reese Creek	REES 02-02	2	2	2658	17w		2	U	4-10		RVC	RANGE	RANGE	YES	BARE	POOR	RANGE	YES	BARE	POOR	0	100	0	0	0	0	0	0	MR-4-2-U
Reese Creek	REES 03-01	3	1	1214	17w		2	U	2-<4	GRADIENT		RANGE	RANGE	YES	MATURE DECIDUOUS	FAIR	RANGE	YES	MATURE DECIDUOUS	FAIR	0	60	0	0	0	0	40	0	MR-2-2-U
Reese Creek	REES 03-02	3	2	1616	17w		2	U	2-<4		RVC	RANGE	RANGE	YES	GRASS	FAIR	RANGE	YES	GRASS	FAIR	0	80	0	0	0	0	20	0	MR-2-2-U
Reese Creek	REES 04-01	4	1	932	17w		2	U	4-10	GRADIENT		RANGE	RANGE	YES	GRASS	FAIR	RANGE	YES	GRASS	FAIR	0	80	0	0	0	0	20	0	MR-4-2-U
Reese Creek	REES 05-01	5	1	2487	17w		2	U	2-<4	GRADIENT		RANGE	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	30	60	0	0	0	0	10	0	MR-2-2-U
Reese Creek	REES 06-01	6	1	1090	17w		2	U	<2	GRADIENT		HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	90	0	0	0	0	10	0	MR-0-2-U
Reese Creek	REES 07-01	7	1	691	17w		2	U	2-<4	GRADIENT	LULC	HAY	HAY/PASTURE	YES	SHRUBS	FAIR	HAY/PASTURE	YES	SHRUBS	FAIR	10	30	0	0	0	60	0	0	MR-2-2-U
Reese Creek	REES 08-01	8	1	1166	17w		2	U	<2	GRADIENT		HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	30	0	0	0	60	10	0	MR-0-2-U
Reese Creek	REES 09-01	9	1	323	17w		3	U	<2	STREAM ORDER		HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	30	0	0	0	60	10	0	MR-0-3-U
Reese Creek	REES 10-01	10	1	406	17w		3	U	4-10	GRADIENT		HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	30	0	0	0	60	10	0	MR-4-3-U
Reese Creek	REES 11-01	11	1	947	17w		3	U	2-<4	GRADIENT		HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	30	0	0	0	60	10	0	MR-2-3-U
Reese Creek	REES 12-01	12	1	903	17w		3	U	<2	GRADIENT		HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	20	0	0	0	80	0	0	MR-0-3-U
Reese Creek	REES 13-01	13	1	1387	17w		4	U	<2	STREAM ORDER		HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	30	0	0	0	60	10	0	MR-0-4-U
Reese Creek	REES 14-01	14	1	156	17w		4			BEAVER POND		HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	20	0	0	0	50	30	0	
Reese Creek	REES 15-01	15	1	181	17w		4	U	<2	SAME AS REACH 13	RVC	HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	20	0	0	0	60	20	0	MR-0-4-U
Reese Creek	REES 15-02	15	2	3381	17w		4	U	<2		LULC	RURAL RESIDENCE	RURAL RES./HOBBY FARM	YES	BARE	POOR	HAY/PASTURE	YES	BARE	POOR	0	20	0	0	0	40	0	40	MR-0-4-U
Reese Creek	REES 15-03	15	3	3248	17w		4	U	<2		LULC	HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	40	0	0	0	60	0	0	MR-0-4-U
Reese Creek	REES 15-04	15	4	4205	17w		4	U	<2		RVC	HAY	AGRICULTURE (ROW CROPS)	YES	SHRUBS	FAIR	HAY/PASTURE	YES	SHRUBS	FAIR	0	30	30	0	0	40	0	0	MR-0-4-U
Reese Creek	REES 15-05	15	5	3217	17w		4	U	<2		RVC	HAY	HAY/PASTURE	YES	SHRUBS	FAIR	HAY/PASTURE	YES	SHRUBS	FAIR	0	20	0	0	0	60	20	0	MR-0-4-U
Reese Creek	REES 15-06	15	6	6641	17w		4	U	<2		RVC	HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	10	20	0	0	0	60	10	0	MR-0-4-U
Rocky Creek	ROCK 01-01	1	1	2226	17w		3	U	<2	START		HAY	HAY/PASTURE	YES	SHRUBS	FAIR	HAY/PASTURE	YES	SHRUBS	FAIR	20	30	0	0	0	30	0	20	MR-0-3-U
Rocky Creek	ROCK 01-02	1	2	2953	17w		3	U	<2		RVC	RANGE	HAY/PASTURE	YES	GRASS	FAIR	RANGE	YES	GRASS	FAIR	10	50	0	0	0	40	0	0	MR-0-3-U
Rocky Creek	ROCK 02-01	2	1	961	17g	17w	3	U	<2	ECOREGION		RANGE	HAY/PASTURE	YES	SHRUBS	FAIR	RANGE	YES	SHRUBS	FAIR	20	40	0	0	0	40	0	0	MR-0-3-U
Rocky Creek	ROCK 02-02	2	2	1250	17g	17w	3	U	<2		LULC	ROAD ENCROACHMENT	ROAD	YES	BARE	POOR	RANGE	YES	GRASS	FAIR	70	30	0	0	0	0	0	0	MR-0-3-U
Rocky Creek	ROCK 02-03	2	3	1725	17g	17w	3	U	<2		RVC	ROAD ENCROACHMENT	WETLAND	YES	SHRUBS	FAIR	ROAD	YES	SHRUBS	FAIR	80	0	0	0	0	0	20	0	MR-0-3-U
Rocky Creek	ROCK 02-04	2	4	1604	17g	17w	3	U	<2		LULC	ROAD ENCROACHMENT	ROAD	YES	SHRUBS	FAIR	ROAD	YES	SHRUBS	FAIR	100	0	0	0	0	0	0	0	MR-0-3-U
Rocky Creek	ROCK 03-01	3	1	7610	17g	17w	4	U	<2	STREAM ORDER	LULC/RVC	ROAD ENCROACHMENT	FOREST	YES	SHRUBS	FAIR	ROAD	YES	SHRUBS	FAIR	60	0	0	0	0	0	40	0	MR-0-4-U
Rocky Creek	ROCK 03-02	3	2	470	17g	17w	4	U	<2		LULC	ROAD ENCROACHMENT	FOREST	NO	MATURE CONIFEROUS	GOOD	ROAD	YES	BARE	POOR	50	0	0	0	0	0	50	0	MR-0-4-U
Rocky Creek	ROCK 04-01	4	1	1912	17g	17w	4	U	2-<4	GRADIENT		ROAD ENCROACHMENT	FOREST	NO	MATURE CONIFEROUS	GOOD	ROAD	YES	SHRUBS	FAIR	50	0	0	0	0	0	50	0	MR-2-4-U
Rocky Creek	ROCK 05-01	5	1	2931	17g	17w	4	U	<2	GRADIENT		ROAD ENCROACHMENT	FOREST	NO	MATURE CONIFEROUS	GOOD	ROAD	YES	BARE	POOR	50	0	0	0	0	0	50	0	MR-0-4-U
Rocky Creek	ROCK 06-01	6	1	503	17w	17w-17g	4	U	2-<4	ECOREGION/GRADIENT		ROAD ENCROACHMENT	FOREST	NO	MATURE CONIFEROUS	GOOD	ROAD	YES	SHRUBS	FAIR	50	0	0	0	0	0	50	0	MR-2-4-U
Rocky Creek	ROCK 06-02	6	2	5783	17w	17w-17g	4	U	2-<4		RVC	ROAD ENCROACHMENT	ROAD	YES	SHRUBS	FAIR	ROAD	YES	BARE	POOR	80	0	0	0	0	0	20	0	MR-2-4-U
Rocky Creek	ROCK 06-03	6	3	982	17w	17w-17g	4	U	2-<4		RVC	ROAD ENCROACHMENT	HAY/PASTURE	YES	SHRUBS	FAIR	ROAD	YES	SHRUBS	FAIR	70	0	0	0	0	30	0	0	MR-2-4-U
Rocky Creek	ROCK 07-01	7	1	3471	17w	17w-17g	4	U	<2	GRADIENT		RURAL RESIDENCE	ROAD	YES	MATURE DECIDUOUS	FAIR	RANGE	YES	MATURE DECIDUOUS	FAIR	50	10	0	0	0	10	0	30	MR-0-4-U
Rocky Creek	ROCK 07-02	7	2	1903	17w	17w-17g	4	U	<2		RVC	RURAL RESIDENCE	RURAL RES./HOBBY FARM	YES	GRASS	FAIR	RURAL RES./HOBBY FARM	YES	GRASS	FAIR	20	0	0	0	0	40	0	40	MR-0-4-U
Rocky Creek	ROCK 07-03	7	3	3501	17w	17w-17g	4	U	<2		RVC/LULC	ROW CROPS/HAY	HAY/PASTURE	YES	GRASS	FAIR	AGRICULTURE (ROW CROPS)	YES	MATURE DECIDUOUS	FAIR	10	0	50	0	0	40	0	0	MR-0-4-U

