

## **APPENDIX G**

### **Road Results and Maps**

#### **Appendix G Maps**

[Figure G-1. Road Sediment Inventory Buck Creek.](#)

[Figure G-2. Road Sediment Inventory Ditch Creek.](#)

[Figure G-3. Road Sediment Inventory Gilbert/Laird Creek.](#)

[Figure G-4. Road Sediment Inventory Hughes Creek.](#)

[Figure G-5. Road Sediment Inventory Meadow Creek.](#)

[Figure G-6. Road Sediment Inventory Moose Creek.](#)

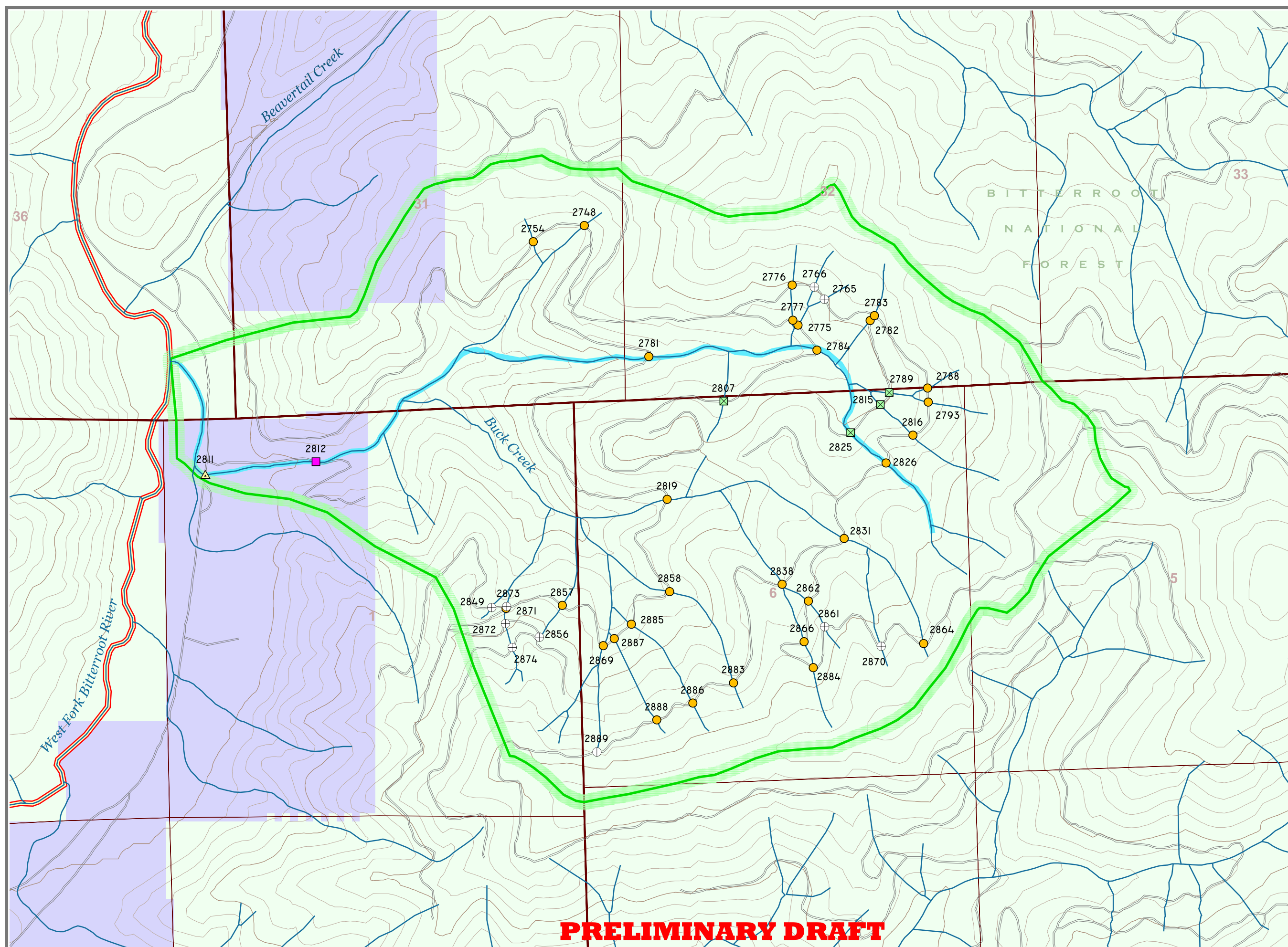
[Figure G-7. Road Sediment Inventory Reimel Creek.](#)

#### **Appendix G Table**

[Bitterroot Headwaters TMDL - Existing Road Sediment Sources.](#)

**Figure G-1**  
**Road Sediment Inventory**

Buck Creek



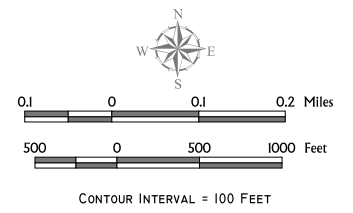
**Stream Crossings**

- Contributing
- Not Contributing
- ▲ Paved Road
- ⊕ Not a Crossing
- Private, Not Assessed

- Watershed Boundary
- Ditch Creek
- East & West Forks of the Bitterroot River
- Other Streams
- Major Roads
- Other Roads
- Contour Line
- Section Lines

**Land Ownership**

- Bitterroot National Forest
- State of Montana
- Private
- Darby Lumber



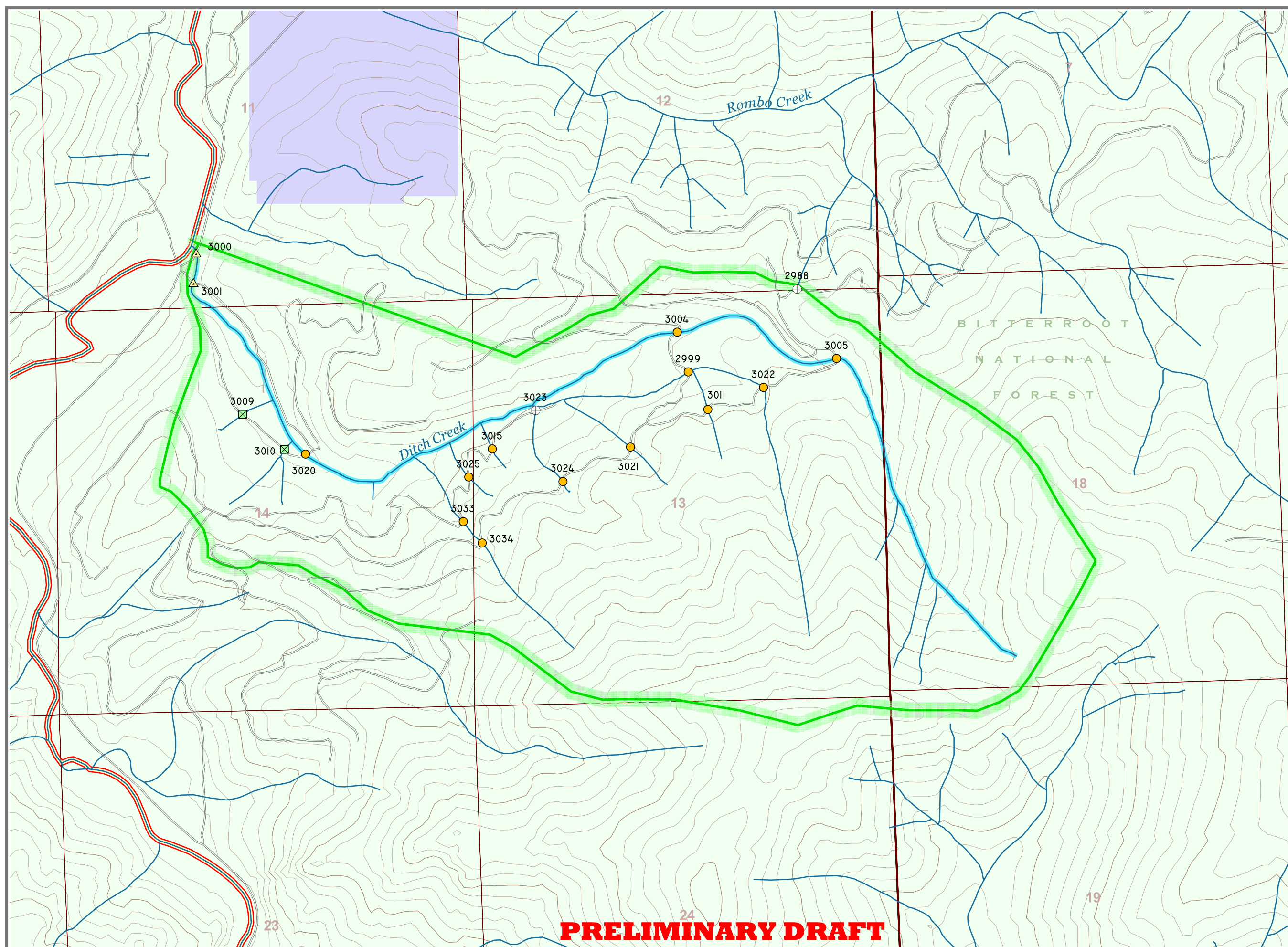
**LAND & WATER CONSULTING, INC.**  
 1120 Cedar Street  
 P.O. Box 8254  
 Missoula, MT 59807  
 Project#: 110426  
 Date: October 2003  
 Location: Bitterroot  
 Project Manager: P. Callahan  
 Drawn By: JCG/MSA

**PRELIMINARY DRAFT**



**Figure G-2.**  
**Road Sediment Inventory**

Ditch Creek



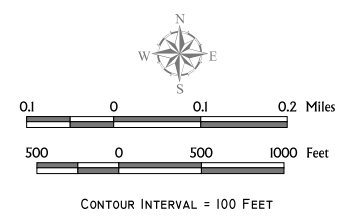
**Stream Crossings**

- Contributing
- Not Contributing
- ▲ Paved Road
- ⊕ Not a Crossing
- Private, Not Assessed

- Watershed Boundary
- Ditch Creek
- East & West Forks of the Bitterroot River
- Other Streams
- Major Roads
- Other Roads
- Contour Line
- Section Lines

