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. Prior to 2004, this list was referred to as the "303(d) list", but is now named the "Integrated Report". 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 2008 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 of 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 landuse 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 A**.

Table 2-2. Aerial Assessment Stream Segments.

Waterbody 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	Number of	Monitoring Sites
	of	Monitoring	
	Reaches	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.

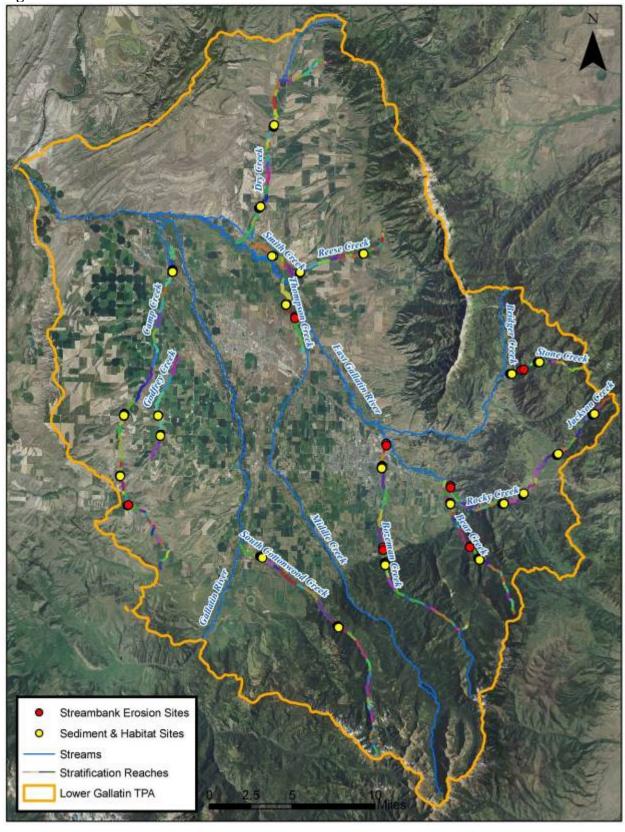


Figure 3-1. Aerial Assessment Reach Stratification.

Streambank Erosion Sites Sediment & Habitat Sites MR-0-1-U --- MR-2-2-C MR-0-2-U -MR-2-2-U MR-0-3-C - MR-2-3-C MR-0-3-U MR-0-4-C - MR-2-4-U MR-0-4-U MR-4-1-C MR-10-1-C MR-4-1-U MR-10-1-U MR-4-2-C MR-10-2-U MR-10-3-C - MR-4-3-C MR-2-1-U MR-4-3-U Streams Lower Gallatin TPA

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 of 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 B**.

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.

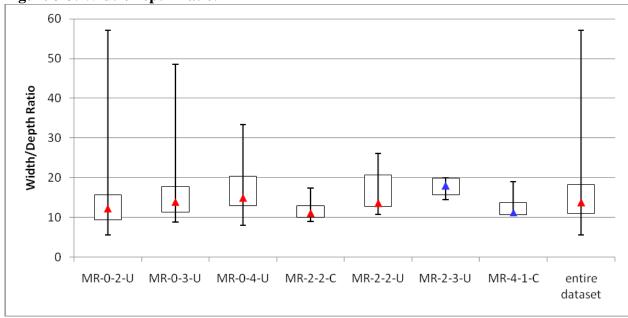


Figure 3-3. Width/Depth Ratio.

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.

C4-4'-4'-1 D		Reach Type										
Statistical Parameter	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,	BEAR26-02,	CAMP15-04,	BEAR18-01,	JACK10-02,	SCOT25-02	JACK04-01					
	GOD02-01,	BOZE18-04,	DRY12-06,	STON08-01	STON13-02							
	REES06-01,	CAMP14-05,	REES15-06,									
	THOM02-03	CAMP14-12,	ROCK03-01,									
		DRY09-05,	SCOT31-02									
		GOD03-01,										
		ROCK02-01,										
		SCOT31-02										

Note: See Table 2-1 for reach type descriptions.

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**).

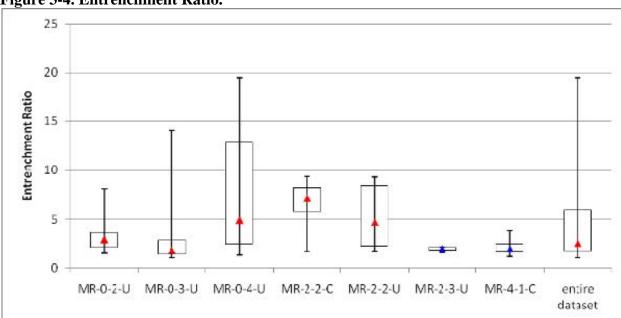


Figure 3-4. Entrenchment Ratio.

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				Reac	h Type			
Stausucai Parameter	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,	BEAR26-02,	CAMP15-04,	BEAR18-01,	JACK10-02,	SCOT25-02	JACK04-01	
	GOD02-01,	BOZE18-04,	DRY12-06,	STON08-01	STON13-02			
	REES06-01,	CAMP14-05,	REES15-06,					
	THOM02-03	CAMP14-12,	ROCK03-01,					
		DRY09-05,	SCOT31-02					
		GOD03-01,						
		ROCK02-01,						
		SCOT31-02						

Note: See Table 2-1 for reach type descriptions.

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**).

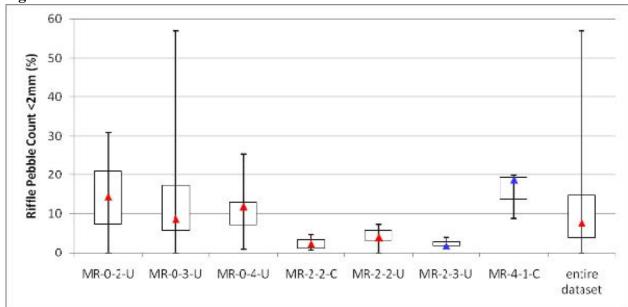


Figure 3-5. Riffle Pebble Count <2mm.

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.

C4-4'-4'1 D		Reach Type										
Statistical Parameter	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,	BEAR26-02,	CAMP15-04,	BEAR18-01,	JACK10-02,	SCOT25-02	JACK04-01					
	GOD02-01,	BOZE18-04,	DRY12-06,	STON08-01	STON13-02							
	REES06-01,	CAMP14-05,	REES15-06,									
	THOM02-03	CAMP14-12,	ROCK03-01,									
		DRY09-05,	SCOT31-02									
		GOD03-01,										
		ROCK02-01,										
		SCOT31-02										

Note: See Table 2-1 for reach type descriptions.

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.

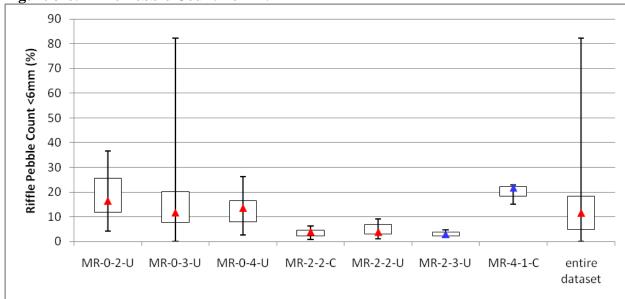


Figure 3-6. Riffle Pebble Count <6mm.

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.

C4-4'-4'1 D4	Reach Type										
Statistical Parameter	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,	BEAR26-02,	CAMP15-04,	BEAR18-01,	JACK10-02,	SCOT25-02	JACK04-01				
	GOD02-01,	BOZE18-04,	DRY12-06,	STON08-01	STON13-02						
	REES06-01,	CAMP14-05,	REES15-06,								
	THOM02-03	CAMP14-12,	ROCK03-01,								
		DRY09-05,	SCOT31-02								
		GOD03-01,									
		ROCK02-01,									
İ		SCOT31-02									

Note: See Table 2-1 for reach type descriptions.

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**).

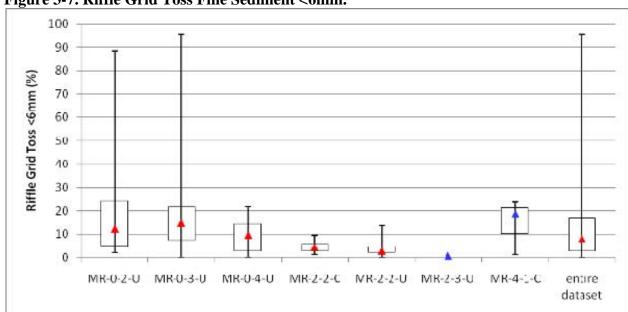


Figure 3-7. Riffle Grid Toss Fine Sediment <6mm.

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.

Table 5-0. Killie	GIId IO	bb I me be	difficit \		h Type			
Statistical Parameter		1	T			1	Т	1
	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,	BEAR26-02,	CAMP15-04,	BEAR18-01,	JACK10-02,	SCOT25-02	JACK04-01	
	GOD02-01,	BOZE18-04,	DRY12-06,	STON08-01	STON13-02			
	REES06-01,	CAMP14-05,	REES15-06,					
	THOM02-03	CAMP14-12,	ROCK03-01,					
		DRY09-05,	SCOT31-02					
		GOD03-01,						
		ROCK02-01,						
		SCOT31-02						

Note: See Table 2-1 for reach type descriptions.

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**).

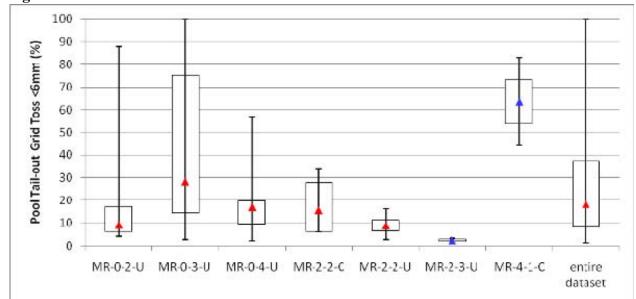


Figure 3-8. Pool Tail-out Grid Toss <6mm.

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.

C4-4'-4'1 D4		Reach Type										
Statistical Parameter	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,	BEAR26-02,	CAMP15-04,	BEAR18-01,	JACK10-02,	SCOT25-02	JACK04-01					
	GOD02-01,	BOZE18-04,	DRY12-06,	STON08-01	STON13-02							
	REES06-01,	CAMP14-05,	REES15-06,									
	THOM02-03	CAMP14-12,	ROCK03-01,									
		DRY09-05,	SCOT31-02									
		GOD03-01,										
		ROCK02-01,										
		SCOT31-02										

Note: See Table 2-1 for reach type descriptions.

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.

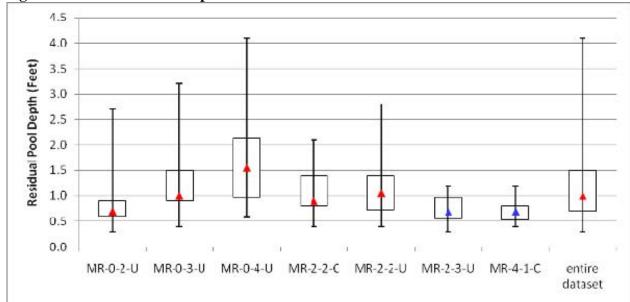


Figure 3-9. Residual Pool Depth.

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.

C4-4'-4'1 D	Reach Type										
Statistical Parameter	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,	BEAR26-02,	CAMP15-04,	BEAR18-01,	JACK10-02,	SCOT25-02	JACK04-01				
	GOD02-01,	BOZE18-04,	DRY12-06,	STON08-01	STON13-02						
	REES06-01,	CAMP14-05,	REES15-06,								
	THOM02-03	CAMP14-12,	ROCK03-01,								
		DRY09-05,	SCOT31-02								
		GOD03-01,									
		ROCK02-01,									
		SCOT31-02									

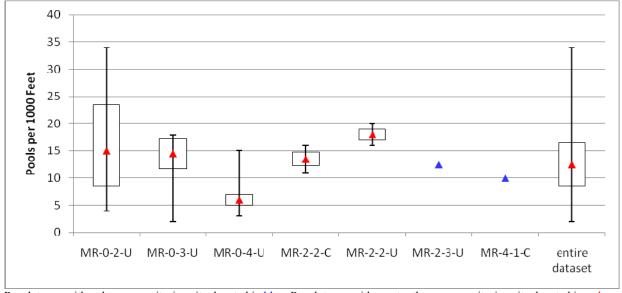
Note: See Table 2-1 for reach type descriptions.

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.

C4-4'-4'1 D4	Reach Type										
Statistical Parameter	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,	BEAR26-02,	CAMP15-04,	BEAR18-01,	JACK10-02,	SCOT25-02	JACK04-01				
	GOD02-01,	BOZE18-04,	DRY12-06,	STON08-01	STON13-02						
	REES06-01,	CAMP14-05,	REES15-06,								
	THOM02-03	CAMP14-12,	ROCK03-01,								
		DRY09-05,	SCOT31-02								
		GOD03-01,									
		ROCK02-01,									
		SCOT31-02									

Note: See Table 2-1 for reach type descriptions. 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			

Note: See Table 2-1 for reach type descriptions. 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.

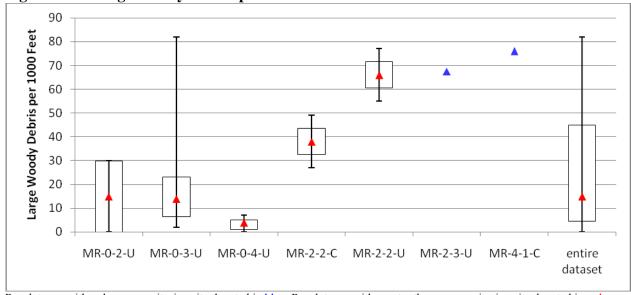


Figure 3-11. Large Woody Debris per 1000 Feet.

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.

Table 5-11. 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,	BEAR26-02,	CAMP15-04,	BEAR18-01,	JACK10-02,	SCOT25-02	JACK04-01					
	GOD02-01,	BOZE18-04,	DRY12-06,	STON08-01	STON13-02							
	REES06-01,	CAMP14-05,	REES15-06,									
	THOM02-03	CAMP14-12,	ROCK03-01,									
		DRY09-05,	SCOT31-02									
		GOD03-01,										
		ROCK02-01,										
		SCOT31-02										

Note: See Table 1-1 for reach type descriptions. 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		

Note: See Table 2-1 for reach type descriptions. Reach types with only one monitoring site denoted in blue italics.

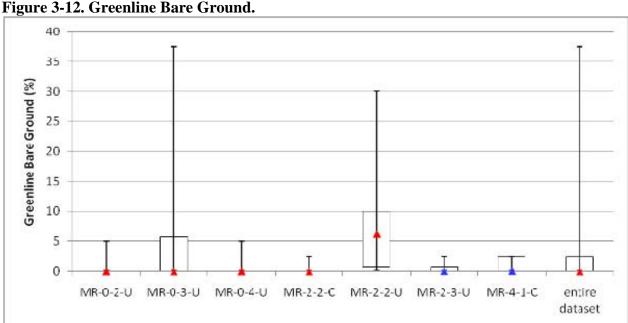
3.3.1.10 Greenline Understory Shrub Cover

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**).



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,	BEAR26-02,	CAMP15-04,	BEAR18-01,	JACK10-02,	SCOT25-02	JACK04-01				
	GOD02-01,	BOZE18-04,	DRY12-06,	STON08-01	STON13-02						
	REES06-01,	CAMP14-05,	REES15-06,								
	THOM02-03	CAMP14-12,	ROCK03-01,								
		DRY09-05,	SCOT31-02								
		GOD03-01,									
		ROCK02-01,									
		SCOT31-02									

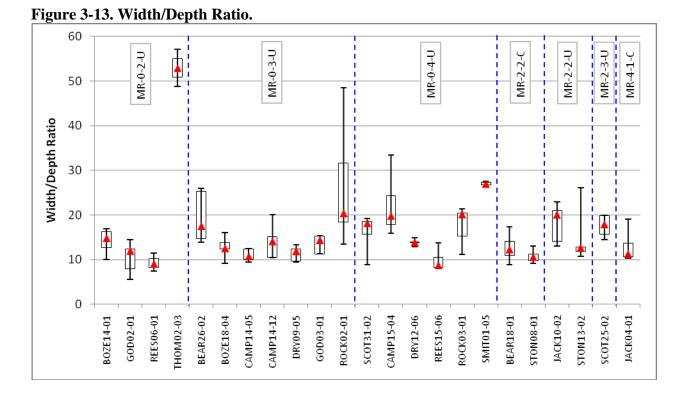
Note: See Table 2-1 for reach type descriptions.

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.



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.

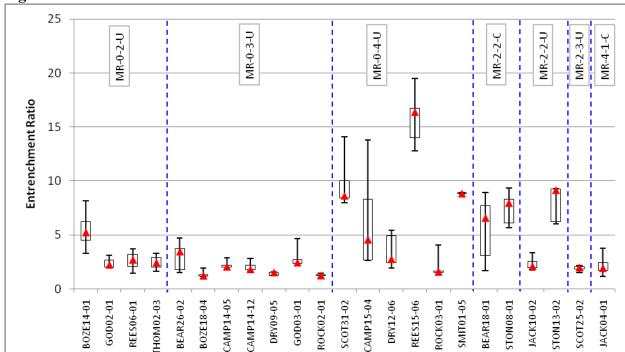
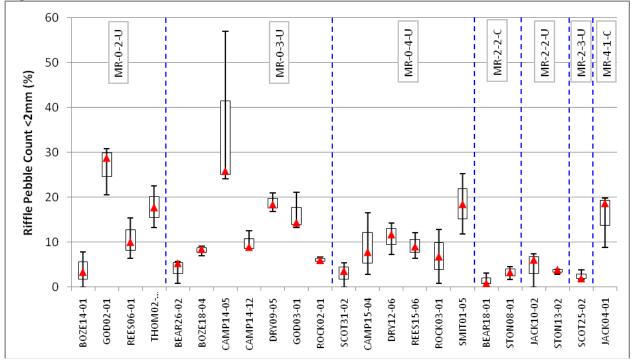


Figure 3-14. Entrenchment Ratio.

3.2.2.3 Riffle Pebble Count <2mm

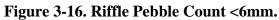
The median percent of fine sediment in riffles <2mm as measured by a pebble count was highest in CAMP14-05 and GOD02-01 (**Figure 3-15**).

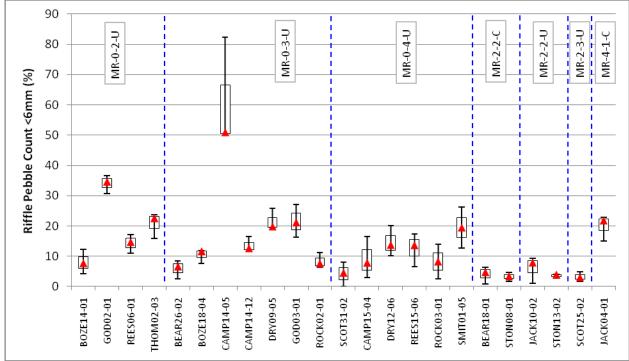




3.2.2.4 Riffle Pebble Count <6mm

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**).





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**).

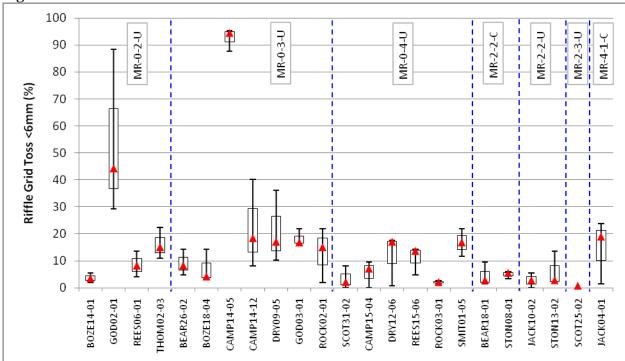


Figure 3-17. Riffle Grid Toss <6mm.

3.2.2.6 Riffle Stability Index

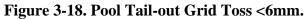
The mobile percentile of particles on the riffle is termed "Riffle Stability Index" (RSI) and provides a useful estimate of the degree of increased sediment supply to riffles. The RSI addresses situations in which increases in gravel bedload from headwater activities is depositing material on riffles 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**).

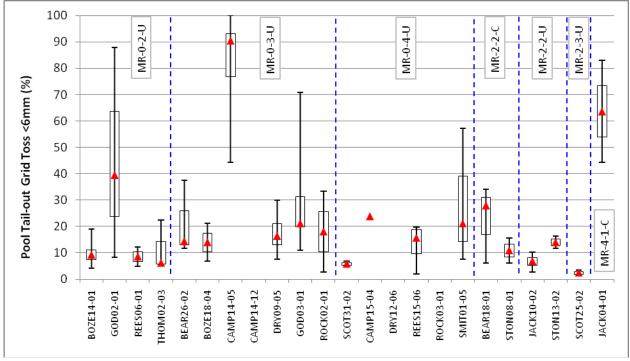
Table 3-14. Riffle Stability Index Summary.

Table 5-14. Killie Stability Index Sulmilary.										
Site	Mobile	e Particle Analysis	Pebble Cor	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**).

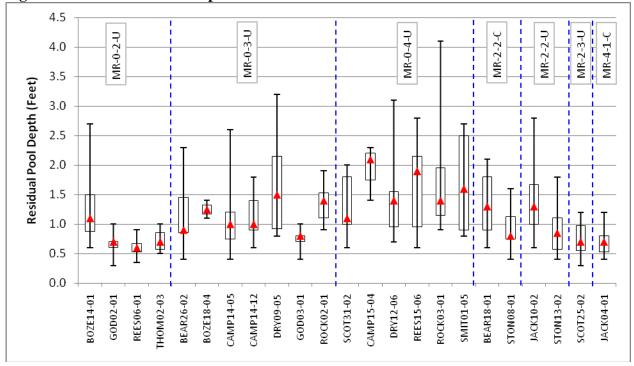




3.2.2.8 Residual Pool Depth

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.





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**).

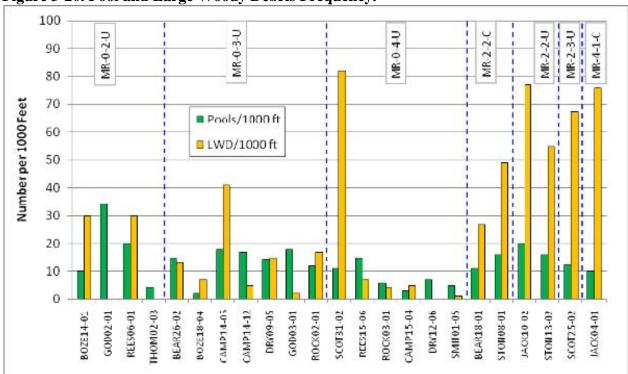


Figure 3-20. Pool and Large Woody Debris Frequency.

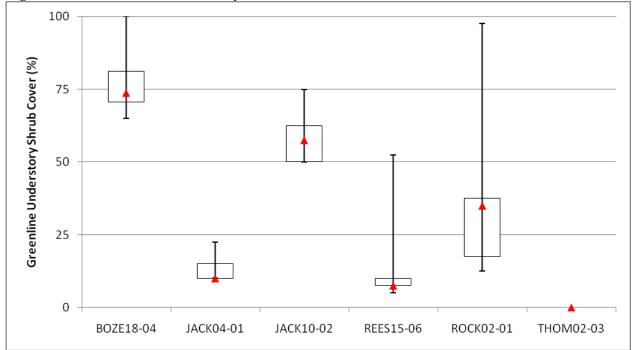
3.2.2.10 Large Woody Debris Frequency

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**).





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.

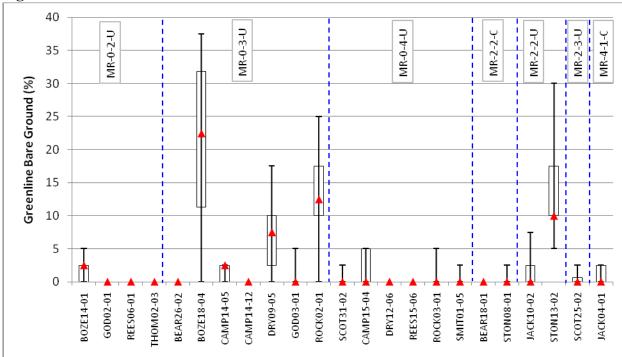


Figure 3-22. Greenline Bare Ground.

