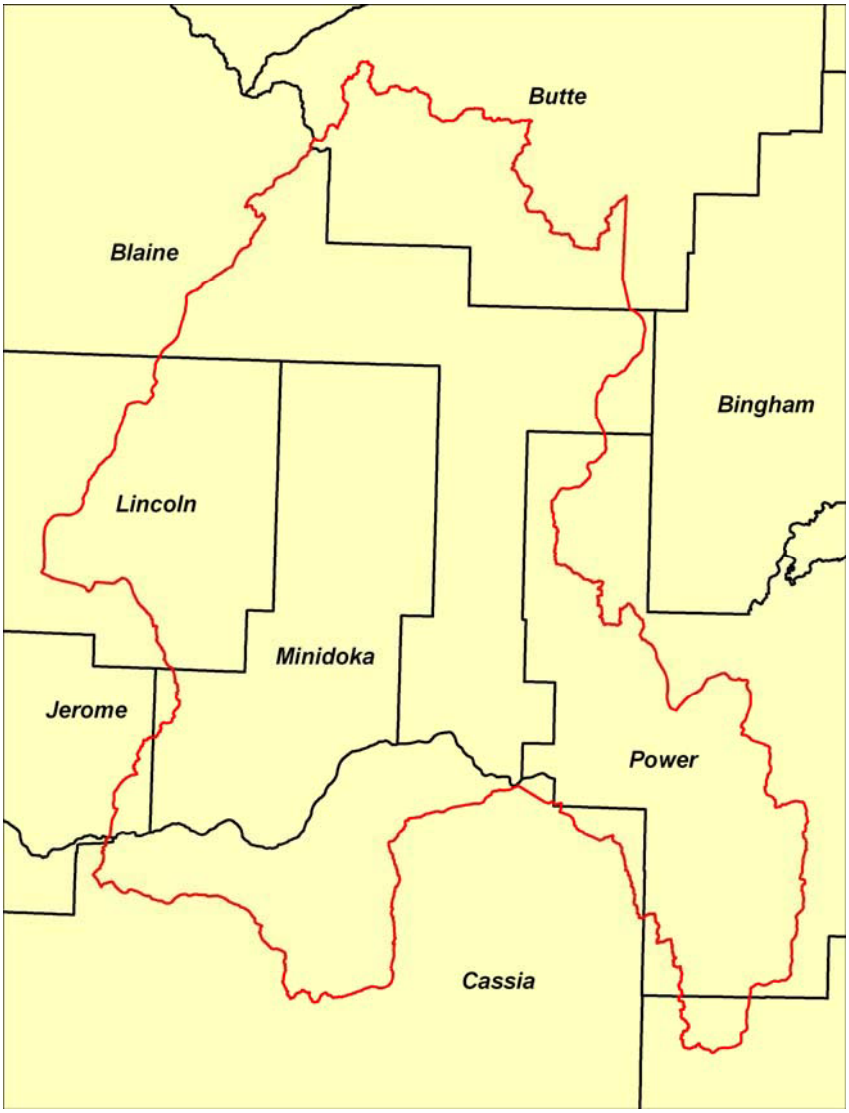
NRCS Natural Resources Conservation Service

Idaho

Lake Walcott - 17040209

8 Digit Hydrologic Unit Profile

April 2006



Introduction

The Lake Walcott 8-Digit Hydrologic Unit Code (HUC) subbasin contains 2,296,320 acres. Twenty-four percent of the subbasin is in Blaine County, 21 percent in Minidoka County, 18 percent in Power, 13 percent in Lincoln, 12 percent in Cassia, 10 percent in Butte and the remaining 2 percent is split between Jerome and Oneida Counties. Sixty seven percent of the basin is publicly owned, 33 percent privately owned and less than one percent is tribal land.

Sixty seven percent of the basin is in shrubland, rangeland, grass, pasture, or hayland. Twelve percent is cropland, 3 percent is CRP and the remainder in forest, water, wetlands and developed.

Elevations range from 4,100 feet in the southwestern portion of the HUC to over 9,200 feet in the southern portion of the HUC.

Conservation assistance is provided by 3 Soil Conservation Districts, 6 Soil and Water Conservation Districts, and five Resource Conservation and Development Offices.

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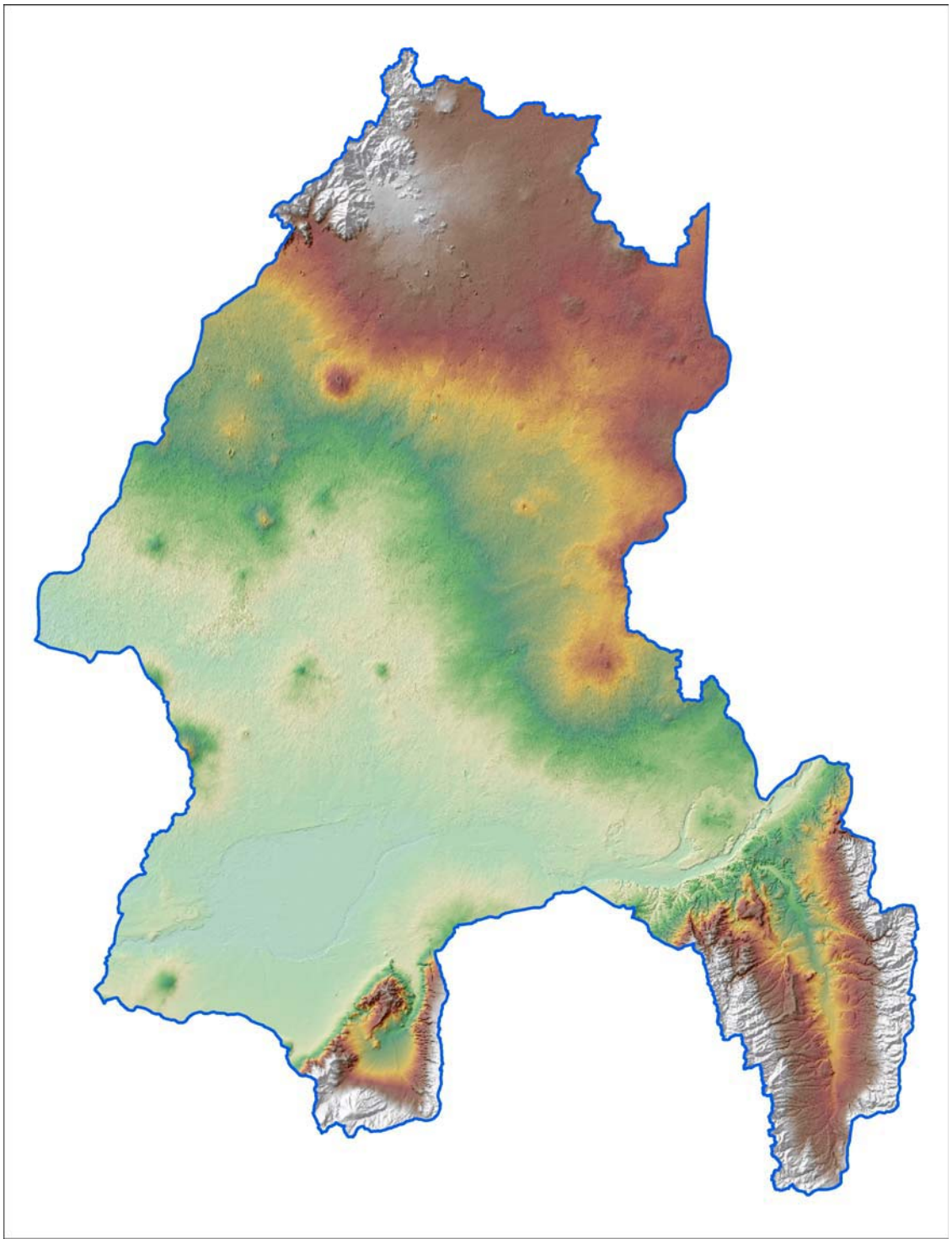
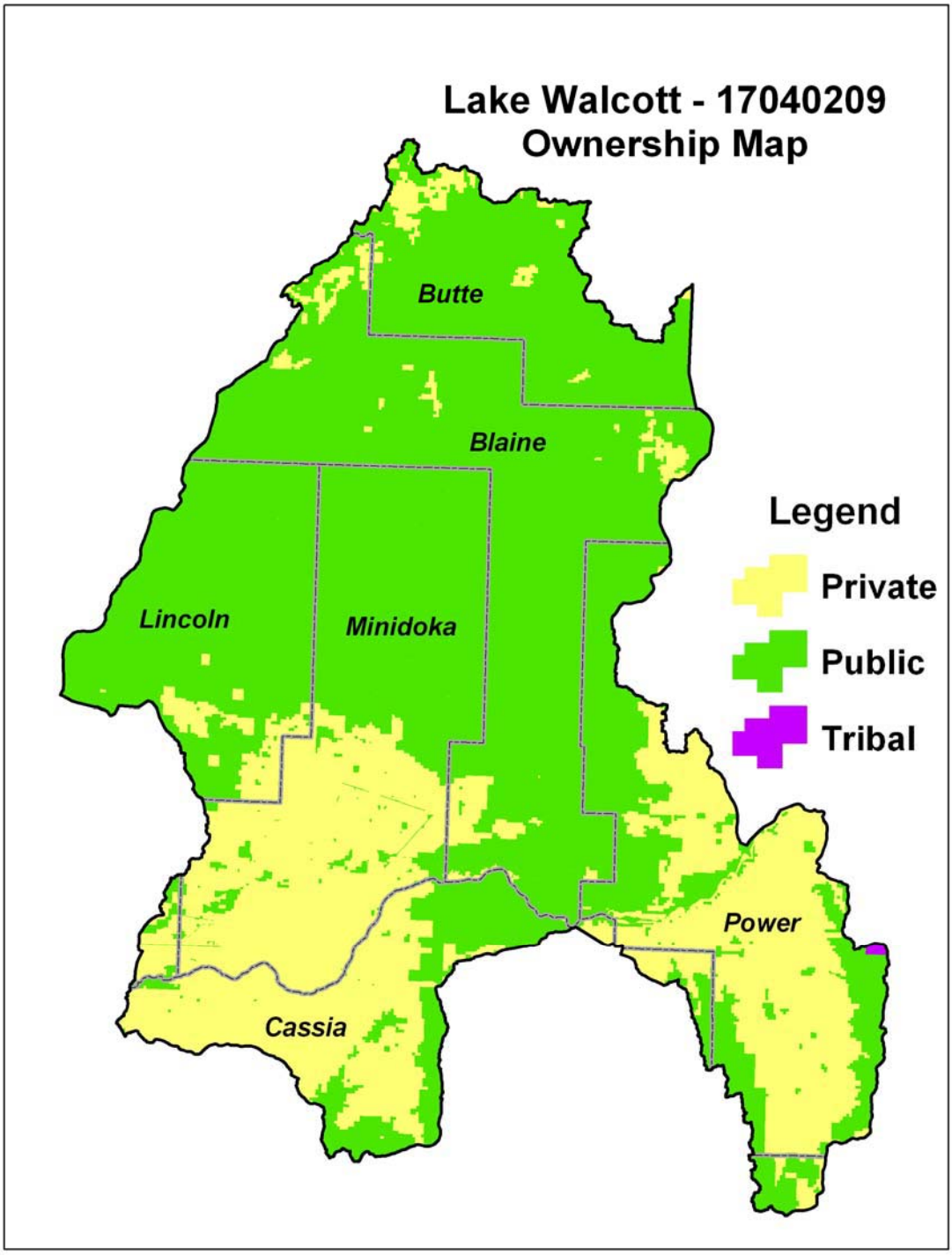
Relief Map