**Land Ownership**

- Bitterroot National Forest
- State of Montana
- Private
- Darby Lumber

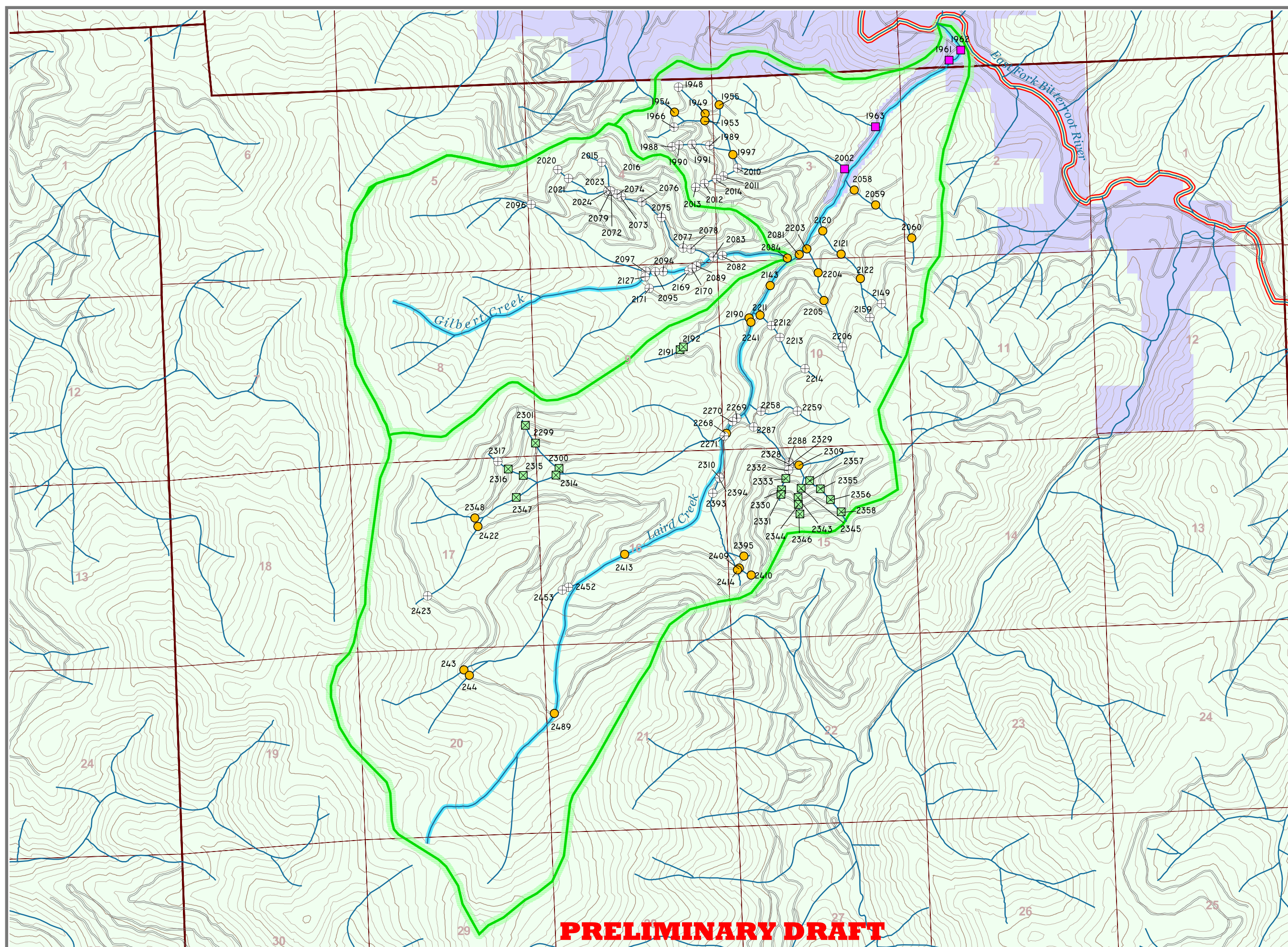


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**PRELIMINARY DRAFT**

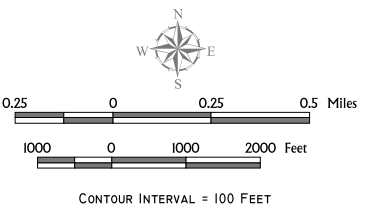


**Figure G-3**  
**Road Sediment Inventory**  
 Gilbert & Laird Creeks



- Stream Crossings**
- Contributing
  - ⊠ Not Contributing
  - ▲ Paved Road
  - ⊕ Not a Crossing
  - Private, Not Assessed
- Stream Crossings**
- Watershed Boundary
  - Ditch Creek
  - East & West Forks of the Bitterroot River
  - Other Streams
  - Major Roads
  - Other Roads
  - Contour Line
  - Section Lines

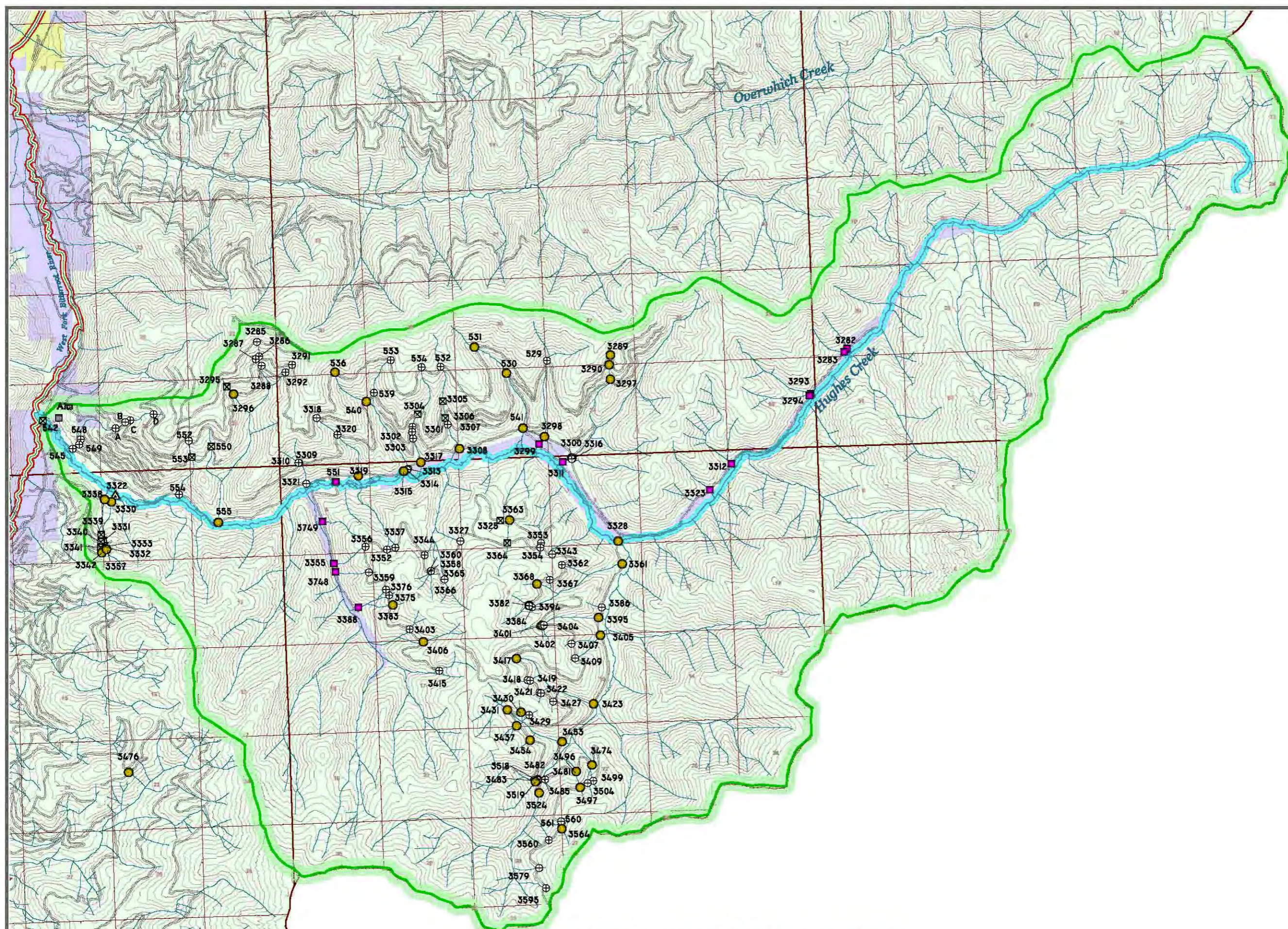
- Land Ownership**
- Bitterroot National Forest
  - State of Montana
  - Private
  - Darby Lumber



**PRELIMINARY DRAFT**

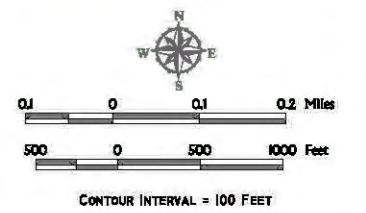


**Figure G-4**  
**Road Sediment Inventory**  
 Hughes Creek



- Stream Crossings**
- Contributing
  - ⊠ Not Contributing
  - △ Paved Road
  - ⊕ Not a Crossing
  - Private, Not Assessed
- Watershed Boundary**
- Ditch Creek
  - East & West Forks of the Bitterroot River
  - Other Streams
  - Major Roads
  - Other Roads
  - Contour Line
  - Section Lines

