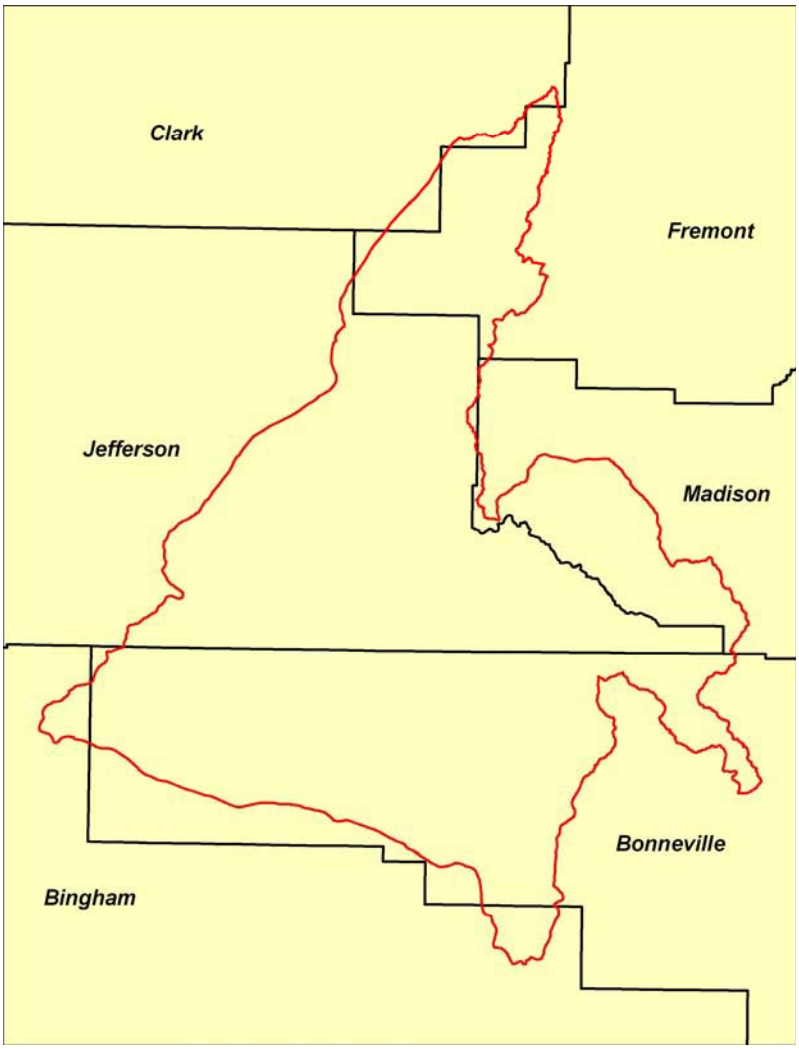
NRCS Natural Resources Conservation Service

Idaho Falls - 17040201

Idaho | 8 Digit Hydrologic Unit Profile | July 2006



Introduction

The Idaho Falls 8-Digit Hydrologic Unit Code (HUC) subbasin contains 805,610 acres. Forty percent of the subbasin is in Jefferson County, 39 percent in Bonneville County, 10 percent in Fremont, 9 percent in Madison and the remaining 2 percent is split between Clark and Bingham Counties. Sixty nine percent of the basin is privately owned and 31 percent is publicly owned.

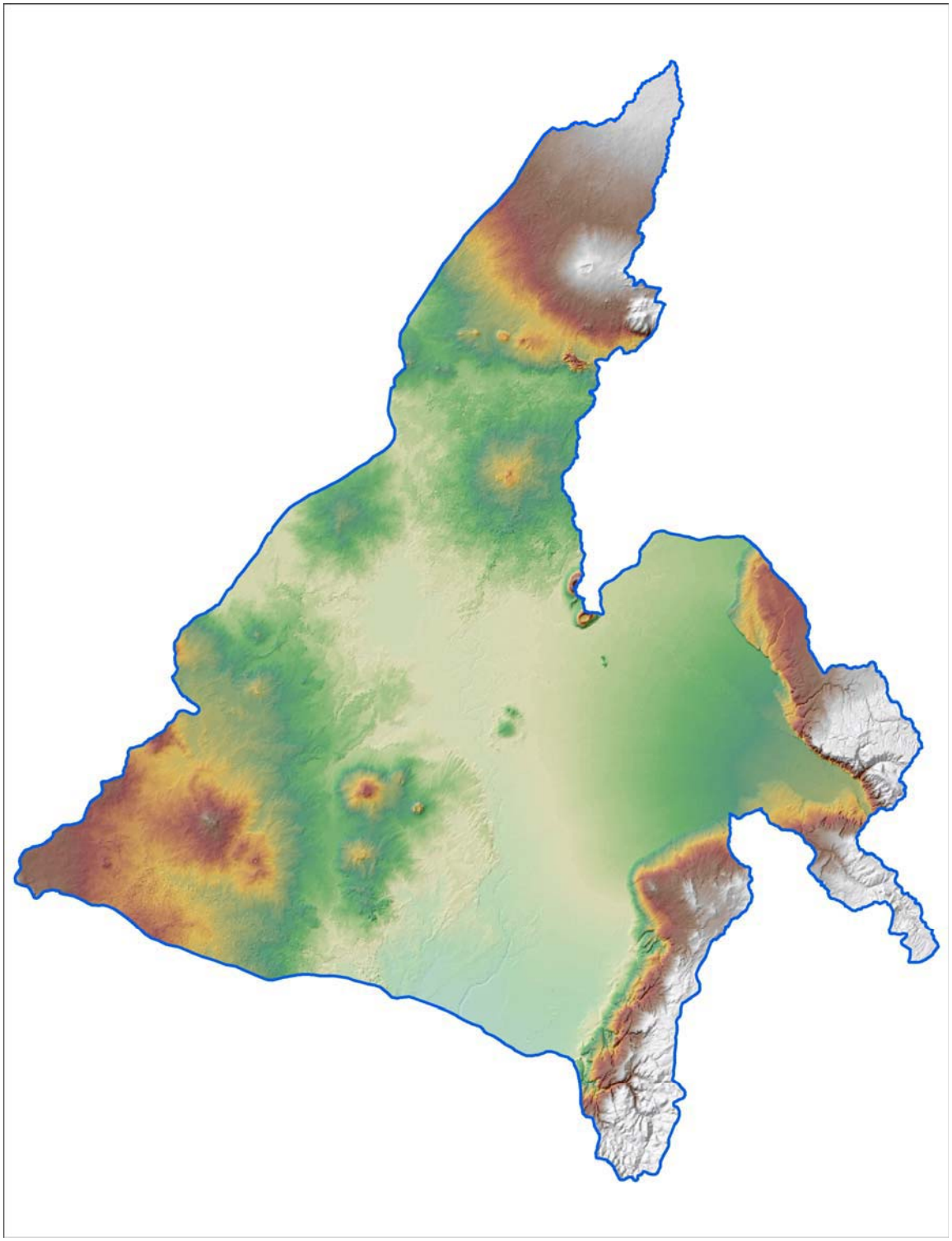
Fifty six percent of the basin is in shrubland, rangeland, grass, pasture, or hayland. Thirty seven percent is cropland, and the remainder is forest, water, wetlands, developed or barren.

Elevations range from 4,600 feet in the southern portion of the HUC to over 7,300 feet in the western portion of the HUC.

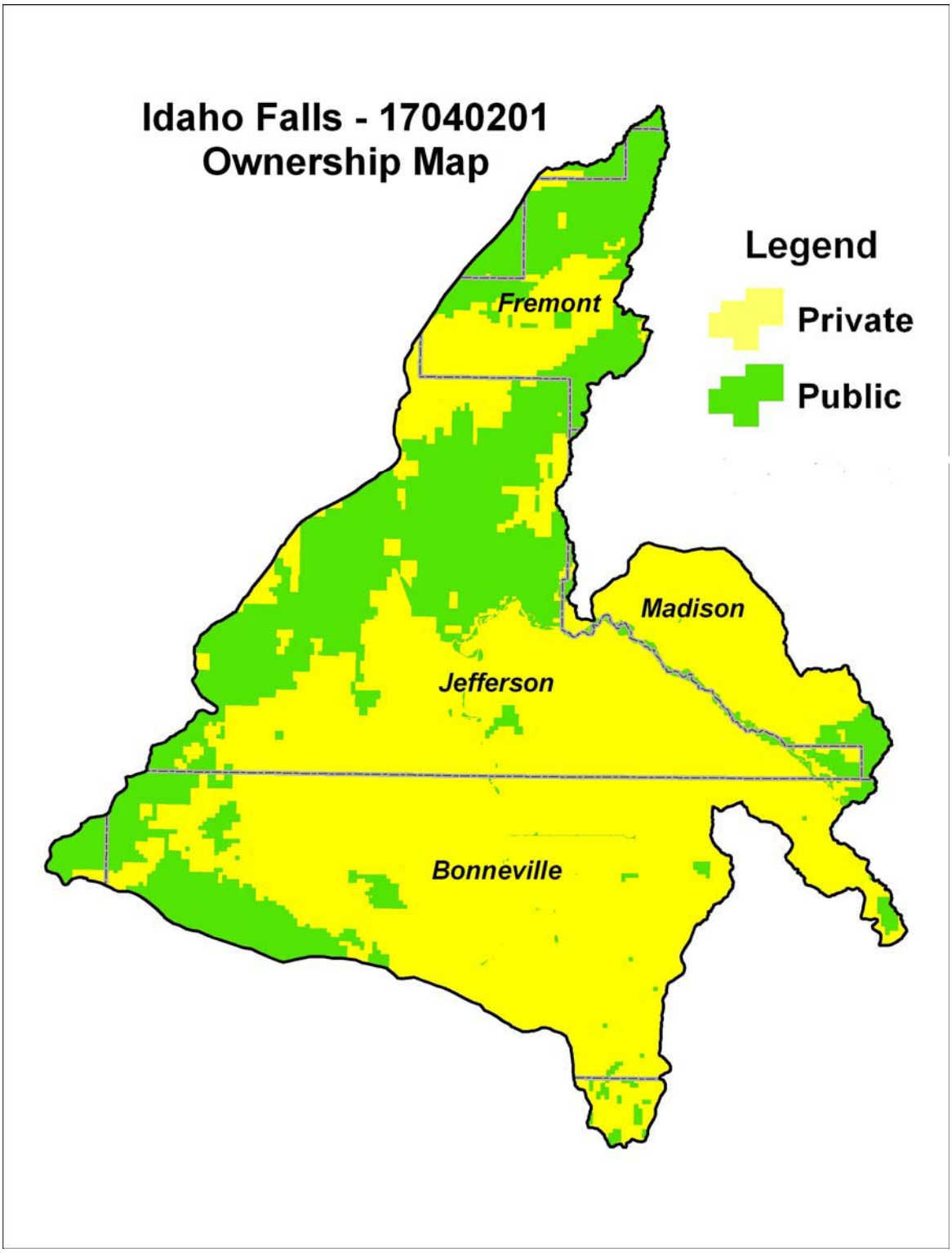
Conservation assistance is provided by 2 Soil Conservation Districts, 7 Soil and Water Conservation Districts, and 2 Resource Conservation and Development offices.