General Ownership[/1]



Physical Description

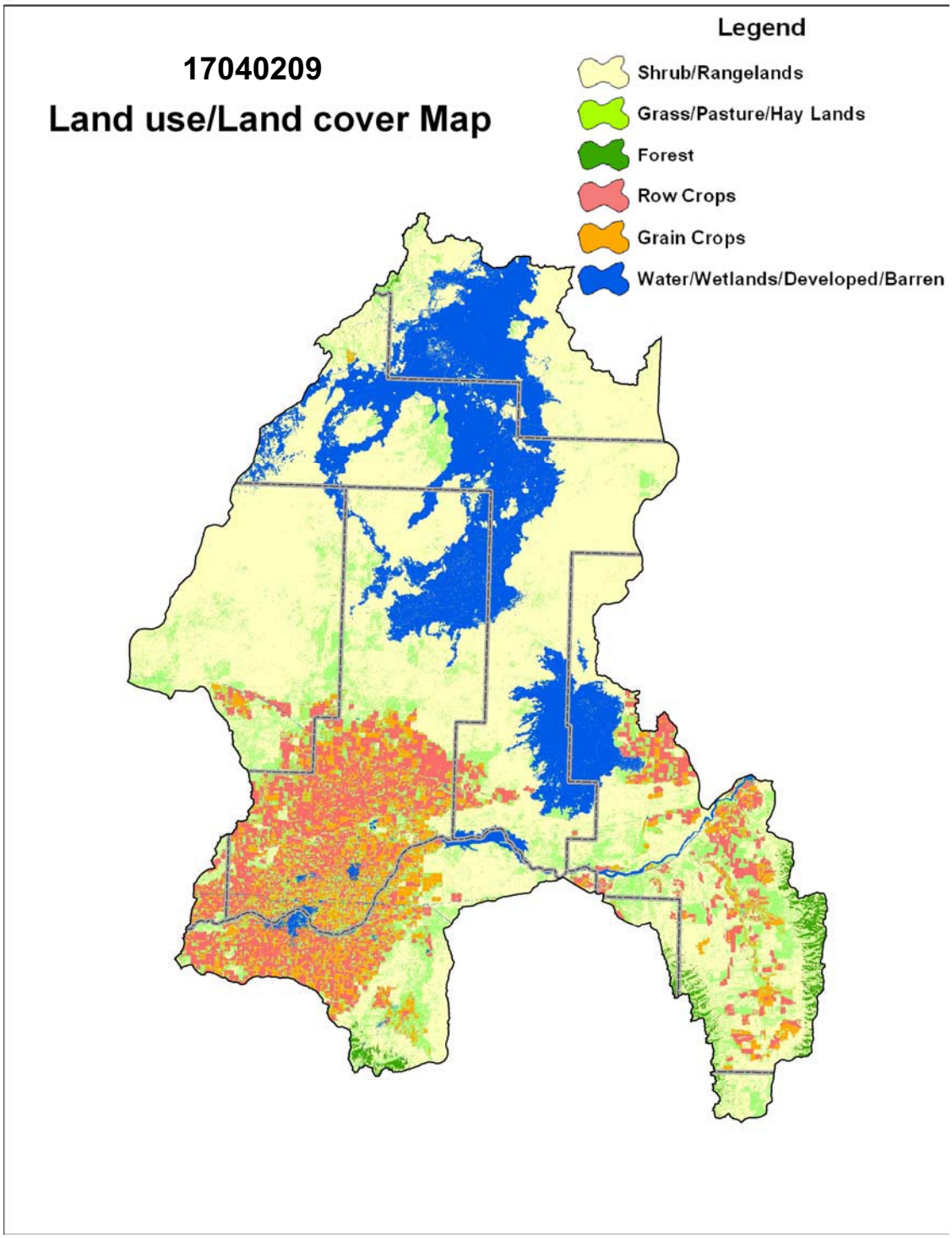
Land Cover/ Land Use (NLCD/2)	Ownership - (2003 Draft BLM Surface Map Set /1)							
	Public		Private		Tribal		Totals	% of HUC
	Acres	%	Acres	%		%		
Forest	21,870	1%	1,740	<1%	660	<1%	**24,270**	**2%**
Grain Crops		--	97,560	4%		--	**97,560**	**4%**
Conservation Reserve/3 Program (CRP) Land		--	71,120	3%		--	**71,120**	**3%**
Grass/Pasture/Hay Lands	133,470	6%	197,210	9%	90	<1%	**330,770**	**15%**
Orchards/Vineyards/Berries		--		--		--		**--**
Row Crops		--	195,140	8%		--	**195,140**	**8%**
Shrub/Rangelands	988,650	43%	181,720	8%	410	1%	**1,170,780**	**52%**
Water/Wetlands/ Developed/Barren	386,680	17	20,000	1%		--	**406,680**	**18%**
Idaho HUC Totals	**1,530,670**	**67%**	**764,490**	**33%**	**1,160**	**<1%**	**2,296,320**	**100%**

Irrigated Lands/4	Type of Land	ACRES	% of Irrigated Lands	% of HUC
	Cultivated Cropland	337,500	87%	15%
	Non-Cultivated Cropland *	29,800	8%	1%
	Pastureland	17,000	4%	<1%
	Total Irrigated Lands	**384,300**	**100%**	**16%**

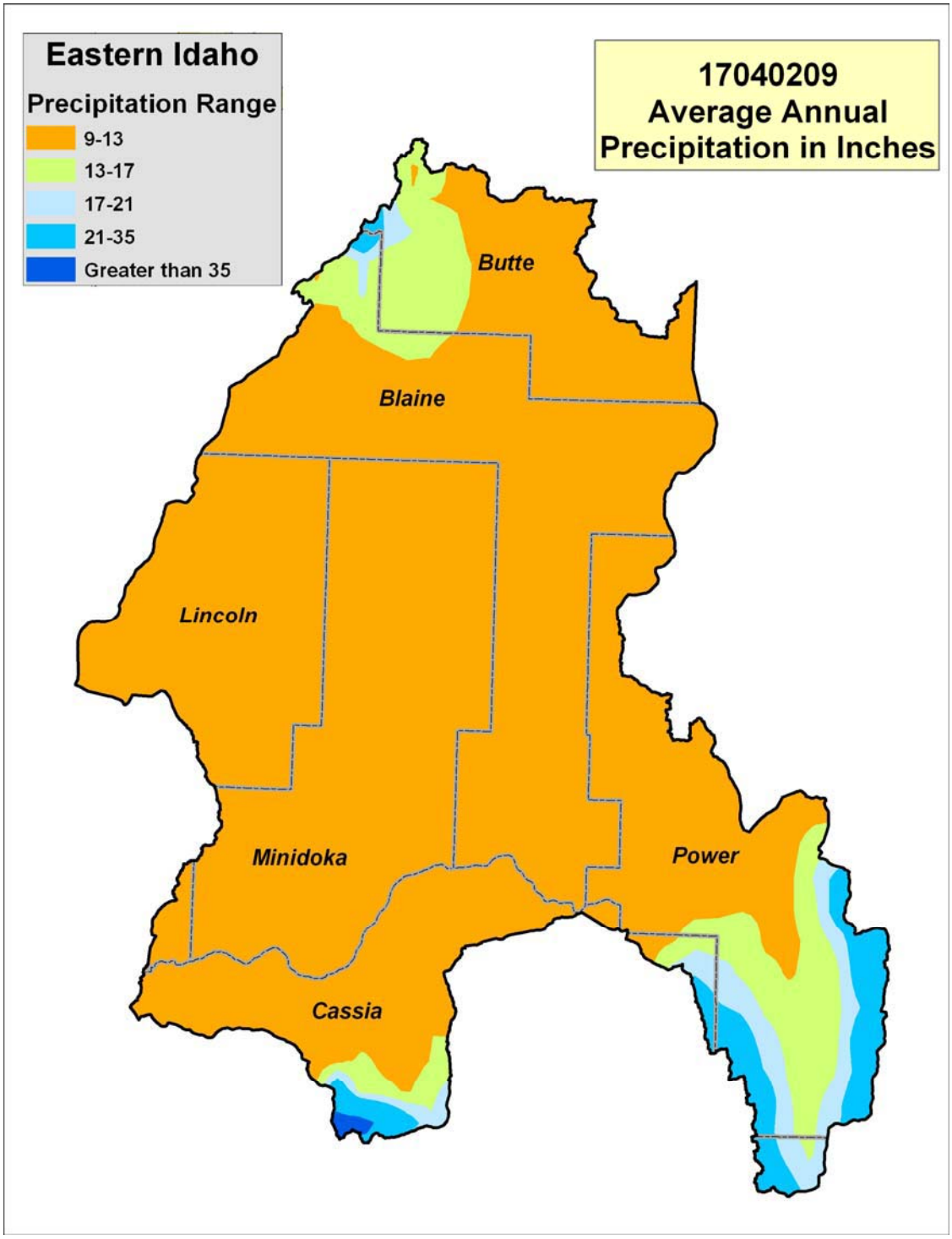
* Includes permanent hayland and horticultural cropland.