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 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/yard³ 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 Bai	nk 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 subwatershed 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

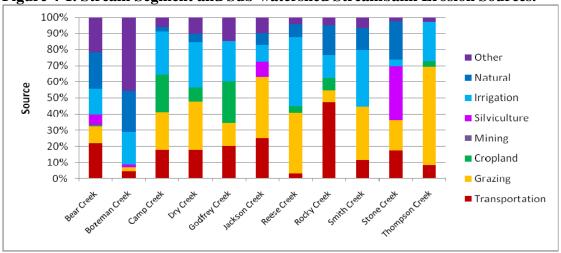
A total average annual sediment load of 418 tons/year was attributed to the 219 assessed eroding streambanks within the 30 monitoring sites. Predominant sources of streambank erosion observed during the field assessment include riparian grazing, cropland, irrigation, and urban development. Average annual 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 C**). 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 C**). 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	Monitoring	Percent of	Reach	Total Sediment
			Eroding	Site	Reach with	Sediment	Load per 1000
			Bank	Length	Eroding	Load	Feet
			(Feet)	(Feet)	Bank	(Tons/Year)	(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	SCOT25-02	MR-2-3-U	200	800	13	5.3	6.6
Creek	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	THOM01-04	MR-0-1-U	60	700	4	1.0	1.4
Creek	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	Stream	Sub-	Un-	Sediment Load	Sub-	Total Load
	Length	Segment	watershed	assessed	Applied to Un-	watershed	per Mile
	(Miles)	Sediment Load	Stream	Stream	assessed Stream	(Tons/Year)	(Tons/Year)
		(Tons/Year)	Length	Length	Length (10.40		
			(Miles)	(Miles)	tons/year/mile)		
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	

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	Coarse Gravel	Fine Gravel	Sand/Silt <2mm
	Monitoring Sites	>6mm (Percent)	<6mm & >2mm (Percent)	(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:

May, 2010

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:

$$(0.15 \times 7.19) + (0.85 \times 4.44) = 4.85$$

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	Average	Reduced	Un-Assessed Reach Types
Group	Sediment Load	Sediment Load	
	per 1000 Feet	per 1000 Feet	
	(Tons/Year)	(Tons/Year)	
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 1st and 2nd 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 S	ediment Load (To	ons/Year)	Reduced S	ediment Load thro	ugh BMPs	Potential	Percent Reduction in	Potential Reduction in	Percent Reduction in
					(Tons/Year)			Total Sediment Load		Anthropogenic Sediment
	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)	Sediment Load (Total Existing- Total Reduced) (Tons/Year)	(Potential Reduction/Total Existing)	Sediment Load (Anthropogenic Existing-Anthropogenic Reduced) (Tons/Year)	Load (Potential Reduction/Anthropogenic Existing)
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	223.1	194.5	28.6	174.5	44%	174.5	47%
Reese Creek	1257.0	1156.2	100.8	863.8	762.9	100.8	393.3	31%	393.3	34%
Rocky Creek (excluding Jackson Creek sub-watershed)	1148.7	938.5	210.2	582.6	372.4	210.2	566.1	49%	566.1	60%
Smith Creek (excluding Reese Creek sub-watershed)	965.9	833.9	132.1	597.2	465.1	132.1	368.8	38%	368.8	44%
Stone Creek	317.1	241.8	75.3	200.6	125.4	75.3	116.5	37%	116.5	48%
Thompson Creek	148.9	148.9	0.0	57.6	57.6	0.0	91.3	61%	91.3	61%
TOTAL	13036	11762	1274	7495	6221	1274	5541	43%	5541	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.

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Attachment A

AERIAL ASSESSMENT DATABASE

Lower Gallatin TMDL Planning Area

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Bear Creek	BEAR 01-01	1 1	1090 17g	1		4 START	_	FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO MATURE CONIFEROUS	GOOD	0	0	0 C	0	0 100	0 M F	R-2-1-U
Bear Creek	BEAR 02-01		951 17g			GRADIENT		FOREST	FOREST		MATURE CONIFEROUS		FOREST	NO MATURE CONIFEROUS	GOOD	0	0	0 0	,	0 100		R-4-1-U
Bear Creek Bear Creek	BEAR 03-01 BEAR 04-01	3 1	375 17g 1826 17g	1	-	GRADIENT GRADIENT		FOREST FOREST	FOREST FOREST		MATURE CONIFEROUS MATURE CONIFEROUS	GOOD	FOREST FOREST	NO MATURE CONIFEROUS NO MATURE CONIFEROUS	GOOD	0	0	0 0		0 100		R-10-1-U R-4-1-U
Bear Creek	BEAR 05-01	5 1	708 17g	1		GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD		NO MATURE CONIFEROUS	GOOD	0	0	0 0		0 100		R-10-1-U
Bear Creek	BEAR 06-01	6 1	1682 17g			GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	1 OILEOI	NO MATURE CONIFEROUS	GOOD	0	0	0 0	0	0 100	0	R-4-1-U
Bear Creek Bear Creek	BEAR 07-01 BEAR 08-01	7 1	714 17g 1117 17g	1		GRADIENT) GRADIENT		FOREST FOREST	FOREST FOREST	NO	MATURE CONIFEROUS MATURE CONIFEROUS	GOOD		NO MATURE CONIFEROUS NO MATURE CONIFEROUS	GOOD	0	0	0 0	0	0 100		R-10-1-U R-4-1-U
Bear Creek	BEAR 09-01	9 1	401 17g	1		GRADIENT		FOREST	FOREST		MATURE CONIFEROUS	GOOD		NO MATURE CONIFEROUS	GOOD	0	0	0 C	1 0	0 100		R-10-1-U
Bear Creek	BEAR 10-01	10 1	437 17g			GRADIENT		FOREST	FOREST		MATURE CONIFEROUS		FOREST	NO MATURE CONIFEROUS	GOOD	0	Ü	0 0		0 100	0 M F	R-4-1-U
Bear Creek	BEAR 11-01	11 1	1232 17g			STREAM ORDER	LULC	FOREST	FOREST		MATURE CONIFEROUS	_	FOREST	YES MATURE CONIFEROUS	GOOD	0	0	0 0		0 100		R-4-2-U
Bear Creek Bear Creek	BEAR 11-02 BEAR 12-01	12 1	331 17g 2333 17g	2		4 GRADIENT	LULC	FOREST HARVEST	HARVEST/FIRE HARVEST/FIRE	YES	GRASS MATURE CONIFEROUS	FAIR	HARVEST/FIRE HARVEST/FIRE	YES GRASS YES MATURE CONIFEROUS	FAIR FAIR	20	_		60			R-4-2-U R-2-2-U
Bear Creek	BEAR 13-01	13 1	627 17g	2		GRADIENT		HARVEST	HARVEST/FIRE		SHRUBS	FAIR	HARVEST/FIRE	YES SHRUBS	FAIR	20	-		70			R-4-2-U
Bear Creek	BEAR 13-02	13 2	296 17g	2	U 4-10)	RVC	HARVEST	HARVEST/FIRE		MATURE CONIFEROUS	FAIR	HARVEST/FIRE	YES MATURE CONIFEROUS	FAIR	20	-	0 0	70	0 10		R-4-2-U
Bear Creek Bear Creek	BEAR 14-01 BEAR 15-01	14 1 15 1	4039 17g 826 17g	2		4 GRADIENT) GRADIENT		HARVEST FOREST	FOREST FOREST		MATURE CONIFEROUS MATURE CONIFEROUS	FAIR FAIR	HARVEST/FIRE FOREST	YES MATURE CONIFEROUS YES MATURE CONIFEROUS	FAIR FAIR	30	0	0 0	50	0 20		R-2-2-U R-4-2-U
Bear Creek	BEAR 16-01	16 1	1057 17g			GRADIENT GRADIENT		FOREST	FOREST		MATURE CONIFEROUS	FAIR	FOREST	NO MATURE CONIFEROUS	GOOD	20	-	0 0		0 80		R-4-2-U R-2-2-U
Bear Creek	BEAR 17-01	17 1	992 17g	2		CONFINEMENT/GRADIENT		FOREST	ROAD		MATURE CONIFEROUS	FAIR	FOREST	NO MATURE CONIFEROUS	GOOD	0		0 0		0 60	0 M F	R-4-2-C
Bear Creek	BEAR 17-02	17 2	1743 17g	2			LULC	FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	ROAD	YES MATURE CONIFEROUS	FAIR	50	0	0 0	0	0 50		R-4-2-C
Bear Creek Bear Creek	BEAR 18-01 BEAR 19-01	18 1	2320 17g 1920 17g	2		GRADIENT GRADIENT		FOREST FOREST	ROAD ROAD	YES	SHRUBS MATURE CONIFEROUS	FAIR	FOREST FOREST	NO MATURE CONIFEROUS NO MATURE CONIFEROUS	GOOD	0	0	0 0	0	0 100		R-2-2-C R-4-2-C
Bear Creek	BEAR 20-01	20 1	2378 17g	2		CONFINEMENT		FOREST	ROAD	YES	MATURE CONIFEROUS	FAIR	FOREST	YES MATURE CONIFEROUS	FAIR	0	0	0 0	0	0 100		R-4-2-U
Bear Creek	BEAR 21-01	21 1	746 17g	2		4 GRADIENT	LULC	RURALRESIDENCE	ROAD	YES	MATURE DECIDUOUS	FAIR	RURAL RES./HOBBY FARM	YES MATURE DECIDUOUS	FAIR	50	0	0 0	0	0 0	50 M F	R-2-2-U
Bear Creek	BEAR 22-01		6268 17g			STREAM ORDER		RURAL RESIDENCE	RURAL RES./HOBBY FARM		MATURE DECIDUOUS	FAIR	RURAL RES./HOBBY FARM	YES MATURE DECIDUOUS	FAIR	40	Ü	0 0		0 20		R-2-3-U
Bear Creek Bear Creek	BEAR 23-01 BEAR 24-01		1161 17w 17g 838 17w 17g			4 ECOREGION GRADIENT		RURAL RESIDENCE ROAD	FOREST FOREST		SHRUBS MATURE CONIFEROUS	FAIR	RURAL RES./HOBBY FARM	YES SHRUBS YES SHRUBS	FAIR	60		0 0	0 0			R-2-3-U R-0-3-U
Bear Creek	BEAR 24-02		1607 17w 17g	3		GIGIERT	LULC	RURAL RESIDENCE	RURAL RES./HOBBY FARM	YES		FAIR	RURAL RES./HOBBY FARM	YES SHRUBS	FAIR	20	_	_	0 4	_		R-0-3-U
Bear Creek	BEAR 25-01		2309 17w 17g	3	\blacksquare	BEAVER POND		HAY	HAY/PASTURE	YES	SHRUBS	FAIR	ROAD	YES SHRUBS	FAIR	40	0	0 0				
Bear Creek	BEAR 26-01		1516 17w 17g	_	U <2	SAME AS ABOVE	DVO	HAY	HAY/PASTURE HAY/PASTURE		MATURE DECIDUOUS	FAIR	ROAD RURAL RES/HOBBY FARM	YES MATURE DECIDUOUS	FAIR	50	-	0 0		_		R-0-3-U
Bear Creek Bear Creek	BEAR 26-02 BEAR 26-03	26 2	5038 17w 17g 1156 17w 17g	3	U <2		LULC	RURAL SUBDIVISION	URBAN		SHRUBS SHRUBS	FAIR	RURAL RES./HOBBY FARM	YES SHRUBS YES SHRUBS	FAIR	20	0 2	0 0	0 4	-		R-0-3-U R-0-3-U
Bear Creek	BEAR 27-01	27 1	995 17w 17g			4 GRADIENT	2020	RURAL SUBDIVISION	RURAL RES./HOBBY FARM		MATURE DECIDUOUS	FAIR	URBAN	YES MATURE DECIDUOUS	FAIR	10	-	0 0				R-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 3	0 0	30 M F	R-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		0 100	0 M	R-10-1-U
Bozeman Creek	BOZE 02-01	2 1	581 17g	1) GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD		NO MATURE CONFEROUS	GOOD	0	0	0 0		0 100		R-4-1-U
Bozeman Creek	BOZE 03-01	3 1	1613 17g	1		CONFINEMENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD		NO MATURE CONIFEROUS	GOOD	0	0	0 0	0	0 100	0 M I	R-4-1-C
Bozeman Creek	BOZE 04-01		902 17g			4 CONFINEMENT/GRADIENT		FOREST	FOREST		MATURE CONFEROUS	GOOD		NO MATURE CONFEROUS	GOOD	0	0	0 0		0 100		R-2-1-U
Bozeman Creek Bozeman Creek		5 1	305 17g 942 17g			STREAM ORDER ORADIENT		FOREST FOREST	FOREST FOREST		MATURE CONIFEROUS MATURE CONIFEROUS	GOOD		NO MATURE CONIFEROUS NO MATURE CONIFEROUS	GOOD	0	0	0 0		0 100		R-2-2-U R-4-2-U
Bozeman Creek	BOZE 07-01	7 1	2222 17g			GRADIENT		FOREST	FOREST				FOREST	NO MATURE CONFEROUS	GOOD	0	_	0 0		0 100		R-0-2-U
Bozeman Creek			0.045 47-	_		4 GRADIENT		FOREST	FOREST		MATURE CONFERDALIO	0000	FOREST	NO MATURE CONFERDALIO		0	0	0 0		0 100		R-2-2-U
	BOZE 08-01	8 1	6615 17g	_							MATURE CONIFEROUS			NO MATURE CONIFEROUS	GOOD	U	0	0 0		01 70		
Bozeman Creek	BOZE 08-02	8 1 8 2	1127 17g	2	U 2-<4	4	RVC	FOREST	FOREST	YES	MATURE CONIFEROUS	FAIR	FOREST	YES MATURE CONIFEROUS	FAIR	30				0 80		R-2-2-U
Bozeman Creek Bozeman Creek Bozeman Creek		8 1 8 2 9 1 10 1		2	U 2-<4	GRADIENT	RVC			YES			FOREST FOREST			30 10 20	0		10	0 80	0 M I	R-2-2-U R-0-2-U R-2-2-U
Bozeman Creek	BOZE 08-02 BOZE 09-01 BOZE 10-01 BOZE 11-01	8 1 8 2 9 1 10 1 11 1	1127 17g 2400 17g 5529 17g 2097 17g	2 2 2	U 2-<4 U <2 U 2-<4 U 2-<4	GRADIENT GRADIENT GRADIENT GRADIENT	RVC	FOREST FOREST FOREST FOREST	FOREST FOREST FOREST FOREST	YES YES NO NO	MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS	FAIR FAIR GOOD GOOD	FOREST FOREST FOREST FOREST	YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS	FAIR FAIR FAIR FAIR	30 10 20	0	0 0	0 10	0 80	0 MF 0 MF	R-0-2-U R-2-2-U R-0-2-U
Bozeman Creek Bozeman Creek Bozeman Creek Bozeman Creek	BOZE 08-02 BOZE 09-01 BOZE 10-01 BOZE 11-01 BOZE 12-01	8 1 8 2 9 1 10 1 11 1 12 1	1127 17g 2400 17g 5529 17g 2097 17g 4378 17g	2 2 2 2 2	U 2-44 U 2-4 U 2-4 U 2-4 U 2 C 2-4	GRADIENT GRADIENT GRADIENT GRADIENT CONFINEMENT/GRADIENT		FOREST FOREST FOREST FOREST FOREST	FOREST FOREST FOREST FOREST FOREST	YES YES NO NO NO	MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS	FAIR FAIR GOOD GOOD GOOD	FOREST FOREST FOREST FOREST ROAD	YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES SHRUBS	FAIR FAIR FAIR FAIR FAIR	30 10 20 10 50	0 0 0	0 0 0 0 0 0	0 10 0 0 0 0 0 0	0 80 0 90 0 50	0 M F 0 M F 0 M F	R-0-2-U R-2-2-U R-0-2-U R-2-2-C
Bozeman Creek Bozeman Creek Bozeman Creek Bozeman Creek Bozeman Creek	BOZE 08-02 BOZE 09-01 BOZE 10-01 BOZE 11-01 BOZE 12-01 BOZE 12-02	8 1 8 2 9 1 10 1 11 1 12 1 12 2 13 1	1127 17g 2400 17g 5529 17g 2097 17g 4378 17g 4200 17g	2 2 2 2 2 2 2	U 2-<4 U 2-<4 U 2-<4 U 2-<4 C 2-<4 C 2-<4	GRADIENT GRADIENT GRADIENT GRADIENT CONFINEMENT/GRADIENT	RVC	FOREST FOREST FOREST FOREST FOREST FOREST FOREST	FOREST FOREST FOREST FOREST FOREST FOREST FOREST	YES YES NO NO NO NO	MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS MATURE CONIFEROUS	FAIR FAIR GOOD GOOD GOOD GOOD	FOREST FOREST FOREST FOREST ROAD FOREST	YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES SHRUBS NO MATURE CONIFEROUS	FAIR FAIR FAIR FAIR FAIR GOOD	30 10 20 10 50 0	0 0 0 0	0 0	0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 80 0 90 0 50	0 M F 0 M F 0 M F 0 M F	R-0-2-U R-2-2-U R-0-2-U R-2-2-C R-2-2-C
Bozeman Creek Bozeman Creek Bozeman Creek Bozeman Creek	BOZE 08-02 BOZE 09-01 BOZE 10-01 BOZE 11-01 BOZE 12-01		1127 17g 2400 17g 5529 17g 2097 17g 4378 17g	2 2 2 2 2 2 2 2	U 2-44 U 2-4 U 2-4 U 2-4 C 2-4 U 2-4 U 2-4	GRADIENT GRADIENT GRADIENT GRADIENT CONFINEMENT/GRADIENT		FOREST FOREST FOREST FOREST FOREST	FOREST FOREST FOREST FOREST FOREST	YES YES NO NO NO NO NO	MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS	FAIR FAIR GOOD GOOD GOOD	FOREST FOREST FOREST FOREST ROAD FOREST	YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES SHRUBS	FAIR FAIR FAIR FAIR FAIR	30 10 20 10 50 0	0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0	0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 80 0 90 0 50 0 100 0 100	0 M F 0 M F 0 M F 0 M F 0 M F	R-0-2-U R-2-2-U R-0-2-U R-2-2-C
Bozeman Creek	BOZE 08-02 BOZE 09-01 BOZE 10-01 BOZE 11-01 BOZE 12-01 BOZE 12-02 BOZE 12-02 BOZE 14-01 BOZE 14-01 BOZE 15-01	13 1 14 1 15 1	1127 17g 2400 17g 5529 17g 2097 17g 4378 17g 4200 17g 1529 17g 4901 17g 5754 17w 17g 17g	2 2 2 2 2 2 2 2 2 2	U 2-44 U 2-4 U 2-4 U 2-4 C 2-4 U 2-4 U 2-4 U 2-4 U 2-4 U 2-4	GRADIENT GRADIENT GRADIENT GRADIENT 4 CONFINEMENT/GRADIENT 4 CONFINEMENT	RVC RVC LULC	FOREST FOREST FOREST FOREST FOREST FOREST FOREST FOREST FOREST HAY	FOREST FOREST FOREST FOREST FOREST FOREST FOREST FOREST HARVEST/FIRE HAY/PASTURE	YES YES NO NO NO NO NO YES YES	MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS	FAIR FAIR GOOD GOOD GOOD GOOD FAIR FAIR	FOREST FOREST FOREST FOREST FOREST ROAD FOREST FOREST FOREST FOREST FOREST RURAL RES/HOBBY FARM	YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES SHRUBS NO MATURE CONIFEROUS NO MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS	FAIR FAIR FAIR FAIR FAIR GOOD GOOD FAIR	50 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 80 0 90 0 50 0 100 0 100 0 60	0 MF 0 MF 0 MF 0 MF 0 MF 0 MF	R-0-2-U R-2-2-U R-0-2-U R-2-2-C R-2-2-C R-2-2-U R-0-2-U R-0-2-U
Bozeman Creek	BOZE 08-02 BOZE 09-01 BOZE 10-01 BOZE 11-01 BOZE 12-01 BOZE 12-02 BOZE 13-01 BOZE 13-01 BOZE 15-01 BOZE 15-01	13 1 14 1 15 1 15 2	1127 17g 2400 17g 5529 17g 2097 17g 4378 17g 4200 17g 4200 17g 4201 17g 4901 17g 4901 17g 5754 17w 17g 6057 17w 17g	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	U 2-44 U 2-4 U 2-4 U 2-4 C 2-4 U 2-4	GRADIENT GRADIENT GRADIENT CONFINEMENT/GRADIENT CONFINEMENT GRADIENT GRADIENT ECOREGION	RVC RVC	FOREST FOREST FOREST FOREST FOREST FOREST FOREST FOREST FOREST HAY HAY	FOREST FOREST FOREST FOREST FOREST FOREST FOREST HARVEST/FIRE HAY/PASTURE HAY/PASTURE	YES YES NO NO NO NO YES YES YES	MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS SHRUBS	FAIR FAIR GOOD GOOD GOOD GOOD FAIR FAIR FAIR	FOREST FOREST FOREST FOREST ROAD FOREST FOREST FOREST FOREST FOREST RURAL RES/HOBBY FARM HAY/PASTURE	YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES SHRUBS NO MATURE CONIFEROUS NO MATURE CONIFEROUS NO MATURE CONIFEROUS YES MATURE OBECIDIOUS YES SHRUBS	FAIR FAIR FAIR FAIR FAIR GOOD GOOD FAIR FAIR	50 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 80 0 90 0 50 0 100 0 100 0 60 0 0	0 MF 0 MF 0 MF 0 MF 0 MF 0 MF 0 MF	R-0-2-U R-2-2-U R-0-2-U R-2-2-C R-2-2-C R-2-2-U R-0-2-U R-0-2-U R-0-2-U
Bozeman Creek	BOZE 08-02 BOZE 09-01 BOZE 10-01 BOZE 11-01 BOZE 12-01 BOZE 12-02 BOZE 12-02 BOZE 14-01 BOZE 14-01 BOZE 15-01	13 1 14 1 15 1	1127 17g 2400 17g 5529 17g 2097 17g 4378 17g 4200 17g 4200 17g 4201 17g 4901 17g 4901 17g 6057 17w 17g 678 17w 17g	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	U 2-4 U 2 U 2-4 U 2 C 2-4 C 2-4 U 2-4 U 2 U 2 U 2 U 2	GRADIENT GRADIENT GRADIENT GRADIENT CONFINEMENT/GRADIENT CONFINEMENT GRADIENT ECOREGION GRADIENT	RVC RVC LULC	FOREST HAY HAY HAY	FOREST FOREST FOREST FOREST FOREST FOREST FOREST FOREST HARVEST/FIRE HAY/PASTURE HAY/PASTURE HAY/PASTURE	YES YES NO NO NO NO NO YES YES	MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS SHRUBS	FAIR FAIR GOOD GOOD GOOD GOOD FAIR FAIR	FOREST FOREST FOREST FOREST ROAD FOREST FOREST FOREST FOREST FOREST RURAL RES/HOBBY FARM HAY/PASTURE WETLAND	YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES SHRUBS NO MATURE CONIFEROUS NO MATURE CONIFEROUS NO MATURE CONIFEROUS YES MATURE DECIDUOUS YES SHRUBS YES SHRUBS	FAIR FAIR FAIR FAIR FAIR GOOD GOOD FAIR	50 0 0 0	0 0 0 0 0 0 0 0 20 20	0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 80 0 90 0 50 0 100 0 100 0 60 0 0 0	0 MF 0 MF 0 MF 0 MF 0 MF 0 MF 0 MF 0 MF	R-0-2-U R-2-2-U R-0-2-U R-2-2-C R-2-2-C R-2-2-U R-0-2-U R-0-2-U R-0-2-U R-2-2-U
Bozeman Creek	BOZE 08-02 BOZE 09-01 BOZE 10-01 BOZE 11-01 BOZE 12-01 BOZE 12-02 BOZE 3-01 BOZE 15-01 BOZE 15-02 BOZE 16-02	13 1 14 1 15 1 15 2 16 1	1127 17g 2400 17g 5529 17g 2097 17g 4378 17g 4200 17g 4529 17g 4529 17g 4529 17g 4901 17g 5754 17w 17g 6057 17w 17g 678 17w 17g 1140 17w 17g 4607 17w 17g	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	U 2-4 U 2 U 2-4 U 2 C 2-4 C 2-4 U 2-4 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2	GRADIENT GRADIENT GRADIENT CONFINEMENT/GRADIENT CONFINEMENT CONFINEMENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT	RVC RVC LULC	FOREST FOREST FOREST FOREST FOREST FOREST FOREST FOREST HAY HAY HAY HAY URBAN	FOREST FOREST FOREST FOREST FOREST FOREST FOREST FOREST HARVEST/FIRE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE	YES YES NO NO NO NO NO YES YES YES YES YES	MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS SHRUBS	FAIR FAIR GOOD GOOD GOOD GOOD FAIR FAIR FAIR FAIR FAIR FAIR FAIR	FOREST FOREST FOREST FOREST ROAD FOREST FOREST FOREST FOREST FOREST RURAL RES/HOBBY FARM HAY/PASTURE WETLAND HAY/PASTURE URBAN	YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES SHRUBS NO MATURE CONIFEROUS NO MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES SHRUBS YES SHRUBS YES MATURE DECIDUOUS	FAIR FAIR FAIR FAIR FAIR FAIR GOOD GOOD GOOD FAIR FAIR FAIR FAIR FAIR FAIR FAIR	50 0 0 0	0 0 0 0 0 0 0 0 20 20	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 80 0 90 0 50 0 100 0 100 0 60 0 0 0 0 20	0 MF 0 MF 0 MF 0 MF 0 MF 0 MF 0 MF 0 MF	R-0-2-U R-2-2-U R-0-2-U R-2-2-C R-2-2-C R-2-2-U R-0-2-U R-0-2-U R-0-2-U
Bozeman Creek	BOZE 08-02 BOZE 09-01 BOZE 10-01 BOZE 11-01 BOZE 12-01 BOZE 12-01 BOZE 13-01 BOZE 15-01 BOZE 15-01 BOZE 15-01 BOZE 16-01 BOZE 17-01 BOZE 17-02 BOZE 17-02	13 1 14 1 15 1 15 2 16 1 17 1 17 2 18 1	1127 17g 2400 17g 2400 17g 2097 17g 4378 17g 4200 17g 1529 17g 4901 17g 5754 17w 17g 6057 17w 17g 678 17w 17g 1140 17w 17g 1400 17r 17g 1707 17w 17g	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	U 2-44 U 2-4	GRADIENT GRADIENT GRADIENT GRADIENT CONFINEMENT/GRADIENT CONFINEMENT GRADIENT ECOREGION GRADIENT	RVC RVC LULC RVC	FOREST HAY HAY HAY URBAN URBAN	FOREST FOREST FOREST FOREST FOREST FOREST FOREST FOREST FOREST HARVEST/FIRE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE FOREST	YES YES NO NO NO NO YES YES YES YES YES YES YES YES	MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS MATURE DECIDUOUS MATURE DECIDUOUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE DECIDUOUS MATURE DECIDUOUS	FAIR FAIR GOOD GOOD GOOD GOOD FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAIR	FOREST FOREST FOREST FOREST ROAD FOREST FOREST FOREST FOREST FOREST WIRAL RES/HOBBY FARM HAY/PASTURE WETLAND HAY/PASTURE URBAN FOREST	YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES SHRUBS NO MATURE CONIFEROUS NO MATURE CONIFEROUS NO MATURE CONIFEROUS YES MATURE DECIDUOUS YES SHRUBS YES SHRUBS YES MATURE DECIDUOUS	FAIR FAIR FAIR FAIR FAIR GOOD GOOD GOOD FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAIR	50 0 0 0	0 0 0 0 0 0 0 0 20 20 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 80 0 90 0 50 0 100 0 100 0 60 0 0 0 0 20 0 0 20 0 0 70	O M M M M M M M M M M M M M M M M M M M	R-0-2-U R-2-2-U R-0-2-U R-2-2-C R-2-2-C R-2-2-U R-0-2-U R-0-2-U R-0-2-U R-0-2-U R-0-2-U R-0-3-U
Bozeman Creek	BOZE 08-02 BOZE 09-01 BOZE 10-01 BOZE 11-01 BOZE 12-01 BOZE 12-02 BOZE 30-01 BOZE 14-01 BOZE 15-01 BOZE 15-01 BOZE 15-02 BOZE 15-02 BOZE 17-01 BOZE 17-02 BOZE 18-01 BOZE 18-01	13 1 14 1 15 1 15 2 16 1 17 1 17 2 18 1 18 2	1127 17g 2400 17g 2400 17g 2097 17g 4378 17g 4200 17g 4378 17g 4901 17g 5554 17w 17g 6057 17w 17g 6057 17w 17g 618 17w 17g 1140 17w 17g 4607 17w 17g 618 17w 17g 6310 17w 17g	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	U 2-c4 U 2 U 2-c4 U 2 C 2-c4 U 2-c4 U 2-c4 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2	GRADIENT GRADIENT GRADIENT CONFINEMENT/GRADIENT CONFINEMENT CONFINEMENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT	RVC RVC LULC RVC LULC	FOREST FOREST FOREST FOREST FOREST FOREST FOREST FOREST HAY HAY HAY HAY HAY URBAN URBAN URBAN	FOREST FOREST FOREST FOREST FOREST FOREST FOREST FOREST HARVEST/FIRE HAY/PASTURE HOREST URBAN	YES YES NO NO NO NO YES YES YES YES YES YES YES YES YES	MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE DECIDUOUS SHRUBS SHRUBS MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS MATURE OCIDIOUS MATURE OCIDIOUS MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS	FAIR FAIR GOOD GOOD GOOD GOOD FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAIR	FOREST FOREST FOREST FOREST ROAD FOREST FOREST FOREST FOREST RURAL RES/HOBBY FARM HAY/PASTURE WETLAND HAY/PASTURE URBAN FOREST URBAN FOREST URBAN	YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES SHRUBS NO MATURE CONIFEROUS NO MATURE CONIFEROUS YES MATURE CONIFEROUS YES SHRUBS YES SHRUBS YES MATURE DECIDUOUS	FAIR FAIR FAIR FAIR FAIR GOOD GOOD GOOD FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAIR	50 0 0 0	0 0 0 0 0 0 0 0 20 20 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 80 0 90 0 50 0 100 0 100 0 60 0 0 20 0 0 20 0 0 0 0 70	O M M M M M M M M M M M M M M M M M M M	R-0-2-U R-2-2-U R-0-2-U R-2-2-C R-2-2-C R-2-2-U R-0-2-U R-0-2-U R-0-2-U R-0-2-U R-0-2-U R-0-3-U R-0-3-U
Bozeman Creek	BOZE 08-02 BOZE 09-01 BOZE 10-01 BOZE 11-01 BOZE 12-01 BOZE 12-01 BOZE 13-01 BOZE 15-01 BOZE 15-01 BOZE 15-01 BOZE 16-01 BOZE 17-01 BOZE 17-02 BOZE 17-02	13 1 14 1 15 1 15 2 16 1 17 1 17 2 18 1 18 2	1127 17g 2400 17g 2400 17g 2097 17g 4378 17g 4200 17g 1529 17g 4901 17g 5754 17w 17g 6057 17w 17g 678 17w 17g 1140 17w 17g 1400 17r 17g 1707 17w 17g	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	U 2-44 U 2-4	GRADIENT GRADIENT GRADIENT CONFINEMENT/GRADIENT CONFINEMENT CONFINEMENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT	RVC RVC LULC RVC	FOREST FOREST FOREST FOREST FOREST FOREST FOREST FOREST HAY HAY HAY URBAN URBAN URBAN URBAN	FOREST FOREST FOREST FOREST FOREST FOREST FOREST FOREST HARVEST/FIRE HAY/PASTURE HOY/PASTURE FOREST URBAN URBAN	YES YES NO NO NO NO YES YES YES YES YES YES YES YES YES	MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE DECIDUOUS SHRUBS MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS MATURE CONIFEROUS MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS	FAIR FAIR GOOD GOOD GOOD GOOD FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAIR	FOREST FOREST FOREST FOREST ROAD FOREST FOREST FOREST FOREST RURAL RES/HOBBY FARM HAY/PASTURE WETLAND HAY/PASTURE URBAN FOREST URBAN URBAN URBAN	YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES SHRUBS NO MATURE CONIFEROUS NO MATURE CONIFEROUS NO MATURE CONIFEROUS YES MATURE DECIDUOUS YES SHRUBS YES SHRUBS YES MATURE DECIDUOUS	FAIR FAIR FAIR FAIR FAIR GOOD GOOD GOOD FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAIR	50 0 0 0	0 0 0 0 0 0 0 0 20 20 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 80 0 90 0 50 0 100 0 100 0 60 0 0 20 0 0 20 0 0 70 0 0 0	O M M M M M M M M M M M M M M M M M M M	R-0-2-U R-2-2-U R-0-2-U R-2-2-C R-2-2-C R-2-2-U R-0-2-U R-0-2-U R-0-2-U R-0-2-U R-0-2-U R-0-3-U
Bozeman Creek	BOZE 08-02 BOZE 09-01 BOZE 10-01 BOZE 11-01 BOZE 12-01 BOZE 12-02 BOZE 13-01 BOZE 13-01 BOZE 15-01 BOZE 15-01 BOZE 15-01 BOZE 15-01 BOZE 17-02 BOZE 17-02 BOZE 18-01 BOZE 18-01	13 1 14 1 15 1 15 2 16 1 17 1 17 2 18 1 18 2 18 3 18 4	1127 17g 2400 17g 5529 17g 2097 17g 4378 17g 4200 17g 4378 17g 4200 17g 1529 17g 4901 17g 5754 17w 17g 6057 17w 17g 1140 17w 17g 4607 17w 17g 1071 17w 17g 6310 17w 17g 6489 17w 17g	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	U 2-c4 U 2 U 2-c4 U 2 C 2-c4 U 2-c4 U 2-c4 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2	GRADIENT GRADIENT GRADIENT CONFINEMENT/GRADIENT CONFINEMENT CONFINEMENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT	RVC LULC RVC LULC RVC RVC	FOREST FOREST FOREST FOREST FOREST FOREST FOREST FOREST HAY HAY HAY HAY HAY URBAN URBAN URBAN	FOREST FOREST FOREST FOREST FOREST FOREST FOREST FOREST HARVEST/FIRE HAY/PASTURE HOREST URBAN	YES YES NO NO NO NO YES	MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE DECIDUOUS SHRUBS SHRUBS MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS MATURE OCIDIOUS MATURE OCIDIOUS MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS	FAIR FAIR GOOD GOOD GOOD GOOD FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAIR	FOREST FOREST FOREST FOREST ROAD FOREST FOREST FOREST FOREST RURAL RES/HOBBY FARM HAY/PASTURE WETLAND HAY/PASTURE URBAN FOREST URBAN FOREST URBAN	YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES MATURE CONIFEROUS YES SHRUBS NO MATURE CONIFEROUS NO MATURE CONIFEROUS YES MATURE DECIDUOUS YES MATURE DECIDUOUS YES SHRUBS YES SHRUBS YES MATURE DECIDUOUS	FAIR FAIR FAIR FAIR FAIR GOOD GOOD GOOD FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAIR	50 0 0 0	0 0 0 0 0 0 0 0 20 20 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 80 0 90 0 50 0 100 0 100 0	O M M M M M M M M M M M M M M M M M M M	R-0-2-U R-2-2-U R-0-2-U R-2-2-C R-2-2-C R-2-2-U R-0-2-U R-0-2-U R-0-2-U R-0-2-U R-0-3-U R-0-3-U R-0-3-U R-0-3-U