Profile Content

Relief Map



General Ownership[/1]



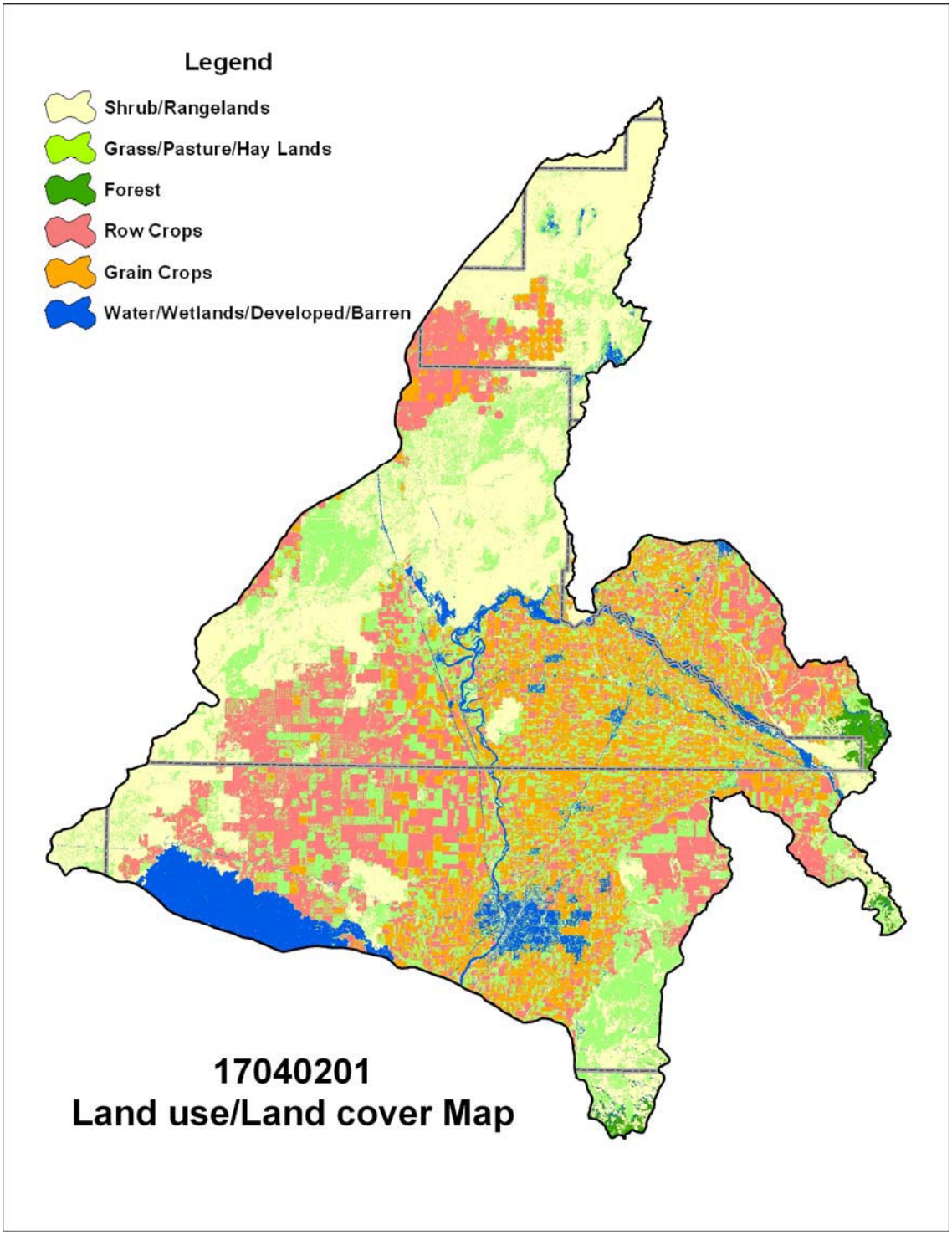
Physical Description

Land Cover/ Land Use (NLCD[2])	Ownership - (2003 Draft BLM Surface Map Set[1])							
	Public		Private		Tribal		Totals	% of HUC
	Acres	%	Acres	%		%		
Forest	5,180	1%	3,100	<1%		--	**8,280**	**1%**
Grain Crops		--	109,150	14%		--	**109,150**	**14%**
Conservation Reserve[3] Program (CRP) Land		--	25,300	3%		--	**25,300**	**3%**
Grass/Pasture/Hay Lands	43,550	5%	163,930	20%		--	**207,480**	**25%**
Orchards/Vineyards/Berries		--		--		--		**0%**
Row Crops		--	161,380	20%		--	**161,380**	**20%**
Shrub/Rangelands	165,470	21%	77,460	10%		--	**242,930**	**31%**
Water/Wetlands/ Developed/Barren	30,320	4%	20,770	3%		--	**51,090**	**7%**
Idaho HUC Totals	**244,520**	**31%**	**561,090**	**69%**		**--**	**805,610**	**100%**

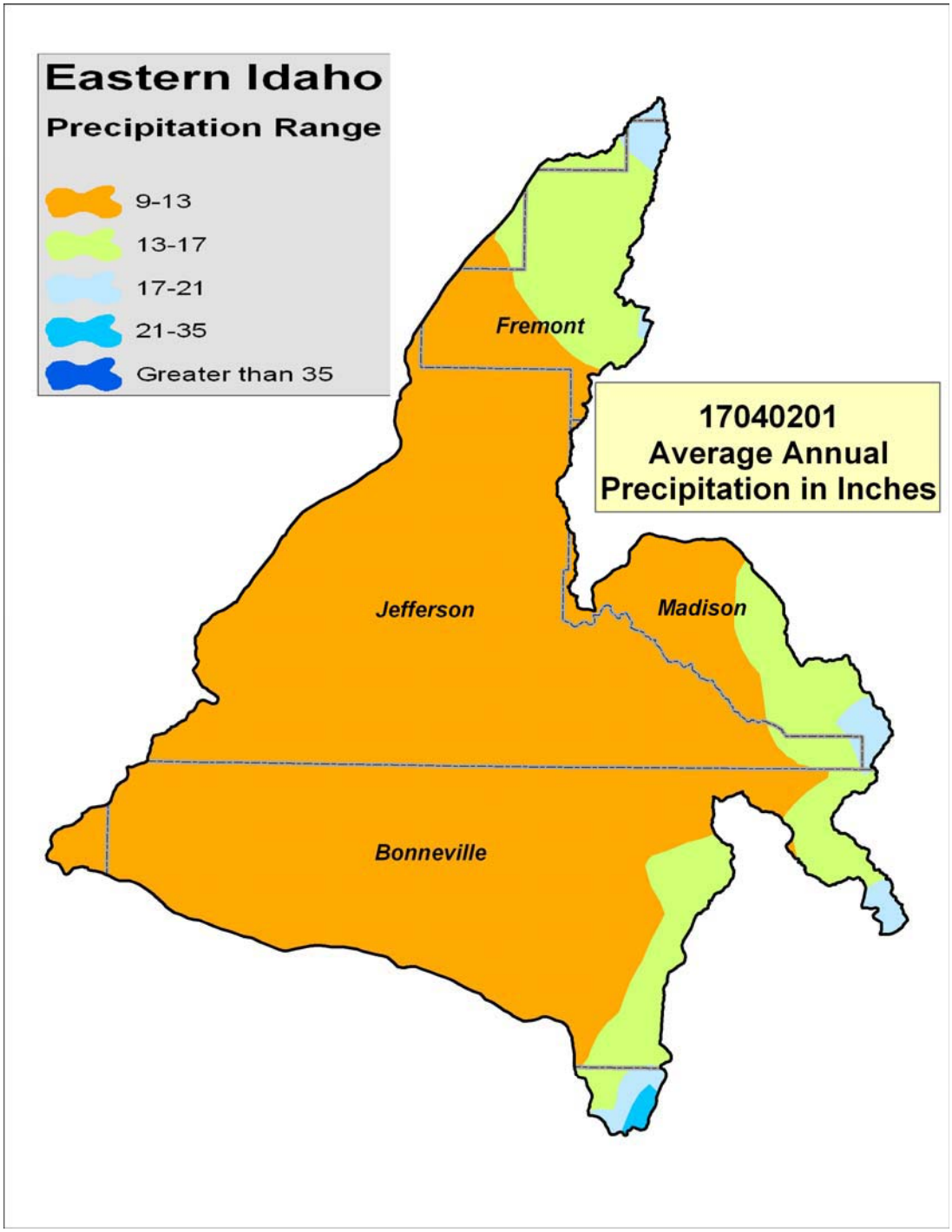
Irrigated Lands[4]	Type of Land	ACRES	% of Irrigated Lands	% of HUC
	Cultivated Cropland	273,500	89%	34%
	Non-Cultivated Cropland *	13,100	4%	2%
	Pastureland	19,200	6%	2%
	Total Irrigated Lands	**305,800**	**100%**	**38%**

* Includes permanent hayland and horticultural cropland.

Land Use/Land Cover[/2]

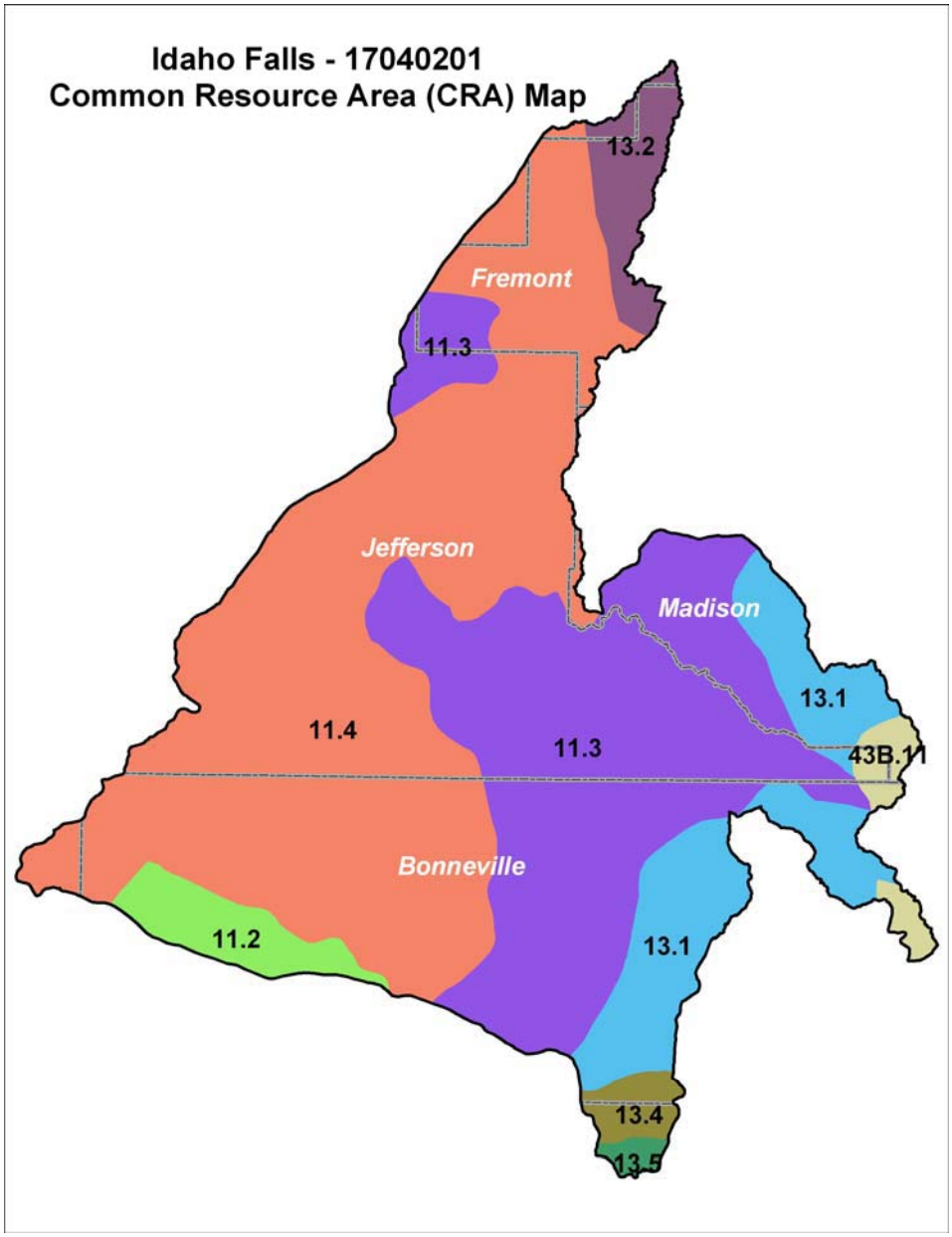


Average Annual Precipitation[/5]



Common Resource Area Map

The Common Resource Areas (CRA) delineated below for the Idaho Falls HUC are described in the next section (for additional information, see http://www.id.nrcs.usda.gov/technical/soils/common_res_areas.html). A CRA is defined as a geographical area where resource concerns, problems, or treatment needs are similar. It is considered a subdivision of an existing Major Land Resource Area (MLRA) map delineation or polygon. Landscape conditions, soil, climate, human considerations, and other natural resource information are used to determine the geographic boundaries of a Common Resource Area (General Manual Title 450 Subpart C 401.21).