/4 Irrigated acre estimates are from the 1997 NRI DATABASE. Irrigated acres used in tables in the back of this document have been adjusted based on other GIS databases.

Land Use/Land Cover[/2]

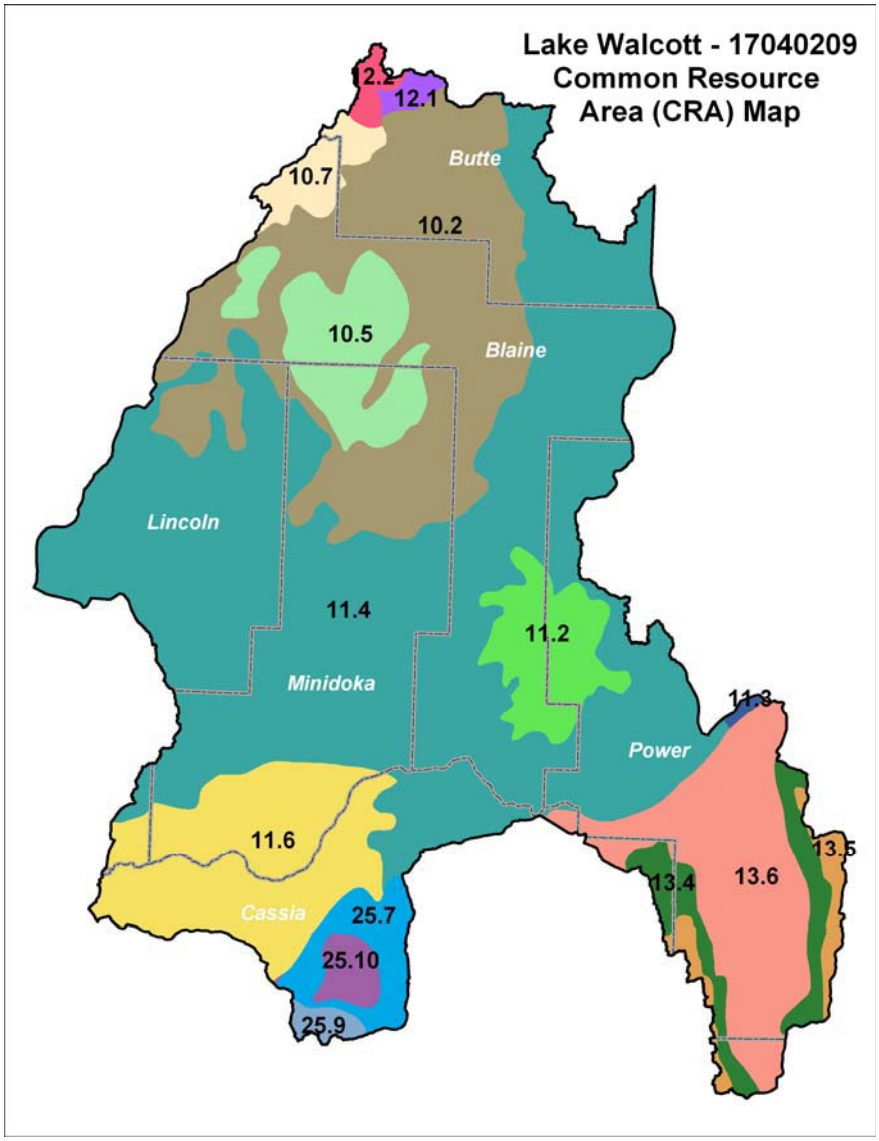


Average Annual Precipitation[/5]



Common Resource Area Map

The Common Resource Areas (CRA) delineated below for the Lake Walcott 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.

10.2 Central Rocky and Blue Mountain Foothills – Lava Fields: This unit contains 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 temperature regime is dominantly frigid and the soil moisture regimes are xeric and aridic. Livestock carrying capacity is very low. Surface water availability is very limited. This unit includes the Craters of the Moon National Monument. Lithology, depth to bedrock, livestock carrying capacity, and water availability are unlike neighboring units.

10.5 Central Rocky and Blue Mountain Foothills – 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 the land type. Potential natural vegetation is mostly sagebrush and bunchgrass. It is cool enough to have some regeneration capacity and still contains native plants.

10.7 Central Rocky and Blue Mountain Foothills – Foothill Shrublands – Grasslands: This unit consists of grass-and shrub-covered foothills in the rain shadow of high mountains. Its hills and benches are dry, treeless, and covered by shrubs and grasses. The vegetation mosaic is unlike open forests. Landuse is mostly grazing.

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."

Common Resource Area Descriptions – continued

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.

11.6 Snake River Plains – Magic Valley: This unit is underlain by alluvium, loess, and basalt lava flows. Its aridic soils require irrigation to grow commercial crops. Many canals, reservoirs, and diversions supply water to its pastureland, cropland, and residential, commercial, and industrial developments. Small grins, alfalfa, sugar beets, potatoes, and beans are grown. Livestock and dairy farms are common. Dams, irrigation diversions, pollution, and channel alternation have affected water quality. Over-irrigation has raised ground water levels and created artificial wetlands. Natural vegetation is mostly sagebrush and bunchgrass but low terraces have salt tolerant plants. Population density is greater than in adjacent rangeland-dominated units.

12.1 Lost River Valleys and Mountains - Dry Intermontane Sagebrush Valleys: "This unit contains stream terraces, floodplains, saline areas, and alluvial fans. Water availability and potential for cropland agriculture are low because this unit is in the rain shadow of high mountains, receives little mountain runoff, and is underlain by highly permeable valley fill deposits. Its deep gravel deposits are unlike the basalt bedrock of MLRA 11. Sagebrush grassland is widespread and contrasts with the open-canopied forests of the more rugged and higher mountains. Shadscale and greasewood grow on alkaline soils that receive less than 8 inches of precipitation annually. Grazing is the dominant land use. The Pahsimeroi and Lemhi Rivers were once important salmon and steelhead fisheries.

12.2 Lost River Valleys and Mountains - Dry Gneissic–Schistose–Volcanic Hills: This unit is shrub- and grass-covered and is underlain by Quaternary and Tertiary volcanics. It is less rugged and drier than the higher Barren Mountains CRA, but is more rugged and receives more precipitation than the Dry Intermontane Sagebrush Valleys CRA. Its sagebrush-grassland vegetation contrasts with the open-canopied forest-shrubland-grassland mosaic along the Continental Divide. Grazing is the most common land use."

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 rocky 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."

13.6 Eastern Idaho Plateaus – Sagebrush Steppe Valleys: This valley unit is flanked by hills and mountains. It is dominated by sagebrush grassland and lacks woodlands, open conifer forest, and the saltbush-greasewood vegetation. Perennial bunchgrasses are more abundant than in the Sagebrush Basins and Slopes in Utah. Valleys mostly drain to the Snake River and fish assemblages are unlike those of the internally-drained basins to the south (MLRA 28A). Grazing is the dominant land use but non-irrigated wheat and barley farming is much more common than in MLRA 29A. This unit is less suitable for cropland and has less available water than many parts of the Snake River Plain (MLRA 11).

25.7 Owyhee High Plateau – Semiarid 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 that in the adjacent, drier regions. Juniper woodland grows on rock outcrops. Land use is primarily livestock grazing.

25.9 Owyhee High Plateau - High Elevation Forests and Shrublands: The High Elevation Forests and Shrublands ecoregion is mountainous and occupies the elevational band above Sagebrush Steppe- and Woodland-Covered Hills and Low Mountains region. 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 mean annual precipitation is greater than in lower regions.

25.10 Owyhee High Plateau – Sagebrush Steppe Valleys: The unit is in valleys is flanked by hills and mountains. It is dominated by sagebrush grassland. Grazing is the dominant land use but non-irrigated wheat and barley farming is much more common than in the semiarid Central Basin and Range region. The Sagebrush Steppe Valleys region is less suitable for cropland agriculture and has less available water than many parts of the Snake River Plains.

Streamflow Summary[7]

The average annual flow of the Snake River below American Falls Dam is approximately 5,276,700 acre-feet (1993-2004), and the average annual flow below Milner Dam is 2,151,900 acre-feet (1993-2004). Much of the Snake River streamflow is diverted for irrigation at Milner Dam; the entire river flow may be diverted for irrigation in the Upper Snake-Rock Hydrologic Unit leaving the stream dry at times. Flow is regulated by American Falls Reservoir and other reservoirs, having a combined usable capacity of 4,600,000 acre-feet. Upstream reservoir releases may be made for flood control or for passing water for downstream use. Much of the return flow, spring flow and seepage flow enters the Snake River Canyon below the Milner gage. The flows at Milner are highly regulated and display less of the typical snowmelt hydrograph pattern.

