1.Modesty Creek Watershed Summary

Description and Land Use

Table xxx: Modesty Creek Watershed Overview

Watershed Size	16,056 acres/25.1 sq miles/65.0 sq km
Elevation Range	3,180 feet [4,760-7,940]
Stream Miles	49.0
Land Ownership	Private: 96% /State: 4%
Road Miles	Driveway/Service Road: 0.2 Local Road/City Street = 33.7 Highway = 1.7 Total = 35.6

Source: Montana GIS Portal Data Layers

Modesty Creek has its headwaters in the foothills of the Flint Creek Range and flows for almost 15 miles before it reaches the Clark Fork River. The creek drains an area of about 25 square miles, which is primarily private land (Table xxx). The watershed lies within the Anaconda Smelter Superfund site and was also heavily used for mining in the past. Grazing, irrigated agriculture and some timber harvest are present land uses (MDEQ, 2010).

2.Impairments

Table xxx: Listed Impairments for Modesty Creek

2010			
Reach (River Mile)	**Impairment**	**Pollutant**	**Impaired Beneficial Use**
0.0-14.8	Arsenic	Metals	Drinking Water
	Cadmium	Metals	Aquatic Life, Cold Water Fishery
	Copper	Metals	Aquatic Life, Cold Water Fishery
	Lead	Metals	Aquatic Life, Cold Water Fishery
2008			
Reach (River Mile)	**Impairment**	**Pollutant**	**Impaired Beneficial Use**
0.0-14.8	Arsenic	Metals	Drinking Water*
	Low Flow Alterations	*Not a Pollutant*	Primary Contact Recreation*

Metals

As mentioned in the previous section, the Modesty Creek watershed lies within the Anaconda Smelter Superfund Site and also contains several abandoned mines. The mines are not priority mines and have not been found to contribute to environmental degradation. Atmospheric deposition is the main source of severe metals contamination throughout the basin (Table xxx). The contamination spreads via water transportation and is also dispersed through human-caused and natural soil erosion. High levels of metals, along with acidic conditions created by leaching, pose health issues for humans, wildlife, fish and vegetative communities in the area. (MDEQ, 2010).

Irrigation and Dewatering

Chronic dewatering often results from agricultural irrigation and has many implications for both water quantity and quality. Over 100 water rights exist in the Modesty Creek basin (MDNRC, 2011) and low flows have been noted by Montana DEQ (2010). Low flows result in unsuitable habitat for fish and macroinvertebrates due to increased temperatures and algal growth (Table xxx). In addition, irrigation structures can create barriers which impede fish passage and migration (MFWP, 2010).

3.Sport/Native Fishery

No fisheries data exists for Modesty Creek at this time.

4.Assessments

Modesty Creek was assessed by Montana DEQ in 2010 (Table xxx). The report included information from 2010 and 2008 303(d) impairment listings.

Table xxx: Modesty Creek Assessments

Type	Agency	Year	Area
Upper Clark Fork Tributaries TMDL	MDEQ	2010	River Mile 0.0-14.8

5.Restoration

Needs

- Address sources of metals contamination with soil erosion prevention methods
- Use riparian plantings to stabilize stream banks
- Limit livestock access to riparian areas and the creek
- Continue to monitor levels of listed metals in the basin

- Work with irrigation water users to address low flow issues
- Monitor water temperature throughout the basin

Activities: Projects undertaken by the WRC

6.Watershed Map

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