Common Resource Area Descriptions

The National Coordinated CRA Geographic Database provides:

- A consistent CRA geographic database;
- CRA geographic data compatible with other GIS data digitized from 1:250,000 scale maps, such as land use/land cover, political boundaries, Digital General Soil Map of the U.S. (updated STATSGO), and ecoregion boundaries;
- A consistent (correlated) geographic index for Conservation System Guides information and the eFOTG;
- A geographic linkage with the national MLRA framework.

11.2 Snake River Plains – Lava Fields: This unit consists of basalt lava flows, cinder cones, and spatter cones. Exposed basalt or very shallow loessial soils over volcanics are characteristic and are either barren or sparsely covered by shrubs and grasses. Soil moisture regime is aridic and soil temperature regime is dominantly mesic. Livestock carrying capacity is very low. Surface water availability is very limited. This unit includes the part of the Idaho National Engineering Laboratory. Lithology, depth to bedrock, livestock carrying capacity, and water availability are unlike neighboring units.

11.3 Snake River Plains – Upper Snake River Plain: The nearly level unit is characterized by cropland, pastureland, cities, suburbs, and industries. Extensive surface irrigated small grain, sugar beet, potato, and alfalfa farming occurs. Frost-free season is shorter and crop variety is less than downstream CRA units. Aquatic resources have been degraded by irrigation diversions, channelization, dams, sewage treatment, nonpoint pollution, food processing and phosphate processing.

11.4 Snake River Plains – Eastern Snake River Basalt Plain: This unit is characterized by shallow, stony soils that are unsuitable for cultivation. Only small areas have soils deep enough to be farmed under sprinkler irrigation. Rangeland is widespread. Potential natural vegetation is mostly sagebrush and bunchgrass. It is cool enough to have some regeneration capacity and still contains native plants.

13.1 Eastern Idaho Plateaus – Dissected Plateaus and Teton Basin: This unit is used for cropland and rangeland. Potatoes are an important cash crop. Sprinkler irrigated land supports potatoes, alfalfa, and pasture. Non-irrigated land supports small grains. Mollisols developed in thick loess deposits or alluvium and are subject to wind erosion. Potential natural vegetation is sagebrush steppe and is unlike the forests of the higher, more rugged mountains. Wet meadows occur in the poorly-drained soils of the Teton Basin.

13.2 Eastern Idaho Plateaus - Eastern Snake River Basalt Plains: This unit is characterized by shallow, stony soils that are unsuitable for cultivation. Only small areas have soils deep enough to be farmed under sprinkler irrigation. Rangeland is widespread. Potential natural vegetation is mostly sagebrush and bunchgrass. It is cool enough to have some regeneration capacity and still contains native plants. Soil moisture regime is xeric and soil temperature regime is frigid.

Common Resource Area Descriptions - Continued

13.4 Eastern Idaho Plateaus – Sagebrush Steppe- and Woodland-Covered Hills and Low Mountains: This unit occupies an elevational band between the higher mountains and the lower inter-montane valleys. Potential natural vegetation is mostly sagebrush steppe. Cool season grasses are more common than in the adjacent, drier units. Juniper woodland vegetative sites occur on shallow rock soils. Land use is primarily livestock grazing.

13.5 Eastern Idaho Plateaus – High Elevation Forests and Shrublands: This unit is mountainous and occupies the elevational band above Sagebrush Steppe Valleys and Woodland-Covered Hills and Low Mountains CRA units. It is characterized by a mix of conifers, mountain brush, and sagebrush grassland. North-facing slopes and many flatter areas support open stands of Douglas-fir, aspen and lodgepole pine. Winters are colder and the Mean annual precipitation is higher than in lower elevational units.

43B.11 Central Rocky Mountains – Partly Forested Mountains: The steep, dry Partly Forested Mountains vary in elevation from about 6,000 to over 9,000 feet. Mean annual precipitation is 500 to 750 mm. Mean annual air temperature is 2 to 7°C. Average frost-free period is 30 to 60 days. Frost occurs every month of the year on high mountains. Soils have a cryic temperature regime and are rocky and shallow. They support open-canopied forests, shrublands, and grasslands; Douglas-fir, lodgepole pine, and aspen are most common on north-facing slopes and gently sloping uplands while mountain big sagebrush and mountain brush dominate south-facing slopes. Its vegetation is distinct from surrounding ecoregions. It is used as summer range and for timber production.

Streamflow Summary[7]

The hydrology of the Idaho Falls subbasin is dominated by the Snake River and its associated diversion structures for irrigation of farmland on the Snake River plain. Flows of the Snake River (South Fork) and Henry's Fork enter the Idaho Falls subbasin from the east and northeast, respectively. The average annual flow of the Snake River near Heise is approximately 5,054,440 acre-feet and the average flow of Henry's Fork near Rexburg is about 1,706,835 acre-feet. The average annual flow of the Snake River just above Shelley, Idaho is approximately 4,424,800 acre-feet (1983-2004). The flows of the Snake River within the subbasin are highly regulated and display less of the typical snowmelt hydrograph pattern. Flow is regulated by Palisades Reservoir and other reservoirs, and upstream reservoir releases may be made for flood control or for passing water for downstream use. Considerable water leaks into the Snake River Plain Aquifer within the subbasin. Major portions of the subbasin are characterized by thick lava flows and sand dunes, so very little surface drainage exists in the western and northern portions of the subbasin.

Irrigated Adjudicated Water Rights[6])		**CFS**	
	Surface Water	14,750	
	Groundwater	2,820	
	Total Irrigated Adjudicated Water Rights	17,570	
Stream Flow Data[7]	USGS 13060000, Snake River near Shelley ID, 1983-2004		**ACRE-FEET**
		Average Annual	4,424,840
		Mar - July Average	2,662,300
		Percent of Average Annual	Mar - Jul 60%
Stream Data **Percent of Total Miles of streams in HUC*		**MILES**	**PERCENT**
	Total Stream Miles[8]	1,785	
	Water quality impaired streams[9,10]	95.4	5%*
	Anadromous Fish Presence (Streamnet)[11]	0	--
	Bull Trout Presence (Streamnet)[11]	0	--
Land Cover/Use[2] based on a 100 ft. stretch on both sides of all streams in the 100K Hydro Layer		**ACRES**	**PERCENT**
	Forest	452	1%
	Grain Crops	7,854	24%
	Grass/Pasture/Hay Lands	9,923	30%
	Row Crops	6,599	20%
	Shrub/Rangelands – Includes CRP Lands	4,675	14%
	Water/Wetlands/Developed/Barren	3,739	11%
	Total Acres of 100 ft stream buffers	**33,242**	100%
Land Capability Class[4]	**I** – slight limitations	0	0
	II – moderate limitations	207,600	57%
	III – severe limitations	86,800	24%
	IV – very severe limitations	61,600	17%
	V – no erosion hazard, but other limitations	0	0%
	VI – severe limitations, unsuited for cultivation, limited to pasture, range, forest	7,200	2%
	VII – very severe limitations, unsuited for cultivation, limited to grazing, forest, wildlife	3,000	1%
	VIII – misc areas have limitations, limited to recreation, wildlife, and water supply	0	0
	Total Crop & Pasture Lands	**366,200**	100%

Confined Animal Feeding Operations – Dairies/Feedlots[/12,13, 26]						
	Number	**<200**	**200-500**	**500-750**	**750-1000**	**>1000**
Dairy	46	42	2	0	1	1
	Number	**<300**	**300-999**	**1,000-4,999**	**5,000-9,999**	**>10,000**
Feedlots	31	6	16	7	0	2

Resource Settings

Pasture
Some improved dryland pasture with introduced forage species including wheatgrasses, fescues, bromes, and orchardgrass. The older established stands are of low vigor, with encroachment of noxious weeds. Continuous season-long grazing is typical, with below-optimum forage production. No commercial fertilizers are applied, and pest management practices are limited. Livestock water may be inadequate.

Irrigated pastureland includes both low elevation pastures and those in high elevation mountain valleys. Irrigated pastures are often surface irrigated on variable soils with slopes 1-5%. Irrigation water distributed via earthen ditches, with tailwater eventually returning to rivers or streams. Fields may have been leveled. Irrigation efficiency is 20-35%. Plants are introduced forage species and native perennials, conventionally tilled when rotating pasture (10 years) and grain (2 years). Fertilizers are sometimes applied, but without soil testing or nutrient management. Adjacent riparian areas are important for wildlife.

Dry Cropland
Primarily winter wheat/fallow (precipitation 10-14 inches) or annual spring barley (precipitation 16-22 inches), on silt loams with slopes 0-8%. Dry cropland is often characterized by significant ephemeral gully and concentrated flow erosion as well as sheet and rill erosion. Conventional tillage results in less than 15% residue after planting. Application of nutrients and pesticides typically does not meet Idaho NRCS standards.

Surface Irrigated Cropland
Conventionally tilled, often intensively cultivated cropland on 0-7% slopes. Precipitation is 12 inches or less. Soils are typically sandy loams, silt loams, and loams, and may have been extensively land-leveled in the past. Most irrigation is by siphon tube or gated pipe, but there is also some border irrigation. Typical rotations include silage corn, small grains, and alfalfa, although annual grain is also common. Irrigation-induced erosion exceeds the threshold. Wind erosion is a resource problem following low residue row crops. Surface roughening and cover crops is often utilized to reduce wind erosion problems. Nutrient, pest, and/or irrigation water management may be less than desirable. Impacted surface and/or ground water quality is common.

Sprinkler Irrigated Cropland
Conventionally tilled cropland on soils ranging from sands to loams. Rotations containing less than 66% high residue crops can lead to wind erosion problems. Wind erosion is typically a problem from March to June, creating air quality and visibility hazards in some portions of the subbasin. Various combinations of small grains, alfalfa, beets, corn, potatoes, beans and barley are grown. Potato with one or two years of spring grain is a typical rotation on slopes ranging from 0-8%.

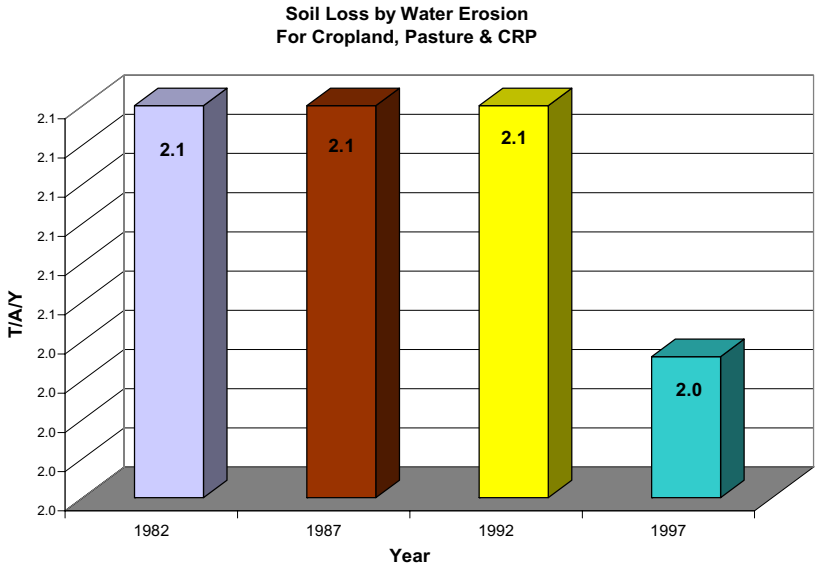
Resource Settings - continued

These rotations may have sheet and rill and ephemeral gully erosion problems in the spring following potatoes. Sprinkler-irrigation induced erosion may also be a concern, especially on steeper slopes. Nutrient and pest management may be less than desirable. Irrigation water management and maintenance of sprinkler systems may be less than desirable. Wildlife habitat is often inadequate with limited permanent cover.

