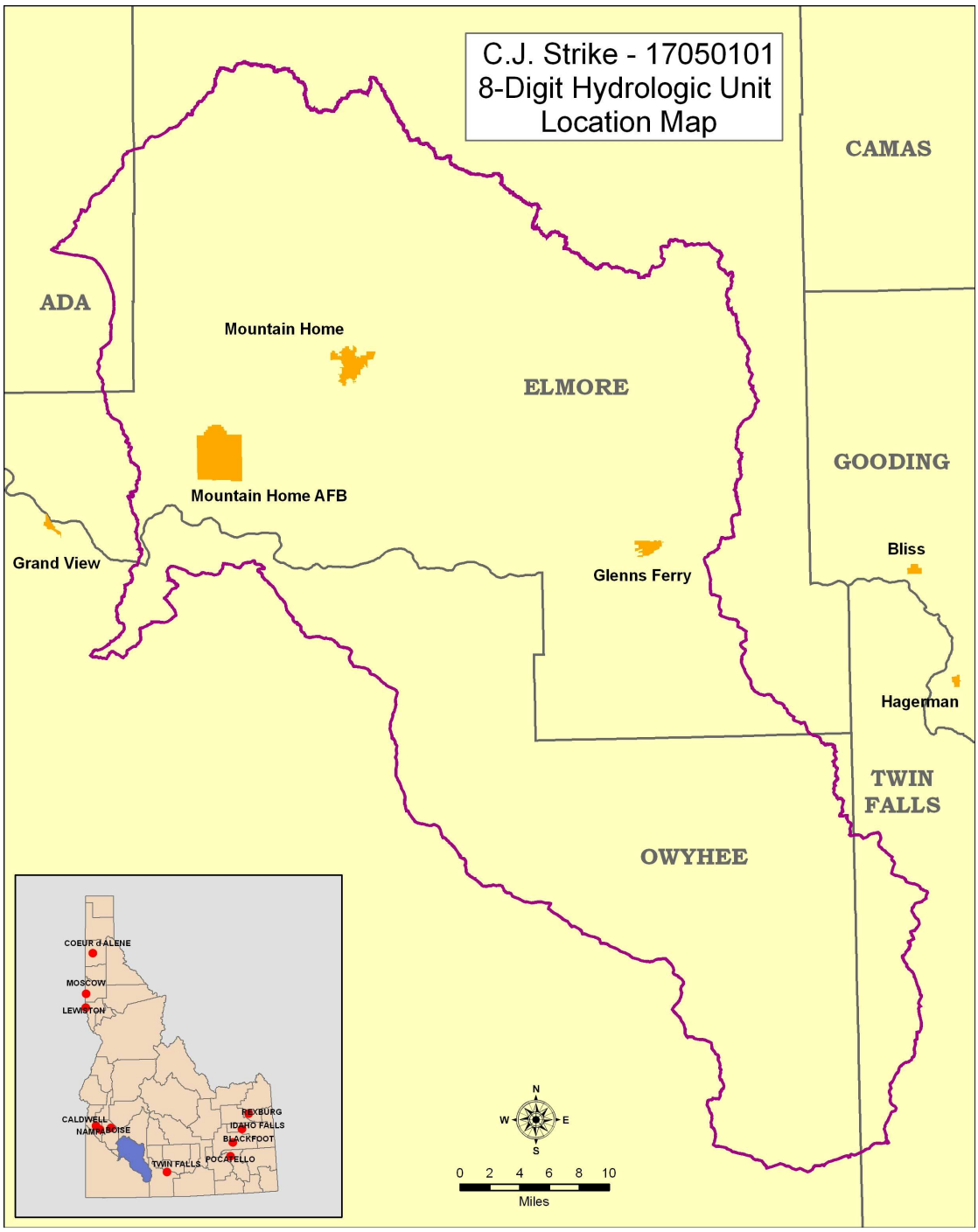
C.J. Strike – 17050101

Idaho 8 Digit Hydrologic Unit Profile June 2007



Introduction

The C.J. Strike 8-Digit Hydrologic Unit Code (HUC) subbasin is 1,310,000 acres. Elmore County accounts for approximately 60 percent of the watershed. Thirty five percent of the subbasin is in Owyhee County, 3 percent in Twin Falls County and about 2 percent in Ada County. Twenty three percent of the basin is privately owned; the remaining 77 percent is public land.

Fifty seven percent of the subbasin is shrubland or rangeland; grass, pasture or hayland comprises 35 percent. Six percent of the watershed is cropland; participation in the Conservation Reserve Program (CRP) is very limited. Less than one percent of the basin is forest. The remaining two percent is water, wetland, developed or barren land.

Elevations range from 2373 feet on the western central edge of the watershed to over 7400 feet in the northeastern portion.

Conservation assistance is provided by four Soil and Water Conservation Districts, and two Resource Conservation and Development offices.

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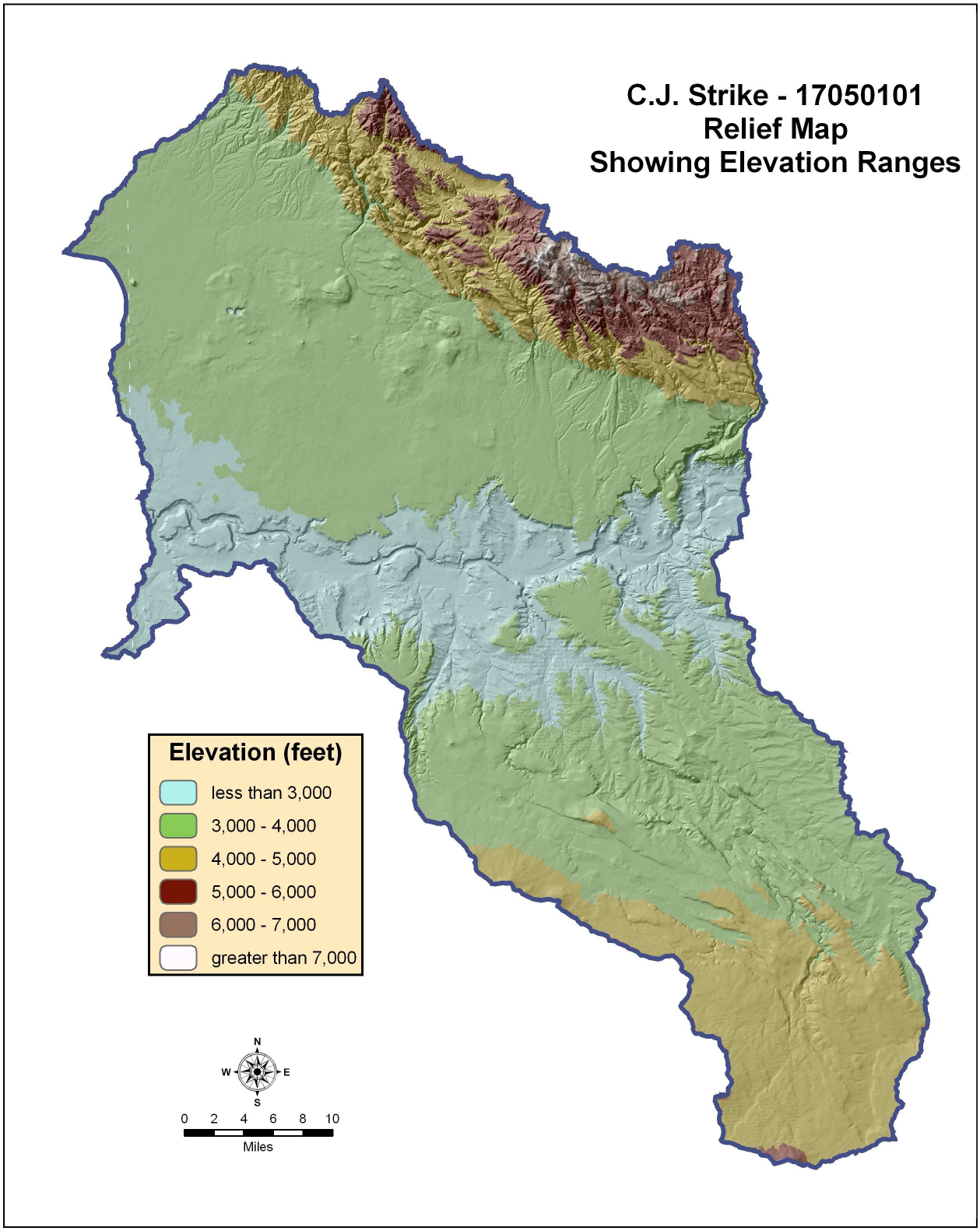
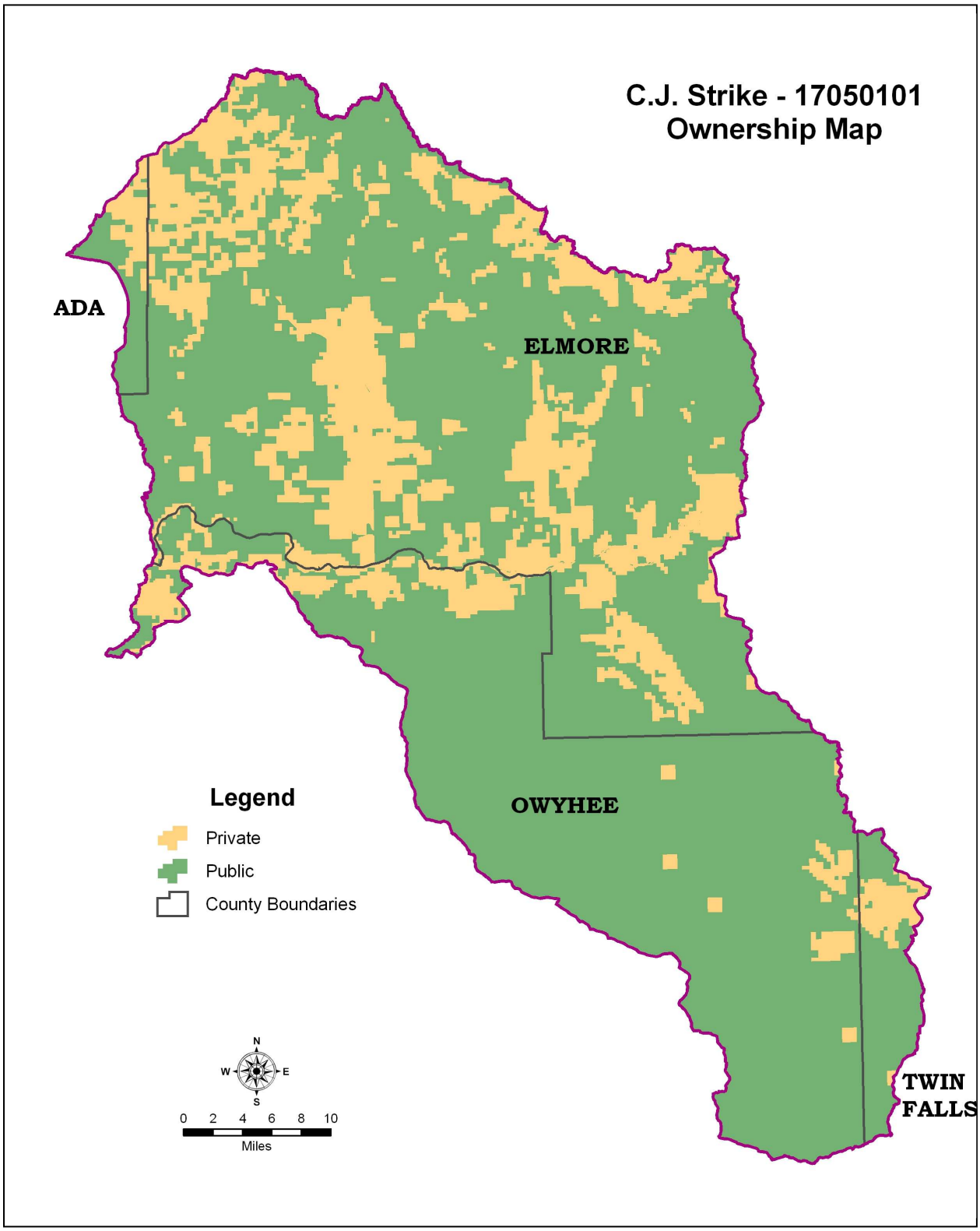
Relief Map