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Camp Creek	CAM P 01-01	1 1	1888	17 _W	1		4-10	START		RANGE	RANGE	YES GRASS	FAIR	RANGE	YES	BARE	POOR	0 1	20	0 0	0	0 0	0 MR	2-4-1-11
Camp Creek	CAMP 02-01	2 1	899	17 W	1			LAKE		RANGE	RANGE	YES GRASS	FAIR	RANGE	YES	BARE	POOR		00	0 0	0	0 0	0 1011	-4-1-0
Camp Creek Camp Creek	CAMP 03-01 CAMP 03-02	3 1 2	1985	17w		U		GRADIENT	RVC	DRYLAND DRYLAND	AGRICULTURE (ROW CROPS) AGRICULTURE (ROW CROPS)	YES GRASS YES GRASS	FAIR FAIR	AGRICULTURE (ROW CROPS) AGRICULTURE (ROW CROPS)	YES	GRASS GRASS	FAIR FAIR			0 50	-	0 0		R-0-1-U R-0-1-U
Camp Creek	CAMP 03-02	3 3	2555			U			LULC	DRYLAND	HAY/PASTURE	YES GRASS	FAIR	HAY/PASTURE	YES		FAIR		30 6	0 0		0 0		R-0-1-U
Camp Creek	CAMP 03-04 CAMP 03-05	3 4		17w		U			RVC RVC	DRYLAND DRYLAND	HAY/PASTURE AGRICULTURE (ROW CROPS)	YES GRASS YES GRASS	FAIR FAIR	HAY/PASTURE HAY/PASTURE	YES YES		FAIR FAIR	-		50 0	-	0 0	_	R-0-1-U
Camp Creek Camp Creek	CAMP 03-05	4 1		17W		U		GRADIENT	RVC	DRYLAND	HAY/PASTURE	YES BARE	POOR	RANGE	YES		POOR		20 8 50 5	50 0	-	0 0	_	R-2-1-U
Camp Creek	CAMP 05-01 CAMP 05-02	5 1	925	17w	1	С	4-10 4-10	CONFINEMENT/GRADIENT	DVC	DRYLAND	AGRICULTURE (ROW CROPS) RANGE	YES GRASS	FAIR	RANGE RANGE	YES YES	GRASS	FAIR FAIR	-	70 3	0 0	0	0 0	_	R-4-1-C
Camp Creek Camp Creek	CAMP 05-02	5 2 6 1	1024 1515	17W	1	U		GRADIENT	RVC RVC	RANGE RANGE	RANGE	YES MATURE CONIFEROUS YES BARE	FAIR POOR	RANGE	YES		POOR		00	0 0	0	0 0		R-4-1-C R-0-1-U
Camp Creek	CAMP 06-02	6 2		17w		U		OTDEAM ODDED	RVC	RANGE	RANGE	YES SHRUBS	FAIR	RANGE	YES		FAIR	-		0 0	-	0 30		R-0-1-U
Camp Creek Camp Creek	CAMP 07-01 CAMP 08-01	7 1 8 1		17w 17w		2 U		STREAM ORDER STREAM ORDER		RANGE DRYLAND RL, RANGE RR	RANGE AGRICULTURE (ROW CROPS)	YES SHRUBS YES SHRUBS	FAIR FAIR	RANGE RANGE	YES	SHRUBS SHRUBS	FAIR FAIR	_	70 40 4	0 0	-	0 30		R-0-2-U R-0-3-U
Camp Creek	CAMP 09-01	9 1		17w		_			LULC	DRYLAND RL, RANGE RR	AGRICULTURE (ROW CROPS)		FAIR	RANGE	YES		FAIR	-		50 0	-	0 10	_	R-2-3-U
Camp Creek Camp Creek	CAMP 10-01 CAMP 10-02	10 1 10 2		17w		B U		GRADIENT	LULC	DRYLAND RL, RANGE RR HAY	AGRICULTURE (ROW CROPS) HAY/PASTURE	YES GRASS YES GRASS	FAIR FAIR	RANGE HAY/PASTURE	YES		FAIR FAIR	-		10 0 70 0	-	0 10	_	R-0-3-U R-0-3-U
Camp Creek	CAMP 10-03	10 3	1093	17w	3	B U	<2		RVC	DRYLAND	HAY/PASTURE	YES GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	40 4	0 0	0	0 20	0 MR	R-0-3-U
Camp Creek Camp Creek	CAM P 10-04 CAM P 11-01	10 4 11 1		17w		U C		CONFINEM ENT	RVC	RANGE RANGE	RANGE RANGE	YES SHRUBS YES SHRUBS	FAIR FAIR	RANGE RANGE	YES	SHRUBS SHRUBS	FAIR FAIR	0	70 70	υ 0 0 0	0	0 30		R-0-3-U R-0-3-C
Camp Creek	CAM P 11-02	11 2	764	17w	3	3 C	<2		RVC	RANGE	RANGE	YES MATURE CONIFEROUS	GOOD	RANGE	YES	MATURE CONIFEROUS	GOOD	0	50	0 0	0	0 50	0 MR	R-0-3-C
Camp Creek Camp Creek		12 1 13 1		17w				GRADIENT CONFINEMENT		RANGE DRYLAND	RANGE RANGE	YES MATURE CONIFEROUS YES SHRUBS	FAIR FAIR	RANGE RANGE	YES	MATURE CONIFEROUS SHRUBS	FAIR FAIR		00	0 0		0 50		R-2-3-C R-2-3-U
Camp Creek	CAMP 13-02	13 2	665	17w	3	B U	2-<4		RVC	RANGE	RANGE	YES MATURE CONIFEROUS	FAIR	RANGE	YES	MATURE CONIFEROUS	FAIR	20	60	0 0	0	0 20	0 MR	R-2-3-U
Camp Creek Camp Creek	CAM P 14-01 CAM P 14-02	14 1 14 2		17w 17w		B U		GRADIENT	LULC	DRYLAND HAY	RANGE HAY/PASTURE	YES SHRUBS YES GRASS	FAIR FAIR	RANGE HAY/PASTURE	YES YES	SHRUBS GRASS	FAIR FAIR	40	_	0 0 50 0	-	0 0	_	R-0-3-U
Camp Creek		14 3	1168	17W		3 U			LULC	RURAL RESIDENCE/ROAD	RURAL RES./HOBBY FARM	YES BARE	POOR	RURAL RES./HOBBY FARM	YES	BARE	POOR			0 0			40 MR	
Camp Creek	CAMP 14-04 CAMP 14-05		4358 2211	17w		U			LULC	DRYLAND DRYLAND	ROAD HAY/PASTURE	YES BARE YES SHRUBS	POOR FAIR	AGRICULTURE (ROW CROPS) AGRICULTURE (ROW CROPS)	YES	BARE SHRUBS	POOR FAIR		20 3	0 0	0	0 0	20 MR	R-0-3-U
Camp Creek Camp Creek		14 5 14 6				B U			RVC RVC	DRYLAND	RANGE	YES GRASS	FAIR	ROAD	YES		FAIR	50	. 0		0	0 0		R-0-3-U
Camp Creek		14 7	1848			U U			RVC	DRYLAND	ROAD	YES GRASS	FAIR	ROAD	YES		FAIR	80	_	0 0	- ŭ	0 0		R-0-3-U
Camp Creek Camp Creek		14 8 14 9	924 8617	17w		B U			RVC/LULC LULC/RVC	RURAL RESIDENCE DRYLAND	HAY/PASTURE ROAD	YES SHRUBS YES GRASS	FAIR FAIR	RURAL RES./HOBBY FARM HAY/PASTURE	YES	SHRUBS GRASS	FAIR FAIR		40 20 2	0 0	Ľ	0 0	40 MR	R-0-3-U
Camp Creek	CAM P 14-10	14 10	3839	17w	3	3 U	<2		LULC	DRYLAND	HAY/PASTURE	YES GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0		_	0	_	0 MR	R-0-3-U
Camp Creek Camp Creek		14 11 14 12		17w		B U			LULC	RURAL RESIDENCE DRYLAND/ROWCROP	RURAL RES./HOBBY FARM AGRICULTURE (ROW CROPS)	YES BARE YES BARE	POOR	RURAL RES./HOBBY FARM	YES	BARE	POOR	0	0 2	0 0	_	0 0	100 MR	R-0-3-U
Camp Creek	CAM P 14-13	14 13	6851	17w	3	B U	<2		LULC	DRYLAND/ROWCROPS(?)	HAY/PASTURE	YES BARE	POOR	ROAD	YES	BARE	POOR	50	20	0 0	0 3	30 0	0 MR	R-0-3-U
Camp Creek Camp Creek		14 14 14 15		17w		B U			LULC/RVC	RURAL SUBDIVISION RURAL RESIDENCES	URBAN RURAL RES./HOBBY FARM	YES GRASS YES BARE	FAIR	RANGE URBAN	YES		FAIR POOR	50 40	50 20	0 0		0 0	0 MR 40 MR	R-0-3-U
Camp Creek		14 16		17w		, U			LULC	ROWCROPS	AGRICULTURE (ROW CROPS)	YES GRASS	FAIR	ROAD	YES		FAIR	50		50 0		0 0		R-0-3-U
Camp Creek Camp Creek		14 17 14 18		17w		B U			RVC RVC	ROWCROPS ROWCROPS	AGRICULTURE (ROW CROPS) AGRICULTURE (ROW CROPS)	YES GRASS YES GRASS	FAIR FAIR	AGRICULTURE (ROW CROPS) AGRICULTURE (ROW CROPS)	YES	GRASS GRASS	FAIR FAIR	10	70 20 8	10 0	Ľ	0 10		R-0-3-U
Camp Creek		14 19				3 U			LULC	ROWCROPS	RURAL RES./HOBBY FARM	YES BARE	POOR	RURAL RES/HOBBY FARM	YES		POOR	0		0 0	0		80 MR	
Camp Creek	CAMP 14-20 CAMP 14-21	14 20 14 21				3 U			LULC	ROWCROPS ROWCROPS	AGRICULTURE (ROW CROPS) AGRICULTURE (ROW CROPS)	YES BARE YES GRASS	POOR FAIR	AGRICULTURE (ROW CROPS) AGRICULTURE (ROW CROPS)	YES YES	BARE BARE	POOR POOR	0	0 10	0 0		0 0	_	R-0-3-U
Camp Creek Camp Creek	CAMP 14-21					3 U			RVC	ROWCROPS/HAY	AGRICULTURE (ROW CROPS)	YES GRASS	FAIR	,	YES		FAIR			50 0	0	0 0	20 MR	R-0-3-U
Camp Creek		15 1		17w		l U		STREAM ORDER	DVO	ROWCROPS/HAY	HAY/PASTURE	YES GRASS	FAIR FAIR	HAY/PASTURE	YES		FAIR FAIR	10	40	0 0	_	50 0	_	R-0-4-U
Camp Creek Camp Creek	CAMP 15-02 CAMP 15-03	15 2 15 3		17W		l U			RVC LULC	HAY/ROW CROPS HIGHWAY	AGRICULTURE (ROW CROPS) ROAD	YES GRASS YES GRASS	FAIR	HAY/PASTURE ROAD	YES		FAIR	100		0 0	0 3	0 0		R-0-4-U R-0-4-U
Camp Creek		15 4		17w		U			LULC	HAY	HAY/PASTURE	YES GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	10	40	0 0	0 4	.0 .0	0	R-0-4-U
Camp Creek	CAM P 15-05	15 5	5118	1/W	4	ı U	<2		RVC	HAY	HAY/PASTURE	YES GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	10	40	0 0	0 4	40 10	0 MR	R-0-4-U
Dry Creek		1 1	_	17g		_	_	START		FOREST	FOREST	NO MATURE CONIFEROUS			_	MATURE CONIFEROUS			_		_	0 100		R-10-1-C
Dry Creek Dry Creek	DRY 02-01 DRY 03-01	2 1 3 1		17g 17w 1				CONFINEMENT ECOREGION	RVC	FOREST RANGE	FOREST RANGE	YES MATURE CONIFEROUS YES BARE		FOREST RANGE		MATURE CONIFEROUS BARE	FAIR POOR	0				0 50		R-10-1-U R-10-1-U
Dry Creek	DRY 04-01	4 1	954	17w 1	7g 1	U	4-10	GRADIENT		RANGE	RANGE	YES BARE	POOR	RANGE	YES	BARE	POOR	0	60	0 0	0	0 40	0 MR	R-4-1-U
Dry Creek Dry Creek		4 2		17w 1		U U			LULC RVC	DRYLAND DRYLAND	AGRICULTURE (ROW CROPS) RANGE	YES BARE YES SHRUBS		AGRICULTURE (ROW CROPS) AGRICULTURE (ROW CROPS)			POOR FAIR	10 :	_	70 0 10 0		0 0	0 MR	R-4-1-U R-4-1-U
Dry Creek	DRY 05-01	5 1	2954	17w 1	7g 1	U	2-<4	GRADIENT		DRYLAND	AGRICULTURE (ROW CROPS)	YES SHRUBS	FAIR	AGRICULTURE (ROW CROPS)	YES	SHRUBS	FAIR	0	0 8	30 0	0	0 20	0 MR	R-2-1-U
Dry Creek Dry Creek	DRY 06-01 DRY 07-01	6 1 7 1		17w 1		2 U		STREAM ORDER BEAVER POND	RVC	DRYLAND DRYLAND	AGRICULTURE (ROW CROPS) AGRICULTURE (ROW CROPS)		FAIR FAIR	AGRICULTURE (ROW CROPS) RANGE		SHRUBS SHRUBS	FAIR FAIR		_	_		0 10 0 10	0 M R	R-2-2-U
Dry Creek	DRY 08-01	8 1	3249	17w 1	7g 2	2 U	<2	GRADIENT	LULC	HAY	HAY/PASTURE	YES SHRUBS	FAIR	RANGE	YES	SHRUBS	FAIR	10	40 4	10 0	0	0 10		R-0-2-U
Dry Creek Dry Creek		9 1	3487 2686	17w 1		3 U		STREAM ORDER	RVC RVC	HAY RL/RANGE RR RANGE	RURAL RES./HOBBY FARM RANGE	YES GRASS YES GRASS	FAIR FAIR	RANGE RANGE		GRASS GRASS	FAIR FAIR	30		0 0		30 10 0 20		R-0-3-U
Dry Creek	DRY 09-03	9 3	5586	17w 1	7g 3	3 U	<2		RVC	HAY	HAY/PASTURE	YES GRASS	FAIR	RANGE	YES	GRASS	FAIR	10	40	0 0	0 4	40 10	0 MR	R-0-3-U
Dry Creek Dry Creek	DRY 09-04 DRY 09-05	9 4 9 5		17w 1		B U			RVC LULC	DRYLAND RR/HAY RL	HAY/PASTURE HAY/PASTURE	YES GRASS YES GRASS	FAIR FAIR	RANGE HAY/PASTURE	YES	GRASS GRASS	FAIR FAIR	0	_	0 0	0 4		10 MR	R-0-3-U
Dry Creek	DRY 09-06		2653		7g 3	3 U	<2		LULC	RANGE	ROAD	YES GRASS	FAIR	ROAD	YES	GRASS	FAIR	50		0 0		0 10		R-0-3-U
Dry Creek		10 1		17w 1		_		CONFINEMENT	IIIIC	RANGE	RANGE RANGE	YES GRASS YES GRASS		HAY/PASTURE ROAD		GRASS GRASS	FAIR FAIR		40			0 10	_	R-0-3-C
Dry Creek Dry Creek		10 2 10 3		17w 1	7g 3	C C	<2		RVC/LULC	RANGE HAY	HAY/PASTURE	YES GRASS YES GRASS		HAY/PASTURE		GRASS	FAIR	50 10	_	0 0	_	0 10 50 0		R-0-3-C
Dry Creek		11 1		17w 1				STREAM ORDER		RANGE	RANGE	YES GRASS		ROAD		GRASS	FAIR	50		0 0	_	_		R-0-4-C
Dry Creek Dry Creek		12 1 12 2		17w 1		l U		CONFINEMENT	LULC	RANGE RANGE	RANGE RANGE	YES GRASS YES GRASS		ROAD RURAL RES./HOBBY FARM		GRASS GRASS	FAIR FAIR		40 30	0 0		0 10	0 MR	R-0-4-U R-0-4-U
Dry Creek	DRY 12-03	12 3	6456	17w 1	7g 4	U	<2		RVC	DRYLAND	HAY/PASTURE	YES SHRUBS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	40	20	0 0	0 4	40 0	0 MR	R-0-4-U
Dry Creek Dry Creek		12 4 12 5	3709 4054	17w 1		l U			RVC LULC	HAY DRYLAND	HAY/PASTURE AGRICULTURE (ROW CROPS)	YES GRASS YES GRASS		HAY/PASTURE AGRICULTURE (ROW CROPS)		GRASS GRASS	FAIR FAIR	10	_	0 0	0 (_		R-0-4-U R-0-4-U
Dry Creek	DRY 12-06	12 6	2850	17w 1	7g 4	l U	<2		LULC/RVC	RURAL RESIDENCE	RANGE	YES GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	10	40	0 0	0	0 0	50 MR	R-0-4-U
Dry Creek Dry Creek			2977 2571			l U			LULC	HAY	HAY/PASTURE RURAL RES./HOBBY FARM	YES GRASS YES MATURE DECIDUOUS		HAY/PASTURE HAY/PASTURE		GRASS MATURE DECIDUOUS	FAIR FAIR			0 0			0 MR	
Dry Creek			8540			ı U			RVC/LULC		RURALRES/HOBBY FARM	YES GRASS		HAY/PASTURE		GRASS		20						R-0-4-U
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Codfroy Crook	COD 04 04	1 1	EC 20 47		1			TADT		DOW CDODS	A CDICLIL TUDE (DOW CDODS)	VEC CDASS	EAID	A CDICLUTURE (DOW CDORS)	VEC	CDACC	EAID	4	20	20 0		20	0 20	MD 0.4	
Godfrey Creek	GOD 01-01	1 1	5639 17v	_	_		ST	TREAM ORDER		ROW CROPS	AGRICULTURE (ROW CROPS) RURAL RES./HOBBY FARM		FAIR	, ,			FAIR		20 2		0 4	_	_	MR-0-1-	
Godfrey Creek Godfrey Creek	GOD 02-01 GOD 03-01	2 1	3 149 17v 15867 17v		_	U <2	_		LULC/RVC	ROW CROPS ROW CROPS/HAY	ROAD	YES BARE YES BARE	POOR	RURAL RES./HOBBY FARM RURAL RES./HOBBY FARM	YES	BARE BARE	POOR POOR	_	20 2	_	0 1	_		MR-0-2	
Godfrey Creek	GOD 03-01	2 2	6879 17V	_	_	U 2			LULC	URBAN RL/ROWCROP RR	ROAD	YES BARE	POOR	AGRICULTURE (ROW CROPS)		BARE	POOR	_	20 2		0 2	_		MR-0-3-	
Godfrey Creek	GOD 03-02 GOD 03-03	3 3	6071 17v		_	U 2	_		LULC	ROWCROPS	AGRICULTURE (ROW CROPS)		POOR				POOR			40 0	0 4	_		MR-0-3	_
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Jackson Creek	JACK 01-01	1 1	5072 17i		1	C >10	0 S1	TART		HARVEST	HARVEST/FIRE	YES MATURE CONIFEROUS	FAIR	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	30	0	0 0	50	0 2	0 0	M R-10-1	-C
Jackson Creek	JACK 02-01	2 1	1622 17i		1	C 4-	10 GI	RADIENT		FOREST	FOREST	YES MATURE CONIFEROUS	FAIR	ROAD	YES	GRASS	FAIR	40	30	0 0	30	0 (0 0	MR-4-1-	С
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-	С
Jackson Creek	JACK 03-01	3 1	563 17i		1	U 4-	10 C	ONFINEMENT		HARVEST	HARVEST/FIRE	YES GRASS	FAIR	HARVEST/FIRE	YES	GRASS	FAIR	40	30	0 0	30	0 (0	MR-4-1-	U
Jackson Creek	JACK 04-01	4 1	2134 17i		1	C 4-	10 C	ONFINEMENT		HARVEST	HARVEST/FIRE	YES MATURE CONIFEROUS	FAIR	HARVEST/FIRE	YES	GRASS	FAIR	0	50	0 0	50	0 /	0 0	MR-4-1-	С
Jackson Creek	JACK 05-01	5 1	997 17i		1	U 4-	10 C	ONFINEMENT		HARVEST	HARVEST/FIRE	YES MATURE CONIFEROUS	FAIR	HARVEST/FIRE	YES	MATURE CONIFEROUS	FAIR	0	50	0 0	50	0 (0	MR-4-1-	U
Jackson Creek	JACK 06-01	6 1	1113 17i		1					HARVEST	HARVEST/FIRE	YES MATURE CONIFEROUS	FAIR	ROAD	YES		FAIR		30		30	0 (0 0	MR-2-1-	U
Jackson Creek	JACK 07-01	7 1	1228 17i		_		_		LULC/RVC	FOREST	FOREST	YES MATURE CONIFEROUS	FAIR	ROAD	YES		FAIR			_	20	-	_	MR-2-2	_
Jackson Creek	JACK 08-01	8 1						RADIENT		HARVEST	HARVEST/FIRE	YES SHRUBS	FAIR	HARVEST/FIRE	YES		FAIR			0 0		0 (MR-0-2	_
Jackson Creek	JACK 09-01	9 1	2794 17i		_		_	RADIENT	DVO/IIII O	HARVEST	ROAD	YES MATURE CONIFEROUS	FAIR	ROAD	YES		FAIR				30	0 0		MR-2-2	_
Jackson Creek		9 2		_	_	U 2-	_			HARVEST	HARVEST/FIRE	YES SHRUBS	FAIR	ROAD	YES		FAIR			0 0		0 20		MR-2-2	_
Jackson Creek Jackson Creek	JACK 09-03 JACK 10-01	9 3		_	_	U 2-	_	COREGION	RVC	FOREST FOREST	FOREST FOREST	NO MATURE CONIFEROUS NO MATURE CONIFEROUS	GOOD		YES		FAIR FAIR		_	0 0		0 40	_	MR-2-2-	_
Jackson Creek	JACK 10-01	10 1	2548 17v	_	_		<4		LULC/RVC	HAY	HAY/PASTURE	YES SHRUBS	FAIR	HAY/PASTURE	YES		FAIR	_	40	0 0	_	50 (_	MR-2-2	_
Jackson Creek		10 3				U 2-			LULC/RVC		HAY/PASTURE	YES SHRUBS	FAIR	HAY/PASTURE		SHRUBS	FAIR		1.0	0 0	0 4		_	MR-2-2	
Jackson Creek		10 4		_	_	U 2-	_		RVC	RANGE	RANGE	YES GRASS	FAIR	RANGE	YES		FAIR			0 0		_		MR-2-2	_
Jackson Creek	JACK 11-01	11 1	4163 17v		_	U <2	_	RADIENT		RANGE	RANGE	YES SHRUBS	FAIR	RANGE	YES		FAIR			0 0	-	-		MR-0-2	_
Jackson Creek	JACK 11-02	11 2			_	U 2	_		RVC	RURAL RESIDENCE	RURAL RES./HOBBY FARM	YES SHRUBS	FAIR	RANGE	YES		FAIR			_		_		MR-0-2	_
Jackson Creek	JACK 11-03	_	2665 17v		2	U <2			RVC	RURAL RESIDENCE	RURAL RES./HOBBY FARM	YES GRASS	FAIR	RANGE	YES		FAIR	30				_		MR-0-2	_
Reese Creek	REES 01-01	1 1	1077 17v	v	2	U >10	0 S1	TART		RANGE	RANGE	YES MATURE DECIDUOUS	FAIR	RANGE	YES	MATURE DECIDUOUS	FAIR	0	70	0 0	0	0 30	0	MR-10-2	<u>′</u> -U
Reese Creek	REES 01-02	1 2	557 17v	v	2	U >10	0		RVC	RANGE	RANGE	YES SHRUBS	FAIR	RANGE	YES	SHRUBS	FAIR	10	70	0 0	0	0 20	J 0	MR-10-2	<u>′</u> -U
Reese Creek	REES 02-01	2 1	759 17v		2	U 4-	10 GI	RADIENT		RANGE	RANGE	YES SHRUBS	FAIR	RANGE	YES		FAIR		80	0 0	0	0 20	0	MR-4-2	.U
Reese Creek	REES 02-02	2 2	2658 17v			U 4-			RVC	RANGE	RANGE	YES BARE	POOR	RANGE		BARE	POOR		100	0 0	0	0 (MR-4-2	_
Reese Creek	REES 03-01	3 1	12 14 17v	_	_		_	RADIENT		RANGE	RANGE	YES MATURE DECIDUOUS	FAIR	RANGE	_		FAIR			0 0		0 40	_	MR-2-2	
Reese Creek	REES 03-02	3 2	16 16 17v			U 2-			RVC	RANGE	RANGE	YES GRASS	FAIR	RANGE	YES		FAIR			0 0		0 20		MR-2-2-	_
Reese Creek	REES 04-01	4 1		_	_			RADIENT		RANGE	RANGE	YES GRASS	FAIR	RANGE	YES		FAIR			0 0		0 20		MR-4-2	_
Reese Creek	REES 05-01	5 1 6 1	2487 17v 1090 17v	_	_		_	RADIENT RADIENT		RANGE HAY	HAY/PASTURE HAY/PASTURE	YES GRASS YES GRASS	FAIR	HAY/PASTURE HAY/PASTURE	YES	GRASS GRASS	FAIR FAIR			0 0	Ť	0 10		MR-2-2	_
Reese Creek Reese Creek	REES 07-01	7 1	691 17V		_		_		LULC	HAY	HAY/PASTURE	YES GRASS YES SHRUBS	FAIR FAIR	HAY/PASTURE	YES		FAIR			0 0	-			MR-0-2-	
Reese Creek	REES 08-01	8 1	1166 17v	_	_	U <2	_	RADIENT	LULU	HAY	HAY/PASTURE	YES GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR		-	0 0	0 6	_	_	MR-0-2	_
Reese Creek	REES 09-01	9 1	323 17v					TREAM ORDER		HAY	HAY/PASTURE	YES GRASS	FAIR	HAY/PASTURE	YES		FAIR		30	0 0	0 6	_		MR-0-3	_
Reese Creek	REES 10-01	10 1	406 17v					RADIENT		HAY	HAY/PASTURE	YES GRASS	FAIR	HAY/PASTURE		GRASS	FAIR		30	0 0	0 6	_		MR-4-3	
Reese Creek	REES 11-01	11 1	947 17v		_		_	RADIENT		HAY	HAY/PASTURE	YES GRASS	FAIR	HAY/PASTURE			FAIR	0		0 0	0 /	60 10		MR-2-3	_
Reese Creek	REES 12-01	12 1	903 17v	v	3	U <2	GI	RADIENT		HAY	HAY/PASTURE	YES GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	20	0 0	0 8	80 (0 0	MR-0-3	-U
Reese Creek	REES 13-01	13 1	1387 17v	v	4	U <2	ST	TREAM ORDER		HAY	HAY/PASTURE	YES GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	30	0 0	0 (60 10	5 0	MR-0-4	·U
Reese Creek	REES 14-01	14 1	156 17v	٧	4		BI	EAVER POND		HAY	HAY/PASTURE	YES GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR	0	20	0 0	0	50 30) O		
Reese Creek	REES 15-01	15 1	181 17v	٧	4	U <2	SA	AMEAS REACH 13	RVC	HAY	HAY/PASTURE	YES GRASS	FAIR	HAY/PASTURE	YES		FAIR		20	0 0	0 6	60 20		MR-0-4	
Reese Creek		15 2	3381 17v		_	U ⊲2	_			RURAL RESIDENCE	RURAL RES./HOBBY FARM	YES BARE	POOR				POOR			0 0	0 4	_		MR-0-4	_
Reese Creek		15 3			_	U <2	_		LULC	HAY	HAY/PASTURE	YES GRASS	FAIR	HAY/PASTURE	YES	GRASS	FAIR		40	0 0	0 6		_	MR-0-4	_
Reese Creek	REES 15-04	15 4			_	U <2	_		RVC	HAY	AGRICULTURE (ROW CROPS)	YES SHRUBS	FAIR	HAY/PASTURE	YES	SHRUBS	FAIR			30 0	0 4	_		MR-0-4	
Reese Creek	REES 15-05 REES 15-06	15 5			_	U <2	_		RVC	HAY HAY	HAY/PASTURE HAY/PASTURE	YES SHRUBS YES GRASS	FAIR	HAY/PASTURE HAY/PASTURE	YES	SHRUBS GRASS	FAIR			0 0		60 20		MR-0-4	_
Reese Creek	KEES 15-U6	15 6	0041 1/0	v	4	0 2			NVC	TIAT	TH T/PASTURE	I ES URASS	FAIK	TAT/PASIURE	TES	GNASS	PAIK	10	20	0 0	0 6	JU 10	, 0	MR-0-4	U
Rocky Creek	ROCK 01-01	1 1	2226 17v	v	3	U 2	27	TART		HAY	HAY/PASTURE	YES SHRUBS	FAIR	HAY/PASTURE	YES	SHRUBS	FAIR	20	30	0 0	0	30	0 20	MR-0-3-	-11
Rocky Creek	ROCK 01-02	_		_	_	U 2	_		RVC	RANGE	HAY/PASTURE	YES GRASS	FAIR	RANGE	YES		FAIR			_		_	_	MR-0-3	_
Rocky Creek	ROCK 02-01	_		_	_		_	COREGION		RANGE	HAY/PASTURE	YES SHRUBS	FAIR	RANGE	YES		FAIR							MR-0-3	_
Rocky Creek	ROCK 02-02		1250 170		3	U Q			LULC	ROAD ENCROACHMENT	ROAD	YES BARE	POOR			GRASS	FAIR			0 0				MR-0-3	
Rocky Creek	ROCK 02-03				3	U <2	1		RVC	ROAD ENCROACHMENT	WETLAND	YES SHRUBS		ROAD		SHRUBS	FAIR					_		MR-0-3	
Rocky Creek		2 4			3	U <2	!			ROAD ENCROACHMENT	ROAD	YES SHRUBS					FAIR							MR-0-3	
Rocky Creek	ROCK 03-01	3 1		17w						ROAD ENCROACHMENT	FOREST	YES SHRUBS	FAIR	ROAD		SHRUBS	FAIR							MR-0-4	
Rocky Creek	ROCK 03-02	3 2	470 170	17w		U ⊲2			LULC	ROAD ENCROACHMENT	FOREST		GOOD	ROAD			POOR	50	0	0 0	0	0 5/	J 0	MR-0-4	·U
Rocky Creek	ROCK 04-01	_						RADIENT		ROAD ENCROACHMENT	FOREST			ROAD			FAIR							MR-2-4	
Rocky Creek	ROCK 05-01							RADIENT		ROAD ENCROACHMENT	FOREST			ROAD			POOR							MR-0-4	_
Rocky Creek	ROCK 06-01	_						COREGION/GRADIENT		ROAD ENCROACHMENT	FOREST			ROAD			FAIR			0 0				MR-2-4	
Rocky Creek		6 2							RVC	ROAD ENCROACHMENT	ROAD	YES SHRUBS	FAIR	ROAD			POOR			0 0		_		MR-2-4	
Rocky Creek	ROCK 06-03	6 3		v 17w-17g					RVC	ROAD ENCROACHMENT	HAY/PASTURE	YES SHRUBS					FAIR			0 0		30 (MR-2-4	
Rocky Creek	ROCK 07-01	7 1							DVC	RURAL RESIDENCE	ROAD	YES MATURE DECIDUOUS	FAIR	RANGE			FAIR							MR-0-4	
Rocky Creek Rocky Creek	ROCK 07-02 ROCK 07-03	7 2 7 3								RURAL RESIDENCE ROW CROPS/HAY	RURAL RES./HOBBY FARM HAY/PASTURE	YES GRASS YES GRASS	FAIR	RURAL RES./HOBBY FARM AGRICULTURE (ROW CROPS)			FAIR							MR-0-4-	
TOURY OTHER	NOCK 07-03	, 3	3301 1/1	• 17 W- 17 C	, 4	0 2	+		IX VO/LULO	NOW ONO! OF TIME!	TATTA A STOKE	I LO GICAGO	LAIN	AGNIGOLI GIVE (ROW GROPS)	1 E3	WITH DECIDOODS	- AIN	10	9	50 0	- 0 '	70	1	WIN-0-4	<u> </u>

