



Introduction

The Lower Henrys 8-Digit Hydrologic Unit Code (HUC) subbasin contains 653,800 acres. Sixty three percent of the subbasin is in Fremont County, 5 percent in Madison County and less than one percent is in Clark and Jefferson Counties, Idaho. Thirty-two percent is in Teton County, Wyoming. Thirty seven percent of the basin is privately owned and 63 percent is publicly owned.

Forty one percent of the basin is in shrubland, rangeland, grass, pasture, or hayland. Twenty four percent is cropland, 31 percent is forest and the remainder is water, wetlands, developed or barren.

Elevations range from 6,700 feet in the eastern portion of the HUC at the Wyoming State border to 4,810 feet in the south western portion of the HUC where the Henrys Fork merges with the South Fork of the Snake River to form the main stem Snake River.

Conservation assistance is provided by 5 Conservation Districts in Idaho,

1 Conservation District in Wyoming, and 2 Resource Conservation and Development offices.

Profile Contents

[Introduction](#)

[Physical Description](#)

[Landuse Map & Precipitation Map](#)

[Common Resource Area](#)

[Resource Settings](#)

[Progress/Status](#)

[Resource Concerns](#)

[Census and Social Data](#)

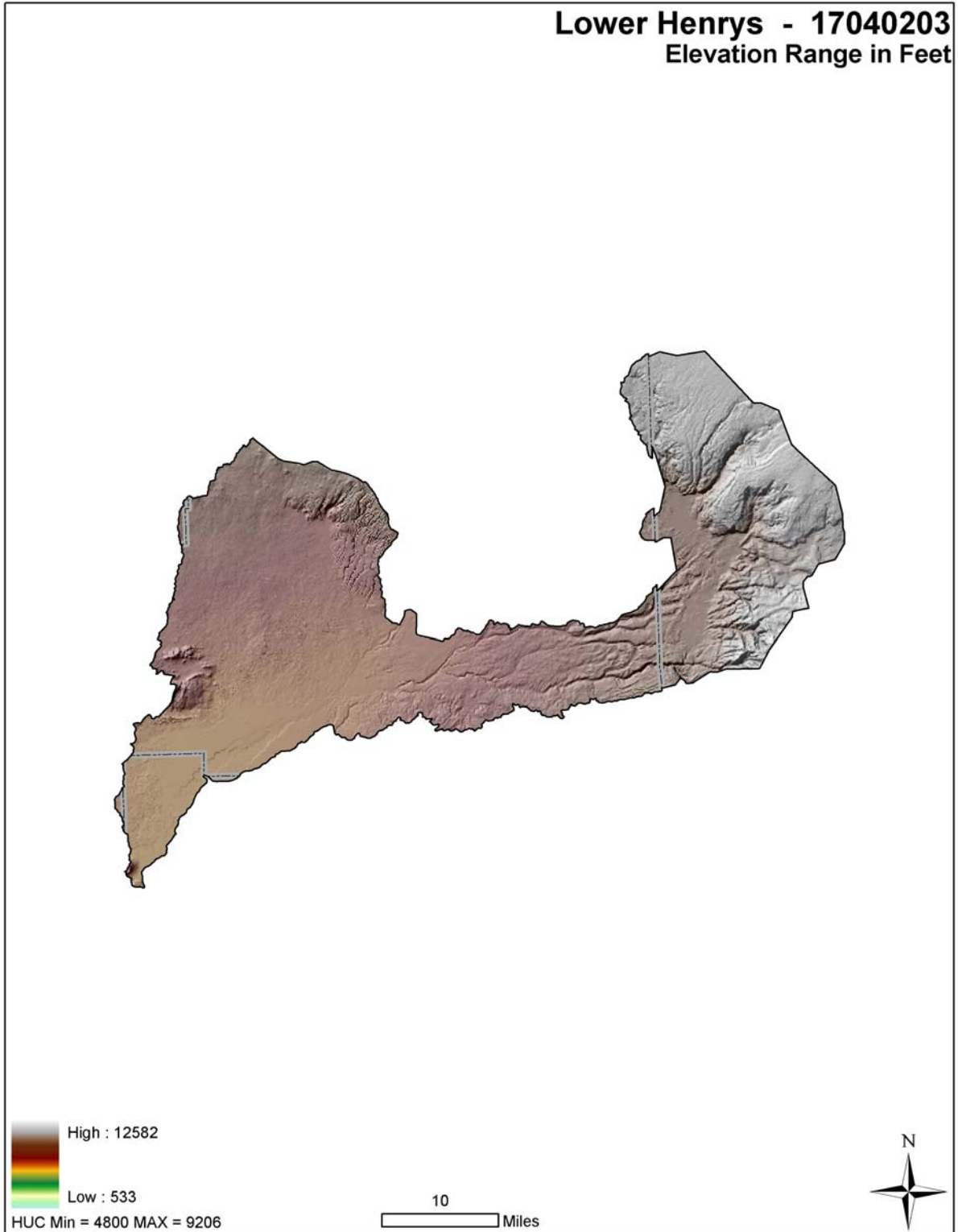
[Footnotes/Bibliography](#)