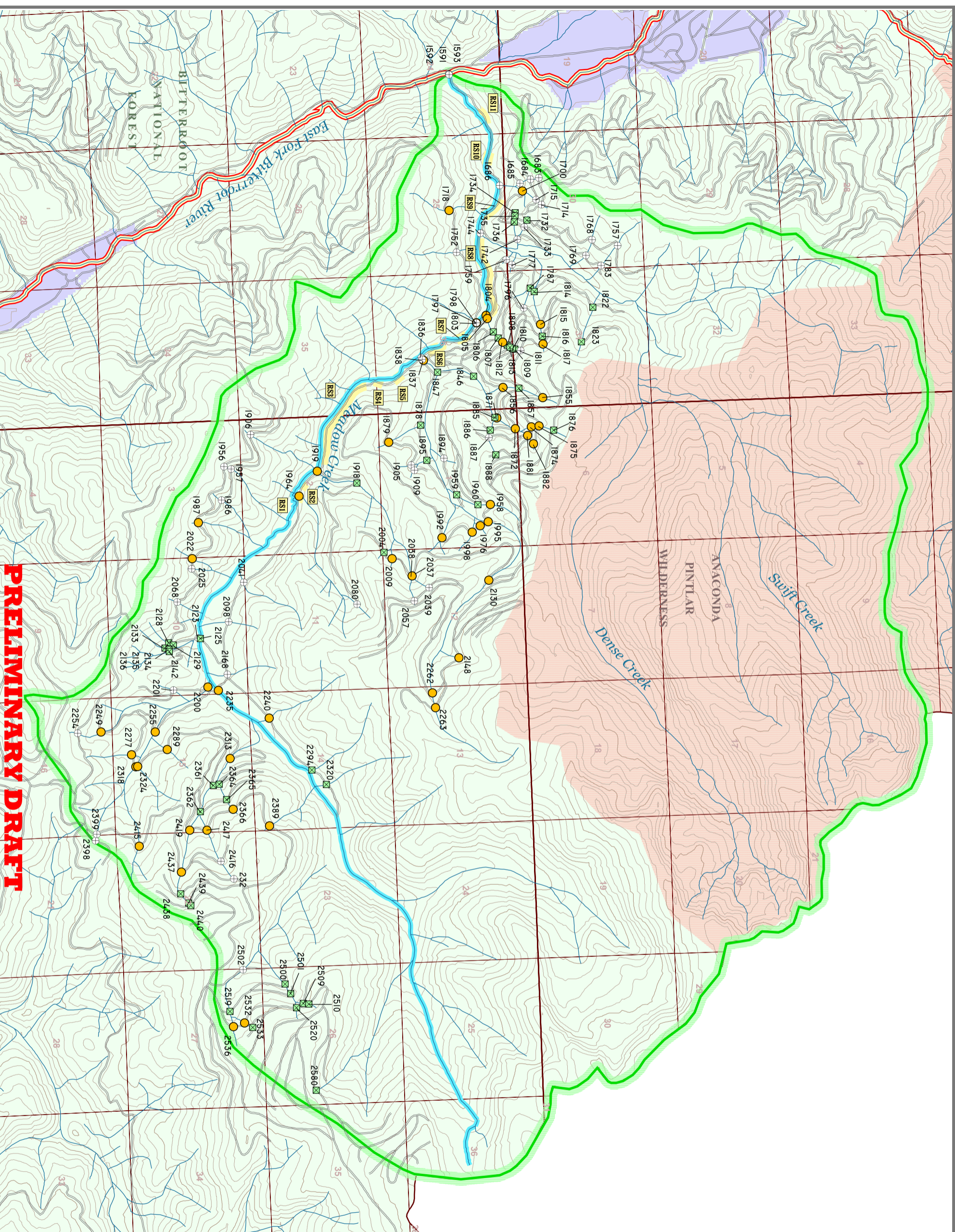
- Land Ownership**
- Bitterroot National Forest
  - State of Montana
  - Private
  - Darby Lumber



**PRELIMINARY DRAFT**



**Figure G-5**  
**Road Sediment Inventory**  
 Meadow Creek



**PRELIMINARY DRAFT**

<p><b>Stream Crossings</b></p> <ul style="list-style-type: none"> <li>● Contributing</li> <li>◻ Not Contributing</li> <li>▲ Paved Road</li> <li>⊕ Not a Crossing</li> <li>◻ Private, Not Assessed</li> </ul>	<p><b>Road Segments</b></p> <ul style="list-style-type: none"> <li>— Road Segments</li> </ul>	<p><b>Watershed Boundary</b></p> <ul style="list-style-type: none"> <li>— Meadow Creek</li> <li>— East &amp; West Forks of the Bitterroot River</li> <li>— Other Streams</li> <li>— Major Roads</li> <li>— Other Roads</li> <li>— Contour Line</li> <li>— Section Lines</li> </ul>	<p><b>Land Ownership</b></p> <ul style="list-style-type: none"> <li>— Bitterroot National Forest</li> <li>— State of Montana</li> <li>— Private</li> <li>— Wilderness</li> </ul>
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0.25 0 0.25 0.5 0.75 Miles

1000 0 1000 2000 3000 Feet

CONTOUR INTERVAL = 100 FEET

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**Figure G-6**  
Road Sediment Inventory

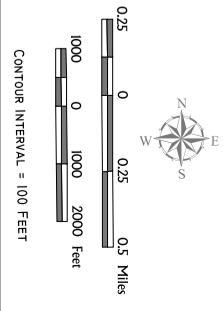
Moose Creek



- Stream Crossings**
- Contributing
  - ⊠ Not Contributing
  - ▴ Paved Road
  - ⊕ Not a Crossing
  - Private, Not Assessed

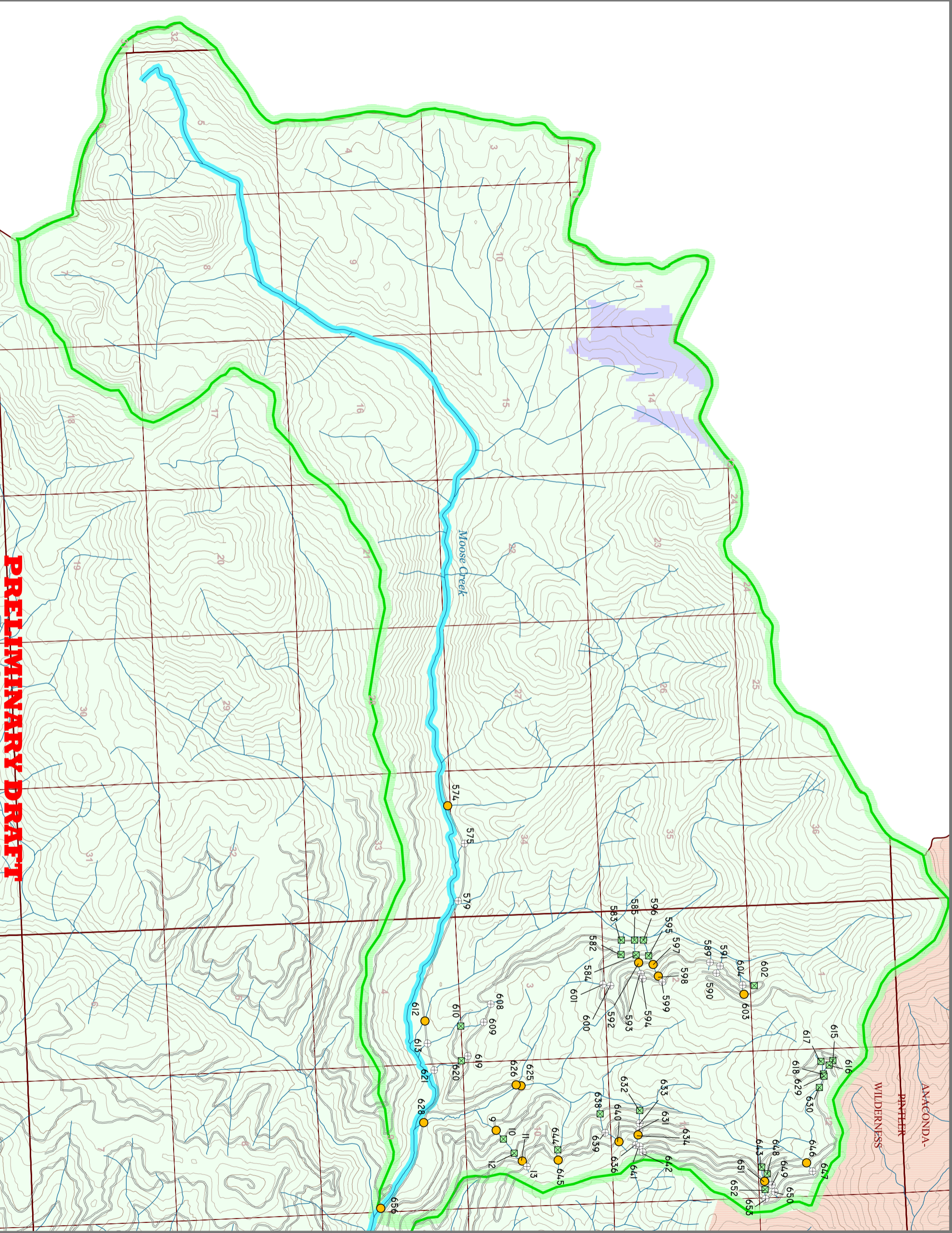
- Watershed Boundary
- Moose Creek
- East & West Forks of the Bitterroot River
- Other Streams
- Major Roads
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- Section Lines

- Land Ownership**
- Bitterroot National Forest
  - State of Montana
  - Private
  - Wilderness