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South Cottonwood Cree		1 1	1928 1190		1	C >10 U >10			FOREST	FOREST FOREST		MATURE CONIFEROUS MATURE CONIFEROUS				MATURE CONIFEROUS MATURE CONIFEROUS	GOOD	0	0 0 0	0 0	0 100		R-10-1-C
South Cottonwood Cree South Cottonwood Cree		3 1	417		1		GRADIENT	1	FOREST FOREST			MATURE CONIFEROUS	GOOD	FOREST FOREST		MATURE CONIFEROUS	GOOD	0	0 0 0	• •	0 100		R-10-1-U R-4-1-U
South Cottonwood Cree		4 1	1130			C >10			FOREST	FOREST	_	MATURE CONIFEROUS			_	MATURE CONIFEROUS	GOOD	0	0 0 0	_	0 100		R-10-1-C
South Cottonwood Cree	ek SCOT 05-01	5 1	437		1		CONFINEM ENT/GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0 0 (0 0	0 100	0 M F	R-4-1-U
South Cottonwood Cree		6 1	397		1	U >10			FOREST	FOREST				FOREST	NO	MATURE CONIFEROUS	GOOD	0	0 0 (0 0	0 100		R-10-1-U
South Cottonwood Cree South Cottonwood Cree		/ 1 Ω 1	863 962		1	U 4-10	GRADIENT GRADIENT		FOREST FOREST	FOREST FOREST		MATURE CONIFEROUS MATURE CONIFEROUS	GOOD	FOREST FOREST	NO	MATURE CONIFEROUS MATURE CONIFEROUS	GOOD	0	0 0 0	0 0	0 100		R-4-1-U R-10-1-U
South Cottonwood Cree		9 1	668	_	1	C >10	CONFINEM ENT		FOREST	FOREST		MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0 0 0	0 0	0 100		R-10-1-C
South Cottonwood Cree		9 2			1	C >10		RVC	FOREST	FOREST		MATURE CONIFEROUS	GOOD	FOREST	NO	SHRUBS	GOOD	0	0 0 0	0 0	0 100	0 M F	R-10-1-C
South Cottonwood Cree		10 1	1455			U >10			FOREST	FOREST		MATURE CONIFEROUS		FOREST		MATURE CONIFEROUS	GOOD	0	0 0 0	0 0	0 100		R-10-1-U
South Cottonwood Cree South Cottonwood Cree		11 1	474 1195				STREAM ORDER GRADIENT		FOREST FOREST			MATURE CONIFEROUS MATURE CONIFEROUS	GOOD		$\overline{}$	MATURE CONIFEROUS MATURE CONIFEROUS	GOOD	0	0 0 0	0 0	0 100		R-10-2-U R-4-2-U
South Cottonwood Cree		13 1	1379	_			ECOREGION		FOREST			MATURE CONIFEROUS	GOOD	FOREST	_	MATURE CONIFEROUS	GOOD	0	0 0 0	0 0	0 100		R-4-2-U
South Cottonwood Cree		14 1	2370	- v	17i 2		CONFINEM ENT		FOREST	FOREST				FOREST		MATURE CONIFEROUS	GOOD	0	0 0 0	0 0	0 100		R-4-2-C
South Cottonwood Cree		15 1	1576		17i 2		CONFINEMENT		FOREST	FOREST		MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0 0 0	0 0	0 100		R-4-2-U
South Cottonwood Cree		16 1	1940	_	17i 2		GRADIENT		FOREST FOREST	FOREST FOREST		MATURE CONFEROUS	GOOD	FOREST	NO	MATURE CONFEROUS	GOOD	0	0 0 0	0 0	0 100		R-2-2-U
South Cottonwood Cree		17 2	5841 2606	- v	171 3	U 2-<4	STREAM ORDER	RVC	FOREST	FOREST	_	MATURE CONIFEROUS SHRUBS	GOOD	FOREST FOREST	NO NO	MATURE CONIFEROUS MATURE CONIFEROUS	GOOD	0	0 0 0	0 0	0 100		R-2-3-U R-2-3-U
South Cottonwood Cree		18 1	1476	ŭ	17i 3		CONFINEMENT		FOREST	FOREST	_	MATURE CONIFEROUS	GOOD	FOREST		MATURE CONIFEROUS	GOOD	0	0 0 0	0 0	0 100		R-2-3-C
South Cottonwood Cree		19 1	1502	ŭ	17i 3	C >10	GRADIENT	RVC	FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD		NO	MATURE CONIFEROUS	GOOD	0	0 0 0	0 0	0 100		R-10-3-C
South Cottonwood Cree	_	20 1	2554				CONFINEMENT/GRADIENT		FOREST	FOREST		MATURE CONIFEROUS	GOOD	FOREST		MATURE CONFEROUS	GOOD	0	0 0 0	0 0	0 100		R-4-3-U
South Cottonwood Cree South Cottonwood Cree		21 1	53 13 940	17g	17i 3	U 2-<4 C 4-10			FOREST FOREST	FOREST FOREST		MATURE CONIFEROUS MATURE CONIFEROUS	GOOD	FOREST FOREST	NO NO	MATURE CONIFEROUS MATURE CONIFEROUS	GOOD	0	0 0 0	0 0	0 100		R-2-3-U R-4-3-C
South Cottonwood Cree	_	23 1	1622	17g	17i 3	C 2-<4			FOREST	FOREST		MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0 0 0	0 0	0 100		R-2-3-C
South Cottonwood Cree	ek SCOT 24-01	24 1	941	_	17i 3	C 4-10	GRADIENT		FOREST	FOREST	NO	MATURE CONIFEROUS	GOOD	FOREST	NO	MATURE CONIFEROUS	GOOD	0	0 0 0	0 0	0 100	0 M F	R-4-3-C
South Cottonwood Cree		25 1	2805	17g	17i 3	U 2-<4	CONFINEMENT/GRADIENT		FOREST	FOREST		MATURE CONIFEROUS	GOOD	FOREST	-	MATURE CONIFEROUS	GOOD	0	0 0 (0 0	0 100		R-2-3-U
South Cottonwood Cree		25 2	5774 8445	17g	17i 3	U 2-<4		RVC LULC	FOREST FOREST	FOREST RURAL RES/HOBBY FARM		MATURE CONIFEROUS MATURE DECIDUOUS	GOOD FAIR	FOREST RURAL RES./HOBBY FARM	NO YES	MATURE CONIFEROUS MATURE DECIDUOUS	GOOD	0 2	0 0 0	0 0	0 100		R-2-3-U R-2-3-U
South Cottonwood Cree South Cottonwood Cree		26 1	6643	- v	17i-17g 3		ECOREGION	RVC	PASTURE	HAY/PASTURE	-		FAIR	RURAL RES./HOBBY FARM	_	MATURE DECIDUOUS	FAIR FAIR	20 2		0 0 3	30 0		R-2-3-U
South Cottonwood Cree	_	27 1	2183	_	17i-17g 3		GRADIENT		PASTURE	HAY/PASTURE		MATURE DECIDUOUS	GOOD		_	MATURE DECIDUOUS	FAIR	0 3	0 0 0	0 0 :	30 0		R-0-3-U
South Cottonwood Cree		28 1	7900	17w	17i-17g 3	U 2-<4			HAY	HAY/PASTURE			FAIR			MATURE DECIDUOUS	FAIR	20 2	0 0 (0 0 4	40 0		R-2-3-U
South Cottonwood Cree	_	29 1	2198	17w	17i-17g 3	U <2	GRADIENT		HAY	RURAL RES/HOBBY FARM		MATURE DECIDUOUS	FAIR	RURAL RES./HOBBY FARM	YES	MATURE DECIDUOUS	FAIR	10 2	0 0 0	0 0 :	20 0		R-0-3-U
South Cottonwood Cree South Cottonwood Cree		30 1	3430 334	_	17i-17g 3 17i-17g 3	U 2-«	GRADIENT GRADIENT		PASTURE PASTURE	RURAL RES./HOBBY FARM HAY/PASTURE		MATURE DECIDUOUS MATURE DECIDUOUS	FAIR FAIR	RURAL RES./HOBBY FARM HAY/PASTURE		MATURE DECIDUOUS MATURE DECIDUOUS	FAIR FAIR	10 2 0 5			20 0 50 0		R-2-3-U R-0-3-U
South Cottonwood Cree		24 2	2048			U Q	GRADIENT	D) (O				WIATORE DECIDOOOS		TIA T/T ASTURE	LO			0 0		0 0	20 0		R-0-3-U
		31 2	2040	17 VV	17i-17g 3			RVC	PASTURE	HAY/PASTURE	YES	MATURE DECIDUOUS	FAIR	RURAL RES./HOBBY FARM	YES	MATURE DECIDUOUS	FAIR	0 4	0 0 0	0 0 2		40 IVI	
South Cottonwood Cree		32 1	1943	_	17i-17g 3		GRADIENT	RVC	PASTURE	HAY/PASTURE HAY/PASTURE		MATURE DECIDUOUS MATURE DECIDUOUS	FAIR FAIR	RURAL RES./HOBBY FARM RURAL RES./HOBBY FARM	YES YES	MATURE DECIDUOUS MATURE DECIDUOUS	FAIR FAIR	0 4	, ,	0 0 3	30 0		R-2-3-U
	ek SCOT 32-01	31 2 32 1 33 1	_	17w	- u	U 2-<4	GRADIENT GRADIENT	RVC			YES	MATURE DECIDUOUS	FAIR		YES			٠.	0 0 0	0 0 3			R-2-3-U
South Cottonwood Cree South Cottonwood Cree	ek SCOT 32-01 ek SCOT 33-01	32 1 33 1	1943 6011	17w 17w	17i-17g 3 17i-17g 3	U 2-4	GRADIENT		PASTURE PASTURE/RESIDENTIAL	HAY/PASTURE HAY/PASTURE	YES YES	MATURE DECIDUOUS MATURE DECIDUOUS	FAIR FAIR	RURAL RES./HOBBY FARM RURAL RES./HOBBY FARM	YES YES	MATURE DECIDUOUS MATURE DECIDUOUS	FAIR FAIR	0 4	0 0 0		20 0	30 MF	R-2-3-U R-0-3-U
South Cottonwood Cree	ek SCOT 32-01	32 1 33 1 1 1 1 2	1943 6011 7056	17w 17w 17w	17i-17g 3 17i-17g 3	U 2-<4			PASTURE	HAY/PASTURE	YES YES YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS	FAIR FAIR FAIR	RURAL RES./HOBBY FARM RURAL RES./HOBBY FARM HAY/PASTURE	YES YES YES	MATURE DECIDUOUS	FAIR	0 4	0 0 0	0 0 :		30 MF 30 MF	R-2-3-U
South Cottonwood Cree South Cottonwood Cree Smith Creek	SM IT 01-01	32 1 33 1 1 1 1 2 1 3	1943 6011 7056 1620	17w 17w 17w	17i-17g 3 17i-17g 3 4 4	U 2-4 U 2	GRADIENT	RVC LULC LULC	PASTURE PASTURE/RESIDENTIAL HAY HAY HAY	HAY/PASTURE HAY/PASTURE HAY/PASTURE	YES YES YES YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS	FAIR FAIR FAIR	RURAL RES./HOBBY FARM RURAL RES./HOBBY FARM HAY/PASTURE	YES YES YES YES YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS	FAIR FAIR FAIR	0 4 20 3	0 0 0	0 0 :	0 60	30 MF 30 MF 0 MF 20 MF	R-2-3-U R-0-3-U R-0-4-U
South Cottonwood Cree South Cottonwood Cree Smith Creek Smith Creek Smith Creek Smith Creek Smith Creek	SMIT 01-03 SMIT 01-03 SMIT 01-03 SMIT 01-04		1943 6011 7056 1620 2333 2834	17w 17w 17w 17w 17w	17i-17g 3 17i-17g 3 4 4 4 4	U 2-4 U 2 U 2 U 2 U 2 U 2 U 2	GRADIENT	RVC LULC LULC LULC	PASTURE PASTURE/RESIDENTIAL HAY HAY HAY HAY	HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE	YES YES YES YES YES YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS	FAIR FAIR FAIR POOR FAIR FAIR	RURAL RES/HOBBY FARM RURAL RES/HOBBY FARM HAY/PASTURE ROAD HAY/PASTURE ROAD	YES YES YES YES YES YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS	FAIR FAIR POOR FAIR FAIR	0 4 20 3	0 0 0	0 0 0	0 60	30 MF 30 MF 0 MF 20 MF 20 MF	R-2-3-U R-0-3-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U
South Cottonwood Cree South Cottonwood Cree Smith Creek	SMIT 01-03 SMIT 01-04 SMIT 01-04 SMIT 01-05	1 3 1 4 1 5	1943 6011 7056 1620 2333 2834 6328	17w 17w 17w 17w 17w 17w 17w	17i-17g 3 17i-17g 3 4 4 4 4 4	U 2-4 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2	GRADIENT	RVC LULC LULC LULC LULC	PASTURE PASTURE/RESIDENTIAL HAY HAY HAY HAY HAY HAY	HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE	YES YES YES YES YES YES YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS	FAIR FAIR POOR FAIR FAIR FAIR	RURAL RES/HOBBY FARM RURAL RES/HOBBY FARM HAY/PASTURE ROAD HAY/PASTURE ROAD HAY/PASTURE ROAD HAY/PASTURE	YES YES YES YES YES YES YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS	FAIR FAIR POOR FAIR FAIR FAIR	0 4 20 3 20 2 60 0 2 40 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 60 20 0 60 0 40 0	30 MF 30 MF 0 MF 20 MF 20 MF 30 MF	R-2-3-U R-0-3-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U
South Cottonwood Cree South Cottonwood Cree Smith Creek Smith Creek Smith Creek Smith Creek Smith Creek	SMIT 01-03 SMIT 01-03 SMIT 01-03 SMIT 01-04	1 3	1943 6011 7056 1620 2333 2834 6328	17w 17w 17w 17w 17w 17w 17w	17i-17g 3 17i-17g 3 4 4 4 4 4	U 2-4 U 2 U 2 U 2 U 2 U 2 U 2	GRADIENT	RVC LULC LULC LULC	PASTURE PASTURE/RESIDENTIAL HAY HAY HAY HAY	HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE	YES YES YES YES YES YES YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS	FAIR FAIR POOR FAIR FAIR FAIR	RURAL RES/HOBBY FARM RURAL RES/HOBBY FARM HAY/PASTURE ROAD HAY/PASTURE ROAD HAY/PASTURE ROAD HAY/PASTURE	YES YES YES YES YES YES YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS	FAIR FAIR POOR FAIR FAIR	0 4 20 3 20 2 60 0 2 40 2	0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 60 20 0 60 0 40 0	30 MF 30 MF 0 MF 20 MF 20 MF 30 MF	R-2-3-U R-0-3-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U
South Cottonwood Cree South Cottonwood Cree Smith Creek	SMIT 01-03 SMIT 01-04 SMIT 01-04 SMIT 01-05	1 3 1 4 1 5	1943 6011 7056 1620 2333 2834 6328 13085	17w 17w	17i-17g 3 17i-17g 3 17i-17g 3 4 4 4 4 4	U 2-4 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2	GRADIENT START	RVC LULC LULC LULC LULC	PASTURE PASTURE/RESIDENTIAL HAY HAY HAY HAY HAY HAY HAY FOREST	HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE	YES YES YES YES YES YES YES YES YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS	FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR	RURAL RES/HOBBY FARM RURAL RES/HOBBY FARM HAY/PASTURE ROAD HAY/PASTURE ROAD HAY/PASTURE HAY/PASTURE HAY/PASTURE	YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS	FAIR FAIR POOR FAIR FAIR FAIR	0 4 20 3 20 2 60 0 2 40 2		0 0 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 60 20 0 60 0 40 0	30 MF 30 MF 0 MF 20 MF 20 MF 0 MF 30 MF	R-2-3-U R-0-3-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U
South Cottonwood Cree South Cottonwood Cree Smith Creek Stone Creek Stone Creek	SK SCOT 32-01 SK SCOT 33-01 SMIT 01-01 SMIT 01-02 SMIT 01-03 SMIT 01-05 SMIT 01-06 STON 01-01 STON 02-01	1 3 1 4 1 5 1 6 1 1 2 1	1943 6011 7056 1620 2333 2834 6328 13085	17w 17w 17w 17w 17w 17w 17w 17w 17w 17i 17i 17i 17i 17i 17i 17i 17i 17w 17w 17i 17i 17i 17i 17w 17w 17w 17i 17i	17i-17g 3 17i-17g 3 17i-17g 3 4 4 4 4 4 1 1 1	U 2-44 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 C 510 C 4-10	START START GRADIENT	RVC LULC LULC LULC LULC/RVC	PASTURE PASTURE/RESIDENTIAL HAY HAY HAY HAY HAY HAY HAY FOREST FOREST	HAY/PASTURE HARVEST/FIRE HARVEST/FIRE	YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS GRASS GRASS MATURE CONIFEROUS GRASS	FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR FAIR	RURAL RES/HOBBY FARM RURAL RES/HOBBY FARM HAY/PASTURE ROAD HAY/PASTURE ROAD HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HARVEST/FIRE HARVEST/FIRE	YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS GRASS MATURE CONIFEROUS MATURE CONIFEROUS	FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR FAIR	0 4 20 3 20 2 60 0 2 40 2 0 3 0 5		0 0 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 0 0 60 20 0 60 0 40 0 50 0	30 MF 30 MF 0 MF 20 MF 20 MF 0 MF 0 MF 0 MF	R-2-3-U R-0-3-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-10-1-C R-4-1-C
South Cottonwood Cree South Cottonwood Cree Smith Creek Stone Creek Stone Creek Stone Creek	SCOT 32-01 SCOT 33-01 SMIT 01-01 SMIT 01-02 SMIT 01-03 SMIT 01-05 SMIT 01-05 SMIT 01-06 STON 02-01 STON 02-02	1 3 1 4 1 5 1 6	1943 6011 7056 1620 2333 2834 6328 13085 3778 1374 485	17w 17w 17w 17w 17w 17w 17w 17w 17i 17i 17i 17i	17i-17g 3 17i-17g 3 17i-17g 3 4 4 4 4 4 1 1 1	U 2-4 U 2 U 2 U 2 U 2 U 2 U 2 U 2 C >10 C 4-10 C 4-10	START START START GRADIENT	RVC LULC LULC LULC RVC	PASTURE PASTURE/RESIDENTIAL HAY HAY HAY HAY HAY HAY FOREST FOREST FOREST	HAY/PASTURE ROAD	YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS GRASS GRASS GRASS MATURE CONIFEROUS MATURE CONIFEROUS	FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR FAIR	RURAL RES/HOBBY FARM RURAL RES/HOBBY FARM HAY/PASTURE ROAD HAY/PASTURE ROAD HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HARVEST/FIRE HARVEST/FIRE ROAD	YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS GRASS MATURE CONIFEROUS MATURE CONIFEROUS	FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR GOOD	0 4 20 3 20 2 60 0 2 40 2 0 3		0 0 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 60 0 60 20 0 60 0 40 0 50 0	30 MF 30 MF 0 MF 20 MF 20 MF 0 MF 0 MF 0 MF 0 MF	R-2-3-U R-0-3-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-10-1-C R-4-1-C
South Cottonwood Cree South Cottonwood Cree Smith Creek Stone Creek Stone Creek Stone Creek Stone Creek	SK SCOT 32-01 SK SCOT 33-01 SMIT 01-01 SMIT 01-02 SMIT 01-03 SMIT 01-05 SMIT 01-06 STON 01-01 STON 02-01	1 3 1 4 1 5 1 6 1 1 2 1	1943 6011 7056 1620 2333 2834 6328 13085 3778 1374 485 1156	17w 17w 17w 17w 17w 17w 17w 17h 17i 17i 17i 17i	17i-17g 3 17i-17g 3 17i-17g 3 4 4 4 4 4 1 1 1	U 2-« U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 C >10 C 4-10 C 4-10 C 4-10	START START START GRADIENT STREAM ORDER	RVC LULC LULC LULC LULC/RVC	PASTURE PASTURE/RESIDENTIAL HAY HAY HAY HAY HAY HAY HAY FOREST FOREST	HAY/PASTURE HARVEST/FIRE ROAD HARVEST/FIRE	YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS GRASS GRASS GRASS GRASS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS	FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	RURAL RES/HOBBY FARM RURAL RES/HOBBY FARM HAY/PASTURE ROAD HAY/PASTURE ROAD HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HARVEST/FIRE HARVEST/FIRE ROAD HARVEST/FIRE	YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS GRASS MATURE CONIFEROUS MATURE CONIFEROUS	FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR FAIR	0 4 20 3 20 2 60 0 2 40 2 0 3 0 5		0 0 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 0 0 60 20 0 60 0 40 0 50 0	30 MF 30 MF 20 MF 20 MF 30 MF 0 MF 0 MF 0 MF	R-2-3-U R-0-3-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-10-1-C R-4-1-C
South Cottonwood Cree South Cottonwood Cree Smith Creek Smith Creek Smith Creek Smith Creek Smith Creek Smith Creek Stone Creek Stone Creek Stone Creek Stone Creek Stone Creek	SK SCOT 32-01 SK SCOT 33-01 SMIT 01-01 SMIT 01-02 SMIT 01-03 SMIT 01-05 SMIT 01-06 STON 01-01 STON 02-01 STON 02-01 STON 04-01 STON 04-01 STON 04-01	1 3 1 4 1 5 1 6 1 1 2 1	1943 6011 7056 1620 2333 2834 6328 13085 3778 1374 1456 570 2585	17w 17w 17w 17w 17m 17i	17i-17g 3 17i-17g 3 17i-17g 3 17i-17g 3 17i-17g 3 17i-17g 3 17i-17g 17	U 2-4 U 2-4 U 2 U 2 U 2 U 2 U 2 U 2 U 2 C 510 C 4-10 C 4-10 U 4-10	START START START GRADIENT STREAM ORDER CONFINEMENT	RVC LULC LULC LULC LULC/RVC	PASTURE PASTURE/RESIDENTIAL HAY HAY HAY HAY HAY HAY FOREST	HAY/PASTURE HARVEST/FIRE HARVEST/FIRE ROAD HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE	YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS GRASS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS	FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	RURAL RES/HOBBY FARM RURAL RES/HOBBY FARM HAY/PASTURE ROAD HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE	YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS	FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	0 4 20 3 20 2 60 0 2 40 2 0 3 0 5		0 0 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 60 0 60 20 0 60 0 40 0 40 0 0 20 0 20 0 30 0 0 0	30 MF 30 MF 20 MF 20 MF 30 MF 0 MF 0 MF 0 MF 0 MF 0 MF 0 MF	R-2-3-U R-0-3-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-10-1-C R-4-1-C R-4-1-C R-4-1-C R-4-2-C R-4-2-U
