Lemhi River Subbasin Total Maximum Daily Load (TMDL)
Agricultural Implementation Plan



Prepared for the
Idaho Department of Environmental Quality

Lemhi Soil and Water Conservation District
Idaho Soil Conservation Commission
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1.0 Goals and Objectives

This agricultural component of the Lemhi River Subbasin Total Maximum Daily Load (TMDL) Implementation Plan outlines an adaptive management approach for the implementation of Best Management Practices (BMPs) and Resource Management Systems (RMS) to meet the requirements for the Lemhi River Watershed TMDL (IDEQ 1999). Implementation activities will be phased in on a subwatershed basis due to the large size of the Lemhi Subbasin, which encompasses 807,464 acres. Figure B.1, located in Appendix B, shows the general location and area of the subbasin.

The goal of this plan is to assist and/or compliment other subbasin efforts in restoring beneficial uses for §303(d) listed stream segments. These include the Lemhi River (WQLS #7611), Eighteenmile Creek (WQLS #3093), Kirtley Creek (WQLS #3061), Wimpey Creek (WQLS #3067), Sandy Creek (WQLS #3070), Geertson Creek (WQLS #3063), Bohannon Creek (WQLS #3065), and McDevitt Creek (WQLS #3078).

The objective of this plan will be to reduce the amount of sediment and bacteria entering these streams from agricultural sources. Agricultural pollutant reductions will be achieved through the application of BMPs and RMS systems developed and implemented on site with individual agricultural operators. Grazing and livestock concerns will be addressed by providing off-site watering for pasture and feeding operations, as well as other selected BMPs. Bacteria concerns will be addressed through upgrading and installing animal waste systems and eliminating any discharges from animal feed operations that are contributing pathogens to the Lemhi River and its tributaries.

Another objective of this plan will be to provide BMP effectiveness evaluation and monitoring, in terms of reducing pollutant loading and impacts on designated beneficial uses on the above listed stream segments. Emphasis will also be placed on implementation of a water quality outreach program to encourage landowner participation in water quality implementation efforts within the subbasin.

2.0 Beneficial Use Status

Historic impacts within the subbasin have impaired the beneficial uses of the Lemhi River and its tributaries. On some streams, a lack of plant diversity within the riparian community, impaired stream hydrology, stream channel straightening, and other stream channel related problems have contributed to the degradation of the river.

Table 2.0 Water quality limited segments in the Lemhi River Subbasin and their support status.

Stream	WQLS#	Pollutant	Support Status	Concerns
Lemhi River	7611	sediment, nutrients	Needs Verification	sediment, temperature
Eighteenmile	3093	sediment, nutrients	Needs Verification	sediment, temperature
Kirtley	3061	sediment, nutrients	Full Support	bank erosion, flow, temp.
Wimpey	3067	sediment, nutrients	Needs Verification	sediment, habitat
Sandy	3070	sediment, nutrients	Needs Verification	macroinvertebrates
Geertson	3063	sediment, nutrients	Needs Verification	sediment
Bohannon	3065	sediment, nutrients	Needs Verification	sediment, nutrients, temp.
McDevitt	3078	sediment	Needs Verification	sediment, banks (private)

3.0 Background

Several conservation measures have been implemented within the subbasin. Much of this success is due to the Upper Salmon Basin Watershed Project (USBWP) formerly known as the Idaho Model Watershed Project. Successes have been the result of credibility and trust developed through prior planning efforts. Most of the agencies and individuals involved in the USBWP Technical Team were already working together in the Idaho Fish Passage Technical Work Group. The Idaho Department of Fish and Game (IDFG) organized this group in January 1992. The group identified potential screen sites and prioritized a fish screen construction and/or replacement program, given constraints of manpower and financing. Early on, the group recognized that irrigation headwork reconstruction and design was an essential element of the screening program (Loucks 2000). Funding was available for this activity through the Agricultural Conservation Program of the Agricultural Stabilization and Conservation Service (now the Farm Service Agency, FSA).

As early as 1985, during the development of their long-range plan, supervisors of the Lemhi Soil and Water Conservation District (LSWCD) discussed enhancement of anadromous fish habitat on private lands in the district. In the 1990 planning cycle, LSWCD adopted an action item to initiate dialogue between all interested parties for purposes of increasing fish returns to the Lemhi River. Representatives of the LSWCD met with the membership of the Lemhi Irrigation District (LID) and Water District 74 (WD74) at their annual meetings in 1990 and 1991. As a result of this dialogue, a committee with representation from LSWCD, LID, WD74, Lemhi ASCS (now FSA) County Committee, IDFG, Lemhi County Agricultural Agent (now UI-CES), and the Soil Conservation Service (now USDA-NRCS) was formed in early 1991 to review fisheries and habitat studies conducted in the Lemhi Subbasin and to advise LSWCD, LID, and WD74 on potential actions to enhance anadromous fish recovery. In June 1992, LSWCD, LID, and WD74 adopted *Irrigators Plan to Improve Fish Passage on Lemhi River* (Swift and Loucks 1992) and indicated that this plan should be the basis on which private landowners could cooperate with federal and state agencies (Loucks 2000).

Additionally, there have been implementation projects such as the Lemhi County Environmental Quality Incentives Program (EQIP) Priority Area and Idaho's Water Quality Program for Agriculture (WQPA) Project. There are four contracts currently being implemented through WQPA, one of these is complete. The completed contract converted 127 acres from flood irrigation to sprinkler irrigation and reduced irrigation induced erosion and sediment delivery to the Lemhi River. The other three projects are on going. These address water quality concerns on animal feed operations (AFOs), by relocating livestock facilities away from streams. This will be accomplished through off stream water development and a combination of riparian and corral/pasture fencing. The final contract entails riparian fencing and an irrigation pit to collect and reuse irrigation runoff.

There were seven projects implemented through EQIP. Six of these installed waste management systems on six AFOs and implemented nutrient management plans. One sprinkler system was installed to convert 100 acres from flood to sprinkler irrigation. This project will reduce irrigation induced erosion and sediment delivery to Wimpey Creek. On all seven projects, irrigation water management was implemented on 524 acres. The final contract implemented prescribed grazing on 24,300 acres and installated off stream livestock watering facilities.

4.0 Accomplishments

Several conservation practices have been implemented within the subbasin over the past years. Most of the projects have focused on agricultural irrigation diversions and their detrimental impacts on anadromous fish passage. However, several other projects have improved water quality by restoring riparian vegetation, stabilizing eroding streambanks, eliminating runoff from AFOs and improving irrigation effiency. Figure B.2, located in Appendix B, shows where these projects are located.

Table 4.0 Implementation projects and practices completed in the Lemhi River Subbasin.

Project ID	Target Stream	Stream Miles Treated	Acres Treated	Stream Miles Fenced	Site Type	Work Type	Project Benefits	Program
1038	Agency Creek	1.9	0	1.9	Instream	Exclusion Fencing	Removing these barriers in conjunction with other projects downstream makes 10+ miles of stream accessible.	USBWP
1045	Agency Creek	0	0	0	Ditch Canal	Fish Passage Improvement	Provides connectivity of lower Agency Creek.	USBWP
1061	Canyon Creek	0	0	0	Ditch Canal	Irrigation Modification	Should markedly improve reconstructed stream channel in lower Canyon Creek, which has been dewatered since 1876.	USBWP
1076	Canyon Creek	0	0	0	Ditch Canal	Fish Passage Improvement	Consolidated irrigation diversion to improve fish passage.	USBWP
1044	Eighteenmile Creek	0.98	0	0.98	Riparian Upland	Fencing – Nonexclusion	Water temperature, bank stability, rearing habitat for resident and anadromous fish in Texas and Eighteenmile Creek.	USBWP
1054	Eighteenmile Creek	1.2	0	1.7	Riparian	Fencing – Nonexclusion	Improves riparian vegetation in important spawning and rearing habitat.	USBWP
3003	Geertson	0.75	93	0.75	Riparian Pasture	Exclusion Fencing	Improves riparian vegetation in important spawning and rearing habitat.	WQPA
1004	Hayden Creek	0	0	0	Ditch Canal	Fish Passage Improvement	Consolidated irrigation diversion to improve fish passage.	USBWP
1005	Hayden Creek	0	0	0	Ditch Canal	Fish Passage Improvement	Consolidated irrigation diversion to improve fish passage.	USBWP
1001	Lemhi River	0	0	0	Ditch Canal	Fish Passage Improvement	Consolidated irrigation diversion to improve fish passage.	USBWP
1006	Lemhi River	0	0	0	Ditch Canal	Fish Passage Improvement	Consolidated irrigation diversion to improve fish passage.	USBWP
1007	Lemhi River	0	0	0	Diversion	Irrigation Modification	Removed migration barrier from the most critical section of the Lemhi River.	USBWP
1008	Lemhi River	0	0	0	Diversion	Irrigation Modification	Removed migration barrier in most critical section of the Lemhi River.	USBWP
1009	Lemhi River	0	0	0	Diversion	Construct	Provides capability of fish passage through the most critical section of the Lemhi River.	USBWP
1011	Lemhi River	1	279	1.6	Riparian Upland	Fencing – Nonexclusion	Protect important Chinook spawning habitat near Leadore.	USBWP
1014	Lemhi River	0	0	0	Diversion	Irrigation Modification	Raises river level with a placed rock reef to replace gravel push-up dam.	USBWP
1018	Lemhi River	3	0	3.3	Riparian Upland	Fencing – Nonexclusion	Protect important spawning and rearing habitat near Leadore.	USBWP
1019	Lemhi River	1	315	2.3		Fencing – Nonexclusion	Helps protect spawning and rearing habitat immediately below Cottom Lane.	USBWP
1021	Lemhi River	0	0	0	Ditch Canal	Fish Passage Improvement	Consolidated irrigation diversion to improve fish passage.	USBWP
1024	Lemhi River	1	0	1.3	Riparian Upland	Fencing – Nonexclusion	Protects important chinook rearing habitat (to a lesser extent-spawning habitat).	USBWP
1028	Lemhi River	0	0	0	Ditch Canal	Fish Passage Improvement	Consolidated irrigation diversion to improve fish passage.	USBWP
1030	Lemhi River	0.5	0	0.5	Riparian	Exclusion Fencing	Improve riparian habitat, bank stability, and water temperatures through shading.	USBWP
1031	Lemhi River	8.3	0	15	Riparian	Exclusion Fencing	Improve and protect riparian zone in most productive spawning and rearing habitat on the Lemhi River.	USBWP
1032	Lemhi River	0.9	0	0.9	Riparian	Exclusion Fencing	Improves riparian vegetation along migration and rearing corridor.	USBWP
1033	Lemhi River	0	0	0	Ditch	Fish Passage	Consolidated irrigation diversion to improve fish passage.	USBWP

					Canal	Improvement		
Project ID	**Target Stream**	**Stream Miles Treated**	**Acres Treated**	**Stream Miles Fenced**	**Site Type**	**Work Type**	**Project Benefits**	**Program**
1035	Lemhi River	0	0	0	Ditch Canal	Fish Passage Improvement	Consolidated irrigation diversion to improve fish passage.	USBWP
1036	Lemhi River	0.2	0	0.2	Instream	Rock Structure Placement	Improves bank stability in migration and rearing habitat.	USBWP
1037	Lemhi River	0	0	0.2	Instream	Rock Structure Placement	Improves bank stability in migration and rearing habitat.	USBWP
1039	Lemhi River	0	0	0	Instream	Stabilization	Barb placement in the Lemhi River for erosion protection and maintenance of limited pool habitat.	USBWP
1040	Lemhi River	0	0	0	Ditch Canal	Fish Passage Improvement	Consolidated irrigation diversion to improve fish passage.	USBWP
1046	Lemhi River	0	0	0	Diversion	Fish Passage Improvement	Improves fish passage immediately above most critical river stretch.	USBWP
1053	Lemhi River	0.9	0	1	Riparian	Exclusion Fencing	Protects riparian vegetation immediately above Cottom Lane.	USBWP
1062	Lemhi River	0	0	0	Stream bank	Vegetation Planting	Improves stream stability through a degraded section of the Lemhi River.	USBWP
1063	Lemhi River	1.2	0	1.2	Riparian	Exclusion Fencing	Improves riparian vegetation in important spawning and rearing habitat.	USBWP
1068	Lemhi River	0	0	0	Corral	Exclusion Fencing	Improves riparian vegetation in important spawning and rearing habitat.	USBWP
1071	Lemhi River	0.33	0	0.33	Riparian	Exclusion Fencing	Improves riparian vegetation in important spawning and rearing habitat.	USBWP
1072	Lemhi River	0.2	0	0.2	Riparian	Exclusion Fencing	Improves riparian vegetation in important spawning and rearing habitat.	USBWP
1073	Lemhi River	0	0	0	Instream	Fish Passage Improvement	Improves migration corridor by providing pools and resting-places.	USBWP
1059	Lemhi River	0	0	0	Ditch Canal	Fish Passage Improvement	Consolidated irrigation diversion to improve fish passage.	USBWP
3001	Lemhi River	0	15	0	Corral	Relocation	Reduce sedimentation and potential livestock pollution to Lemhi River.	WQPA
3002	Lemhi River	0	165	0	Corral	Relocation	Reduce sedimentation and potential livestock pollution to Lemhi River.	WQPA
3004	Lemhi River	0	129	0	Irrigated Pasture	Irrigation Improvement	Irrigation efficiency and management improvement.	WQPA
3005	Lemhi River	0	200	0	Dairy	Waste System	Reduce potential runoff of sediment, nutrients and bacteria to Geertson Creek.	EQIP
3006	Lemhi River	0	20	0	Dairy	Waste System	Reduce potential runoff of sediment, nutrients and bacteria to Geertson Creek.	EQIP
3007	Lemhi River	1.6	178	0.8	Corral	Waste System Riparian	Reduce potential runoff of sediment, nutrients and bacteria to Wimpey Creek.	EQIP
3008	Lemhi River	0	200	0	Corral	Waste System	Reduce potential runoff of sediment, nutrients and bacteria to McDevitt Creek.	EQIP
3009	Lemhi River	0	300	0	Dairy	Waste System	Reduce potential runoff of sediment, nutrients and bacteria to Lemhi River.	EQIP
3010	Lemhi River	0	350	0	Corral	Waste System	Reduce potential runoff of sediment, nutrients and bacteria to Lemhi River.	EQIP
3011	Mill Creek	0	20	0	Corral	Waste System	Reduce potential runoff of sediment, nutrients and bacteria to Lemhi River.	EQIP
1060	Pattee Creek	0	0	0	Ditch Canal	Irrigation Modification	Provides connectivity to Pattee Creek.	USBWP
1064	Wimpy Creek	0.5	0	0.5	Upland	Exclusion Fencing	Reduce sedimentation and potential livestock pollution to Wimpy Creek.	USBWP

USBWP = Upper Salmon Basin Watershed Project (Lemhi & Custer SWCDs, federal, state & local agencies)
EQIP = Environmental Quality Incentives Program (USDA-Natural Resources Conservation Service)
WQPA = Water Quality Program for Agriculture (Idaho Soil Conservation Commission)

5.0 Problem Statement

Private lands within the subbasin are located primarily along watercourses and are mostly used for agricultural production. However, ranchette development is becoming common as the population in the area increases. The TMDL identifies sediment and bacteria as the pollutants of concern and says "excessive sedimentation as reducing the quality of spawning and rearing habitat for resident trout species and exceeds the same habitat parameters for anadromous species. Fecal coliform bacteria loading threatens primary and secondary contact recreation in the Lemhi River. Altered flow conditions resulting from diversions of surface waters for irrigation have eliminated migrating components of resident fish species and elevated risks to isolated fish populations" (IDEQ 1999).