STREAM	REACH_ID	REACH	SUBREACH	LENGTH_FT	PRI_ECOREG	SEC_ECOREG	STREAM_ORD	CONFINE	GRADIENT	HB_TRIGGER	SB_TRIGGER	DOMLU	LB_LANDUSE	LB_ANTHRO	LB_RP_VEG	LB_RP_HLTH	RB_LANDUSE	RB_ANTHRO	RB_RP_VEG	RB_RP_HLTH	ANTHRO_TRA	ANTHRO_GRA	ANTHRO_CRO	ANTHRO_MIN	ANTHRO_FOR	ANTHRO_IRR	ANTHRO_NAT	ANTHRO_OTH	REACH_TYPE
South Cottonwood Creek	SCOT 01-01	1	1	1928	17i		1	C	>10	START		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-10-1-C
South Cottonwood Creek	SCOT 02-01	2	1	1190	17i		1	U	>10	CONFINEMENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-10-1-U
South Cottonwood Creek	SCOT 03-01	3	1	417	17i		1	U	4-10	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-4-1-U
South Cottonwood Creek	SCOT 04-01	4	1	1130	17i		1	C	>10	CONFINEMENT/GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-10-1-C
South Cottonwood Creek	SCOT 05-01	5	1	437	17i		1	U	4-10	CONFINEMENT/GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-4-1-U
South Cottonwood Creek	SCOT 06-01	6	1	397	17i		1	U	>10	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-10-1-U
South Cottonwood Creek	SCOT 07-01	7	1	863	17i		1	U	4-10	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-4-1-U
South Cottonwood Creek	SCOT 08-01	8	1	962	17i		1	U	>10	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-10-1-U
South Cottonwood Creek	SCOT 09-01	9	1	668	17i		1	C	>10	CONFINEMENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-10-1-C
South Cottonwood Creek	SCOT 09-02	9	2	577	17i		1	C	>10		RVC	FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	SHRUBS	GOOD	0	0	0	0	0	0	100	0	MR-10-1-C
South Cottonwood Creek	SCOT 10-01	10	1	1455	17i		1	U	>10	CONFINEMENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-10-1-U
South Cottonwood Creek	SCOT 11-01	11	1	474	17i		2	U	>10	STREAM ORDER		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-10-2-U
South Cottonwood Creek	SCOT 12-01	12	1	1195	17i		2	U	4-10	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-4-2-U
South Cottonwood Creek	SCOT 13-01	13	1	1379	17g	17i	2	U	4-10	ECOREGION		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-4-2-U
South Cottonwood Creek	SCOT 14-01	14	1	2370	17g	17i	2	C	4-10	CONFINEMENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-4-2-C
South Cottonwood Creek	SCOT 15-01	15	1	1576	17g	17i	2	U	4-10	CONFINEMENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-4-2-U
South Cottonwood Creek	SCOT 16-01	16	1	1940	17g	17i	2	U	2-<4	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-2-2-U
South Cottonwood Creek	SCOT 17-01	17	1	5841	17g	17i	3	U	2-<4	STREAM ORDER		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-2-3-U
South Cottonwood Creek	SCOT 17-02	17	2	2606	17g	17i	3	U	2-<4		RVC	FOREST	FOREST	NO	SHRUBS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-2-3-U
South Cottonwood Creek	SCOT 18-01	18	1	1476	17g	17i	3	C	2-<4	CONFINEMENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-2-3-C
South Cottonwood Creek	SCOT 19-01	19	1	1502	17g	17i	3	C	>10	GRADIENT	RVC	FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-10-3-C
South Cottonwood Creek	SCOT 20-01	20	1	2554	17g	17i	3	U	4-10	CONFINEMENT/GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-4-3-U
South Cottonwood Creek	SCOT 21-01	21	1	5313	17g	17i	3	U	2-<4	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-2-3-U
South Cottonwood Creek	SCOT 22-01	22	1	940	17g	17i	3	C	4-10	CONFINEMENT/GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-4-3-C
South Cottonwood Creek	SCOT 23-01	23	1	1622	17g	17i	3	C	2-<4	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-2-3-C
South Cottonwood Creek	SCOT 24-01	24	1	941	17g	17i	3	C	4-10	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-4-3-C
South Cottonwood Creek	SCOT 25-01	25	1	2805	17g	17i	3	U	2-<4	CONFINEMENT/GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-2-3-U
South Cottonwood Creek	SCOT 25-02	25	2	5774	17g	17i	3	U	2-<4		RVC	FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0	0	0	0	0	100	0	MR-2-3-U
South Cottonwood Creek	SCOT 25-03	25	3	8445	17g	17i	3	U	2-<4		LULC	FOREST	RURAL RES/HOBBY FARM	YES	MATURE DECIDUOUS	FAIR	RURAL RES/HOBBY FARM	YES	MATURE DECIDUOUS	FAIR	0	20	0	0	0	20	20	40	MR-2-3-U
South Cottonwood Creek	SCOT 26-01	26	1	6643	17w	17i-17g	3	U	2-<4	ECOREGION	RVC	PASTURE	HAY/PASTURE	YES	MATURE DECIDUOUS	FAIR	RURAL RES/HOBBY FARM	YES	MATURE DECIDUOUS	FAIR	20	20	0	0	0	30	0	30	MR-2-3-U
South Cottonwood Creek	SCOT 27-01	27	1	2183	17w	17i-17g	3	U	<2	GRADIENT		PASTURE	HAY/PASTURE	YES	MATURE DECIDUOUS	GOOD	RURAL RES/HOBBY FARM	YES	MATURE DECIDUOUS	FAIR	0	30	0	0	0	30	0	40	MR-0-3-U
South Cottonwood Creek	SCOT 28-01	28	1	7900	17w	17i-17g	3	U	2-<4	GRADIENT		HAY	HAY/PASTURE	YES	MATURE DECIDUOUS	FAIR	HAY/PASTURE	YES	MATURE DECIDUOUS	FAIR	20	20	0	0	0	40	0	20	MR-2-3-U
South Cottonwood Creek	SCOT 29-01	29	1	2198	17w	17i-17g	3	U	<2	GRADIENT		HAY	RURAL RES/HOBBY FARM	YES	MATURE DECIDUOUS	FAIR	RURAL RES/HOBBY FARM	YES	MATURE DECIDUOUS	FAIR	10	20	0	0	0	20	0	50	MR-0-3-U
South Cottonwood Creek	SCOT 30-01	30	1	3430	17w	17i-17g	3	U	2-<4	GRADIENT		PASTURE	RURAL RES/HOBBY FARM	YES	MATURE DECIDUOUS	FAIR	RURAL RES/HOBBY FARM	YES	MATURE DECIDUOUS	FAIR	10	20	0	0	0	20	0	50	MR-2-3-U
South Cottonwood Creek	SCOT 31-01	31	1	334	17w	17i-17g	3	U	<2	GRADIENT		PASTURE	HAY/PASTURE	YES	MATURE DECIDUOUS	FAIR	HAY/PASTURE	YES	MATURE DECIDUOUS	FAIR	0	50	0	0	0	50	0	0	MR-0-3-U
South Cottonwood Creek	SCOT 31-02	31	2	2048	17w	17i-17g	3	U	<2		RVC	PASTURE	HAY/PASTURE	YES	MATURE DECIDUOUS	FAIR	RURAL RES/HOBBY FARM	YES	MATURE DECIDUOUS	FAIR	0	40	0	0	0	20	0	40	MR-0-3-U
South Cottonwood Creek	SCOT 32-01	32	1	1943	17w	17i-17g	3	U	2-<4	GRADIENT		PASTURE	HAY/PASTURE	YES	MATURE DECIDUOUS	FAIR	RURAL RES/HOBBY FARM	YES	MATURE DECIDUOUS	FAIR	0	40	0	0	0	30	0	30	MR-2-3-U
South Cottonwood Creek	SCOT 33-01	33	1	6011	17w	17i-17g	3	U	<2	GRADIENT	RVC	PASTURE/RESIDENTIAL	HAY/PASTURE	YES	MATURE DECIDUOUS	FAIR	RURAL RES/HOBBY FARM	YES	MATURE DECIDUOUS	FAIR	20	30	0	0	0	20	0	30	MR-0-3-U
Smith Creek	SMIT 01-01	1	1	7056	17w		4	U	<2	START		HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	20	20	0	0	0	0	60	0	MR-0-4-U
Smith Creek	SMIT 01-02	1	2	1620	17w		4	U	<2		LULC	HAY	HAY/PASTURE	YES	BARE	POOR	ROAD	YES	BARE	POOR	60	0	0	0	0	20	0	20	MR-0-4-U
Smith Creek	SMIT 01-03	1	3	2333	17w		4	U	<2		LULC	HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	20	0	0	0	60	0	20	MR-0-4-U
Smith Creek	SMIT 01-04	1	4	2834	17w		4	U	<2		LULC	HAY	HAY/PASTURE	YES	GRASS	FAIR	ROAD	YES	GRASS	FAIR	40	20	0	0	0	40	0	0	MR-0-4-U
Smith Creek	SMIT 01-05	1	5	6328	17w		4	U	<2		LULC/RVC	HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	30	0	0	0	40	0	30	MR-0-4-U
Smith Creek	SMIT 01-06	1	6	13085	17w		4	U	<2		RVC	HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	50	0	0	0	50	0	0	MR-0-4-U
Stone Creek	STON 01-01	1	1	3778	17i		1	C	>10	START		FOREST	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	20	0	0	0	60	0	20	0	MR-10-1-C
Stone Creek	STON 02-01	2	1	1374	17i		1	C	4-10	GRADIENT	LULC/RVC	FOREST	HARVEST/FIRE	YES	GRASS	FAIR	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	0	0	0	0	70	0	30	0	MR-4-1-C
Stone Creek	STON 02-02	2	2	485	17i		1	C	4-10		LULC/RVC	FOREST	ROAD	YES	MATURE CONIFEROUS	FAIR	ROAD	YES	MATURE CONIFEROUS	GOOD	100	0	0	0	0	0	0	0	MR-4-1-C
Stone Creek	STON 03-01	3	1	1156	17i		2	C	4-10	STREAM ORDER		FOREST	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	HARVEST/FIRE	YES	MATURE CONIFEROUS	GOOD	0	0	0	0	80	0	20	0	MR-4-2-C
Stone Creek	STON 04-01	4	1	570	17i		2	U	4-10	CONFINEMENT		FOREST	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	0	0	0	0	80	0	20	0	MR-4-2-U
Stone Creek	STON 04-02	4	2	2585	17i		2	U	4-10		LULC	FOREST	HARVEST/FIRE	YES	SHRUBS	FAIR	HARVEST/FIRE	YES	SHRUBS	FAIR	20	0	0	0	60	0	20	0	MR-4-2-U
Stone Creek	STON 05-01	5	1	916	17i		2	C	4-10	CONFINEMENT		FOREST	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	0	80	0	0	0	0	20	0	MR-4-2-C
Stone Creek	STON 06-01	6	1	1142	17i		2	C	2-<4	GRADIENT		FOREST	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	20	0	0	0	70	0	10	0	MR-2-2-C
Stone Creek	STON 07-01	7	1	2330	17i		2	U	2-<4	CONFINEMENT		FOREST	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	HARVEST/FIRE	YES	SHRUBS	FAIR	20	0	0	0	60	0	20	0	MR-2-2-U
Stone Creek	STON 08-01	8	1	1308	17i		2	C	2-<4	CONFINEMENT		FOREST	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	HARVEST/FIRE	YES	GRASS	FAIR	0	0	0	0	50	0	50	0	MR-2-2-C
Stone Creek	STON 09-01	9	1	932	17i		2	C	4-10	GRADIENT		FOREST	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	HARVEST/FIRE	YES	SHRUBS	FAIR	0	0	0	0	60	0	40	0	MR-4-2-C
Stone Creek	STON 10-01	10	1	898	17i		2	U	4-10	CONFINEMENT		FOREST	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	0	0	0	0	70	0	30	0	MR-4-2-U
Stone Creek	STON 11-01	11	1	570	17i		2	U	2-<4	GRADIENT		FOREST	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	ROAD	YES	GRASS	FAIR	40	0	0	0	40	0	20	0	MR-2-2-U
Stone Creek	STON 11-02	11	2	3892	17i		2	U	2-<4		LULC/RVC	FOREST	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	ROAD	YES	SHRUBS	FAIR	40	40	0	0	0	0	20	0	MR-2-2-U
Stone Creek	STON 11-03	11	3	1123	17i		2	U	2-<4		LULC	FOREST RL/RANGE RR	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	ROAD	YES	SHRUBS	FAIR	40	0	0	0	40	0	20	0	MR-2-2-U
Stone Creek	STON 12-01	12	1	285	17i		2	U	4-10	GRADIENT		FOREST/RANGE	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	ROAD	YES	SHRUBS	FAIR	40	0	0	0	40	0	20	0	MR-4-2-U
Stone Creek	STON 12-02	12	2	580	17i		2	U	4-10		RVC	FOREST/RANGE	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	RANGE	YES	SHRUBS	FAIR	40	0	0	0	40	0	20	0	MR-4-2-U
Stone Creek	STON 13-01	13	1	794	17w	17i	2	U	2-<4	ECOREGION/GRADIENT		FOREST/RANGE	FOREST	YES	SHRUBS	FAIR	RANGE	YES	SHRUBS	FAIR	20	40	0	0	0	0	40	0	MR-2-2-U
Stone Creek	STON 13-02	13	2	1682	17w	17i	2	U	2-<4		RVC/LULC	HAY	HAY/PASTURE	YES	MATURE DECIDUOUS	FAIR	HAY/PASTURE	YES	MATURE DECIDUOUS	FAIR	0	50	0	0	0	30	20	0	MR-2-2-U
Stone Creek	STON 13-03	13	3	1268	17w	17i	2	U	2-<4		LULC	RURAL RESIDENCE	RURAL RES/HOBBY FARM	YES	MATURE DECIDUOUS	FAIR	ROAD	YES	MATURE DECIDUOUS	FAIR	50	0	0	0	0	0	0	50	MR-2-2-U
Stone Creek	STON 13-04	13	4	1753	17w	17i	2	U	2-<4		RVC	PASTURE	HAY/PASTURE	YES	SHRUBS	FAIR	HAY/PASTURE	YES	SHRUBS	FAIR	10	50	0	0	0	0	40	0	MR-2-2-U
Thompson Creek	THOM 01-01	1	1	2467	17w		1	U	<2	START		RURAL SUBDIVISION	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	60	0	0	0	30	0	10	MR-0-1-U
Thompson Creek	THOM 01-02	1	2	2957	17w		1	U	<2		LULC	RECREATION	URBAN	YES	BARE	POOR	URBAN	YES	BARE	POOR	100	0	0	0	0	0	0	0	MR-0-1-U
Thompson Creek	THOM 01-03	1	3	6990	17w		1	U	<2		LULC	ROW CROPS/HAY	HAY/PASTURE	YES	BARE	POOR	HAY/PASTURE	YES	BARE	POOR	20	20	30	0	0	30	0	0	MR-0-1-U
Thompson Creek	THOM 01-04	1	4	3847	17w		1	U	<2		LULC	ROW CROPS	RURAL RES/HOBBY FARM	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	10	20	20	0	0	30	0	20	MR-0-1-U
Thompson Creek	THOM 02-01	2	1	2272	17w		2	U	<2	STREAM ORDER		HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	60	0	0	0	40	0	0	MR-0-2-U
Thompson Creek	THOM 02-02	2	2	1051	17w		2	U	<2		LULC	HAY	HAY/PASTURE	YES	GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	30	0	0	0	70	0	0	MR-0-2-U
Thompson Creek	THOM 02-03	2	3	17112	17w		2	U	<2		LULC	HAY	RURAL RES/HOBBY FARM	YES	GRASS	FAIR	RURAL RES/HOBBY FARM	YES	GRASS	FAIR	0	90	0	0	0	10	0	0	MR-0-2-U
Thompson Creek	THOM 02-04	2	4	593	17w		2	U	<2		LULC	RURAL RESIDENCE	HAY/PASTURE	YES	GRASS	FAIR	RURAL RES/HOBBY FARM	YES	GRASS	FAIR	10	20	0	0	0	30	0	40	MR-0-2-U
Thompson Creek	THOM 02-05	2	5	695	17w		2	U	<2		LULC	HAY	HAY/PASTURE	YES	GRASS	FAIR	ROAD	YES	GRASS	FAIR	40	30	0	0	0	30	0	0	MR-0-2-U

Monitoring sites highlighted in yellow.

Attachment AB - Sediment & Habitat Database

Reach ID	Site	Date	Cell	Reach Type	Existing Rosgen Stream Type	Potential Rosgen Stream Type	GIS Calculated Sinuosity	Field Slope (Percent)	Aerial Assessment Valley Gradient	Bankfull Channel Width	Cross-Sectional Area	Bankfull Mean Depth	Width / Depth Ratio	Maximum Depth	Floodprone Width	Entrenchment Ratio	Riffle Pebble Count D50	Riffle Pebble Count Percent <2mm	Riffle Pebble Count Percent <6mm	Riffle Grid Toss Percent <6mm	Riffle Stability Index	Number of Pools per 1000 Feet	Mean Residual Pool Depth	Number of Individual Pieces of LWD per 1000 Feet	Number of LWD Aggregates per 1000 Feet	Total Number of LWD per 1000 Feet	Percent Understory Shrub Cover	Percent Bare/Disturbed Ground	Percent Riprap	Percent Overstory Canopy Cover	Right Bank Mean Riparian Zone Width	Left Bank Mean Riparian Zone Width
BEAR18-01	1	8/17/09	1	MR-2-2-C	C4b	B4	1.25	2.5	2-<4%	17.9	18.4	1.03	17.4	1.9	117.9	>6.6	58	1	5	3		11	1.4	10	3	27		0	0		>200	>150
BEAR18-01	1	8/17/09	2	MR-2-2-C	B4	B4	1.25	2.5	2-<4%	16.6	19.6	1.18	14.1	1.8	27.6	1.7												0	0		>188	119
BEAR18-01	1	8/17/09	3	MR-2-2-C	C4b	B4	1.25	2.5	2-<4%	14.0	16.0	1.14	12.3	1.9	124.0	>8.9	61	1	1	1								0	0		>175	113
BEAR18-01	1	8/17/09	4	MR-2-2-C	E4b	B4	1.25	2.5	2-<4%	13.5	20.5	1.52	8.9	2.1	41.5	3.1												0	0		>194	108
BEAR18-01	1	8/17/09	5	MR-2-2-C	E4b	B4	1.25	2.5	2-<4%	15.6	22.3	1.43	10.9	2.0	120.6	7.7	46	3	6	10								0	0		>108	>105
BEAR26-02	1	8/17/09	1	MR-0-3-U	C4	C4	1.74	1.4	<2%	29.3	33.8	1.16	25.4	2.3	109.3	3.7	29	5	8	14	89	15	1.2	1	0	13		0	0		>175	88
BEAR26-02	1	8/17/09	2	MR-0-3-U	B4c	C4	1.74	1.4	<2%	17.0	19.7	1.16	14.7	1.9	30.0	1.8												0	0		>150	>175
BEAR26-02	1	8/17/09	3	MR-0-3-U	C4	C4	1.74	1.4	<2%	26.8	27.7	1.04	25.9	1.8	126.8	>4.7	35	6	7	8								0	0		>135	>158
BEAR26-02	1	8/17/09	4	MR-0-3-U	B4c	C4	1.74	1.4	<2%	20.7	24.4	1.18	17.5	1.9	30.7	1.5												0	0		40	>200
BEAR26-02	1	8/17/09	5	MR-0-3-U	C4	C4	1.74	1.4	<2%	16.9	20.6	1.22	13.9	1.8	58.9	3.5	61	1	3	5								0	0		63	>183
BOZE14-01	1	8/17/09	1	MR-0-2-U	C4	C3	1.12	1.6	<2%	21.0	32.4	1.55	13.6	2.1	171.0	8.1	47	0	4	3	86	10	1.3	25	1	30		3	0		60	>200
BOZE14-01	1	8/17/09	2	MR-0-2-U					<2%																			0	0		90	>200
BOZE14-01	1	8/17/09	3	MR-0-2-U	E3	C3	1.12	1.6	<2%	17.7	31.2	1.76	10.1	2.3	57.7	3.3	89	3	8	2								3	0		33	>200
BOZE14-01	1	8/17/09	4	MR-0-2-U	C3/4	C3	1.12	1.6	<2%	26.3	41.0	1.56	16.9	2.5	128.3	>4.9												5	0		34	>200
BOZE14-01	1	8/17/09	5	MR-0-2-U	C3	C3	1.12	1.6	<2%	24.0	35.8	1.49	16.1	2.6	134.0	>5.6	74	8	12	5	62							0	20		>79	>200
BOZE18-04	1	8/24/09	1	MR-0-3-U	B4c	B4c	1.01	1.0	<2%	23.4	44.1	1.88	12.4	2.8	45.4	1.9	30	7	8	14		2	1.3	7	0	7	75	30	13	75	3	8
BOZE18-04	1	8/24/09	2	MR-0-3-U	F4	B4c	1.01	1.0	<2%	29.8	55.2	1.85	16.1	2.6	35.8	1.2											65	38	0	78	0	6
BOZE18-04	1	8/24/09	3	MR-0-3-U	F4	B4c	1.01	1.0	<2%	25.0	45.1	1.81	13.9	2.7	31.0	1.2	47	9	12	3							100	0	15	100	5	5
BOZE18-04	1	8/24/09	4	MR-0-3-U	F4	B4c	1.01	1.0	<2%	22.7	41.1	1.81	12.5	2.9	29.7	1.3											73	15	5	95	5	3
BOZE18-04	1	8/24/09	5	MR-0-3-U	G4c	B4c	1.01	1.0	<2%	18.0	35.5	1.97	9.1	3.0	21.0	1.2	39	9	12	4												
CAMP14-05	1	8/20/09	1	MR-0-3-U	E4	E4	3.16	<2%	<2%	10.6	10.5	0.99	10.7	1.5	30.6	2.9	6	26	51	95		18	1.1	10	3	41		3	0		5	10
CAMP14-05	1	8/20/09	2	MR-0-3-U	B4/5c	E4	3.16	<2%	<2%	11.6	13.3	1.15	10.1	1.7	23.6	2.0												0	0		3	10
CAMP14-05	1	8/20/09	3	MR-0-3-U	B5c	E4	3.16	<2%	<2%	13.3	14.1	1.06	12.5	1.8	29.3	2.2	<2	57	82	94								0	0		>125	0
CAMP14-05	1	8/20/09	4	MR-0-3-U	B4/5c	E4	3.16	<2%	<2%	14.8	17.6	1.19	12.4	1.9	26.8	1.8												3	0		75	0
CAMP14-05	1	8/20/09	5	MR-0-3-U	B4c	E4	3.16	<2%	<2%	11.1	13.0	1.17	9.5	1.6	23.1	2.1	6	24	50	88								3	0		35	0
CAMP14-12	1	8/21/09	1	MR-0-3-U	B4c	E4	1.26	1.0	<2%	14.3	19.7	1.38	10.4	3.0	26.3	1.8	23	8	17	8		17	1.1	1	0	5		0	0		11	8
CAMP14-12	1	8/21/09	2	MR-0-3-U	B4c	E4	1.26	1.0	<2%	15.7	23.6	1.50	10.5	2.9	25.7	1.6												0	0		10	5
CAMP14-12	1	8/21/09	3	MR-0-3-U	B4c	E4	1.26	1.0	<2%	17.6	20.4	1.16	15.2	2.4	31.6	1.8	23	9	12	18								0	0		44	24
CAMP14-12	1	8/21/09	4	MR-0-3-U	C4	E4	1.26	1.0	<2%	16.4	19.1	1.16	14.1	2.4	46.4	2.8												0	0		10	40
CAMP14-12	1	8/21/09	5	MR-0-3-U	B4c	E4	1.26	1.0	<2%	21.6	23.3	1.08	20.0	1.7	47.6	2.2	24	13	13	40								0	3		56	16
CAMP15-04	1	8/21/09	1	MR-0-4-U	C3	E4	1.48	1.0	<2%	30.0	48.9	1.63	18.4	2.4	80.0	2.7	76	3	3	0		3	1.9	5	0	5		0	0		>200	13
CAMP15-04	1	8/21/09	2	MR-0-4-U	C3/4	E4	1.48	1.0	<2%	34.8	57.0	1.64	21.2	2.1	90.8	2.6												5	0		>200	>143
CAMP15-04	1	8/21/09	3	MR-0-4-U					<2%																			0	0		>200	>200
CAMP15-04	1	8/21/09	4	MR-0-4-U	C4	E4	1.48	1.0	<2%	50.4	76.2	1.51	33.3	2.4	325.4	>6.5	32	8	8	10								0	0		>200	>200
CAMP15-04	1	8/21/09	5	MR-0-4-U	C4	E4	1.48	1.0	<2%	31.2	61.2	1.96	15.9	2.5	431.2	>13.8	42	16	16	7								5	0		>200	>200
DRY09-05	1	8/25/09	1	MR-0-3-U	B4c	E4	1.47	1.3	<2%	15.7	18.5	1.18	13.3	1.5	24.7	1.6	20	21	26	36		14	1.6	8	0	15		18	0		13	20
DRY09-05	1	8/25/09	2	MR-0-3-U	B4c	E4	1.47	1.3	<2%	14.9	17.9	1.20	12.4	1.7	22.9	1.5												0	0		3	8
DRY09-05	1	8/25/09	3	MR-0-3-U	B4c	E4	1.47	1.3	<2%	14.6	17.9	1.23	11.9	1.8	22.6	1.5	23	18	19	10								3	0		8	3
DRY09-05	1	8/25/09	4	MR-0-3-U	G4c	E4	1.47	1.3	<2%	13.4	19.1	1.43	9.4	2.1	16.4	1.2												10	0		15	5
DRY09-05	1	8/25/09	5	MR-0-3-U	G4c	E4	1.47	1.3	<2%	13.0	17.4	1.34	9.7	1.9	16.0	1.2	32	17	20	17								8	0		0	20