Hayland
Conventionally tilled, surface and sprinkler irrigated on 0-7% slopes. Irrigation water is normally plentiful. Small grains and alfalfa are grown in rotation, with alfalfa typically maintained for 4-6 years. Grazing of crop aftermath is common. Nutrient, pest or irrigation water management may be less than desirable.

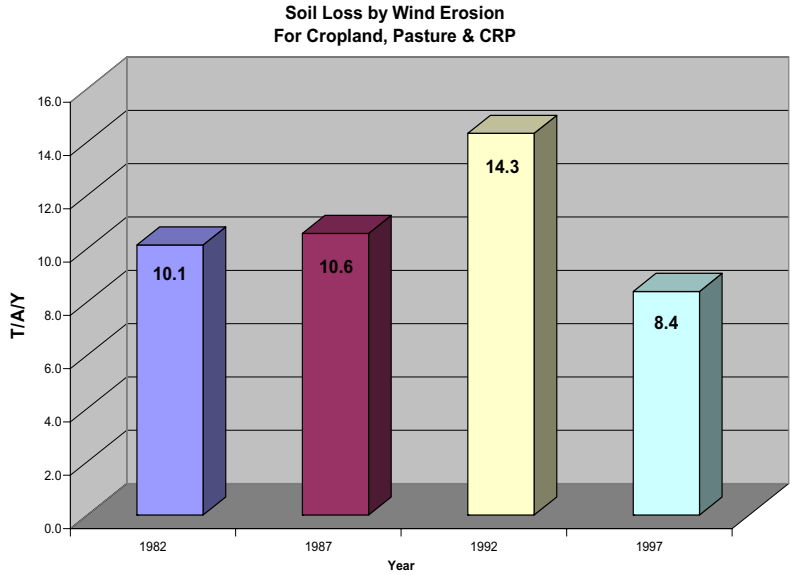
Rangeland
Low elevation desert to high elevation, steep rangeland. Low elevation desert characterized by sagebrush and perennial bunchgrasses. Frequent fires have eliminated some areas of sagebrush, with annual cheatgrass and other invaders dominant. Carrying capacity can be limited by available water. Land is utilized by antelope and livestock in winter and early spring. Mid-elevation rangeland has precipitation ranging from 12-16 inches. This range consists of sagebrush and perennial bunchgrasses with variable soils on nearly level flats to benches and rolling hills. High elevation range has precipitation greater than 16 inches, on steep slopes and high mountain valleys. Access to riparian areas on all rangeland types is not typically managed, and temperature, nutrients, and sediment may be an associated water quality concern.

Resource Concerns



Sheet and rill erosion by water on the sub basin croplands, pasturelands and CRP have been essentially static since 1992 but has decreased by about ½ ton per acre per year since 1982. Sheet and rill erosion is not a major issue on cropland in this subbasin, with the exception of the dryland area east of Idaho Falls. Susceptibility to sheet and rill erosion is low in this subbasin because the natural precipitation is low and the cropland is relatively flat. /4

The dryland area east of Idaho Falls has a predominantly wheat/fallow dryland rotation. Sheet and rill and ephemeral erosion are considered a moderate to severe problem in this area.



Wind erosion has decreased by slightly more than 1 ½ tons per acre per year on cropland, pasture and CRP in this sub basin between 1982 and 1997. Following a spike in wind erosion to approximately 14 tons per acre per year in 1992, wind erosion has decreased to approximately 8.5 tons per acre per year in 1997. Wind erosion in the HAMER area is a moderate to severe problem after low residue crops. The I values of the soils range from 134-220.

Resource Concerns – Continued

Impacted Water Bodies[9,10] (ID17040201)	Stream Miles	Sediment, Siltation or TSS	Nutrients	Bacteria	Temperature	Dissolved Oxygen	Flow Alteration[1]	Other or Unknown
Birch Creek (SK008_02)	29.3	x						
Birch Creek (SK008_03)	6.2	x						
Crow Creek (SK007_05)	9.5	x						
North Fork Willow Creek (SK003_05)	10.2	x[1]						
Snake River (SK001_05)	5.7	x[1]						
Snake River (SK013_02)	20.4							x
Snake River (SK013_06)	7.2						x	
South Fork Willow Creek (SK002_05)	6.9	x[1]						
TOTAL STREAM MILES:	95.4							

[1] Proposed change to 2004 Integrated Report, subbasin assessment recommends delisting.
Shading indicates TMDL in place.

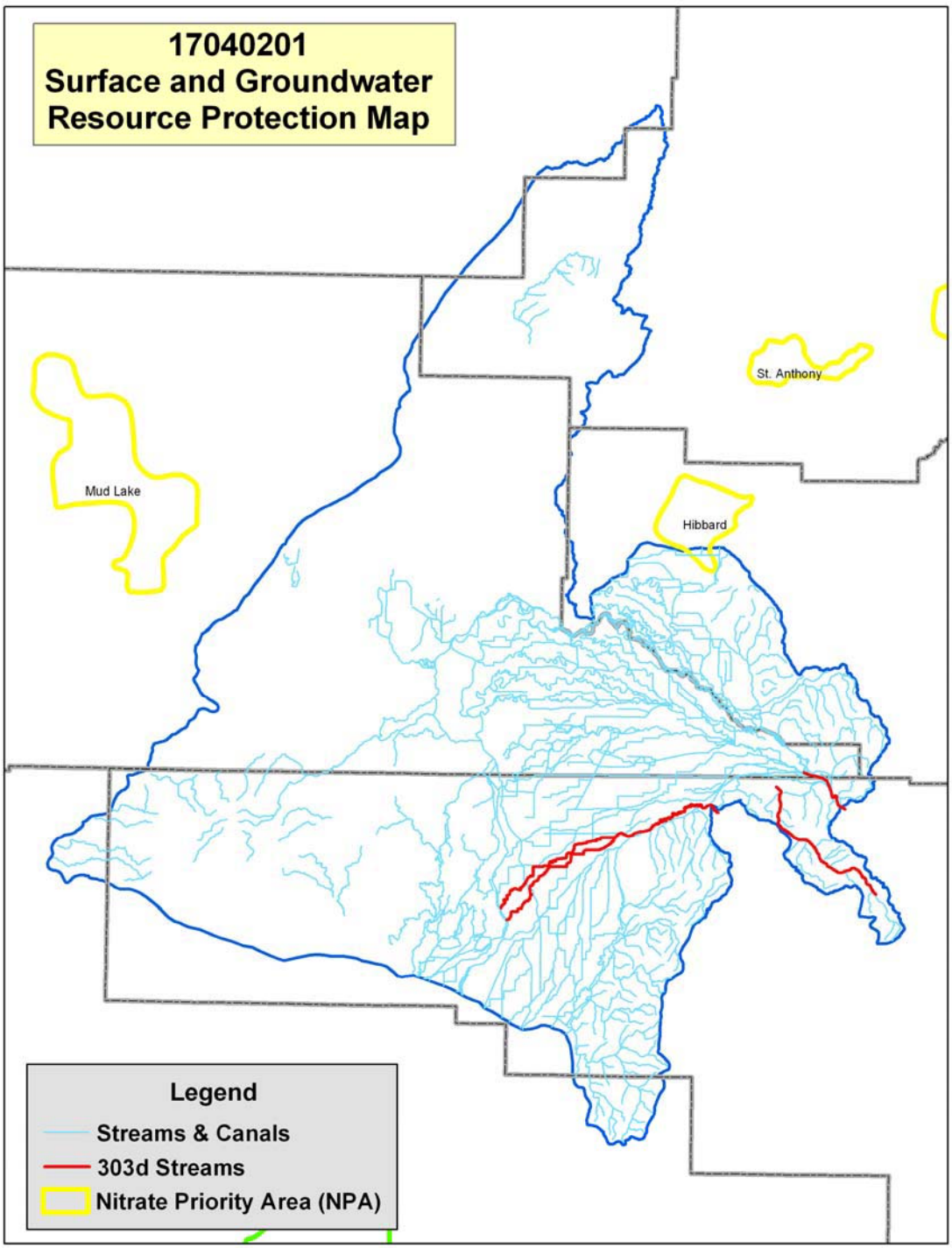
Sediment is the major pollutant which impacts beneficial uses of surface waters in this watershed. A variety of human activities are potential sources of pollutants in the watershed, including irrigated agriculture, grazing, urban stormflow and septic systems, feedlots/dairies, and roads. Flow alteration is a problem in this highly regulated system. Shoreline erosion is a concern for subbasin reservoirs, and portions of major tributaries in the watershed have poor bank stability. There is one area in the northeast portion of the watershed where ground water is impacted by nitrates (designated Nitrate Priority Areas).

Conservation practices that can be used to address these water quality issues include erosion control, grazing management, irrigation water management, residue management, nutrient management, shoreline and streambank enhancement/restoration, and riparian buffers.

Watershed Projects, Plans, Studies, and Assessments*	
Federal:	***State:***
NRCS Watershed Plans/Studies/Assessments[14,15]	**IDEQ TMDLs[16]**
Upper Sand Creek PL-566 Watershed Plan (1984) Completed	Idaho Falls SBA –TMDL (2004)
Lower Sand Creek PL-566 Watershed Plan (1985) Completed	**IDEQ 319 Projects/[17]**
	None
NWPCC Subbasin Plans and Assessments[18]	**SCC Plans/Projects[19]**
Upper Snake Subbasin Assessment (2004)	None
	ISDA Regional Water Quality Projects[20]
	Northern Eastern Snake River Plain Regional Study (on-going)
	IDWR Comprehensive Basin Plans[21]
	South Fork Snake River Comprehensive State Water Plan (1996)

* Listing includes past efforts in the watershed, and on-going studies and assessments.

Surface and Groundwater Resource Protection[/22,23,24]



NOTE: The 303(d) list (IDEQ 1998) has recently been replaced with the Integrated Report (IDEQ 2005). There may be slight discrepancies between this map and impacted waters listed in the Integrated Report.

Resource Concerns – Continued

Resource Concerns/ Issues by Land Use								
SWAPA*	**Specific Resource Concerns/Issues**	**Pasture**	**Hayland**	**Dry Crops**	**Surface Irrigated Crops**	**Sprinkler Irrigated Crops**	**Rangeland**	**Grazed and Ungrazed Forest**
Soil Erosion	Sheet and rill			x		x		
	Ephemeral or classic gully			x		x		
	Irrigation-induced				x			
	Wind				x	x		
	Streambank	x					x	
Water Quantity	Inefficient use on irrigated lands	x	x		x	x		
Water Quality, Surface	Suspended sediment	x	x	x	x	x	x	
	Nutrients and organics	x	x	x	x	x		
Water Quality, Ground	Nutrients and organics		x	x	x	x		
	Pesticides		x	x	x	x		
Soil Condition	Organic matter depletion			x		x		
	Compaction	x		x		x		
Plant Condition	Productivity, health and vigor	x	x	x			x	
	Noxious and invasive plants	x			x		x	
	Wildfire hazard						x	
Domestic Animals	Inadequate feed or water	x					x	
Fish and Wildlife	Inadequate water						x	
	Inadequate cover/shelter	x			x	x	x	

*** SWAPA: - Soil, Water, Air, Plants and Animals**

Human considerations: Implementation of conservation practices and enhancement has the potential for change in management and cost of production. Installation of practices will have an upfront cost and require maintenance. In the short run increased management may be required as new techniques are learned. Land may be taken out of production for installation of practices or conversion to other uses, such as wildlife habitat. Long term benefits should result from increased soil health, benefits to water quality and wildlife habitat.