5.1 Sediment

The agricultural sediment load and reduction allocations were defined in the Lemhi River Watershed TMDL (IDEQ 1999) for the seven tributaries. Table 5.1 summarizes that data from the TMDL.

Table 5.1 Streambank erosion estimates for 303(d)-listed tributaries to the Lemhi River (IDEQ 1999).

Stream	Site	Inventoried Length (ft)	Private Length (ft)	Percent Inventoried	Existing Erosion (tons/year)	Desired Erosion (tons/year)	Percent Reduction
Eighteenmile Creek	Upper	13,756	27,040	51%	14	3	77%
	Lower	17,146	11,818	100%	47	11	77%
				Subtotal	**61**	**14**	**77%**
Geertson Creek	Upper	8,558	13,868	62%	385	20	95%
	Middle	7,761	7,761	100%	1	4	0%
	Lower	7,960	20,020	40%	116	36	69%
	Gary Cr	N/A	N/A	N/A	200	10	95%
	Canyon Rd	N/A	N/A	N/A	81	40	51%
				Subtotal	**783**	**110**	**86%**
Kirtley Creek	Upper	3,680	27,728	13%	1,331	67	95%
	Lower	4,100	16,234	25%	166	8	95%
	Kirtley Rd	N/A	N/A	N/A	13	7	49%
	E. Fork Trail	N/A	N/A	N/A	23	12	50%
	N. Fork Trail	N/A	N/A	N/A	19	11	44%
	Upper	N/A	N/A	N/A	2	2	0%
	Lower	7,650	8,816	87%	3	2	39%
				Subtotal	**1,557**	**109**	**93%**
McDevitt Creek	Upper	29,062	1,483	100%	79.7	69.1	13%
	Middle	29,062	5,312	100%	42.8	2.4	94%
	Lower	15,984	14,259	100%	0.06	0.03	54%
				Subtotal	**122.56**	**71.53**	**42%**
Wimpey Creek	Upper	4,456	2,556	100%	0.2	0.1	58%
	Middle	8,428	3,652	100%	9	0.6	93%
	Mid-lower	N/A	N/A	N/A	0.5	0.2	60%
	Lower	0	10,968	0%	9	0.6	93%
				Subtotal	**18.7**	**1.5**	**92%**
Bohannon Creek	East Fork	N/A	N/A	N/A	47	20	58%
	Upper	N/A	N/A	N/A	290	15	95%
	Middle	4,948	4,948	100%	91	18	80%
	Lower	12,338	14,590	85%	158	18	88%
	W. Fork Rd	N/A	N/A	N/A	51	24	53%
	E. Fork Trail	N/A	N/A	N/A	22	10	55%
	Bohannon Tr	N/A	N/A	N/A	39	19	51%
				Subtotal	**698**	**124**	**82%**

Total	**3,179.26**	**430.03**	**86%**

5.2 Streambank Erosion Inventory

IDEQ performed the streambank erosion inventory used to estimate background and existing streambank erosion followed methods outlined in the proceedings from the Channel Evaluation Workshop (NRCS 1983). Subsections of State of Idaho's 1996 §303(d)-listed water quality limited stream segments were surveyed to determine the extent of chronic bank erosion and estimate the needed reductions. The USDA-NRCS Streambank Erosion Condition Inventory is a field based methodology, which measures streambank and channel stability, length of active eroding banks, and bank geometry. The streambank and channel stability inventories were used to estimate the long-term lateral recession rate. Previous to that effort, USDA-NRCS performed stream and rangeland inventories in the Lemhi, Pahsimeroi and East Fork Watersheds in May and November 1994 (NRCS 1994). Table 5.2 shows the erosion estimates from that report.

Table 5.2 Streambank erosion estimates for the Lemhi River and its tributaries (NRCS 1994).

Stream	Erosion Category	Lateral Recession Rate (ft/yr)	Average Bank Height (ft)	Percent of Stream (%)	Stream Length (ft)	Sediment Yield (tons/yr)
Agency Creek	Very Slight	0.01	3.0	35	1,891	2
	Slight	0.05	2.0	10	540	2
	Moderate	0.15	2.0	40	2,162	22
	Severe	0.3	3.0	15	811	25
				Subtotal	**5,404**	**51**
Big Springs Creek	Very Slight	0.01	1.8	8	2,785	2
	Slight	0.045	1.0	42	14,619	22
	Moderate	0.08	1.5	33	11,486	47
	Severe	0.3	1.8	17	5,916	109
				Subtotal	**34,806**	**180**
Hayden Creek	Very Slight	0.01	3.0	27	12,836	13
	Slight	0.03	2.6	59	28,050	74
	Moderate	0.12	2.2	14	6,656	60
				Subtotal	**47,542**	**147**
Upper Lemhi River	Very Slight	0.01	2.2	24	34,337	26
	Slight	0.03	1.6	11	15,737	26
	Moderate	0.1	2.0	54	77,256	525
	Severe	0.3	3.5	9	12,876	460
	Very Severe	0.45	4.0	2	2,861	175
				Subtotal	**143,067**	**1,212**
Middle Lemhi River	Very Slight	0.01	2.5	18	10,478	9
	Slight	0.027	2.3	29	16,881	36
	Moderate	0.1	2.5	39	22,702	193
	Severe	0.29	3.7	12	6,985	255
	Very Severe	0.45	4.0	2	1,164	71
				Subtotal	**58,210**	**564**
Lower Lemhi River	Very Slight	0.01	3.0	12	17,245	18
	Slight	0.025	3.0	47	67,540	172
	Moderate	0.09	3.0	23	33,051	303
	Severe	0.28	4.0	16	22,992	876
	Very Severe	0.45	4.0	2	2,874	176
				Subtotal	**92,702**	**1,545**
				Total	**381,731**	**3,699**

5.3 Bacteria

For the Lemhi River, "bacterial loading from non-point sources is the pollutant of concern" (IDEQ 1999). Potential sources include residential septic systems, wildlife, irrigated pasture and hayland, irrigation return flows, and animal feeding operations. Final load reduction percentages for bacteria, from the TMDL, are displayed in Table 5.3.

Table 5.3 Final Load Reduction Percentages with explicit 20% MOS (IDEQ 1999).

Site = LMH	109	107	105	103	102	101
High Flow LR	92%	94%	92%	83%	87%	89%
Low Flow LR	89%	92%	91%	82%	88%	92%

In order to better define and delineate the sources of bacteria additional monitoring is required. A cooperative effort involving the LSWCD, ISCC, ISDA, IASCD and US Bureau of Reclamation (BOR) is underway to provide support for this monitoring. The results from this additional monitoring will assist in adapting future BMP implementation efforts.

6.0 Critical Areas

Areas of agricultural lands that contribute excessive pollutants to waterbodies are defined as "Critical Areas" for BMP implementation. Critical areas are prioritized for treatment based upon their location to a waterbody of concern , the potential for pollutant transport, and delivery to the receiving waterbody. Accordingly, the following is a general rule that applies to the prioritization of critical acres within each tributary subwatershed. Agricultural critical areas in all of the listed stream segments within the subbasin are:

- Unstable and erosive streambanks
- Areas of severe gully erosion
- Areas where livestock are grazed
- Areas where livestock have access to streams
- Animal Feed Operations

6.1 Tiers

There were three tiers delineated within the subbasin. These tiers were determined by the proximity of the critical areas to §303(d)-listed stream segments. Figures B.3 through B.11, located in Appendix B, shows the implementation tiers for each §303(d) listed subwatershed.

Tier 1 **Unstable and erosive streambanks and riparian areas or facilities adjacent to the stream that have a direct and substantial influence on the stream.**

Tier 2 **Fields or facilities with an indirect, yet substantial influence on the stream.**

Tier 3 **Upland areas or facilities that indirectly influence the stream.**

Table 6.1 Critical Areas by Subwatershed within the Lemhi River Subbasin.

	TMDL Implementation Tier 1		TMDL Implementation Tier 2		TMDL Implementation Tier 3	
Subwatershed	**Riparian**	**AFO**	**Pasturelan d**	**AFO**	**Rangeland**	**AFO**
Lemhi River	693	2	24,889	19	1,056	0
Eighteenmile Creek	49	0	5,807	3	8,033	0
Kirtley Creek	28	1	1,698	1	3,859	0
Wimpey Creek	22	1	1,326	1	902	0
Sandy Creek	21	0	546	2	2,596	0
Geertson Creek	3	0	204	3	3,006	0
Bohannon Creek	18	0	2,528	1	1,521	0
McDevitt Creek	4	2	521	0	660	0
Total	838	6	37,519	30	21,633	0

Note: *Subwatersheds were prioritized by a committee comprised of representatives from the Lemhi Soil & Water Conservation District, Idaho Soil Conservation Commission, Idaho Department of Environmental Quality and the Idaho Department of Fish & Game. Prioritization was based on data from the Lemhi River Subbasin Assessment and TMDL documents, previous water quality monitoring information, field inventory data and input from members of this committee.*

6.2 Animal Feed Operations

National Definition: The term "animal feeding operation" or AFO is defined in EPA regulations as a "lot or facility" where animals "have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period and crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility."

In 2000, the State of Idaho enacted the Beef Cattle Environmental Control Act, Chapter 49, Title 22, Idaho Code. This act enables ISDA to regulate beef cattle animal feed operations to protect state natural resources, including surface water and ground water. In 2001, the ISDA, IDEQ, US

Environmental Protection Agency (EPA), and the Idaho Cattle Association (ICA) entered into a memorandum of understanding on how to regulate beef cattle AFOs in the State of Idaho.

7.0 Threatened and Endangered Species

There are several threatened or endangered fish species in the subbasin. They include Bull Trout (*Salvelinus confluentus),* Westslope Cutthroat Trout (*Oncorhyncus clarki lewsii),* Steelhead (*Oncorhyncus mykiss)* and Chinook Salmon (*Oncorhyncus tshawytscha)*. Many factors caused their decline, some of which are loss of spawning habitat due to excessive fine sediment. This fine sediment can abrade and or suffocate the eggs, trapping fry in the gravels. Dewatering of tributary streams isolates fish populations and fry from the mainstem, which provides critical summer and winter habitat needed for sustainable fish populations. Past activities that have impacted fish populations are; dam installation, commercial fishing and commercial egg taking. Collectively these have reduced populations to critically low current levels.

8.0 Treatment Units

Each agricultural land use is divided into one or more Treatment Units (TUs) (Appendix D). The TUs describe areas with similar use, soils, productivity, resource concerns and treatment needs. These not only provide a method for delineating and describing land use but are also used to evaluate land use impacts to water quality and in the formulation of alternatives for solving identified problems.

8.1 Treatment Unit #1 Riparian Areas

Acres	Soils	Resource Problems
838	Riparian areas occur along stream and river corridors. Soils are typically an alluvial mixture ranging from gravelly and cobbly loams to silty clay loams.	Overgrazing resulting in decreased vegetative condition, suitability and composition. Unstable and eroding streambanks. Increased water temperature. Increased bacterial contribution to the stream.

8.2 Treatment Unit #2 Irrigated Pasture and Hayland

Acres	Soils	Resource Problems
37,519	Gravelly, and cobbly loams, silt loams and silty clay loams. May contain wet (hydric) soils. Slopes range from 0 to 2%.	Pastures grazed below recommended stubble heights. Grazing not uniform. Lack of pasture renovation (20-30 yrs.) Bluegrass species dominate. Soil compaction and hummocking from livestock use during irrigation. Poor production.

8.3 Treatment Unit #3 Rangeland

Acres	Soils	Resource Problems
21,633	Range from very cobbly loam, very cobbly silt loam to very cobbly clay loam. Slope ranges from 2 to 10% and/or 6 to 20% (foothills).	Vegetative condition and production. Soil erosion. Water quality-temperature.

8.4 Treatment Unit #4 Animal Feed Operations (AFO)

Units	Soils	Resource Problems
54	AFOs occur throughout the subbasin. Soils are typically an alluvial mixture of gravelly and cobbly loams to silty clay loams. May contain wet (hydric) soils. Slope ranges 0 to	Irrigation returns or runoff from corrals. Increased bacteria loading from runoff. Streambank impacts. Inadequate storage.

	2%.	

9.0 Proposed Treatment

The proposed treatment for sediment and bacteria reduction will be to implement BMPs through RMS conservation plans in Treatment Units (TUs) within each subwatershed. RMS plans are a combination of BMPs and is defined in Idaho's Agricultural Pollution Abatement Plan. Table 9.1 lists the estimated cost of BMPs and Table 9.2 describes action items yet to be completed.

Table 9.0 Total BMP Costs for the entire Lemhi River Subbasin (all treatment units).