Irrigated Adjudicated Water Rights[6])		**CFS**	
	Surface Water	4,197	
	Groundwater	4,341	
	Total Irrigated Adjudicated Water Rights	8,538	
Stream Flow Data[7]	USGS 13088000, Snake River at Milner ID, 1993-2004		**ACRE-FEET**
		Average Annual	2,151,900
		February-June Average	1,364,100
		Percent of Average Annual	Feb – Jun 63%
Stream Data **Percent of Total Miles of streams in HUC*		**MILES**	**PERCENT**
	Total Stream Miles[8]	4,103	--
	303d streams[9,10]	765.1	19%*
	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	462	1%
	Grain Crops	7,335	13%
	Grass/Pasture/Hay Lands	15,582	27%
	Row Crops	14,432	25%
	Shrub/Rangelands – Includes CRP Lands	17,883	31%
	Water/Wetlands/Developed/Barren	2,347	3%
	Total Acres of 100 ft stream buffers	**58,041**	100%
Land Capability Class[4]	**I** – slight limitations	0	0
	II – moderate limitations	240,100	54%
	III – severe limitations	118,800	27%
	IV – very severe limitations	62,700	14%
	V – no erosion hazard, but other limitations	1,700	<1%
	VI – severe limitations, unsuited for cultivation, limited to pasture, range, forest	17,300	4%
	VII – very severe limitations, unsuited for cultivation, limited to grazing, forest, wildlife	0	0
	VIII – misc areas have limitations, limited to recreation, wildlife, and water supply	0	0
	Total Crop & Pasture Lands	**440,600**	100%

Confined Animal Feeding Operations – Dairies/Feedlots[12,13,26]						
	Number	**<200**	**200-500**	**500-750**	**750-1000**	**>1000**
Dairy	75	57	11	2	0	5
	Number	**<300**	**300-999**	**1,000-4,999**	**5,000-9,999**	**>10,000**
Feedlots	15	0	4	9	1	1

Resource Settings

Pasture
Improved dryland pasture with introduced forage species including wheatgrasses, fescues, bromes, and orchardgrass. Older established stands of low vigor, with encroachment of noxious weeds. Continous season-long grazing is typical. No commercial fertilizers are applied, and pest management practices are limited. Livestock water may be inadequate. 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 25-35%. Plants are introduced forage species, conventionally tilled when rotating pasture (10 years) and grain (2 years). Fertilizers are sometimes applied, but without soil testing or nutrient management.

Dry Cropland
Primarily winter wheat/fallow (precipitation 10-14 inches) or annual spring barley (precipitation 16-22 inches), on silt loams with slopes 0-15%. Often characterized by significant ephemeral and concentrated flow erosion. Conventional tillage results in <15% residue after planting. Application of nutrients and pesticides typically does not meet Idaho standards.

Surface Irrigated Cropland
Conventionally tilled, intensively cultivated cropland on slopes 0-7%. Precipitation is 12 inches or less. Small grains and alfalfa are grown in most rotations, with corn (silage, sweet, grain), sugar beets, potatoes and beans. Irrigation-induced erosion exceeds the threshold. Wind erosion may be a problem following low residue row crops. Nutrient, pest, and/or irrigation water management may be less than desirable.

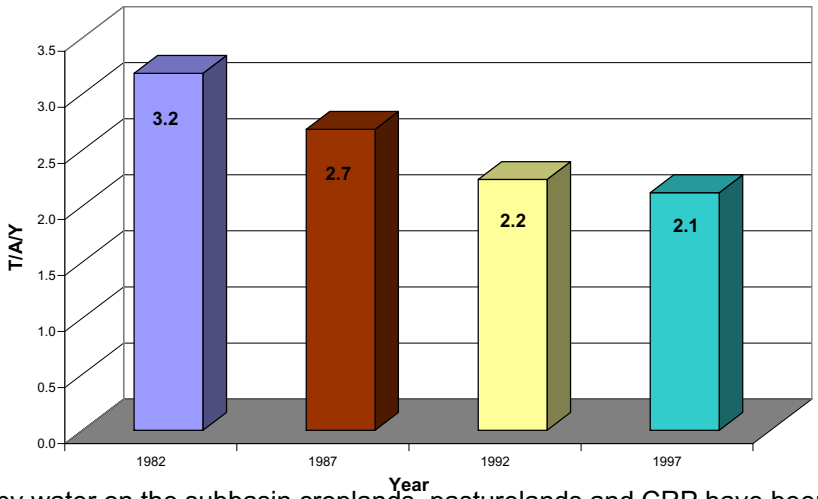
Sprinkler Irrigated Cropland
Conventionally tilled cropland on soils ranging from sands to sandy loams. Wind erosion is typically a problem from March to June, creating air quality and visibility hazards. Various combinations of small grains, alfalfa, beets, potatoes, beans and barley are grown. Some rotations contain less than 50% high residue crops. 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 irrigated on 0-7% slopes. 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. Sagebrush and perennial bunchgrasses with variable soils are 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.

Resource Concerns

Soil Loss by Water Erosion for Cropland, Pasture & CRP

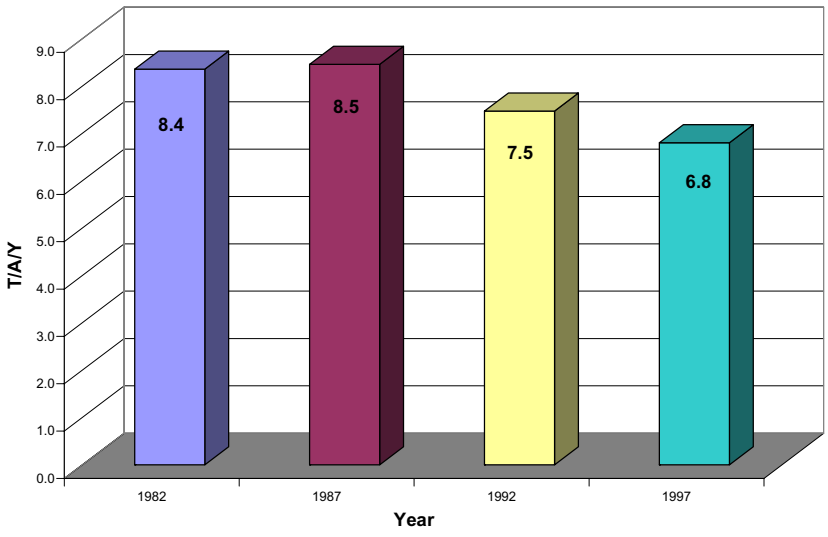


Sheet and rill erosion by water on the subbasin croplands, pasturelands and CRP have been essentially static since 1982. Sheet and rill erosion is not a major issue on cropland in this subbasin, with the exception of the Rockland Valley area. Susceptibility to sheet and rill erosion is low in this subbasin because the natural precipitation is low and the cropland is relatively flat. [4].

The Rockland Valley area has predominantly a 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 about 1 ½ tons per acre per year on cropland, pasture and CRP in this subbasin between 1982 and 1997. [4].

Soil Loss by Wind Erosion for Cropland, Pasture & CRP



Resource Concerns – Continued

The erosion from surface irrigated row crops in this watershed is considered a serious problem. Erosion rates on 0-3 percent slopes can average 10 tons/acre/year. The most erosive crops are sugar beets, beans and corn, which can have surface irrigation-induced erosion rates ranging from 30 to 53 tons/acre/year. Slopes over three percent can average 30 tons/acre/year for a typical rotation. Soil loss from sugar beets, beans and corn, for any one year, can be as great as 51 to 89 tons/acre/year on these steeper slopes. These erosion rates were measured by the USDA-ARS in the 1980s and 1990s.

Through NRCS programs many farmers and ranchers have applied conservation practices to reduce the effects of erosion by wind. The acreage of low residue crops in the subbasin increased by about 4 percent in the time period between 1982 and 1997 but the corresponding wind erosion rate declined by 19 percent from 8.4 tons/acre/year to 6.8 tons/acre/year.

Controlling erosion not only sustains the long-term productivity of the land, but also affects the amount of soil, pesticides, fertilizer and other substances that move into the nation's waters.

Impacted Water Bodies[9,10]	Stream Miles	Sediment, Siltation or TSS	Nutrients	Bacteria	Temperature	Dissolved Oxygen	Flow Alteration*	Other or Unknown
Lake Walcott (not assessed)								
Craters of the Moon complex (SK013_02)	115.6							x
Craters of the Moon complex (SK013_03)	13.4							x
East Fork Rock Creek (SK010_03)	9.2	x						
Marsh Creek (SK003_03)	10.7							x
Marsh Creek (SK003_02)	171.1							x
Marsh Creek (SK003_04)	17.8							x
Rock Creek (SK008_03)	7.6							x
Rock Creek (SK008_04)	13.2	x						
Snake River (SK001_07)	15.4		x					
Snake River (SK002_07)	20.6		x					
Snake River (SK005_07)	4.6	x						
Snake River (SK006_07	13.1	x						
South Fork Rock Creek (SK009_02)	246.4	x						
South Fork Rock Creek (SK009_03)	4.0	x						
South Fork Rock Creek (SK009_04)	20.1	x						
Snake River (SK011_02)	31.6							x
Snake River (SK005_07)	4.6					x		x
Dayley Creek (SK000_02)	46.1							x
TOTAL STREAM MILES:	765.1							

* Flow alteration not listed, but identified as impacting the Snake River and tributaries within the watershed.