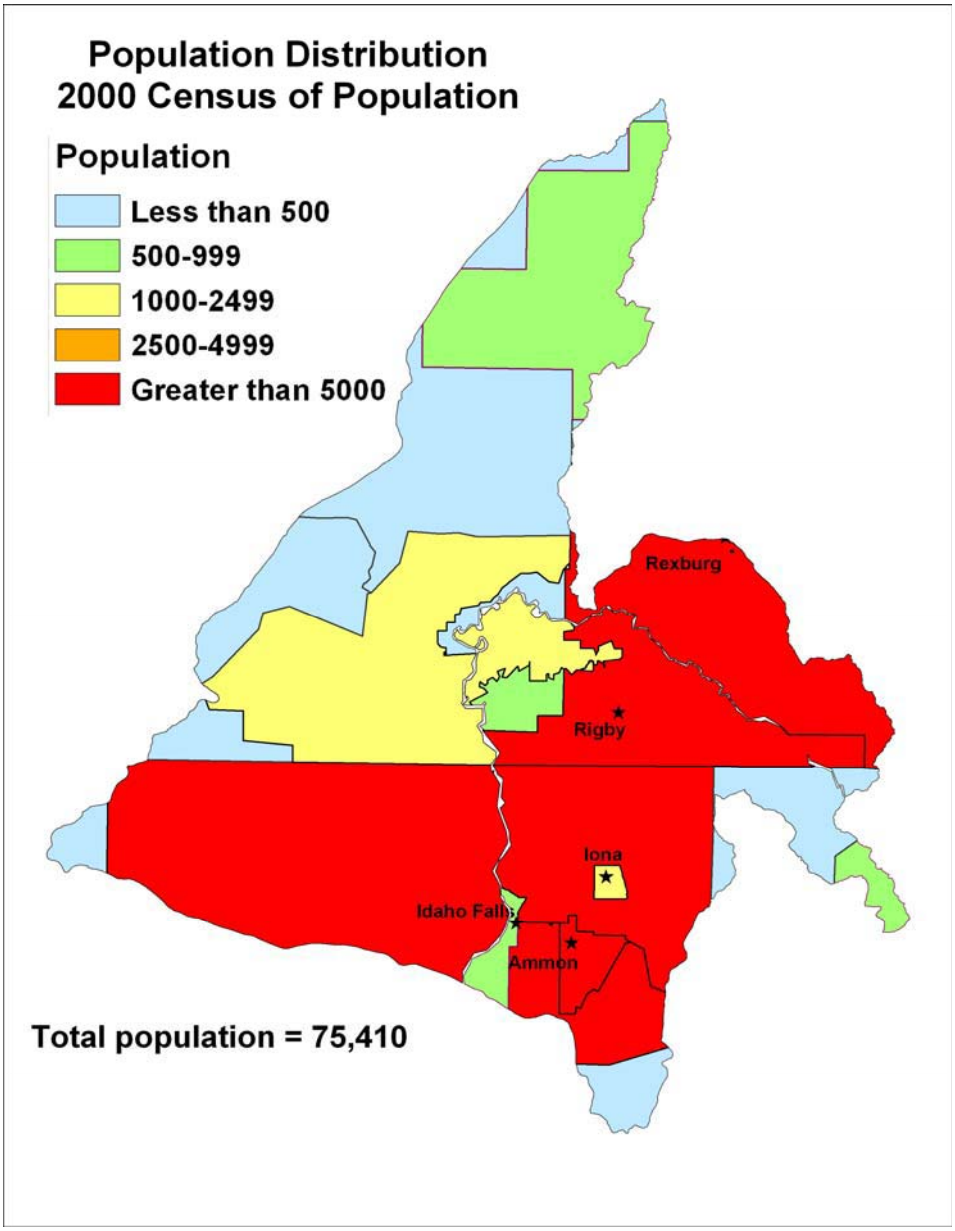
FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES[25]	
Threatened and Endangered Species	**Candidate Species**
Mammals – None **Birds –** Bald Eagle **Fish –** None **Invertebrates –** None **Plants –** Ute Ladies' Tresses	**Birds -** Yellow Billed Cuckoo **PROPOSED SPECIES** - None
ESSENTIAL FISH HABITAT – None	**CRITICAL FISH HABITAT –** None

Census and Social Data[/26]

Population: 75,410

Number of Farms: 1,319

	0-49 acres	50-999 acres	1000+ acres
Number of Farms	719	455	145



Census and Social Data - continued

Fifty-three percent of farm operators are farmers by occupation. The remaining operators have off-farm jobs as their primary occupation. The majority of operators are male; women make up 7.1 percent of the total. Ninety-nine percent of all operators are white. Non-white operators are of Hispanic, American Indian and Asian background.

Farm size ranges from less than 10 acres to more than 1,000 acres with an average of 450 acres. Agricultural land in the watershed is a mix of cropland, range, pasture and hay land. Land users in the watershed utilize EQIP, CRP, Continuous CRP and other programs to implement conservation plans.

Farm size is down while market value of production is up over the past several years. Government payments to farmers are also up for the period. Farm sales range from less than $1,000 to more than $500,000 per year. Seventy-eight percent of the farms reported sales of less than $50,000 per year.

	Number of farms	Average size farm	Market Value of Production (Average Farm)	Government Payments (Average Farm)
1997	840	460	$129,100	$8,900
2002	820	450	$159,500	$16,500
Change	- 2.4%	- 2.2%	23.5%	85.4%

Economic Profile:

	Watershed	Idaho	United States
Population (2000)	75,410		
Per Capita Personal Income (2001)	$21,500	$24,500	$30,400
Median Home Value (2000)	$93,800	$106,600	$119,600
Percent Unemployment (2002)	3.7%	5.4%	5.9%
Percent Below Poverty Level (2003)	11.9%	11.8%	12.5%

Progress/Status

PRS Data					
Conservation Treatment Acres	FY04	FY05	FY06	Avg/Year	Total
Waste Management (number)	0	0	0	0.0	0
Residue Management (acres)	529	129	18	225.3	676
Irrigation System (sprinkler)(acres)	273	469	1903	881.7	2645
Irrigation Water Conveyance, Pipeline, High Pressure Underground Plastic (430DD) (ft)	3521	9929	24240	12563.3	37690
Irrigation Water Management (acres)	273	684	226	394.3	1183
Nutrient Management (acres)	520	489	282	430.3	1291
Pest Management (acres)	2993	808	60	1287.0	3861
Prescribed Grazing (acres)	64	472	1229	588.3	1765
Fence (ft)	1995	12219	0	4738.0	14214
Pipeline (516) (ft)	2801	90	0	963.7	2891
Wildlife Habitat (acres)	3142	722	1190	1684.7	5054
Windbreak/Shelterbelt Establishment (380) (ft)	2933	8501	0	3811.3	11434

Progress in the last three years has been focused on:

~ irrigation water management

~ nutrient management

~ pest management

~ erosion control

Resource concerns that require ongoing attention:

~ erosion control

~ irrigation water management

~ nutrient management

~ water quality and water quantity

~ prescribed grazing

~ pest management

~ wildlife habitat improvements

Lands Removed from Production through Farm Bill Programs

- Conservation Reserve Program (CRP): **25,300 acres**
- Wetland Reserve Program (WRP): **237 acres**

Footnotes/Bibliography

1. Ownership Layer – Source: This spatial data contains surface management land status (sometimes known as "ownership") and Public Land Survey System (PLSS) information for Idaho. The Bureau of Land Management (BLM) in Idaho creates and maintains these spatial data layers. The primary source of the spatial features is the BLM Geographic Coordinate Database (GCDB), which contains official survey records and corresponding geodetic control information maintained by the BLM Cadastral program. In areas where GCDB records are unavailable, the spatial features are taken from a variety of sources including the BLM Idaho Resource Base Data collection, US Geological Survey Digital Line Graphs (DLGs), and US Forest Service Cartographic Feature Files (CFFs), among others. The source of the attribute information is the BLM Master Title Plats (MTPs) and careful cooperation with other government agencies that own or manage land parcels. The layer is available from the Inside Idaho (Interactive Numeric & Spatial Information Data Engine): http://inside.uidaho.edu For current ownership status, consult official records at appropriate federal, state or county offices. Ownership classes grouped to calculate Public Ownership vs. Private Ownership.
2. National Land Cover Dataset (NLCD): NLCD 92 (National Land Cover Data 1992) is a 21-category land cover classification scheme that has been applied consistently over the conterminous U.S. It is based primarily on the unsupervised classification of Landsat TM (Thematic Mapper) 1992 imagery. Ancillary data sources included topography, census, agricultural statistics, soil characteristics, other land cover maps, and wetlands data. The NLCD 92 classification is provided as raster data with a spatial resolution of 30 meters. The layer is available from: http://edcwww.cr.usgs.gov/products/landcover/nlcd.html Description: Abstract: These data can be used in a geographic information system (GIS) for any number of purposes such as assessing wildlife habitat, water quality, pesticide runoff, land use change, etc. The State data sets are provided with a 300 meter buffer beyond the State border to facilitate combining the State files into larger regions.
3. Farm Services Agency, USDA, 2005. CRP acres from GIS (CLU) database.
4. ESTIMATES FROM THE 1997 NRI DATABASE (REVISED DECEMBER 2000) REPLACE ALL PREVIOUS REPORTS AND ESTIMATES. Comparisons made using data published for the 1982, 1987, or 1992 NRI may produce erroneous results. This is due to changes in statistical estimation protocols, and because all data collected prior to 1997 were simultaneously reviewed (edited) as 1997 NRI data were collected. All definitions are available in the glossary. In addition, this December 2000 revision of the 1997 NRI data updates information released in December 1999 and corrects a computer error discovered in March 2000. For more information: http://www.nrcs.usda.gov/technical/NRI/
5. PRISM Climate Mapping Project. Annual precipitation data. See http://www.ocs.orst.edu/prism_new.html for further information.
6. Irrigated Adjudicated Water Rights – Idaho Department of Water Resources http://www.idwr.idaho.gov/water/srba/mainpage/
7. USGS Idaho Streamflows, gaging station data (http://waterdata.usgs.gov/id/nwis/sw/) and estimates for ungaged streams based on statistical data (http://streamstats.usgs.gov/html/idaho.html).
8. National Hydrology Dataset (NHD). Developed by the US Geological Survey in cooperation with U.S. Environmental Protection Agency and other state and local partners (http://nhd.usgs.gov).
9. IDEQ. 2002 Integrated Report (approved December 2005). http://www.deq.idaho.gov/water/data_reports/surface_water/monitoring/integrated_report.cfm.
10. IDEQ. 2004. Idaho Falls Subbasin Assessment and TMDL. http://www.deq.state.id.us/water/data_reports/surface_water/tmdls/idaho_falls/idaho_falls.cfm

11. StreamNet is a cooperative venture of the Pacific Northwest's fish and wildlife agencies and tribes and is administered by the Pacific States Marine Fisheries Commission. Streamnet provided data and data services in support of the region's Fish and Wildlife Program and other efforts to manage and restore the region's aquatic resources. Official Streamnet website: http://www.streamnet.org/
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22. 303d Listed Streams designated by the Idaho Department of Environmental Quality (1998) and approved by the Environmental Protection Agency, Section 303d Clean Water Act
23. Groundwater Management Areas and Critical Groundwater Management Areas designated by the Idaho Department of Water Resources. http://www.idwr.idaho.gov/hydrologic/projects/gwma/
24. Nitrate Priority Areas. IDEQ has developed a list of degraded ground water areas. This list focuses on nitrate and ranks the top 25 nitrate-degraded areas (referred to as "nitrate priority areas") in the state based on the severity of the degradation, the population affected, and the trend; the rank of "1" indicates the most severely impacted area in the state. http://www.deq.state.id.us/water/prog_issues/ground_water/nitrate.cfm#ranking
25. NRCS Field Office Technical Guide, Section II, Threatened and Endangered List and the Idaho Conservation Data Center, Idaho Department of Fish and Game http://fishandgame.idaho.gov/cms/tech/CDC/
26. Data were taken from the 2002 Agricultural Census and adjusted by percent of HUC in the county or by percent of zip code area in the HUC, depending on the level of data available. Data were also taken from the U.S. Census, 2000 by zip code and adjusted by percent of zip code in the HUC. http://www.nass.usda.gov/Census_of_Agriculture/Census_by_State/Idaho/index.asp

Future Conservation Needs

The following Tables are an estimate of the future needs of conservation practices in the watershed.