South Cottonwood Cree South Cottonwood Cree Smith Creek Smith Creek Smith Creek Smith Creek Smith Creek Smith Creek Stone Creek Stone Creek Stone Creek Stone Creek Stone Creek	SCOT 32-01 SMIT 01-01 SMIT 01-02 SMIT 01-03 SMIT 01-05 SMIT 01-06 STON 01-01 STON 02-01 STON 02-02 STON 03-01 STON 04-01 STON 04-02 STON 04-01	1 3 1 4 1 5 1 6 1 1 2 1 2 2 3 1 4 1 4 2 5 1	1943 6011 7056 1620 2333 2834 6328 13085 3778 1374 445 1156 570 2585 916	17w 17w 17w 17w 17w 17rw 17rw 17rw 17ri 17ri 17ri 17ri 17ri 17ri 17ri 17ri	17i-17g 3 17i-17g 3 17i-17g 3 17i-17g 3 4 4 4 4 4 4 1 1 1 1 2 2 2 2 2	U 2-4 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2	START START START GRADIENT STREAM ORDER CONFINEMENT	RVC LULC LULC LULC LULC/RVC RVC LULC/RVC LULC/RVC	PASTURE PASTURE/RESIDENTIAL HAY HAY HAY HAY HAY HAY FOREST	HAY/PASTURE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE	YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS GRASS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS	FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	RURAL RES/HOBBY FARM RURAL RES/HOBBY FARM HAY/PASTURE ROAD HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE	YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS MATURE CONIFEROUS	FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	0 4 20 3 20 2 60 0 2 40 2 0 3 0 5 20 0 100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 0 0 0 0 0 20 0 20 0 20 0 20 0 20 0	30 MF 30 MF 0 MF 20 MF 0 MF 0 MF 0 MF 0 MF 0 MF 0 MF 0 MF	R-2-3-U R-0-3-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-10-1-C R-4-1-C R-4-1-C R-4-1-C R-4-2-C R-4-2-U R-4-2-U
South Cottonwood Cree South Cottonwood Cree Smith Creek Stone Creek	SK SCOT 32-01 SK SCOT 33-01 SMIT 01-01 SMIT 01-02 SMIT 01-03 SMIT 01-04 SMIT 01-05 SMIT 01-06 STON 01-01 STON 02-01 STON 02-01 STON 03-01 STON 04-02 STON 04-01 STON 04-01 STON 05-01 STON 06-01	1 3 1 4 1 5 1 6 1 1 2 1 2 2 3 1 4 1 4 2 5 1 6 1	1943 6011 7056 1620 2333 2834 6328 13085 3778 1374 485 1156 570 2585 916	17w 17w 17w 17w 17m 17i	17i-17g 3 17i-17	U 2-« U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2	START START START GRADIENT STREAM ORDER CONFINEMENT CONFINEMENT GRADIENT	RVC LULC LULC LULC LULC/RVC RVC LULC/RVC LULC/RVC	PASTURE PASTURE/RESIDENTIAL HAY HAY HAY HAY HAY HAY FOREST	HAY/PASTURE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE	YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS	FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	RURAL RES/HOBBY FARM RURAL RES/HOBBY FARM HAY/PASTURE ROAD HAY/PASTURE ROAD HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE HARVEST/FIRE	YES	MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS MATURE CONIFEROUS	FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR GOOD GOOD FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAIR	0 4 20 3 20 2 60 0 2 40 2 0 3 0 5 100 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	220 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	30 MF 30 MF 0 MR 20 MR 20 MF 0 MF 0 MF 0 MF 0 MF 0 MF 0 MF 0 MF	R-2-3-U R-0-3-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-10-1-C R-4-1-C R-4-1-C R-4-2-C R-4-2-C R-4-2-U R-4-2-U R-4-2-C R-4-2-C
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South Cottonwood Cree South Cottonwood Cree South Creek Smith Creek Smith Creek Smith Creek Smith Creek Smith Creek Stone Creek	SK SCOT 32-01 SK SCOT 33-01 SMIT 01-01 SMIT 01-02 SMIT 01-02 SMIT 01-05 SMIT 01-06 STON 01-01 STON 02-01 STON 03-01 STON 04-01 STON 04-01 STON 05-01 STON 05-01 STON 05-01 STON 08-01 STON 08-01 STON 09-01 STON 09-01 STON 09-01 STON 09-01	1 3 1 4 1 5 1 6 1 1 2 1 2 2 3 1 4 1 4 2 5 1 6 1 7 1 8 1 9 1 10 1	1943 6011 7056 1620 2333 2834 6328 13085 13778 485 1156 570 2585 916 1142 2330 1308 932 898	17w	171-17g 3 171-17g 3 171-17g 3 171-17g 3 4 4 4 4 4 4 4 1 1 1 1 1 2 2 2 2 2 2 2 2	U 2-« U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2	START START START GRADIENT STREAM ORDER CONFINEMENT GRADIENT CONFINEMENT CONFINEMENT CONFINEMENT CONFINEMENT CONFINEMENT CONFINEMENT CONFINEMENT CONFINEMENT CONFINEMENT	RVC LULC LULC LULC LULC/RVC RVC LULC/RVC LULC/RVC	PASTURE PASTURE/RESIDENTIAL HAY HAY HAY HAY HAY HAY FOREST	HAY/PASTURE HARVEST/FIRE	YES	MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS MATURE CONIFEROUS	FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	RURAL RES/HOBBY FARM RURAL RES/HOBBY FARM HAY/PASTURE ROAD HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HARVEST/FIRE	YES	MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS	FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	0 4 20 3 60 2 40 2 5 0 5 0 5 0 0 5 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 0 0 0 0 0 20 0 20 0 20 0 20 0 20 0	30 MF 30 MF 20 MF 20 MF 30 MF 30 MF 30 MF 30 MF 30 MF 0 MF	R-2-3-U R-0-3-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-10-1-C R-4-1-C R-4-1-C R-4-1-C R-4-2-C R-4-2-C R-2-2-C R-2-2-C R-2-2-C R-4-2-U
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South Cottonwood Cree South Cottonwood Cree South Creek Smith Creek Smith Creek Smith Creek Smith Creek Smith Creek Smith Creek Stone Creek	SK SCOT 32-01 SK SCOT 33-01 SMIT 01-01 SMIT 01-02 SMIT 01-03 SMIT 01-04 SMIT 01-05 SMIT 01-06 STON 02-01 STON 02-01 STON 03-01 STON 04-01 STON 05-01 STON 06-01 STON 09-01 STON 01-01	1 3 1 4 1 5 1 6 1 1 2 1 2 2 3 1 4 1 4 2 5 1 6 1 7 1 8 1 9 1 10 1 11 1 11 2	1943 6011 7056 1620 2333 2834 6328 13085 1374 485 1156 2585 916 1142 2330 1308 932 898 570 3892	17w 17w 17w 17w 17w 17w 17w 17w 17w 17i	17i-17g 3 17i-17g 3 17i-17g 3 17i-17g 3 4 4 4 4 4 4 4 1 1 1 1 2 2 2 2 2 2 2 2 2	U 2-4/0 U 4-10 U 4-10 U 4-10 U U 2-4/0 U U 2-4/0 U U 2-4/0 U 2-4/0 U 2-4/0 U 2-4/0 U	START START GRADIENT STRAT GRADIENT STREAM ORDER CONFINEMENT CONFINEMENT CONFINEMENT CONFINEMENT GRADIENT CONFINEMENT GRADIENT CONFINEMENT GRADIENT CONFINEMENT GRADIENT CONFINEMENT GRADIENT	RVC LULC LULC LULC LULC/RVC RVC LULC/RVC LULC/RVC	PASTURE PASTURE/RESIDENTIAL HAY HAY HAY HAY HAY HAY HAY HAY HAY HOREST FOREST	HAY/PASTURE HARVEST/FIRE	YES	MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS MATURE CONIFEROUS	FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	RURAL RES/HOBBY FARM RURAL RES/HOBBY FARM RURAL RES/HOBBY FARM HAY/PASTURE ROAD HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HARVEST/FIRE	YES	MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS SHRUBS GRASS SHRUBS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS	FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	0 4 20 3 60 2 60 2 40 2 20 0 5 100 0 0 0 0 0 20 0 8 20 0 8 20 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	30 MF 30 MF 20 MF 20 MF 30 MF	R-2-3-U R-0-3-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-10-1-C R-4-1-C R-4-1-C R-4-1-C R-4-2-C R-4-2-C R-2-2-C R-2-2-C R-2-2-C R-4-2-U
South Cottonwood Cree South Cottonwood Cree South Creek Smith Creek Smith Creek Smith Creek Smith Creek Smith Creek Stone Creek	SK SCOT 32-01 SK SCOT 33-01 SMIT 01-01 SMIT 01-02 SMIT 01-02 SMIT 01-05 SMIT 01-05 SMIT 01-06 STON 02-01 STON 02-01 STON 04-01 STON 04-01 STON 05-01 STON 07-01 STON 08-01 STON 08-01 STON 09-01 STON 09-01 STON 01-01	1 3 1 4 1 5 1 6 2 1 2 2 3 1 4 1 4 2 5 1 6 1 7 1 8 1 9 1 10 1	1943 6011 7056 1620 2333 2834 6328 13085 3778 1374 485 570 2585 916 1142 2330 1308 932 898 570 3892 1123	17w 17w 17w 17w 17w 17w 17w 17w 17m 17i	17i-17g 3 17i-17g 3 17i-17g 3 17i-17g 3 4 4 4 4 4 4 4 4 1 1 1 1 2 2 2 2 2 2 2 2	U 2-d U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2	START START GRADIENT STRAT GRADIENT STREAM ORDER CONFINEMENT CONFINEMENT CONFINEMENT CONFINEMENT GRADIENT CONFINEMENT GRADIENT CONFINEMENT GRADIENT CONFINEMENT GRADIENT CONFINEMENT GRADIENT	RVC LULC LULC LULC/RVC LULC/RVC LULC/RVC LULC/RVC	PASTURE PASTURE/RESIDENTIAL HAY HAY HAY HAY HAY HAY HAY FOREST	HAY/PASTURE HARVEST/FIRE	YES	MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS MATURE CONIFEROUS	FAIR FAIR FAIR FAIR FOOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	RURAL RES/HOBBY FARM RURAL RES/HOBBY FARM RURAL RES/HOBBY FARM HAY/PASTURE ROAD HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HARVEST/FIRE ROAD ROAD ROAD	YES	MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS GRASS SHRUBS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS SHRUBS SHRUBS	FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	0 4 20 3 20 2 60 0 2 40 2 0 3 0 5 20 0 0 100 0 0 20 0 8 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	220 0 0 600 600 600 600 600 600 600 600	30 MF 30 MF 20 MF 20 MF 30 MF	R-2-3-U R-0-3-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-10-1-C R-4-1-C R-4-1-C R-4-1-C R-4-2-C R-4-2-U R-4-2-U R-4-2-U R-4-2-C R-4-C R-4-2-C R-4-2-C R-4-2-C R-4-2-C R-4-2-C R-4-2-C R-4-2-C R-4-2-C
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South Cottonwood Cree South Cottonwood Cree South Creek Smith Creek Smith Creek Smith Creek Smith Creek Smith Creek Smith Creek Stone Creek	SK SCOT 32-01 SK SCOT 33-01 SMIT 01-01 SMIT 01-02 SMIT 01-03 SMIT 01-04 SMIT 01-05 SMIT 01-06 STON 01-01 STON 02-01 STON 02-01 STON 04-01 STON 04-01 STON 05-01 STON 05-01 STON 05-01 STON 09-01 STON 09-01 STON 09-01 STON 10-01 STON 11-02 STON 11-03 STON 11-03 STON 12-02 STON 13-01	1 3 1 4 1 5 1 6 1 1 6 1 2 1 2 2 3 1 4 1 4 2 5 1 6 1 7 1 8 1 9 1 10 1 11 1 11 2 11 3 12 2 12 2 3 1 1 4 1 1 4 2 1 7 1 1 8 1 1 7 1 1 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1943 6011 7056 1620 2333 2834 6328 13085 1374 1374 156 570 2585 1156 2330 1308 932 898 570 3892 1123 285 570 794	17w	17i-17g 3 17i-17g 3 17i-17g 3 17i-17g 3 17i-17g 3 4 4 4 4 4 4 4 4 1 1 1 1 2 2 2 2 2 2 2 2	U 2-even U 2	GRADIENT START GRADIENT STRAT GRADIENT STREAM ORDER CONFINEMENT CONFINEMENT GRADIENT CONFINEMENT GRADIENT CONFINEMENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT	RVC LULC LULC/RVC LULC/RVC LULC/RVC LULC/RVC LULC/RVC	PASTURE PASTURE/RESIDENTIAL HAY HAY HAY HAY HAY HAY HAY HAY HAY HA	HAY/PASTURE HARVEST/FIRE	YES YES	MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS MATURE CONIFEROUS	FAIR FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	RURAL RES/HOBBY FARM RURAL RES/HOBBY FARM RURAL RES/HOBBY FARM HAY/PASTURE ROAD HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HARVEST/FIRE ROAD ROAD ROAD ROAD ROAD ROAD RANGE RANGE	YES	MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS	FAIR FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	0 4 20 3 20 2 60 0 2 40 2 0 3 0 5 20 0 0 0 0 0 0 0 20 0 8 20 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	220 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	30 MF 30 MF 20 MF 20 MF 30 MF	R-2-3-U R-0-3-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-10-1-C R-4-1-C R-4-1-C R-4-1-C R-4-1-C R-4-2-C R-4-2-U R-4-2-U R-2-1-U R-2-U R-2-1-U
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South Cottonwood Cree South Cottonwood Cree South Creek Smith Creek Smith Creek Smith Creek Smith Creek Smith Creek Smith Creek Stone Creek	SK SCOT 32-01 SK SCOT 33-01 SMIT 01-01 SMIT 01-02 SMIT 01-03 SMIT 01-04 SMIT 01-05 SMIT 01-06 STON 01-01 STON 02-01 STON 02-01 STON 04-01 STON 04-01 STON 05-01 STON 05-01 STON 05-01 STON 09-01 STON 09-01 STON 09-01 STON 10-01 STON 11-02 STON 11-03 STON 11-03 STON 12-02 STON 13-01	1	1943 6011 7056 1620 2333 2834 6328 13085 3778 1374 485 570 2585 916 1142 2330 1308 932 898 898 898 570 3892 1285 580 794	17w	171-17g 3 171-17g 3 171-17g 3 171-17g 3 171-17g 3 4 4 4 4 4 4 4 4 1 1 1 1 1 1 2 2 2 2 2 2	U 2-even U 2	START START GRADIENT STRAT GRADIENT STREAM ORDER CONFINEMENT GRADIENT CONFINEMENT GRADIENT CONFINEMENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT GRADIENT	RVC LULC LULC/RVC LULC/RVC LULC/RVC LULC/RVC LULC/RVC	PASTURE PASTURE/RESIDENTIAL HAY HAY HAY HAY HAY HAY HAY HAY HAY HA	HAY/PASTURE HARVEST/FIRE	YES	MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS MATURE CONIFEROUS MATURE DECIDUOUS MATURE DECIDUOUS	FAIR FAIR FAIR FAIR FOOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	RURAL RES/HOBBY FARM RURAL RES/HOBBY FARM RURAL RES/HOBBY FARM HAY/PASTURE ROAD HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HARVEST/FIRE ROAD ROAD ROAD ROAD ROAD ROAD ROAD RANGE RANGE HAY/PASTURE ROAD	YES	MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS MATURE CONIFEROUS SHRUBS	FAIR FAIR FAIR FAIR FOOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	0 4 20 3 3 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	220 0 0 0 600 0 0 0 0 0 0 0 0 0 0 0 0 0	30 MF 30 MF 20 MF	R-2-3-U R-0-3-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-10-1-C R-4-1-C R-4-1-C R-4-1-C R-4-2-C R-4-2-C R-4-2-C R-2-2-U R-2-0-U R-2-0-U R-2-0-U R-2-0-U R-2-0-U R-2-0-U R-2-0-U R-2-0-U R-2-0
South Cottonwood Cree South Cottonwood Cree South Creek Smith Creek Smith Creek Smith Creek Smith Creek Smith Creek Smith Creek Stone Creek	SK SCOT 32-01 SK SCOT 33-01 SMIT 01-01 SMIT 01-02 SMIT 01-03 SMIT 01-05 SMIT 01-05 SMIT 01-06 STON 01-01 STON 02-01 STON 02-01 STON 03-01 STON 04-02 STON 05-01	1 1 1 1 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1943 6011 7056 1620 2333 2834 6328 13085 3778 1374 485 570 2585 916 1142 2330 1308 570 3892 1123 285 580 570 1124 1125 1126 1126 1127 1127 1128 1128 1129 1129 1129 1129 1129 1129	17w 17w 17w 17w 17w 17w 17w 17w 17w 17m 17i	17i-17g 3 17i-17g 3 17i-17g 3 17i-17g 3 17i-17g 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	U 2-4-0 U 4-10 U	START START GRADIENT START GRADIENT STREAM ORDER CONFINEMENT CONFINEMENT CONFINEMENT CONFINEMENT CONFINEMENT GRADIENT CONFINEMENT GRADIENT GRADIENT CONFINEMENT GRADIENT CONFINEMENT GRADIENT GRADIENT GRADIENT GRADIENT ECOREGION/GRADIENT	RVC LULC LULC LULC/RVC RVC LULC/RVC LULC/RVC LULC/RVC LULC/RVC LULC/RVC RVC LULC/RVC LULC/RVC LULC/RVC LULC/RVC	PASTURE PASTURE/RESIDENTIAL HAY HAY HAY HAY HAY HAY HAY HAY HAY HA	HAY/PASTURE HARVEST/FIRE HARVE	YES	MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS MATURE CONIFEROUS MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS	FAIR FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	RURAL RES/HOBBY FARM RURAL RES/HOBBY FARM RURAL RES/HOBBY FARM HAY/PASTURE ROAD HAY/PASTURE HAY/PASTURE HAY/PASTURE HAY/PASTURE HARVEST/FIRE ROAD ROAD ROAD ROAD ROAD ROAD RANGE RANGE HAY/PASTURE	YES	MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS GRASS BARE GRASS GRASS GRASS GRASS MATURE CONIFEROUS SHRUBS GRASS SHRUBS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS SHRUBS MATURE CONIFEROUS MATURE CONIFEROUS MATURE CONIFEROUS SHRUBS SHRUBS SHRUBS SHRUBS SHRUBS SHRUBS SHRUBS SHRUBS SHRUBS MATURE DECIDUOUS MATURE DECIDUOUS MATURE DECIDUOUS	FAIR FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	0 4 20 3 3 20 2 20 0 5 20 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	220 0 0 0 600 0 0 0 0 0 0 0 0 0 0 0 0 0	30 MF 30 MF 20 MF 20 MF 30 MF	R-2-3-U R-0-3-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-0-4-U R-10-1-C R-4-1-C R-1-C
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Attachment B