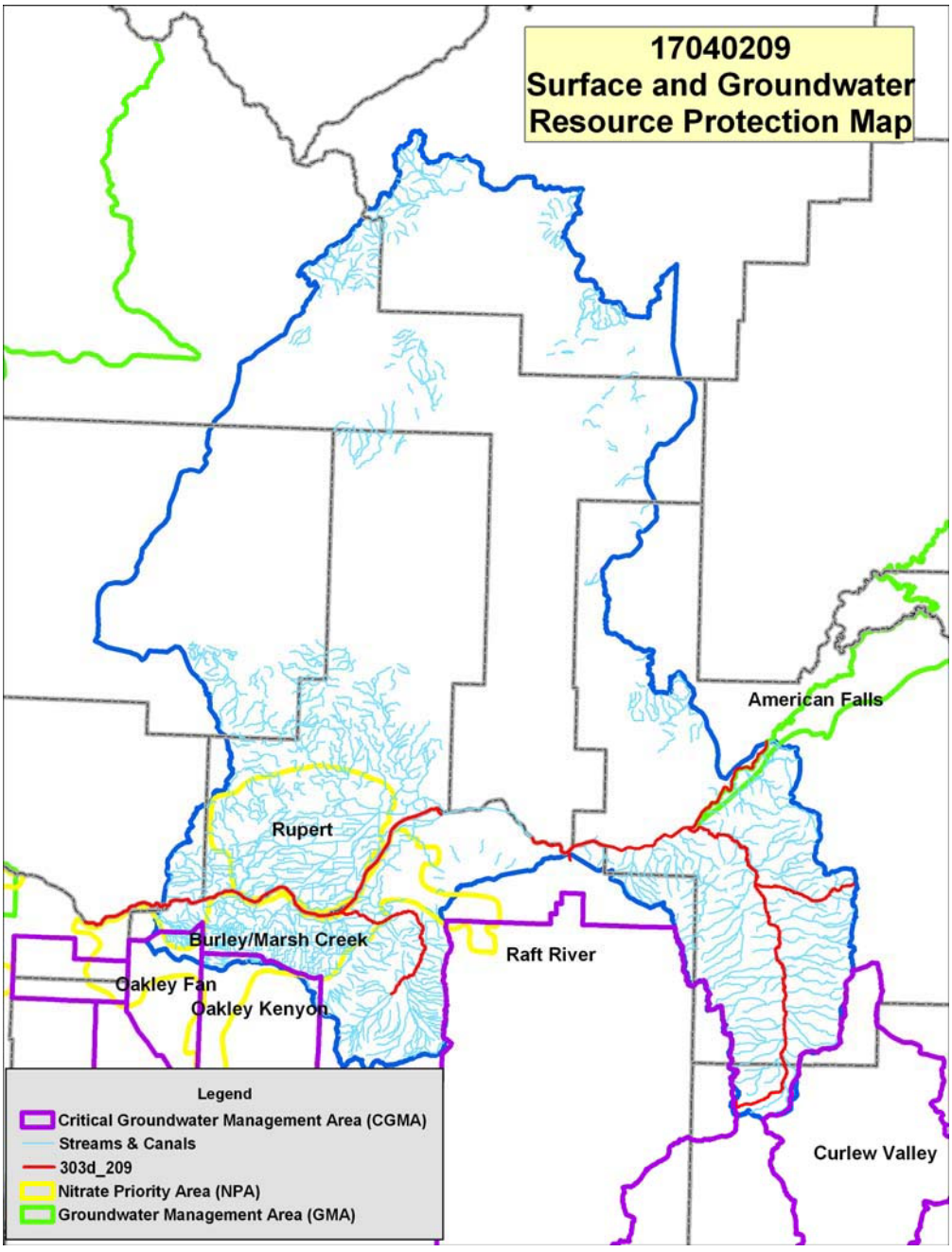
Nutrients and sediment are the major pollutants which impact beneficial uses of surface waters in this watershed. A variety of human activities are potential sources of pollutants in the watershed, including irrigated agriculture, grazing, septic systems, feedlots and dairies. Flow alteration is a problem in this highly regulated system. Many tributaries have become intermittent due to irrigation demands and altered hydrology, limiting riparian habitat. Two areas in the watershed have groundwater 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 and riparian buffers.

Watershed Projects, Plans, Studies, and Assessments*	
Federal:	***State:***
NRCS Watershed Plans/Studies/Assessments[14,15]	**IDEQ TMDLs**[16]
Minidoka Land and Water Management Project (2002)	Lake Walcott SBA -TMDL(2000)
Minidoka Preliminary Investigation Report	
Idaho Snake River Plain Water Quality Demonstration Project (1990-1996)	**IDEQ 319 Projects** [17]
Rock Creek PL-566 Watershed Plan (Implementation Complete) (1981-2000) - Sublett Subwatershed (1981) - Summit Subwatershed (1982) - Roy East Subwatershed (1983) - Big Canyon/East Fork Subwatershed (1984) - Houtz-Outlet Subwater (1985)	Restoration of Milner Lake Segment of the Snake (on-going)
	Burley-Marsh Creek Nitrate Project (on-going)
NWPCC Subbasin Plans and Assessments[18]	**SCC Plans/Projects**[19]
Middle Snake Subbasin Assessment (2004)	Lake Walcott TMDL Implementation Plan (2001)
	ISDA Regional Water Quality Projects[20]
	Minidoka Shallow and Deep Aquifer (on-going)
	Cassia County (on-going)
	IDWR Comprehensive Basin Plans[21]
	None

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

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



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				
	Ephemeral or classic gully			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	
	Nutrients and organics	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	x		
	Compaction	x		x	x	x		
Plant Condition	Productivity, health and vigor	x	x	x			x	
	Noxious and invasive plants	x		x	x	x	x	x
	Wildfire hazard						x	
Domestic Animals	Inadequate feed or water	x					x	x
Fish and Wildlife	Inadequate water	x					x	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.

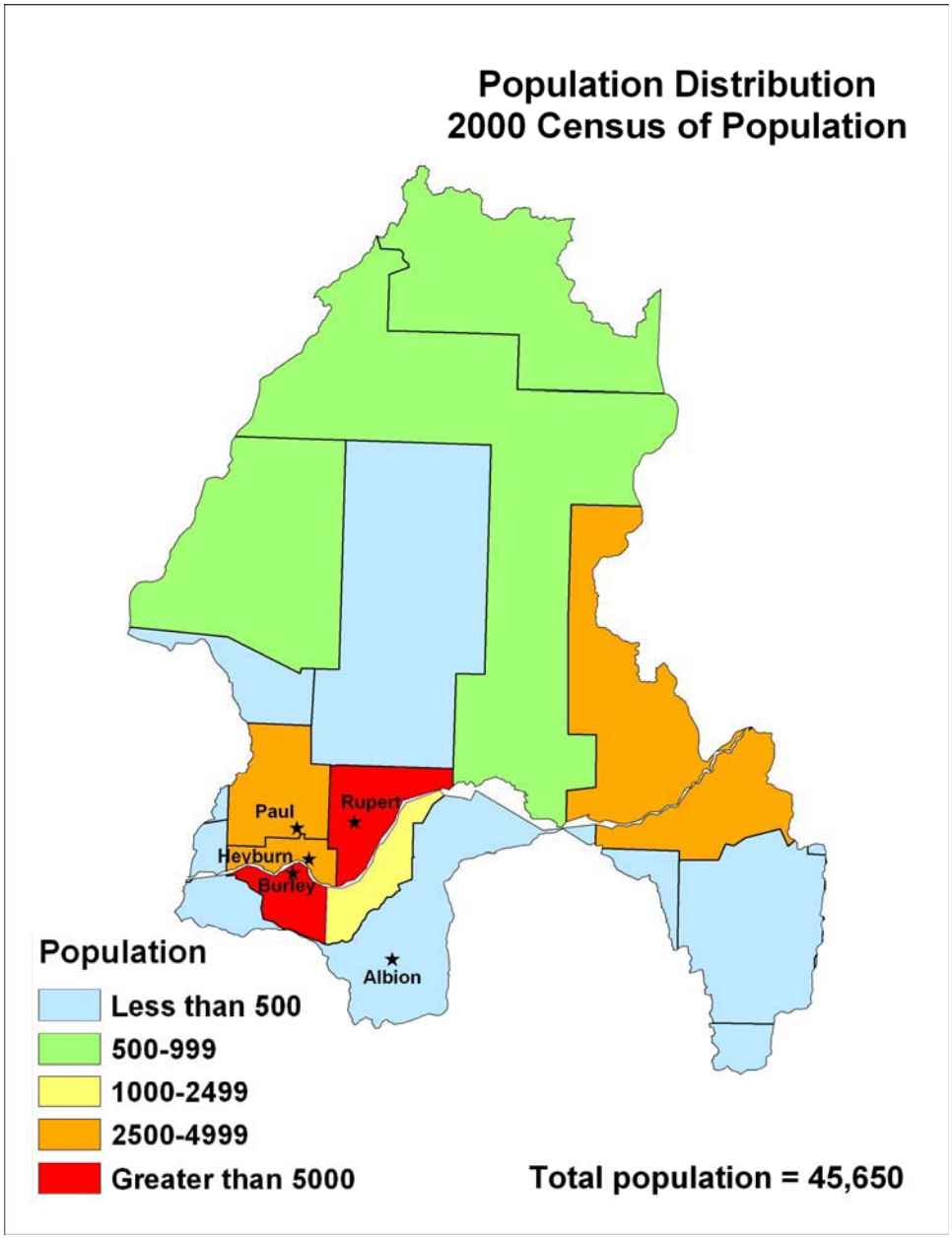
FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES[25]	
Threatened and Endangered Species	**Candidate Species**
Mammals – Lynx **Birds –** Bald Eagle **Fish –** None **Invertebrates –** Desert Valvata **Plants –** None	**Plants** – Christ's Indian Paintbrush **PROPOSED SPECIES** None
ESSENTIAL FISH HABITAT – None	**CRITICAL FISH HABITAT –** None

Census and Social Data[/26]

Population: 45,650

Number of Farms: 1,470

	0-49 acres	50-999 acres	1000+ acres
Number of Farms	630	620	220



Census and Social Data - continued

Sixty-four 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 9.3 percent of the total. Ninety-three 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 810 acres. Agricultural land in the watershed is a mix of cropland, range, pasture and hayland. Land users in the watershed utilize EQIP, CRP, Continuous CRP and other programs to implement conservation plans.

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

The Census of Agriculture is authorized under PL 105-113 and uses the definition of a farm as any place from which $1,000 or more of agricultural products are produced or sold, or normally would have been sold, during the census year.

	Average size farm	Market Value of Production (Average Farm)	Government Payments (Average Farm)
1997	740	$213,300	$13,000
2002	810	$260,600	$19,000
Change	9%	22.0%	46.0%

Economic Profile: This watershed is unique because of the Sun Valley Ski resort.