Estimates of future needs in the watershed are based on the following factors:

1. Estimates of total conservation needs based on benchmark conditions in the watershed
2. Present level of conservation installation reported in the NRCS web based reporting system
3. Local knowledge of the area, past and ongoing project activities and professional judgment
4. Practices previously installed which have exceeded their expected life (life span), are no longer accomplishing the conservation objective, and may need to be replaced or upgraded.

Conservation Activities for Dry Cropland/Hayland *

**The following Current Conditions Tables have been developed to estimate the present level of conservation installed within the HUC, based on what has been reported in the PRMS and PRS Reporting system for the Years 2004 through 2006.*

Current Conditions		Total acres	Riparian Potential
Total Dry Cropland		13,200	
Typical Management Unit/Ownership		450	1,320
Current Farm Bill participation		15%	

Current Level of Treatment for Dry Cropland:

Dry Cropland	Quantity		Costs		Effects				Implementation			
Practices	Unit	Quantity	Additional Investment Cost	Annual O&M and Mngt. Cost	Water Conservation	Water Storage	Fish Habitat	WQ	EQIP	WHIP	CREP	Other
Dry Cropland	Ac.	13,200			-3	-/+	-2	-3				
Conservation Crop Rotation (328)	Ac.	116	$ -	$ -					X			X
Deep Tillage (324)	Ac.	529	$ -	$ 7,900								
Residue Management Mulch Till (329B)(345)	Ac.	843	$ -	$ 12,600					X			X
Residue Management NoTill/StripTill (329A)	Ac.	39	$ -	$ 600					X			X
Upland Wildlife Habitat Management (645)	Ac.	570	$ -	$ 2,900								
Use Exclusion (472)	Ac.	390	$ -	$ 400								X
Windbreak/Shelterbelt Establishment (380)	Ft.	1,150	$ -	$ 100								X

Conservation Activities for Dry Cropland/Hayland * - Continued

Future Conditions	Riparian Potential	Total Acres
Dry Cropland Acres		11,880
Conversion to Riparian RMS	1,320	1,320
Total Acres		13,200

Project Future Level of Treatment for Dry Cropland:

Dry Cropland		Quantity	Costs		Effects				Implementation			
Practices	Unit	Quantity	Additional Investment Cost	Annual O&M and Mngt. Cost	Water Conservation	Water Storage	Habitat	WQ	EQIP	WHIP	CREP	Other
Dry Cropland	Ac.	11,880			+3	+1	+2	+3				
Conservation Crop Rotation (328)	Ac.	11,800	$ -	$ -					X			X
Contour Farming (330)	Ac.	11,800	$ 88,500	$ 29,500					X			X
Deep Tillage (324)	Ac.	11,800	$ 507,200	$ 169,100					X			X
Diversion (362)	Ft.	23,760	$ 65,300	$ 1,300					X			X
Forage Harvest Management (511)	Ac.	4,750	$ -	$ -					X			X
Grassed Waterway (412)	Ac.	65	$ 117,000	$ 2,300					X	X		X
Nutrient Management (590)	Ac.	11,800	$ 177,000	$ 59,000					X			X
Pasture & Hayland Planting (512)	Ac.	4,750	$ 475,000	$ 4,800					X		X	X
Pest Management (595)	Ac.	11,800	$ 354,000	$ 118,000					X			X
Residue and Tillage Management Mulch Till (345)	Ac.	5,940	$ 229,400	$ 76,500					X			X
Residue and Tillage Management No Till / Strip Till / Direct Seed (329)	Ac.	5,940	$ 265,500	$ 88,500					X			X
Sediment Basin (350)	No.	70	$ 192,500	$ 5,800					X		X	X
Stripcropping (585)	Ac.	5,940	$ 148,500	$ 1,500					X			X
Terrace (600)	Ft.	570,240	$ 1,254,500	$ 12,500					X			X
Upland Wildlife Habitat Management (645)	Ac.	1,780	$ 18,200	$ 6,100					X			X
Water and Sediment Control Basin (638)	No.	590	$ 619,500	$ 18,600					X			X
Windbreak/Shelterbelt Establishment (380)	Ft.	47,520	$ 235,600	$ 2,400					X			X

Conservation Activities for Dry Cropland/Hayland * - Continued

Current Level of Treatment for Dry Cropland												
Dry Cropland	Quantity		Costs		Effects				Implementation			
Practices	Unit	Quantity	Investment Cost	Annual O&M and Mngt. Cost	Water Conservation	Water Storage	Habitat	WQ	EQIP	WHIP	CREP	Other
Dry Cropland Riparian	Ac.	1,320			+3	+2	+3	+3				
Channel Bank Vegetation (322)	Ac.	130	$ 650,000	$ 13,000					X			X
Channel Stabilization (584)	Ft.	2,080	$ 37,400	$ 200					X			X
Fence (382)	Ft.	21,120	$ 37,000	$ 700					X	X		X
Nutrient Management (590)	Ac.	1,320	$ 19,800	$ 6,600					X	X		X
Pest Management (595)	Ac.	1,320	$ 39,600	$ 13,200					X			X
Pipeline (516)	Ft.	21,120	$ 57,000	$ 1,100					X			X
Prescribed Grazing (528)	Ac.	1,320	$ 19,800	$ 6,600					X			X
Pumping Plant (533)	No.	8	$ 22,800	$ 500					X			X
Riparian Forest Buffer (391)	Ac.	24	$ 72,000	$ 700					X			X
Riparian Herbaceous Cover (390)	Ac.	24	$ 1,200	$ -					X	X		X
Streambank & Shoreline Prot (580)	Ft.	5,210	$ 125,000	$ 12,500					X	X		X
Tree/Shrub Establishment (612)	Ac.	6	$ 2,700	$ -					X			X
Upland Wildlife Management (645)	Ac.	200	$ 3,000	$ 1,000					X	X		X
Use Exclusion (472)	Ac.	70	$ 2,500	$ 100					X	X		X
Watering Facility (614)	No.	17	$ 17,000	$ 200					X			X
Wetland Wildlife Management (644)	Ac.	130	$ 2,000	$ 700					X			X
Total RMS Costs			$ 5,856,500	$ 653,000								

Conservation Activities for Dry Cropland/Hayland * - Continued

Potential RMS Effects Summary for Dry Cropland		
Cost Items and Programs	Costs	O&M Costs
Non Farm Bill Programs	$ 292,800	$ 32,700
Potential Farm Bill Programs	$ 5,563,700	$ 620,300
Operator O&M and Management Cost		$ 653,000
Annual Management Incentives (3 yrs - Incentive Payments)	$ 1,724,000	
Operator Investment	$ 1,252,700	
Federal Costshare	$ 2,879,800	
Total RMS Costs	$ 5,856,500	$ 653,000
Estimated Level of Participation		75%
Total Acres in RMS System		9,900
Anticipated Cost at Estimated Level of Participation	$	4,392,400
Total Acre Feet of Water Saved Annually		449,580
Participating landowners will be in compliance with TMDLs		
Improves habitat for ESA endangered & threatened species		

Conservation Activities for Irrigated Cropland/Hayland

Current Conditions		Total acres
Total Irrigated Cropland/Hayland		286,600
Typical Management Unit/Ownership		450
Surface Irrigated Cropland/Hayland		171,960
Sprinkler Irrigated Cropland/Hayland		114,640
Current Farm Bill participation		15%

Current Level of Treatment for Irrigated Cropland/Hayland:

Irrigated Cropland/Hayland	Quantity		Costs		Effects				Implementation			
Practices	Unit	Quantity	Additional Investment Cost	Annual O&M and Mngt. Cost	Water Conservation	Water Storage	Fish Habitat	WQ	EQIP	WHIP	CREP	Other
Surface Irrigation	Ac.	171,960			-3	-/+	-2	-3				
Conservation Crop Rotation (328)	Ac.	552	$ -	$ -					X			X
Irrigation Land Leveling (464)	Ac.	427	$ -	$ 2,600								
Irrigation Water Management (449)	Ac.	582	$ -	$ 4,400					X			X
Nutrient Management (590)	Ac.	143	$ -	$ 700					X			X
Pest Management (595)	Ac.	822	$ -	$ 8,200					X			X
Structure for Water Control (587)	No.	15	$ -	$ 150					X			X
Sprinkler Irrigation	Ac.	114,640			+1	-/+	+1	+3				
Conservation Crop Rotation (328)	Ac.	18	$ -	$ -					X			X
Irrigation System, Sprinkler (442)	Ac.	2,136	$ -	$ 29,900					X			X
Irrigation Water Conveyance (430DD)	Ft.	27,073	$ -	$ 1,000					X			X
Irrigation Water Management (449)	Ac.	1,654	$ -	$ 12,400					X			X
Nutrient Management (590)	Ac.	528	$ -	$ 2,600					X			X
Pest Management (595)	Ac.	2,139	$ -	$ 21,400					X			X
Upland Wildlife Habitat Management (645)	Ac.	7,050	$ -	$ 35,300					X			X
Use Exclusion (472)	Ac.	2,400	$ -	$ 2,500					X			X
Windbreak/Shelterbelt Establishment (380)	Ft.	3,480	$ -	$ 200					X			X

Conservation Activities for Irrigated Cropland/Hayland * - Continued

Future Conditions			Total Acres
Surface Irrigated Cropland/Hayland			57,320
Sprinkler Irrigated Cropland/Hayland			229,280
Total Irrigated Cropland/Hayland Acres			286,600

Project Future Level of Treatment for Irrigated Cropland/Hayland:

Irrigated Cropland/Hayland	Quantity		Costs		Effects				Implementation			
Practices	Unit	Quantity	Additional Investment Cost	Annual O&M and Mngt. Cost	Water Conservation	Water Storage	Habitat	WQ	EQIP	WHIP	CREP	Other
Surface Irrigation	Ac.	57,320			+2	+1	+2	+2				
Anionic Polyacrylamide, (PAM) (450)	Ac.	57,320	$ 2,579,400	$ 859,800					X			X
Conservation Crop Rotation (328)	Ac.	57,320	$ -	$ -					X			X
Constructed Wetland (656)	No.	6	$ 300,000	$ 3,000					X			X
Cover Crop (340)	Ac.	14,330	$ 716,500	$ 7,200					X			X
Forage Harvest Management (511)	Ac.	57,320	$ -	$ -					X			X
Irrigation System, Surface (443)	Ac.	45,380	$ 6,807,000	$ 204,200					X			X
Irrigation System, Gated Surge (443)	Ac.	4,530	$ 2,491,500	$ 74,700					X			X
Irrigation Tailwater Recovery (447)	No.	72	$ 1,087,200	$ 32,600					X			X
Irrig. System, Micro Irrigation (Drip) (441)	Ac.	4,530	$ 5,662,500	$ 283,100					X			X
Irrigation Water Conveyance (430 EE)	Ft.	1,891,560	$ 7,509,500	$ 37,500					X	X		X
Irrigation Water Conveyance (430 HH) (Gated Pipe)	Ft.	871,200	$ 3,554,500	$ 35,500					X	X		X
Irrigation Water Management (449) - Low Level	Ac.	40,120	$ 889,600	$ 296,500					X			X
Irrigation Water Management (449) -Meters and Moisture Sensors	Ac.	17,200	$ 516,000	$ 172,000					X			X
Land Leveling/Smoothing (464 & 466)	Ac.	14,330	$ 2,780,600	$ 83,400					X			X
Nutrient Management (590)	Ac.	57,320	$ 857,700	$ 285,900					X			X
Pest Management (595)	Ac.	57,320	$ 1,694,900	$ 565,000					X			X
Sediment Basin (350)	No.	310	$ 852,500	$ 25,600					X			X