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**PRELIMINARY DRAFT**













Bitterroot Headwaters TMDL - Existing Road Sediment Sources																																
Location Number	Drainage	TREAD										CUTSLOPE										FILLSLOPE						Location Total Sediment (tons/yr)	Comments			
		Tread length (ft)	Tread Width (ft)	Acres of Tread	Base Erosion Rate (tons/ac/yr)	Gravel Factor	Percent Cover	Cover Factor	Percent Delivery	Delivery Factor	Tread Delivery (tons/yr)	Cutslope Length (ft)	Avg. Cutslope Width (ft)	Acres of Cutslope	Base Erosion Rate (tons/ac/yr)	Percent Cover	Cover Factor	Percent Delivery	Delivery Factor	Cutslope Delivery (tons/yr)	Fillslope Length (ft)	Avg. Fillslope Width (ft)	Acres of Fillslope	Base Erosion Rate (tons/ac/yr)	Percent Cover	Cover Factor	Percent Delivery			Delivery Factor	Fillslope Delivery (tons/yr)	
2883	Buck	420	20	0.1928375	50	0.5	10	0.77	25	0.25	0.9280303	410	20	0.1882461	50	65	0.27	75	0.75	1.90599174	250	35	0.2008724	50	90	0.18	75	0.75	1.35888843	4.1899105	good x-slope, but has signs of direct sed input, gully present on fillslope	
2884	Buck	770	20	0.3535354	50	0.5	5	0.89	75	0.75	5.899621212	700	20	0.32139578	50	20	0.63	50	0.5	5.06198347	700	30	0.4820937	50	90	0.18	30	0.3	1.301652893	12.2632576	some gully on x-slope, cutslope, and road, need for x-drainage	
2885	Buck	370	20	0.1698806	50	0.5	20	0.63	40	0.4	1.070247934	350	20	0.16069789	50	10	0.77	80	0.8	4.94949495	280	30	0.1928375	50	90	0.18	70	0.7	1.214876033	7.2346189	some gullies on cutslope, road has small slope	
2886	Buck	270	20	0.1239669	50	0.5	20	0.63	25	0.25	0.488119835	270	15	0.09297521	50	70	0.23	40	0.4	0.42768595	80	20	0.0367309	50	85	0.18	75	0.75	0.247933884	1.1637397	good x-slope, but has signs of direct sed input	
2887	Buck	200	20	0.0918274	50	0.5	20	0.63	40	0.4	0.578512397	170	25	0.09756657	50	30	0.53	75	0.75	1.93913567	200	30	0.137741	50	90	0.18	70	0.7	0.867768595	3.3854167	small input area, no gullies, but signs of direct sed input	
2888	Buck	290	20	0.1331497	50	0.5	25	0.58	10	0.1	0.193067034	280	10	0.06427916	50	85	0.18	15	0.15	0.08677686	100	15	0.0344353	50	95	0.18	5	0.05	0.015495868	0.2953398	road has strong x-slope to aid drainage of road and cutslope, no sign of gully	
2889	Buck	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	0.0000000	headwaters area, no active channel, signs of input from road, but area heavily vegged, good drainage, no gullies
RS1	Buck	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	0.0000000	road section between road 13876 and road 13432 is heavily gullied, no input to stream, but road is badly eroded
RS2	Buck	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	0.0000000	road section below stream x-ing 2754 is heavily gullied in sections, gully continues almost to intersection w/ West fork road, could use more x-drainage to prevent road gullies
243	Laird	300	20	0.137741	50	0.5	10	0.77	60	0.6	1.590909091	300	5	0.03443526	50	70	0.23	75	0.75	0.29700413	150	10	0.0344353	50	95	0.18	75	0.75	0.232438017	2.1203512	small input area, little slope on road	
244	Laird	100	20	0.0459137	50	0.5	10	0.77	50	0.5	0.441919192	80	10	0.01836547	50	70	0.23	75	0.75	0.1584022	80	10	0.0183655	50	95	0.18	75	0.75	0.123966942	0.7242883	small input area, little slope on road	
1948	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	0.0000000	heavy vegetation, headwaters area, no defined channel
1949	Laird	240	18	0.0991736	50	0.5	60	0.3	35	0.35	0.260330579	210	10	0.04820937	50	40	0.45	30	0.3	0.32541322	70	10	0.0160698	50	80	0.18	90	0.9	0.130165289	0.7159091	road tread has good amount of vegetative cover	
1953	Laird	230	22	0.1161616	50	0.5	65	0.27	30	0.3	0.235227273	180	10	0.04132231	50	30	0.53	30	0.3	0.3285124	110	12	0.030303	50	90	0.18	95	0.95	0.259090909	0.8228306	road tread has good amount of vegetative cover	
1954	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	0.0000000	heavy vegetation, headwaters area, no defined channel
1955	Laird	270	18	0.1115702	50	0.5	70	0.23	35	0.35	0.224535124	190	10	0.043618	50	20	0.63	30	0.3	0.41219008	130	16	0.0477502	50	90	0.18	95	0.95	0.408264463	1.0449897	road tread has good amount of vegetative cover	
1961	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	0.0000000	private land, not forest road, near bottom of watershed
1962	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	0.0000000	private land, not forest road, near bottom of watershed
1963	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	0.0000000	private land
1966	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	0.0000000	heavy vegetation, headwaters area, no defined channel
1988	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	0.0000000	upstream of crossing 1997, heavy vegetation, headwaters area, no defined channel
1989	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	0.0000000	upstream of crossing 1997, heavy vegetation, headwaters area, no defined channel
1990	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	0.0000000	upstream of crossing 1997, heavy vegetation, headwaters area, no defined channel
1991	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	0.0000000	upstream of crossing 1997, heavy vegetation, headwaters area, no defined channel
1997	Laird	195	32	0.1432507	50	0.5	75	0.21	25	0.25	0.188016529	45	12	0.01239669	50	90	0.18	20	0.2	0.02231405	80	6	0.0110193	50	90	0.18	95	0.95	0.094214876	0.3045455	Road has washed out in the past, there doesn't appear to be a pipe, crossing is actually in Laird watershed	
2002	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	0.0000000	private land
2010	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	0.0000000	Combined with XS 1997
2011	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	0.0000000	upstream of crossing 2010, heavy vegetation, headwaters area, no defined channel
2012	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	0.0000000	upstream of crossing 2010, heavy vegetation, headwaters area, no defined channel
2013	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	0.0000000	upstream of crossing 2010, heavy vegetation, headwaters area, no defined channel
2014	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	0.0000000	upstream of crossing 2010, heavy vegetation, headwaters area, no defined channel
2058	Laird	160	19	0.0697888	50	0.5	15	0.7	90	0.9	1.099173554	145	14	0.04660239	50	50	0.37	90	0.9	0.77592975	120	24	0.0661157	50	50	0.37	95	0.95	1.161983471	3.0370868	Pipes have been pulled on this road, but road has not been recontoured or revegetated- each crossing contributing, but difficult to quantify	
2059	Laird	150	18	0.0619835	50	0.5	15	0.7	90	0.9	0.976239669	140	15	0.04820937	50	50	0.37	90	0.9	0.80268595	110	25	0.0631313	50	50	0.37	95	0.95	1.109532828	2.8884584	Pipes have been pulled on this road, but road has not been recontoured or revegetated- each crossing contributing, but difficult to quantify	
2060	Laird	400	18	0.1652893	50	0.5	5	0.89	80	0.8	2.94214876	360	10	0.08264463	50	60	0.3	20	0.2	0.24793388	195	18	0.0805785	50	80	0.18	95	0.95	0.688946281	3.8790289	Photo - road is drivable, but gated	
2081	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	0.0000000	road obliterated, heavy veg on road, x-ings washed out
2084	Laird	60	24	0.0330579	50	1	10	0.77	40	0.4	0.509090909	0	0	0	50	0	1	0	0	0	70	5	0.0080349	50	90	0.18	90	0.9	0.065082645	0.5741736	Upstream relief pipe completely eliminates cutslope contribution.	
2120	Laird	150	18	0.0619835	50	0.5	15	0.7	90	0.9	0.976239669	140	15	0.04820937	50	50	0.37	90	0.9	0.80268595	110	25	0.0631313	50	50	0.37	95	0.95	1.109532828	2.8884584	Pipes have been pulled on this road, but road has not been recontoured or revegetated- each crossing contributing, but difficult to quantify	
2121	Laird	150	18	0.0619835	50	0.5	15	0.7	90	0.9	0.976239669	140	15	0.04820937	50	50	0.37	90	0.9	0.80268595	110	25	0.0631313	50	50	0.37	95	0.95	1.109532828	2.8884584	Pipes have been pulled on this road, but road has not been recontoured or revegetated- each crossing contributing, but difficult to quantify	
2122	Laird	500	18	0.2066116	50	0.5	5	0.89	80	0.8	3																					



Bitterroot Headwaters TMDL - Existing Road Sediment Sources																																	
Location Number	Drainage	TREAD										CUTSLOPE										FILLSLOPE								Location Total Sediment (tons/yr)	Comments		
		Tread length (ft)	Tread Width (ft)	Acres of Tread	Base Erosion Rate (tons/ac/yr)	Gravel Factor	Percent Cover	Cover Factor	Percent Delivery	Delivery Factor	Tread Delivery (tons/yr)	Cutslope Length (ft)	Avg. Cutslope Width (ft)	Acres of Cutslope	Base Erosion Rate (tons/ac/yr)	Percent Cover	Cover Factor	Percent Delivery	Delivery Factor	Cutslope Delivery (tons/yr)	Fillslope Length (ft)	Avg. Fillslope Width (ft)	Acres of Fillslope	Base Erosion Rate (tons/ac/yr)	Percent Cover	Cover Factor	Percent Delivery	Delivery Factor	Fillslope Delivery (tons/yr)				
2241	Laird	500	20	0.2295684	50	0.5	20	0.63	75	0.75	2.71177686	460	10	0.10560147	50	90	0.18	75	0.75	0.71280992	80	5	0.0091827	50	95	0.18	75	0.75	0.061983471	3.4865702	road closed beyond x-ing, Laird Cr leaves channel and culvert during high flows and flows side channel which crosses road, heavy veg in side channel but evidence of chronic sed input, x-ing is washed out by severe gully, little direct input from road due to low slope of road		
2258	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	sed input appears to be from surface runoff and not road		
2259	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	road obliterated, visited lower x-ings		
2268	Laird	420	20	0.1928375	50	0.5	0	1	75	0.75	3.615702479	380	10	0.087236	50	90	0.18	75	0.75	0.58884298	100	5	0.0114784	50	95	0.18	75	0.75	0.077479339	4.2820248	ditch full of sediment, some gullies on road and cutslope, effective relief pipe exists upstream, functioning silt fence in place at x-ing		
2269	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	no x-ing, road close to stream, silt fence in place		
2270	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	no x-ing, road close to stream, silt fence in place		
2271	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	no x-ing, road obliterated		
2287	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	x-ing is washed out by severe gully, little direct input from road due to low slope of road sed input appears to be from surface runoff and not road		
2288	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	road obliterated but observed from above, severe gully in stream, road washed out at x-ing, heavy veg on road, photos		
2299	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	road closed and vegged in		
2300	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	road inaccessible due to heavy veg		
2301	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	road closed and vegged in		
2309	Laird	1200	20	0.5509642	50	0.5	0	1	25	0.25	3.443526171	1000	20	0.45913682	50	70	0.23	90	0.9	4.75206612	300	5	0.0344353	50	80	0.18	90	0.9	0.27892562	8.4745179	confluence of 2 small gullied streams, 3 culverts treated as 1 x-ing, road has good x-slope with evidence of x-drainage, ditches choked with sed, no relief pipes in ditch, fillslopes have bio-logs, high risk area		
2310	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	no x-ing, road close to stream but does not cross		
2314	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	road inaccessible due to heavy veg		
2315	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	road closed and vegged in		
2316	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	road closed and vegged in		
2317	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	headwaters area, non-contributing crossing, good road tread, fillslope and cutslope cover		
2328	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	headwaters area, no channel, on side road, road obliterated but accessed by foot		
2329	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	headwaters area, no channel, on main road		
2330	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	headwaters area, no channel, road has been recontoured and revegetated.		
2331	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	headwaters area, no channel, road has been recontoured and revegetated.		
2332	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	headwaters area, no channel, no relief pipe, evidence of past erosion, contributing area included in x-ing 2309		
2333	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	headwaters area, no channel, road has been recontoured and revegetated.		
2343	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	headwaters area, no channel, road has been recontoured and revegetated.		
2344	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	headwaters area, no channel, road has been recontoured and revegetated.		
2345	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	headwaters area, no channel, road has been recontoured and revegetated.		
2346	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	headwaters area, no channel, road has been recontoured and revegetated.		
2347	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	road closed and vegged in		
2348	Laird	500	20	0.2295684	50	0.5	25	0.58	50	0.5	1.664370983	450	10	0.10330579	50	30	0.53	60	0.6	1.64256198	80	10	0.0183655	50	30	0.53	75	0.75	0.365013774	3.6719467	evidence of gully on road		
2355	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	headwaters area, no channel, road has been recontoured and revegetated.		
2356	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	headwaters area, no channel, road has been recontoured and revegetated.		
2357	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	headwaters area, no channel, road has been recontoured and revegetated.		
2358	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	headwaters area, no channel, road has been recontoured and revegetated.		
2393	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	no x-ing, road close to stream but does not cross		
2394	Laird	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	no x-ing, road close to stream but does not cross		
2395	Laird	200	20	0.0918274	50	0.5	20	0.63	25	0.25	0.361570248	150	10	0.03443526	50	60	0.3	50	0.5	0.25826446	150	15	0.0516529	50	90	0.18	75	0.75	0.348657025	0.9684917	little input area, low road slope, no obvious signs of sed input, low potential		
2409	Laird	150	20	0.0688705	50	0.5	20	0.63	25	0.25	0.271177686	80	10	0.01836547	50	75	0.21	50	0.5	0.09641873	80	10	0.0183655	50	90	0.18	75	0.75	0.123966942	0.4915634	little input area, low road slope, no obvious signs of sed input, low potential		
2410	Laird	1110	20	0.5096419	50	0.5	0	1	25	0.25	3.185261708	630	15	0.21694215	50	50	0.37	75	0.75	3.01007231	100	10	0.0229568	50	95	0.18	75	0.75	0.154958678	6.3502927	road has gullies but good x-slope, evidence of past x-drainage off road, also evidence of direct input off road and in culvert/ditches, cutslope has relief pipe ~630' upstream, less burned area		
2413	Laird	700	20	0.3213958	50	0.5	20	0.63	25	0.25	1.265495868	300	10	0.06887052	50	75	0.21	30	0.3	0.21694215	80	10	0.0183655	50	90	0.18	60	0.6	0.099173554	1.5816116	little input area, low road slope, no obvious signs of sed input, low potential, new culvert		
2414	Laird	150	20	0.0688705	50	0.5	20	0.63	25	0.25	0.271177686	80	10	0.01836547	50	75	0.21	50	0.5	0.09641873	80	10	0.0183655	50	90	0.18	75	0.75	0.123966942	0.4915634	little input area, low road slope, no obvious signs of sed input, low potential		
2422	Laird	100	20	0.0459137	50	0.5	20	0.63	25	0.25	0.180785124	0	0	0	50	0	1	0	0	0	0	0	40	6	0.0055096	50	60	0.3	75	0.75	0.061983471	0.2427686	small cutslope, low slope, little