	Watershed	Idaho	United States
Population (2000)	45,650		
Per Capita Personal Income (2001)	$25,580	$24,500	$30,400
Median Home Value (2000)	$129,300	$106,600	$119,600
Percent Unemployment (2002)	6.3%	5.4%	5.78%
Percent Below Poverty Level (2003)	12.3%	11.8%	12.7%

Progress/Status

PRS Data					
Conservation Treatment	**FY04**	**FY05**	**FY06**	**Avg /Year**	**Total**
Waste Management (number)	2	10	15	9.0	27.0
Riparian Forest Buffers (acres)	5	0	0	1.6	5
Irrigation System (sprinkler) (acres)	3200	6140	1424	3588.0	10764
Irrigation Water Management (acres)	3934	9729	2573	5412.0	16236
Nutrient Management (acres)	4061	9492	5264	6272.3	18817
Pest Management (acres)	3566	7923	3583	5024.0	15072
Prescribed Grazing (acres)	6438	4527	3800	4921.7	14765
Residue Management (acres)	3554	11922	6179	7218.3	21655
Terrace (feet)	0	10000	33000	14333.3	43000
Wildlife Habitat (acres)	5	1274	989	756.0	2268
Wetlands (acres)	0	0	0	0.0	0

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

Lands Removed from Production through Farm Bill Programs

- Conservation Reserve Program (CRP): **71,120 acres**
- Wetland Reserve Program (WRP): **None**

Footnotes/Bibliography

All data is provided "as is". There are no warranties, express or implied, including warranty of fitness for a particular purpose, accompanying this document. Use for general planning purposes only.

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/techni
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 2000, Lake Walcott Subbasin Assessment and TMDL. http://www.deq.state.id.us/water/data_reports/surface_water/tmdls/lake_walcott/lake_walcott.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/
12. (Dairy) Idaho Department of Water Resources: http://www.idwr.state.id.us/gisdata/gis_data-new.htm
13. (Feedlot) Idaho State Department of Agriculture: http://www.agri.state.id.us/ FOIA request.
14. Natural Resource Conservation Service, Watershed Projects Planned and Authorized, http://www.nrcs.usda.gov/programs/watershed
15. Natural Resource Conservation Service, Watershed Plans, Studies and Assessments completed, http://www.nrcs.usda.gov/programs/watershed/Surveys_Plng.html#Watershed%20Surveys%20and%20Plan
16. Idaho Department of Environmental Quality (IDEQ), Surface Water Quality: Subbasin Assessments, TMDLs, and Implementation Plans. http://www.deq.state.id.us/water/data_reports/surface_water/tmdls/sba_tmdl_master_list.cfm
17. Idaho Department of Environmental Quality, Watershed protection: Nonpoint source management (319 grant), Reports and program resources. http://www.deq.state.id.us/water/data_reports/surface water.nps/reports/cfm
18. Subbasin assessments and plans are developed by local groups (SWCDs, Watershed Councils, Tribes and others) as part of the Northwest Power and Conservation Council's fish and wildlife program in the Columbia River Basin. This program is funded and implemented by the Bonneville Power Administration. http://www.nwcouncil.org/fw/subbasinplanning/admin/level2/id/default.htm
19. Idaho Soil Conservation Commission (SCC), TMDL watershed implementation plans: agricultural component, http://www.scc.state.id.us/PDF/Ag%20Component%20Status%20Report%20-%202004.pdf and Water Quality Program http://www.scc.state.id.us/Docs/WQPA%20FACT%20SHEET.doc
20. Idaho State Department of Agriculture (ISDA). Groundwater water quality regional projects. http://www.agri.state.id.us/Categories/Environment/water/gwReports.php
21. Idaho Department of Water Resources (IDWR). State Comprehensive Water Plans. http://www.idwr.idaho.gov/waterboard/planning/Comp Basin Plans.htm
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

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		30,080	3,010
Typical Management Unit/Ownership		810	
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.	30,080			-3	-/+	-2	-3				
Conservation Crop Rotation (328)	Ac.	2,432	$ -	$ -					X			X
Contour Farming (330)	Ac.	4,557	$ -	$ 11,400					X			X
Deep Tillage (324)	Ac.	9,730	$ -	$ 146,000					X			X
Pest Management (595)	Ac.	3,081	$ -	$ 30,800					X			X
Nutrient Management (590)	Ac.	3,257	$ -	$ 16,300					X			X
Residue Management Mulch Till (345)	Ac.	19,997	$ -	$ 300,000					X			X
Residue Management NoTill/StripTill (329)	Ac.	569	$ -	$ 8,500					X			X
Stripcropping (585)	Ac.	1,781	$ -	$ 400					X			X
Terrace (600)	Ft.	10,000	$ -	$ 200					X			X
Water and Sediment Control Basin (638)	No.	7	$ -	$ 200					X			X

Conservation Activities for Dry Cropland/Hayland * - Continued

Future Conditions	Riparian Potential		Total Acres
Dry Cropland Acres			27,070
Conversion to Riparian RMS			3,010
Total Acres			30,080

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.	27,070			+2	+1	+2	+2				
Conservation Crop Rotation (328)	Ac.	27,070	$ -	$ -					X			X
Contour Farming (330)	Ac.	27,070	$ 168,800	$ 56,300					X			X
Deep Tillage (324)	Ac.	27,070	$ 1,218,200	$ 406,100					X			X
Diversion (362)	Ft.	55,440	$ 152,500	$ 3,100					X			X
Forage Harvest Management (511)	Ac.	10,830	$ -	$ -					X			X
Grassed Waterway (412)	Ft.	221,760	$ 399,168,000	$7,983,400					X	X		X
Nutrient Management (590)	Ac.	27,070	$ 357,200	$ 119,100					X			X
Pasture & Hayland Planting (512)	Ac.	10,830	$ 1,083,000	$ 10,800					X		X	X
Pest Management (595)	Ac.	27,070	$ 719,700	$ 239,900					X			X
Residue and Tillage Management Mulch Till (345)	Ac.	13,540	$ -	$ 203,100					X			X
Residue and Tillage Management No Till / Strip Till / Direct Seed (329)	No.	13,530	$ 583,200	$ 194,400					X			X

Conservation Activities for Dry Cropland/Hayland * - Continued

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
Sediment Basin (350)	No.	170	$ 467,500	$ 14,000					X		X	X
Stripcropping (585)	Ac.	13,540	$ 294,000	$ 2,900					X			X
Terrace (600)	Ft.	1,330,560	$ 2,905,200	$ 29,100					X			X
Upland Wildlife Habitat Management (645)	Ac.	4,060	$ 60,900	$ 20,300					X			X
Water and Sediment Control Basin (638)	No.	1,360	$ 1,420,700	$ 42,600					X			X
Windbreak/Shelterbelt Establishment (380)	Ft.	110,880	$ 563,300	$ 5,600					X			X
Dry Cropland Riparian	Ac.	3,010			+3	+2	+3	+3				
Channel Bank Vegetation (322)	Ac.	300	$ 1,500,000	$ 30,000					X			X
Channel Stabilization (584)	Ft.	4,000	$ 72,000	$ 400					X			X
Fence (382)	Ft.	50,160	$ 87,800	$ 1,800					X	X		X
Pest Management (595)	Ac.	3,010	$ 90,300	$ 30,100					X			X
Pipeline (516)	Ft.	52,800	$ 142,600	$ 2,900					X			X
Prescribed Grazing (528)	Ac.	3,010	$ 45,200	$ 15,100					X			X
Pumping Plant (533)	No.	20	$ 57,000	$ 1,100					X			X
Riparian Forest Buffer (391)	Ac.	90	$ 270,000	$ 2,700					X			X
Riparian Herbaceous Cover (390)	Ac.	90	$ 4,500	$ -					X	X		X
Streambank & Shoreline Prot (580)	Ft.	38,240	$ 917,800	$ 91,800					X	X		X
Tree/Shrub Establishment (612)	Ac.	23	$ 10,400	$ 100					X			X
Upland Wildlife Management (645)	Ac.	450	$ 6,800	$ 2,300					X	X		X
Use Exclusion (472)	Ac.	150	$ 5,300	$ 200					X	X		X
Watering Facility (614)	No.	40	$ 40,000	$ 400					X			X
Wetland Wildlife Management (644)	Ac.	300	$ 4,500	$ 1,500					X			X
Total RMS Costs			$ 412,416,400	$9,511,100								

Conservation Activities for Dry Cropland/Hayland * - Continued

Potential RMS Effects Summary for Dry Cropland

Cost Items and Programs	Costs	O&M Costs
cNon Farm Bill Programs	$ 20,620,800	$ 475,600
Potential Farm Bill Programs	$ 391,795,600	$9,035,500
Operator O&M and Management Cost		$9,511,100
Annual Management Incentives (3 yrs - Incentive Payments)	$ 3,254,800	
Operator Investment	$ 117,756,000	
Federal Costshare	$ 291,405,600	
Total RMS Costs	$ 412,416,400	$9,511,100
Estimated Level of Participation		75%
Total Acres in RMS System		22,560
Anticipated Cost at Estimated Level of Participation	$	309,312,300
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		292,420
Typical Management Unit/Ownership		810
Surface Irrigated Cropland/Hayland		87,730
Sprinkler Irrigated Cropland/Hayland		204,690
Current Farm Bill participation		15%

Current Level of Tratment 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.	87,730			-3	-/+	-2	-3				
Conservation Crop Rotation (328)	Ac.	5,255	$ -	$ -					X			X
Irrigation System, Surface (443)	Ac.	136	$ -	$ 612					X			X
Irrigation Water Conveyance (430EE)	Ft.	7,120	$ -	$ 100					X			X
Irrigation Water Management (449)	Ac.	2,556	$ -	$ 19,200					X			X
Pasture and Hay Planting (512)	Ac.	556	$ -	$ 600					X			X
Pest Management (595)	Ac.	2,626	$ -	$ 33,100					X			X
Pumping Plant (533)	No.	33	$ -	$ 2,700					X			X
Nutrient Management (590)	Ac.	3,306	$ -	$ 100					X			X
Residue Management Seasonal (344)	Ac.	5,681	$ -	$ 30,800					X			X
Structure for Water Control (587)	No.	11	$ -	$ 110					X			X
Surface Roughening (609)	Ac.	2,053	$ -	$ 15,400					X			X
Windbreak/Shelterbelt Establishment (380)	Ft.	2,000	$ -	$ 102					X			X

Conservation Activities for Irrigated Cropland/Hayland - Continued

Sprinkler Irrigation	Ac.	204,690			+1	-/+	+1	+3				
Conservation Crop Rotation (328)	Ac.	12,000	$ -	$ -					X			X
Irrigation System, Sprinkler (442)	Ac.	11,251	$ -	$ 157,514					X			X
Irrigation Water Conveyance (430DD)	Ft.	81,155	$ -	$ 3,000					X			X
Irrigation Water Management (449)	Ac.	15,026	$ -	$ 112,700					X			X
Residue Management Seasonal (344)	Ac.	3,582	$ -	$ 5,700					X			X
Pest Management (595)	Ac.	8,700	$ -	$ 93,000					X			X
Pumping Plant (533)	No.	377	$ -	$ 31,291					X			X
Nutrient Management (590)	Ac.	9,300	$ -	$ 46,500					X			X