Conservation Activities for Irrigated Cropland/Hayland * - Continued

Project Future Level of Treatment for Irrigated Cropland/Hayland (Continued):												
Irrigated Cropland/Hayland	Quantity		Costs		Effects				Implementation			
Practices	Unit	Quantity	Additional Investment Cost	Annual O&M and Mngt. Cost	Water Conservation	Water Storage	Habitat	WQ	EQIP	WHIP	CREP	Other
Residue Management Mulch Till (345)	Ac.	57,320	$ 2,579,400	$ 859,800					X			X
Residue Management Seasonal (344)	Ac.	57,320	$ 2,579,400	$ 859,800					X			X
Structure for Water Control (587) -Fish Screen	No.	720	$ 8,640,000	$ 86,400					X			X
Surface Roughening (609)	Ac.	57,320	$ 1,289,700	$ 429,900					X			X
Upland Wildlife Habitat Management (645)	Ac.	8,600	$ 129,000	$ 43,000					X			X
Well Decommissioning (355)	No.	95	$ 80,800	$ -					X			X
Windbreak/Shelterbelt Establishment(380)	Ft.	945,120	$ 4,801,200	$ 48,000					X			X

Conservation Activities for Irrigated Cropland/Hayland * - Continued

Project Future Level of Treatment for Irrigated Cropland/Hayland (Continued):												
Irrigated Cropland/Hayland	Quantity		Costs		Effects				Implementation			
Practices	Unit	Quantity	Additional Investment Cost	Annual O&M and Mngt. Cost	Water Conservation	Water Storage	Habitat	WQ	EQIP	WHIP	CREP	Other
Sprinkler Irrigation	Ac.	229,280			+3	+2	+2	+3				
Cover Crop (340)	Ac.	57,320	$ 2,866,000	$ 28,700					X			X
Conservation Crop Rotation (328)	Ac.	229,280	$ -	$ -					X			X
Constructed Wetland (656)	No.	23	$ 690,000	$ 6,900					X			X
Forage Harvest Management (511)	Ac.	57,320	$ -	$ -					X			X
Irrigation System, Sprinkler (442)	Ac.	229,280	$159,000,800	$ 3,180,000					X			X
Irrigation Water Conveyance (430DD)	Ft.	1,890,240	$ 13,824,700	$ 69,100					X			X
Irrigation Water Management (449) - Low level	Ac.	160,500	$ 3,574,000	$ 1,191,300					X			X
Irrigation Water Management (449) - Meters and Moisture Sensors	Ac.	68,780	$ 2,063,400	$ 687,800					X			X
Nutrient Management (590)	Ac.	229,280	$ 3,431,300	$ 1,143,800					X			X
Pest Management (595)	Ac.	229,280	$ 6,814,200	$ 2,271,400					X			X
Residue Mngt, Mulch Till (345)	Ac.	229,280	$ 10,317,600	$ 3,439,200					X			X
Residue Management Seasonal (344)	Ac.	229,280	$ 10,317,600	$ 3,439,200					X			X
Residue Mngt, No Till/Strip Till (329)	Ac.	22,930	$ 1,031,900	$ 344,000					X			X
Sediment Basin (350)	No.	360	$ 990,000	$ 29,700					X			X
Structure for Water Control (587) -Fish Screen	No.	1,430	$ 17,160,000	$ 171,600					X			X
Surface Roughening (609)	Ac.	229,280	$ 5,158,800	$ 1,719,600					X			X
Upland Wildlife Habitat Management (645)	Ac.	34,390	$ 515,900	$ 172,000					X			X
Well Decommissioning (355)	No.	360	$ 306,000	$ -					X			X
Windbreak/Shelterbelt Establishment (380)	Ft.	1,890,240	$ 9,584,700	$ 95,800					X			X
Total RMS Costs			$306,045,800	$23,283,000								

Conservation Activities for Irrigated Cropland/Hayland * - Continued

Potential RMS Effects Summary for Irrigated Cropland/Hayland		
Cost Items and Programs	Costs	O&M Costs
Non Farm Bill Programs	$ 15,302,300	$ 1,164,200
Potential Farm Bill Programs	$290,743,500	$22,118,800
Operator O&M and Management Cost		$23,283,000
Annual Management Incentives (3 yrs - Incentive Payments)	$ 56,339,800	
Operator Investment	$ 73,903,200	
Federal Costs	$175,802,800	
Total RMS Costs	$306,045,800	$23,283,000
Estimated Level of Participation		75%
Total Acres in RMS System		214,950
Anticipated Cost at Estimated Level of Participation	$	229,534,400
Total Acre Feet of Water Saved Annually		321,276
Increases infiltration and storage of water in soil profile		
Participating landowners will be in compliance with TMDLs		
Improves habitat for ESA endangered & threatened species		

Conservation Activities for Irrigated Pasture

Current Conditions		Total Acres	Riparian/ Wetland Potential
Surface Irrigated Pasture		17,280	
Sprinkler Irrigated Pasture		1,920	
Total Irrigated Pasture		19,200	2,500
Typical Management Unit/Ownership		450	
Current Farm Bill participation		15%	

Current Level of Treatment for Irrigated Pasture:

	Quantity		Costs		Effects				Implementation			
Practices	Unit	Quantity	Additional Investment Cost	Annual O&M and Mngt. Cost	Water Conservation	Water Storage	Fish Habitat	WQ	EQIP	WHIP	CREP	Other
Surface Irrigation	Ac.	17,280			-3	-/+	-2	-3				
Fence (382)	Ft.	5000	$ -	$ 200					X			X
Irrigation Water Management (449)	Ac.	139	$ -	$ 1,000					X			X
Nutrient Management (590)	Ac.	139	$ -	$ 700					X			X
Pest Management (595)	Ac.	295	$ -	$ 3,000					X			X
Prescribed Grazing (528)	Ac.	452	$ -	$ 2,300					X			X
Sprinkler Irrigation	Ac.	1,920			+2	+1	+1	+3				
Fence (382)	Ft.	6,210	$ -	$ 200					X			X
Irrigation System Sprinkler (442)	Ac.	453	$ -	$ 6,300					X			X
Irrigation Water Conveyance (430DD)	Ft.	6,866	$ -	$ 250					X			X
Irrigation Water Management (449)	Ac.	336	$ -	$ 2,500					X			X
Nutrient Management (590)	Ac.	336	$ -	$ 1,700					X			X
Pasture and Hayland Planting (512)	Ac.	377	$ -	$ 380					X			X
Pest Management (595)	Ac.	24	$ -	$ 200					X			X
Prescribed Grazing (528)	Ac.	836	$ -	$ 4,200					X			X

Conservation Activities for Irrigated Pasture – Continued

Future Conditions			Total Acres
Surface Irrigated Pasture			2,300
Sprinkler Irrigated Pasture			14,400
Total Conversion to Riparian Pasture RMS			2,500
Total Acres			19,200

Project Future Level of Treatment for Irrigated Pasture:

	Quantity		Costs		Effects				Implementation			
Practices	Unit	Quantity	Additional Investment Cost	Annual O&M and Mngt. Cost	Water Conservation	Water Storage	Habitat	WQ	EQIP	WHIP	CREP	Other
Surface Irrigation	Ac.	2,300			+1	+1	+1	+1				
Fence (382)	Ft.	37,950	$ 57,700	$ 1,200					X			X
Irrigation System Surface (443)	Ac.	1,740	$ 261,000	$ 7,800					X	X	X	X
Irrigation Tailwater Recovery (447)	No.	14	$ 211,400	$ 6,300					X			X
Irrigation Water Conveyance (430HH)	Ft.	76,560	$ 312,400	$ 3,100					X			X
Irrigation Water Conveyance (430EE)	Ft.	153,120	$ 607,900	$ 3,000					X			X
Irrigation Water Management (449)	Ac.	2,300	$ 48,600	$ 16,200					X			X
Nutrient Management (590)	Ac.	2,300	$ 32,400	$ 10,800					X			X
Pasture & Hayland Planting (512)	Ac.	920	$ 92,000	$ 900					X			X
Pest Management (595)	Ac.	2,300	$ 60,200	$ 20,100					X			X
Prescribed Grazing (528)	Ac.	2,300	$ 27,700	$ 9,200					X			X
Structure for Water Control (587)-Fish Screen	No.	30	$ 360,000	$ 3,600					X	X		X
Upland Wildlife Management (645)	Ac.	350	$ 5,300	$ 1,800					X			X
Watering Facility (614)	No.	14	$ 14,000	$ 100					X			X
Windbreak/Shelterbelt Establish(380)	Ft.	14	$ 100	$ -					X			X

Conservation Activities for Irrigated Pasture – Continued

Project Future Level of Treatment for Irrigated Pasture (Continued):												
	Quantity		Costs		Effects				Implementation			
Practices	Unit	Quantity	Additional Investment Cost	Annual O&M and Mngt. Cost	Water Conservation	Water Storage	Habitat	WQ	EQIP	WHIP	CREP	Other
Sprinkler Irrigation	Ac.	14,400			+3	+3	+2	+3				
Fence (382)	Ft.	237,600	$ 404,900	$ 8,100					X			X
Irrigation Water Conveyance (430DD)	Ft.	205,920	$ 1,477,000	$ 7,400					X			X
Irrigation System Sprinkler (442)	Ac.	14,400	$ 9,762,900	$ 195,300					X			X
Irrigation Water Management (449)	Ac.	14,400	$ 316,400	$ 105,500					X			X
Nutrient Management (590)	Ac.	14,400	$ 211,000	$ 70,300					X			X
Pasture & Hayland Planting (512)	Ac.	5,760	$ 538,300	$ 5,400					X			X
Pest Management (595)	Ac.	14,400	$ 431,300	$ 143,800					X			X
Prescribed Grazing (528)	Ac.	14,400	$ 203,500	$ 67,800					X			X
Structure for Water Control (587)-Fish Screen	No.	90	$ 1,080,000	$ 10,800					X	X		X
Upland Wildlife Management (645)	Ac.	2,160	$ 32,400	$ 10,800					X			X
Watering Facility (614)	No.	90	$ 90,000	$ 900					X			X
Windbreak/Shelterbelt Establish(380)	Ft.	237,600	$ 1,207,000	$ 12,100					X			X
Riparian Pastures	Ac.	2,500			+1	+1	+3	+3				
Channel Bank Vegetation (322)	Ac.	250	$ 1,250,000	$ 25,000					X			X
Channel Stabilization (584)	Ft.	1,390	$ 25,000	$ 100					X			X
Fence (382)	Ft.	42,240	$ 73,900	$ 1,500					X	X	X	X
Nutrient Management (590)	Ac.	2,500	$ 37,500	$ 12,500					X			X
Pasture & Hayland Planting (512)	Ac.	1,000	$ 100,000	$ 1,000					X			X
Pest Management (595)	Ac.	2,500	$ 75,000	$ 25,000					X			X
Pipeline (516)	Ft.	40,920	$ 110,500	$ 2,200					X			X
Prescribed Grazing (528)	Ac.	2,500	$ 37,500	$ 12,500					X			X

Conservation Activities for Irrigated Pasture – Continued

Project Future Level of Treatment for Irrigated Pasture (Continued):

	Quantity		Costs		Effects				Implementation			
Practices	Unit	Quantity	Additional Investment Cost	Annual O&M and Mngt. Cost	Water Conservation	Water Storage	Habitat	WQ	EQIP	WHIP	CREP	Other
Riparian Forest Buffer (391)	Ac.	32	$ 96,000	$ 1,000					X			X
Riparian Herbaceous Cover (390)	Ac.	32	$ 1,600	$ -					X	X	X	X
Streambank & Shoreline Prot (580)	Ft.	3,480	$ 83,500	$ 8,400					X			X
Tree/Shrub Establishment (612)	Ac.	16	$ 7,200	$ 100					X			X
Upland Wildlife Management (645)	Ac.	375	$ 5,600	$ 1,900					X			X
Use Exclusion (472)	Ac.	125	$ 4,400	$ 100					X	X	X	X
Watering Facility (614)	No.	31	$ 31,000	$ 300					X		X	X
Wetland Wildlife Management (644)	Ac.	250	$ 3,800	$ 1,300					X			X
Total RMS Costs			$ 19,787,900	$ 815,200								