C.J. Strike - 17050101
Relief Map
Showing Elevation Ranges
Elevation (feet)
less than 3,000
3,000 - 4,000
4,000 - 5,000
5,000 - 6,000
6,000 - 7,000
greater than 7,000
N
W
E
S
0 2 4 6 8 10
Miles

General Ownership



Physical Description

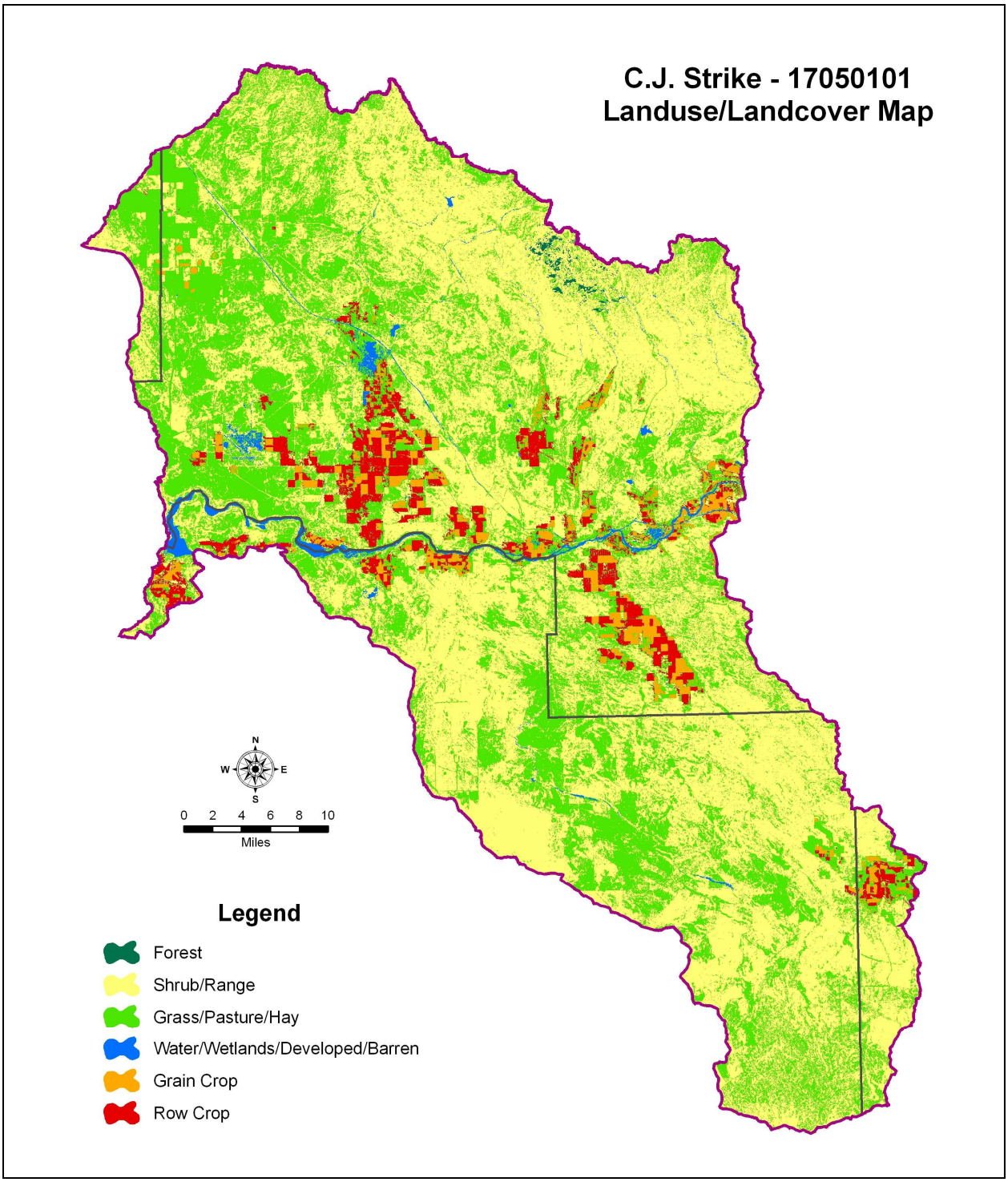
Land Cover/ Land Use (NLCD[2])	Ownership - (2003 Draft BLM Surface Map Set[1])							
	Public		Private		Tribal		Totals	% of HUC
	Acres	%	Acres	%	Acres	%		
Forest	1,647	<1%	1,141	<1%	--	--	**2,788**	**<1%**
Grain Crops	2,062	<1%	28,654	2%	--	--	**30,716**	**2%**
Conservation Reserve[3] Program (CRP) Land	--	--	316	<1%	--	--	**316**	**<1%**
Grass/Pasture/Hay Lands	342,176	26%	116,222	9%	--	--	**458,398**	**35%**
Orchards/Vineyards/Berries	--	--	--	--	--	--	**--**	**--**
Row Crops	4,717	<1%	45,770	3%	--	--	**50,487**	**4%**
Shrub/Rangelands	650,676	50%	100,481	8%	--	--	**751,157**	**57%**
Water/Wetlands/ Developed/Barren	6,880	<1%	9,259	<1%	--	--	**16,139**	**1%**
Idaho HUC Totals*	**1,008,158**	**77%**	**301,843**	**23%**	**--**	**--**	**1,310,011**	**100%**

**Totals are approximate due to calculation methods used*

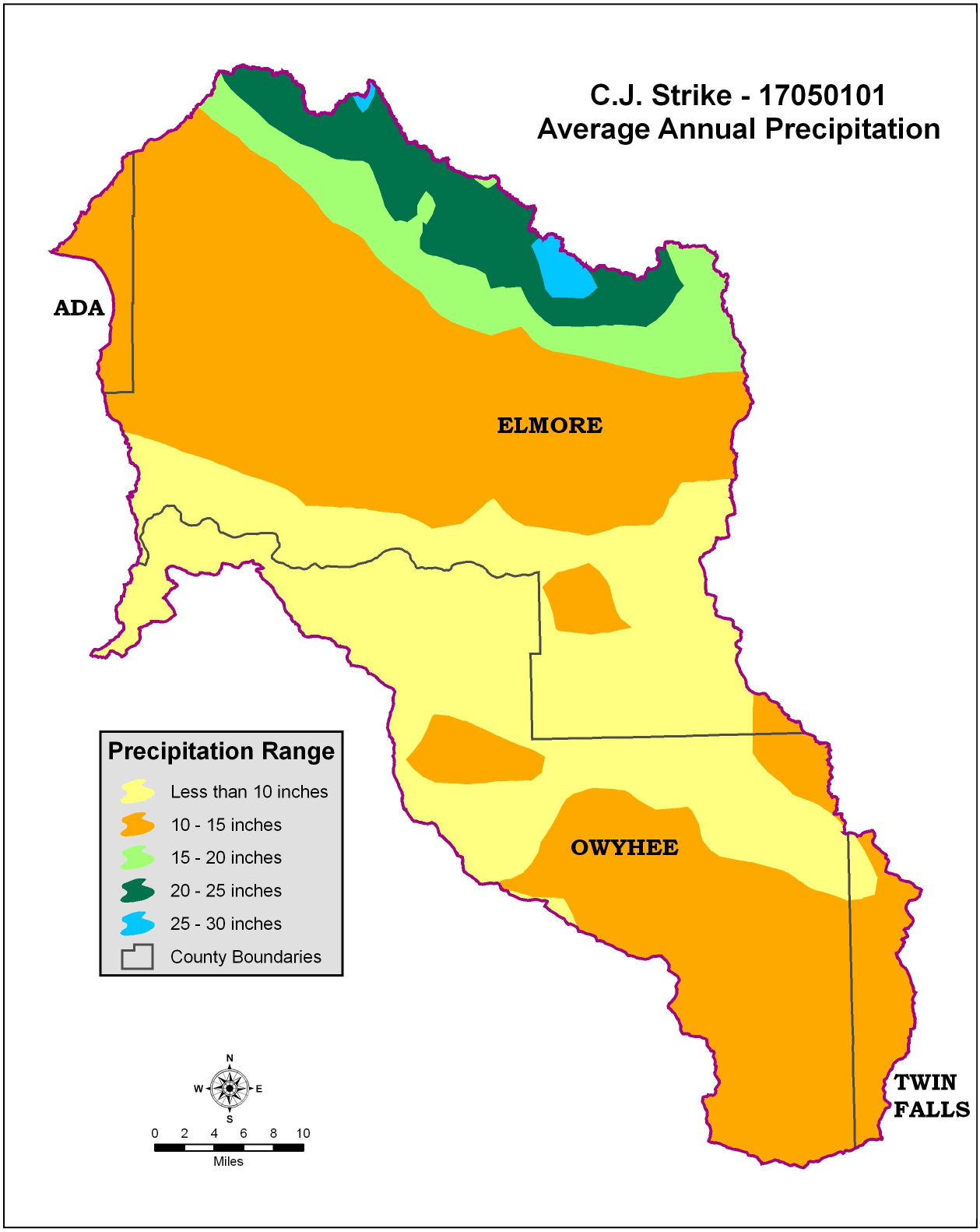
Irrigated Lands[3]	Type of Land	ACRES	% of Irrigated Lands	% of HUC
	Cultivated Cropland	57,700	86%	4%
	Non-Cultivated Cropland**	7,700	11%	<1%
	Pastureland	1,900	3%	<1%
	Total Irrigated Lands	**67,300**	**100%**	**5%**