Future Conditions			Total Acres
Surface Irrigated Cropland/Hayland			29,240
Sprinkler Irrigated Cropland/Hayland			263,180
Total Irrigated Cropland/Hayland Acres			292,420

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.	29,240			+2	+1	+2	+2				
Anionic Polyacrylamide, (PAM) (450)	Ac.	29,240	$ 1,315,800	$ 438,600					X			X
Conservation Crop Rotation (328)	Ac.	29,240	$ -	$ -					X			X
Constructed Wetland (656)	No.	3	$ 150,000	$ 1,500					X			X

Conservation Activities for Irrigated Cropland/Hayland – Continued

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.	29,240			+2	+1	+2	+2				
Forage Harvest Management (511)	Ac.	29,240	$ -	$ -					X			X
Irrigation System, Surface (443)	Ac.	27,740	$ 4,140,600	$ 124,200					X			X
Irrigation System, Gated Surge (443)	Ac.	1,500	$ 825,000	$ 24,800					X			X
Irrigation Tailwater Recovery (447)	No.	1,500	$22,650,000	$ 679,500					X			X
Irrig. System, Micro Irrigation (Drip) (441)	Ac.	1,500	$ 1,875,000	$ 93,800					X			X
Irrigation Water Conveyance (430 EE)	Ft.	105,600	$ 391,000	$ 2,000					X	X		X
Irrigation Water Conveyance (430 HH) (Gated Pipe)	Ft.	52,800	$ 215,400	$ 2,200					X	X		X
Irrigation Water Management (449) - Low Level	Ac.	20,470	$ 403,100	$ 134,400					X			X
Irrigation Water Management (449) - Meters and Moisture Sensors	Ac.	8,770	$ 263,100	$ 87,700					X			X
Land Leveling/Smoothing (466 & 464)	Ac.	7,310	$ 1,462,000	$ 43,900					X			X
Nutrient Management (590)	Ac.	29,240	$ 389,000	$ 129,700					X			X
Pest Management (595)	Ac.	29,240	$ 798,400	$ 266,100					X			X
Sediment Basin (350)	No.	180	$ 495,000	$ 14,900					X			X
Residue Management Mulch Till (345)	Ac.	29,240	$ 1,315,800	$ 438,600					X			X
Residue Management Seasonal (344)	Ac.	29,240	$ 1,060,200	$ 353,400					X			X
Structure for Water Control (587) -Fish Screen	No.	365	$ 4,380,000	$ 43,800					X			X
Surface Roughening (609)	Ac.	29,240	$ 611,700	$ 203,900					X			X
Upland Wildlife Habitat Management (645)	Ac.	4,390	$ 65,900	$ 22,000					X			X
Well Decommissioning (355)	No.	50	$ 42,500	$ -					X			X
Windbreak/Shelterbelt Establishment (380)	Ft.	480,480	$ 2,430,700	$ 24,300					X			X

Conservation Activities for Irrigated Cropland/Hayland – Continued

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
Sprinkler Irrigation	Ac.	263,180			+3	+2	+2	+3				
Cover Crop (340)	Ac.	65,790	$ 3,289,500	$ 32,900					X			X
Conservation Crop Rotation (328)	Ac.	263,180	$ -	$ -					X			X
Constructed Wetland (656)	No.	26	$ 780,000	$ 7,800					X			X
Forage Harvest Management (511)	Ac.	65,790	$ -	$ -					X			X
Irrigation System, Sprinkler (442)	Ac.	263,180	$176,350,300	$3,527,000					X			X
Irrigation Water Conveyance (430DD)	Ft.	963,600	$ 6,547,700	$ 32,700					X			X
Irrigation Water Management (449) - Low level	Ac.	188,370	$ 3,900,200	$1,300,100					X			X
Irrigation Water Management (449) - Meters and Moisture Sensors	Ac.	78,950	$ 2,368,500	$ 789,500					X			X
Nutrient Management (590)	Ac.	263,180	$ 3,808,200	$1,269,400					X			X
Pest Management (595)	Ac.	263,180	$ 7,557,900	$2,519,300					X			X
Residue Mngt, Mulch Till (345)	Ac.	263,180	$ 11,843,100	$3,947,700					X			X
Residue Management Seasonal (344)	Ac.	263,180	$ 11,681,900	$3,894,000					X			X
Residue Mngt, No Till/Strip Till (329)	Ac.	26,320	$ 1,184,400	$ 394,800					X			X
Sediment Basin (350)	No.	410	$ 1,127,500	$ 33,800					X			X
Structure for Water Control (587) -Fish Screen	No.	360	$ 4,320,000	$ 43,200					X			X
Surface Roughening (609)	Ac.	263,180	$ 5,921,600	$1,973,900					X			X
Upland Wildlife Habitat Management (645)	Ac.	39,480	$ 592,200	$ 197,400					X			X
Well Decommissioning (355)	No.	100	$ 85,000	$ -					X			X
Windbreak/Shelterbelt Establishment (380)	Ft.	2,170,080	$ 11,024,000	$ 110,200					X			X
Total RMS Costs			$297,662,200	$23,203,000								

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	$ 14,883,100	$ 1,160,200
Potential Farm Bill Programs	$282,779,100	$22,042,800
Operator O&M and Management Cost		$23,203,000
Annual Management Incentives (3 yrs - Incentive Payments)	$ 46,790,900	
Operator Investment	$ 73,880,200	
Federal Costs	$176,991,100	
Total RMS Costs	$297,662,200	$23,203,000
Estimated Level of Participation		75%
Total Acres in RMS System		219,315
Anticipated Cost at Estimated Level of Participation	$	223,246,700
Total Acre Feet of Water Saved Annually		264,740
Increases infiltration and storage of water in soil profile		
Participating landowners will be in compliance with TMDLs		
Improves habitat for ESA endangered & threatened species		
Improves ground water quality		

Conservation Activities for Irrigated Pasture

Current Conditions		Total Acres	Riparian/ Wetland Potential
Surface Irrigated Pasture		12,750	
Sprinkler Irrigated Pasture		4,250	
Total Irrigated Pasture		17,000	2,210
Typical Management Unit/Ownership		810	
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.	12,750			-3	-/+	-2	-3				
Fence (382)	Ft.	7,863	$ -	$ 300					X			X
Irrigation Water Management (449)	Ac.	8	$ -	$ 100					X			X
Nutrient Management (590)	Ac.	8	$ -	$ -					X			X
Pest Management (595)	Ac.	8	$ -	$ 100					X			X
Pipeline (516)	Ft.	300	$ -	$ -					X			X
Prescribed Grazing (528)	Ac.	8	$ -	$ -					X			X
Watering Facility (614)	No.	3	$ -	$ -					X			X
Sprinkler Irrigation	Ac.	4,250			+2	+1	+1	+3				
Fence (382)	Ft.	2,500	$ -	$ 100					X			X
Irrigation System Sprinkler (442)	Ac.	49	$ -	$ 700					X			X
Irrigation Water Conveyance (430DD)	Ft.	,661	$ -	$ 170					X			X
Irrigation Water Management (449)	Ac.	71	$ -	$ 500					X			X
Nutrient Management (590)	Ac.	4	$ -	$ -					X			X
Pasture and Hayland Planting (512)	Ac.	21	$ -	$ 20					X			X
Pest Management (595)	Ac.	4	$ -	$ -					X			X

Conservation Activities for Irrigated Pasture – Continued

Future Conditions			Total Acres
Surface Irrigated Pasture			2,040
Sprinkler Irrigated Pasture			12,750
Total Conversion to Riparian Pasture RMS			2,210
Total Acres			17,000

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.	2,040			+/-	+/-	+1	+1				
Fence (382)	Ft.	34,320	$ 46,300	$ 900					X			X
Irrigation System Surface (443)	Ac.	2,040	$ 306,000	$ 9,200					X	X	X	X
Irrigation Tailwater Recovery (447)	No.	13	$ 1,963,000	$ 58,900					X			X
Irrigation Water Conveyance (430HH)	Ft.	67,320	$ 274,700	$ 2,700					X			X
Irrigation Water Conveyance (430EE)	Ft.	134,640	$ 534,500	$ 2,700					X			X
Irrigation Water Management (449)	Ac.	2,040	$ 45,700	$ 15,200					X			X
Nutrient Management (590)	Ac.	2,040	$ 30,500	$ 10,200					X			X
Pasture & Hayland Planting (512)	Ac.	820	$ 82,000	$ 800					X			X
Pest Management (595)	Ac.	2,040	$ 61,000	$ 20,300					X			X
Prescribed Grazing (528)	Ac.	2,040	$ 30,500	$ 10,200					X			X
Structure for Water Control (587)-Fish Screen	No.	26	$ 312,000	$ 3,100					X	X		X
Upland Wildlife Management (645)	Ac.	310	$ 4,700	$ 1,600					X			X
Watering Facility (614)	No.	17	$ 14,000	$ 100					X			X
Windbreak/Shelterbelt Establish(380)	Ft.	33,660	$ 171,000	$ 1,700					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.	12,750			+3	+3	+2	+3				
Fence (382)	Ft.	211,200	$ 365,200	$ 7,300					X			X
Irrigation Water Conveyance (430DD)	Ft.	139,920	$ 1,003,600	$ 5,000					X			X
Irrigation System Sprinkler (442)	No.	12,750	$ 8,890,700	$ 177,800					X			X
Irrigation Water Management (449)	Ac.	12,750	$ 285,300	$ 95,100					X			X
Nutrient Management (590)	Ac.	12,750	$ 191,200	$ 63,700					X			X
Pasture & Hayland Planting (512)	Ac.	5,100	$ 507,900	$ 5,100					X			X
Pest Management (595)	Ac.	12,750	$ 382,400	$ 127,500					X			X
Prescribed Grazing (528)	Ac.	12,750	$ 191,300	$ 63,800					X			X
Structure for Water Control (587)-Fish Screen	No.	80	$ 960,000	$ 9,600					X	X		X
Upland Wildlife Management (645)	Ac.	1,910	$ 28,700	$ 9,600					X			X
Watering Facility (614)	No.	80	$ 80,000	$ 800					X			X
Windbreak/Shelterbelt Establish(380)	Ft.	211,200	$ 1,072,900	$ 10,700					X			X
Riparian Pastures	Ac.	2,210			+1	+1	+3	+3				
Channel Bank Vegetation (322)	Ac.	220	$ 1,100,000	$ 22,000					X			X
Channel Stabilization (584)	Ft.	2,670	$ 48,100	$ 200					X			X
Fence (382)	Ft.	36,960	$ 64,700	$ 1,300					X	X	X	X
Nutrient Management (590)	Ac.	2,210	$ 33,200	$ 11,100					X			X
Pasture & Hayland Planting (512)	Ac.	880	$ 88,000	$ 900					X			X
Pest Management (595)	Ac.	2,210	$ 66,300	$ 22,100					X			X
Pipeline (516)	Ft.	36,960	$ 99,800	$ 2,000					X			X
Prescribed Grazing (528)	Ac.	2,210	$ 33,200	$ 11,100					X			X
Riparian Forest Buffer (391)	Ac.	61	$ 183,000	$ 1,800					X			X
Riparian Herbaceous Cover (390)	Ac.	61	$3,100	$ 0					X	X	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
Streambank & Shoreline Prot (580)	Ft.	6,670	$160,100	$ 16,000					X			X
Tree/Shrub Establishment (612)	Ac.	30	$ 13,500	$ 100					X			X
Upland Wildlife Management (645)	Ac.	330	$5,000	$ 1,700					X			X
Use Exclusion (472)	Ac.	110	$3,900	$ 100					X	X	X	X
Watering Facility (614)	No.	28	$28,000	$ 300					X		X	X
Wetland Wildlife Management (644)	Ac.	220	$3,300	$1,100					X			X
Total RMS Costs			$ 19,768,300	$ 805,400								