Conservation Activities for Irrigated Pasture – Continued

RMS Cost Summary for Irrigated Pasture:

Cost Items and Programs	Costs	O&M Costs
Non Farm Bill Programs	$ 989,400	$ 40,800
Potential Farm Bill Programs	$ 18,798,500	$774,400
Operator O&M and Management Cost		$815,200
Annual Management Incentives (3 yrs - Incentive Payments)	$ 1,528,200	
Operator Investment	$ 5,307,000	
Federal Costshare	$ 12,952,700	
Total RMS Farm Bill Costs	$ 19,787,900	
Estimated Level of Participation		60%
Total Acres in RMS System		11,520
Anticipated Cost at Estimated Level of Participation	$	11,872,700
Total Acre Feet of Water Saved Annually		23,964
Total Annual Forage Production Benefits (animal unit months)		44,500
Improves ground water and surface water quality by minimizing off-site transport		
Improves riparian habitat for ESA endangered & threatened species		

Conservation Activities for Grazed Rangeland, Dry Pasture and Forestland

Current Conditions	Grazed	Ungrazed	Riparian/Wetland/Potential	Total Acres
Private Rangeland and Dry Pasture	176,420		19,600	196,020
Typical Management Unit/Ownership	450			
Current Farm Bill participation	15%			

Current Level of Treatment for Grazed Rangeland, Dry Pasture and Forestland:

	Quantity		Costs		Effects				Implementation				
Practices	Unit	Quantity	Investment Cost	Annual O&M and Mngt. Cost	Water Conservation	Water Storage	Habitat	WQ	EQIP	WHIP	WRP	CREP	Other
Range / Pasture (w/prescribed grazing)	Ac.	196,020	$ -		+/-	+/-	+/-	+/-					
Fence (382)	Ft.	1,009	$ -	$ 40					X				X
Pest Management (595)	Ac.	43	$ -	$ 400					X				X
Pipeline (516)	Ft.	90	$ -	$ -					X				X
Prescribed Grazing (528)	Ac.	980	$ -	$ 4,900					X				X
Spring Development (574)	No.	1		$ 10					X				X
Watering Facility (614)	No.	1	$ -	$ 10					X				X

Conservation Activities for Grazed Rangeland, Dry Pasture and Forestland - Continued

Future Conditions	Rangeland / Pasture	Riparian	Total Acres
	176,420	19,600	196,020

Project Future Level of Treatment for Grazed Rangeland, Dry Pasture and Forestland:

	Quantity		Costs		Effects				Implementation				
Practices	Unit	Quantity	Investment Cost	Annual O&M and Mngt. Cost	Water Conservation	Water Storage	Habitat	WQ	EQIP	WHIP	WRP	CREP	Other
Grazed Range, Pasture and Forestland	Ac.	176,420			+3	+2	+3	+3					
Brush Management (314)	Ac.	58,630	$ 1,172,600	$ 11,700					X				X
Fence (382)	Ft.	2,931,720	$ 5,128,700	$ 102,600					X				X
Firebreak (394)	Ft.	733,710	$ 1,416,100	$ 283,200					X				X
Pest Management (595)	Ac.	176,420	$ 5,291,300	$1,763,800					X				X
Pipeline (516)	Ft.	733,710	$ 1,980,800	$ 39,600					X				X
Pond (378)	No.	70	$ 350,000	$ 3,500					X				X
Prescribed Grazing (528)	Ac.	176,420	$ 2,631,600	$ 877,200					X				X
Range Planting (550)	Ac.	58,630	$ 5,276,700	$ 52,800					X				X
Spring Development (574)	No.	280	$ 655,700	$ 3,300					X	X			X
Upland Wildlife Management (645)	Ac.	35,530	$ 533,000	$ 177,700					X	X			X
Watering Facility (614)	No.	280	$ 279,000	$ 2,800					X				X
Well (642)	No.	140	$ 420,000	$ 4,200					X				X
Range & Pasture Riparian	Ac.	19,600			+3	+2	+3	+3					
Channel Bank Vegetation (322)	Ac.	1,960	$ 9,800,000	$ 196,000					X				X
Channel Stabilization (584)	Ft.	13,200	$ 237,600	$ 1,200					X				X
Fence (382)	Ft.	162,350	$ 284,100	$ 5,700					X	X	X		X
Pest Management (595)	Ac.	19,600	$ 588,000	$ 196,000					X				X
Pipeline (516)	Ft.	40,590	$ 109,600	$ 2,200					X				X
Prescribed Grazing (528)	Ac.	19,600	$ 294,000	$ 98,000					X				X
Pumping Plant (533)	No.	8	$ 22,800	$ 500					X				X
Riparian Forest Buffer (391)	Ac.	150	$ 450,000	$ 4,500					X				X
Riparian Herbaceous Cover (390)	Ac.	150	$ 7,500	$ 100					X	X	X		X

Conservation Activities for Grazed Rangeland, Dry Pasture and Forestland - Continued

Project Future Level of Treatment for Grazed Rangeland, Dry Pasture and Forestland (Continued):													
	Quantity		Costs		Effects				Implementation				
Practices	Unit	Quantity	Investment Cost	Annual O&M and Mngt. Cost	Water Conservation	Water Storage	Habitat	WQ	EQIP	WHIP	WRP	CREP	Other
Range & Pasture Riparian (cont.)													
Streambank & Shoreline Prot (580)	Ft.	33,010	$ 792,200	$ 79,200					X	X			X
Tree/Shrub Establishment (612)	Ac.	76	$ 34,200	$ 300					X				X
Upland Wildlife Management (645)	Ac.	3,950	$ 59,300	$ 19,800					X	X			X
Use Exclusion (472)	Ac.	150	$ 5,300	$ 200					X	X	X		X
Watering Facility (614)	No.	30	$ 30,000	$ 300					X		X		X
Wetland Wildlife Management (644)	Ac.	1,960	$ 29,400	$ 9,800					X		X		X
Total RMS Costs			$37,879,500	$3,936,200									

Conservation Activities for Grazed Rangeland, Dry Pasture and Forestland - Continued

RMS Cost Summary for Grazed Rangeland, Pasture and Forestland:

Cost Items and Programs	Costs	O&M Costs
Non Farm Bill Programs	$ 1,894,000	$ 196,800
Potential Farm Bill Programs	$35,985,500	$3,739,400
Operator O&M and Management Cost		$3,936,200
Annual Management Incentives (3 yrs - Incentive Payments)	$ 9,426,600	
Operator Investment	$ 8,533,700	
Federal Costshare	$19,919,200	
Total RMS Farm Bill Costs	$37,879,500	
Estimated Level of Participation		35%
Total Acres in RMS System		68,600
Anticipated Cost at Estimated Level of Participation	$	13,257,800
Total Annual Forage Production Benefits (acre unit months)		10,300
Improves infiltration and storage of water in soil profile		
Improves upland wildlife habitat for deer, elk, antelope and other species		
Improves water quality by reducing erosion and sediment delivery to streams		

Conservation Activities for Headquarters

Confined Animal Feed Operations (CAFO - 700 Head Dairies or 1,000 Head Feeder Cattle) and Animal Feed Operations (AFO 200-700 Head Dairy or 300 to 1,000 Head Feeder Cattle) are variable in complexity depending on size, number of cows and location of the waste storage facility. Kinds and amounts of component practices required for proper operation are site specific, but typically include the following practices. Note that an AFO can be designated as a CAFO regardless of number of animals if it is found to be a significant polluter.

Anaerobic Digester (366), Composting Facility (317), Access Road (560), Dikes (356), Diversions (362), Fence (382), Heavy Use Area Protection (561), Irrigation Water Conveyance (430EE) (430DD), Pipeline (516), Pond (378), Pond Sealing or Lining (521), Pump Plant (533), Roof Runoff Structure (558), Separator, Structure for Water Control (587), Underground Outlet (620), Waste Treatment Lagoon (359), Watering Facility (614), Well Decommissioning (355), Windbreak/Shelterbelt Establishment (380), Dry Stack Areas and Ramps.

Management practices commonly used include. Critical Area Planting (342), Filter Strip (393), Manure Transfer (634), Nutrient Management (590), Pest Management (595) and Waste Utilization (633).

Current conditions and future needs for CAFOs and AFOs reflect the following component practices of Waste Storage Facility (313).

Current Conditions		Total
CAFOs		11
AFOs		66
Current Farm Bill participation	15%	-
Total CAFOs and AFOs		77

Conservation Activities for Headquarters – Continued

Current Level of Treatment for Headquarters													
	Quantity		Costs		Effects				Implementation				
Practices	Unit	Quantity	Investment Cost	Annual O&M and Mngt. Cost	Water Conservation	Water Storage	Habitat	WQ	EQIP	WHIP	WRP	CREP	Other
Dairy	Ac.	46			+/-	-1	-3	-3					
Waste Storage Facility (313) CAFO	No.	1	$ -	1,800					X				X
Waste Storage Facility (313) AFO	No.	33	$ -	29,700					X				X
Feed Lot	Ac.	31			+/-	+/-	-3	-3					
Waste Storage Facility (313) CAFO	No.	2	$ -	3,500					X				X
Waste Storage Facility (313) AFO	No.	4	$ -	3,600					X				X

Conservation Activities for Headquarters – Continued

Future Conditions		Total Dairies & Feedlots
Dairies Needing Structural Practices		12
Dairies Needing Management Practices		28
Feedlots Needing Management and Structural Practices		25
Total Dairies and Feedlots		65

Numbers of Dairies and Feedlots needing treatment were estimated based on input from Idaho Department of Agriculture and the local NRCS Field Offices.

Project Future Level of Treatment for Headquarters

	Quantity		Costs		Effects				Implementation				
Practices	Unit	Quantity	Investment Cost	Annual O&M and Mngt. Cost	Water Conservation	Water Storage	Habitat	WQ	EQIP	WHIP	WRP	CREP	Other
Dairy	Ac.				+3	+2	+3	+3					
Structural/Management Practices		12											
Waste Storage Facility (313) CAFO	No.	2	$ 87,500	$ 1,750					X				X
Waste Storage Facility (313) AFO	No.	44	$ 495,000	$ 9,900					X				X
Management Practices		28											
Waste Storage Facility (313) CAFO	No.	1	$ 10,000	$ 200					X				X
Waste Storage Facility (313) AFO	No.	27	$ 140,400	$ 2,808					X				X
Feed Lot	Ac.				+3	+1	+3	+3					
Structural/Management Practices		25											
Waste Storage Facility (313) CAFO	No.	9	$ 612,500	$ 12,250					X				X
Waste Storage Facility (313) AFO	No.	22	$ 810,000	$ 16,200					X				X
Total RMS Costs			$2,155,400	$ 43,108									

Conservation Activities for Headquarters – Continued

RMS Cost Summary for Headquarters

Cost Items and Programs	Costs	O&M Costs
Non Farm Bill Programs	$ 107,800	$ 2,200
Potential Farm Bill Programs	$2,047,600	$ 40,908
Operator O&M and Management Cost		$ 43,108
Annual Management Incentives (3 yrs - Incentive Payments)	320,800	
Operator Investment	$ 539,500	
Federal Costshare	$1,295,100	
Total RMS Costs	$2,155,400	
Estimated Level of Participation		90%
Total CAFO/AFO in RMS System		69
Anticipated Cost at Estimated Level of Participation	$	1,939,900
Reduces impact to ground and surface water quality		
90% participation reflects Local, State and Federal regulations		