SEDIMENT & HABITAT DATABASE

Lower Gallatin TMDL Planning Area

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	Perce Right	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		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		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		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		2.3	109.3	3.7	29	5	8	14	89	15	1.2	1	0	13		0	0		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		>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		>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	0.4	_		_								0	0		>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	0.1	47	0	4	3	96	10	1.3	25	1	30		3	0	60 >	>200
BOZE14-01	1	8/17/09	2	MR-0-2-U	- 04	03	1.12	1.0	<2%	21.0	32.4	1.55	13.0	2.1	17 1.0	8.1	47	0	4	3	86	10	1.3	20		30		0	0		>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		>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	09	3	0									5	0		>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		>200
BOZE 14-01		0/11/03	5	WIK-0-2-0	03	03	1.12	1.0	<2 /0	24.0	55.6	1.43	10.1	2.0	134.0	>5.0	74	U	12	3	02							U	20	219 2	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		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		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		3
BOZE18-04	1	8/24/09	5	MR-0-3-U	G4c	B4c		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		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
0.114544.40		0/04/00	4	ME	D.4	5 4	4.00	4.0	00/	440	40.7	4.00	10.1	0.0	00.0	4.0	00	0	47	0		47	4.4	4	•	_		•		4.4	
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		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	00	_	40	40								0	0		5
CAMP14-12 CAMP14-12	1	8/21/09		MR-0-3-U MR-0-3-U	B4c C4		1.26 1.26	1.0	<2% <2%			1.16			31.6	1.8 2.8	23	9	12	18								0	0		24 40
CAMP14-12	1			MR-0-3-U	B4c		1.26		<2%			1.08				2.2	24	13	13	40								0	3		16
OAWII 14-12		0/21/03	5	WITC 0 3 - 0	DTC		1.20	1.0	\Z /0	21.0	20.0	1.00	20.0	1.7	47.0	2.2		10	10	40									3	30	10
CAMP15-04	1	8/21/09	1	MR-0-4-U	C3	F4	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		MR-0-4-U	C3/4		1.48		<2%			1.64				2.6	. •							<u> </u>				5	0	>200 >	
CAMP15-04	1			MR-0-4-U					<2%											1								0	0	>200 >	
CAMP15-04	1			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
CAMP15-04	1	8/21/09		MR-0-4-U	C4		1.48		<2%	31.2					431.2		42	16	16	7							İ	5	0		>200
DRY09-05	1	8/25/09	1		B4c		1.47		<2%			1.18				1.6	20	21	26	36		14	1.6	8	0	15		18	0	13	20
DRY09-05	1	8/25/09		MR-0-3-U	B4c		1.47		<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		1.47		<2%			1.23				1.5	23	18	19	10								3	0	8	3
DRY09-05	1	8/25/09	4		G4c		1.47		<2%			1.43				1.2												10	0		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 c6mm	Stability Ind	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	8.0	<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	10	0.1	0.4	4.4								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	0.76	11.2	1.3	20.7	2.4	13	14	21	17		10	0.6		U			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	0.76	11.2	1.3	44.6	4.6	13	۷1	21	10								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
0000001		0/2-1/00	Ö	WITCOOO	O T		2.20	1.0	VZ 70	11.7	5.0	0.70	1 1. 1	1.2	01.4	2.0	- 17	10	10	LL.								<u> </u>	Ü		, in the second	Ü
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	В4	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		1.32	1.7	2-<4%	17.0	22.1	1.30	13.1	1.8	36.0	2.1	55	6	8	5 6	3	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										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	1.00	9.1	1.4	25.3	2.7	36	6	11	4		20	0.0	50	U	30	+	0	0		63	5
REES06-01	1			MR-0-2-U					<2%						15.9					14								0	0		>150	
1122000 01		0/20/00		WITC 0 E G	210		1.07	1.0	42 70	10.0	10.0	0.00	11.0		10.0	1.0	00	10	1.										Ů		7 100	00
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		2.91	0.5	<2%		23.8	1.51			220.8												8	0	0	8	31	15
REES15-06	1	8/29/09	3	MR-0-4-U	E4		2.91		<2%	13.6					223.6		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			242.4												10	0	0	0	63	30
REES15-06	1	8/29/09	5		C4		2.91		<2%						227.8		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			20.4		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			31.6			1.5			1 .		_						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						ļ	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

Q + 500 × 00 × 00 × 00 × 00 × 00 × 00 × 0	Site	Date	Cell	Reach Type	Existing Rosgen Stream	C Potential Rosgen Stream Type	GIS Calculated Sinuosity	Field Slope (Percent)	Aerial Assessment Valley Gradient	Bankfull Channel Width	Cross-Sectional Area	Bankfull Mean Depth	1.0 Width / Depth Ratio	Maximum Depth	Floodprone Width	Entrenchment Ratio	8 Riffle Pebble Count D50	Riffle Pebble Count Percent <	ω Riffle Pebble Count Percent comm	ω Riffle Grid Toss Percent c6mm	Riffle Stability Index	ONUMBER of Pools per 1000 Feet	ت Mean Residual Pool Depth	Number of Individual Pieces of LWD per 1000 Feet	O Aggregates per 1000 Feet	Total Number of LWD per 1000 Feet	Percent Understory Shrub Cover	Percent Bare/Disturbed Ground	o Percent Riprap	Percent Overstory Canopy Cover	Right Bank Mean Riparian Zone Width	Ceft Bank Mean Riparian Sone Width
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		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	В3	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	В3	В3	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		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				·		<u> </u>		0	0		20	51
SMIT01-05	1	8/25/09	3	MR-0-4-U					<2%										1.0									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	$\overline{}$	13	>63
OWNTOT GO		0/20/00		WITCO TO					4270																				Ť		·Ů	700
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	- 00			Ü	88	-10	0.0	10		10		3	0	$\overline{}$	>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	$\overline{}$	>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	, 0			3	84					1	+	0	0	\longrightarrow	>200	>200
STON08-01	1	8/19/09	5	MR-2-2-C	E4b	C4b			2-<4%	11.4	14.3	1.25	9.1	1.9	106.4	9.3	44	3	3	6	04							0	0	\rightarrow	>200	>200
3101108-01	'	0/19/09	3	WIK-2-2-C	L40	040	1.30		2-<4/0	11.4	14.3	1.23	9.1	1.9	100.4	9.3	44	3	3	O								U	U		>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 STON13-02	1	8/19/09	2	MR-2-2-U	C4	C4	1.34	1.2	2-<4%	13.7	14.9	1.07	12.8	1.9	125.7	9.3	50	4	4			10	0.8	JJ		- 55		10	0	\longrightarrow	150	8
STON13-02 STON13-02	1												12.7				F0	2	2	2									+ +	\longrightarrow		
	1	8/19/09	3	MR-2-2-U	C4 E4	C4	1.34	1.2	2-<4% 2-<4%	14.7	17.1	1.16		1.7	136.7	9.3	59	3	3	3						1		18	0	\longrightarrow	100 >156	38
STON13-02							1.34										40	A	4	4.4						-	+	10	0	\longrightarrow		
STON13-02	1	8/19/09	5	MR-2-2-U	C4	U4	1.34	1.2	2-<4%	∠5.0	∠4.0	0.96	∠6.0	1.6	150.0	6.0	49	4	4	14								30	0		75	18
THOMASS	4	0/26/00	1	MDCCL	C4	Γ4	2.40	0.5	-00/	27.0	15.0	0.57	40.0	0.0	04.0	2.2	20	10	0.4	4.5		1	0.7	0	0	0	0	0		0	24	20
THOM02-03		8/26/09	1	MR-0-2-U	C4		3.40	0.5	<2%	27.8					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		MR-0-2-U	B4c	<u></u> ⊏4	3.40	0.5	<2%	33.8	∠0.0	0.59	57.0	1.0	54.8	1.6	19	23	23	22						ļ	0	0	0	0	14	55
THOM02-03	1	8/26/09	3	MR-0-2-U	1	1			<2%										1							ļ	0	0	0	0	33	11
THOM02-03	1	8/26/09	4	MR-0-2-U	-	-			<2%								0=	4.5	1.5	4.						1	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	Υ	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	Υ	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	Υ	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	Υ	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	Υ	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	Υ	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		<u>. </u>
CAMP14-05	MR-0-3-U	14	1.3	Q	100
CAMP14-05	MR-0-3-U	15	1.3		.00
CAMP14-05	MR-0-3-U	16	1.0	Υ	45
CAMP14-05	MR-0-3-U	17	0.4	Y	91
CAMP14-05	MR-0-3-U	18	1.2	Y	44
07 tivii 14 00	WIICOOO	10	1.2	<u>'</u>	77
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	17		
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		
0, 1111 11 12					
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		
				<u> </u>	
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		
		L			
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	Υ	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	0.8	Y	88
GOD02-01	MR-0-2-U	13		Y	8
GOD02-01 GOD02-01	MR-0-2-U	14	0.4	I	0
GOD02-01 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		
0000000	MDOOL	-	4.0		45
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
	T		T		
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	Υ	2
REES15-06	MR-0-4-U	2	2.1	Υ	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	Υ	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	Υ	20
REES15-06	MR-0-4-U	9	0.6		
REES15-06	MR-0-4-U	10	1.5	Υ	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		
		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	Υ	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	Υ	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	Υ	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	Υ	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	Υ	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	Υ	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	Υ	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	Υ	6