Treatment Unit	Best Management Practice	Unit Type	Unit Cost	C/S Rate	Total Amount	C/S Funds	Operator Funds	Total Funds
TU1 Riparian	Riparian Forest Buffer	each	$23.00	75%	10,000	$172,500	$57,500	$230,000
	Channel Vegetation	foot	$6.00	75%	56,400	$253,800	$84,600	$338,400
	Conservation Cover	acre	$100.00	75%	277	$20,775	$6,925	$27,700
	Jack Fence	foot	$4.50	75%	184,600	$623,025	$207,675	$830,700
	4-wire Fence	foot	$1.15	75%	96,200	$82,973	$27,658	$110,630
	Use Exclusion	acre	$14.00	75%	307	$3,224	$1,075	$4,298
	Prescribed Grazing	acre	$1.50	75%	421	$474	$158	$632
	Heavy Use Area Protection	each	$2,000.00	75%	69	$103,500	$34,500	$138,000
	Streambank Protection	foot	$45.00	75%	5,500	$185,625	$61,875	$247,500
	Stream Channel Stabilization	foot	$30.00	75%	1,800	$40,500	$13,500	$54,000
	Wetland Restoration	acre	$4,100.00	75%	59	$181,425	$60,475	$241,900
					Subtotal	**$1,667,820**	**$555,940**	**$2,223,760**
TU2 Pasture & Hayland	Critical Area Planting	acre	$160.00	75%	48	$5,760	$1,920	$7,680
	Jack Fence	foot	$4.50	75%	30,000	$101,250	$33,750	$135,000
	4-wire Fence	foot	$1.15	75%	140,000	$120,750	$40,250	$161,000
	Pipe 100 psi, 12"	foot	$9.40	50%	70,200	$329,940	$329,940	$659,880
	Irrigation System, Hand Line	acre	$400.00	50%	2,150	$430,000	$430,000	$860,000
	Irrigation System, Wheel Line	foot	$7.00	50%	59,600	$208,600	$208,600	$417,200
	Irrigation Water Management	acre	$5.00	100%	21,300	$0	$106,500	$106,500
	Pasture & Hayland Planting	acre	$65.00	75%	1,520	$74,100	$24,700	$98,800
	PVC Pipe 1.50"	foot	$1.98	75%	77,300	$114,791	$38,264	$153,054
	Prescribed Grazing	acre	$1.50	75%	11,400	$12,825	$4,275	$17,100
	Pump Plant for Water Control	hp	$240.00	50%	1,220	$146,400	$146,400	$292,800
	Spring Development	each	$2,500.00	75%	62	$116,250	$38,750	$155,000
	Nutrient Management	acre	$5.00	75%	9,550	$35,813	$11,938	$47,750
	Nutrient Soil Testing	each	$55.00	75%	190	$7,838	$2,613	$10,450
	Trough or Tank	each	$775.00	75%	111	$64,519	$21,506	$86,025
	Livestock Water Well	each	$3,500.00	75%	27	$70,875	$23,625	$94,500
					Subtotal	**$1,839,709**	**$1,463,030**	**$3,302,739**
TU3 Rangeland	4-wire Fence	foot	$1.15	75%	92,000	$79,350	$26,450	$105,800
	PVC Pipe 1.50"	foot	$1.98	75%	56,500	$83,903	$27,968	$111,870
	Prescribed Grazing	acre	$1.50	75%	15,590	$17,539	$5,846	$23,385
	Range Planting	acre	$55.00	75%	190	$7,838	$2,613	$10,450
	Spring Development	each	$2,500.00	75%	16	$30,000	$10,000	$40,000
	Trough or Tank	each	$775.00	75%	19	$11,044	$3,681	$14,725
					Subtotal	**$229,673**	**$76,558**	**$306,230**
TU4 AFO	Waste Management System	each	$66,666	75%	16	$799,992	$266,664	$1,066,656
	Nutrient Management	head	$1.00	75%	5,100	$3,825	$1,275	$5,100

Subtotal	**$803,817**	**$267,939**	**$1,071,756**
Total	**$4,541,018**	**$2,363,466**	**$6,904,484**

Table 9.1 Action items to be completed in the Lemhi River Subbasin (all treatment units).

Priority Subwatershed	Action Item	Completion Date
1. Lemhi River	Continue bacteria monitoring on mainstem and tributaries	Ongoing
	Initiate landowner contacts for inventory and implementation	June 2002
	Outreach efforts for example projects, tours and newsletters	Ongoing
	Complete conservation plans with project contracts	Ongoing
2. Eighteenmile Creek	Complete stream assessment for 2.5 miles of private land	Sept 2002
	Initiate landowner contacts for inventory and implementation	June 2002
	Outreach efforts for example projects, tours and newsletters	Ongoing
	Complete conservation plans with project contracts	Ongoing
3. Kirtley Creek	Complete stream assessment for 6.9 miles of private land	Sept 2002
	Initiate landowner contacts for inventory and implementation	June 2002
	Outreach efforts for example projects, tours and newsletters	Ongoing
	Complete conservation plans with project contracts	Ongoing
4. Wimpey Creek	Complete stream assessment for 2.1 miles of private land	Sept 2002
	Initiate landowner contacts for inventory and implementation	June 2002
	Outreach efforts for example projects, tours and newsletters	Ongoing
	Complete conservation plans with project contracts	Ongoing
5. Sandy Creek	Complete stream assessment for 0.3 miles of private land	Sept 2002
	Initiate landowner contacts for inventory and implementation	June 2002
	Outreach efforts for example projects, tours and newsletters	Ongoing
	Complete conservation plans with project contracts	Ongoing
6. Geertson Creek	Complete stream assessment for 3.3 miles of private land	Sept 2002
	Initiate landowner contacts for inventory and implementation	June 2002
	Outreach efforts for example projects, tours and newsletters	Ongoing
	Complete conservation plans with project contracts	Ongoing
7. Bohannon Creek	Complete stream assessment for 0.4 miles of private land	Sept 2002
	Initiate landowner contacts for inventory and implementation	June 2002
	Outreach efforts for example projects, tours and newsletters	Ongoing
	Complete conservation plans with project contracts	Ongoing
8. McDevitt Creek	Initiate landowner contacts for inventory and implementation	June 2002
	Outreach efforts for example projects, tours and newsletters	Ongoing

	Complete conservation plans with project contracts	Ongoing

10.0 Funding

Current funding for implementation of agricultural projects is being provided through Idaho's Water Quality Program for Agriculture (WQPA), the federal Environmental Quality Incentives Program (EQIP) and the Bonneville Power Administration (BPA) for the Upper Salmon Basin Watershed Project (USBWP). The LSWCD has submitted an application to IDEQ for §319 funding for BMP implementation involving ten landowners. Other potential funding sources being evaluated include Continuous Sign-Up Conservation Reserve Program (C-CRP) through USDA-FSA and the Resource Conservation and Rangeland Development Program (RCRDP) through the ISCC.

11.0 Outreach

The conservation partnership (LSWCD, ISCC and USDA-NRCS) will use their combined resources to provide information to agricultural landowners and operators within the subbasin. A local outreach plan will be developed by the conservation partnership. Newspaper articles, district newsletters, watershed and project tours, landowner meetings and one on one personal contact will be used as outreach tools. Outreach efforts will:

- Provide information about the TMDL process.
- Provide water quality monitoring results.
- Accelerate the development of conservation plans and program participation.
- Provide progress reports.
- Enhance technology transfer related to BMP implementation.
- Increase awareness of agriculture's contribution to conserve and enhance natural resources.
- Increase the public's awareness of agriculture's commitment to meeting the TMDL challenge.

12.0 Evaluation and Monitoring

Evaluation and monitoring will be an integral component of this implementation plan. At the field level the ISCC and USDA-NRCS will complete annual status reviews in cost-share programs such as EQIP, CRP, WQPA, RCRDP and §319. In addition the ISCC will complete BMP effectiveness evaluations throughout the implementation phase. The ISCC has an established BMP evaluation format and process that will be implemented in conjunction with the annual status reviews. Evaluation protocols have been developed for many water quality BMPs and component practices. Should the situation arise where an appropriate protocol is lacking, the ISCC will work with agencies such as USDA-NRCS, UI-CES, IDEQ and LSWCD to develop the needed protocol.

At the subbasin level, ISDA and IASCD water quality analysts will provide water quality monitoring. ISCC and BOR will continue the bacteria monitoring until sufficient data is obtained to identify and locate major bacteria sources within the subbasin. All water quality monitoring activities will be coordinated with IDEQ, ISCC, and the LSWCD. The ISCC and USDA-NRCS will also complete periodic and annual project and program reviews. Reviews will be comprehensive from both a technical and administrative standpoint. These reviews will be very important for ensuring sound decision making involved with adaptation of implementation priorities and direction. The ISCC will be responsible for tracking and reporting implementation progress for all cost-share programs.

13.0 References

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APPENDIX A

Table A.1 Detailed BMP Costs for the Lemhi River Subwatershed for all Treatment Units.

Treatment Unit	Best Management Practice	Unit Type	Unit Cost	C/S Rate	Practice Amount	C/S Funds	Operator Funds	Total Funds
TU1 Riparian	Riparian Forest Buffer	each	$23.00	75%	7,000	$120,750	$40,250	$161,000
	Channel Vegetation	foot	$6.00	75%	30,000	$135,000	$45,000	$180,000
	Conservation Cover	acre	$100.00	75%	200	$15,000	$5,000	$20,000
	Jack Fence	foot	$4.50	75%	132,000	$445,500	$148,500	$594,000
	4-wire Fence	foot	$1.15	75%	50,000	$43,125	$14,375	$57,500
	Use Exclusion	acre	$14.00	75%	250	$2,625	$875	$3,500
	Prescribed Grazing	acre	$1.50	75%	250	$281	$94	$375
	Heavy Use Area Protection	each	$2,000.00	75%	40	$60,000	$20,000	$80,000
	Streambank Protection	foot	$45.00	75%	2,000	$67,500	$22,500	$90,000
	Wetland Restoration	acre	$4,100.00	75%	40	$123,000	$41,000	$164,000
					Subtotal	**$1,012,781**	**$337,594**	**$1,350,375**
TU2 Pasture & Hayland	Critical Area Planting	acre	$160.00	75%	30	$3,600	$1,200	$4,800
	Jack Fence	foot	$4.50	75%	10,000	$33,750	$11,250	$45,000
	4-wire Fence	foot	$1.15	75%	40,000	$34,500	$11,500	$46,000
	Pipe 100 psi, 12"	foot	$9.40	50%	30,000	$141,000	$141,000	$282,000
	Irrigation System, Hand Line	acre	$400.00	50%	1,000	$200,000	$200,000	$400,000
	Irrigation System, Wheel Line	foot	$7.00	50%	30,000	$105,000	$105,000	$210,000
	Irrigation Water Management	acre	$5.00	100%	10,000	$0	$50,000	$50,000
	Pasture & Hayland Planting	acre	$65.00	75%	500	$24,375	$8,125	$32,500
	PVC Pipe 1.50"	foot	$1.98	75%	30,000	$44,550	$14,850	$59,400
	Prescribed Grazing	acre	$1.50	75%	3,000	$3,375	$1,125	$4,500
	Pump Plant for Water Control	hp	$240.00	50%	500	$60,000	$60,000	$120,000
	Spring Development	each	$2,500.00	75%	30	$56,250	$18,750	$75,000
	Nutrient Management	acre	$5.00	75%	5,000	$18,750	$6,250	$25,000
	Nutrient Soil Testing	each	$55.00	75%	50	$2,063	$688	$2,750
	Trough or Tank	each	$775.00	75%	50	$29,063	$9,688	$38,750
	Livestock Water Well	each	$3,500.00	75%	15	$39,375	$13,125	$52,500
					Subtotal	**$795,650**	**$652,550**	**$1,448,200**
TU3 Rangeland	4-wire Fence	foot	$1.15	75%	2,000	$1,725	$575	$2,300
	PVC Pipe 1.50"	foot	$1.98	75%	2,000	$2,970	$990	$3,960
	Prescribed Grazing	acre	$1.50	75%	500	$563	$188	$750
	Range Planting	acre	$55.00	75%	20	$825	$275	$1,100
	Spring Development	each	$2,500.00	75%	2	$3,750	$1,250	$5,000
	Trough or Tank	each	$775.00	75%	3	$1,744	$581	$2,325
					Subtotal	**$11,576**	**$3,859**	**$15,435**
TU4 Animal Feed Operations	Waste Management System	each	$66,666	75%	8	$399,996	$133,332	$533,328
	Nutrient Management, Animal Waste	head	$1.00	75%	2,000	$1,500	$500	$2,000
					Subtotal	**$401,496**	**$133,832**	**$535,328**
					Total	**$2,221,504**	**$1,127,835**	**$3,349,338**

Table A.2 Detailed BMP Costs for Eighteenmile Creek Subwatershed for all Treatment Units.