******Includes permanent hayland and horticultural cropland**.**

Land Use / Land Cover

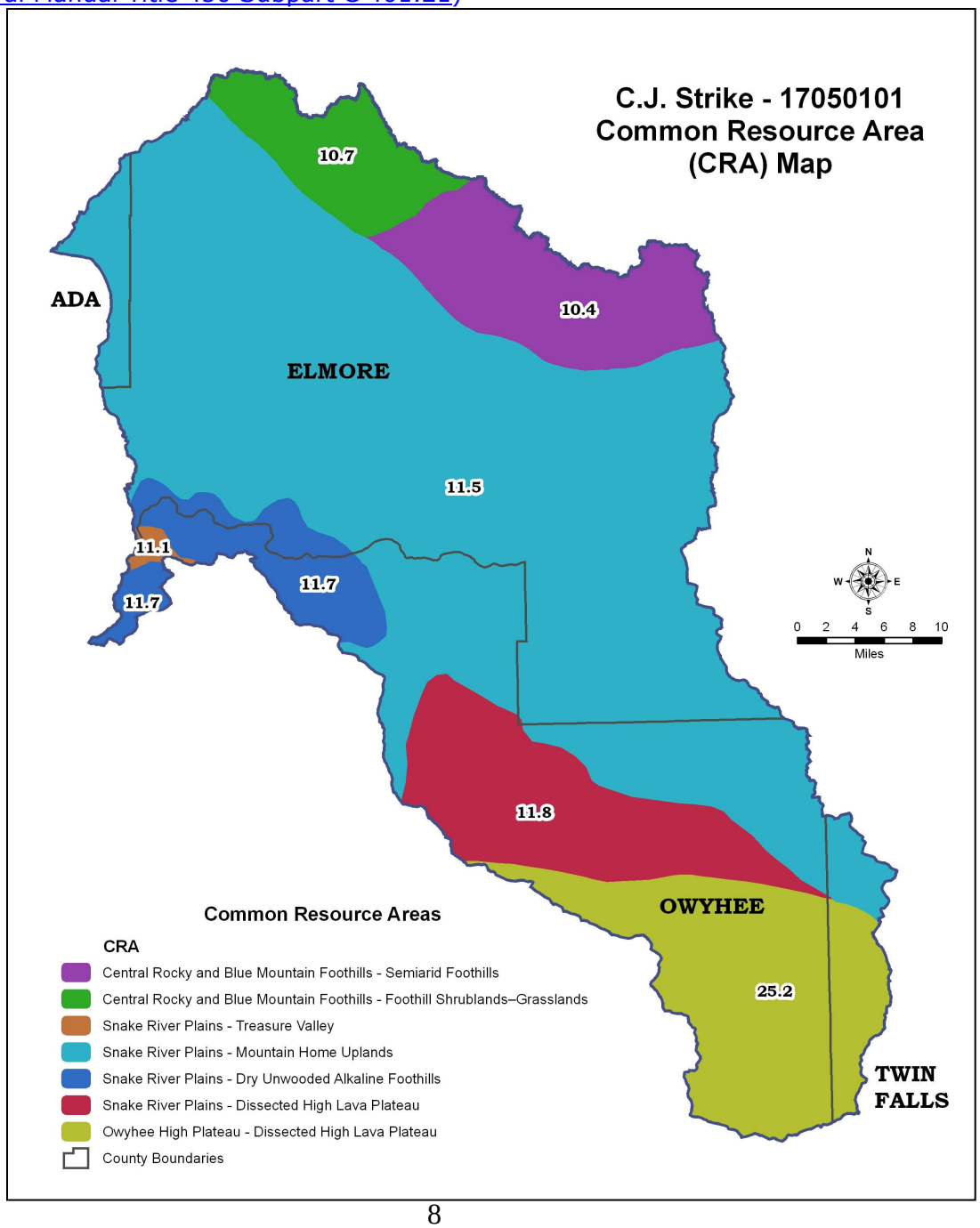


Average Annual Precipitation



Common Resource Area Map

CRA Map - areas with a majority are listed below - for descriptions of every class within the HUC, go to: http://ice.id.nrcs.usda.gov/website/cra/viewer.htm
A Common Resource Area (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 landuse/landcover, 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 MRLA framework

10.4 **Central Rocky and Blue Mountain Foothills - Semiarid Foothills**
The shrub- and grass-covered foothill unit is higher and more rugged than nearby CRA units. A few perennial streams flow across the unit but are absent on the lacustrine deposits of the Unwooded Alkaline Foothills CRA. Shallow, clayey soils are common and often support medusahead, wild rye, cheatgrass, and scattered shrubs. Wildfire frequency is high. Land use is primarily livestock grazing and is distinct from the irrigated agriculture of the Treasure Valley.

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. Land use is mostly grazing but rural residential development is expanding near the city of Boise.

11.1 **Snake River Plains - Treasure Valley**
This unit is characterized by irrigated cropland, pastureland, and rapidly growing cities, suburbs, and industries. Many canals, reservoirs, and diversions are present. Aridic soils predominate and require irrigation to grow commercial crops. Surface water quality has been significantly affected by channel alteration, dams, irrigation return flow, and urban, industrial, and agricultural pollution. Crops include wheat, barley, alfalfa, sugar beets, potatoes, and beans. Crop diversity is greater, temperatures are warmer, and the mean frost free season is longer than in other CRA units. Population density is much greater than in nearby, rangeland-dominated units.

11.5 **Snake River Plains – Mountain Home Uplands**
This upland shrub- and grass-covered unit is sparsely populated. Local relief is between that of the flanking foothills and the Magic and Treasure Valleys. Soils are warmer than the frigid soils of the Owyhee Mountains. Today, cheatgrass, medusahead, wild rye, and sagebrush occur and livestock carrying capacity is low; native grasses are rare and vegetative regeneration capacity is limited.

11.7 **Snake River Plains - Dry Unwooded Alkaline Foothills**
The shrub- and grass-covered foothill unit is higher and more rugged than adjacent valley CRAs. Alkaline lacustrine terrace deposits characterize the soil and support a unique flora. Shallow and moderately deep soils over cemented pans are common. Potential natural vegetation is saltbush-greasewood and sagebrush steppe. Today, cheatgrass and crested wheatgrass are also common and the unit is used for livestock grazing. The soil temperature regime is mesic and the soil moisture regime is aridic.

Common Resource Area Descriptions - continued

11.8 **Snake River Plains – Dissected High Lava Plateau**
This unit consists of alluvial fans, rolling plains, and shear-walled canyons cut into extrusive rocks. Sagebrush grassland is common and scattered woodland grows on rocky uplands. This unit has more cool season grasses than the valleys to the south and lacks the saltbush–greasewood of the Raft River Valley. Frigid and mesic aridisols and mollisols occur. Grazing is the primary land use. Cropland is much less common than in other CRAs. Areas of high water quality and native fish assemblages occur in isolated canyons.

25.2 **Owyhee High Plateau - Dissected High Lava Plateau**
This unit has alluvial fans, rolling plains, and shear-walled canyons that are cut into extrusive rocks. Sagebrush grassland is common and scattered woodland grows on rocky uplands. This region has more cool season grasses than the valleys to the south and lacks saltbush–greasewood. Frigid and mesic Aridisols and Mollisols occur. Grazing is the primary land use. Cropland is less common than in the Snake River Plain. High water quality and native fish assemblages occur in isolated canyons.

Streamflow Summary /7, 28-31

The Snake River is the primary stream in the C.J. Strike subbasin. Much of the water that flows from the mountain valleys does not reach the Snake River in tributary drainages but disappears from the surface and enters the aquifer. The 53 mile long reach of the Snake River that bisects the C.J. Strike subbasin begins at King Hill and ends at C.J. Strike Dam. The King Hill-C.J. Strike reach is an important agricultural, recreational, and wildlife resource as well as a hydroelectric power source. In this reach, the river flows through basalt canyons, rangeland, and agricultural land. The channel shape varies from being confined in the canyons to wide single channel areas with extensive floodplains and meandering channels with island complexes (IDEQ, 2006).

A water balance is presented in the *King Hill-C.J. Strike Subbasin Assessment and TMDL* (IDEQ, 2006) for 1992 to 2002. It presents average streamflow, for the Snake River, as 10,708 cfs at King Hill and 11,130 cfs at C.J. Strike Dam. The largest inflows are listed as the Bruneau River (330 cfs), Canyon Creek (36 cfs) and Big Jacks Creeks (4 cfs). Withdrawals for irrigation from more than 20 pumping sites result in a net loss of 199 cfs average annual discharge.

C.J. Strike Dam is an earthfill structure, 3,220 feet long and 115 feet high, with a crest elevation of 2,465 feet above sea level. Spill flows occur when total Snake River flows exceed hydraulic capacity of the powerhouse. C.J. Strike Reservoir is not used to store water on a seasonal basis but is fluctuated daily to meet power needs(IDEQ, 2006). The reservoir above the plant covers 7,500 surface acres and has a storage capacity of 247,000 acre-feet (IPC, 2003).

The hydrology of the Middle Snake subbasins, including C.J. Strike, is varied and complex. Spring and early summer streamflow in the Snake River is driven by snowmelt and runoff from areas where precipitation falls mostly as snow. Groundwater and spring systems have a profound impact on the hydrology of these subbasins and, in some areas and seasons, groundwater discharge is a substantial source of flow to the Snake River. The hydrology of

Streamflow Summary -continued

both the mainstem and tributary systems has been substantially altered through irrigation diversions and hydropower development. Mainstem flow in the Snake River is heavily influenced by dams and other water-control structures on both the mainstem and tributaries (Ecovista and IDFG, 2004).

Tributary hydrology in agricultural areas of the subbasins is complex, with water diverted into fields, discharged back into the tributaries through irrigation drains and subsurface flows, and rediverted onto additional lands downstream (IDEQ and ODEQ, 2003). Most small tributaries in the low-elevation, arid portions of the subbasin are ephemeral or intermittent, with flow present only seasonally or during high precipitation events. Flow is highly variable in the perennial tributaries and is often composed of irrigation return flow and/or groundwater discharge (IWRB, 1993). Many creeks remain perennial in the headwaters, but flow subsurface in the lower reaches (BLM, 1996, 1999). Underground tributary valley flow is a major component of groundwater input into the aquifer(Ecovista and IDFG, 2004).