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

Attachment C

STREAMBANK EROSION SEDIMENT LOADS

Lower Gallatin TMDL Planning Area

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 Creek	BEAR 01-01 BEAR 02-01	MR-2-1-U MR-4-1-U	1.95 1.95	1090 951	2.1	GOOD	GOOD GOOD	0	0	0	0	0	0	100 100	0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0
Bear Creek Bear Creek Bear Creek	BEAR 03-01 BEAR 04-01 BEAR 05-01	MR-10-1-U MR-4-1-U MR-10-1-U	0.31 1.95 0.31	375 1826 708	0.1 3.6 0.2	GOOD GOOD	GOOD GOOD	0 0	0 0	0 0	0 0	0	0 0	100 100 100	0	0.0 0.0	0.0	0.0	0.0	0.0 0.0	0.0	0.1 3.6 0.2	0.0
Bear Creek Bear Creek	BEAR 06-01 BEAR 07-01	MR-4-1-U MR-10-1-U	1.95 0.31	1682 714	3.3 0.2	GOOD GOOD	GOOD GOOD	0	0	0	0	0	0	100 100	0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0
Bear Creek Bear Creek Bear Creek	BEAR 08-01 BEAR 09-01	MR-4-1-U MR-10-1-U MR-4-1-U	1.95 0.31 1.95	1117 401 437	2.2 0.1 0.9	GOOD GOOD	GOOD	0	0 0	0	0	0	0	100 100	0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Bear Creek Bear Creek	BEAR 10-01 BEAR 11-01 BEAR 11-02	MR-4-2-U MR-4-2-U	4.85 10.88	1232 331	6.0 3.6	GOOD FAIR	GOOD GOOD FAIR	0 0 20	0	0 0	0	0 0 60	0 0	100 100 20	0	0.0 0.0 0.7	0.0	0.0	0.0	0.0 0.0 2.2	0.0	0.9 6.0 0.7	0.0
Bear Creek Bear Creek	BEAR 12-01 BEAR 13-01	MR-2-2-U MR-4-2-U	10.88 10.88	2333 627	25.4 6.8	FAIR FAIR	FAIR FAIR	0 20	0	0	0	60 70	0	40 10	0	0.0	0.0	0.0	0.0	15.2 4.8	0.0	10.2	0.0
Bear Creek Bear Creek	BEAR 13-02 BEAR 14-01	MR-4-2-U MR-2-2-U MR-4-2-U	10.88	296 4039	3.2 43.9	FAIR FAIR	FAIR FAIR	30	0	0 0	0	70 50 0	0	10 20	0	0.6	0.0	0.0	0.0	2.3	0.0	0.3 8.8	0.0
Bear Creek Bear Creek Bear Creek	BEAR 15-01 BEAR 16-01 BEAR 17-01	MR-2-2-U MR-4-2-C	4.85 4.85 10.88	826 1057 992	4.0 5.1 10.8	FAIR FAIR	FAIR GOOD GOOD	20 20 0	0 0 40	0	0 0	0	0 0	80 80 60	0	0.8 1.0 0.0	0.0 0.0 4.3	0.0	0.0	0.0 0.0	0.0 0.0	3.2 4.1 6.5	0.0
Bear Creek Bear Creek	BEAR 17-02 BEAR 18-01	MR-4-2-C MR-2-2-C	10.88 2.28	1743 2320	19.0 5.3	GOOD FAIR	FAIR GOOD	50 50	0 0	0 0	0 0	0 0	0 0	50 50	0 0	9.5 2.6	0.0	0.0	0.0	0.0	0.0	9.5 2.6	0.0
Bear Creek Bear Creek Bear Creek	BEAR 19-01 BEAR 20-01 BEAR 21-01	MR-4-2-C MR-4-2-U MR-2-2-U	10.88 15.92 10.88	1920 2378 746	20.9 37.9 8.1	FAIR FAIR	GOOD FAIR FAIR	50 0 50	0 0	0 0	0 0	0 0	0 0	50 100 0	0 0 50	10.4 0.0 4.1	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	10.4 37.9 0.0	0.0 0.0 4.1
Bear Creek Bear Creek	BEAR 22-01 BEAR 23-01	MR-2-3-U MR-2-3-U	19.40 19.40	6268 1161	121.6 22.5	FAIR FAIR	FAIR FAIR	40	0 20	0	0	0	0	20	40	48.6	0.0	0.0	0.0	0.0	0.0	24.3 9.0	48.6
Bear Creek Bear Creek	BEAR 24-01 BEAR 24-02	MR-0-3-U MR-0-3-U	19.40 19.40	838 1607	16.3 31.2	FAIR FAIR	FAIR FAIR	60 20	0	0	0	0	0 40	40 0	0 40	9.8 6.2	0.0	0.0	0.0	0.0	0.0 12.5	6.5 0.0	0.0 12.5
Bear Creek Bear Creek Bear Creek	BEAR 25-01 BEAR 26-01 BEAR 26-02	MR-0-3-U MR-0-3-U	19.40 31.22	2309 1516 5038	0.0 29.4 157.3	FAIR FAIR	FAIR FAIR	40 50 0	0 0 40	0 0	0 0	0	40 50 40	20 0	0 0 20	0.0 14.7 0.0	0.0 0.0 62.9	0.0 0.0	0.0 0.0	0.0 0.0	0.0 14.7 62.9	0.0 0.0	0.0 0.0 31.5
Bear Creek Bear Creek	BEAR 26-03 BEAR 27-01	MR-0-3-U MR-2-3-U	19.40 19.40	1156 995	22.4 19.3	FAIR FAIR	FAIR FAIR	20	0	20	0	0	0 20	0	60 70	4.5 1.9	0.0	4.5 0.0	0.0	0.0	0.0	0.0	13.5 13.5
Bear Creek	BEAR 28-01	MR-0-3-U	19.40 TOTAL	2486 53513	48.2 682.7	FAIR	FAIR	40	0	0	0	0	30	0 TO		19.3 149.4	0.0 71.7	0.0 4.5	0.0	0.0 46.4	14.5 108.4	0.0 155.2	14.5 147.1
Bozeman Creek	BOZE 01-01	MR-10-1-U	0.31	984	0.3	GOOD	GOOD	0	0	0	0	0	0	PERC 100	0	0.0	0.11	0.01	0.00	0.07	0.16	0.23	0.22
Bozeman Creek Bozeman Creek	BOZE 02-01 BOZE 03-01	MR-4-1-U MR-4-1-C	1.95 1.95	581 1613	1.1	GOOD GOOD	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 Bozeman Creek	BOZE 04-01 BOZE 05-01	MR-2-1-U MR-2-2-U	1.95 4.85	902 305	1.8	GOOD GOOD	GOOD GOOD	0	0	0	0	0	0	100 100	0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0
Bozeman Creek Bozeman Creek Bozeman Creek	BOZE 06-01 BOZE 07-01 BOZE 08-01	MR-4-2-U MR-0-2-U MR-2-2-U	4.85 4.85 4.85	942 2222 6615	4.6 10.8 32.1	GOOD GOOD	GOOD GOOD	0	0 0	0 0	0	0	0 0	100 100 100	0	0.0 0.0	0.0	0.0	0.0	0.0 0.0	0.0	4.6 10.8 32.1	0.0
Bozeman Creek Bozeman Creek	BOZE 08-02 BOZE 09-01	MR-2-2-U MR-0-2-U	10.88	1127 2400	12.3 11.6	FAIR FAIR	FAIR FAIR	30	0	0	0	0	0	70 80	0	3.7	0.0	0.0	0.0	0.0	0.0	8.6 9.3	0.0
Bozeman Creek Bozeman Creek	BOZE 10-01 BOZE 11-01	MR-2-2-U MR-0-2-U	4.85 4.85	5529 2097	26.8 10.2	GOOD	FAIR FAIR	20 10	0	0	0	0	0	80 90	0	5.4 1.0	0.0	0.0	0.0	0.0	0.0	21.5 9.2	0.0
Bozeman Creek Bozeman Creek Bozeman Creek	BOZE 12-01 BOZE 12-02 BOZE 13-01	MR-2-2-C MR-2-2-C MR-2-2-U	10.88 4.85 4.85	4378 4200 1529	47.6 20.4 7.4	GOOD GOOD	FAIR GOOD GOOD	50 0	0 0	0 0	0 0	0	0 0	50 100 100	0	0.0 0.0	0.0	0.0	0.0	0.0 0.0 0.0	0.0	23.8 20.4 7.4	0.0
Bozeman Creek Bozeman Creek	BOZE 14-01 BOZE 15-01	MR-0-2-U MR-0-2-U	8.04 5.33	4901 5754	39.4 30.7	FAIR FAIR	GOOD FAIR	0	0 20	0	0	40 0	0 40	60	0 40	0.0	0.0 6.1	0.0	0.0	15.8 0.0	0.0 12.3	23.6 0.0	0.0 12.3
Bozeman Creek Bozeman Creek Bozeman Creek	BOZE 15-02 BOZE 16-01 BOZE 17-01	MR-0-2-U MR-2-2-U MR-0-2-U	10.88 10.88 10.88	6057 678 1140	65.9 7.4 12.4	FAIR FAIR	FAIR FAIR FAIR	0 10 0	20 0 0	0	0 0	0	90 80	20 0 20	0	0.0 0.7 0.0	0.0 0.0	0.0	0.0	0.0 0.0	39.5 6.6 9.9	13.2 0.0 2.5	0.0
Bozeman Creek Bozeman Creek	BOZE 17-01 BOZE 17-02 BOZE 18-01	MR-0-2-U MR-0-3-U	10.88	4607 1071	50.1	FAIR FAIR	FAIR FAIR	0	0	0	0	0	40	0 70	60	0.0	0.0	0.0	0.0	0.0	20.1	0.0	30.1 6.2
Bozeman Creek Bozeman Creek	BOZE 18-02 BOZE 18-03	MR-0-3-U MR-0-3-U	19.40 19.40	6310 6489	122.4 125.9	FAIR FAIR	FAIR FAIR	0	0	0	0	0	30 30	0	70 70	0.0	0.0	0.0	0.0	0.0	36.7 37.8	0.0	85.7 88.1
Bozeman Creek Bozeman Creek	BOZE 18-04 BOZE 18-05	MR-0-3-U MR-0-3-U	17.37 8.92 TOTAL	6024 4910 83366	104.6 43.8 814.9	POOR FAIR	POOR FAIR	0	0	0	0	0	0			0.0 0.0 35.8 0.0	0.0 0.0 19.3 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 16.9 0.0	0.0 0.0 162.9 0.2	0.0 0.0 209.2 0.3	104.6 43.8 370.8 0.5
Camp Creek Camp Creek	CAMP 01-01 CAMP 02-01	MR-4-1-U	1.97	1888 899	3.7 0.0	FAIR FAIR	POOR 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 Creek	CAMP 03-01 CAMP 03-02	MR-0-1-U MR-0-1-U	1.97	1985 1953	3.9	FAIR FAIR	FAIR FAIR	0	50 40	0 60	50 0	0	0	0	0	0.0	2.0 1.5	2.3	0.0	0.0	0.0	0.0	0.0
Camp Creek Camp Creek Camp Creek	CAMP 03-03 CAMP 03-04 CAMP 03-05	MR-0-1-U MR-0-1-U MR-0-1-U	1.97 1.97 1.97	2555 459 1175	5.0 0.9 2.3	FAIR FAIR	FAIR FAIR FAIR	10 0	30 50 20	60 50 80	0	0	0 0	0 0	0	0.5 0.0 0.0	1.5 0.5 0.5	3.0 0.5 1.9	0.0	0.0	0.0	0.0	0.0
Camp Creek Camp Creek	CAMP 04-01 CAMP 05-01	MR-2-1-U MR-4-1-C	1.97 1.97	3715 925	7.3 1.8	POOR FAIR	POOR FAIR	0	50 70	50 30	0	0	0	0	0	0.0	3.7 1.3	3.7 0.5	0.0	0.0	0.0	0.0	0.0
Camp Creek Camp Creek	CAMP 05-02 CAMP 06-01	MR-4-1-C MR-0-1-U MR-0-1-U	1.97 1.97 1.97	1024 1515	2.0 3.0 3.0	FAIR POOR FAIR	FAIR POOR	0	60 100 70	0	0	0	0 0	40 0 30	0	0.0	3.0	0.0	0.0	0.0 0.0 0.0	0.0	0.8 0.0 0.9	0.0
Camp Creek Camp Creek Camp Creek	CAMP 06-02 CAMP 07-01 CAMP 08-01	MR-0-2-U MR-0-3-U	10.88 19.40	1534 1388 960	15.1 18.6	FAIR FAIR	FAIR FAIR FAIR	0	70 70 40	0	0	0	0	30 20	0	0.0 0.0	2.1 10.6 7.5	0.0 0.0 7.5	0.0	0.0	0.0 0.0	4.5	0.0
Camp Creek Camp Creek	CAMP 09-01 CAMP 10-01	MR-2-3-U MR-0-3-U	19.40 19.40	968 505	18.8 9.8	FAIR FAIR	FAIR FAIR	0	40 50	50 40	0	0	0	10 10	0	0.0	7.5 4.9	9.4 3.9	0.0	0.0	0.0	1.9 1.0	0.0
Camp Creek Camp Creek Camp Creek	CAMP 10-02 CAMP 10-03 CAMP 10-04	MR-0-3-U MR-0-3-U MR-0-3-U	19.40 19.40 19.40	1912 1093 408	37.1 21.2 7.9	FAIR FAIR	FAIR FAIR FAIR	10 0	20 40 70	70 40 0	0	0	0 0	0 20 30	0	3.7 0.0 0.0	7.4 8.5 5.5	26.0 8.5 0.0	0.0	0.0	0.0	0.0 4.2 2.4	0.0
Camp Creek Camp Creek	CAMP 11-01 CAMP 11-02	MR-0-3-C MR-0-3-C	19.40 19.40	877 764	17.0 14.8	FAIR GOOD	FAIR GOOD	0	70 70 50	0	0	0	0	30 50	0	0.0	11.9 7.4	0.0	0.0	0.0	0.0	5.1	0.0
Camp Creek Camp Creek	CAMP 12-01 CAMP 13-01	MR-2-3-C MR-2-3-U	19.40 19.40	1983 621	38.5 12.1	FAIR FAIR	FAIR FAIR	0 20	50 30	0 40	0	0	0	50 10	0	0.0 2.4	19.2 3.6	0.0 4.8	0.0	0.0	0.0	19.2 1.2	0.0
Camp Crook	CAMP 13-02 CAMP 14-01	MR-2-3-U MR-0-3-U	5.12 19.40	665 3888	3.4 75.4 15.3	FAIR FAIR	FAIR FAIR FAIR	20 40 10	60 60 40	0 0 50	0	0	0 0	20 0	0	0.7 30.2 1.5	2.0 45.3 6.1	0.0 0.0 7.6	0.0 0.0	0.0 0.0	0.0	0.7 0.0 0.0	0.0
Camp Creek Camp Creek		MD-0-3-II	10.40					10	60	0	0	0	0	0	40	0.0	13.6	0.0	0.0	0.0	0.0	0.0	9.1
•	CAMP 14-02 CAMP 14-03 CAMP 14-04	MR-0-3-U MR-0-3-U MR-0-3-U	19.40 19.40 19.40	786 1168 4358	22.7 84.5	POOR POOR	POOR POOR	30	20	30	0	0	0	0	20	25.4	16.9	25.4	0.0	0.0	0.0		
Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek	CAMP 14-02 CAMP 14-03 CAMP 14-04 CAMP 14-05 CAMP 14-06	MR-0-3-U	19.40	1168	22.7	POOR	POOR				0 0 0	0 0 0	0 0 0	0 0 0	20 0 0	25.4 6.7 21.3	16.9 13.5 12.8	25.4 13.5 8.5	0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0	0.0
Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek	CAMP 14-02 CAMP 14-03 CAMP 14-04 CAMP 14-05 CAMP 14-06 CAMP 14-07 CAMP 14-08	MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U	19.40 19.40 15.25 19.40 19.40	1168 4358 2211 2201 1848 924	22.7 84.5 33.7 42.7 35.9 17.9	POOR POOR FAIR FAIR FAIR FAIR	POOR POOR FAIR FAIR FAIR	30 20 50 80 20	20 40 30 20 40	30 40 20 0	0 0 0	0 0	0 0 0 0	0 0 0	0 0 0 40	6.7 21.3 28.7 3.6	13.5 12.8 7.2 7.2	13.5 8.5 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 7.2
Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek	CAMP 14-02 CAMP 14-03 CAMP 14-04 CAMP 14-05 CAMP 14-06 CAMP 14-07	MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U	19.40 19.40 15.25 19.40	1168 4358 2211 2201 1848	22.7 84.5 33.7 42.7 35.9	POOR POOR FAIR FAIR	POOR POOR FAIR FAIR FAIR	30 20 50 80	20 40 30 20	30 40 20 0	0 0	0 0	0 0	0 0 0 0 0	0	6.7 21.3 28.7	13.5 12.8 7.2	13.5 8.5 0.0	0.0 0.0 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 Creek Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek Camp Creek	CAMP 14-02 CAMP 14-03 CAMP 14-04 CAMP 14-05 CAMP 14-06 CAMP 14-07 CAMP 14-08 CAMP 14-09 CAMP 14-11 CAMP 14-11 CAMP 14-12	MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U	19.40 19.40 15.25 19.40 19.40 19.40 19.40 19.40 61.62 19.40	1168 4358 2211 2201 1848 924 8617 3839 1594 8753 6851	22.7 84.5 33.7 42.7 35.9 17.9 167.2 74.5 30.9 539.4 132.9	POOR POOR FAIR FAIR FAIR FAIR FAIR POOR POOR	POOR POOR FAIR FAIR FAIR FAIR FAIR POOR POOR	30 20 50 80 20 30 0 0 0	20 40 30 20 40 20 50 0 0	30 40 20 0 20 0 0 0 20	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 30 50 0 80	0 0 0 0 0 0 0 0 0	0 0 40 0 0 100 0	6.7 21.3 28.7 3.6 50.2 0.0 0.0 0.0 66.5	13.5 12.8 7.2 7.2 33.4 37.2 0.0 0.0 26.6	13.5 8.5 0.0 0.0 33.4 0.0 0.0 107.9	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 50.2 37.2 0.0 431.5 39.9	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 7.2 0.0 0.0 30.9 0.0
Camp Creek Camp Creek	CAMP 14-02 CAMP 14-03 CAMP 14-05 CAMP 14-05 CAMP 14-06 CAMP 14-07 CAMP 14-09 CAMP 14-10 CAMP 14-11 CAMP 14-12 CAMP 14-13 CAMP 14-14 CAMP 14-15	MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U	19.40 19.40 15.25 19.40 19.40 19.40 19.40 19.40 61.62 19.40 19.40 19.40	1168 4358 2211 2201 1848 924 8617 3839 1594 8753 6851 3384 3390	22.7 84.5 33.7 42.7 35.9 17.9 167.2 74.5 30.9 539.4 132.9 65.6 65.8	POOR POOR FAIR FAIR FAIR FAIR FAIR POOR POOR FAIR POOR	POOR POOR FAIR FAIR FAIR FAIR FAIR POOR POOR POOR FAIR POOR	30 20 50 80 20 30 0 0 50 50 40	20 40 30 20 40 20 50 0 20 20 20 20	30 40 20 0 20 0 0 20 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 30 50 0 80 30 0	0 0 0 0 0 0 0 0 0	0 0 40 0 0 100 0 0 0 40	6.7 21.3 28.7 3.6 50.2 0.0 0.0 0.0 66.5 32.8 26.3	13.5 12.8 7.2 7.2 33.4 37.2 0.0 0.0 26.6 32.8 13.2	13.5 8.5 0.0 0.0 33.4 0.0 0.0 107.9 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 50.2 37.2 0.0 431.5 39.9 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 7.2 0.0 0.0 30.9 0.0 0.0 0.0 26.3
Camp Creek Camp Creek	CAMP 14-02 CAMP 14-03 CAMP 14-04 CAMP 14-05 CAMP 14-06 CAMP 14-07 CAMP 14-08 CAMP 14-09 CAMP 14-10 CAMP 14-11 CAMP 14-11 CAMP 14-12 CAMP 14-13 CAMP 14-15 CAMP 14-16 CAMP 14-16	MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U	19.40 19.40 15.25 19.40 19.40 19.40 19.40 19.40 61.62 19.40 19.40 19.40 19.40	1168 4358 2211 2201 1848 924 8617 3839 1594 8753 6851 3384 3390 6334	22.7 84.5 33.7 42.7 35.9 167.2 74.5 30.9 539.4 132.9 65.6 66.8 122.9	POOR POOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR POOR POOR FAIR POOR FAIR FAIR FAIR	POOR POOR FAIR FAIR FAIR FAIR FAIR POOR POOR POOR FAIR POOR FAIR FAIR	30 20 50 80 20 30 0 0 50 50 40 10	20 40 30 20 40 20 50 0 20 50 20 50 20 70	30 40 20 0 0 20 0 0 0 0 0 0 10	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 30 50 0 80 30 0 0 0	0 0 0 0 0 0 0 0 0 0 0	0 0 40 0 0 100 0 0 40 0	6.7 21.3 28.7 3.6 50.2 0.0 0.0 66.5 32.8 26.3 61.4 3.0	13.5 12.8 7.2 7.2 33.4 37.2 0.0 26.6 32.8 13.2 0.0 21.2	13.5 8.5 0.0 0.0 33.4 0.0 0.0 107.9 0.0 0.0 61.4 3.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 50.2 37.2 0.0 431.5 39.9 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 7.2 0.0 0.0 30.9 0.0 0.0 26.3 0.0
Camp Creek Camp Creek	CAMP 14-02 CAMP 14-03 CAMP 14-04 CAMP 14-05 CAMP 14-06 CAMP 14-07 CAMP 14-09 CAMP 14-10 CAMP 14-11 CAMP 14-11 CAMP 14-12 CAMP 14-13 CAMP 14-14 CAMP 14-15 CAMP 14-15 CAMP 14-16 CAMP 14-17 CAMP 14-17 CAMP 14-18 CAMP 14-19 CAMP 14-19	MR-0-3-U MR-0-3-U	19.40 19.40 15.25 19.40 19.40 19.40 19.40 19.40 19.40 19.40 19.40 19.40 19.40 19.40 19.40 19.40 19.40	1168 4358 2211 2201 1848 924 8617 3839 1594 8753 6851 3384 3390 6334 1562 2483 1584	22.7 84.5 33.7 42.7 35.9 167.2 74.5 30.9 539.4 132.9 65.6 65.8 122.9 30.3 73.0 48.2	POOR POOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR POOR POOR FAIR FAIR FAIR FOOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	POOR POOR FAIR FAIR FAIR FAIR FAIR FAIR POOR POOR FAIR POOR FAIR FAIR FAIR POOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	30 20 50 80 20 30 0 0 0 50 50 40 50	20 40 30 20 40 20 50 0 0 20 50 20 70 20 20 20 0 70	30 40 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 30 50 0 80 30 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 40 0 100 0 0 0 40 0 0 0 80	6.7 21.3 28.7 3.6 50.2 0.0 0.0 66.5 32.8 26.3 61.4 3.0 0.0 0.0	13.5 12.8 7.2 7.2 33.4 37.2 0.0 26.6 32.8 13.2 0.0 21.2 14.6 9.6 0.0	13.5 8.5 0.0 0.0 33.4 0.0 0.0 107.9 0.0 0.0 61.4 3.0 58.4 0.0 30.7	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 50.2 37.2 0.0 431.5 39.9 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 7.2 0.0 0.0 30.9 0.0 0.0 26.3 0.0 0.0 0.0 38.5
Camp Creek Camp Creek	CAMP 14-02 CAMP 14-03 CAMP 14-03 CAMP 14-06 CAMP 14-06 CAMP 14-07 CAMP 14-08 CAMP 14-09 CAMP 14-10 CAMP 14-11 CAMP 14-12 CAMP 14-12 CAMP 14-13 CAMP 14-15 CAMP 14-16 CAMP 14-17 CAMP 14-18 CAMP 14-19 CAMP 14-19 CAMP 14-19 CAMP 14-19 CAMP 14-19 CAMP 14-19 CAMP 14-10 CAMP 14-10 CAMP 14-11 CAMP 14-12 CAMP 14-20 CAMP 14-21	MR-0-3-U MR-0-3-U	19.40 19.40	1168 4358 2211 2201 1848 924 8617 3839 1594 8753 6851 3384 3390 6334 1562 3765 2483 1584 5441	22.7 84.5 33.7 42.7 35.9 167.2 74.5 30.9 539.4 132.9 65.6 65.8 122.9 30.3 73.0 48.2 30.7 105.6	POOR POOR FAIR FAIR FAIR FAIR FAIR FAIR POOR POOR FAIR POOR FAIR POOR FAIR FAIR FAIR FOOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	POOR POOR FAIR FAIR FAIR FAIR FAIR POOR POOR FAIR POOR FAIR POOR FAIR FOOR FAIR FAIR FOOR FAIR FAIR FAIR FOOR FAIR FAIR FOOR FAIR FAIR FOOR FAIR FOOR FAIR FOOR FAIR FOOR FOOR FOOR FOOR FOOR FOOR FOOR FO	30 20 80 20 0 0 0 50 50 40 0 0 0 0 0 30 50 40 50 10 0 0 30 40 50 50 50 50 50 50 50 50 50 5	20 40 30 20 40 50 0 20 50 20 20 70 20 20 20 20 20 20 20 20 20 20 20 20 20	30 40 20 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 30 50 0 80 30 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 40 0 0 100 0 0 40 0 0 0 80 0 20	6.7 21.3 28.7 3.6 50.2 0.0 0.0 66.5 32.8 26.3 61.4 3.0 0.0 0.0 0.0 0.0	13.5 12.8 7.2 7.2 33.4 37.2 0.0 26.6 32.8 13.2 0.0 21.2 14.6 9.6 0.0 21.1 27.2	13.5 8.5 0.0 0.0 33.4 0.0 0.0 107.9 0.0 0.0 61.4 3.0 58.4 0.0 30.7 63.3 68.1	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 50.2 37.2 0.0 431.5 39.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 7.2 0.0 0.0 30.9 0.0 0.0 26.3 0.0 0.0 0.0 38.5 0.0 21.1
Camp Creek Camp Creek	CAMP 14-02 CAMP 14-03 CAMP 14-05 CAMP 14-05 CAMP 14-06 CAMP 14-07 CAMP 14-09 CAMP 14-10 CAMP 14-11 CAMP 14-12 CAMP 14-15 CAMP 14-15 CAMP 14-17 CAMP 14-18 CAMP 14-19 CAMP 14-19 CAMP 14-19 CAMP 14-19 CAMP 14-19 CAMP 14-20 CAMP 14-20	MR-0-3-U MR-0-3-U	19.40 19.40 15.25 19.40 19.40 19.40 19.40 19.40 19.40 19.40 19.40 19.40 19.40 19.40 19.40 19.40 19.40	1168 4358 2211 2201 1848 924 8617 3839 1594 8753 6851 3384 3390 6334 1562 3765 2483 1584 5441	22.7 84.5 33.7 42.7 35.9 17.9 167.2 74.5 30.9 539.4 65.6 65.8 122.9 30.3 73.0 48.2 30.7	POOR POOR FAIR FAIR FAIR FAIR FAIR FAIR POOR POOR FAIR POOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR FAI	POOR POOR FAIR FAIR FAIR FAIR FAIR FAIR FAIR POOR POOR FAIR FAIR FOOR FAIR POOR FAIR FAIR FAIR FOOR FAIR FOOR FAIR FAIR FAIR FAIR FAIR FAIR FOOR POOR	30 20 80 20 30 0 0 50 50 40 50 10 0 0	20 40 30 20 40 20 50 0 20 50 20 20 20 20 20 20 20 20 20 20 20 20 20	30 40 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 30 50 80 30 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 40 0 0 100 0 0 0 40 0 0 0 80 0	6.7 21.3 28.7 3.6 50.2 0.0 0.0 66.5 32.8 26.3 61.4 3.0 0.0 0.0	13.5 12.8 7.2 7.2 33.4 37.2 0.0 26.6 32.8 13.2 0.0 21.2 14.6 9.6 0.0 21.1	13.5 8.5 0.0 0.0 33.4 0.0 0.0 107.9 0.0 0.0 61.4 3.0 58.4 0.0 30.7 63.3	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 50.2 37.2 0.0 431.5 39.9 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 7.2 0.0 0.0 30.9 0.0 0.0 26.3 0.0 0.0 38.5 0.0 21.1