Reach ID	Site	Date	Cell	Reach Type	Existing Rosgen Stream Type	Potential Rosgen Stream Type	GIS Calculated Sinuosity	Field Slope (Percent)	Aerial Assessment Valley Gradient	Bankfull Channel Width	Cross-Sectional Area	Bankfull Mean Depth	Width / Depth Ratio	Maximum Depth	Floodprone Width	Entrenchment Ratio	Riffle Pebble Count D50	Riffle Pebble Count Percent <2mm	Riffle Pebble Count Percent <6mm	Riffle Grid Toss Percent <6mm	Riffle Stability Index	Number of Pools per 1000 Feet	Mean Residual Pool Depth	Number of Individual Pieces of LWD per 1000 Feet	Number of LWD Aggregates per 1000 Feet	Total Number of LWD per 1000 Feet	Percent Understory Shrub Cover	Percent Bare/Disturbed Ground	Percent Riprap	Percent Overstory Canopy Cover	Right Bank Mean Riparian Zone Width	Left Bank Mean Riparian Zone Width
DRY12-06	1	8/25/09	1	MR-0-4-U	C4	E4	1.13	0.8	<2%	16.4	19.4	1.18	13.9	1.9	89.4	5.5	57	12	14	1		7	1.5	0	0	0		0	0		>200	>200
DRY12-06	1	8/25/09	2	MR-0-4-U	C4	E4	1.13	0.8	<2%	15.2	16.8	1.10	13.8	2.0	75.2	4.9												0	0		>188	>200
DRY12-06	1	8/25/09	3	MR-0-4-U	C4	E4	1.13	0.8	<2%	18.0	25.2	1.40	12.9	2.2	50.0	2.8	32	7	10	17								0	0		>133	>200
DRY12-06	1	8/25/09	4	MR-0-4-U	C4	E4	1.13	0.8	<2%	16.7	19.9	1.19	14.0	2.1	40.7	2.4												0	0		55	>200
DRY12-06	1	8/25/09	5	MR-0-4-U	B4c	E4	1.13	0.8	<2%	19.0	24.2	1.28	14.9	1.8	36.0	1.9	36	14	20	18								0	0		23	>200
GOD02-01	1	8/20/09	1	MR-0-2-U	E4	E4	1.03	1.0	<2%	6.1	6.6	1.08	5.6	1.6	19.1	3.1	11	29	35	88		34	0.6	0	0	0		0	0		13	10
GOD02-01	1	8/20/09	2	MR-0-2-U	C4	E4	1.03	1.0	<2%	8.8	6.5	0.74	12.0	1.3	19.8	2.3												0	0		10	8
GOD02-01	1	8/20/09	3	MR-0-2-U	B4c	E4	1.03	1.0	<2%	7.7	7.5	0.97	7.9	1.4	15.7	2.0	12	31	37	29								0	0		5	18
GOD02-01	1	8/20/09	4	MR-0-2-U	C4	E4	1.03	1.0	<2%	9.0	5.6	0.62	14.5	1.2	24.0	2.7												0	5		13	8
GOD02-01	1	8/20/09	5	MR-0-2-U	B4c	E4	1.03	1.0	<2%	7.8	4.9	0.63	12.4	1.2	15.8	2.0	13	21	31	44								0	0		5	10
GOD03-01	1	8/24/09	1	MR-0-3-U	C4	E4	2.20	1.0	<2%	11.7	8.9	0.76	15.3	1.1	27.7	2.4	13	14	21	17		18	0.8	2	0	2		0	0		0	0
GOD03-01	1	8/24/09	2	MR-0-3-U	B4c	E4	2.20	1.0	<2%	9.7	8.4	0.86	11.2	1.3	20.7	2.1												5	0		0	0
GOD03-01	1	8/24/09	3	MR-0-3-U	C4	E4	2.20	1.0	<2%	11.6	8.8	0.76	15.2	1.2	28.6	2.5	15	21	27	16								0	0		0	0
GOD03-01	1	8/24/09	4	MR-0-3-U	C4	E4	2.20	1.0	<2%	9.6	8.2	0.85	11.2	1.3	44.6	4.6												0	0		0	0
GOD03-01	1	8/24/09	5	MR-0-3-U	C4	E4	2.20	1.0	<2%	11.4	9.0	0.79	14.4	1.2	31.4	2.8	17	13	16	22								0	0		0	0
JACK04-01	1	8/18/09	1	MR-4-1-C	B4	B4	1.27	3.0	4-<10%	13.2	14.7	1.11	11.9	1.6	26.2	2.0	45	19	23	19		10	0.7	41	8	76	10	0	0	25	200	>200
JACK04-01	1	8/18/09	2	MR-4-1-C	G4	B4	1.27	3.0	4-<10%	12.2	13.9	1.14	10.7	1.6	14.2	1.2											10	3	0	40	200	>200
JACK04-01	1	8/18/09	3	MR-4-1-C					4-<10%																		23	0	0	30	>200	>200
JACK04-01	1	8/18/09	4	MR-4-1-C	E4b	B4	1.27	3.0	4-<10%	12.0	13.9	1.16	10.3	1.6	45.0	3.8	53	9	15	24							15	0	0	38	200	>200
JACK04-01	1	8/18/09	5	MR-4-1-C	B4c	B4	1.27	3.0	4-<10%	17.5	16.1	0.92	19.0	1.4	33.5	1.9	30	20	22	1							10	3	0	23	193	>200
JACK10-02	1	8/18/09	1	MR-2-2-U	B4c	C4	1.32	1.7	2-<4%	17.0	22.1	1.30	13.1	1.8	36.0	2.1	55	6	8	5	63	20	1.4	35	6	77	58	0	0	83	>85	>200
JACK10-02	1	8/18/09	2	MR-2-2-U	C4	C4	1.32	1.7	2-<4%	22.0	24.1	1.10	20.1	1.6	74.0	3.4											75	0	10	73	25	>200
JACK10-02	1	8/18/09	3	MR-2-2-U	B4c	C4	1.32	1.7	2-<4%	16.0	18.2	1.14	14.1	1.6	31.0	1.9	38	0	1	0							50	8	43	53	6	>200
JACK10-02	1	8/18/09	4	MR-2-2-U	B4c	C4	1.32	1.7	2-<4%	23.3	25.9	1.11	20.9	1.6	41.3	1.8											50	3	10	30	23	>200
JACK10-02	1	8/18/09	5	MR-2-2-U	C4	C4	1.32	1.7	2-<4%	21.0	19.2	0.91	23.0	1.4	54.0	2.6	50	7	9	3							63	0	0	23	32	>200
REES06-01	1	8/20/09	1	MR-0-2-U	E4	E4	1.07	1.0	<2%	7.4	7.4	1.00	7.4	1.3	27.4	3.7	27	10	15	8		20	0.6	30	0	30		0	0		23	5
REES06-01	1	8/20/09	2	MR-0-2-U	E4	E4	1.07	1.0	<2%	9.3	9.5	1.03	9.1	1.4	25.3	2.7	36	6	11	4								0	0		63	5
REES06-01	1	8/20/09	3	MR-0-2-U	B4c	E4	1.07	1.0	<2%	10.9	10.3	0.95	11.5	1.4	15.9	1.5	50	15	17	14								0	0		>150	30
REES15-06	1	8/29/09	1	MR-0-4-U	E4	E4	2.91	0.5	<2%	14.0	22.4	1.60	8.8	2.2	234.0	>16.7	25	6	6	14		15	1.7	7	0	7	8	0	0	8	26	19
REES15-06	1	8/29/09	2	MR-0-4-U	E4	E4	2.91	0.5	<2%	15.8	23.8	1.51	10.5	2.0	220.8	>14.0											8	0	0	8	31	15
REES15-06	1	8/29/09	3	MR-0-4-U	E4	E4	2.91	0.5	<2%	13.6	22.3	1.64	8.3	1.9	223.6	>16.4	25	9	14	5							5	0	0	5	46	35
REES15-06	1	8/29/09	4	MR-0-4-U	E4	E4	2.91	0.5	<2%	12.4	19.2	1.55	8.0	1.9	242.4	>19.5											10	0	0	0	63	30
REES15-06	1	8/29/09	5	MR-0-4-U	C4	E4	2.91	0.5	<2%	17.8	23.1	1.30	13.7	1.7	227.8	>12.8	20	12	17	14							53	0	0	10	29	38
ROCK02-01	1	8/19/09	1	MR-0-3-U	F4	C4	1.58	2.0	<2%	24.1	28.5	1.18	20.4	1.8	31.1	1.3	34	7	8	15		12	1.4	3	0	17	98	0	0	55	31	59
ROCK02-01	1	8/19/09	2	MR-0-3-U	F4	C4	1.58	2.0	<2%	22.4	27.4	1.22	18.3	1.7	28.4	1.3											35	10	0	5	35	40
ROCK02-01	1	8/19/09	3	MR-0-3-U	B4c	C4	1.58	2.0	<2%	31.0	30.4	0.98	31.6	1.5	45.0	1.5											13	13	0	0	38	35
ROCK02-01	1	8/19/09	4	MR-0-3-U	F4	C4	1.58	2.0	<2%	19.4	27.9	1.44	13.5	1.8	24.4	1.3	35	6	11	22							38	25	0	5	30	50
ROCK02-01	1	8/19/09	5	MR-0-3-U	F4	C4	1.58	2.0	<2%	33.5	23.1	0.69	48.6	1.5	34.5	1.0	39	5	6	2							18	18	0	18	48	59