Treatment Unit	Best Management Practice	Unit Type	Unit Cost	C/S Rate	Practice Amount	C/S Funds	Operator Funds	Total Funds
TU1 Riparian	Riparian Forest Buffer	each	$23.00	75%	1,000	$17,250	$5,750	$23,000
	Channel Vegetation	foot	$6.00	75%	10,000	$45,000	$15,000	$60,000
	Conservation Cover	acre	$100.00	75%	30	$2,250	$750	$3,000
	Jack Fence	foot	$4.50	75%	15,000	$50,625	$16,875	$67,500
	4-wire Fence	foot	$1.15	75%	15,000	$12,938	$4,313	$17,250
	Use Exclusion	acre	$14.00	75%	20	$210	$70	$280
	Prescribed Grazing	acre	$1.50	75%	20	$23	$8	$30
	Heavy Use Area Protection	each	$2,000.00	75%	10	$15,000	$5,000	$20,000
	Streambank Protection	foot	$45.00	75%	200	$6,750	$2,250	$9,000
	Wetland Restoration	acre	$4,100.00	75%	5	$15,375	$5,125	$20,500
					Subtotal	**$165,420**	**$55,140**	**$220,560**
TU2 Pasture & Hayland	Critical Area Planting	acre	$160.00	75%	6	$720	$240	$960
	Jack Fence	foot	$4.50	75%	0	$0	$0	$0
	4-wire Fence	foot	$1.15	75%	20,000	$17,250	$5,750	$23,000
	Pipe 100 psi, 12"	foot	$9.40	50%	10,000	$47,000	$47,000	$94,000
	Irrigation System, Hand Line	acre	$400.00	50%	200	$40,000	$40,000	$80,000
	Irrigation System, Wheel Line	foot	$7.00	50%	10,000	$35,000	$35,000	$70,000
	Irrigation Water Management	acre	$5.00	100%	2,500	$0	$12,500	$12,500
	Pasture & Hayland Planting	acre	$65.00	75%	300	$14,625	$4,875	$19,500
	PVC Pipe 1.50"	foot	$1.98	75%	10,000	$14,850	$4,950	$19,800
	Prescribed Grazing	acre	$1.50	75%	2,000	$2,250	$750	$3,000
	Pump Plant for Water Control	hp	$240.00	50%	120	$14,400	$14,400	$28,800
	Spring Development	each	$2,500.00	75%	5	$9,375	$3,125	$12,500
	Nutrient Management, Commercial Fertilizer	acre	$5.00	75%	800	$3,000	$1,000	$4,000
	Nutrient Soil Testing	each	$55.00	75%	20	$825	$275	$1,100
	Trough or Tank	each	$775.00	75%	8	$4,650	$1,550	$6,200
	Livestock Water Well	each	$3,500.00	75%	2	$5,250	$1,750	$7,000
					Subtotal	**$209,195**	**$173,165**	**$382,360**
TU3 Rangeland	4-wire Fence	foot	$1.15	75%	20,000	$17,250	$5,750	$23,000
	PVC Pipe 1.50"	foot	$1.98	75%	15,000	$22,275	$7,425	$29,700
	Prescribed Grazing	acre	$1.50	75%	4,000	$4,500	$1,500	$6,000
	Range Planting	acre	$55.00	75%	50	$2,063	$688	$2,750
	Spring Development	each	$2,500.00	75%	5	$9,375	$3,125	$12,500
	Trough or Tank	each	$775.00	75%	5	$2,906	$969	$3,875
					Subtotal	**$58,369**	**$19,456**	**$77,825**
TU4 AFO	Waste Management System	each	$66,666	75%	1	$50,000	$16,667	$66,666
	Nutrient Management, Animal Waste	head	$1.00	75%	600	$450	$150	$600
					Subtotal	**$50,450**	**$16,817**	**$67,266**
					Total	**$483,433**	**$264,578**	**$748,011**

Table A.3 Detailed BMP Costs for the Kirtley Creek Subwatershed for all Treatment Units.

Treatment Unit	Best Management Practice	Unit Type	Unit Cost	C/S Rate	Practice Amount	C/S Funds	Operator Funds	Total Funds
TU1 Riparian	Riparian Forest Buffer	each	$23.00	75%	250	$4,313	$1,438	$5,750
	Channel Vegetation	foot	$6.00	75%	2,600	$11,700	$3,900	$15,600
	Conservation Cover	acre	$100.00	75%	7	$525	$175	$700
	Jack Fence	foot	$4.50	75%	5,000	$16,875	$5,625	$22,500
	4-wire Fence	foot	$1.15	75%	5,000	$4,313	$1,438	$5,750
	Use Exclusion	acre	$14.00	75%	5	$53	$18	$70
	Prescribed Grazing	acre	$1.50	75%	22	$25	$8	$33
	Heavy Use Area Protection	each	$2,000.00	75%	2	$3,000	$1,000	$4,000
	Stream Channel Stabilization	foot	$30.00	75%	500	$11,250	$3,750	$15,000
	Streambank Protection	foot	$45.00	75%	50	$1,688	$563	$2,250
	Wetland Restoration	acre	$4,100.00	75%	2	$6,150	$2,050	$8,200
					Subtotal	**$59,890**	**$19,963**	**$79,853**
TU2 Pasture & Hayland	Critical Area Planting	acre	$160.00	75%	1	$120	$40	$160
	Jack Fence	foot	$4.50	75%	0	$0	$0	$0
	4-wire Fence	foot	$1.15	75%	10,000	$8,625	$2,875	$11,500
	Pipe 100 psi, 12"	foot	$9.40	50%	5,000	$23,500	$23,500	$47,000
	Irrigation System, Hand Line	acre	$400.00	50%	100	$20,000	$20,000	$40,000
	Irrigation System, Wheel Line	foot	$7.00	50%	1,320	$4,620	$4,620	$9,240
	Irrigation Water Management	acre	$5.00	100%	1,200	$0	$6,000	$6,000
	Pasture & Hayland Planting	acre	$65.00	75%	100	$4,875	$1,625	$6,500
	PVC Pipe 1.50"	foot	$1.98	75%	5,000	$7,425	$2,475	$9,900
	Prescribed Grazing	acre	$1.50	75%	800	$900	$300	$1,200
	Pump Plant for Water Control	hp	$240.00	50%	60	$7,200	$7,200	$14,400
	Spring Development	each	$2,500.00	75%	3	$5,625	$1,875	$7,500
	Nutrient Management, Commercial Fertilizer	acre	$5.00	75%	600	$2,250	$750	$3,000
	Nutrient Soil Testing	each	$55.00	75%	20	$825	$275	$1,100
	Trough or Tank	each	$775.00	75%	6	$3,488	$1,163	$4,650
	Livestock Water Well	each	$3,500.00	75%	1	$2,625	$875	$3,500
					Subtotal	**$92,078**	**$73,573**	**$165,650**
TU3 Rangeland	4-wire Fence	foot	$1.15	75%	20,000	$17,250	$5,750	$23,000
	PVC Pipe 1.50"	foot	$1.98	75%	10,000	$14,850	$4,950	$19,800
	Prescribed Grazing	acre	$1.50	75%	3,600	$4,050	$1,350	$5,400
	Range Planting	acre	$55.00	75%	20	$825	$275	$1,100
	Spring Development	each	$2,500.00	75%	2	$3,750	$1,250	$5,000
	Trough or Tank	each	$775.00	75%	2	$1,163	$388	$1,550
					Subtotal	**$41,888**	**$13,963**	**$55,850**
TU4 AFO	Waste Management System	each	$66,666	75%	2	$99,999	$33,333	$133,332
	Nutrient Management, Animal Waste	head	$1.00	75%	300	$225	$75	$300
					Subtotal	**$100,224**	**$33,408**	**$133,632**
					Total	**$294,079**	**$140,906**	**$434,985**

Table A.4 Detailed BMP Costs for the Wimpey Creek Subwatershed for all Treatment Units.

Treatment Unit	Best Management Practice	Unit Type	Unit Cost	C/S Rate	Practice Amount	C/S Funds	Operator Funds	Total Funds
TU1 Riparian	Riparian Forest Buffer	each	$23.00	75%	200	$3,450	$1,150	$4,600
	Channel Vegetation	foot	$6.00	75%	0	$0	$0	$0
	Conservation Cover	acre	$100.00	75%	0	$0	$0	$0
	Jack Fence	foot	$4.50	75%	8,400	$28,350	$9,450	$37,800
	4-wire Fence	foot	$1.15	75%	2,000	$1,725	$575	$2,300
	Use Exclusion	acre	$14.00	75%	5	$53	$18	$70
	Prescribed Grazing	acre	$1.50	75%	20	$23	$8	$30
	Heavy Use Area Protection	each	$2,000.00	75%	2	$3,000	$1,000	$4,000
	Stream Channel Stabilization	foot	$30.00	75%	500	$11,250	$3,750	$15,000
	Streambank Protection	foot	$45.00	75%	250	$8,438	$2,813	$11,250
	Wetland Restoration	acre	$4,100.00	75%	2	$6,150	$2,050	$8,200
					Subtotal	**$62,438**	**$20,813**	**$83,250**
TU2 Pasture & Hayland	Critical Area Planting	acre	$160.00	75%	2	$240	$80	$320
	Jack Fence	foot	$4.50	75%	0	$0	$0	$0
	4-wire Fence	foot	$1.15	75%	10,000	$8,625	$2,875	$11,500
	Pipe 100 psi, 12"	foot	$9.40	50%	5,000	$23,500	$23,500	$47,000
	Irrigation System, Hand Line	acre	$400.00	50%	200	$40,000	$40,000	$80,000
	Irrigation System, Wheel Line	foot	$7.00	50%	4,000	$14,000	$14,000	$28,000
	Irrigation Water Management	acre	$5.00	100%	200	$0	$1,000	$1,000
	Pasture & Hayland Planting	acre	$65.00	75%	0	$0	$0	$0
	PVC Pipe 1.50"	foot	$1.98	75%	0	$0	$0	$0
	Prescribed Grazing	acre	$1.50	75%	400	$450	$150	$600
	Pump Plant for Water Control	hp	$240.00	50%	60	$7,200	$7,200	$14,400
	Spring Development	each	$2,500.00	75%	4	$7,500	$2,500	$10,000
	Nutrient Management, Commercial Fertilizer	acre	$5.00	75%	100	$375	$125	$500
	Nutrient Soil Testing	each	$55.00	75%	20	$825	$275	$1,100
	Trough or Tank	each	$775.00	75%	6	$3,488	$1,163	$4,650
	Livestock Water Well	each	$3,500.00	75%	1	$2,625	$875	$3,500
					Subtotal	**$108,828**	**$93,743**	**$202,570**
TU3 Rangeland	4-wire Fence	foot	$1.15	75%	1,000	$863	$288	$1,150
	PVC Pipe 1.50"	foot	$1.98	75%	500	$743	$248	$990
	Prescribed Grazing	acre	$1.50	75%	50	$56	$19	$75
	Range Planting	acre	$55.00	75%	5	$206	$69	$275
	Spring Development	each	$2,500.00	75%	1	$1,875	$625	$2,500
	Trough or Tank	each	$775.00	75%	1	$581	$194	$775
					Subtotal	**$4,324**	**$1,441**	**$5,765**
TU4 AFO	Waste Management System	each	$66,666	75%	1	$50,000	$16,667	$66,666
	Nutrient Management, Animal Waste	head	$1.00	75%	300	$225	$75	$300
					Subtotal	**$50,225**	**$16,742**	**$66,966**
					Total	**$225,813**	**$132,738**	**$358,551**

Table A.5 Detailed BMP Costs for the Sandy Creek Subwatershed for all Treatment Units.

Treatment Unit	Best Management Practice	Unit Type	Unit Cost	C/S Rate	Practice Amount	C/S Funds	Operator Funds	Total Funds
TU1 Riparian	Riparian Forest Buffer	each	$23.00	75%	250	$4,313	$1,438	$5,750
	Channel Vegetation	foot	$6.00	75%	2,600	$11,700	$3,900	$15,600
	Conservation Cover	acre	$100.00	75%	7	$525	$175	$700
	Jack Fence	foot	$4.50	75%	5,000	$16,875	$5,625	$22,500
	4-wire Fence	foot	$1.15	75%	5,000	$4,313	$1,438	$5,750
	Use Exclusion	acre	$14.00	75%	5	$53	$18	$70
	Prescribed Grazing	acre	$1.50	75%	20	$23	$8	$30
	Heavy Use Area Protection	each	$2,000.00	75%	4	$6,000	$2,000	$8,000
	Stream Channel Stabilization	foot	$30.00	75%	400	$9,000	$3,000	$12,000
	Streambank Protection	foot	$45.00	75%	250	$8,438	$2,813	$11,250
	Wetland Restoration	acre	$4,100.00	75%	2	$6,150	$2,050	$8,200
					Subtotal	**$67,388**	**$22,463**	**$89,850**
TU2 Pasture & Hayland	Critical Area Planting	acre	$160.00	75%	2	$240	$80	$320
	Jack Fence	foot	$4.50	75%	20,000	$67,500	$22,500	$90,000
	4-wire Fence	foot	$1.15	75%	10,000	$8,625	$2,875	$11,500
	Pipe 100 psi, 12"	foot	$9.40	50%	200	$940	$940	$1,880
	Irrigation System, Hand Line	acre	$400.00	50%	0	$0	$0	$0
	Irrigation System, Wheel Line	foot	$7.00	50%	2,640	$9,240	$9,240	$18,480
	Irrigation Water Management	acre	$5.00	100%	2,000	$0	$10,000	$10,000
	Pasture & Hayland Planting	acre	$65.00	75%	200	$9,750	$3,250	$13,000
	PVC Pipe 1.50"	foot	$1.98	75%	10,000	$14,850	$4,950	$19,800
	Prescribed Grazing	acre	$1.50	75%	1,600	$1,800	$600	$2,400
	Pump Plant for Water Control	hp	$240.00	50%	120	$14,400	$14,400	$28,800
	Spring Development	each	$2,500.00	75%	6	$11,250	$3,750	$15,000
	Nutrient Management, Commercial Fertilizer	acre	$5.00	75%	1,000	$3,750	$1,250	$5,000
	Nutrient Soil Testing	each	$55.00	75%	20	$825	$275	$1,100
	Trough or Tank	each	$775.00	75%	12	$6,975	$2,325	$9,300
	Livestock Water Well	each	$3,500.00	75%	2	$5,250	$1,750	$7,000
					Subtotal	**$155,395**	**$78,185**	**$233,580**
TU3 Rangeland	4-wire Fence	foot	$1.15	75%	5,000	$4,313	$1,438	$5,750
	PVC Pipe 1.50"	foot	$1.98	75%	5,000	$7,425	$2,475	$9,900
	Prescribed Grazing	acre	$1.50	75%	500	$563	$188	$750
	Range Planting	acre	$55.00	75%	20	$825	$275	$1,100
	Spring Development	each	$2,500.00	75%	2	$3,750	$1,250	$5,000
	Trough or Tank	each	$775.00	75%	2	$1,163	$388	$1,550
					Subtotal	**$18,038**	**$6,013**	**$24,050**
TU4 AFO	Waste Management System	each	$66,666	75%	1	$50,000	$16,667	$66,666
	Nutrient Management, Animal Waste	head	$1.00	75%	250	$188	$63	$250
					Subtotal	**$50,187**	**$16,729**	**$66,916**
					Total	**$291,007**	**$123,389**	**$414,396**

Table A.6 Detailed BMP Costs for the Geertson Creek Subwatershed for all Treatment Units.