Less than 20% of the total inflow into the Snake River reaches the river without passing through a reservoir or other control structure. Such management of flows affects both the magnitude and timing of flow variations within the mainstem Snake River. Although the overall volume may not have changed substantially, flows are now more evenly distributed over the year (USBR, 1998).

Although long term discharge data for the Snake River is available from a gaging station at King Hill, there are no other mainstem stations until the C.J. Strike dam; however this data is daily storage, not discharge. Streamflow (1985 to 2005) data was obtained for the nearest downstream site, near Grandview.

The average annual (daily) flow of the Snake River near Grandview is 9,618 cfs; this is based on 21 years of flow data (1985 to 2005). Peak flows recorded range from 7,810 cfs (10/20/02) to 44,000 cfs (6/20/97). Major tributaries to the Snake River in the subbasin include: Cold Springs, Alkali, Canyon, King Hill, Browns, Sailor and Deadman Creeks.

			Acre-Feet
Stream Flow Data	USGS 13171620, USGS Snake River Near Grand View, ID, 1985-2005	Average Annual	6,963,491
		Mar-July Average	3,064,496
		Percent of Average Annual	44%

		CFS	Number
Irrigated Adjudicated Water Rights[6])	Surface Water	2,203	6,168
	Groundwater	655	2,776
	Total Irrigated Adjudicated Water Rights	2,858	8,944

		MILES	PERCENT
Stream Data **Percent of Total Miles of streams in HUC*	Total Miles[8]	1,689	--
	Water quality impaired streams [9]	816	48%*
	Anadramous Fish Presence (Streamnet)[11]	--	--
	Bull Trout Presence (Streamnet)[11]	--	--

		ACRES	PERCENT
Land Cover/Use[2] based on a 100 ft. stretch on both sides of all streams in the 100K Hydro Layer	Forest	199	<1%
	Grain Crops	1,031	1%
	Grass/Pasture/Hay Lands	28,114	33%
	Row Crops	1,596	2%
	Shrub/Rangelands	52,983	63%
	Water/Wetlands/Developed/Barren	461	1%
	Total Acres of 100 ft stream buffers	**84,384**	100%
Land Capability Class[4]	**I** – slight limitations	--	--
	II – moderate limitations	30,500	30%
	III – severe limitations	22,900	22%
	IV – very severe limitations	7,000	7%
	V – no erosion hazard, but other limitations	--	--
	VI – severe limitations, unsuited for cultivation, limited to pasture, range, forest	41,400	40%
	VII – very severe limitations, unsuited for cultivation, limited to grazing, forest, wildlife	1,300	1%
	VIII – misc areas have limitations, limited to recreation, wildlife, and water supply	--	--
	Total Crop & Pasture Lands	**103,100**	100%

Confined Animal Feeding Operations – Dairies/Feedlots [12, 13]

Operation Type	Number	<300	300-999	1000-4999	5000+
Dairy	3			2	1
Feedlots	1			1	

Resource Settings

Pasture: Surface irrigated pastureland. Annual precipitation is nine to 11 inches, and the growing season is 100 to 160 days. Soils vary from silty clays to gravelly sands, with slopes from one to five percent. Irrigation water is distributed by earthen ditches. Tailwater from fields may be reused and eventually returns to a perennial stream or river. Some fields may have been leveled, smoothed or shaped to allow for irrigation. Estimated irrigation efficiency is 25 to 35 percent. Plants are introduced perennial forage species. Conventional tillage is used when rotating pasture and grain. The average rotation is ten years of pasture and two years of small grain. Commercial fertilizers are occasionally used, but soil testing is rarely done.

High elevation irrigated pastureland has annual precipitation of 16 to 30 inches, and the growing season is 50 to 100 days. Soils vary from silt loams to gravelly sands, with slopes from one to five percent. Irrigation water is diverted from streams and distributed by earthen ditches. In the fields, water is controlled and directed by ditch tarps on contour ditches, and the tailwater returns to the perennial streams. Some fields may have been leveled, smoothed or shaped to allow for irrigation. Plants are a mixture of introduced and native perennial forage species. Conventional tillage is used when rotating pasture and grain. The average rotation is ten years of pasture and two years of small grain. Commercial fertilizers are occasionally used, but soil testing is rarely done.

Dry Cropland: Dry cropland planted to winter wheat/fallow rotation. Precipitation is 9 to 11 inches per year. Growing season ranges from 90 to 120 days. Typical soils are silt loams with slopes from zero to eight percent. Conventional tillage results in five to ten percent residue after planting. Tillage practices are typically fall disc, spring disc, chisel and rod weeding. Fertilizers and/or pesticides are applied. Wildlife includes deer, elk, moose, small game and nongame birds.

Surface Irrigated Crops: Conventionally tilled, surface-irrigated cropland planted predominantly to row crops. Crops grown include: beans, peas, onions, sugar beets, silage corn, grain corn and winter wheat. Alfalfa may be included in the rotation and is typically maintained for three to four years. Fertilizers and pesticides are applied. Nutrient, pest, and/or irrigation water management in some cases is less than desirable. Precipitation is 12 inches or less and the growing season is approximately 120 to 160 days. Typical soils are sandy loam or finer, approximately 15 inches in depth with slopes from zero to seven percent.

Sprinkler Irrigated Crops: Cropland is conventionally tilled and planted predominantly to row crops. Typical crops grown include beans, potatoes, sugar beets, peas, silage corn, grain corn, small grains and alfalfa. Crop rotations generally contain less than 50 percent high residue crops. Wind erosion typically occurs in the spring following low residue crop production and causes visibility concerns. Typical tillage includes plow, heavy offset disc or deep ripping with seasonal residue management. Fertilizers and pesticides are applied. Typical soils are loamy fine sand to coarse sand with slopes from zero to four percent. Growing season is approximately 100 to 160 days. Precipitation is eight to 12 inches per year. The irrigation water source is groundwater and surface water from irrigation districts. Hand-lines, wheel-lines and pivots are commonly used to irrigate crops. Fertilizers and pesticides and manure are commonly applied. Nutrient, pest and/or irrigation water

Resource Settings - continued

management is less than desirable. Wildlife includes antelope, deer, elk, small game, upland game birds and small mammals.

Hayland: Non-irrigated upland hay consists of introduced perennial grasses and legumes; one cutting is common. Renovations occur every six to ten years. Soils vary from loam to silt loams with slopes ranging from three to 30 percent. Precipitation is 9 to 20 inches per year with very dry summer months. Vegetation ranges from grass/sedge/rush complexes to improved species like timothy, smooth bromegrass, creeping meadow foxtail, orchard grass and clover. Fertilizers and/or pesticides are periodically applied. Soil testing and fertility management is lacking.

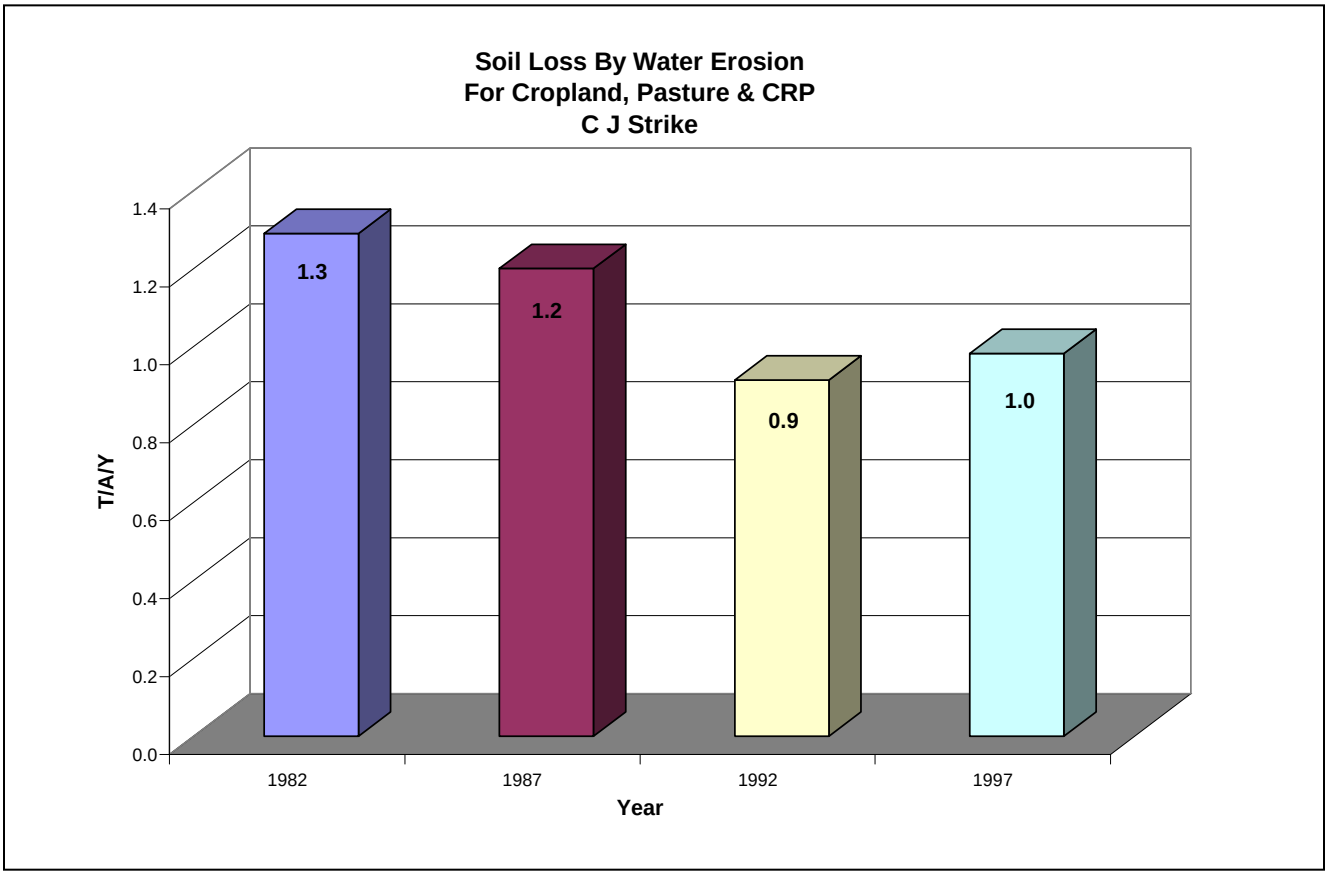
Irrigated hayland is conventionally tilled, and includes sprinkler and surface irrigation. Small grains and alfalfa hay are grown in rotation, with alfalfa typically maintained for four to six years. Grazing of crop aftermath may occur. Typical soils are loamy sands or finer with slopes of zero to seven percent. Fertilizers and pesticides are applied. Nutrient, pest, and/or irrigation water management is less than desirable.