[Future Conservation Needs](#)

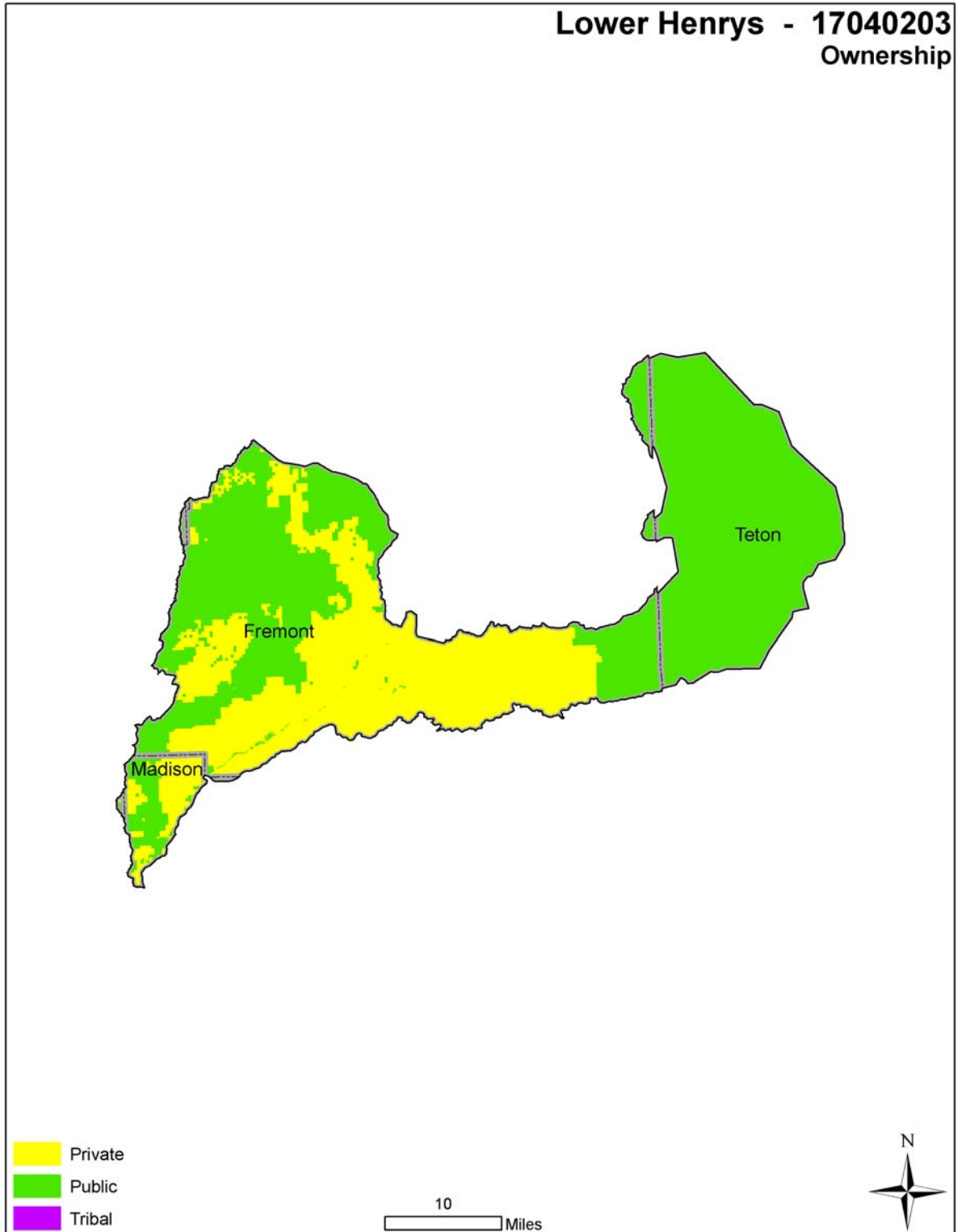
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Relief Map



General Ownership¹





Idaho

Lower Henrys - 17040203
8 Digit Hydrologic Unit Profile

August 2008

Physical Description

| Land Cover/ Land Use (NLCD ²) | Ownership - (2003 Draft BLM Surface Map Set ¹) | | | | | | | Totals | % of HUC |
|---|--|------------|----------------|------------|--------|-----------|----------------|-------------|----------|
| | Public | | Private | | Tribal | | | | |
| | Acres | % | Acres | % | Acres | % | | | |
| Forest | 197,820 | 30% | 6,380 | 1% | | -- | 204,200 | 31% | |
| Grain Crops | | -- | 42,680 | 7% | | -- | 42,680 | 7% | |
| Conservation Reserve ³ Program (CRP) Land | | -- | (23,300) | (9.7%) | | -- | (23,300) | (9.7%) | |
| Grass/Pasture/Haylands | 46,690 | 7% | 71,080 | 11% | | -- | 117,770 | 18% | |
| Orchards/Vineyards/Berries | | -- | | -- | | -- | | 0% | |
| Row Crops | | | 43,330 | 7% | | -- | 43,330 | 7% | |
| Shrub/Rangelands | 148,290 | 23% | 66,490 | 10% | | -- | 214,780 | 33% | |
| Water/Wetlands/ Developed/Barren | 21,330 | 3% | 9,700 | 1% | | -- | 31,030 | 4% | |
| Idaho HUC Totals | 414,130 | 63% | 239,670 | 37% | | -- | 653,800 | 100% | |