Reach ID	Site	Date	Cell	Reach Type	Existing Rosgen Stream Type	Potential Rosgen Stream Type	GIS Calculated Sinuosity	Field Slope (Percent)	Aerial Assessment Valley Gradient	Bankfull Channel Width	Cross-Sectional Area	Bankfull Mean Depth	Width / Depth Ratio	Maximum Depth	Floodprone Width	Entrenchment Ratio	Riffle Pebble Count D50	Riffle Pebble Count Percent <2mm	Riffle Pebble Count Percent <6mm	Riffle Grid Toss Percent <6mm	Riffle Stability Index	Number of Pools per 1000 Feet	Mean Residual Pool Depth	Number of Individual Pieces of LWD per 1000 Feet	Number of LWD Aggregates per 1000 Feet	Total Number of LWD per 1000 Feet	Percent Understory Shrub Cover	Percent Bare/Disturbed Ground	Percent Riprap	Percent Overstory Canopy Cover	Right Bank Mean Riparian Zone Width	Left Bank Mean Riparian Zone Width
ROCK03-01	1	8/18/09	1	MR-0-4-U	C3	C3	1.25	1.0	<2%	27.7	38.1	1.37	20.1	2.2	112.7	4.1	78	1	3	3		6	1.8	2	0	4		0	0		125	>200
ROCK03-01	1	8/18/09	2	MR-0-4-U	B3c	C3	1.25	1.0	<2%	27.6	37.4	1.36	20.4	2.0	42.6	1.5												0	0		144	>200
ROCK03-01	1	8/18/09	3	MR-0-4-U	B3c	C3	1.25	1.0	<2%	24.0	37.7	1.57	15.3	2.0	39.0	1.6												5	0		105	>200
ROCK03-01	1	8/18/09	4	MR-0-4-U	G3c	C3	1.25	1.0	<2%	19.3	33.3	1.72	11.2	2.4	24.3	1.3												0	13		13	>200
ROCK03-01	1	8/18/09	5	MR-0-4-U	B3c	C3	1.25	1.0	<2%	27.4	35.2	1.29	21.3	2.1	45.4	1.7	84	13	14	1								0	0		20	>200
SCOT25-02	1	8/24/09	1	MR-2-3-U	B3	B3	1.13	2.0	2-<4%	22.0	33.6	1.53	14.4	2.2	47.0	2.1	89	2	3	1		13	0.7	23	9	68		0	0		>200	>200
SCOT25-02	1	8/24/09	2	MR-2-3-U	B3	B3	1.13	2.0	2-<4%	26.3	34.6	1.32	20.0	2.2	51.3	2.0												0	0		>200	>200
SCOT25-02	1	8/24/09	3	MR-2-3-U	B3	B3	1.13	2.0	2-<4%	24.3	36.7	1.51	16.1	2.2	50.3	2.1	90	4	5	1								3	0		>200	>200
SCOT25-02	1	8/24/09	4	MR-2-3-U	B3	B3	1.13	2.0	2-<4%	26.3	35.0	1.33	19.8	2.0	40.3	1.5	109	2	2	1								0	0		>200	>200
SCOT31-02	1	8/26/09	1	MR-0-3-U	C3	C3	1.14	2.0	<2%	35.6	70.4	1.98	18.0	3.0	305.6	8.6	65	4	5	8		11	1.3	38	7	82		0	0		200	>200
SCOT31-02	1	8/26/09	2	MR-0-3-U					<2%																			3	0		>163	>200
SCOT31-02	1	8/26/09	3	MR-0-3-U	E3	C3	1.14	2.0	<2%	18.0	36.5	2.03	8.9	2.7	253.0	>14.1	76	0	0	0								0	0		52	>200
SCOT31-02	1	8/26/09	4	MR-0-3-U	C3/4	C3	1.14	2.0	<2%	30.6	48.9	1.60	19.1	2.2	245.6	>8.0												0	0		50	>200
SCOT31-02	1	8/26/09	5	MR-0-3-U	C4	C3	1.14	2.0	<2%	32.0	55.7	1.74	18.4	2.5	277.0	>8.7	58	5	8	2								0	0		88	>200
SMIT01-05	1	8/25/09	1	MR-0-4-U	C4	E4	2.01	0.5	<2%	51.0	98.7	1.94	26.4	2.4	451.0	>8.8	19	25	26	12		5	1.7	1	0	1		0	0		8	100
SMIT01-05	1	8/25/09	2	MR-0-4-U	C4	E4	2.01	0.5	<2%	50.5	92.4	1.83	27.6	2.5	450.5	>8.9	21	12	13	22								0	0		20	51
SMIT01-05	1	8/25/09	3	MR-0-4-U					<2%																			3	0		8	75
SMIT01-05	1	8/25/09	4	MR-0-4-U					<2%																			0	0		0	20
SMIT01-05	1	8/25/09	5	MR-0-4-U					<2%																			0	0		13	>63
STON08-01	1	8/19/09	1	MR-2-2-C	E4b	C4b	1.30		2-<4%	13.6	16.5	1.21	11.2	2.0	108.6	8.0	59	5	5	5		16	0.9	13	5	49		0	0		>200	>200
STON08-01	1	8/19/09	2	MR-2-2-C	E4b	C4b	1.30		2-<4%	12.8	15.5	1.21	10.6	2.0	77.8	6.1					88							3	0		>200	>200
STON08-01	1	8/19/09	3	MR-2-2-C	E4b	C4b	1.30		2-<4%	12.3	15.4	1.25	9.8	1.7	102.3	8.3	70	2	2	3	65							0	0		>200	>200
STON08-01	1	8/19/09	4	MR-2-2-C	C4b	C4b	1.30		2-<4%	15.0	17.3	1.15	13.0	1.5	85.0	5.7					84							0	0		>200	>200
STON08-01	1	8/19/09	5	MR-2-2-C	E4b	C4b	1.30		2-<4%	11.4	14.3	1.25	9.1	1.9	106.4	9.3	44	3	3	6								0	0		>200	>200
STON13-02	1	8/19/09	1	MR-2-2-U	E4	C4	1.34	1.2	2-<4%	13.3	14.9	1.12	11.9	1.9	123.3	9.3	50	4	4	2		16	0.9	33	2	55		5	0		54	85
STON13-02	1	8/19/09	2	MR-2-2-U	C4	C4	1.34	1.2	2-<4%	13.7	14.6	1.07	12.8	1.9	125.7	9.2												10	0		150	8
STON13-02	1	8/19/09	3	MR-2-2-U	C4	C4	1.34	1.2	2-<4%	14.7	17.1	1.16	12.7	1.7	136.7	9.3	59	3	3	3								18	0		100	38
STON13-02	1	8/19/09	4	MR-2-2-U	E4	C4	1.34	1.2	2-<4%	13.4	16.7	1.25	10.7	1.7	83.4	6.2												10	0		>156	31
STON13-02	1	8/19/09	5	MR-2-2-U	C4	C4	1.34	1.2	2-<4%	25.0	24.0	0.96	26.0	1.6	150.0	6.0	49	4	4	14								30	0		75	18
THOM02-03	1	8/26/09	1	MR-0-2-U	C4	E4	3.40	0.5	<2%	27.8	15.8	0.57	48.8	0.9	91.6	3.3	20	18	24	15		4	0.7	0	0	0	0	0	0	0	24	20
THOM02-03	1	8/26/09	2	MR-0-2-U	B4c	E4	3.40	0.5	<2%	33.8	20.0	0.59	57.0	1.0	54.8	1.6	19	23	23	22							0	0	0	0	14	55
THOM02-03	1	8/26/09	3	MR-0-2-U					<2%																		0	0	0	0	33	11
THOM02-03	1	8/26/09	4	MR-0-2-U					<2%																		0	0	0	0	38	11
THOM02-03	1	8/26/09	5	MR-0-2-U					<2%								27	13	16	11							0	0	0	0	44	14

Reach ID	Reach Type	Pool	Residual Depth (Feet)	*Spawning Gravels Identified*	*Pool Tail-out Fines (%)*
BEAR18-01	MR-2-2-C	1	2.0	Y	28
BEAR18-01	MR-2-2-C	2	0.9	Y	6
BEAR18-01	MR-2-2-C	3	0.6		
BEAR18-01	MR-2-2-C	4	1.2		
BEAR18-01	MR-2-2-C	5	2.1		
BEAR18-01	MR-2-2-C	6	1.6		
BEAR18-01	MR-2-2-C	7	0.9		
BEAR18-01	MR-2-2-C	8	0.9		
BEAR18-01	MR-2-2-C	9	1.6		
BEAR18-01	MR-2-2-C	10	1.3		
BEAR18-01	MR-2-2-C	11	2.1	Y	34
BEAR26-02	MR-0-3-U	1	0.4		
BEAR26-02	MR-0-3-U	2	1.4		
BEAR26-02	MR-0-3-U	3	0.8		
BEAR26-02	MR-0-3-U	4	0.9		
BEAR26-02	MR-0-3-U	5	2.3	Y	12
BEAR26-02	MR-0-3-U	6	0.9	Y	14
BEAR26-02	MR-0-3-U	7	0.9		
BEAR26-02	MR-0-3-U	8	0.8		
BEAR26-02	MR-0-3-U	9	0.9		
BEAR26-02	MR-0-3-U	10	0.8		
BEAR26-02	MR-0-3-U	11	1.8		
BEAR26-02	MR-0-3-U	12	2.0		
BEAR26-02	MR-0-3-U	13	1.2		
BEAR26-02	MR-0-3-U	14	1.5	Y	37
BEAR26-02	MR-0-3-U	15	1.0		
BOZE14-01	MR-0-2-U	1	1.5	Y	4
BOZE14-01	MR-0-2-U	2	0.8		
BOZE14-01	MR-0-2-U	3	1.1		
BOZE14-01	MR-0-2-U	4	1.1	Y	9
BOZE14-01	MR-0-2-U	5	1.8	Y	19
BOZE14-01	MR-0-2-U	6	1.1	Y	7
BOZE14-01	MR-0-2-U	7	2.7	Y	12
BOZE14-01	MR-0-2-U	8	0.6		
BOZE14-01	MR-0-2-U	9	1.5		
BOZE14-01	MR-0-2-U	10	0.7	Y	10
BOZE18-04	MR-0-3-U	1	1.4	Y	7
BOZE18-04	MR-0-3-U	2	1.1	Y	21

Reach ID	Reach Type	Pool	Residual Depth (Feet)	*Spawning Gravels Identified*	*Pool Tail-out Fines (%)*
CAMP14-05	MR-0-3-U	1	1.0	Y	93
CAMP14-05	MR-0-3-U	2	1.1	Y	88
CAMP14-05	MR-0-3-U	3	1.4	Y	77
CAMP14-05	MR-0-3-U	4	1.2	Y	86
CAMP14-05	MR-0-3-U	5	0.9	Y	90
CAMP14-05	MR-0-3-U	6	2.6	not recorded	100
CAMP14-05	MR-0-3-U	7	0.7		
CAMP14-05	MR-0-3-U	8	1.0		
CAMP14-05	MR-0-3-U	9	0.6		
CAMP14-05	MR-0-3-U	10	0.9	Y	93
CAMP14-05	MR-0-3-U	11	0.7	Y	99
CAMP14-05	MR-0-3-U	12	0.7	Y	67
CAMP14-05	MR-0-3-U	13	0.9		
CAMP14-05	MR-0-3-U	14	1.3	Q	100
CAMP14-05	MR-0-3-U	15	1.3		
CAMP14-05	MR-0-3-U	16	1.0	Y	45
CAMP14-05	MR-0-3-U	17	0.4	Y	91
CAMP14-05	MR-0-3-U	18	1.2	Y	44
CAMP14-12	MR-0-3-U	1	0.6		
CAMP14-12	MR-0-3-U	2	1.0		
CAMP14-12	MR-0-3-U	3	1.1		
CAMP14-12	MR-0-3-U	4	1.4		
CAMP14-12	MR-0-3-U	5	1.5		
CAMP14-12	MR-0-3-U	6	0.8		
CAMP14-12	MR-0-3-U	7	0.9		
CAMP14-12	MR-0-3-U	8	1.0		
CAMP14-12	MR-0-3-U	9	1.4		
CAMP14-12	MR-0-3-U	10			
CAMP14-12	MR-0-3-U	11	1.8		
CAMP14-12	MR-0-3-U	12	1.2		
CAMP14-12	MR-0-3-U	13	1.0		
CAMP14-12	MR-0-3-U	14	0.9		
CAMP14-12	MR-0-3-U	15	0.7		
CAMP14-12	MR-0-3-U	16	1.0		
CAMP14-12	MR-0-3-U	17	1.7		
CAMP15-04	MR-0-4-U	1	2.1	Y	24
CAMP15-04	MR-0-4-U	2	2.3		
CAMP15-04	MR-0-4-U	3	1.4		
DRY09-05	MR-0-3-U	1	1.5	Y	15
DRY09-05	MR-0-3-U	2	1.7	Y	30
DRY09-05	MR-0-3-U	3	1.5	Y	22
DRY09-05	MR-0-3-U	4	2.3		
DRY09-05	MR-0-3-U	5	2.4	Y	20
DRY09-05	MR-0-3-U	6	3.2	Y	16
DRY09-05	MR-0-3-U	7	0.9		
DRY09-05	MR-0-3-U	8	1.0		
DRY09-05	MR-0-3-U	9	0.8		
DRY09-05	MR-0-3-U	10	1.3	Y	11
DRY09-05	MR-0-3-U	11	2.3	Y	7
DRY09-05	MR-0-3-U	12	0.9		
DRY09-05	MR-0-3-U	13	1.7		
DRY09-05	MR-0-3-U	14	0.9		

Reach ID	Reach Type	Pool	Residual Depth (Feet)	*Spawning Gravels Identified*	*Pool Tail-out Fines (%)*
DRY12-06	MR-0-4-U	1	1.1		
DRY12-06	MR-0-4-U	2	1.7		
DRY12-06	MR-0-4-U	3	0.7		
DRY12-06	MR-0-4-U	4	0.8		
DRY12-06	MR-0-4-U	5	1.4		
DRY12-06	MR-0-4-U	6	3.1		
DRY12-06	MR-0-4-U	7	1.4		
GOD02-01	MR-0-2-U	1	0.6		
GOD02-01	MR-0-2-U	2	0.7		
GOD02-01	MR-0-2-U	3	1.0		
GOD02-01	MR-0-2-U	4	0.7	Y	39
GOD02-01	MR-0-2-U	5	0.7		
GOD02-01	MR-0-2-U	6	0.6		
GOD02-01	MR-0-2-U	7	0.6		
GOD02-01	MR-0-2-U	8	0.8		
GOD02-01	MR-0-2-U	9	0.7		
GOD02-01	MR-0-2-U	10	0.3		
GOD02-01	MR-0-2-U	11	0.8		
GOD02-01	MR-0-2-U	12	0.7	Y	88
GOD02-01	MR-0-2-U	13	0.4	Y	8
GOD02-01	MR-0-2-U	14	0.4		
GOD02-01	MR-0-2-U	15	0.9		
GOD02-01	MR-0-2-U	16	0.4		
GOD02-01	MR-0-2-U	17	0.6		
GOD03-01	MR-0-3-U	1	1.0	Y	45
GOD03-01	MR-0-3-U	2	0.8	Y	13
GOD03-01	MR-0-3-U	3	0.7	Y	71
GOD03-01	MR-0-3-U	4	0.4	Y	27
GOD03-01	MR-0-3-U	5	0.8	Y	21
GOD03-01	MR-0-3-U	6	0.7	Y	20
GOD03-01	MR-0-3-U	7	1.0	not recorded	31
GOD03-01	MR-0-3-U	8	0.8	Y	20
GOD03-01	MR-0-3-U	9	0.7	not recorded	11
JACK04-01	MR-4-1-C	1	0.4		
JACK04-01	MR-4-1-C	2	0.5		
JACK04-01	MR-4-1-C	3	0.8		
JACK04-01	MR-4-1-C	4	0.7		
JACK04-01	MR-4-1-C	5	0.6		
JACK04-01	MR-4-1-C	6	0.4	Y	44
JACK04-01	MR-4-1-C	7	0.7		
JACK04-01	MR-4-1-C	8	0.8	Y	83
JACK04-01	MR-4-1-C	9	1.1		
JACK04-01	MR-4-1-C	10	1.2		

Reach ID	Reach Type	Pool	Residual Depth (Feet)	*Spawning Gravels Identified*	*Pool Tail-out Fines (%)*
JACK10-02	MR-2-2-U	1	1.0	Q	6
JACK10-02	MR-2-2-U	2	1.0		
JACK10-02	MR-2-2-U	3	0.8		
JACK10-02	MR-2-2-U	4	0.8		
JACK10-02	MR-2-2-U	5	0.7		
JACK10-02	MR-2-2-U	6	0.6		
JACK10-02	MR-2-2-U	7			
JACK10-02	MR-2-2-U	8	1.2		
JACK10-02	MR-2-2-U	9	2.0		
JACK10-02	MR-2-2-U	10	1.4		
JACK10-02	MR-2-2-U	11	1.9		
JACK10-02	MR-2-2-U	12	1.4	Q	7
JACK10-02	MR-2-2-U	13	1.2		
JACK10-02	MR-2-2-U	14	1.6		
JACK10-02	MR-2-2-U	15	2.8		
JACK10-02	MR-2-2-U	16	1.2	not recorded	10
JACK10-02	MR-2-2-U	17	1.6		
JACK10-02	MR-2-2-U	18	1.7		
JACK10-02	MR-2-2-U	19			
JACK10-02	MR-2-2-U	20	1.7	Y	3
REES06-01	MR-0-2-U	1	0.6		
REES06-01	MR-0-2-U	2	0.4	Y	5
REES06-01	MR-0-2-U	3	0.7	Y	12
REES06-01	MR-0-2-U	4	0.5		
REES06-01	MR-0-2-U	5	0.6		
REES06-01	MR-0-2-U	6	0.9		
REES15-06	MR-0-4-U	1	1.9	Y	2
REES15-06	MR-0-4-U	2	2.1	Y	8
REES15-06	MR-0-4-U	3	0.9		
REES15-06	MR-0-4-U	4	2.2	Y	19
REES15-06	MR-0-4-U	5	2.3	Y	20
REES15-06	MR-0-4-U	6	2.8	Y	7
REES15-06	MR-0-4-U	7	1.6		
REES15-06	MR-0-4-U	8	2.2	Y	20
REES15-06	MR-0-4-U	9	0.6		
REES15-06	MR-0-4-U	10	1.5	Y	14
REES15-06	MR-0-4-U	11	1.0	Y	16
REES15-06	MR-0-4-U	12	2.0	Y	16
REES15-06	MR-0-4-U	13	0.8		
REES15-06	MR-0-4-U	14	0.8		
REES15-06	MR-0-4-U	15	2.1		
ROCK02-01	MR-0-3-U	1	1.1		
ROCK02-01	MR-0-3-U	2	1.0		
ROCK02-01	MR-0-3-U	3	1.5		
ROCK02-01	MR-0-3-U	4	1.3		
ROCK02-01	MR-0-3-U	5	1.9		
ROCK02-01	MR-0-3-U	6	1.1		
ROCK02-01	MR-0-3-U	7	1.5		
ROCK02-01	MR-0-3-U	8	1.7	Y	33
ROCK02-01	MR-0-3-U	9	1.6		
ROCK02-01	MR-0-3-U	10	1.5		
ROCK02-01	MR-0-3-U	11	0.9		
ROCK02-01	MR-0-3-U	12	1.1	Y	3