Range: Rangeland vegetation consists of perennial grass and forbs. Some areas have problems with invasive species. There are both cool and warm season grasses. Precipitation is 9 to 16 inches most of which falls in winter and early spring with periodic summer rains. Topography varies from steep slopes to rims and benches. Soils are loamy to gravelly with slopes from 20 to 60 percent. The average frost free period is 80 to 180 days. Temperatures are mild in the winter and very hot in the summer. Ecological status is typically less at lower elevations and improves with elevation. Fencing is generally an existing condition. The typical planning unit is 640 acres.

Riparian grazing units exhibit impacts to riparian vegetation and a loss of woody species. Riparian vegetation consists of grasses, sedges, rushes and a variety of woody species. Streams are primarily low gradient and depend on vegetation for stability. These areas are important habitat for a variety of fish and wildlife. Soils vary from gravelly to loamy. Water quality is often a concern for sediment and temperature. Moisture for vegetation growth is primarily from high water tables and stream flows. Fencing is generally an existing practice.

Resource Concerns

Water erosion on Cropland, Pasture & CRP lands in this watershed is generally low but has decreased slightly since 1982. Rates have decreased from about 1.3 tons per acre year in 1982 to approximately 1 ton per acre per year in 1997.



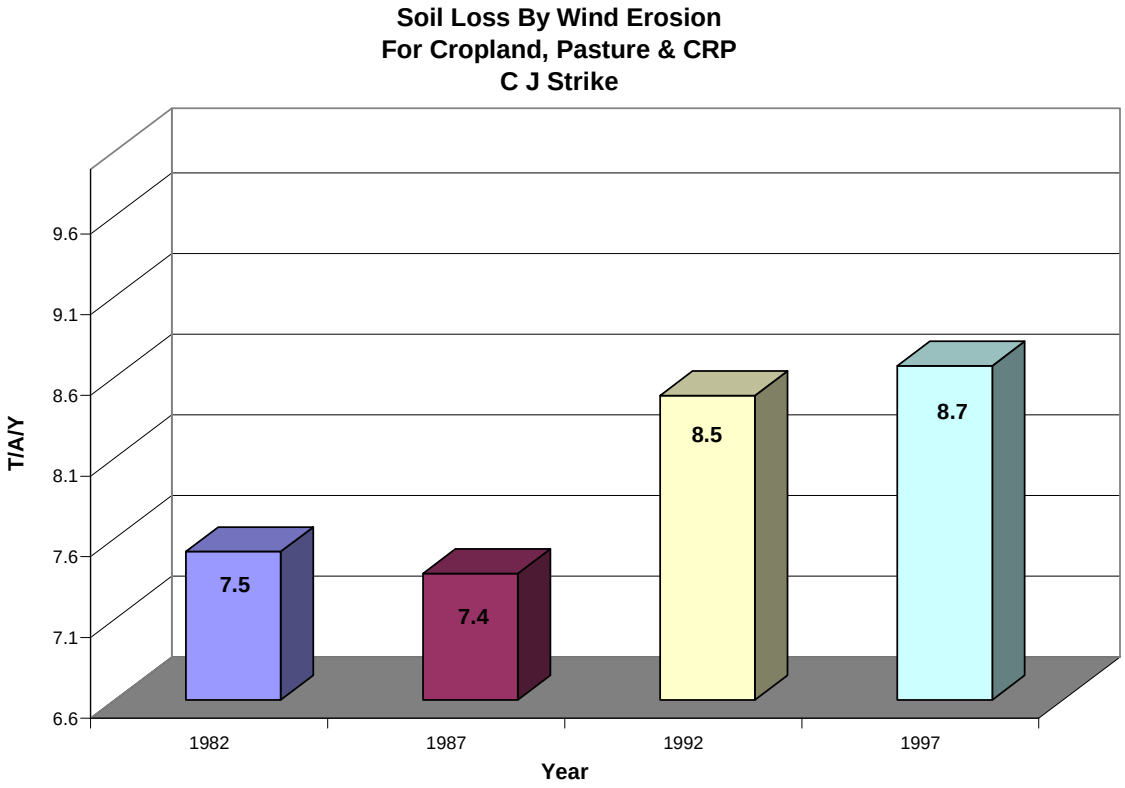
Controlling erosion not only sustains the long-term productivity of the land, but also affects the amount of soil, pesticides, fertilizer, and other substances that move into the nation's waters.

The listed streams are impaired by several pollutants, primarily sediment but segments are also listed for bacteria, nutrients, and temperature. Agricultural land uses contribute to water quality impacts. Other pollutant sources include stormwater runoff and land development. Flow and habitat alteration problems exist within the watershed.

Conservation practices that can be used to address these water quality issues include erosion control, grazing management, residue management, and riparian buffers.

Resource Concerns - continued

Wind erosion in this watershed has fluctuated since 1982 and has experienced a slight overall increase between 1987 and 1997. This is mainly attributed to an increase in cultivated crops and a corresponding decrease in non-cultivated crops in both 1992 and 1997.



Conservation practices that can be used to address wind erosion include: surface wetting, surface roughening, windbreaks, seedbed preparation (delayed seeding), mulching, and pasture and hayland planting.

Resource Concerns - continued

Impacted Water Bodies[9] (ID 17050101) Named Streams	Stream Miles*	Bacteria	Nutrients	Sediment	Temperature	Dissolved Oxygen	Other or Unknown
Alkali Creek (SW013_02)	29.4			X			
Alkali Creek (SW013_03)	4.4			X	X		
Bennett Creek (SW016_03)	29.3						X
Bennett Creek (SW016_02)	53.1						X
Browns Creek (SW003_02)	31.7			X			
Browns Creek (SW003_03)	4.2			X			
Cold Springs Creek (SW014_03)	17.3						X
Deadman Creek (SW008_02)	92.7			X			
Little Canyon Creek (SW012_03a)	10.9	X					
Little Canyon Creek (SW012_03)	31.0			X			
Ryegrass Creek (SW015_02)	28.3			X			
Sailor Creek (SW006_02)	266.0			X			
Sailor Creek (SW006_03)	33.4			X			
Snake River (SW001_07)	30.0		X				X
Snake River (SW001_02)	126.0		X				X
Snake River (SW005_07)	25.0			X			
Total Stream Miles:	**812.7**						

Shading indicates TMDL in place

Shading indicates TMDL in progress

Resource Concerns - continued

Watershed Projects, Plans, Studies and Assessments

NWPCC[18]

Ecovista and IDFG, 2004. Middle Snake Subbasin Assessment.

USGS[18]

USGS, 1976. Flood characteristics of streams in Owyhee County, Idaho. WRI 76-88.

IDEQ TMDLs[16,28,29]

IDEQ, 2006. King Hill-C.J. Strike Reservoir Subbasin Assessment and TMDL.
IDEQ, 2006. King Hill-C.J. Strike Reservoir Subbasin Assessment and TMDL Addendum.

Other State Assessments[18,28,29]

Norton, M.A., W. Ondrechen, and J.L. Baggs. 1982. Ground water investigation of the Mountain Home Plateau, Idaho. Idaho Department of Water Resources: Boise, ID. 68 p.

US Bureau of Reclamation[18,28,29]

U.S. Bureau of Reclamation (USBR). 1998. Snake River Resource Review: Resource Needs Assessment. Draft. USBR, Boise, ID.

Other Studies[18]

Harrison, J., M. Kasch, S. Wells. 2004. C.J. Strike Reservoir CE-QUAL-W2 Water Quality Modeling – Draft Status Report. Boise ID, August 2004.

Idaho Power Company. 2003. Snake River White Sturgeon Conservation Plan, July 2003. 342 p.

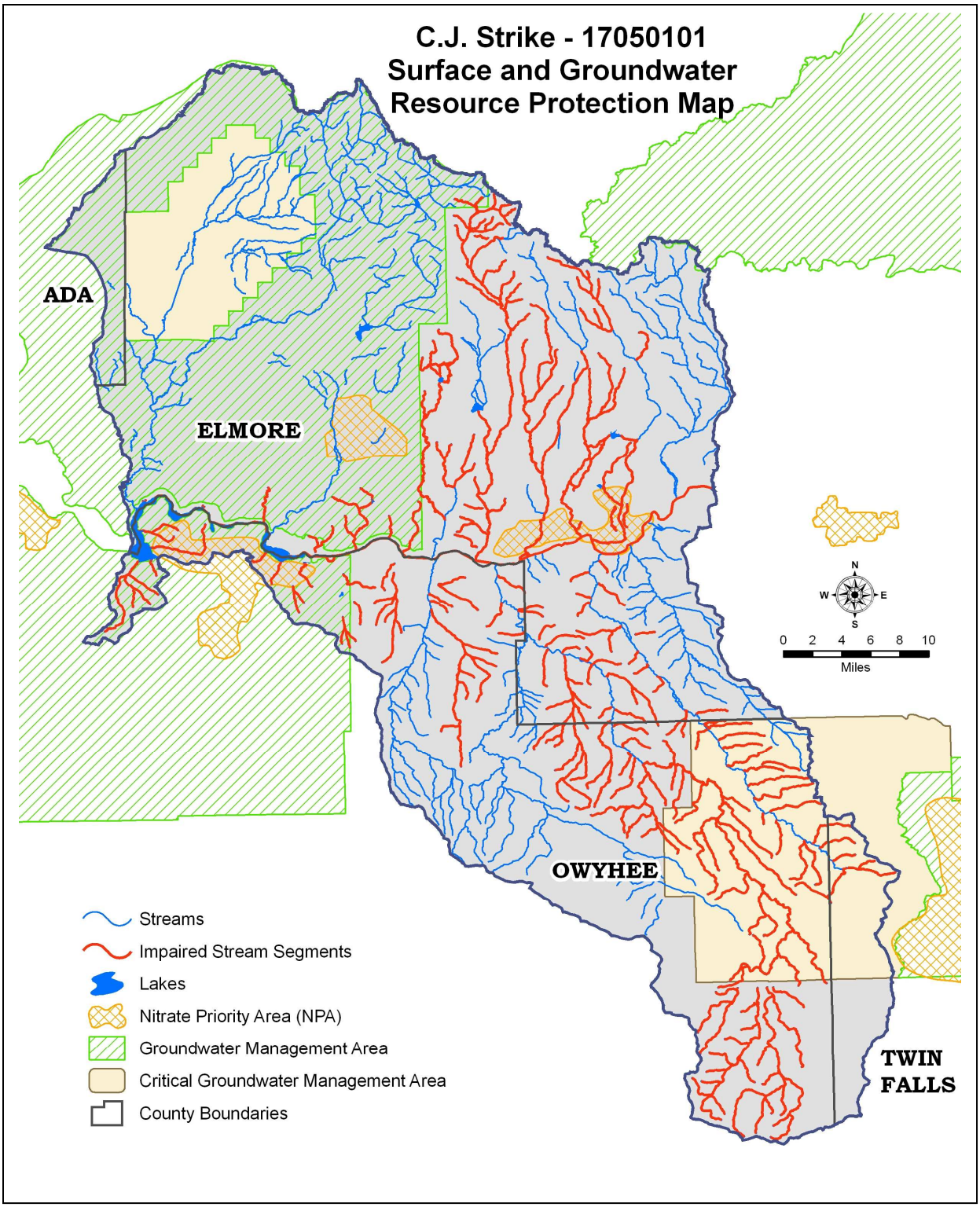
Chandler, J. A., and K. B. Lepla. 1997. Instream Flow Evaluations of the Snake River from C.J. Strike Dam to the Confluence of the Boise River. *In* Volume 1. Technical Appendices for C.J. Strike Hydroelectric Project, FERC Project 2055. Technical Report E.3.1-C. Idaho Power Company, Boise, ID.