Bitterroot Headwaters TMDL - Existing Road Sediment Sources																																			
Location Number	Drainage	TREAD										CUTSLOPE										FILLSLOPE								Location Total Sediment (tons/yr)	Comments				
		Tread length (ft)	Tread Width (ft)	Acres of Tread	Base Erosion Rate (tons/ac/yr)	Gravel Factor	Percent Cover	Cover Factor	Percent Delivery	Delivery Factor	Tread Delivery (tons/yr)	Cutslope Length (ft)	Avg. Cutslope Width (ft)	Acres of Cutslope	Base Erosion Rate (tons/ac/yr)	Percent Cover	Cover Factor	Percent Delivery	Delivery Factor	Cutslope Delivery (tons/yr)	Fillslope Length (ft)	Avg. Fillslope Width (ft)	Acres of Fillslope	Base Erosion Rate (tons/ac/yr)	Percent Cover	Cover Factor	Percent Delivery	Delivery Factor	Fillslope Delivery (tons/yr)						
2010	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000				
2015	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	headwaters area, no active channel			
2016	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	road obliterated and vegged in, no access, did not visit				
2020	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	headwaters area, no active channel				
2021	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	headwaters area, no active channel				
2023	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	road obliterated and vegged in, no access, did not visit				
2024	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	road obliterated and vegged in, no access, did not visit				
2072	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	road obliterated and vegged in, no access, did not visit				
2073	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	road obliterated and vegged in, no access, did not visit				
2074	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	road obliterated and vegged in, no access, did not visit				
2075	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	road obliterated and vegged in, no access, did not visit				
2076	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	road obliterated and vegged in, no access, did not visit				
2077	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	road obliterated and vegged in, no access, did not visit				
2078	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	road obliterated and vegged in, no access, did not visit				
2079	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	road obliterated and vegged in, no access, did not visit				
2082	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	no x-ing, road close to stream but does not cross				
2083	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	no x-ing, road close to stream but does not cross				
2084	Gilbert	60	24	0.0330579	50	0.5	10	0.77	40	0.4	0.254545455	0	0	0	50	0	1	0	0	0	0	0	0	0	70	5	0.0080349	50	90	0.18	90	0.9	0.065082645	0.3196281	Excellent grading greatly reduces tread delivery; cutslope is eliminated by a relief pipe
2089	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	road obliterated and vegged in, no access, did not visit				
2094	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	road obliterated and vegged in, no access, did not visit				
2095	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	road obliterated and vegged in, no access, did not visit				
2096	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	headwaters area, no active channel				
2097	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	road obliterated and vegged in, no access, did not visit				
2127	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	road obliterated and vegged in, no access, did not visit				
2169	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	road obliterated and vegged in, no access, did not visit				
2170	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	road obliterated and vegged in, no access, did not visit				
2171	Gilbert	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	road obliterated and vegged in, no access, did not visit				
2298	Reimel	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Private road.				
2401	Reimel	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Not a crossing. No channel, no culvert. Alluvial fan. Road 73345 is a low potential road that is gated.				
2420	Reimel	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Not a crossing. No channel, no culvert. Alluvial fan. Road 73345 is a low potential road that is gated.				
2432	Reimel	30	12	0.0082645	50	0	25	0.58	95	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No pipe. Crossing is a ford; no fill or cut.				
2454	Reimel	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Not a crossing. No channel, no culvert. Alluvial fan.				
2478	Reimel	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Not a crossing. No channel, no culvert. Alluvial fan.				
2507	Reimel	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Not a crossing. No channel, no culvert. Alluvial fan.				
2508	Reimel	55	18	0.0227273	50	0	40	0.45	10	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Low gradient road. FS has done excellent job of mitigating any potential for delivery. 6" gravel, bio-logs. #727 is a high potential road, though.				
2537	Reimel	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Not a crossing. No channel, no culvert. Alluvial fan.				
2551	Reimel	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Not a crossing. No channel, no culvert. Low potential - gated.				
2560	Reimel	620	15	0.2134986	50	1	10	0.77	40	0.4	3.287878788	0	0	0	50	0	1	0	0	0	0	0	0	0	80	6	0.0110193	50	100	0.18	100	1	0.099173554	3.3870523	FS has done excellent job of mitigating. Moderate gradient road with (high potential) 6" gravel. Install sediment trap on ditch.
2561	Reimel	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Not a crossing - GIS error.				
2562	Reimel	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Not a crossing - GIS error.				
232	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing.				
1591	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Non-contributing; paved bridge.				
1592	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	GIS				
1593	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	GIS				
1683	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	not a crossing; no channel				
1684	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	not a crossing; no channel; high potential road				
1685	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	not a crossing; no channel; low potential road				
1686	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	non-contributing due to buffer				
1700	Meadow	195	15	0.0671488	50	1	75	0.21	25	0.25	0.176265496	105	8	0.01928375	50	10	0.77	70	0.7	0.51969697	80	60	0.1101928	50	100	0.18	100	1	0.991735537	1.6876980					
1714	Meadow	0	3	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	not a crossing; no channel; low potential road				
1715	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	not a crossing; no channel; low gradient road				
1718	Meadow	150	20	0.0688705	50	1	0	1	100	1	3.443526171	150	14	0.04820937	50	10	0.77	90	0.9	1.67045455	160	15	0.0550964	50	90	0.18	90	0.9	0.446280992	5.5602617					
1718	Meadow	150	20																																