Reach ID	Reach Type	Pool	Residual Depth (Feet)	*Spawning Gravels Identified*	*Pool Tail-out Fines (%)*
ROCK03-01	MR-0-4-U	1	1.5		
ROCK03-01	MR-0-4-U	2	1.3		
ROCK03-01	MR-0-4-U	3	0.9		
ROCK03-01	MR-0-4-U	4	2.1		
ROCK03-01	MR-0-4-U	5	4.1		
ROCK03-01	MR-0-4-U	6	1.1		
SCOT25-02	MR-2-3-U	1	0.7	Y	1
SCOT25-02	MR-2-3-U	2	0.7		
SCOT25-02	MR-2-3-U	3	1.0		
SCOT25-02	MR-2-3-U	4	0.3	Y	3
SCOT25-02	MR-2-3-U	5	0.5		
SCOT25-02	MR-2-3-U	6	0.9		
SCOT25-02	MR-2-3-U	7	1.2		
SCOT25-02	MR-2-3-U	8	0.7		
SCOT25-02	MR-2-3-U	9	1.0		
SCOT25-02	MR-2-3-U	10	0.3		
SCOT31-02	MR-0-3-U	1	2.0	Y	5
SCOT31-02	MR-0-3-U	2			
SCOT31-02	MR-0-3-U	3	1.8		
SCOT31-02	MR-0-3-U	4	1.8		
SCOT31-02	MR-0-3-U	5	0.7		
SCOT31-02	MR-0-3-U	6	1.1	Y	7
SCOT31-02	MR-0-3-U	7	0.6		
SCOT31-02	MR-0-3-U	8	1.5		
SCOT31-02	MR-0-3-U	9	1.0		
SCOT31-02	MR-0-3-U	10	1.1		
SCOT31-02	MR-0-3-U	11			
SMIT01-05	MR-0-4-U	1	2.7		
SMIT01-05	MR-0-4-U	2	2.5	Y	57
SMIT01-05	MR-0-4-U	3	0.8	Y	7
SMIT01-05	MR-0-4-U	4	1.6	Y	21
SMIT01-05	MR-0-4-U	5	0.9		

Reach ID	Reach Type	Pool	Residual Depth (Feet)	*Spawning Gravels Identified*	*Pool Tail-out Fines (%)*
STON08-01	MR-2-2-C	1	1.2	Y	6
STON08-01	MR-2-2-C	2	1.1		
STON08-01	MR-2-2-C	3	0.8		
STON08-01	MR-2-2-C	4	0.8		
STON08-01	MR-2-2-C	5	0.8		
STON08-01	MR-2-2-C	6	0.4		
STON08-01	MR-2-2-C	7	0.5		
STON08-01	MR-2-2-C	8	0.8		
STON08-01	MR-2-2-C	9	0.6	Y	16
STON08-01	MR-2-2-C	10	0.8		
STON08-01	MR-2-2-C	11	1.4		
STON08-01	MR-2-2-C	12	0.8		
STON08-01	MR-2-2-C	13	1.6		
STON08-01	MR-2-2-C	14	1.4		
STON08-01	MR-2-2-C	15	0.6		
STON08-01	MR-2-2-C	16	0.8		
STON13-02	MR-2-2-U	1	1.8		
STON13-02	MR-2-2-U	2	0.6		
STON13-02	MR-2-2-U	3	0.4	Y	12
STON13-02	MR-2-2-U	4	0.5		
STON13-02	MR-2-2-U	5	0.4		
STON13-02	MR-2-2-U	6	1.4		
STON13-02	MR-2-2-U	7	1.3		
STON13-02	MR-2-2-U	8	0.4		
STON13-02	MR-2-2-U	9	0.7		
STON13-02	MR-2-2-U	10	1.0	Y	16
STON13-02	MR-2-2-U	11	0.9		
STON13-02	MR-2-2-U	12	0.8		
STON13-02	MR-2-2-U	13	1.0		
STON13-02	MR-2-2-U	14	1.1		
STON13-02	MR-2-2-U	15	1.1		
STON13-02	MR-2-2-U	16	0.7		
THOM02-03	MR-0-2-U	1	1.0	Y	5
THOM02-03	MR-0-2-U	2	0.5	Y	22
THOM02-03	MR-0-2-U	3	0.8		
THOM02-03	MR-0-2-U	4	0.6	Y	6

Y = Spawning Gravels Present
N = Spawning Gravels Absent
Q = Questionable Spawning Gravels