Cochnauer, T. G. 1983. Abundance, Distribution, Growth, and Management of White Sturgeon (*Acipenser transmontanus*) in the Middle Snake River, Idaho. Ph.D. Dissertation. University of Idaho, Moscow, ID.

Jankovsky-Jones M. 2001. Wetland Conservation Strategy for the Middle and Western Snake River and Lower Reaches of Its Major Tributaries Including the Boise River and Payette River. Idaho Department of Fish and Game, Idaho Conservation Data Center, Boise, ID.

Resource Concerns – continued

Surface and Groundwater Resource Protection



Resource Concerns – continued

Resource Concerns/ Issues by Land Use								
SWAPA Soil, Water, Air, Plants, Animals	**Specific Resource Concerns/Issues**	**Pasture**	**Hayland**	**Dry Crops**	**Surface Irrigated Crops**	**Sprinkler Irrigated Crops**	**Rangeland**	**Grazed or Ungrazed Forest**
Soil Erosion	Sheet and rill			X	X	X		
	Ephemeral or classic gully							
	Wind			X	X	X		
	Streambank	X					X	X
Water Quantity	Aquifer overdraft		X					
	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	X	X	X	
	Temperature						X	
Water Quality, Ground	Nutrients and organics		X	X	X	X		
	Pesticides		X	X	X	X		
Soil Condition	Organic matter depletion							
	Compaction	X						
Plant Condition	Productivity, health and vigor	X	X	X	X	X	X	
	Plants not adapted or suited	X	X				X	
	Noxious and invasive plants	X	X				X	X
	Wildfire hazard	X	X				X	X
Domestic Animals	Inadequate feed or water	X					X	
Fish and Wildlife	Inadequate water	X					X	
	Inadequate cover/shelter	X				X	X	

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.

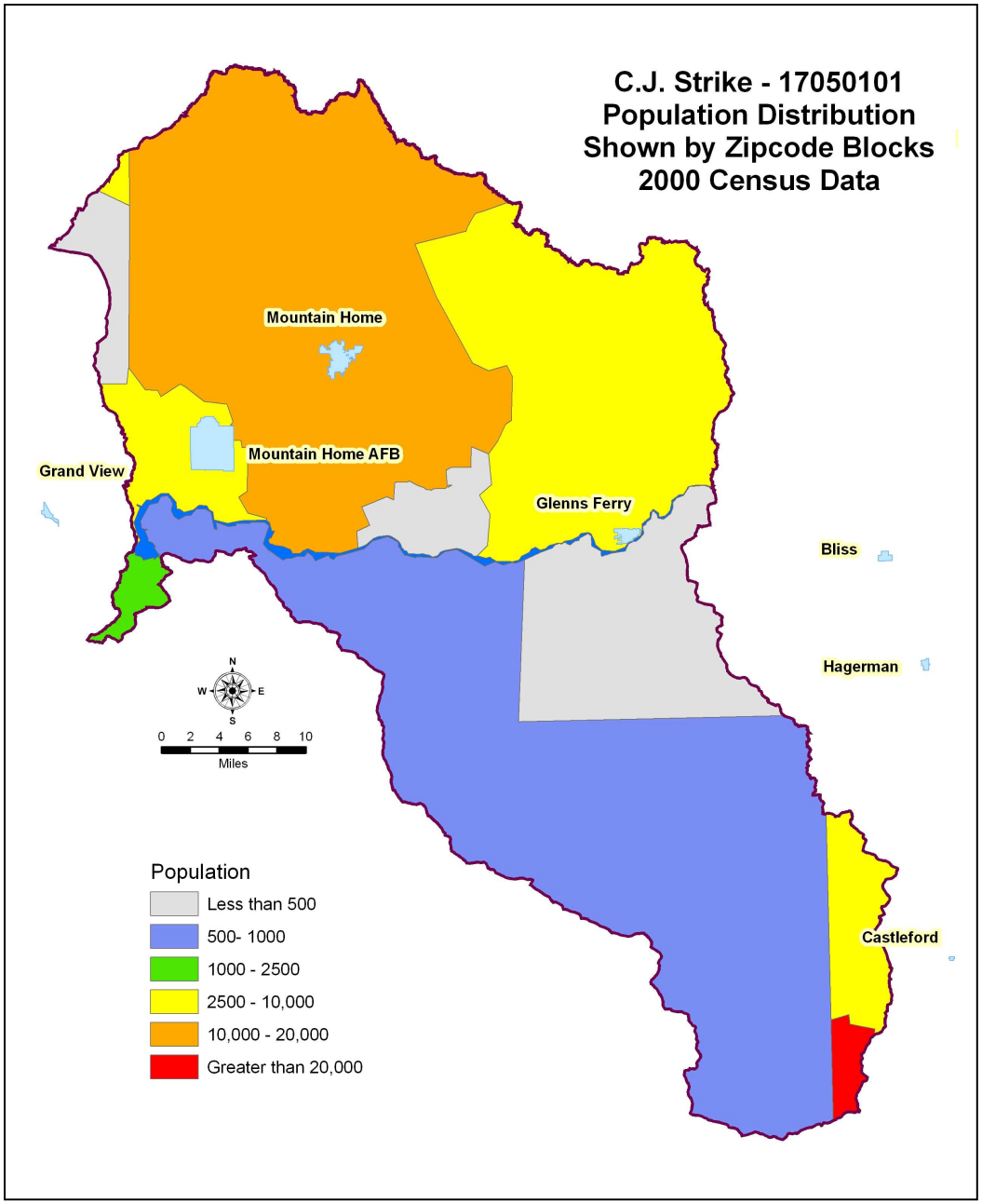
FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES[25,32]	
Threatened or Endangered Species	**Candidate Species**
Mammals – None **Birds –** Bald Eagle **Fish –** None **Invertebrates –** Idaho Springsnail, Snake River Physasnail, Bruneau Hot Springsnail **Plants –** None	**Fish** - None **Birds –** Yellow Billed Cuckoo **Amphibians –** Columbia Spotted Frog **Species of Concern** White Sturgeon
ESSENTIAL FISH HABITAT – None	**CRITICAL FISH HABITAT-** None

Census and Social Data[/26]

Population: 28,729

Number of Farms: 282

	0-49 acres	50-999 acres	1000+ acres
Number of Farms	143	105	34



Census and Social Data - continued

Fifty seven 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 but women make up 35% of the total. Ninety-six percent of all operators are white. Non-white operators are of Hispanic, American Indian, Pacific Islander, Asian or biracial background.

Farm size ranges from less than 10 acres to more than 2,000 acres with an average of 920 acres. Agricultural land in the watershed is a mix of rangeland, pasture, hayland and cropland. Land users in the watershed utilize EQIP, CRP, Continuous CRP, WHIP and other programs to implement conservation plans.

Market value of production and government payments to farmers are up over the past several years. Farm sales range from less than $1,000 to more than $500,000 per year. Seventy-six percent of farms reported sales of less than $50,000 per year. Average farm size and number of farms are both down over the last few years.

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.

	Number of farms	Average size farm	Market Value of Production (Average Farm)	Government Payments (Average Farm)
1997	288	970	$528,100	$11,500
2002	282	920	$687,400	$14,600
Change	-2.1%	-5.2%	30.2%	27.0%

Economic Profile

	Watershed	Idaho	United States
Population (2000)	28,729		
Per Capita Personal Income (2002)	$22,200	$25,476	$30,906
Median Home Value (2000)	$92,600	$106,300	$119,600
Percent Unemployment (2004)	5.0%	4.7%	5.5%
Percent Below Poverty Level (2003)	12.3%	11.8%	12.5%

Progress / Status

PRS DATA				
Conservation Treatment Applied	**FY04**	**FY05**	**FY06**	**Total**
Brush Management (314) (ac)			31	31
Channel Bank Vegetation (322) (ac)		1		1
Channel Stabilization (584) (ft)		60		60
Conservation Completion Incentive First Year (CCIA) (no)		1		1
Conservation Crop Rotation (328) (ac)		838	442	1,280
Critical Area Planting (342) (ac)			1	1
Fence (382) (ft)	2,906	7,408	29,870	40,184
Filter Strip (393) (ac)			1	1
Grade Stabilization Structure (410) (no)			1	1
Irrigation System, Microirrigation (441) (ac)		1	1	2
Irrigation System, Sprinkler (442) (ac)	2	238	618	858
Irrigation Water Conveyance, Pipeline, High-Pressure, Underground, Plastic (430DD) (ft)		2,330	2,100	4,430
Irrigation Water Conveyance, Pipeline, Low-Pressure, Underground, Plastic (430EE) (ft)		14,970		14,970
Irrigation Water Conveyance, Pipeline, Rigid Gated Pipeline (430HH) (ft)		1,830	930	2,760
Irrigation Water Management (449) (ac)		225	973	1,198
Nutrient Management (590) (ac)		93	102	195
Pasture and Hay Planting (512) (ac)			15	15
Pest Management (595) (ac)	88	2,325	11,905	14,318
Pipeline (516) (ft)			393	393
Prescribed Grazing (528) (ac)			187	187
Pumping Plant (533) (no)			1	1
Range Planting (550) (ac)			1,200	1,200
Residue Management, Mulch Till (329B) (ac)			442	442
Spring Development (574) (no)	1	1		2
Structure for Water Control (587) (no)		5	1	6
Surface Roughening (609) (ac)	22		442	464
Tree/Shrub Establishment (612) (ac)	6			6
Upland Wildlife Habitat Management (645) (ac)		159	600	759
Use Exclusion (472) (ac)	88	159		247
Waste Storage Facility (313) (no)			1	1
Waste Utilization (633) (ac)			25	25
Watering Facility (614) (no)			3	3
Wetland Wildlife Habitat Management (644) (ac)	1			1
Windbreak/Shelterbelt Establishment (380) (ft)	1,336	5,280	170	6,786