Bitterroot Headwaters TMDL - Existing Road Sediment Sources																																
Location Number	Drainage	TREAD										CUTSLOPE										FILLSLOPE						Location Total Sediment (tons/yr)	Comments			
		Tread length (ft)	Tread Width (ft)	Acres of Tread	Base Erosion Rate (tons/ac/yr)	Gravel Factor	Percent Cover	Cover Factor	Percent Delivery	Delivery Factor	Tread Delivery (tons/yr)	Cutslope Length (ft)	Avg. Cutslope Width (ft)	Acres of Cutslope	Base Erosion Rate (tons/ac/yr)	Percent Cover	Cover Factor	Percent Delivery	Delivery Factor	Cutslope Delivery (tons/yr)	Fillslope Length (ft)	Avg. Fillslope Width (ft)	Acres of Fillslope	Base Erosion Rate (tons/ac/yr)	Percent Cover	Cover Factor	Percent Delivery			Delivery Factor	Fillslope Delivery (tons/yr)	
1752	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Not a crossing - no channel. Sediment at pipe, but doesn't appear to be connected to any channel - #5758 high potential.
1757	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	not a crossing; no channel; high potential; kelly humped	
1759	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	not a crossing, no channel; low potential; kelly humped	
1759	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Not a crossing - no channel. Low potential.	
1768	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	not a crossing; no channel; road has high potential	
1769	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Seep at crossing, but no channel to convey water to the creek	
1777	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	not a crossing, no channel; kelly humped	
1777	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Not a crossing - no channel.	
1783	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	seep at crossing, but not channel; road has mod. Potential; the drainage is buffered by dense veg and LWD. Road is kelly humped with good cover on tread; cows are causing the only problems	
1787	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	non contrib; perennial channel but no source; kelly humped	
1787	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Non-contributing - perennial channel, but no source.	
1796	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	No crossing.	
1797	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	GIS	
1798	Meadow	700	20	0.3213958	50	0.5	20	0.63	45	0.45	2.277892562	600	13	0.17906336	50	10	0.77	35	0.35	2.41287879	125	15	0.0430441	50	85	0.18	80	0.8	0.309917355	5.000687	not a crossing; no channel; high potential; kelly humped	
1803	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	GIS	
1804	Meadow	605	22	0.3055556	50	0.5	50	0.37	10	0.1	0.282638889	605	12	0.16666667	50	90	0.18	10	0.1	0.15	70	14	0.0224977	50	70	0.23	75	0.75	0.1940427	0.6266816	Main road.	
1805	Meadow	275	18	0.1136364	50	1	20	0.63	85	0.85	3.042613636	270	16	0.09917355	50	75	0.21	80	0.8	0.83305785	65	16	0.0238751	50	95	0.18	75	0.75	0.161157025	4.0368285		
1806	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Non-contributing. Road is Kelly humped and tread has good vegetation.	
1807	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Non-contributing. Road is Kelly humped and tread has good vegetation.	
1808	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Non-contributing. All roads become indistinct; dense vegetation on tread.	
1809	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Non-contributing. All roads become indistinct; dense vegetation on tread.	
1810	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Non-contributing. All roads become indistinct; dense vegetation on tread.	
1811	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	No crossing.	
1812	Meadow	220	18	0.0909091	50	1	30	0.53	50	0.5	1.204545455	205	10	0.04706152	50	90	0.18	50	0.5	0.21177686	60	15	0.0206612	50	95	0.18	90	0.9	0.167355372	1.5836777		
1813	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Non-contributing. All roads become indistinct; dense vegetation on tread.	
1814	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	non contrib; perennial channel but stable veg.	
1814	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Non-contributing - perennial channel, but stable vegetation.	
1815	Meadow	250	25	0.1434803	50	1	10	0.77	90	0.9	4.971590909	250	12	0.06887052	50	15	0.7	85	0.85	2.04889807	75	16	0.0275482	50	90	0.18	90	0.9	0.223140496	7.2436295		
1815	Meadow	250	25	0.1434803	50	1	10	0.77	90	0.9	4.971590909	250	12	0.06887052	50	15	0.7	85	0.85	2.04889807	75	16	0.0275482	50	90	0.18	90	0.9	0.223140496	7.2436295		
1816	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	non contrib due to low potential and good tread cover	
1816	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Non-contributing due to low potential and good tread cover.	
1817	Meadow	460	20	0.2112029	50	1	10	0.77	25	0.25	2.032828283	445	10	0.10215794	50	100	0.18	25	0.25	0.22985537	30	6	0.0041322	50	100	0.18	80	0.8	0.029752066	2.2924357		
1822	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Non-contributing due to stable vegetation.	
1823	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Non-contributing due to stable vegetation.	
1836	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	GIS	
1837	Meadow	40	28	0.0257117	50	0.5	10	0.77	25	0.25	0.123737374	0	0	0	50	0	1	0	0	0	0	50	10	0.0114784	50	90	0.18	75	0.75	0.077479339	0.2012167	
1838	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	GIS	
1846	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Non-contributing due to dense vegetation.	
1847	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Non-contributing. Road is kelly-humped and overgrown.	
1855	Meadow	240	22	0.1212121	50	1	10	0.77	75	0.75	3.5	210	8	0.03856749	50	60	0.3	75	0.75	0.4338843	80	8	0.0146924	50	100	0.18	80	0.8	0.105785124	4.0396694		
1856	Meadow	390	15	0.1342975	50	1	50	0.37	30	0.3	0.74535124	140	14	0.04499541	50	70	0.23	40	0.4	0.20697888	55	16	0.020202	50	90	0.18	90	0.9	0.163636364	1.1159665		
1857	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Non-contributing. All roads become indistinct - dense vegetation on tread.	
1871	Meadow	200	16	0.0734619	50	1	40	0.45	25	0.25	0.41322314	190	16	0.0697888	50	95	0.18	50	0.5	0.31404959	70	12	0.0192837	50	100	0.18	75	0.75	0.130165289	0.8574380		
1872	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Non-contributing. All roads become indistinct - dense vegetation on tread.	
1874	Meadow	290	20	0.1331497	50	1	10	0.77	25	0.25	1.281565657	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	1.2815657		
1875	Meadow	195	18	0.0805785	50	1	10	0.77	50	0.5	1.551136364	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	1.5511364		
1876	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Non-contributing. Just a seep with no potential - dense vegetation.	
1878	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Non-contributing. Road is kelly-humped and overgrown.	
1879	Meadow	120	18	0.0495868	50	1	70	0.23	70	0.7	0.399173554	390	15	0.13429752	50	70	0.23	50	0.5	0.77221074	90	14	0.0289256	50	80	0.18	90	0.9	0.234297521	1.4056818		
1881	Meadow	120	18	0.0495868	50	1	40	0.45	10	0.1	0.111570248	100																				



Bitterroot Headwaters TMDL - Existing Road Sediment Sources																																	
Location Number	Drainage	TREAD										CUTSLOPE										FILLSLOPE						Location Total Sediment (tons/yr)	Comments				
		Tread length (ft)	Tread Width (ft)	Acres of Tread	Base Erosion Rate (tons/ac/yr)	Gravel Factor	Percent Cover	Cover Factor	Percent Delivery	Delivery Factor	Tread Delivery (tons/yr)	Cutslope Length (ft)	Avg. Cutslope Width (ft)	Acres of Cutslope	Base Erosion Rate (tons/ac/yr)	Percent Cover	Cover Factor	Percent Delivery	Delivery Factor	Cutslope Delivery (tons/yr)	Fillslope Length (ft)	Avg. Fillslope Width (ft)	Acres of Fillslope	Base Erosion Rate (tons/ac/yr)	Percent Cover	Cover Factor	Percent Delivery			Delivery Factor	Fillslope Delivery (tons/yr)		
1959	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0.000000	Non-contributing. Road has good vegetation on tread, cut & fill.		
1960	Meadow	450	20	0.2066116	50	1	30	0.53	20	0.2	1.095041322	430	13	0.12832874	50	10	0.77	20	0.2	0.98813131	105	16	0.0385675	50	50	0.37	70	0.7	0.499449036	2.5826217			
1964	Meadow	40	20	0.0183655	50	0.5	10	0.77	25	0.25	0.088383838	0	0	0	50	0	1	0	0	0	0	0	300	5	0.0344353	50	90	0.18	90	0.9	0.27892562	0.3673095	
1976	Meadow	155	10	0.0355831	50	1	25	0.58	50	0.5	0.515955005	160	20	0.07346189	50	20	0.63	60	0.6	1.38842975	155	14	0.0498163	50	70	0.23	90	0.9	0.515599174	2.4199839			
1986	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	Non-contributing. Road has good vegetation; low potential, no channel.	
1987	Meadow	340	20	0.1561065	50	1	25	0.58	100	1	4.527089073	310	12	0.08539945	50	75	0.21	75	0.75	0.67252066	40	8	0.0073462	50	90	0.18	80	0.8	0.052892562	5.2525023	Cattle.		
1992	Meadow	380	22	0.1919192	50	1	20	0.63	50	0.5	3.022727273	390	15	0.13429752	50	70	0.23	50	0.5	0.77221074	90	14	0.0289256	50	80	0.18	90	0.9	0.234297521	4.0292355			
1995	Meadow	340	20	0.1561065	50	1	30	0.53	70	0.7	2.895775941	300	25	0.17217631	50	10	0.77	70	0.7	4.64015152	210	18	0.0867769	50	90	0.18	90	0.9	0.702892562	8.2388200			
1998	Meadow	175	20	0.0803489	50	1	20	0.63	40	0.4	1.012396694	170	25	0.09756657	50	30	0.53	40	0.4	1.03420569	140	16	0.0514233	50	100	0.18	90	0.9	0.416528926	2.4631313			
2004	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	Non-contributing - no channel.	
2009	Meadow	240	18	0.0991736	50	1	30	0.53	50	0.5	1.314049587	130	8	0.02387511	50	70	0.23	50	0.5	0.13728191	60	10	0.0137741	50	100	0.18	75	0.75	0.092975207	1.5443067	Cattle.		
2022	Meadow	140	20	0.0642792	50	1	25	0.58	50	0.5	0.93204775	130	15	0.04476584	50	25	0.58	75	0.75	0.97365702	40	12	0.0110193	50	70	0.23	80	0.8	0.10137741	2.0070822			
2025	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	No crossing. No channel or pipe.	
2037	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	No crossing - map double counts.	
2038	Meadow	265	18	0.1095041	50	1	30	0.53	20	0.2	0.580371901	240	15	0.08264463	50	75	0.21	20	0.2	0.17355372	75	10	0.0172176	50	80	0.18	80	0.8	0.123966942	0.8778926	Cattle.		
2039	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	No crossing; no channel.	
2041	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	No crossing; no channel.	
2057	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	No crossing; no channel.	
2068	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	No crossing. No channel or pipe.	
2080	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	No crossing. Road doesn't cross channel.	
2098	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	No crossing; no channel.	
2123	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	No crossing. Map error.	
2125	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	Non-contributing, bridge, evidence of cattle in area	
2128	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	Non-contributing. Low gradient system, spring-like flow w/little potential. Good grass cover on tread. Biggest issue: cattle. Seep flow.	
2129	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	Non-contributing. Low gradient system, spring-like flow w/little potential. Good grass cover on tread. Biggest issue: cattle. Seep flow.	
2130	Meadow	240	24	0.1322314	50	1	20	0.63	25	0.25	1.041322314	210	20	0.09641873	50	20	0.63	25	0.25	0.75929752	90	8	0.0165289	50	90	0.18	70	0.7	0.104132231	1.9047521			
2133	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	Non-contributing. Low gradient system, spring-like flow w/little potential. Good grass cover on tread. Biggest issue: cattle. Seep flow.	
2134	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	Non-contributing. Low gradient system, spring-like flow w/little potential. Good grass cover on tread. Biggest issue: cattle. Seep flow.	
2135	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	Non-contributing. Low gradient system, spring-like flow w/little potential. Good grass cover on tread. Biggest issue: cattle. Seep flow.	
2136	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	Non-contributing. Low gradient system, spring-like flow w/little potential. Good grass cover on tread. Biggest issue: cattle. Seep flow.	
2142	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	Non-contributing. Low gradient system, spring-like flow w/little potential. Good grass cover on tread. Biggest issue: cattle. Seep flow.	
2148	Meadow	115	18	0.0475207	50	0.5	20	0.63	50	0.5	0.374225207	95	6	0.0130854	50	50	0.37	50	0.5	0.12103994	90	8	0.0165289	50	70	0.23	95	0.95	0.180578512	0.6758437	Behind a locked gate.		
2168	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	No crossing; no channel.	
2200	Meadow	190	15	0.065427	50	1	30	0.53	100	1	1.733815427	180	8	0.03305785	50	40	0.45	75	0.75	0.55785124	0	0	0	50	0	1	0	0	0	2.2916667	Cattle. Pipe has been removed.		
2201	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	Non-contributing. No channel.	
2225	Meadow	190	22	0.0959596	50	0.5	20	0.63	90	0.9	1.360227273	180	16	0.0661157	50	10	0.77	50	0.5	1.27272727	55	6	0.0075758	50	90	0.18	90	0.9	0.061363636	2.6943182			
2235	Meadow	60	20	0.0275482	50	0.5	10	0.77	40	0.4	0.212121212	0	0	0	50	0	1	0	0	0	0	0	80	10	0.0183655	50	75	0.21	75	0.75	0.144628099	0.3567493	good veg buffers, little input from road, more input from cattle
2240	Meadow	60	18	0.0247934	50	1	10	0.77	25	0.25	0.238636364	0	0	0	50	0	1	0	0	0	0	40	6	0.0055096	50	100	0.18	50	0.5	0.024793388	0.2634298	Roadless tributary with substantial fines observed. Cattle.	
2249	Meadow	260	22	0.1313131	50	0.5	15	0.7	90	0.9	2.068181818	110	8	0.02020202	50	50	0.37	50	0.5	0.18686869	40	4	0.0036731	50	80	0.18	90	0.9	0.029752066	2.2848026			
2254	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	Non-contributing. No channel, not connected.	
2255	Meadow	125	20	0.0573921	50	1	15	0.7	30	0.3	0.60261708	110	15	0.03787879	50	10	0.77	25	0.25	0.36458333	65	4	0.0059688	50	65	0.27	90	0.9	0.072520661	1.0397211	Road is no longer travelled.		
2262	Meadow	265	20	0.1216713	50	0.5	75	0.21	25	0.25	0.159693526	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.1596935	No pipe.	
2263	Meadow	190	35	0.152663	50	0.5	35	0.49	75	0.75	1.402591253	0	0	0	50	0	1	0	0	0	0	70	4	0.0064279	50	70	0.23	90	0.9	0.066528926	1.4691202	Pipe is failing, documented with a photo.	
2277	Meadow	75	20	0.0344353	50	1	10	0.77	75	0.75	0.994318182	0	0	0	50	0	1	0	0	0	0	60	12	0.0165289	50	70	0.23	95	0.95	0.180578512	1.1748967	Sed. basin.	
2289	Meadow	130	24	0.0716253	50	1	10	0.77	75	0.75	2.068181818	115	12	0.03168044	50	40	0.45	70	0.7	0.49896694	45	12	0.0123967	50	90	0.18	90	0.9	0.100413223	2.6675620			
2294	Meadow	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.000000	Non-contributing. Tread has been ripped and reseeded; good cover on tread	
2313	Meadow																																