STREAM	REACH_ID	REACH_TYPE	Sediment Load per 1000 R Feet (Tons/Year)	LENGTH_FT	Reach Sediment Load (Tons/Year)	LB_RP_HLTH	RB_RP_HLTH	ANTHRO_TRA	ANTHRO_GRA	ANTHRO_CRO		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 Creek	DRY 01-01 DRY 02-01	MR-10-1-C MR-10-1-U	0.31 0.31	1229 407	0.4	GOOD FAIR	GOOD FAIR	0	0 50	0	0	0	0	100 50	0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Dry Creek Dry Creek	DRY 03-01 DRY 04-01	MR-10-1-U MR-4-1-U	0.31 1.97	1282 954	0.4 1.9	POOR POOR	POOR POOR	0	60 60	0	0	0	0	40 40	0	0.0	0.2 1.1	0.0	0.0	0.0	0.0	0.2	0.0
Dry Creek Dry Creek	DRY 04-02 DRY 04-03	MR-4-1-U MR-4-1-U	1.97	3183 738	6.3	POOR FAIR	POOR FAIR	10	20	70 40	0	0	0	0	0	0.6	1.3	4.4	0.0	0.0	0.0	0.0	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 Creek	DRY 06-01 DRY 07-01	MR-2-2-U	10.88	3657 2021	39.8 0.0	FAIR FAIR	FAIR FAIR	0	20 50	70 40	0	0	0	10	0	0.0	0.0	27.9 0.0	0.0	0.0	0.0	4.0 0.0	0.0
Dry Creek Dry Creek	DRY 08-01 DRY 09-01	MR-0-2-U MR-0-3-U	10.88 19.40	3249 3487	35.3 67.7	FAIR FAIR	FAIR FAIR	10 30	40 30	40 0	0	0	0 30	10 10	0	3.5 20.3	14.1 20.3	14.1	0.0	0.0	0.0 20.3	3.5 6.8	0.0
Dry Creek Dry Creek	DRY 09-02 DRY 09-03	MR-0-3-U MR-0-3-U	19.40 19.40	2686 5586	52.1 108.4	FAIR FAIR	FAIR	10	70 40	0	0	0	0	20	0	5.2 10.8	36.5	0.0	0.0	0.0	0.0	10.4 10.8	0.0
Dry Creek	DRY 09-04	MR-0-3-U	19.40	5193	100.7	FAIR	FAIR FAIR	0	40	0	0	0	40	10	0 10	0.0	43.4 40.3	0.0	0.0	0.0	43.4 40.3	10.1	0.0 10.1
Dry Creek Dry Creek	DRY 09-05 DRY 09-06	MR-0-3-U MR-0-3-U	31.39 19.40	4650 2653	146.0 51.5	FAIR FAIR	FAIR FAIR	0 50	30	0	0	0	50	0	20	0.0 25.7	43.8 20.6	0.0	0.0	0.0	73.0	0.0 5.1	29.2 0.0
Dry Creek Dry Creek	DRY 10-01 DRY 10-02	MR-0-3-C MR-0-3-C	19.40 19.40	1484 2137	28.8 41.5	FAIR FAIR	FAIR FAIR	0 50	40 40	0	0	0	40 0	20 10	0	0.0 20.7	11.5 16.6	0.0	0.0	0.0	11.5 0.0	5.8 4.1	0.0
Dry Creek	DRY 10-03 DRY 11-01	MR-0-3-C MR-0-4-C	19.40 19.40	509 1338	9.9	FAIR FAIR	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 Creek	DRY 12-01	MR-0-4-U	19.40	2572	49.9	FAIR	FAIR	50	40 40	0	0	0	0	10	0	13.0 24.9	20.0	0.0	0.0	0.0	0.0	2.6 5.0	0.0
Dry Creek Dry Creek	DRY 12-02 DRY 12-03	MR-0-4-U MR-0-4-U	19.40 19.40	2555 6456	49.6 125.2	FAIR FAIR	FAIR FAIR	30 40	30 20	0	0	0	0 40	0	40 0	14.9 50.1	14.9 25.0	0.0	0.0	0.0	0.0 50.1	0.0	19.8
Dry Creek Dry Creek	DRY 12-04 DRY 12-05	MR-0-4-U MR-0-4-U	19.40 19.40	3709 4054	72.0 78.7	FAIR FAIR	FAIR FAIR	10	30	90	0	0	60 0	0	0	7.2 7.9	21.6	0.0 70.8	0.0	0.0	43.2	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 Creek	DRY 12-07 DRY 12-08	MR-0-4-U MR-0-4-U	19.40 19.40	2977 2571	57.7 49.9	FAIR FAIR	FAIR FAIR	0 20	30 0	0	0	0	70 60	0	0 20	0.0 10.0	17.3 0.0	0.0	0.0	0.0	40.4 29.9	0.0	0.0 10.0
Dry Creek	DRY 12-09	MR-0-4-U	19.40 TOTAL	8540 85683	165.7 1422.7	FAIR	FAIR	20	20	0	0	0	30	0 TC	30 TAL	33.1 254.0	33.1 424.6	0.0 122.4	0.0	0.0	49.7 406.7	0.0 71.1	49.7 143.9
														PER		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 Godfrey Creek	GOD 02-01 GOD 03-01	MR-0-2-U MR-0-3-U	5.69 9.46	3149 15867	17.9 150.1	POOR POOR	POOR POOR	20 20	20 20	20 20	0	0	20 20	0	20 20	3.6 30.0	3.6 30.0	3.6 30.0	0.0	0.0	3.6 30.0	0.0	3.6 30.0
Godfrey Creek Godfrey Creek	GOD 03-02 GOD 03-03	MR-0-3-U MR-0-3-U	19.40 19.40	6879 6071	133.5 117.8	POOR POOR	POOR POOR	20 20	20 0	20 40	0	0	20 40	0	20 0	26.7 23.6	26.7 0.0	26.7 47.1	0.0	0.0	26.7 47.1	0.0	26.7 0.0
,			TOTAL	37605	430.4									TC	TAL	86.1 0.2	62.5 0.1	109.6 0.3		0.0	109.6	0.0	62.5 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 Jackson Creek	JACK 02-01 JACK 02-02	MR-4-1-C MR-4-1-C	1.97 1.97	1622 362	3.2 0.7	FAIR FAIR	FAIR FAIR	40 40	30 30	0	0	30	0	0	0	1.3 0.3	1.0 0.2	0.0	0.0	0.2	0.0	0.0	0.0
Jackson Creek Jackson Creek	JACK 03-01 JACK 04-01	MR-4-1-U MR-4-1-C	1.97 2.50	563 2134	1.1 5.3	FAIR FAIR	FAIR FAIR	40 0	30 50	0	0	30 50	0	0	0	0.4	0.3 2.7	0.0	0.0	0.3 2.7	0.0	0.0	0.0
Jackson Creek Jackson Creek	JACK 05-01 JACK 06-01	MR-4-1-U MR-2-1-U	1.97 1.97	997 1113	2.0	FAIR FAIR	FAIR FAIR	0	50 30	0	0	50 30	0	0	0	0.0	1.0	0.0	0.0	1.0	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 Jackson Creek	JACK 08-01 JACK 09-01	MR-0-2-U MR-2-2-U	10.88 10.88	2074 2794	22.6 30.4	FAIR FAIR	FAIR FAIR	40 50	30 20	0	0	30	0	0	0	9.0 15.2	6.8	0.0	0.0	6.8 9.1	0.0	0.0	0.0
Jackson Creek Jackson Creek	JACK 09-02 JACK 09-03	MR-2-2-U MR-2-2-U	10.88 10.88	3137 1829	34.1 19.9	FAIR GOOD	FAIR FAIR	40 40	20 20	0	0	20 0	0	20 40	0	13.7 8.0	6.8 4.0	0.0	0.0	6.8	0.0	6.8 8.0	0.0
Jackson Creek	JACK 10-01	MR-2-2-U	10.88	2228 2548	24.2 38.2	GOOD FAIR	FAIR FAIR	10 10	50 40	0	0	0	0 50	40 0	0	2.4	12.1	0.0	0.0	0.0	0.0	9.7	0.0
Jackson Creek Jackson Creek	JACK 10-02 JACK 10-03	MR-2-2-U	14.98 10.88	2849	31.0	FAIR	FAIR	10	40	0	0	0	40	0	10	3.8 3.1	15.3 12.4	0.0	0.0	0.0	19.1 12.4	0.0	3.1
Jackson Creek Jackson Creek	JACK 10-04 JACK 11-01	MR-2-2-U MR-0-2-U	10.88 10.88	1666 4163	18.1 45.3	FAIR FAIR	FAIR FAIR	30 20	70 50	0	0	0	0	0	30	5.4 9.1	12.7 22.6	0.0	0.0	0.0	0.0	0.0	0.0 13.6
Jackson Creek Jackson Creek	JACK 11-02 JACK 11-03	MR-0-2-U MR-0-2-U	10.88 10.88	2059 2665	22.4 29.0	FAIR FAIR	FAIR FAIR	0 30	40 40	0	0	0	20	0	40 30	0.0 8.7	9.0 11.6	0.0	0.0	0.0	4.5 0.0	0.0	9.0 8.7
			TOTAL	41101	344.6										TAL	87.1 0.3	130.5	0.0	0.0	32.0 0.1	36.0	24.8	34.3
	DEE2 04 04	152 40 0 11	0.04	4077	2.2	EAID	EAID	_	70	_	0												
Reese Creek Reese Creek	REES 01-01 REES 01-02	MR-10-2-U MR-10-2-U	0.31 0.31	1077 557	0.3	FAIR FAIR	FAIR FAIR	0 10	70 70	0	0	0	0	30 20	0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0
Reese Creek Reese Creek	REES 02-01 REES 02-02	MR-4-2-U MR-4-2-U	10.88 10.88	759 2658	8.3 28.9	FAIR POOR	FAIR POOR	0	80 100	0	0	0	0	20 0	0	0.0	6.6 28.9	0.0	0.0	0.0	0.0	1.7 0.0	0.0
Reese Creek Reese Creek	REES 03-01 REES 03-02	MR-2-2-U MR-2-2-U	10.88 10.88	1214 1616	13.2 17.6	FAIR FAIR	FAIR FAIR	0	60 80	0	0	0	0	40 20	0	0.0	7.9 14.1	0.0	0.0	0.0	0.0	5.3 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 Reese Creek	REES 05-01 REES 06-01	MR-2-2-U MR-0-2-U	10.88 24.85	2487 1090	27.1 27.1	FAIR FAIR	FAIR FAIR	30 0	60 90	0 0	0 0	0	0 0	10 10	0 0	8.1 0.0	16.2 24.4	0.0	0.0 0.0	0.0	0.0	2.7 2.7	0.0 0.0
Reese Creek Reese Creek	REES 07-01 REES 08-01	MR-2-2-U MR-0-2-U	10.88 10.88	691 1166	7.5 12.7	FAIR FAIR	FAIR FAIR	10 0	30 30	0	0	0	60 60	0 10	0	0.0	2.3 3.8	0.0	0.0	0.0	4.5 7.6	0.0	0.0
Reese Creek Reese Creek	REES 09-01 REES 10-01	MR-0-3-U MR-4-3-U	19.40 10.88	323 406	6.3 4.4	FAIR FAIR	FAIR FAIR	0	30 30	0	0	0	60 60	10 10	0	0.0	1.9	0.0	0.0	0.0	3.8 2.7	0.6	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 Reese Creek	REES 12-01 REES 13-01	MR-0-3-U MR-0-4-U	19.40 19.40	903 1387	17.5 26.9	FAIR FAIR	FAIR FAIR	0	20 30	0	0	0	80 60	0 10	0	0.0	3.5 8.1	0.0	0.0	0.0	14.0 16.1	0.0 2.7	0.0
Reese Creek Reese Creek	REES 14-01 REES 15-01	MR-0-4-U	19.40	156 181	0.0 3.5	FAIR FAIR	FAIR FAIR	0	20 20	0	0	0	50 60	30 20	0	0.0	0.0	0.0	0.0	0.0	0.0 2.1	0.0	0.0
Reese Creek Reese Creek	REES 15-02 REES 15-03	MR-0-4-U MR-0-4-U	19.40 19.40	3381 3248	65.6 63.0	POOR FAIR	POOR FAIR	0	20	0	0	0	40 60	0	40	0.0	13.1	0.0	0.0	0.0	26.2	0.0	26.2
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 REES 15-06	MR-0-4-U MR-0-4-U	19.40 17.07	3217 6641	62.4 113.4	FAIR FAIR	FAIR FAIR	0 10	20 20	0	0 0	0 0	60 60	20 10	0 0	0.0 11.3	12.5 22.7	0.0	0.0	0.0 0.0	37.5 68.0	12.5 11.3	0.0
Reese Creek			TOTAL	39242	615.9									PERC	TAL	0.0	231.6 0.4	24.5 0.0	0.0	0.0	264.0 0.4	49.4 0.1	26.2 0.0
Reese Creek									30	0	0	0	30 40	0	20	8.6 5.7	13.0 28.6	0.0	0.0	0.0	13.0	0.0	8.6
Rocky Creek	ROCK 01-01	MR-0-3-U MR-0-3-11	19.40 19.40	2226	43.2	FAIR	FAIR FAIR	20 10	EΩ	$^{\circ}$			÷∪	0	U	J.1	∠0.0		· U.U		22.0	U.U	0.0
Rocky Creek Rocky Creek Rocky Creek	ROCK 01-02 ROCK 02-01	MR-0-3-U MR-0-3-U	19.40 25.44	2953 961	57.3 24.4	FAIR FAIR	FAIR FAIR	10 20	50 40	0 0	0 0	0	40	0	0	4.9	9.8	0.0	0.0	0.0	22.9 9.8	0.0	^ -
Rocky Creek Rocky Creek	ROCK 01-02	MR-0-3-U	19.40	2953	57.3	FAIR	FAIR	10					40 0 0	0 0 20	0 0	17.0 26.8	9.8 7.3 0.0	0.0 0.0			_	0.0 0.0 6.7	0.0
Rocky Creek Rocky Creek Rocky Creek Rocky Creek	ROCK 01-02 ROCK 02-01 ROCK 02-02	MR-0-3-U MR-0-3-U MR-0-3-U	19.40 25.44 19.40	2953 961 1250	57.3 24.4 24.3	FAIR FAIR POOR	FAIR FAIR FAIR	10 20 70	40 30	0	0	0	0	0	0	17.0	7.3	0.0	0.0	0.0	9.8 0.0	0.0	
Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek	ROCK 01-02 ROCK 02-01 ROCK 02-02 ROCK 02-03 ROCK 02-04	MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U	19.40 25.44 19.40 19.40	2953 961 1250 1725 1604	57.3 24.4 24.3 33.5 31.1	FAIR FAIR POOR FAIR FAIR	FAIR FAIR FAIR FAIR FAIR FAIR POOR	10 20 70 80 100	40 30 0	0 0 0	0 0 0	0 0 0	0 0	0 20 0	0 0	17.0 26.8 31.1	7.3 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	9.8 0.0 0.0 0.0	0.0 6.7 0.0	0.0
Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek	ROCK 01-02 ROCK 02-01 ROCK 02-02 ROCK 02-03 ROCK 02-04 ROCK 03-01 ROCK 03-01 ROCK 04-01 ROCK 05-01	MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-4-U MR-0-4-U MR-0-4-U MR-0-4-U MR-0-4-U	19.40 25.44 19.40 19.40 19.40 25.82 19.40 19.40 19.40	2953 961 1250 1725 1604 7610 470 1912 2931	57.3 24.4 24.3 33.5 31.1 196.5 9.1 37.1 56.9	FAIR FAIR POOR FAIR FAIR GOOD GOOD	FAIR FAIR FAIR FAIR FAIR FAIR POOR FAIR POOR	10 20 70 80 100 60 50 50	30 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0 0	0 20 0 40 50 50	0 0 0 0 0	17.0 26.8 31.1 117.9 4.6 18.5 28.4	7.3 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0	9.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 6.7 0.0 78.6 4.6 18.5 28.4	0.0 0.0 0.0 0.0 0.0 0.0
Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek	ROCK 01-02 ROCK 02-01 ROCK 02-02 ROCK 02-03 ROCK 02-04 ROCK 03-01 ROCK 03-02 ROCK 04-01 ROCK 05-01 ROCK 06-01	MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-4-U MR-0-4-U MR-2-4-U MR-2-4-U MR-2-4-U MR-2-4-U	19.40 25.44 19.40 19.40 19.40 25.82 19.40 19.40 19.40 19.40 19.40	2953 961 1250 1725 1604 7610 470 1912 2931 503 5783	57.3 24.4 24.3 33.5 31.1 196.5 9.1 37.1 56.9 9.8 112.2	FAIR FAIR POOR FAIR FAIR FAIR GOOD GOOD GOOD FAIR	FAIR FAIR FAIR FAIR FAIR FAIR FAIR POOR FAIR POOR FAIR POOR	10 20 70 80 100 60 50 50 50 50	40 30 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 20 0 40 50 50 50 50	0 0 0 0 0 0	17.0 26.8 31.1 117.9 4.6 18.5 28.4 4.9 89.8	7.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	9.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 6.7 0.0 78.6 4.6 18.5 28.4 4.9	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek	ROCK 01-02 ROCK 02-01 ROCK 02-02 ROCK 02-02 ROCK 02-04 ROCK 03-01 ROCK 03-01 ROCK 04-01 ROCK 05-01 ROCK 06-01	MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-4-U MR-0-4-U MR-0-4-U MR-0-4-U MR-0-4-U MR-0-4-U	19.40 25.44 19.40 19.40 19.40 25.82 19.40 19.40 19.40 19.40	2953 961 1250 1725 1604 7610 470 1912 2931 503	57.3 24.4 24.3 33.5 31.1 196.5 9.1 37.1 56.9 9.8	FAIR FAIR POOR FAIR FAIR GOOD GOOD GOOD	FAIR FAIR FAIR FAIR FAIR FAIR POOR FAIR POOR FAIR	10 20 70 80 100 60 50 50 50	40 30 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 20 0 40 50 50 50	0 0 0 0 0 0	17.0 26.8 31.1 117.9 4.6 18.5 28.4 4.9	7.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	9.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 6.7 0.0 78.6 4.6 18.5 28.4 4.9	0.0 0.0 0.0 0.0 0.0 0.0 0.0
Rocky Creek Rocky Creek	ROCK 01-02 ROCK 02-01 ROCK 02-02 ROCK 02-03 ROCK 02-03 ROCK 03-01 ROCK 03-01 ROCK 03-01 ROCK 05-01 ROCK 06-01 ROCK 06-02 ROCK 06-03 ROCK 07-01	MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-4-U MR-0-4-U MR-2-4-U MR-2-4-U MR-2-4-U MR-2-4-U MR-2-4-U MR-2-4-U MR-0-4-U MR-0-4-U MR-0-4-U	19.40 25.44 19.40 19.40 19.40 25.82 19.40 19.40 19.40 19.40 19.40 19.40 19.40 19.40 19.40	2953 961 1250 1725 1604 7610 470 1912 2931 503 5783 982 3471 1903	57.3 24.4 24.3 33.5 31.1 196.5 9.1 37.1 56.9 9.8 112.2 19.1 67.3 36.9	FAIR FAIR POOR FAIR FAIR FAIR GOOD GOOD GOOD FAIR FAIR FAIR FAIR FAIR FAIR	FAIR FAIR FAIR FAIR FAIR FAIR POOR FAIR POOR FAIR POOR FAIR FAIR FAIR FAIR	10 20 70 80 100 60 50 50 50 80 70 50 20	40 30 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 30 10	0 20 0 40 50 50 50 20 0	0 0 0 0 0 0 0 0 0 0 0 0 40	17.0 26.8 31.1 117.9 4.6 18.5 28.4 4.9 89.8 13.3 33.7 7.4	7.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	9.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 5.7 6.7	0.0 6.7 0.0 78.6 4.6 18.5 28.4 4.9 22.4 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek Rocky Creek	ROCK 01-02 ROCK 02-01 ROCK 02-02 ROCK 02-03 ROCK 02-04 ROCK 03-01 ROCK 03-01 ROCK 03-01 ROCK 04-01 ROCK 05-01 ROCK 06-01 ROCK 06-02 ROCK 06-03 ROCK 07-01	MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-3-U MR-0-4-U MR-0-4-U MR-2-4-U MR-2-4-U MR-2-4-U MR-2-4-U MR-2-4-U MR-2-4-U MR-2-4-U MR-2-4-U	19.40 25.44 19.40 19.40 19.40 25.82 19.40 19.40 19.40 19.40 19.40 19.40 19.40 19.40	2953 961 1250 1725 1604 7610 470 1912 2931 503 5783 982 3471	57.3 24.4 24.3 33.5 31.1 196.5 9.1 37.1 56.9 9.8 112.2 19.1 67.3	FAIR FAIR POOR FAIR FAIR GOOD GOOD GOOD FAIR FAIR FAIR	FAIR FAIR FAIR FAIR FAIR FAIR POOR FAIR POOR FAIR POOR FAIR POOR FAIR FAIR	10 20 70 80 100 60 50 50 50 50 70	40 30 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 30 10 40	0 20 0 40 50 50 50 20 0 0	0 0 0 0 0 0 0 0 0	17.0 26.8 31.1 117.9 4.6 18.5 28.4 4.9 89.8 13.3 33.7	7.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	9.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 6.7 0.0 78.6 4.6 18.5 28.4 4.9 22.4 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

Smith Creek Smith Creek	SMIT 01-01 SMIT 01-02	MR-0-4-U MR-0-4-U	Sediment Load per 1000 04-61 16-61 1	7056 1620	Reach Sediment Load (Tons/Year) 31.4	FAIR POOR	FAIR POOR	00 ANTHRO_TRA	0 ANTHRO_GRA	o o ANTHRO_CRO	O O ANTHRO_MIN	O O ANTHRO_FOR	D O ANTHRO_IRR	O 9 ANTHRO_NAT	© o ANTHRO_OTH	ANTHRO_TRA_TONS/YR	0.0 ANTHRO_GRA_TONS/YR	0.0 ANTHRO_CRO_TONS/YR	O O ANTHRO_MIN_TONS/YR	O O ANTHRO_FOR_TONS/YR	9 0 ANTHRO_IRR_TONS/YR	0.0 ANTHRO_NAT_TONS/YR	0.0 ANTHRO_OTH_TONS/YR
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									TO	TAL	68.2	197.8	0.0	0.0	0.0	213.7	82.1	38.8
Smith Creek														PERC	ENT	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
	1	†	TOTAL	29421	273.5									то	TAL	47.8	51.1	0.0	0.0	91.8	11.0	64.9	6.9
	1	†												PERC	ENT	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
1	1	1	TOTAL	37984	148.916	 	 	ΙŤ	-	Ť	Ť	Ť		_	TAL	12.8	90.5	5.2	0.0	0.0	36.2	0.0	4.2
		l			1							H	H	PERC		0.09	0.61	0.04	0.00	0.00	0.24	0.00	0.03
Monitoring sites denoted	in bold text.																						