Progress / Status - continued

Progress in the last seven years has been focused on:
- ~ erosion control
- ~ nutrient management
- ~ prescribed grazing
- ~ conversion from surface to sprinkler irrigation

Resource concerns that require ongoing attention:
- ~ erosion control
- ~ nutrient management
- ~ prescribed grazing
- ~ riparian area improvement
- ~ water quality & water quantity
- ~ off-site watering

Lands Removed from Production through Farm Bill Programs

- Conservation Reserve Program (CRP): **316**
- Wetland Restoration Program (WRP): **None**

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. Idaho Soil Conservation Commission (SCC), Water Quality Program for Agriculture (WQPA). http://www.scc.state.id.us/waq.htm

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/surfacewater.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/Default.htm

19. Idaho Soil Conservation Commission (SCC), TMDL watershed implementation plans: agricultural component. http://www.deq.state.id.us/water/data_reports/surface_water/nps/reports.cfmponent. http://www.scc.state.id.us/PDF/Ag%Component%20Status%20Report%20-%202004.pdf

20. Idaho State Department of Agriculture (ISDA). Groundwater water quality regional projects. http://www.agri.idaho.gov/gw/gwdatasummary.htm

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/

23. USGS Publications Warehouse. http://pubs.er.usgs.gov/usgspubs/

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

27. Idaho State Department of Agriculture (ISDA).Surface water quality reports. http://www.agri.state.id.us/Categories/Environment/water/swReports.php

28. IDEQ, 2006. King Hill – C.J. Strike Reservoir Subbasin Assessment and TMDL.

29. IDEQ, 2006. King Hill – C.J. Strike Reservoir Subbasin Assessment and TMDL Addendum.

30. Idaho Power Company, 2003. Snake River White Sturgeon Conservation Plan. 342 p.

31. Ecovista and IDFG, 2004. Middle Snake Subbasin Assessment.

32. Ries, Bob. 2006. National Marine Fisheries biologist. Personal communication.

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 judgement
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

Current Conditions		Total Acres	Riparian Acres
Total Irrigated Cropland		65,400	2,408
Surface Irrigated Cropland		6,540	
Sprinkler Irrigated Cropland		58,860	
Typical Management Unit/Ownership		920	
Current Farm Bill Participation		15%	

Current Level of Treatment for Irrigated Cropland

Irrigated 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
Surface Irrigated Cropland	Ac.	6,540			-3	-1	-1	-2				
Conservation Crop Rotation (328)	Ac.	128	$ -	$ -					X			
Irrigation System, Micro-irr. (441)	Ac.	2	$ -	$150					X			
Irrigation Water Conveyance, Pipeline, Low-Pressure, Underground, Plastic (430EE)	Ft.	8,982	$ -	$1,400					X			
Irrigation Water Conveyance, Pipeline, Rigid Gated Pipeline (430HH)	Ft.	2,760	$ -	$290					X			
Irrigation Water Management (449)	Ac.	120	$ -	$1,200					X			
Nutrient Management (590)	Ac.	195	$ -	$980					X			
Pest Management (595)	Ac.	716	$ -	$7,160					X			
Residue Mgmt. - Mulch Till (345)	Ac.	442	$ -	$6,630					X			

Current Level of Treatment for Irrigated Cropland												
Irrigated 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
Sprinkler Irrigated Cropland	Ac.	58,860										
Conservation Crop Rotation (328)	Ac.	1,152	$ -	$ -					X			
Irrigation Water Conveyance, Pipeline, High-Pressure, Underground, Plastic (430DD)	Ft.	4,430	$ -	$870					X			
Irrigation Water Conveyance, Pipeline, Low-Pressure, Underground, Plastic (430EE)	Ft.	5,988	$ -	$940					X			
Irrigation System, Sprinkler (442)	Ac.	858	$ -	$9,440					X			
Irrigation Water Management (449)	Ac.	1078	$ -	$10,780					X			
Pest Management (595)	Ac.	6443	$ -	$64,430					X			
Pumping Plant (533)	No.	1	$ -	$70					X			
Structure for Water Control (587)	No.	4	$ -	$20					X			
Surface Roughening	Ac.	464	$ -	$3,480					X			
Riparian (Surface and Sprinkler) Irrigated Cropland	Ac.	2,408										
Channel Bank Vegetation (322)	Ac.	1	$ -	$100					X			
Total RMS Costs			**$0**	**$107,940**								

Future Conditions		Total Acres	Riparian Acres
Surface Irrigated Cropland		3,270	
Sprinkler Irrigated Cropland		62,130	
Total Irrigated Cropland		65,400	2408

Project Future Level of Treatment for Irrigated Cropland												
Irrigated 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
Surface Irrigated Cropland	Ac.	3,270			+2	+2	+2	+3				
Anionic Polyacrylamide (PAM) Erosion Control (450)	Ac.	3,107	$139,800	$46,610					X			X
Conservation Crop Rotation (328)	Ac.	3,107	$0	$0					X			X
Cover Crop (340)	Ac.	397	$19,900	$200					X			X
Irrigation Land Leveling (464)	Ac.	327	$81,800	$2,450					X			X
Irr.on System, Microirrigation (441)	Ac.	33	$46,500	$2,330					X			X
Irr. Water Conveyance, Ditch and Canal Lining, Plain Concrete (428A)	Ft.	1,686	$11,600	$230					X			X
Irr. Water Pipeline, Low-Press., Underground, Plastic (430EE)	Ft.	13,489	$35,200	$700					X			X
Irrigation Water Conveyance, Rigid Gated Pipeline (430HH)	Ft.	3,372	$3,200	$60					X			X
Irrigation Water Management (449)	Ac.	3,107	$89,600	$29,870					X			X
Irrigation Water Management (449) - Meters and Moisture Sensors	Ac.	33	$1,000	$330					X			
Nutrient Management (590)	Ac.	3,107	$43,700	$14,560					X			X
Pest Management (595)	Ac.	3,107	$71,700	$23,910					X			X
Residue Mgmt. - Mulch Till (345)	Ac.	2,943	$112,500	$37,520					X			
Sediment Basin (350)	No.	10	$25,000	$800					X			X
Structure for Water Control (587)	No.	5	$2,500	$30					X			X
Upland Wildlife Hab. Mgmt. (645)	Ac.	33	$500	$170					X			X

Project Future Level of Treatment for Irrigated Cropland												
Irrigated 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
Sprinkler Irrigated Cropland	Ac.	62,130										
Conservation Crop Rotation (328)	Ac.	59,024	$0	$0					X			X
Irrigation System, Sprinkler (442)	Ac.	3,270	$1,326,600	$26,530					X			X
Irrigation Water Conveyance, Pipeline, high pressure, underground, plastic (430DD)	Ft.	64,072	$583,300	$11,670					X			X
Irrigation Water Management (449)	Ac.	59,024	$1,738,400	$579,460					X			X
Irrigation Water Management (449) - Meters and Moisture Sensors	Ac.	6,213	$186,400	$62,130					X			X
Nutrient Management (590)	Ac.	59,024	$885,400	$295,120					X			X
Pest Management (595)	Ac.	59,024	$1,577,400	$525,810					X			X
Pumping Plant (533)	No.	48	$162,200	$3,240					X			X
Residue Mgmt. - Mulch Till (345)	Ac.	31,065	$1,397,900	$465,980					X			X
Structure for Water Control (587)	No.	23	$9,500	$100					X			X
Surface Roughening	Ac.	6213	$46,600	$46,600					X			X
Upland Wildlife Hab. Mgmt. (645)	Ac.	6,213	$93,200	$31,070					X			X
Riparian (Surface and Sprinkler) Irrigated Cropland	Ac.	2,408										
Channel Bank Vegetation (322)	Ac.	48	$243,200	$4,860					X	X		X
Dam, Diversion (348)	No.	4	$12,000	$100					X			X
Total RMS Costs			**$8,946,600**	**$2,212,440**								

Potential RMS Effects for Irrigated Cropland			
Cost Items and Programs		Costs	O&M Costs
Non Farm Bill Programs		$894,700	$221,240
Potential Farm Bill Programs		$8,051,900	$1,991,200
Operator O&M and Management Cost			$2,212,440
Annual Management Incentives (3yrs - Incentive Payments)		$6,197,700	
Operator Investment		$1,821,800	
Federal Costshare		$927,100	
Total RMS Costs		**$8,946,600**	**$2,212,440**
Estimated Level of Participation			90%
Total Acres in RMS System			58,860
Anticipated Cost at Estimated Level of Participation			$8,051,900
Total Acre Feet of Water Saved Annually			43,590
Participating landowners will be in compliance with TMDLs			
Improves habitat for ESA endangered and threated species			

NRCS Natural Resources Conservation Service

C.J. Strike – 17050101

Idaho | 8 Digit Hydrologic Unit | June 2007

Current Conditions		Total Acres	Riparian Acres
Total Dry Grass/Pasture/Hay		114,322	7,011
Typical Management Unit/Ownership		920	
Current Farm Bill Participation		15%	

Current Level of Treatment for Dry Grass/Pasture/Hay:

Dry Grass/Pasture/Hay	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 Grass/Pasture/Hay	Ac.	114,322			-3	-1	-2	-3				
Channel Bank Vegetation (322)	Ac.	1	$ -	$60					X			
Channel Stabilization (584)	Ft.	60	$ -	$10					X			
Fence (382)	Ft.	12,055	$ -	$480					X	X		
Pasture and Hay Planting (512)	Ac.	15	$ -	$20					X			
Pest Management (595)	Ac.	7159	$ -	$71,590					X			
Pipeline (516)	Ft.	393	$ -	$20					X			
Prescribed Grazing (528)	Ac.	187	$ -	$940					X			
Spring Development (574)	No.	2	$ -	$20					X			
Structure for Water Control (587)	No.	2	$ -	$10					X			
Upland Wildlife Hab. Mgmt. (645)	Ac.	759	$ -	$3,800					X	X		
Watering Facility (614)	No.	3	$ -	$50					X			
Dry Grass/Pasture/Hay Riparian	Ac.	7,011										
Fence (382)	Ft.	4,019	$ -	$160					X	X		
Tree and Shrub Estab. (612)	Ac.	6	$ -	$30					X			
Use Exclusion (472)	Ac.	247	$ -	$260					X			
Windbreak/Shelterbelt Estab. (380)	Ft.	6,786	$ -	$100					X			
Wetland Wildlife Hab. Mgmt. (644)	Ac.	1	$ -	$10					X			
Total RMS Costs			**$ -**	**$77,560**								

Future Conditions		Total Acres	Riparian Acres
Total Dry Grass/Pasture/Hay Lands		114,322	
Conversion to Riparian RMS			7,011