Treatment Unit	Best Management Practice	Unit Type	Unit Cost	C/S Rate	Practice Amount	C/S Funds	Operator Funds	Total Funds
TU1 Riparian	Riparian Forest Buffer	each	$23.00	75%	500	$8,625	$2,875	$11,500
	Channel Vegetation	foot	$6.00	75%	5,200	$23,400	$7,800	$31,200
	Conservation Cover	acre	$100.00	75%	14	$1,050	$350	$1,400
	Jack Fence	foot	$4.50	75%	10,000	$33,750	$11,250	$45,000
	4-wire Fence	foot	$1.15	75%	10,000	$8,625	$2,875	$11,500
	Use Exclusion	acre	$14.00	75%	10	$105	$35	$140
	Prescribed Grazing	acre	$1.50	75%	44	$50	$17	$66
	Heavy Use Area Protection	each	$2,000.00	75%	4	$6,000	$2,000	$8,000
	Stream Channel Stabilization	foot	$30.00	75%	1,000	$22,500	$7,500	$30,000
	Streambank Protection	foot	$45.00	75%	100	$3,375	$1,125	$4,500
	Wetland Restoration	acre	$4,100.00	75%	4	$12,300	$4,100	$16,400
					Subtotal	**$119,780**	**$39,927**	**$159,706**
TU2 Pasture & Hayland	Critical Area Planting	acre	$160.00	75%	2	$240	$80	$320
	Jack Fence	foot	$4.50	75%	0	$0	$0	$0
	4-wire Fence	foot	$1.15	75%	20,000	$17,250	$5,750	$23,000
	Pipe 100 psi, 12"	foot	$9.40	50%	10,000	$47,000	$47,000	$94,000
	Irrigation System, Hand Line	acre	$400.00	50%	200	$40,000	$40,000	$80,000
	Irrigation System, Wheel Line	foot	$7.00	50%	2,640	$9,240	$9,240	$18,480
	Irrigation Water Management	acre	$5.00	100%	2,400	$0	$12,000	$12,000
	Pasture & Hayland Planting	acre	$65.00	75%	200	$9,750	$3,250	$13,000
	PVC Pipe 1.50"	foot	$1.98	75%	10,000	$14,850	$4,950	$19,800
	Prescribed Grazing	acre	$1.50	75%	1,600	$1,800	$600	$2,400
	Pump Plant for Water Control	hp	$240.00	50%	120	$14,400	$14,400	$28,800
	Spring Development	each	$2,500.00	75%	6	$11,250	$3,750	$15,000
	Nutrient Management, Commercial Fertilizer	acre	$5.00	75%	800	$3,000	$1,000	$4,000
	Nutrient Soil Testing	each	$55.00	75%	20	$825	$275	$1,100
	Trough or Tank	each	$775.00	75%	12	$6,975	$2,325	$9,300
	Livestock Water Well	each	$3,500.00	75%	2	$5,250	$1,750	$7,000
					Subtotal	**$181,830**	**$146,370**	**$328,200**
TU3 Rangeland	4-wire Fence	foot	$1.15	75%	40,000	$34,500	$11,500	$46,000
	PVC Pipe 1.50"	foot	$1.98	75%	20,000	$29,700	$9,900	$39,600
	Prescribed Grazing	acre	$1.50	75%	6,000	$6,750	$2,250	$9,000
	Range Planting	acre	$55.00	75%	40	$1,650	$550	$2,200
	Spring Development	each	$2,500.00	75%	2	$3,750	$1,250	$5,000
	Trough or Tank	each	$775.00	75%	2	$1,163	$388	$1,550
					Subtotal	**$77,513**	**$25,838**	**$103,350**
TU4 AFO	Waste Management System	each	$66,666	75%	1	$50,000	$16,667	$66,666
	Nutrient Management, Animal Waste	head	$1.00	75%	600	$450	$150	$600
					Subtotal	**$50,450**	**$16,817**	**$67,266**
					Total	**$429,572**	**$228,951**	**$658,522**

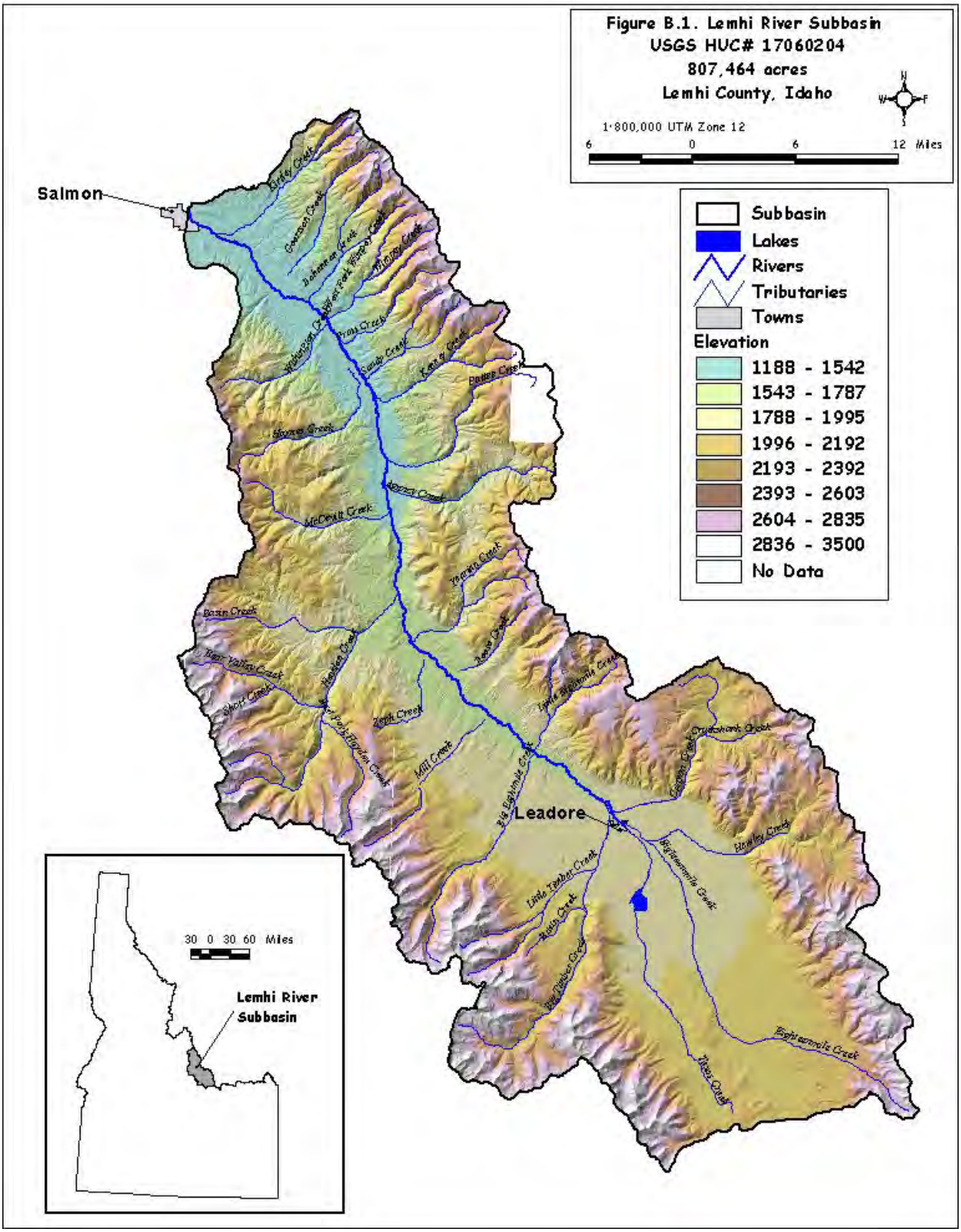
Table A.7 Detailed BMP Costs for the Bohannon Creek Subwatershed for all Treatment Units.

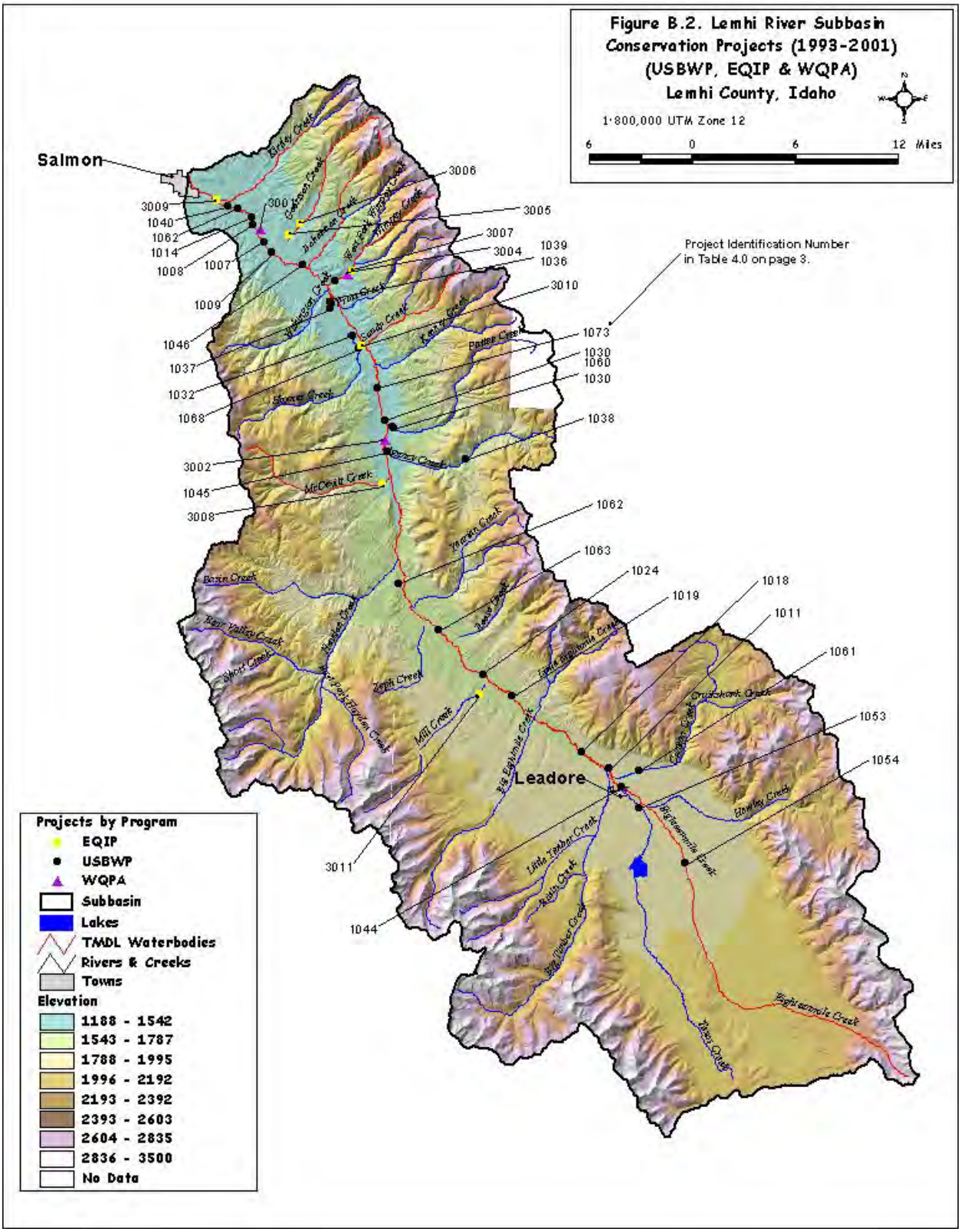
Treatment Unit	Best Management Practice	Unit Type	Unit Cost	C/S Rate	Practice Amount	C/S Funds	Operator Funds	Total Funds
TU1 Riparian	Riparian Forest Buffer	each	$23.00	75%	300	$5,175	$1,725	$6,900
	Channel Vegetation	foot	$6.00	75%	3,400	$15,300	$5,100	$20,400
	Conservation Cover	acre	$100.00	75%	12	$900	$300	$1,200
	Jack Fence	foot	$4.50	75%	7,200	$24,300	$8,100	$32,400
	4-wire Fence	foot	$1.15	75%	7,200	$6,210	$2,070	$8,280
	Use Exclusion	acre	$14.00	75%	7	$74	$25	$98
	Prescribed Grazing	acre	$1.50	75%	30	$34	$11	$45
	Heavy Use Area Protection	each	$2,000.00	75%	4	$6,000	$2,000	$8,000
	Stream Channel Stabilization	foot	$30.00	75%	500	$11,250	$3,750	$15,000
	Streambank Protection	foot	$45.00	75%	900	$30,375	$10,125	$40,500
	Wetland Restoration	acre	$4,100.00	75%	2	$6,150	$2,050	$8,200
					Subtotal	**$105,767**	**$35,256**	**$141,023**
TU2 Pasture & Hayland	Critical Area Planting	acre	$160.00	75%	3	$360	$120	$480
	Jack Fence	foot	$4.50	75%	0	$0	$0	$0
	4-wire Fence	foot	$1.15	75%	20,000	$17,250	$5,750	$23,000
	Pipe 100 psi, 12"	foot	$9.40	50%	10,000	$47,000	$47,000	$94,000
	Irrigation System, Hand Line	acre	$400.00	50%	200	$40,000	$40,000	$80,000
	Irrigation System, Wheel Line	foot	$7.00	50%	6,000	$21,000	$21,000	$42,000
	Irrigation Water Management	acre	$5.00	100%	2,500	$0	$12,500	$12,500
	Pasture & Hayland Planting	acre	$65.00	75%	200	$9,750	$3,250	$13,000
	PVC Pipe 1.50"	foot	$1.98	75%	9,300	$13,811	$4,604	$18,414
	Prescribed Grazing	acre	$1.50	75%	1,500	$1,688	$563	$2,250
	Pump Plant for Water Control	hp	$240.00	50%	120	$14,400	$14,400	$28,800
	Spring Development	each	$2,500.00	75%	5	$9,375	$3,125	$12,500
	Nutrient Management, Commercial Fertilizer	acre	$5.00	75%	1,000	$3,750	$1,250	$5,000
	Nutrient Soil Testing	each	$55.00	75%	20	$825	$275	$1,100
	Trough or Tank	each	$775.00	75%	7	$4,069	$1,356	$5,425
	Livestock Water Well	each	$3,500.00	75%	2	$5,250	$1,750	$7,000
					Subtotal	**$188,527**	**$156,942**	**$345,469**
TU3 Rangeland	4-wire Fence	foot	$1.15	75%	2,000	$1,725	$575	$2,300
	PVC Pipe 1.50"	foot	$1.98	75%	2,000	$2,970	$990	$3,960
	Prescribed Grazing	acre	$1.50	75%	640	$720	$240	$960
	Range Planting	acre	$55.00	75%	20	$825	$275	$1,100
	Spring Development	each	$2,500.00	75%	1	$1,875	$625	$2,500
	Trough or Tank	each	$775.00	75%	2	$1,163	$388	$1,550
					Subtotal	**$9,278**	**$3,093**	**$12,370**
TU4 AFO	Waste Management System	each	$66,666	75%	1	$50,000	$16,667	$66,666
	Nutrient Management, Animal Waste	head	$1.00	75%	450	$338	$113	$450
					Subtotal	**$50,337**	**$16,779**	**$67,116**
					Total	**$353,909**	**$212,070**	**$565,978**