Bitterroot Headwaters TMDL - Existing Road Sediment Sources																															
Location Number	Drainage	TREAD										CUTSLOPE										FILLSLOPE						Location Total Sediment (tons/yr)	Comments		
		Tread length (ft)	Tread Width (ft)	Acres of Tread	Base Erosion Rate (tons/ac/yr)	Gravel Factor	Percent Cover	Cover Factor	Percent Delivery	Delivery Factor	Tread Delivery (tons/yr)	Cutslope Length (ft)	Avg. Cutslope Width (ft)	Acres of Cutslope	Base Erosion Rate (tons/ac/yr)	Percent Cover	Cover Factor	Percent Delivery	Delivery Factor	Cutslope Delivery (tons/yr)	Fillslope Length (ft)	Avg. Fillslope Width (ft)	Acres of Fillslope	Base Erosion Rate (tons/ac/yr)	Percent Cover	Cover Factor	Percent Delivery			Delivery Factor	Fillslope Delivery (tons/yr)
629	Moose	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No-contributing. Road has been obliterated, mature regrowth on surface.	
630	Moose	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No-contributing. Road has been obliterated, mature regrowth on surface.	
631	Moose	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. Road does not exist.	
632	Moose	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Non-contributing. Dense vegetation on road tread.	
633	Moose	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. Road does not exist.	
634	Moose	225	24	0.1239669	50	1	5	0.89	75	0.75	4.137396694	330	18	0.13636364	50	45	0.41	50	0.5	1.39772727	70	18	0.0289256	50	100	0.18	100	1	0.260330579	5.7954545	No crossing. Road does not exist.
636	Moose	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Non-contributing. Dense vegetation on road tread.	
638	Moose	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. Road does not exist.	
639	Moose	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. Road does not exist.	
640	Moose	110	22	0.0555556	50	1	10	0.77	60	0.6	1.283333333	170	12	0.04683196	50	45	0.41	40	0.4	0.38402204	40	16	0.0146924	50	100	0.18	100	1	0.132231405	1.7995868	No crossing. Road does not exist.
641	Moose	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. Road does not exist.	
642	Moose	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. Road does not exist.	
643	Moose	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Non-contributing. Dense vegetation on road tread.	
644	Moose	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Non-contributing. Dense vegetation on road tread.	
645	Moose	540	18	0.2231405	50	1	10	0.77	60	0.6	5.154545455	505	14	0.16230487	50	65	0.27	50	0.5	1.09555785	70	16	0.0257117	50	100	0.18	100	1	0.231404959	6.4815083	Combined (2) pipes.
646	Moose	325	18	0.1342975	50	1	10	0.77	50	0.5	2.585227273	190	18	0.0785124	50	50	0.37	50	0.5	0.72623967	40	8	0.0073462	50	100	0.18	100	1	0.066115702	3.3775826	No crossing. Road does not exist.
647	Moose	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Not a crossing; no channel.	
648	Moose	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing.	
649	Moose	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Non-contributing. Dense, mature vegetation on road tread.	
650	Moose	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Not a crossing; no channel.	
651	Moose	210	18	0.0867769	50	1	10	0.77	50	0.5	1.670454545	420	8	0.07713499	50	90	0.18	45	0.45	0.31239669	40	18	0.0165289	50	100	0.18	100	1	0.148760331	2.1316116	No crossing. Road does not exist.
652	Moose	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Non-contributing. Dense, mature vegetation on road tread.	
653	Moose	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Not a crossing; no channel.	
656	Moose	630	22	0.3181818	50	0.5	25	0.58	15	0.15	0.692045455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. No channel.	
529	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. No channel.	
530	Hughes	640	20	0.2938476	50	1	10	0.77	90	0.9	10.18181818	110	30	0.07575758	50	30	0.53	75	0.75	1.50568182	390	16	0.1432507	50	90	0.18	100	1	1.289256198	12.9767562	No crossing. No channel.
531	Hughes	280	22	0.1414141	50	1	25	0.58	20	0.2	0.82020202	260	18	0.10743802	50	35	0.49	20	0.2	0.52644628	90	26	0.053719	50	60	0.3	95	0.95	0.765495868	2.1121442	No crossing.
532	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing.	
533	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. No channel.	
534	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. No channel.	
536	Hughes	315	18	0.1301653	50	1	25	0.58	15	0.15	0.566219008	290	20	0.13314968	50	20	0.63	15	0.15	0.62913223	50	28	0.0321396	50	90	0.18	90	0.9	0.260330579	1.4556818	No crossing. No channel.
539	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. No channel.	
540	Hughes	270	22	0.1363636	50	1	25	0.58	25	0.25	0.988636364	260	24	0.14325069	50	65	0.27	20	0.2	0.38677686	180	54	0.2231405	50	80	0.18	80	0.8	1.60661157	2.9820248	No crossing. No channel.
541	Hughes	340	26	0.2029385	50	0.5	15	0.7	25	0.25	0.887855831	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	County road. Bridge; non-contributing.	
542	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. No channel.	
545	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. No channel.	
548	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. No channel.	
549	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. No channel.	
550	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Non-contributing. Road #554 is closed; low potential, tread has good cover.	
551	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Private road.	
552	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. No channel.	
553	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Non-contributing. Road #554 is closed; low potential, tread has good cover.	
554	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. No channel.	
555	Hughes	90	24	0.0495868	50	0.5	15	0.7	20	0.2	0.173553719	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. No channel.	
560	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. No channel.	
561	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. No channel.	
3282	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Private road.	
3283	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	Private road.	
3285	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. No channel.	
3286	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. No channel.	
3287	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. No channel.	
3288	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000000	No crossing. No channel.	
3289	Hughes	70	16	0.0257117	50	1	20	0.63	40	0.4	0.323966942	90	14	0.02892562	50	20	0.63	75	0.75	0.68336777	0										