Attachment AC - STREAMBANK EROSION SEDIMENT LOADS

STREAM	REACH_ID	REACH_TYPE	Sediment Load per 1000 Feet (Tons/Year)	LENGTH_FT	Reach Sediment Load (Tons/Year)	LB_RP_HLTH	RB_RP_HLTH	ANTHRO_TRA	ANTHRO_GRA	ANTHRO_CRO	ANTHRO_MIN	ANTHRO_FOR	ANTHRO_IRR	ANTHRO_NAT	ANTHRO_OTH	ANTHRO_TRA_TONS/YR	ANTHRO_GRA_TONS/YR	ANTHRO_CRO_TONS/YR	ANTHRO_MIN_TONS/YR	ANTHRO_FOR_TONS/YR	ANTHRO_IRR_TONS/YR	ANTHRO_NAT_TONS/YR	ANTHRO_OTH_TONS/YR
Bear Creek	BEAR 01-01	MR-2-1-U	1.95	1090	2.1	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0
Bear Creek	BEAR 02-01	MR-4-1-U	1.95	951	1.9	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0
Bear Creek	BEAR 03-01	MR-10-1-U	0.31	375	0.1	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Bear Creek	BEAR 04-01	MR-4-1-U	1.95	1826	3.6	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0
Bear Creek	BEAR 05-01	MR-10-1-U	0.31	708	0.2	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Bear Creek	BEAR 06-01	MR-4-1-U	1.95	1682	3.3	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0
Bear Creek	BEAR 07-01	MR-10-1-U	0.31	714	0.2	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Bear Creek	BEAR 08-01	MR-4-1-U	1.95	1117	2.2	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0
Bear Creek	BEAR 09-01	MR-10-1-U	0.31	401	0.1	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Bear Creek	BEAR 10-01	MR-4-1-U	1.95	437	0.9	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0
Bear Creek	BEAR 11-01	MR-4-2-U	4.85	1232	6.0	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0
Bear Creek	BEAR 11-02	MR-4-2-U	10.88	331	3.6	FAIR	FAIR	20	0	0	0	60	0	20	0	0.7	0.0	0.0	0.0	2.2	0.0	0.7	0.0
Bear Creek	BEAR 12-01	MR-2-2-U	10.88	2333	25.4	FAIR	FAIR	0	0	0	0	60	0	40	0	0.0	0.0	0.0	0.0	15.2	0.0	10.2	0.0
Bear Creek	BEAR 13-01	MR-4-2-U	10.88	627	6.8	FAIR	FAIR	20	0	0	0	70	0	10	0	1.4	0.0	0.0	0.0	4.8	0.0	0.7	0.0
Bear Creek	BEAR 13-02	MR-4-2-U	10.88	296	3.2	FAIR	FAIR	20	0	0	0	70	0	10	0	0.6	0.0	0.0	0.0	2.3	0.0	0.3	0.0
Bear Creek	BEAR 14-01	MR-2-2-U	10.88	4039	43.9	FAIR	FAIR	30	0	0	0	50	0	20	0	13.2	0.0	0.0	0.0	22.0	0.0	8.8	0.0
Bear Creek	BEAR 15-01	MR-4-2-U	4.85	826	4.0	FAIR	FAIR	20	0	0	0	0	0	80	0	0.8	0.0	0.0	0.0	0.0	0.0	3.2	0.0
Bear Creek	BEAR 16-01	MR-2-2-U	4.85	1057	5.1	FAIR	GOOD	20	0	0	0	0	0	80	0	1.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0
Bear Creek	BEAR 17-01	MR-4-2-C	10.88	992	10.8	FAIR	GOOD	0	40	0	0	0	0	60	0	0.0	4.3	0.0	0.0	0.0	0.0	6.5	0.0
Bear Creek	BEAR 17-02	MR-4-2-C	10.88	1743	19.0	GOOD	FAIR	50	0	0	0	0	0	50	0	9.5	0.0	0.0	0.0	0.0	0.0	9.5	0.0
Bear Creek	**BEAR 18-01**	**MR-2-2-C**	**2.28**	**2320**	**5.3**	**FAIR**	**GOOD**	**50**	**0**	**0**	**0**	**0**	**0**	**50**	**0**	**2.6**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**2.6**	**0.0**
Bear Creek	BEAR 19-01	MR-4-2-C	10.88	1920	20.9	FAIR	GOOD	50	0	0	0	0	0	50	0	10.4	0.0	0.0	0.0	0.0	0.0	10.4	0.0
Bear Creek	**BEAR 20-01**	**MR-4-2-U**	**15.92**	**2378**	**37.9**	**FAIR**	**FAIR**	**0**	**0**	**0**	**0**	**0**	**0**	**100**	**0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**37.9**	**0.0**
Bear Creek	BEAR 21-01	MR-2-2-U	10.88	746	8.1	FAIR	FAIR	50	0	0	0	0	0	0	50	4.1	0.0	0.0	0.0	0.0	0.0	0.0	4.1
Bear Creek	BEAR 22-01	MR-2-3-U	19.40	6268	121.6	FAIR	FAIR	40	0	0	0	0	0	20	40	48.6	0.0	0.0	0.0	0.0	0.0	24.3	48.6
Bear Creek	BEAR 23-01	MR-2-3-U	19.40	1161	22.5	FAIR	FAIR	0	20	0	0	0	0	40	40	0.0	4.5	0.0	0.0	0.0	0.0	9.0	9.0
Bear Creek	BEAR 24-01	MR-0-3-U	19.40	838	16.3	FAIR	FAIR	60	0	0	0	0	0	40	0	9.8	0.0	0.0	0.0	0.0	0.0	6.5	0.0
Bear Creek	BEAR 24-02	MR-0-3-U	19.40	1607	31.2	FAIR	FAIR	20	0	0	0	0	40	0	40	6.2	0.0	0.0	0.0	0.0	12.5	0.0	12.5
Bear Creek	BEAR 25-01			2309	0.0	FAIR	FAIR	40	0	0	0	0	40	20	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bear Creek	BEAR 26-01	MR-0-3-U	19.40	1516	29.4	FAIR	FAIR	50	0	0	0	0	50	0	0	14.7	0.0	0.0	0.0	0.0	14.7	0.0	0.0
Bear Creek	**BEAR 26-02**	**MR-0-3-U**	**31.22**	**5038**	**157.3**	**FAIR**	**FAIR**	**0**	**40**	**0**	**0**	**0**	**40**	**0**	**20**	**0.0**	**62.9**	**0.0**	**0.0**	**0.0**	**62.9**	**0.0**	**31.5**
Bear Creek	BEAR 26-03	MR-0-3-U	19.40	1156	22.4	FAIR	FAIR	20	0	20	0	0	0	0	60	4.5	0.0	4.5	0.0	0.0	0.0	0.0	13.5
Bear Creek	BEAR 27-01	MR-2-3-U	19.40	995	19.3	FAIR	FAIR	10	0	0	0	0	20	0	70	1.9	0.0	0.0	0.0	0.0	3.9	0.0	13.5
Bear Creek	BEAR 28-01	MR-0-3-U	19.40	2486	48.2	FAIR	FAIR	40	0	0	0	0	30	0	30	19.3	0.0	0.0	0.0	0.0	14.5	0.0	14.5
			TOTAL	**53513**	**682.7**										**TOTAL**	**149.4**	**71.7**	**4.5**	**0.0**	**46.4**	**108.4**	**155.2**	**147.1**
															PERCENT	**0.22**	**0.11**	**0.01**	**0.00**	**0.07**	**0.16**	**0.23**	**0.22**
Bozeman Creek	BOZE 01-01	MR-10-1-U	0.31	984	0.3	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Bozeman Creek	BOZE 02-01	MR-4-1-U	1.95	581	1.1	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0
Bozeman Creek	BOZE 03-01	MR-4-1-C	1.95	1613	3.1	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0
Bozeman Creek	BOZE 04-01	MR-2-1-U	1.95	902	1.8	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0
Bozeman Creek	BOZE 05-01	MR-2-2-U	4.85	305	1.5	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0
Bozeman Creek	BOZE 06-01	MR-4-2-U	4.85	942	4.6	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0
Bozeman Creek	BOZE 07-01	MR-0-2-U	4.85	2222	10.8	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	10.8	0.0
Bozeman Creek	BOZE 08-01	MR-2-2-U	4.85	6615	32.1	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	32.1	0.0
Bozeman Creek	BOZE 08-02	MR-2-2-U	10.88	1127	12.3	FAIR	FAIR	30	0	0	0	0	0	70	0	3.7	0.0	0.0	0.0	0.0	0.0	8.6	0.0
Bozeman Creek	BOZE 09-01	MR-0-2-U	4.85	2400	11.6	FAIR	FAIR	10	0	0	0	10	0	80	0	1.2	0.0	0.0	0.0	1.2	0.0	9.3	0.0
Bozeman Creek	BOZE 10-01	MR-2-2-U	4.85	5529	26.8	GOOD	FAIR	20	0	0	0	0	0	80	0	5.4	0.0	0.0	0.0	0.0	0.0	21.5	0.0
Bozeman Creek	BOZE 11-01	MR-0-2-U	4.85	2097	10.2	GOOD	FAIR	10	0	0	0	0	0	90	0	1.0	0.0	0.0	0.0	0.0	0.0	9.2	0.0
Bozeman Creek	BOZE 12-01	MR-2-2-C	10.88	4378	47.6	GOOD	FAIR	50	0	0	0	0	0	50	0	23.8	0.0	0.0	0.0	0.0	0.0	23.8	0.0
Bozeman Creek	BOZE 12-02	MR-2-2-C	4.85	4200	20.4	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	20.4	0.0
Bozeman Creek	BOZE 13-01	MR-2-2-U	4.85	1529	7.4	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	0.0
Bozeman Creek	**BOZE 14-01**	**MR-0-2-U**	**8.04**	**4901**	**39.4**	**FAIR**	**GOOD**	**0**	**0**	**0**	**0**	**40**	**0**	**60**	**0**	**0.0**	**0.0**	**0.0**	**0.0**	**15.8**	**0.0**	**23.6**	**0.0**
Bozeman Creek	**BOZE 15-01**	**MR-0-2-U**	**5.33**	**5754**	**30.7**	**FAIR**	**FAIR**	**0**	**20**	**0**	**0**	**0**	**40**	**0**	**40**	**0.0**	**6.1**	**0.0**	**0.0**	**0.0**	**12.3**	**0.0**	**12.3**
Bozeman Creek	BOZE 15-02	MR-0-2-U	10.88	6057	65.9	FAIR	FAIR	0	20	0	0	0	60	20	0	0.0	13.2	0.0	0.0	0.0	39.5	13.2	0.0
Bozeman Creek	BOZE 16-01	MR-2-2-U	10.88	678	7.4	FAIR	FAIR	10	0	0	0	0	90	0	0	0.7	0.0	0.0	0.0	0.0	6.6	0.0	0.0
Bozeman Creek	BOZE 17-01	MR-0-2-U	10.88	1140	12.4	FAIR	FAIR	0	0	0	0	0	80	20	0	0.0	0.0	0.0	0.0	0.0	9.9	2.5	0.0
Bozeman Creek	BOZE 17-02	MR-0-2-U	10.88	4607	50.1	FAIR	FAIR	0	0	0	0	0	40	0	60	0.0	0.0	0.0	0.0	0.0	20.1	0.0	30.1
Bozeman Creek	BOZE 18-01	MR-0-3-U	19.40	1071	20.8	FAIR	FAIR	0	0	0	0	0	0	70	30	0.0	0.0	0.0	0.0	0.0	0.0	14.5	6.2
Bozeman Creek	BOZE 18-02	MR-0-3-U	19.40	6310	122.4	FAIR	FAIR	0	0	0	0	0	30	0	70	0.0	0.0	0.0	0.0	0.0	36.7	0.0	85.7
Bozeman Creek	BOZE 18-03	MR-0-3-U	19.40	6489	125.9	FAIR	FAIR	0	0	0	0	0	30	0	70	0.0	0.0	0.0	0.0	0.0	37.8	0.0	88.1
Bozeman Creek	**BOZE 18-04**	**MR-0-3-U**	**17.37**	**6024**	**104.6**	**POOR**	**POOR**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**100**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**104.6**
Bozeman Creek	**BOZE 18-05**	**MR-0-3-U**	**8.92**	**4910**	**43.8**	**FAIR**	**POOR**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**100**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**43.8**
			TOTAL	**83366**	**814.9**										**TOTAL**	**35.8**	**19.3**	**0.0**	**0.0**	**16.9**	**162.9**	**209.2**	**370.8**
															PERCENT	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.2**	**0.3**	**0.5**
Camp Creek	CAMP 01-01	MR-4-1-U	1.97	1888	3.7	FAIR	POOR	0	100	0	0	0	0	0	0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0
Camp Creek	CAMP 02-01			899	0.0	FAIR	POOR	0	100	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Camp Creek	CAMP 03-01	MR-0-1-U	1.97	1985	3.9	FAIR	FAIR	0	50	0	50	0	0	0	0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0
Camp Creek	CAMP 03-02	MR-0-1-U	1.97	1953	3.8	FAIR	FAIR	0	40	60	0	0	0	0	0	0.0	1.5	2.3	0.0	0.0	0.0	0.0	0.0
Camp Creek	CAMP 03-03	MR-0-1-U	1.97	2555	5.0	FAIR	FAIR	10	30	60	0	0	0	0	0	0.5	1.5	3.0	0.0	0.0	0.0	0.0	0.0
Camp Creek	CAMP 03-04	MR-0-1-U	1.97	459	0.9	FAIR	FAIR	0	50	50	0	0	0	0	0	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0
Camp Creek	CAMP 03-05	MR-0-1-U	1.97	1175	2.3	FAIR	FAIR	0	20	80	0	0	0	0	0	0.0	0.5	1.9	0.0	0.0	0.0	0.0	0.0
Camp Creek	CAMP 04-01	MR-2-1-U	1.97	3715	7.3	POOR	POOR	0	50	50	0	0	0	0	0	0.0	3.7	3.7	0.0	0.0	0.0	0.0	0.0
Camp Creek	CAMP 05-01	MR-4-1-C	1.97	925	1.8	FAIR	FAIR	0	70	30	0	0	0	0	0	0.0	1.3	0.5	0.0	0.0	0.0	0.0	0.0
Camp Creek	CAMP 05-02	MR-4-1-C	1.97	1024	2.0	FAIR	FAIR	0	60	0	0	0	0	40	0	0.0	1.2	0.0	0.0	0.0	0.0	0.8	0.0
Camp Creek	CAMP 06-01	MR-0-1-U	1.97	1515	3.0	POOR	POOR	0	100	0	0	0	0	0	0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Camp Creek	CAMP 06-02	MR-0-1-U	1.97	1534	3.0	FAIR	FAIR	0	70	0	0	0	0	30	0	0.0	2.1	0.0	0.0	0.0	0.0	0.9	0.0
Camp Creek	CAMP 07-01	MR-0-2-U	10.88	1388	15.1	FAIR	FAIR	0	70	0	0	0	0	30	0	0.0	10.6	0.0	0.0	0.0	0.0	4.5	0.0
Camp Creek	CAMP 08-01	MR-0-3-U	19.40	960	18.6	FAIR	FAIR	0	40	40	0	0	0	20	0	0.0	7.5	7.5	0.0	0.0	0.0	3.7	0.0
Camp Creek	CAMP 09-01	MR-2-3-U	19.40	968	18.8	FAIR	FAIR	0	40	50	0	0	0	10	0	0.0	7.5	9.4	0.0	0.0	0.0	1.9	0.0
Camp Creek	CAMP 10-01	MR-0-3-U	19.40	505	9.8	FAIR	FAIR	0	50	40	0	0	0	10	0	0.0	4.9	3.9	0.0	0.0	0.0	1.0	0.0
Camp Creek	CAMP 10-02	MR-0-3-U	19.40	1912	37.1	FAIR	FAIR	10	20	70	0	0	0	0	0	3.7	7.4	26.0	0.0	0.0	0.0	0.0	0.0
Camp Creek	CAMP 10-03	MR-0-3-U	19.40	1093	21.2	FAIR	FAIR	0	40	40	0	0	0	20	0	0.0	8.5	8.5	0.0	0.0	0.0	4.2	0.0
Camp Creek	CAMP 10-04	MR-0-3-U	19.40	408	7.9	FAIR	FAIR	0	70	0	0	0	0	30	0	0.0	5.5	0.0	0.0	0.0	0.0	2.4	0.0
Camp Creek	CAMP 11-01	MR-0-3-C	19.40	877	17.0	FAIR	FAIR	0	70	0	0	0	0	30	0	0.0	11.9	0.0	0.0	0.0	0.0	5.1	0.0
Camp Creek	CAMP 11-02	MR-0-3-C	19.40	764	14.8	GOOD	GOOD	0	50	0	0	0	0	50	0	0.0	7.4	0.0	0.0	0.0	0.0	7.4	0.0
Camp Creek	CAMP 12-01	MR-2-3-C	19.40	1983	38.5	FAIR	FAIR	0	50	0	0	0	0	50	0	0.0	19.2	0.0	0.0	0.0	0.0	19.2	0.0
Camp Creek	CAMP 13-01	MR-2-3-U	19.40	621	12.1	FAIR	FAIR	20	30	40	0	0	0	10	0	2.4	3.6	4.8	0.0	0.0	0.0	1.2	0.0
Camp Creek	**CAMP 13-02**	**MR-2-3-U**	**5.12**	**665**	**3.4**	**FAIR**	**FAIR**	**20**	**60**	**0**	**0**	**0**	**0**	**20**	**0**	**0.7**	**2.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.7**	**0.0**
Camp Creek	CAMP 14-01	MR-0-3-U	19.40	3888	75.4	FAIR	FAIR	40	60	0	0	0	0	0	0	30.2	45.3	0.0	0.0	0.0	0.0	0.0	0.0
Camp Creek	CAMP 14-02	MR-0-3-U	19.40	786	15.3	FAIR	FAIR	10	40	50	0	0	0	0	0	1.5	6.1	7.6	0.0	0.0	0.0	0.0	0.0
Camp Creek	CAMP 14-03	MR-0-3-U	19.40	1168	22.7	POOR	POOR	0	60	0	0	0	0	0	40	0.0	13.6	0.0	0.0	0.0	0.0	0.0	9.1
Camp Creek	CAMP 14-04	MR-0-3-U	19.40	4358	84.5	POOR	POOR	30	20	30	0	0	0	0	20	25.4	16.9	25.4	0.0	0.0	0.0	0.0	16.9
Camp Creek	**CAMP 14-05**	**MR-0-3-U**	**15.25**	**2211**	**33.7**	**FAIR**	**FAIR**	**20**	**40**	**40**	**0**	**0**	**0**	**0**	**0**	**6.7**	**13.5**	**13.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Camp Creek	CAMP 14-06	MR-0-3-U	19.40	2201	42.7	FAIR	FAIR	50	30	20	0	0	0	0	0	21.3	12.8	8.5	0.0	0.0	0.0	0.0	0.0
Camp Creek	CAMP 14-07	MR-0-3-U	19.40	1848	35.9	FAIR	FAIR	80	20	0	0	0	0	0	0	28.7	7.2	0.0	0.0	0.0	0.0	0.0	0.0
Camp Creek	CAMP 14-08	MR-0-3-U	19.40	924	17.9	FAIR	FAIR	20	40	0	0	0	0	0	40	3.6	7.2	0.0	0.0	0.0	0.0	0.0	7.2
Camp Creek	CAMP 14-09	MR-0-3-U	19.40	8617	167.2	FAIR	FAIR	30	20	20	0	0	30	0	0	50.2	33.4	33.4	0.0	0.0	50.2	0.0	0.0
Camp Creek	CAMP 14-10	MR-0-3-U	19.40	3839	74.5	FAIR	FAIR	0	50	0	0	0	50	0	0	0.0	37.2	0.0	0.0	0.0	37.2	0.0	0.0
Camp Creek	CAMP 14-11	MR-0-3-U	19.40	1594	30.9	POOR	POOR	0	0	0	0	0	0	0	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.9
Camp Creek	**CAMP 14-12**	**MR-0-3-U**	**61.62**	**8753**	**539.4**	**POOR**	**POOR**	**0**	**0**	**20**	**0**	**0**	**80**	**0**	**0**	**0.0**	**0.0**	**107.9**	**0.0**	**0.0**	**431.5**	**0.0**	**0.0**
Camp Creek	CAMP 14-13	MR-0-3-U	19.40	6851	132.9	POOR	POOR	50	20	0	0	0	30	0	0	66.5	26.6	0.0	0.0	0.0	39.9	0.0	0.0
Camp Creek	CAMP 14-14	MR-0-3-U	19.40	3384	65.6	FAIR	FAIR	50	50	0	0	0	0	0	0	32.8	32.8	0.0	0.0	0.0	0.0	0.0	0.0
Camp Creek	CAMP 14-15	MR-0-3-U	19.40	3390	65.8	POOR	POOR	40	20	0	0	0	0	0	40	26.3	13.2	0.0	0.0	0.0	0.0	0.0	26.3
Camp Creek	CAMP 14-16	MR-0-3-U	19.40	6334	122.9	FAIR	FAIR	50	0	50	0	0	0	0	0	61.4	0.0	61.4	0.0	0.0	0.0	0.0	0.0
Camp Creek	CAMP 14-17	MR-0-3-U	19.40	1562	30.3	FAIR	FAIR	10	70	10	0	0	0	10	0	3.0	21.2	3.0	0.0	0.0	0.0	3.0	0.0
Camp Creek	CAMP 14-18	MR-0-3-U	19.40	3765	73.0	FAIR	FAIR	0	20	80	0	0	0	0	0	0.0	14.6	58.4	0.0	0.0	0.0	0.0	0.0
Camp Creek	CAMP 14-19	MR-0-3-U	19.40	2483	48.2	POOR	POOR	0	20	0	0	0	0	0	80	0.0	9.6	0.0	0.0	0.0	0.0	0.0	38.5
Camp Creek	CAMP 14-20	MR-0-3-U	19.40	1584	30.7	POOR	POOR	0	0	100	0	0	0	0	0	0.0	0.0	30.7	0.0	0.0	0.0	0.0	0.0
Camp Creek	CAMP 14-21	MR-0-3-U	19.40	5441	105.6	FAIR	POOR	0	20	60	0	0	0	0	20	0.0	21.1	63.3	0.0	0.0	0.0	0.0	21.1
Camp Creek	CAMP 14-22	MR-0-3-U	19.40	7020	136.2	FAIR	FAIR	30	20	50	0	0	0	0	0	40.9	27.2	68.1	0.0	0.0	0.0	0.0	0.0
Camp Creek	CAMP 15-01	MR-0-4-U	19.40	4325	83.9	FAIR	FAIR	10	40	0	0	0	50	0	0	8.4	33.6	0.0	0.0	0.0	42.0	0.0	0.0
Camp Creek	CAMP 15-02	MR-0-4-U	19.40	4050	78.6	FAIR	FAIR	10	30	30	0	0	30	0	0	7.9	23.6	23.6	0.0	0.0	23.6	0.0	0.0
Camp Creek	CAMP 15-03	MR-0-4-U	19.40	622	12.1	FAIR	FAIR	100	0	0	0	0	0	0	0	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Camp Creek	**CAMP 15-04**	**MR-0-4-U**	**2.96**	**5940**	**17.6**	**FAIR**	**FAIR**	**10**	**40**	**0**	**0**	**0**	**40**	**10**	**0**	**1.8**	**7.0**	**0.0**	**0.0**	**0.0**	**7.0**	**1.8**	**0.0**
Camp Creek	CAMP 15-05	MR-0-4-U	19.40	5118	99.3	FAIR	FAIR	10	40	0	0	0	40	10	0	9.9	39.7	0.0	0.0	0.0	39.7	9.9	0.0
			TOTAL	**133827**	**2493.8**										**TOTAL**	**445.8**	**580.4**	**576.8**	**2.0**	**0.0**	**671.0**	**67.8**	**150.0**
															PERCENT	**0.2**	**0.2**	**0.2**	**0.0**	**0.0**	**0.3**	**0.0**	**0.1**