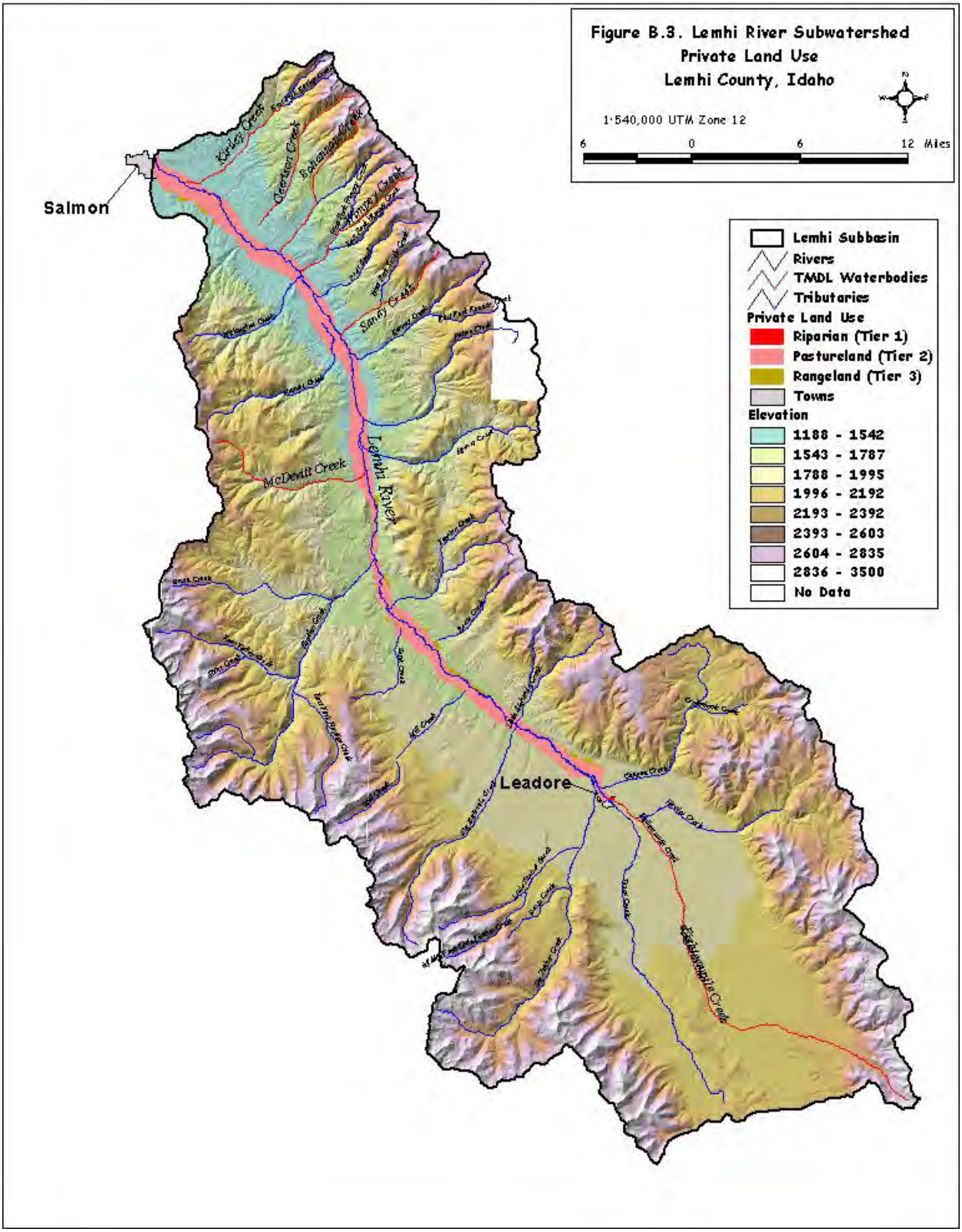
Table A.8 Detailed BMP Costs for the McDevitt Creek Subwatershed for all Treatment Units.

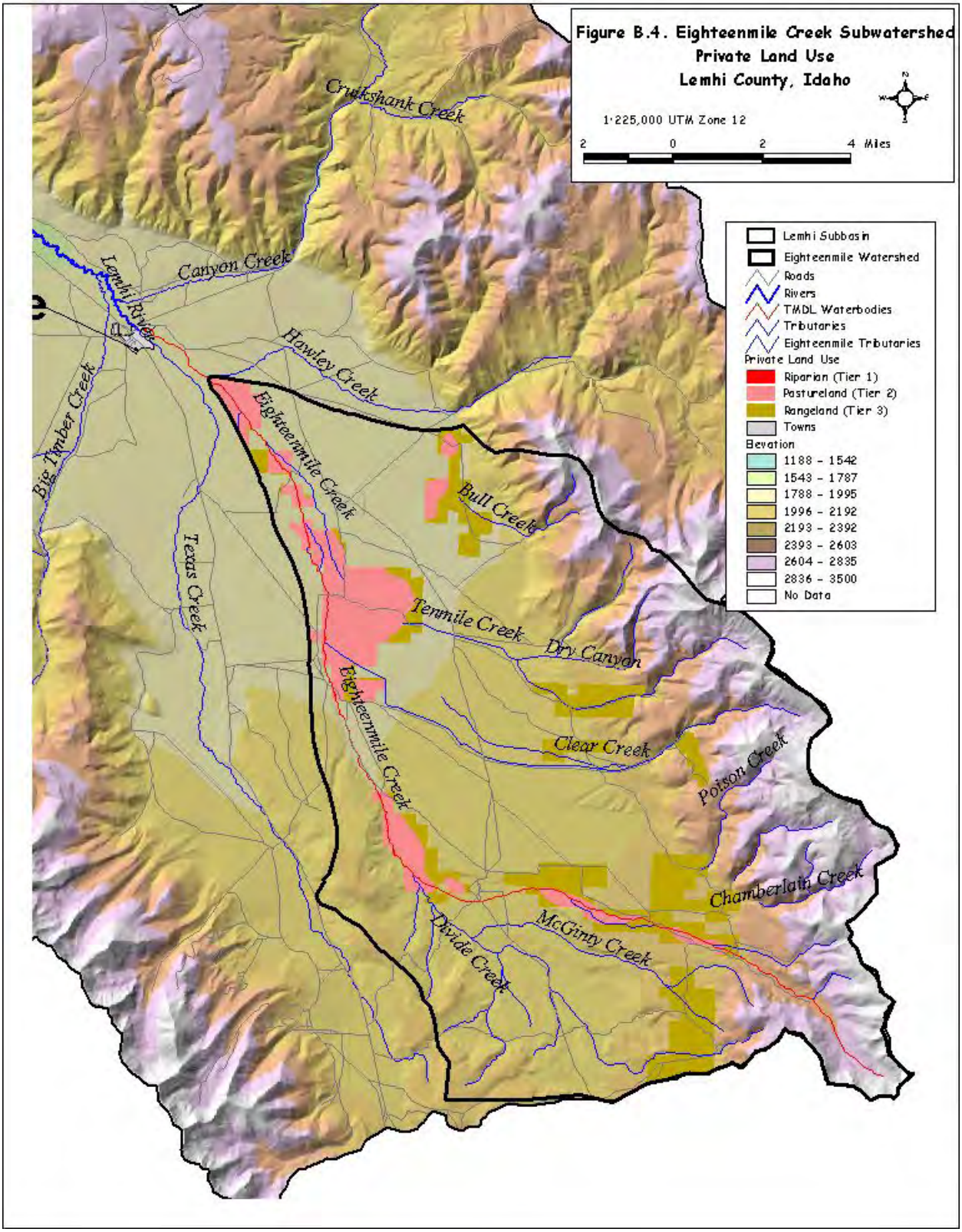
Treatment Unit	Best Management Practice	Unit Type	Unit Cost	C/S Rate	Practice Amount	C/S Funds	Operator Funds	Total Funds
TU1 Riparian	Riparian Forest Buffer	each	$23.00	75%	500	$8,625	$2,875	$11,500
	Channel Vegetation	foot	$6.00	75%	2,600	$11,700	$3,900	$15,600
	Conservation Cover	acre	$100.00	75%	7	$525	$175	$700
	Jack Fence	foot	$4.50	75%	2,000	$6,750	$2,250	$9,000
	4-wire Fence	foot	$1.15	75%	2,000	$1,725	$575	$2,300
	Use Exclusion	acre	$14.00	75%	5	$53	$18	$70
	Prescribed Grazing	acre	$1.50	75%	15	$17	$6	$23
	Heavy Use Area Protection	each	$2,000.00	75%	3	$4,500	$1,500	$6,000
	Stream Channel Stabilization	foot	$30.00	75%	400	$9,000	$3,000	$12,000
	Streambank Protection	foot	$45.00	75%	250	$8,438	$2,813	$11,250
	Wetland Restoration	acre	$4,100.00	75%	2	$6,150	$2,050	$8,200
					Subtotal	**$57,482**	**$19,161**	**$76,643**
TU2 Pasture & Hayland	Critical Area Planting	acre	$160.00	75%	2	$240	$80	$320
	Jack Fence	foot	$4.50	75%	0	$0	$0	$0
	4-wire Fence	foot	$1.15	75%	10,000	$8,625	$2,875	$11,500
	Pipe 100 psi, 12"	foot	$9.40	50%	0	$0	$0	$0
	Irrigation System, Hand Line	acre	$400.00	50%	250	$50,000	$50,000	$100,000
	Irrigation System, Wheel Line	foot	$7.00	50%	3,000	$10,500	$10,500	$21,000
	Irrigation Water Management	acre	$5.00	100%	500	$0	$2,500	$2,500
	Pasture & Hayland Planting	acre	$65.00	75%	20	$975	$325	$1,300
	PVC Pipe 1.50"	foot	$1.98	75%	3,000	$4,455	$1,485	$5,940
	Prescribed Grazing	acre	$1.50	75%	500	$563	$188	$750
	Pump Plant for Water Control	hp	$240.00	50%	120	$14,400	$14,400	$28,800
	Spring Development	each	$2,500.00	75%	3	$5,625	$1,875	$7,500
	Nutrient Management, Commercial Fertilizer	acre	$5.00	75%	250	$938	$313	$1,250
	Nutrient Soil Testing	each	$55.00	75%	20	$825	$275	$1,100
	Trough or Tank	each	$775.00	75%	10	$5,813	$1,938	$7,750
	Livestock Water Well	each	$3,500.00	75%	2	$5,250	$1,750	$7,000
					Subtotal	**$108,208**	**$88,503**	**$196,710**
TU3 Rangeland	4-wire Fence	foot	$1.15	75%	2,000	$1,725	$575	$2,300
	PVC Pipe 1.50"	foot	$1.98	75%	2,000	$2,970	$990	$3,960
	Prescribed Grazing	acre	$1.50	75%	300	$338	$113	$450
	Range Planting	acre	$55.00	75%	15	$619	$206	$825
	Spring Development	each	$2,500.00	75%	1	$1,875	$625	$2,500
	Trough or Tank	each	$775.00	75%	2	$1,163	$388	$1,550
					Subtotal	**$8,689**	**$2,896**	**$11,585**
TU4 AFO	Waste Management System	each	$66,666	75%	1	$50,000	$16,667	$66,666
	Nutrient Management, Animal Waste	head	$1.00	75%	600	$450	$150	$600
					Subtotal	**$50,450**	**$16,817**	**$67,266**
					Total	**$224,828**	**$127,376**	**$352,204**