Bitterroot Headwaters TMDL - Existing Road Sediment Sources																																	
Location Number	Drainage	TREAD										CUTSLOPE										FILLSLOPE								Location Total Sediment (tons/yr)	Comments		
		Tread length (ft)	Tread Width (ft)	Acres of Tread	Base Erosion Rate (tons/ac/yr)	Gravel Factor	Percent Cover	Cover Factor	Percent Delivery	Delivery Factor	Tread Delivery (tons/yr)	Cutslope Length (ft)	Avg. Cutslope Width (ft)	Acres of Cutslope	Base Erosion Rate (tons/ac/yr)	Percent Cover	Cover Factor	Percent Delivery	Delivery Factor	Cutslope Delivery (tons/yr)	Fillslope Length (ft)	Avg. Fillslope Width (ft)	Acres of Fillslope	Base Erosion Rate (tons/ac/yr)	Percent Cover	Cover Factor	Percent Delivery	Delivery Factor	Fillslope Delivery (tons/yr)				
3306	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	Non-contributing. Disconnected due to lower crossings without pipes.
3307	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. No channel, not connected to Hughes.
3308	Hughes	90	24	0.0495868	50	0.5	10	0.77	25	0.25	0.238636364	0	0	0	50	0	1	0	0	0	0	60	5	0.0068871	50	100	0.18	80	0.8	0.049586777	0.2882231	0.000000	No crossing. No channel.
3309	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. No channel.	
3310	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. No channel.	
3311	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	Private road.	
3312	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	Private road.	
3313	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. GIS error.	
3314	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. GIS error.	
3315	Hughes	160	26	0.0955005	50	0.5	10	0.77	25	0.25	0.45959596	0	0	0	50	0	1	0	0	0	0	110	4	0.010101	50	90	0.18	90	0.9	0.5414141	0.081818182	0.000000	No crossing. GIS error.
3316	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. GIS error.	
3317	Hughes	130	26	0.0775941	50	0.5	10	0.77	20	0.2	0.298737374	120	14	0.03856749	50	30	0.53	25	0.25	0.25550964	80	6	0.0110193	50	80	0.18	90	0.9	0.6435032	0.089256198	0.000000	No crossing. No channel.	
3318	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. No channel.	
3319	Hughes	140	25	0.0803489	50	0.5	15	0.7	25	0.25	0.35152663	130	12	0.03581267	50	40	0.45	25	0.25	0.20144628	0	0	0	50	0	1	0	0	0	0.5529729	0.000000	No crossing. No channel.	
3320	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. No channel.	
3321	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. No channel.	
3322	Hughes	40	18	0.0165289	50	0.5	50	0.37	100	1	0.152892562	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	Road paved with gravel. Bridge.	
3323	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	Private road.	
3325	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	Non-contributing. Flat road with only seepage as flow.	
3327	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. No channel.	
3328	Hughes	70	22	0.0353535	50	0.5	20	0.63	25	0.25	0.139204545	0	0	0	50	0	1	0	0	0	0	110	12	0.030303	50	100	0.18	90	0.9	0.245454545	0.3846591	0.000000	Bridge.
3330	Hughes	475	18	0.196281	50	1	10	0.77	25	0.25	1.889204545	0	0	0	50	0	0.25	1	0	0	0	0	50	0	1	0	0	0	0	0	1.8892045	0.000000	Road paved with gravel. Buffered by distance.
3331	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	Non-contributing. Road is completely grown in with mature vegetation on road tread.	
3332	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	Non-contributing.	
3333	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	Non-contributing. Road is completely grown in with mature vegetation on road tread.	
3337	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. No channel.	
3338	Hughes	480	18	0.1983471	50	1	10	0.77	45	0.45	3.436363636	460	22	0.23232323	50	80	0.18	45	0.45	0.94090909	60	15	0.0206612	50	100	0.18	90	0.9	0.167355372	4.5446281	0.000000	Road paved with gravel.	
3339	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	Non-contributing. Road is completely grown in with mature vegetation on road tread.	
3340	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	Non-contributing. Road is completely grown in with mature vegetation on road tread.	
3341	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	Non-contributing. Road is completely grown in with mature vegetation on road tread.	
3342	Hughes	155	18	0.0640496	50	1	20	0.63	15	0.15	0.302634298	130	16	0.04775023	50	10	0.77	15	0.15	0.27575758	35	8	0.0064279	50	100	0.18	80	0.8	0.046280992	0.6246729	0.000000	Road paved with gravel.	
3343	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. No channel.	
3344	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. No channel.	
3352	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. No channel.	
3353	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. No channel.	
3354	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. No channel.	
3355	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	Private road.	
3356	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. No channel.	
3357	Hughes	95	20	0.043618	50	1	15	0.7	15	0.15	0.22899449	55	14	0.01767677	50	10	0.77	15	0.15	0.10208333	40	12	0.0110193	50	90	0.18	80	0.8	0.079338843	0.4104167	0.000000	Road paved with gravel.	
3358	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. Seepage with water on tread - no channel, no pipe.	
3359	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. No channel.	
3360	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. Seepage with water on tread - no channel, no pipe.	
3361	Hughes	65	24	0.0358127	50	0.5	10	0.77	25	0.25	0.172348485	0	0	0	50	0	1	0	0	0	0	60	5	0.0068871	50	100	0.18	50	0.5	0.030991736	0.2033402	0.000000	No crossing. No channel.
3362	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. No channel.	
3363	Hughes	130	22	0.0656566	50	1	15	0.7	75	0.75	1.723484848	60	15	0.02066116	50	10	0.77	75	0.75	0.59659091	80	10	0.0183655	50	50	0.37	90	0.9	0.305785124	2.6258609	0.000000	No crossing. No channel.	
3364	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	Non-contributing. Low gradient road with spring flow.	
3365	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. Seepage with water on tread - no channel, no pipe.	
3366	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. Rock debris blocks drainage.	
3367	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0.000000	No crossing. No channel.	
3368	Hughes	360	20	0.1652893	50	1	20	0.63	50	0.5	2.603305785	32																					



Bitterroot Headwaters TMDL - Existing Road Sediment Sources																																
Location Number	Drainage	TREAD										CUTSLOPE										FILLSLOPE						Location Total Sediment (tons/yr)	Comments			
		Tread length (ft)	Tread Width (ft)	Acres of Tread	Base Erosion Rate (tons/ac/yr)	Gravel Factor	Percent Cover	Cover Factor	Percent Delivery	Delivery Factor	Tread Delivery (tons/yr)	Cutslope Length (ft)	Avg. Cutslope Width (ft)	Acres of Cutslope	Base Erosion Rate (tons/ac/yr)	Percent Cover	Cover Factor	Percent Delivery	Delivery Factor	Cutslope Delivery (tons/yr)	Fillslope Length (ft)	Avg. Fillslope Width (ft)	Acres of Fillslope	Base Erosion Rate (tons/ac/yr)	Percent Cover	Cover Factor	Percent Delivery			Delivery Factor	Fillslope Delivery (tons/yr)	
3395	Hughes	45	20	0.0206612	50	0.5	15	0.7	25	0.25	0.090392562	30	16	0.01101928	50	50	0.37	70	0.7	0.14269972	65	4	0.0059688	50	90	0.18	75	0.75	0.040289256	0.2733815		
3401	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. No channel.	
3402	Hughes	960	22	0.4848485	50	1	15	0.7	20	0.2	3.393939394	830	25	0.47635445	50	20	0.63	20	0.2	3.00103306	70	8	0.0128558	50	100	0.18	50	0.5	0.05785124	6.4528237		
3403	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. No channel.		
3404	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. No channel.		
3405	Hughes	170	22	0.0858586	50	0.5	15	0.7	50	0.5	0.751262626	0	0	0	50	0	1	0	0	0	55	15	0.0189394	50	100	0.18	75	0.75	0.127840909	0.8791035		
3406	Hughes	70	18	0.0289256	50	1	15	0.7	25	0.25	0.253099174	130	25	0.07460973	50	50	0.37	25	0.25	0.34507002	65	24	0.0358127	50	90	0.18	90	0.9	0.290082645	0.8882518		
3407	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. No channel.		
3409	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. No channel.		
3415	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. Road ends just before creek crossing.		
3417	Hughes	730	22	0.3686869	50	1	5	0.89	25	0.25	4.101641414	560	14	0.17998163	50	40	0.45	25	0.25	1.01239669	70	18	0.0289256	50	75	0.21	70	0.7	0.212603306	5.3266414		
3418	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. No channel.		
3419	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. No channel.		
3421	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. No channel.		
3422	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. No channel.		
3423	Hughes	670	20	0.3076217	50	0.5	20	0.63	25	0.25	1.211260331	0	0	0	50	0	1	0	0	0	90	14	0.0289256	50	90	0.18	90	0.9	0.234297521	1.4455579		
3427	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. No channel.		
3429	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. No channel.		
3430	Hughes	190	20	0.087236	50	0.5	20	0.63	15	0.15	0.206095041	170	20	0.07805326	50	50	0.37	15	0.15	0.2165978	60	20	0.0275482	50	70	0.23	20	0.2	0.063360882	0.4860537		
3431	Hughes	310	20	0.1423324	50	0.5	20	0.63	35	0.35	0.784607438	225	22	0.11363636	50	20	0.63	35	0.35	1.25284091	65	18	0.0268595	50	70	0.23	75	0.75	0.231663223	2.2691116		
3437	Hughes	135	22	0.0681818	50	0.5	15	0.7	25	0.25	0.298295455	70	28	0.04499541	50	20	0.63	25	0.25	0.35433884	70	25	0.0401745	50	70	0.23	90	0.9	0.415805785	1.0684401		
3453	Hughes	610	22	0.3080808	50	0.5	10	0.77	25	0.25	1.482638889	0	0	0	50	0	1	0	0	0	55	12	0.0151515	50	90	0.18	75	0.75	0.102272727	1.5849116		
3454	Hughes	130	22	0.0656566	50	0.5	15	0.7	50	0.5	0.574494949	115	20	0.05280073	50	30	0.53	50	0.5	0.69960973	140	26	0.0835629	50	90	0.18	80	0.8	0.601652893	1.8757576		
3474	Hughes	380	16	0.1395776	50	1	10	0.77	20	0.2	1.074747475	340	24	0.18732782	50	25	0.58	25	0.25	1.35812672	0	0	0	50	0	1	0	0	0	2.4328742	No pipe.	
3476	Hughes	250	22	0.1262626	50	1	10	0.77	90	0.9	4.375	185	20	0.08494031	50	10	0.77	90	0.9	2.94318182	40	10	0.0091827	50	75	0.21	75	0.75	0.07231405	7.3904959		
3481	Hughes	270	22	0.1363636	50	0.5	15	0.7	50	0.5	1.193181818	0	0	0	50	0	1	0	0	0	120	15	0.0413223	50	90	0.18	90	0.9	0.334710744	1.5278926		
3482	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. Road grading has combined all these crossings.		
3483	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. Road grading has combined all these crossings.		
3485	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. No channel and no pipe.		
3496	Hughes	250	22	0.1262626	50	1	10	0.77	90	0.9	4.375	185	20	0.08494031	50	10	0.77	90	0.9	2.94318182	40	10	0.0091827	50	75	0.21	75	0.75	0.07231405	7.3904959		
3497	Hughes	190	18	0.0785124	50	1	10	0.77	50	0.5	1.511363636	140	18	0.05785124	50	25	0.58	50	0.5	0.83884298	80	26	0.0477502	50	75	0.21	90	0.9	0.451239669	2.8014463		
3499	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. No channel.		
3504	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. No channel.		
3518	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. Road grading has combined all these crossings.		
3519	Hughes	240	18	0.0991736	50	1	20	0.63	50	0.5	1.561983471	460	16	0.16896235	50	40	0.45	70	0.7	2.66115702	40	12	0.0110193	50	75	0.21	90	0.9	0.104132231	4.3272727		
3524	Hughes	320	20	0.1469238	50	1	10	0.77	50	0.5	2.828282828	190	22	0.09595956	50	40	0.45	50	0.5	1.07954545	50	11	0.0126263	50	75	0.21	100	1	0.132575758	4.0404040		
3560	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. No channel.		
3564	Hughes	190	14	0.0610652	50	1	10	0.77	25	0.25	0.587752525	160	15	0.05509642	50	25	0.58	25	0.25	0.39944904	60	24	0.0330579	50	90	0.18	50	0.5	0.148760331	1.1359619		
3579	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. No channel.		
3595	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. No channel.		
3748	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	Private road.		
3749	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	Private road.		
A	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. No channel.		
B	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. No channel.		
C	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. No channel.		
D	Hughes	0	0	0	50	0	0	1	0	0	0	0	0	0	50	0	1	0	0	0	0	0	50	0	1	0	0	0	0.0000000	No crossing. No channel.		
TOTAL											349.6474231	TOTAL											227.896843	TOTALS						92.80389979	670.3481663	