Project Future Level of Treatment for Dry Grass/Pasture/Hay Lands												
Dry Grass/Pasture/Hay Land	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 Grass/Pasture/Hay Land	Ac.	114,322			+2	+2	+3	+2				
Fence (382)	Ft.	471,578	$919,000	$18,380					X	X		X
Forage Harvest Management (511)	Ac.	114,322	$0	$0					X			X
Heavy Use Area Protection (561)	Ac.	10	$150,000	$7,500					X			X
Nutrient Management (590)	Ac.	108,606	$1,629,100	$543,030					X			X
Pasture and Hay Planting (512)	Ac.	28,581	$2,856,600	$28,570					X			X
Pest Management (595)	Ac.	108,606	$3,043,400	$1,014,470					X			X
Pipeline (516)	Ft.	57,161	$153,300	$3,070					X			X
Prescribed Grazing (528)	Ac.	108,606	$1,626,300	$542,100					X			X
Spring Development (574)	No.	43	$96,400	$4,820					X			X
Structure for Water Control (587)	No.	23	$10,500	$110					X			X
Upland Wildlife Habitat Management (645)	Ac.	11,432	$160,100	$53,370					X	X		X
Watering Facility (614)	No.	43	$60,000	$600					X			X
Water Well (642)	No.	6	$24,000	$240					X			X
Dry Grass/Pasture/Hay Riparian	Ac.	7,011										
Fence (382)	Ft.	57,841	$107,600	$2,150					X	X		X
Tree and Shrub Estab. (612)	Ac.	70	$29,800	$300					X			X
Use Exclusion (472)	Ac.	1,753	$52,700	$1,580					X			X
Windbreak/Shelterbelt Estab. (380)	Ft.	7,230	$700	$10					X			X
Wetland Wildlife Hab. Mgmt. (644)	Ac.	351	$5,300	$1,750					X			X
Total RMS Costs			**$10,924,800**	**$2,222,050**								

Potential RMS Effects for Dry Grass/Pasture/Hayland

Cost Items and Programs		Costs	O&M Costs
Non Farm Bill Programs		$1,092,500	$222,210
Potential Farm Bill Programs		$9,832,300	$1,999,840
Operator O&M and Management Cost			$2,222,050
Annual Management Incentives (3yrs - Incentive Payments)		$ 6,464,200	
Operator Investment		$2,776,600	
Federal Costshare		$1,684,000	
Total RMS Costs		**$ 10,924,800**	**$2,222,050**
Estimated Level of Participation			90%
Total Acres in RMS System			102,890
Anticipated Cost at Estimated Level of Participation			$9,832,300
Total Annual Forage Production Benefits (animal unit months)			14,637
Participating landowners will be in compliance with TMDLs			
Improves habitat for ESA endangered and threated species			

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Current Conditions		Total Acres	Riparian Acres
Shrub/Rangeland		100,481	7,087
Typical Management Unit/Ownership		920	
Current Farm Bill Participation		15%	

Current Level of Treatment for Shrub/Range Land												
Shrub/Range Land	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
Shrub/Range Land	Ac.	100,481			+1	+1	+1	-2				
Brush Management (314)	Ac	31	$ -	$10					X			
Fence (382)	Ft	22,503	$ -	$900					X			
Range Planting (550)	Ac	1,200	$ -	$1,080					X			
Shrub/Range Land Riparian	Ac.	7,087			-1	±	-2	-2				
Fence (382)	Ft	1,607	$ -	$60					X			
Total RMS Costs			**$0**	**$2,050**								

Future Conditions		Total Acres	Riparian Acres
Rangeland		100,481	
Conversion to Riparian RMS			7,087
Total Rangeland		100,481	

Future Level of Treatment for Shrub/Range Land

Shrub/Range Land	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
Shrub/Range Land	Ac.	100,481			+2	+2	+3	+2				
Brush Management (314)	Ac	5,024	$124,800	$1,250					X			X
Fence (382)	Ft	207,242	$369,500	$7,390					X	X		X
Firebreak (394)	Ft	53,054	$102,400	$20,480					X			X
Pest Management (590)	Ac	95,457	$2,863,700	$954,570					X			X
Pipeline (516)	Ft	13,263	$35,800	$720					X			X
Pond (378)	No	38	$228,000	$2,280					X			X
Prescribed Grazing (528)	Ac	95,457	$1,431,900	$477,290					X			X
Range Planting (550)	Ac	10,048	$796,300	$7,960					X			X
Spring Development (574)	No	38	$89,300	$4,470					X			X
Upland Wildlife Habitat Mgmt (645)	Ac	15,072	$226,100	$75,360					X	X		X
Watering Facility (614)	No	78	$117,000	$1,170					X			X
Shrub/Range Land Riparian	Ac.	7,087			+2	+2	+3	+3				
Channel Stabilization (584)	Ft	7,308	$146,200	$730					X			X
Fence (382)	Ft	29,234	$55,300	$1,110					X	X		X
Prescribed Grazing (528)	Ac.	6,733	$101,000	$33,670					X			X
Streambank/Shoreline Protection (580)	Ft	7,308	$347,100	$34,710					X			X
Stream Crossing (578)	No	11	$38,500	$1,930					X			X
Use Exclusion (472)	Ac	2,126	$74,400	$2,230					X	X		X
Total RMS Costs			**$7,147,300**	**$1,627,320**								

Potential RMS Effects for Shrub/Rangeland			
Cost Items and Programs		Costs	O&M Costs
Non Farm Bill Programs		$714,700	$162,730
Potential Farm Bill Programs		$6,432,600	$1,464,590
Operator O&M and Management Cost			$1,627,320
Annual Management Incentives (3yrs - Incentive Payments)		$4,521,700	
Operator Investment		$810,200	
Federal Costshare		$1,815,400	
Total RMS Costs		**$7,147,300**	**$1,627,320**
Estimated Level of Participation			90%
Total Acres in RMS System			90,433
Anticipated Cost at Estimated Level of Participation			$6,432,600
Total Annual Forage Production Benefits (animal unit months)			12,887
Participating landowners will be in compliance with TMDLs			
Improves habitat for ESA endangered and threated species			

Current Conditions (Private)	Total Acres	Riparian Acres
Total Grazed Forest	1,141	81
Typical Management Unit/Ownership	920	
Current Farm Bill Participation	5%	

Current Level of Treatment for Grazed Forest:												
Grazed Forest	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
Grazed Forest	Ac.	1,141			-1	-/+	1	-1				
Critical Area Planting (342)	Ac.	1	$ -	$10					X			
Grazed Forest Riparian	Ac.	81			-1	±	-2	-2				
Total RMS Costs			**$0**	**$10**								

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Future Conditions	Total Acres	Riparian Acres
Total Grazed Forest Lands	1,141	
Conversion to Riparian RMS		81
Total Acres	1,141	

Project Future Level of Treatment for Grazed Forest												
Forest	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
Grazed Forest	Ac.	1,141			+2	+1	+3	+2				
Critical Area Planting (342)	Ac.	11	$4,800	$140					X			X
Fence (382)	Ft.	2,353	$4,700	$90					X	X		X
Forest Stand Improvement (666)	Ac.	114	$51,300	$260					X			X
Pest Management (595)	Ac.	570	$17,100	$5,700					X			X
Pipeline (516)	Ft.	1,177	$3,200	$60					X			X
Prescribed Forestry (409)	Ac.	913	$20,500	$6,850					X			X
Prescribed Grazing (528)	Ac.	1,084	$16,300	$5,420					X			X
Spring Development (574)	No.	2	$4,700	$20					X			X
Upland Wildlife Habitat Management (645)	Ac.	114	$1,700	$570					X	X		X
Watering Facility (614)	No.	2	$2,100	$20					X			X
Grazed Forest Riparian	Ac.	81			+1	+1	+3	+3				
Channel Stabilization (584)	Ft	84	$1,700	$10					X			X
Fence (382)	Ft	334	$700	$10					X	X		X
Riparian Forest Buffer (391)	Ac	8	$12,000	$120					X			X
Use Exclusion (472)	Ac	16	$600	$20					X			X
Total RMS Costs			**$141,400**	**$19,290**								

Potential RMS Effects for Grazed Forest							
Cost Items and Programs						Costs	O&M Costs
Non Farm Bill Programs						$7,100	$960
Potential Farm Bill Programs						$134,300	$18,330
Operator O&M and Management Cost							$19,290
Annual Management Incentives (3yrs - Incentive Payments)						$55,600	
Operator Investment						$46,500	
Federal Costshare						$39,300	
Total RMS Costs						**$141,400**	**$19,290**
Estimated Level of Participation							50%
Total Acres in RMS System							571
Anticipated Cost at Estimated Level of Participation							$70,700
Total Annual Forage Production Benefits (animal unit months)							81
Participating landowners will be in compliance with TMDLs							
Improves habitat for ESA endangered and threated species							

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 of 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), Acess 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/Shelter 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 Acres
CAFOs		10
AFOs		0
Total CAFOs and AFOs		10
Current Farm Bill Participation		2%

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	CREP	Other
Dairy					-1	-1	-3	-3				
Waste Storage Facility -CAFO (313)	No.	4	$ -	$7,000					X			
Waste Storage Facility - AFO (313)	No.	0										
Feed Lot												
Waste Storage Facility -CAFO (313)	No.	0										
Waste Storage Facility - AFO (313)	No.	0										
Total RMS Costs			**$0**	**$7,000**								

Number of Dairies and Feedlots needing treatment were estimated based on input from Idaho Department of Agriculture and the local NRCS Field Office

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	CREP	Other
Dairy					+2	+1	+3	+2				
Structural / Management Practices												
Waste Storage Facility -CAFO (313)	No.	7	$262,500	$5,250					X			X
Waste Storage Facility - AFO (313)	No.	0										
Feed Lot												
Structural / Management Practices												
Waste Storage Facility -CAFO (313)	No.	3	$135,000	$2,700					X			X
Waste Storage Facility - AFO (313)	No.	0										
Total RMS Costs			**$397,500**	**$7,950**								

Potential RMS Effects for Headquarters			
Cost Items and Programs		Costs	O&M Costs
Non Farm Bill Programs		$198,800	$3,980
Potential Farm Bill Programs		$198,700	$3,970
Operator O&M and Management Cost			$7,950
Annual Management Incentives (3yrs - Incentive Payments)		$39,800	
Operator Investment		$278,300	
Federal Costshare		$79,400	
Total RMS Costs		**$397,500**	**$7,950**
Estimated Level of Participation			50%
Total CAFO/AFO in RMS System			5
Anticipated Cost at Estimated Level of Participation			$198,800
Participating landowners will be in compliance with TMDLs			
Improves habitat for ESA endangered and threated species			