STREAM	REACH_ID	REACH_TYPE	Sediment Load per 1000 Feet (Tons/Year)	LENGTH_FT	Reach Sediment Load (Tons/Year)	LB_RP_HLTH	RB_RP_HLTH	ANTHRO_TRA	ANTHRO_GRA	ANTHRO_CRO	ANTHRO_MIN	ANTHRO_FOR	ANTHRO_IRR	ANTHRO_NAT	ANTHRO_OTH	ANTHRO_TRA_TONS/YR	ANTHRO_GRA_TONS/YR	ANTHRO_CRO_TONS/YR	ANTHRO_MIN_TONS/YR	ANTHRO_FOR_TONS/YR	ANTHRO_IRR_TONS/YR	ANTHRO_NAT_TONS/YR	ANTHRO_OTH_TONS/YR
Dry Creek	DRY 01-01	MR-10-1-C	0.31	1229	0.4	GOOD	GOOD	0	0	0	0	0	0	100	0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Dry Creek	DRY 02-01	MR-10-1-U	0.31	407	0.1	FAIR	FAIR	0	50	0	0	0	0	50	0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0
Dry Creek	DRY 03-01	MR-10-1-U	0.31	1282	0.4	POOR	POOR	0	60	0	0	0	0	40	0	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0
Dry Creek	DRY 04-01	MR-4-1-U	1.97	954	1.9	POOR	POOR	0	60	0	0	0	0	40	0	0.0	1.1	0.0	0.0	0.0	0.0	0.8	0.0
Dry Creek	DRY 04-02	MR-4-1-U	1.97	3183	6.3	POOR	POOR	10	20	70	0	0	0	0	0	0.6	1.3	4.4	0.0	0.0	0.0	0.0	0.0
Dry Creek	DRY 04-03	MR-4-1-U	1.97	738	1.5	FAIR	FAIR	0	40	40	0	0	0	20	0	0.0	0.6	0.6	0.0	0.0	0.0	0.3	0.0
Dry Creek	DRY 05-01	MR-2-1-U	1.97	2954	5.8	FAIR	FAIR	0	0	80	0	0	0	20	0	0.0	0.0	4.7	0.0	0.0	0.0	1.2	0.0
Dry Creek	DRY 06-01	MR-2-2-U	10.88	3657	39.8	FAIR	FAIR	0	20	70	0	0	0	10	0	0.0	8.0	27.9	0.0	0.0	0.0	4.0	0.0
Dry Creek	DRY 07-01			2021	0.0	FAIR	FAIR	0	50	40	0	0	0	10	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry Creek	DRY 08-01	MR-0-2-U	10.88	3249	35.3	FAIR	FAIR	10	40	40	0	0	0	10	0	3.5	14.1	14.1	0.0	0.0	0.0	3.5	0.0
Dry Creek	DRY 09-01	MR-0-3-U	19.40	3487	67.7	FAIR	FAIR	30	30	0	0	0	30	10	0	20.3	20.3	0.0	0.0	0.0	20.3	6.8	0.0
Dry Creek	DRY 09-02	MR-0-3-U	19.40	2686	52.1	FAIR	FAIR	10	70	0	0	0	0	20	0	5.2	36.5	0.0	0.0	0.0	0.0	10.4	0.0
Dry Creek	DRY 09-03	MR-0-3-U	19.40	5586	108.4	FAIR	FAIR	10	40	0	0	0	40	10	0	10.8	43.4	0.0	0.0	0.0	43.4	10.8	0.0
Dry Creek	DRY 09-04	MR-0-3-U	19.40	5193	100.7	FAIR	FAIR	0	40	0	0	0	40	10	10	0.0	40.3	0.0	0.0	0.0	40.3	10.1	10.1
Dry Creek	**DRY 09-05**	**MR-0-3-U**	**31.39**	**4650**	**146.0**	**FAIR**	**FAIR**	**0**	**30**	**0**	**0**	**0**	**50**	**0**	**20**	**0.0**	**43.8**	**0.0**	**0.0**	**0.0**	**73.0**	**0.0**	**29.2**
Dry Creek	DRY 09-06	MR-0-3-U	19.40	2653	51.5	FAIR	FAIR	50	40	0	0	0	0	10	0	25.7	20.6	0.0	0.0	0.0	0.0	5.1	0.0
Dry Creek	DRY 10-01	MR-0-3-C	19.40	1484	28.8	FAIR	FAIR	0	40	0	0	0	40	20	0	0.0	11.5	0.0	0.0	0.0	11.5	5.8	0.0
Dry Creek	DRY 10-02	MR-0-3-C	19.40	2137	41.5	FAIR	FAIR	50	40	0	0	0	0	10	0	20.7	16.6	0.0	0.0	0.0	0.0	4.1	0.0
Dry Creek	DRY 10-03	MR-0-3-C	19.40	509	9.9	FAIR	FAIR	10	40	0	0	0	50	0	0	1.0	3.9	0.0	0.0	0.0	4.9	0.0	0.0
Dry Creek	DRY 11-01	MR-0-4-C	19.40	1338	26.0	FAIR	FAIR	50	40	0	0	0	0	10	0	13.0	10.4	0.0	0.0	0.0	0.0	2.6	0.0
Dry Creek	DRY 12-01	MR-0-4-U	19.40	2572	49.9	FAIR	FAIR	50	40	0	0	0	0	10	0	24.9	20.0	0.0	0.0	0.0	0.0	5.0	0.0
Dry Creek	DRY 12-02	MR-0-4-U	19.40	2555	49.6	FAIR	FAIR	30	30	0	0	0	0	0	40	14.9	14.9	0.0	0.0	0.0	0.0	0.0	19.8
Dry Creek	DRY 12-03	MR-0-4-U	19.40	6456	125.2	FAIR	FAIR	40	20	0	0	0	40	0	0	50.1	25.0	0.0	0.0	0.0	50.1	0.0	0.0
Dry Creek	DRY 12-04	MR-0-4-U	19.40	3709	72.0	FAIR	FAIR	10	30	0	0	0	60	0	0	7.2	21.6	0.0	0.0	0.0	43.2	0.0	0.0
Dry Creek	DRY 12-05	MR-0-4-U	19.40	4054	78.7	FAIR	FAIR	10	0	90	0	0	0	0	0	7.9	0.0	70.8	0.0	0.0	0.0	0.0	0.0
Dry Creek	**DRY 12-06**	**MR-0-4-U**	**17.63**	**2850**	**50.3**	**FAIR**	**FAIR**	**10**	**40**	**0**	**0**	**0**	**0**	**0**	**50**	**5.0**	**20.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**25.1**
Dry Creek	DRY 12-07	MR-0-4-U	19.40	2977	57.7	FAIR	FAIR	0	30	0	0	0	70	0	0	0.0	17.3	0.0	0.0	0.0	40.4	0.0	0.0
Dry Creek	DRY 12-08	MR-0-4-U	19.40	2571	49.9	FAIR	FAIR	20	0	0	0	0	60	0	20	10.0	0.0	0.0	0.0	0.0	29.9	0.0	10.0
Dry Creek	DRY 12-09	MR-0-4-U	19.40	8540	165.7	FAIR	FAIR	20	20	0	0	0	30	0	30	33.1	33.1	0.0	0.0	0.0	49.7	0.0	49.7
			TOTAL	**85683**	**1422.7**									**TOTAL**		**254.0**	**424.6**	**122.4**	**0.0**	**0.0**	**406.7**	**71.1**	**143.9**
														PERCENT		**0.2**	**0.3**	**0.1**	**0.0**	**0.0**	**0.3**	**0.0**	**0.1**
Godfrey Creek	GOD 01-01	MR-0-1-U	1.97	5639	11.1	FAIR	FAIR	20	20	20	0	0	20	0	20	2.2	2.2	2.2	0.0	0.0	2.2	0.0	2.2
Godfrey Creek	**GOD 02-01**	**MR-0-2-U**	**5.69**	**3149**	**17.9**	**POOR**	**POOR**	**20**	**20**	**20**	**0**	**0**	**20**	**0**	**20**	**3.6**	**3.6**	**3.6**	**0.0**	**0.0**	**3.6**	**0.0**	**3.6**
Godfrey Creek	**GOD 03-01**	**MR-0-3-U**	**9.46**	**15867**	**150.1**	**POOR**	**POOR**	**20**	**20**	**20**	**0**	**0**	**20**	**0**	**20**	**30.0**	**30.0**	**30.0**	**0.0**	**0.0**	**30.0**	**0.0**	**30.0**
Godfrey Creek	GOD 03-02	MR-0-3-U	19.40	6879	133.5	POOR	POOR	20	20	20	0	0	20	0	20	26.7	26.7	26.7	0.0	0.0	26.7	0.0	26.7
Godfrey Creek	GOD 03-03	MR-0-3-U	19.40	6071	117.8	POOR	POOR	20	0	40	0	0	40	0	0	23.6	0.0	47.1	0.0	0.0	47.1	0.0	0.0
			TOTAL	**37605**	**430.4**									**TOTAL**		**86.1**	**62.5**	**109.6**	**0.0**	**0.0**	**109.6**	**0.0**	**62.5**
														PERCENT		**0.2**	**0.1**	**0.3**	**0.0**	**0.0**	**0.3**	**0.0**	**0.1**
Jackson Creek	JACK 01-01	MR-10-1-C	0.31	5072	1.6	FAIR	FAIR	30	0	0	0	50	0	20	0	0.5	0.0	0.0	0.0	0.8	0.0	0.3	0.0
Jackson Creek	JACK 02-01	MR-4-1-C	1.97	1622	3.2	FAIR	FAIR	40	30	0	0	30	0	0	0	1.3	1.0	0.0	0.0	1.0	0.0	0.0	0.0
Jackson Creek	JACK 02-02	MR-4-1-C	1.97	362	0.7	FAIR	FAIR	40	30	0	0	30	0	0	0	0.3	0.2	0.0	0.0	0.2	0.0	0.0	0.0
Jackson Creek	JACK 03-01	MR-4-1-U	1.97	563	1.1	FAIR	FAIR	40	30	0	0	30	0	0	0	0.4	0.3	0.0	0.0	0.3	0.0	0.0	0.0
Jackson Creek	**JACK 04-01**	**MR-4-1-C**	**2.50**	**2134**	**5.3**	**FAIR**	**FAIR**	**0**	**50**	**0**	**0**	**50**	**0**	**0**	**0**	**0.0**	**2.7**	**0.0**	**0.0**	**2.7**	**0.0**	**0.0**	**0.0**
Jackson Creek	JACK 05-01	MR-4-1-U	1.97	997	2.0	FAIR	FAIR	0	50	0	0	50	0	0	0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0
Jackson Creek	JACK 06-01	MR-2-1-U	1.97	1113	2.2	FAIR	FAIR	40	30	0	0	30	0	0	0	0.9	0.7	0.0	0.0	0.7	0.0	0.0	0.0
Jackson Creek	JACK 07-01	MR-2-2-U	10.88	1228	13.4	FAIR	FAIR	40	40	0	0	20	0	0	0	5.3	5.3	0.0	0.0	2.7	0.0	0.0	0.0
Jackson Creek	JACK 08-01	MR-0-2-U	10.88	2074	22.6	FAIR	FAIR	40	30	0	0	30	0	0	0	9.0	6.8	0.0	0.0	6.8	0.0	0.0	0.0
Jackson Creek	JACK 09-01	MR-2-2-U	10.88	2794	30.4	FAIR	FAIR	50	20	0	0	30	0	0	0	15.2	6.1	0.0	0.0	9.1	0.0	0.0	0.0
Jackson Creek	JACK 09-02	MR-2-2-U	10.88	3137	34.1	FAIR	FAIR	40	20	0	0	20	0	20	0	13.7	6.8	0.0	0.0	6.8	0.0	6.8	0.0
Jackson Creek	JACK 09-03	MR-2-2-U	10.88	1829	19.9	GOOD	FAIR	40	20	0	0	0	0	40	0	8.0	4.0	0.0	0.0	0.0	0.0	8.0	0.0
Jackson Creek	JACK 10-01	MR-2-2-U	10.88	2228	24.2	GOOD	FAIR	10	50	0	0	0	0	40	0	2.4	12.1	0.0	0.0	0.0	0.0	9.7	0.0
Jackson Creek	**JACK 10-02**	**MR-2-2-U**	**14.98**	**2548**	**38.2**	**FAIR**	**FAIR**	**10**	**40**	**0**	**0**	**0**	**50**	**0**	**0**	**3.8**	**15.3**	**0.0**	**0.0**	**0.0**	**19.1**	**0.0**	**0.0**
Jackson Creek	JACK 10-03	MR-2-2-U	10.88	2849	31.0	FAIR	FAIR	10	40	0	0	0	40	0	10	3.1	12.4	0.0	0.0	0.0	12.4	0.0	3.1
Jackson Creek	JACK 10-04	MR-2-2-U	10.88	1666	18.1	FAIR	FAIR	30	70	0	0	0	0	0	0	5.4	12.7	0.0	0.0	0.0	0.0	0.0	0.0
Jackson Creek	JACK 11-01	MR-0-2-U	10.88	4163	45.3	FAIR	FAIR	20	50	0	0	0	0	0	30	9.1	22.6	0.0	0.0	0.0	0.0	0.0	13.6
Jackson Creek	JACK 11-02	MR-0-2-U	10.88	2059	22.4	FAIR	FAIR	0	40	0	0	0	20	0	40	0.0	9.0	0.0	0.0	0.0	4.5	0.0	9.0
Jackson Creek	JACK 11-03	MR-0-2-U	10.88	2665	29.0	FAIR	FAIR	30	40	0	0	0	0	0	30	8.7	11.6	0.0	0.0	0.0	0.0	0.0	8.7
			TOTAL	**41101**	**344.6**									**TOTAL**		**87.1**	**130.5**	**0.0**	**0.0**	**32.0**	**36.0**	**24.8**	**34.3**
														PERCENT		**0.3**	**0.4**	**0.0**	**0.0**	**0.1**	**0.1**	**0.1**	**0.1**
Reese Creek	REES 01-01	MR-10-2-U	0.31	1077	0.3	FAIR	FAIR	0	70	0	0	0	0	30	0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0
Reese Creek	REES 01-02	MR-10-2-U	0.31	557	0.2	FAIR	FAIR	10	70	0	0	0	0	20	0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Reese Creek	REES 02-01	MR-4-2-U	10.88	759	8.3	FAIR	FAIR	0	80	0	0	0	0	20	0	0.0	6.6	0.0	0.0	0.0	0.0	1.7	0.0
Reese Creek	REES 02-02	MR-4-2-U	10.88	2658	28.9	POOR	POOR	0	100	0	0	0	0	0	0	0.0	28.9	0.0	0.0	0.0	0.0	0.0	0.0
Reese Creek	REES 03-01	MR-2-2-U	10.88	1214	13.2	FAIR	FAIR	0	60	0	0	0	0	40	0	0.0	7.9	0.0	0.0	0.0	0.0	5.3	0.0
Reese Creek	REES 03-02	MR-2-2-U	10.88	1616	17.6	FAIR	FAIR	0	80	0	0	0	0	20	0	0.0	14.1	0.0	0.0	0.0	0.0	3.5	0.0
Reese Creek	REES 04-01	MR-4-2-U	10.88	932	10.1	FAIR	FAIR	0	80	0	0	0	0	20	0	0.0	8.1	0.0	0.0	0.0	0.0	2.0	0.0
Reese Creek	REES 05-01	MR-2-2-U	10.88	2487	27.1	FAIR	FAIR	30	60	0	0	0	0	10	0	8.1	16.2	0.0	0.0	0.0	0.0	2.7	0.0
Reese Creek	**REES 06-01**	**MR-0-2-U**	**24.85**	**1090**	**27.1**	**FAIR**	**FAIR**	**0**	**90**	**0**	**0**	**0**	**0**	**10**	**0**	**0.0**	**24.4**	**0.0**	**0.0**	**0.0**	**0.0**	**2.7**	**0.0**
Reese Creek	REES 07-01	MR-2-2-U	10.88	691	7.5	FAIR	FAIR	10	30	0	0	0	60	0	0	0.8	2.3	0.0	0.0	0.0	4.5	0.0	0.0
Reese Creek	REES 08-01	MR-0-2-U	10.88	1166	12.7	FAIR	FAIR	0	30	0	0	0	60	10	0	0.0	3.8	0.0	0.0	0.0	7.6	1.3	0.0
Reese Creek	REES 09-01	MR-0-3-U	19.40	323	6.3	FAIR	FAIR	0	30	0	0	0	60	10	0	0.0	1.9	0.0	0.0	0.0	3.8	0.6	0.0
Reese Creek	REES 10-01	MR-4-3-U	10.88	406	4.4	FAIR	FAIR	0	30	0	0	0	60	10	0	0.0	1.3	0.0	0.0	0.0	2.7	0.4	0.0
Reese Creek	REES 11-01	MR-2-3-U	19.40	947	18.4	FAIR	FAIR	0	30	0	0	0	60	10	0	0.0	5.5	0.0	0.0	0.0	11.0	1.8	0.0
Reese Creek	REES 12-01	MR-0-3-U	19.40	903	17.5	FAIR	FAIR	0	20	0	0	0	80	0	0	0.0	3.5	0.0	0.0	0.0	14.0	0.0	0.0
Reese Creek	REES 13-01	MR-0-4-U	19.40	1387	26.9	FAIR	FAIR	0	30	0	0	0	60	10	0	0.0	8.1	0.0	0.0	0.0	16.1	2.7	0.0
Reese Creek	REES 14-01			156	0.0	FAIR	FAIR	0	20	0	0	0	50	30	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reese Creek	REES 15-01	MR-0-4-U	19.40	181	3.5	FAIR	FAIR	0	20	0	0	0	60	20	0	0.0	0.7	0.0	0.0	0.0	2.1	0.7	0.0
Reese Creek	REES 15-02	MR-0-4-U	19.40	3381	65.6	POOR	POOR	0	20	0	0	0	40	0	40	0.0	13.1	0.0	0.0	0.0	26.2	0.0	26.2
Reese Creek	REES 15-03	MR-0-4-U	19.40	3248	63.0	FAIR	FAIR	0	40	0	0	0	60	0	0	0.0	25.2	0.0	0.0	0.0	37.8	0.0	0.0
Reese Creek	REES 15-04	MR-0-4-U	19.40	4205	81.6	FAIR	FAIR	0	30	30	0	0	40	0	0	0.0	24.5	24.5	0.0	0.0	32.6	0.0	0.0
Reese Creek	REES 15-05	MR-0-4-U	19.40	3217	62.4	FAIR	FAIR	0	20	0	0	0	60	20	0	0.0	12.5	0.0	0.0	0.0	37.5	12.5	0.0
Reese Creek	**REES 15-06**	**MR-0-4-U**	**17.07**	**6641**	**113.4**	**FAIR**	**FAIR**	**10**	**20**	**0**	**0**	**0**	**60**	**10**	**0**	**11.3**	**22.7**	**0.0**	**0.0**	**0.0**	**68.0**	**11.3**	**0.0**
			TOTAL	**39242**	**615.9**									**TOTAL**		**20.2**	**231.6**	**24.5**	**0.0**	**0.0**	**264.0**	**49.4**	**26.2**
														PERCENT		**0.0**	**0.4**	**0.0**	**0.0**	**0.0**	**0.4**	**0.1**	**0.0**
Rocky Creek	ROCK 01-01	MR-0-3-U	19.40	2226	43.2	FAIR	FAIR	20	30	0	0	0	30	0	20	8.6	13.0	0.0	0.0	0.0	13.0	0.0	8.6
Rocky Creek	ROCK 01-02	MR-0-3-U	19.40	2953	57.3	FAIR	FAIR	10	50	0	0	0	40	0	0	5.7	28.6	0.0	0.0	0.0	22.9	0.0	0.0
Rocky Creek	**ROCK 02-01**	**MR-0-3-U**	**25.44**	**961**	**24.4**	**FAIR**	**FAIR**	**20**	**40**	**0**	**0**	**0**	**40**	**0**	**0**	**4.9**	**9.8**	**0.0**	**0.0**	**0.0**	**9.8**	**0.0**	**0.0**
Rocky Creek	ROCK 02-02	MR-0-3-U	19.40	1250	24.3	POOR	FAIR	70	30	0	0	0	0	0	0	17.0	7.3	0.0	0.0	0.0	0.0	0.0	0.0
Rocky Creek	ROCK 02-03	MR-0-3-U	19.40	1725	33.5	FAIR	FAIR	80	0	0	0	0	0	20	0	26.8	0.0	0.0	0.0	0.0	0.0	6.7	0.0
Rocky Creek	ROCK 02-04	MR-0-3-U	19.40	1604	31.1	FAIR	FAIR	100	0	0	0	0	0	0	0	31.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rocky Creek	**ROCK 03-01**	**MR-0-4-U**	**25.82**	**7610**	**196.5**	**FAIR**	**FAIR**	**60**	**0**	**0**	**0**	**0**	**0**	**40**	**0**	**117.9**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**78.6**	**0.0**
Rocky Creek	ROCK 03-02	MR-0-4-U	19.40	470	9.1	GOOD	POOR	50	0	0	0	0	0	50	0	4.6	0.0	0.0	0.0	0.0	0.0	4.6	0.0
Rocky Creek	ROCK 04-01	MR-2-4-U	19.40	1912	37.1	GOOD	FAIR	50	0	0	0	0	0	50	0	18.5	0.0	0.0	0.0	0.0	0.0	18.5	0.0
Rocky Creek	ROCK 05-01	MR-0-4-U	19.40	2931	56.9	GOOD	POOR	50	0	0	0	0	0	50	0	28.4	0.0	0.0	0.0	0.0	0.0	28.4	0.0
Rocky Creek	ROCK 06-01	MR-2-4-U	19.40	503	9.8	GOOD	FAIR	50	0	0	0	0	0	50	0	4.9	0.0	0.0	0.0	0.0	0.0	4.9	0.0
Rocky Creek	ROCK 06-02	MR-2-4-U	19.40	5783	112.2	FAIR	POOR	80	0	0	0	0	0	20	0	89.8	0.0	0.0	0.0	0.0	0.0	22.4	0.0
Rocky Creek	ROCK 06-03	MR-2-4-U	19.40	982	19.1	FAIR	FAIR	70	0	0	0	0	30	0	0	13.3	0.0	0.0	0.0	0.0	5.7	0.0	0.0
Rocky Creek	ROCK 07-01	MR-0-4-U	19.40	3471	67.3	FAIR	FAIR	50	10	0	0	0	10	0	30	33.7	6.7	0.0	0.0	0.0	6.7	0.0	20.2
Rocky Creek	ROCK 07-02	MR-0-4-U	19.40	1903	36.9	FAIR	FAIR	20	0	0	0	0	40	0	40	7.4	0.0	0.0	0.0	0.0	14.8	0.0	14.8
Rocky Creek	**ROCK 07-03**	**MR-0-4-U**	**39.57**	**3501**	**138.5**	**FAIR**	**FAIR**	**10**	**0**	**50**	**0**	**0**	**40**	**0**	**0**	**13.9**	**0.0**	**69.3**	**0.0**	**0.0**	**55.4**	**0.0**	**0.0**
			TOTAL	**39785**	**897.1**									**TOTAL**		**426.4**	**65.4**	**69.3**	**0.0**	**0.0**	**128.3**	**164.1**	**43.6**
														PERCENT		**0.5**	**0.1**	**0.1**	**0.0**	**0.0**	**0.1**	**0.2**	**0.0**