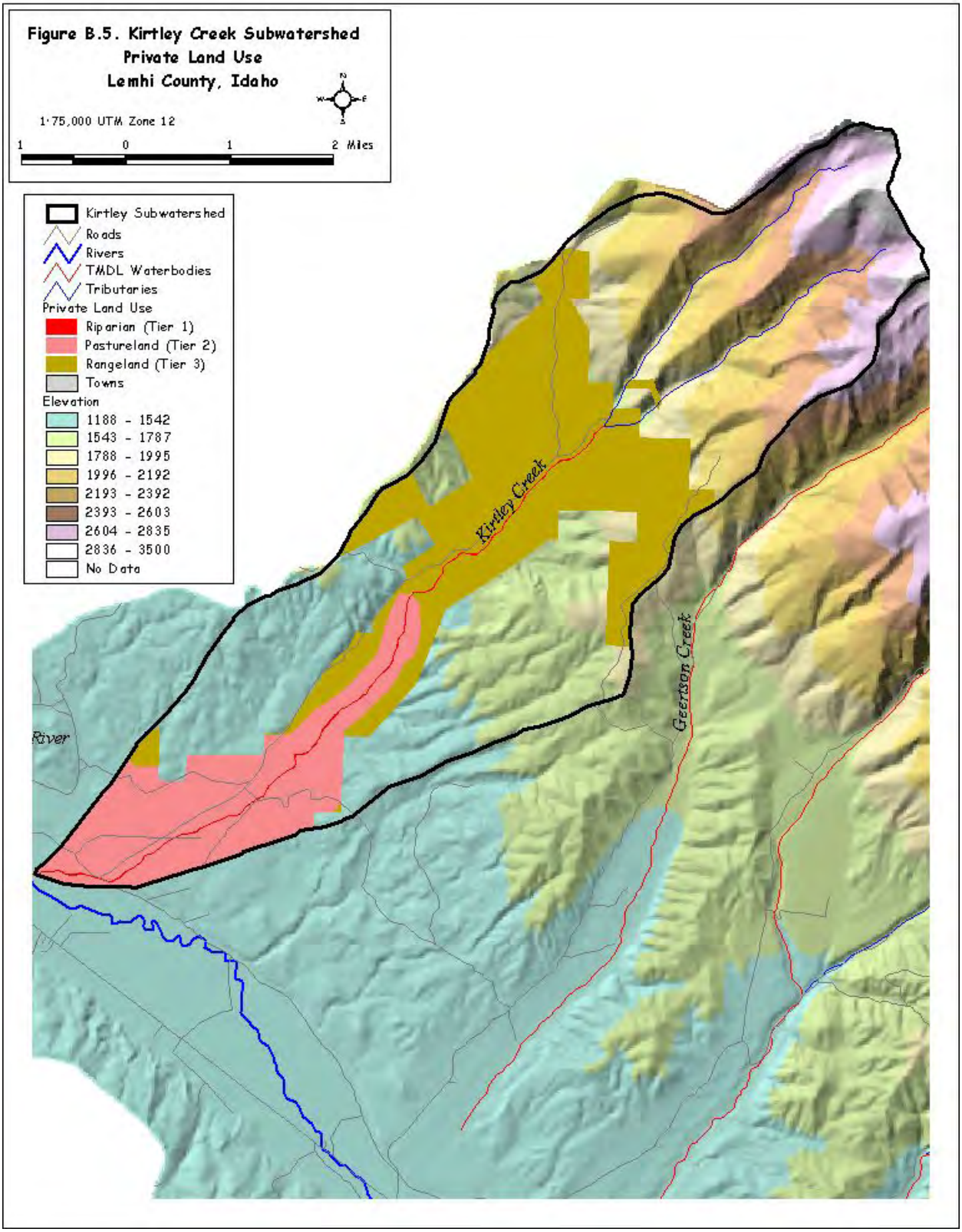
APPENDIX B

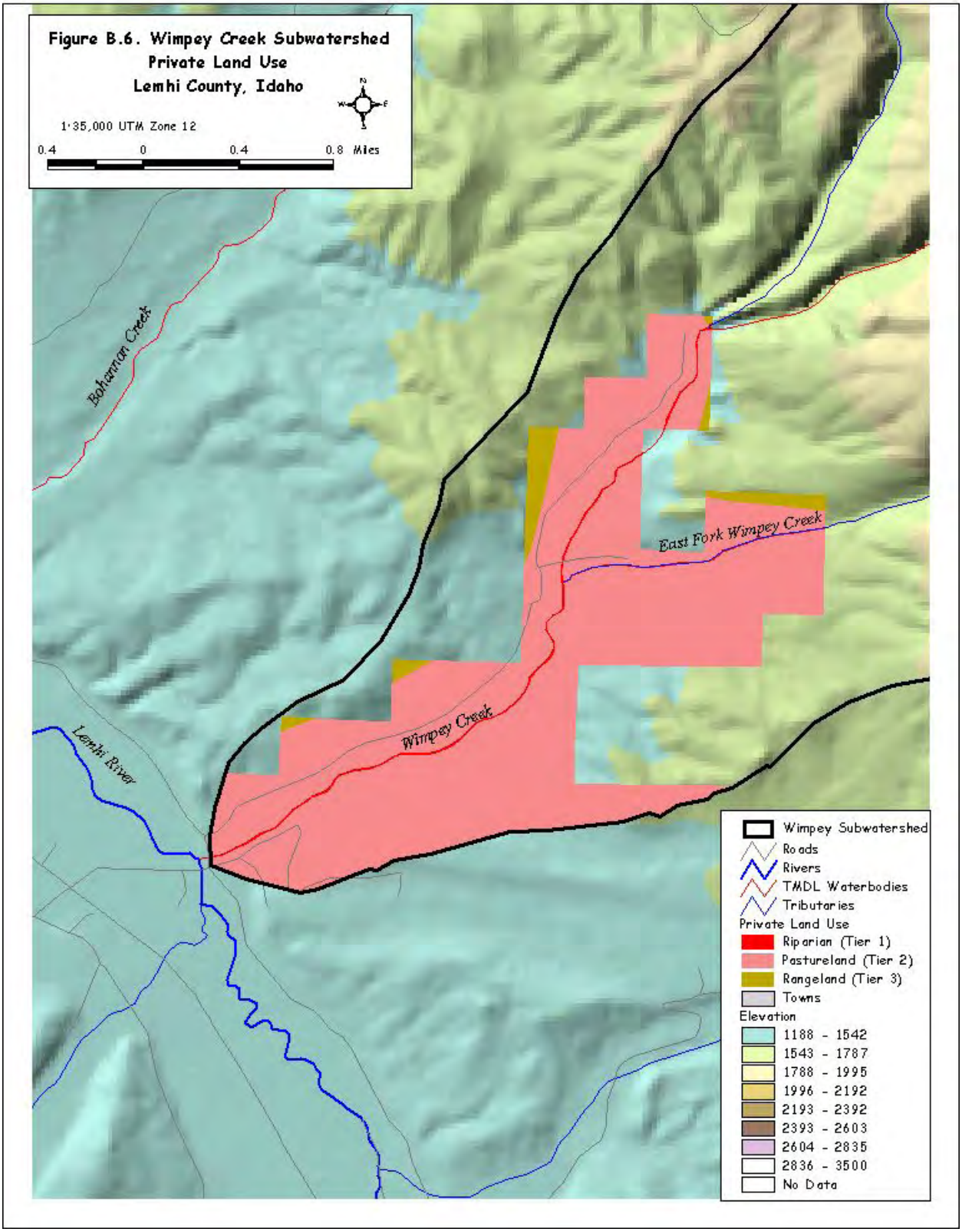

Figure B.1. Lemhi River Subbasin
USGS HUC# 17060204
807,464 acres
Lemhi County, Idaho
1:800,000 UTM Zone 12
6 0 6 12 Miles
Subbasin
Lakes
Rivers
Tributaries
Towns
Elevation
1188 - 1542
1543 - 1787
1788 - 1995
1996 - 2192
2193 - 2392
2393 - 2603
2604 - 2835
2836 - 3500
No Data
Salmon
Leadore
30 0 30 60 Miles
Lemhi River Subbasin

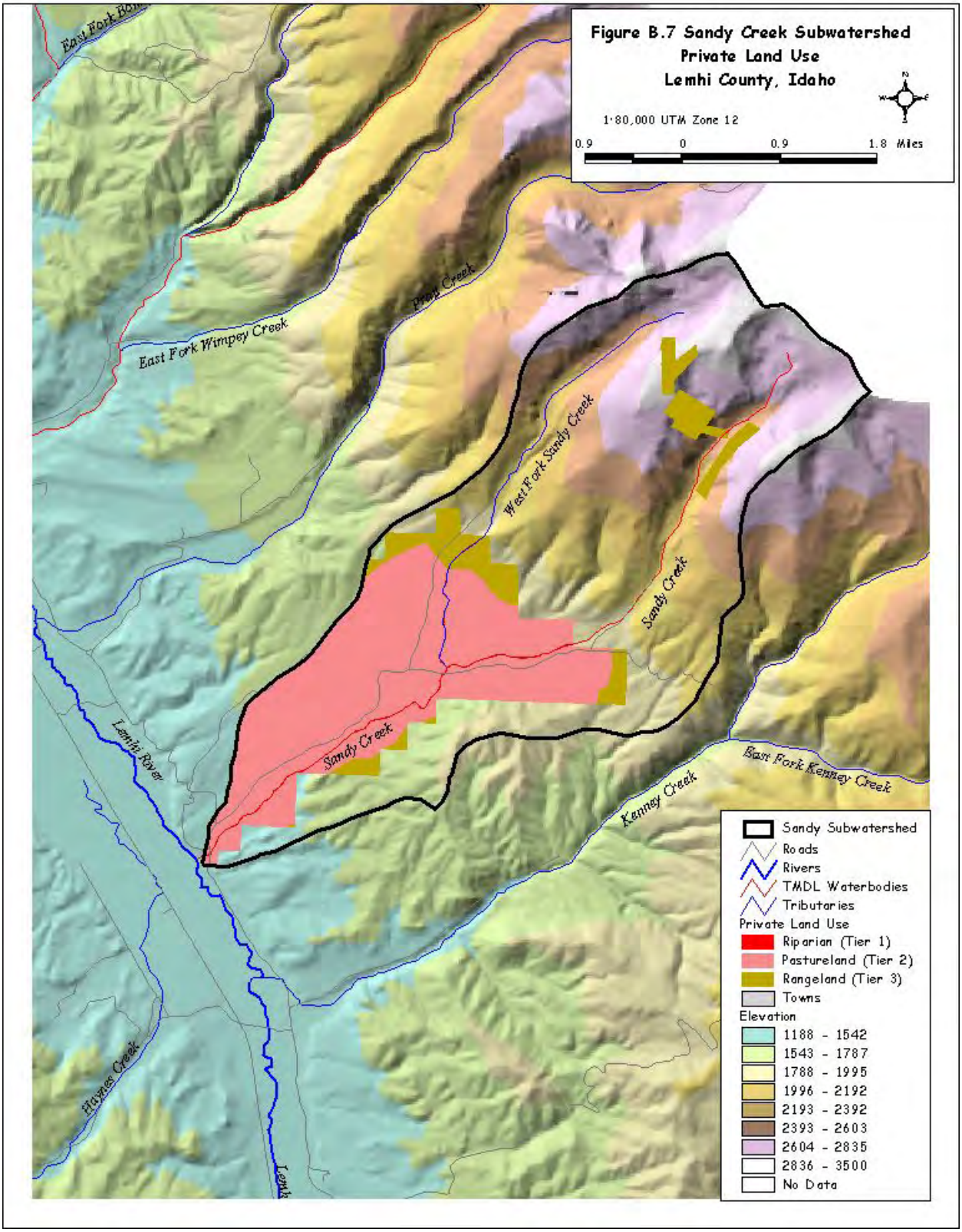

Figure B.2. Lemhi River Subbasin
Conservation Projects (1993-2001)
(USBWP, EQIP & WQPA)
Lemhi County, Idaho
1:800,000 UTM Zone 12
6 0 6 12 Miles
Project Identification Number in Table 4.0 on page 3.
Salmon
Leadore
Projects by Program
EQIP
USBWP
WQPA
Subbasin
Lakes
TMDL Waterbodies
Rivers & Creeks
Towns
Elevation
1188 - 1542
1543 - 1787
1788 - 1995
1996 - 2192
2193 - 2392
2393 - 2603
2604 - 2835
2836 - 3500
No Data

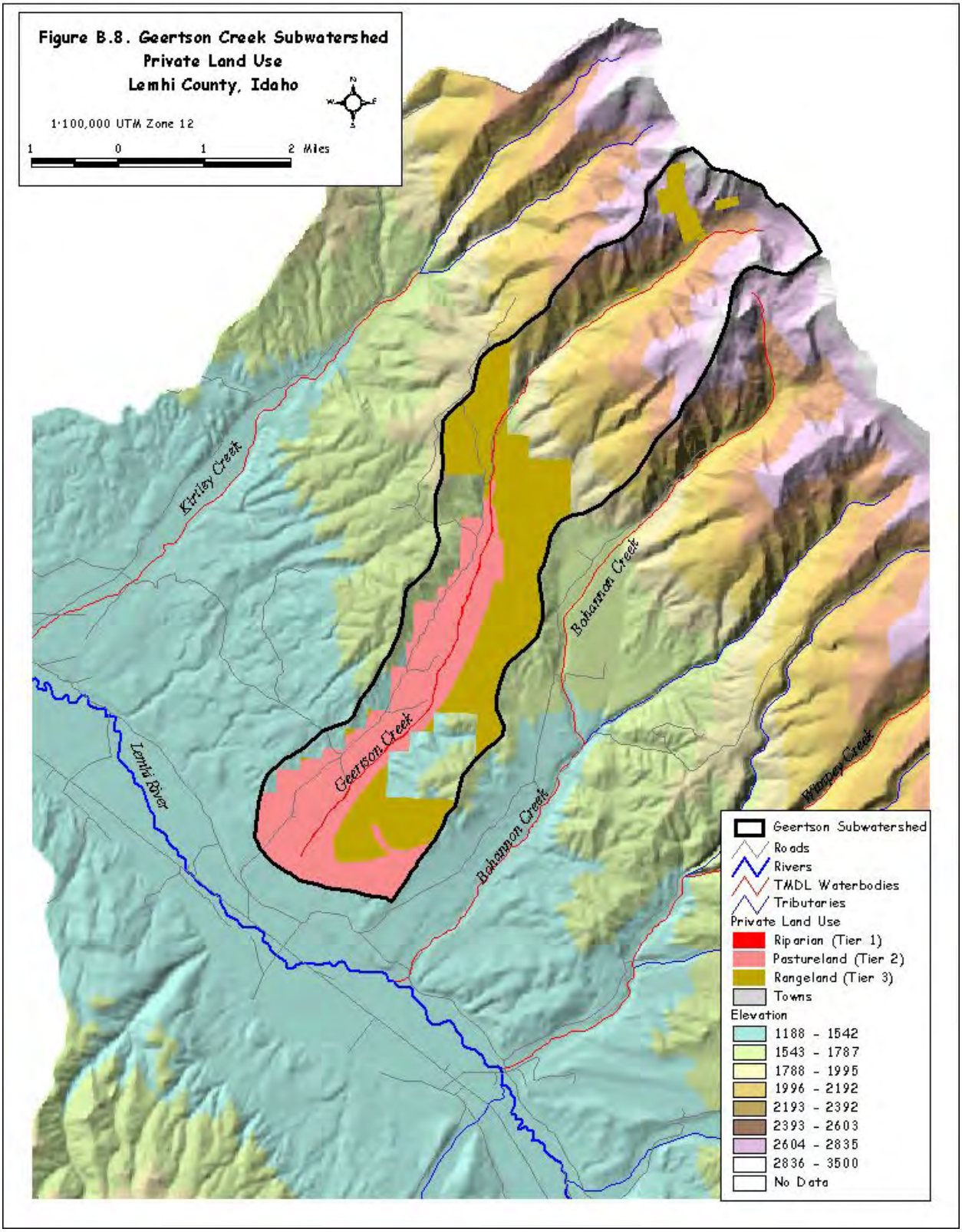

Figure B.3. Lemhi River Subwatershed
Private Land Use
Lemhi County, Idaho
1:540,000 UTM Zone 12
6 0 6 12 Miles
Lemhi Subbasin
Rivers
TMDL Waterbodies
Tributaries
Private Land Use
Riparian (Tier 1)
Pastureland (Tier 2)
Rangeland (Tier 3)
Towns
Elevation
1188 - 1542
1543 - 1787
1788 - 1995
1996 - 2192
2193 - 2392
2393 - 2603
2604 - 2835
2836 - 3500
No Data
Salmon
Leadore
Lemhi River
McDevitt Creek
Kirtley Creek
Hayden Creek
Bohannon Creek
Timber Creek
Bell Creek
Deer Creek
Bender Creek
Big Timber Creek
Eighteenmile Creek