RMS Cost Summary for Irrigated Pasture:

Cost Items and Programs	Costs	O&M Costs
Non Farm Bill Programs	$ 988,400	$ 40,300
Potential Farm Bill Programs	$ 18,779,900	$765,100
Operator O&M and Management Cost		$805,400
Annual Management Incentives (3 yrs - Incentive Payments)	$ 1,155,300	
Operator Investment	$ 5,394,600	
Federal Costshare	$ 13,218,400	
Total RMS Farm Bill Costs	$ 19,768,300	
Estimated Level of Participation		60%
Total Acres in RMS System		10,200
Anticipated Cost at Estimated Level of Participation	$	11,861,000
Total Acre Feet of Water Saved Annually		19,510
Total Annual Forage Production Benefits (animal unit months)		41,200
Improves ground water and surface water quality by minimizing off-site transport		
Improves riparian habitat for ESA endangered & threatened species		

Conservation Activities for Grazed Dry Pasture, Rangeland, and Forestland

Current Conditions	Grazed	Ungrazed	Riparian/Wetland/Potential	Total Acres
Private Rangeland and Dry Pasture	300,480		33,390	333,870
Typical Range Management Unit	810			
Current Farm Bill participation	15%			

Current Level of Treatment for Grazed Dry Pasture, Rangeland 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.	300,480	$ -		+/-	+/-	+/-	+/-					
Prescribed Grazing (528)	Ac.	16,868	$ -	$ 84,300					X				X
Pest Management (595)	Ac.	18	$ -	$ 200					X				X
Watering Facility (614)	No.	5	$ -	$ 100					X				X
Pipeline (516)	Ft.	21,888	$ -	$ 1,200					X				X
Fence (382)	Ft.	14,404	$ -	$ 500					X				X

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

Future Conditions	Rangeland / Pasture	Riparian	Total Acres
	300,480	33,390	333,870

Current Level of Treatment for Grazed Dry Pasture, Rangeland 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 Pasture, Range, and Forestland	Ac.	300,480			+3	+2	+3	+3					
Brush Management (314)	Ac.	99,160	$ 1,983,200	$ 19,800					X				X
Fence (382)	Ft.	4,957,920	$ 8,651,200	$ 173,000					X				X
Firebreak (394)	Ft.	1,240,800	$ 2,394,700	$ 478,900					X				X
Pest Management (595)	Ac.	300,480	$ 9,013,900	$3,004,600					X				X
Pipeline (516)	Ft.	1,240,800	$ 3,291,100	$ 65,800					X				X
Pond (378)	No.	120	$ 600,000	$ 6,000					X				X
Prescribed Grazing (528)	Ac.	300,480	$ 4,254,200	$1,418,100					X				X
Range Planting (550)	Ac.	99,160	$ 8,924,400	$ 89,200					X				X
Spring Development (574)	No.	470	$ 1,104,500	$ 5,500					X	X			X
Upland Wildlife Management (645)	Ac.	60,100	$ 901,500	$ 300,500					X	X			X
Watering Facility (614)	No.	470	$ 465,000	$ 4,700					X				X
Well (642)	No.	235	$ 705,000	$ 7,100					X				X
Range & Pasture Riparian	Ac.	33,390			+3	+2	+3	+3					
Channel Bank Vegetation (322)	Ac.	3,340	$16,700,000	$ 334,000					X				X
Channel Stabilization (584)	Ft.	58,660	$ 1,055,900	$ 5,300					X				X
Fence (382)	Ft.	274,560	$ 480,500	$ 9,600					X	X	X		X
Pest Management (595)	Ac.	33,390	$ 1,001,700	$ 333,900					X				X
Pipeline (516)	Ft.	68,640	$ 185,300	$ 3,700					X				X
Prescribed Grazing (528)	Ac.	33,390	$ 500,900	$ 167,000					X				X
Pumping Plant (533)	No.	14	$ 39,900	$ 800					X				X
Riparian Forest Buffer (391)	Ac.	670	$ 2,010,000	$ 20,100					X				X
Riparian Herbaceous Cover (390)	Ac.	670	$ 33,500	$ 300					X	X	X		X

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

Current Level of Treatment for Grazed Dry Pasture, Rangeland 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 Riparian (cont.)													
Streambank & Shoreline Prot (580)	Ft.	146,640	$ 3,519,400	$ 351,900					X	X			X
Tree/Shrub Establishment (612)	Ac.	335	$ 150,800	$ 1,500					X				X
Upland Wildlife Management (645)	Ac.	6,680	$ 100,200	$ 33,400					X	X			X
Use Exclusion (472)	Ac.	670	$ 23,500	$ 700					X	X	X		X
Watering Facility (614)	No.	52	$ 52,000	$ 500					X		X		X
Wetland Wildlife Management (644)	Ac.	3,340	$ 50,100	$ 16,700					X		X		X
Total RMS Costs			$68,192,400	$6,852,600									

RMS Cost Summary for Private Grazed Pasture, Rangeland and Forestland:

Cost Items and Programs	Costs	O&M Costs
Non Farm Bill Programs	$ 3,409,600	$ 342,600
Potential Farm Bill Programs	$64,782,800	$6,510,000
Operator O&M and Management Cost		$6,852,600
Annual Management Incentives (3 yrs - Incentive Payments)	$15,822,500	
Operator Investment	$15,649,700	
Federal Costshare	$36,720,200	
Total RMS Farm Bill Costs	$68,192,400	
Estimated Level of Participation		35%
Total Acres in RMS System		105,200
Anticipated Cost at Estimated Level of Participation	$	23,867,300
Total Annual Forage Production Benefits (acre unit months)		16,600
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 these practices and are component practices of Waste Management Facilities (313).

Current Conditions		Total
CAFOs		75
AFOs		15
Current Farm Bill participation	15%	-
Total CAFOs and AFOs		90

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.	75			+/-	-1	-3	-3					
Waste Storage Facility (313) CAFO	No.	13	$ -	22,800					X				X
Waste Storage Facility (313) AFO	No.	2	$ -	1,800					X				X
Feed Lot	Ac.	15			+/-	+/-	-3	-3					
Waste Storage Facility (313) CAFO	No.	5	$ -	8,800					X				X
Waste Storage Facility (313) AFO	No.	1	$ -	900					X				X

Conservation Activities for Headquarters - Continued

Future Conditions		Total Dairies & Feedlots
Dairies Needing Structural Practices		30
Dairies Needing Management Practices		40
Feedlots Needing Management and Structural Practices		11
Total Dairies and Feedlots		81

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		30											
Waste Storage Facility (313) CAFO	No.	28	$1,312,500	$ 26,250					X				X
Waste Storage Facility (313) AFO	No.	2	$ -	$ -					X				X
Management Practices		40											
Waste Storage Facility (313) CAFO	No.	37	$ 370,000	$ 7,400					X				X
Waste Storage Facility (313) AFO	No.	3	$ 15,600	$ 312					X				X
Feed Lot	Ac.				+3	+1	+3	+3					
Structural/Management Practices		11											
Waste Storage Facility (313) CAFO	No.	8	$ 262,500	$ 5,250					X				X
Waste Storage Facility (313) AFO	No.	3	$ 90,000	$ 1,800					X				X
Total RMS Costs			$2,050,600	$ 41,012									

Conservation Activities for Headquarters - Continued

RMS Cost Summary for Headquarters

Cost Items and Programs	Costs	O&M Costs
Non Farm Bill Programs	$ 102,500	$ 2,100
Potential Farm Bill Programs	$1,948,100	$ 38,912
Operator O&M and Management Cost		$ 41,012
Annual Management Incentives (3 yrs - Incentive Payments)	$ 475,000	
Operator Investment	$ 470,800	
Federal Costshare	$1,104,800	
Total RMS Costs	$2,050,600	
Estimated Level of Participation		90%
Total CAFO/AFO in RMS System		81
Anticipated Cost at Estimated Level of Participation	$	1,845,500
Reduces impact to ground and surface water quality		
90% participation reflects Local, State and Federal regulations		