STREAM	REACH_ID	REACH_TYPE	Sediment Load per 1000 Feet (Tons/Year)	LENGTH_FT	Reach Sediment Load (Tons/Year)	LB_RP_HLTH	RB_RP_HLTH	ANTHRO_TRA	ANTHRO_GRA	ANTHRO_CRO	ANTHRO_MIN	ANTHRO_FOR	ANTHRO_IRR	ANTHRO_NAT	ANTHRO_OTH	ANTHRO_TRA_TONS/YR	ANTHRO_GRA_TONS/YR	ANTHRO_CRO_TONS/YR	ANTHRO_MIN_TONS/YR	ANTHRO_FOR_TONS/YR	ANTHRO_IRR_TONS/YR	ANTHRO_NAT_TONS/YR	ANTHRO_OTH_TONS/YR
Smith Creek	SMIT 01-01	MR-0-4-U	19.40	7056	136.9	FAIR	FAIR	20	20	0	0	0	0	60	0	27.4	27.4	0.0	0.0	0.0	0.0	82.1	0.0
Smith Creek	SMIT 01-02	MR-0-4-U	19.40	1620	31.4	POOR	POOR	60	0	0	0	0	20	0	20	18.9	0.0	0.0	0.0	0.0	6.3	0.0	6.3
Smith Creek	SMIT 01-03	MR-0-4-U	19.40	2333	45.3	FAIR	FAIR	0	20	0	0	0	60	0	20	0.0	9.1	0.0	0.0	0.0	27.2	0.0	9.1
Smith Creek	SMIT 01-04	MR-0-4-U	19.40	2834	55.0	FAIR	FAIR	40	20	0	0	0	40	0	0	22.0	11.0	0.0	0.0	0.0	22.0	0.0	0.0
Smith Creek	**SMIT 01-05**	**MR-0-4-U**	**12.37**	**6328**	**78.3**	**FAIR**	**FAIR**	**0**	**30**	**0**	**0**	**0**	**40**	**0**	**30**	**0.0**	**23.5**	**0.0**	**0.0**	**0.0**	**31.3**	**0.0**	**23.5**
Smith Creek	SMIT 01-06	MR-0-4-U	19.40	13085	253.9	FAIR	FAIR	0	50	0	0	0	50	0	0	0.0	126.9	0.0	0.0	0.0	126.9	0.0	0.0
Smith Creek			**TOTAL**	**33256**	**600.7**									**TOTAL**		**68.2**	**197.8**	**0.0**	**0.0**	**0.0**	**213.7**	**82.1**	**38.8**
Smith Creek														**PERCENT**		**0.1**	**0.3**	**0.0**	**0.0**	**0.0**	**0.4**	**0.1**	**0.1**
Stone Creek	STON 01-01	MR-10-1-C	0.31	3778	1.2	FAIR	FAIR	20	0	0	0	60	0	20	0	0.2	0.0	0.0	0.0	0.7	0.0	0.2	0.0
Stone Creek	STON 02-01	MR-4-1-C	1.97	1374	2.7	FAIR	FAIR	0	0	0	0	70	0	30	0	0.0	0.0	0.0	0.0	1.9	0.0	0.8	0.0
Stone Creek	STON 02-02	MR-4-1-C	1.97	485	1.0	FAIR	GOOD	100	0	0	0	0	0	0	0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stone Creek	STON 03-01	MR-4-2-C	10.88	1156	12.6	FAIR	GOOD	0	0	0	0	80	0	20	0	0.0	0.0	0.0	0.0	10.1	0.0	2.5	0.0
Stone Creek	STON 04-01	MR-4-2-U	10.88	570	6.2	FAIR	FAIR	0	0	0	0	80	0	20	0	0.0	0.0	0.0	0.0	5.0	0.0	1.2	0.0
Stone Creek	STON 04-02	MR-4-2-U	10.88	2585	28.1	FAIR	FAIR	20	0	0	0	60	0	20	0	5.6	0.0	0.0	0.0	16.9	0.0	5.6	0.0
Stone Creek	STON 05-01	MR-4-2-C	10.88	916	10.0	FAIR	FAIR	0	80	0	0	0	0	20	0	0.0	8.0	0.0	0.0	0.0	0.0	2.0	0.0
Stone Creek	STON 06-01	MR-2-2-C	10.88	1142	12.4	FAIR	FAIR	20	0	0	0	70	0	10	0	2.5	0.0	0.0	0.0	8.7	0.0	1.2	0.0
Stone Creek	STON 07-01	MR-2-2-U	10.88	2330	25.4	FAIR	FAIR	20	0	0	0	60	0	20	0	5.1	0.0	0.0	0.0	15.2	0.0	5.1	0.0
Stone Creek	**STON 08-01**	**MR-2-2-C**	**14.26**	**1308**	**18.7**	**FAIR**	**FAIR**	**0**	**0**	**0**	**0**	**50**	**0**	**50**	**0**	**0.0**	**0.0**	**0.0**	**0.0**	**9.3**	**0.0**	**9.3**	**0.0**
Stone Creek	STON 09-01	MR-4-2-C	10.88	932	10.1	FAIR	FAIR	0	0	0	0	60	0	40	0	0.0	0.0	0.0	0.0	6.1	0.0	4.1	0.0
Stone Creek	STON 10-01	MR-4-2-U	10.88	898	9.8	FAIR	FAIR	0	0	0	0	70	0	30	0	0.0	0.0	0.0	0.0	6.8	0.0	2.9	0.0
Stone Creek	STON 11-01	MR-2-2-U	10.88	570	6.2	FAIR	FAIR	40	0	0	0	40	0	20	0	2.5	0.0	0.0	0.0	2.5	0.0	1.2	0.0
Stone Creek	**STON 11-02**	**MR-2-2-U**	**7.58**	**3892**	**29.5**	**FAIR**	**FAIR**	**40**	**40**	**0**	**0**	**0**	**0**	**20**	**0**	**11.8**	**11.8**	**0.0**	**0.0**	**0.0**	**0.0**	**5.9**	**0.0**
Stone Creek	STON 11-03	MR-2-2-U	10.88	1123	12.2	FAIR	FAIR	40	0	0	0	40	0	20	0	4.9	0.0	0.0	0.0	4.9	0.0	2.4	0.0
Stone Creek	STON 12-01	MR-4-2-U	10.88	285	3.1	FAIR	FAIR	40	0	0	0	40	0	20	0	1.2	0.0	0.0	0.0	1.2	0.0	0.6	0.0
Stone Creek	STON 12-02	MR-4-2-U	10.88	580	6.3	FAIR	FAIR	40	0	0	0	40	0	20	0	2.5	0.0	0.0	0.0	2.5	0.0	1.3	0.0
Stone Creek	STON 13-01	MR-2-2-U	10.88	794	8.6	FAIR	FAIR	20	40	0	0	0	0	40	0	1.7	3.5	0.0	0.0	0.0	0.0	3.5	0.0
Stone Creek	**STON 13-02**	**MR-2-2-U**	**21.77**	**1682**	**36.6**	**FAIR**	**FAIR**	**0**	**50**	**0**	**0**	**0**	**30**	**20**	**0**	**0.0**	**18.3**	**0.0**	**0.0**	**0.0**	**11.0**	**7.3**	**0.0**
Stone Creek	STON 13-03	MR-2-2-U	10.88	1268	13.8	FAIR	FAIR	50	0	0	0	0	0	0	50	6.9	0.0	0.0	0.0	0.0	0.0	0.0	6.9
Stone Creek	STON 13-04	MR-2-2-U	10.88	1753	19.1	FAIR	FAIR	10	50	0	0	0	0	40	0	1.9	9.5	0.0	0.0	0.0	0.0	7.6	0.0
			TOTAL	**29421**	**273.5**									**TOTAL**		**47.8**	**51.1**	**0.0**	**0.0**	**91.8**	**11.0**	**64.9**	**6.9**
														PERCENT		**0.2**	**0.2**	**0.0**	**0.0**	**0.3**	**0.0**	**0.2**	**0.0**
Thompson Creek	THOM 01-01	MR-0-1-U	1.97	2467	4.9	FAIR	FAIR	0	60	0	0	0	30	0	10	0.0	2.9	0.0	0.0	0.0	1.5	0.0	0.5
Thompson Creek	THOM 01-02	MR-0-1-U	1.97	2957	5.8	POOR	POOR	100	0	0	0	0	0	0	0	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Thompson Creek	THOM 01-03	MR-0-1-U	1.97	6990	13.8	POOR	POOR	20	20	30	0	0	30	0	0	2.8	2.8	4.1	0.0	0.0	4.1	0.0	0.0
Thompson Creek	**THOM 01-04**	**MR-0-1-U**	**1.43**	**3847**	**5.5**	**FAIR**	**FAIR**	**10**	**20**	**20**	**0**	**0**	**30**	**0**	**20**	**0.6**	**1.1**	**1.1**	**0.0**	**0.0**	**1.7**	**0.0**	**1.1**
Thompson Creek	THOM 02-01	MR-0-2-U	10.88	2272	24.7	FAIR	FAIR	0	60	0	0	0	40	0	0	0.0	14.8	0.0	0.0	0.0	9.9	0.0	0.0
Thompson Creek	THOM 02-02	MR-0-2-U	10.88	1051	11.4	FAIR	FAIR	0	30	0	0	0	70	0	0	0.0	3.4	0.0	0.0	0.0	8.0	0.0	0.0
Thompson Creek	**THOM 02-03**	**MR-0-2-U**	**4.02**	**17112**	**68.8**	**FAIR**	**FAIR**	**0**	**90**	**0**	**0**	**0**	**10**	**0**	**0**	**0.0**	**61.9**	**0.0**	**0.0**	**0.0**	**6.9**	**0.0**	**0.0**
Thompson Creek	THOM 02-04	MR-0-2-U	10.88	593	6.5	FAIR	FAIR	10	20	0	0	0	30	0	40	0.6	1.3	0.0	0.0	0.0	1.9	0.0	2.6
Thompson Creek	THOM 02-05	MR-0-2-U	10.88	695	7.6	FAIR	FAIR	40	30	0	0	0	30	0	0	3.0	2.3	0.0	0.0	0.0	2.3	0.0	0.0
			TOTAL	**37984**	**148.916**									**TOTAL**		**12.8**	**90.5**	**5.2**	**0.0**	**0.0**	**36.2**	**0.0**	**4.2**
														PERCENT		**0.09**	**0.61**	**0.04**	**0.00**	**0.00**	**0.24**	**0.00**	**0.03**
Monitoring sites denoted in bold text.																							