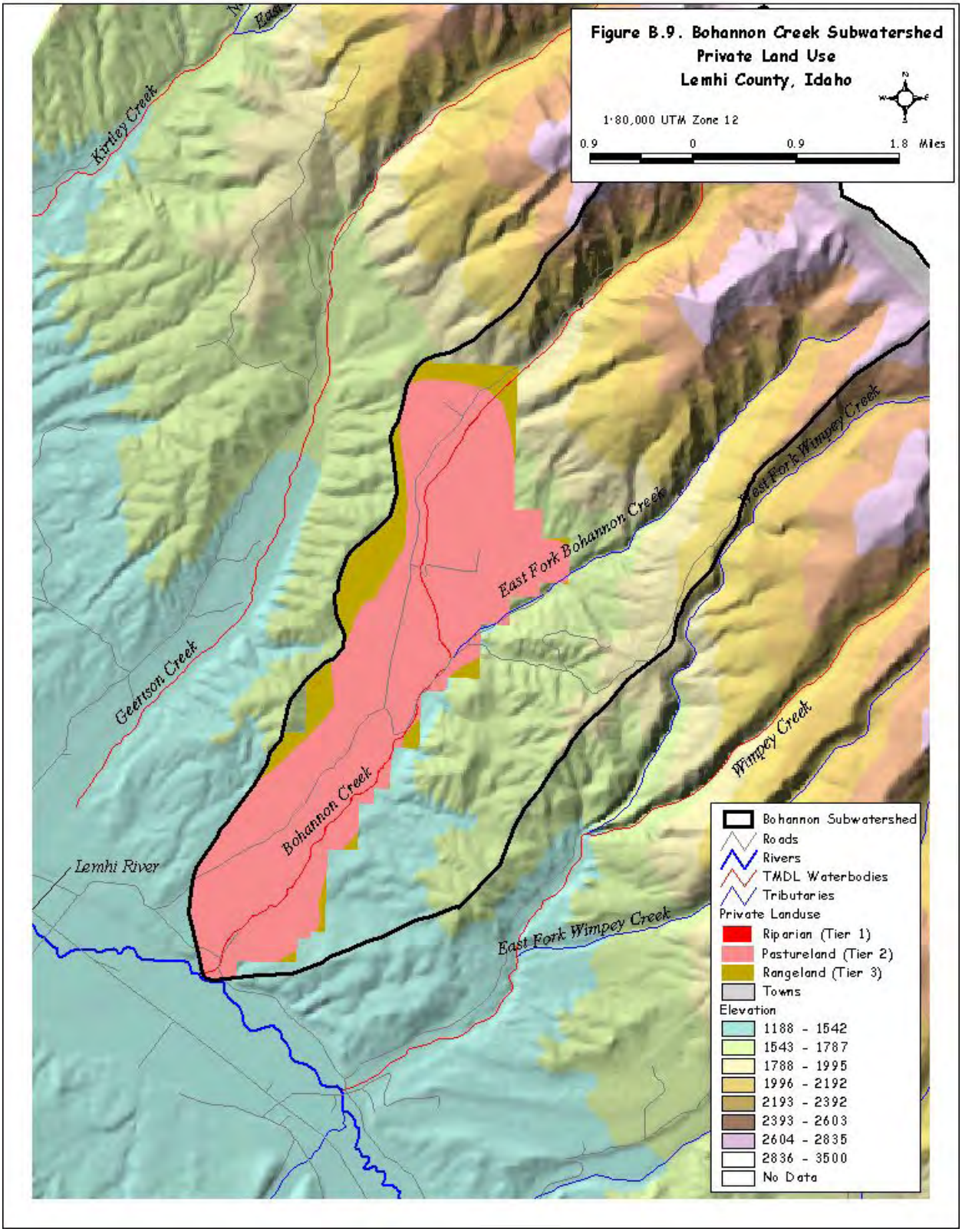

Figure B.4. Eighteenmile Creek Subwatershed
Private Land Use
Lemhi County, Idaho
1:225,000 UTM Zone 12
2 0 2 4 Miles
Lemhi Subbasin
Eighteenmile Watershed
Roads
Rivers
TMDL Waterbodies
Tributaries
Eighteenmile Tributaries
Private Land Use
Riparian (Tier 1)
Pastureland (Tier 2)
Rangeland (Tier 3)
Towns
Elevation
1188 - 1542
1543 - 1787
1788 - 1995
1996 - 2192
2193 - 2392
2393 - 2603
2604 - 2835
2836 - 3500
No Data
Cruikshank Creek
Canyon Creek
Lemhi River
Hawley Creek
Big Timber Creek
Eighteenmile Creek
Bull Creek
Texas Creek
Tenmile Creek
Dry Canyon
Clear Creek
Poison Creek
Chamberlain Creek
McGinty Creek
Divide Creek

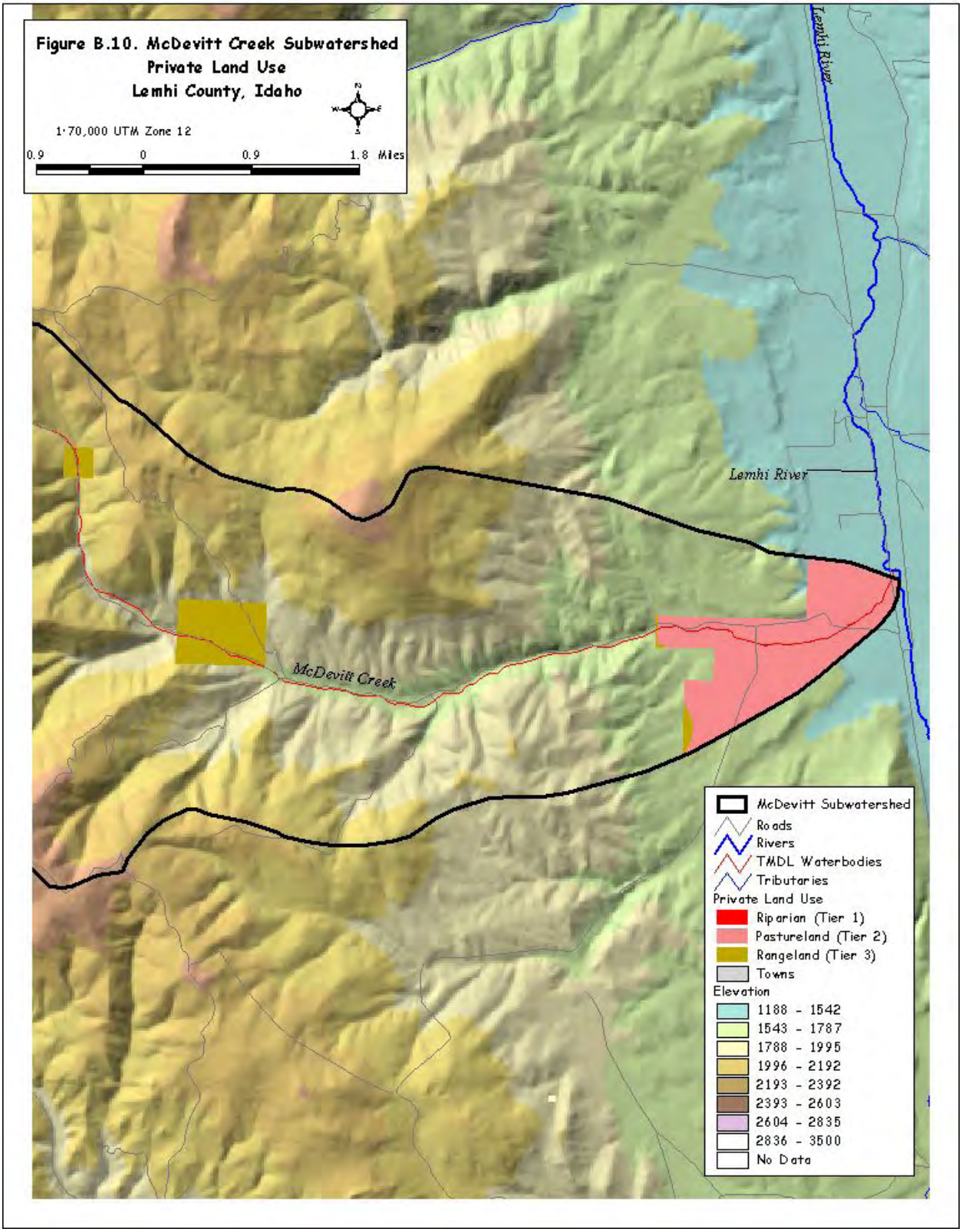

Figure B.5. Kirtley Creek Subwatershed
Private Land Use
Lemhi County, Idaho
1:75,000 UTM Zone 12
1 0 1 2 Miles
Kirtley Subwatershed
Roads
Rivers
TMDL Waterbodies
Tributaries
Private Land Use
Riparian (Tier 1)
Pastureland (Tier 2)
Rangeland (Tier 3)
Towns
Elevation
1188 - 1542
1543 - 1787
1788 - 1995
1996 - 2192
2193 - 2392
2393 - 2603
2604 - 2835
2836 - 3500
No Data
Kirtley Creek
Geertson Creek
River


Figure B.6. Wimpey Creek Subwatershed
Private Land Use
Lemhi County, Idaho
1:35,000 UTM Zone 12
0.4 0 0.4 0.8 Miles
Bohannon Creek
East Fork Wimpey Creek
Wimpey Creek
Lemhi River
Wimpey Subwatershed
Roads
Rivers
TMDL Waterbodies
Tributaries
Private Land Use
Riparian (Tier 1)
Pastureland (Tier 2)
Rangeland (Tier 3)
Towns
Elevation
1188 - 1542
1543 - 1787
1788 - 1995
1996 - 2192
2193 - 2392
2393 - 2603
2604 - 2835
2836 - 3500
No Data


Figure B.7 Sandy Creek Subwatershed
Private Land Use
Lemhi County, Idaho
1:80,000 UTM Zone 12
0.9 0 0.9 1.8 Miles
East Fork Wimpey Creek
Deep Creek
West Fork Sandy Creek
Sandy Creek
Sandy Creek
Lemhi River
East Fork Kenney Creek
Kenney Creek
Haynes Creek
Sandy Subwatershed
Roads
Rivers
TMDL Waterbodies
Tributaries
Private Land Use
Riparian (Tier 1)
Pastureland (Tier 2)
Rangeland (Tier 3)
Towns
Elevation
1188 - 1542
1543 - 1787
1788 - 1995
1996 - 2192
2193 - 2392
2393 - 2603
2604 - 2835
2836 - 3500
No Data


Figure B.8. Geertson Creek Subwatershed
Private Land Use
Lemhi County, Idaho
1:100,000 UTM Zone 12
1 0 1 2 Miles
Kirtley Creek
Bohannon Creek
Geertson Creek
Lemhi River
Bohannon Creek
Hughey Creek
Geertson Subwatershed
Roads
Rivers
TMDL Waterbodies
Tributaries
Private Land Use
Riparian (Tier 1)
Pastureland (Tier 2)
Rangeland (Tier 3)
Towns
Elevation
1188 - 1542
1543 - 1787
1788 - 1995
1996 - 2192
2193 - 2392
2393 - 2603
2604 - 2835
2836 - 3500
No Data


Figure B.9. Bohannon Creek Subwatershed
Private Land Use
Lemhi County, Idaho
1:80,000 UTM Zone 12
0.9 0 0.9 1.8 Miles
Kirtley Creek
Geertson Creek
East Fork Bohannon Creek
West Fork Wimpey Creek
Wimpey Creek
Bohannon Creek
Lemhi River
East Fork Wimpey Creek
Bohannon Subwatershed
Roads
Rivers
TMDL Waterbodies
Tributaries
Private Landuse
Riparian (Tier 1)
Pastureland (Tier 2)
Rangeland (Tier 3)
Towns
Elevation
1188 - 1542
1543 - 1787
1788 - 1995
1996 - 2192
2193 - 2392
2393 - 2603
2604 - 2835
2836 - 3500
No Data


Figure B.10. McDevitt Creek Subwatershed
Private Land Use
Lemhi County, Idaho
1:70,000 UTM Zone 12
0.9 0 0.9 1.8 Miles
Lemhi River
Lemhi River
McDevitt Creek
McDevitt Subwatershed
Roads
Rivers
TMDL Waterbodies
Tributaries
Private Land Use
Riparian (Tier 1)
Pastureland (Tier 2)
Rangeland (Tier 3)
Towns
Elevation
1188 - 1542
1543 - 1787
1788 - 1995
1996 - 2192
2193 - 2392
2393 - 2603
2604 - 2835
2836 - 3500
No Data