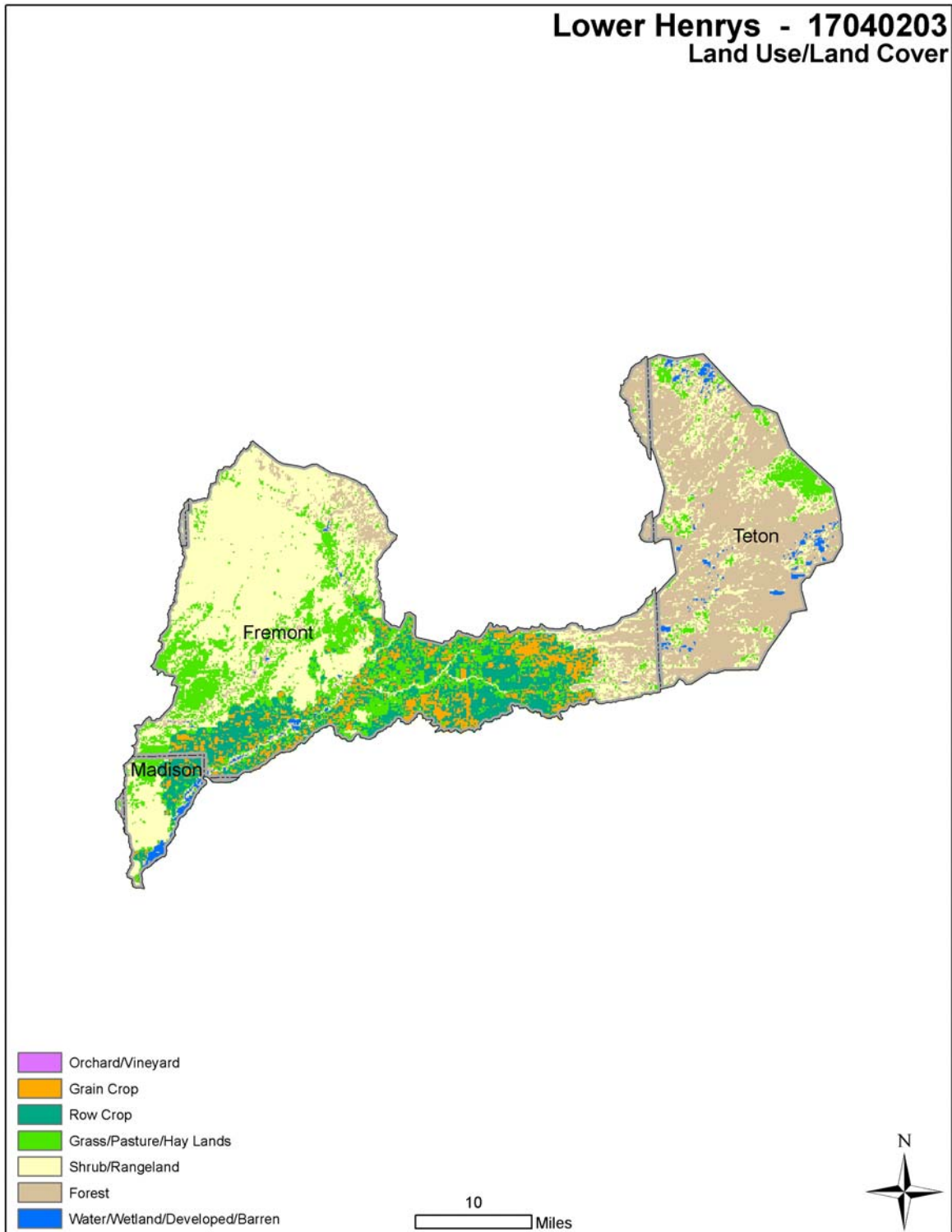
| Irrigated Lands ⁴ | Type of Land | ACRES | % of Irrigated Lands | % of HUC |
|------------------------------|------------------------------|---------------|----------------------|--------------|
| | Cultivated Cropland | 59,200 | 76.4% | 9.0% |
| | Non-Cultivated Cropland * | 1,500 | 1.9% | 0.2% |
| | Pastureland | 16,800 | 21.7% | 2.6% |
| | Total Irrigated Lands | 77,500 | 100% | 11.8% |

- * Includes permanent hayland and horticultural cropland.

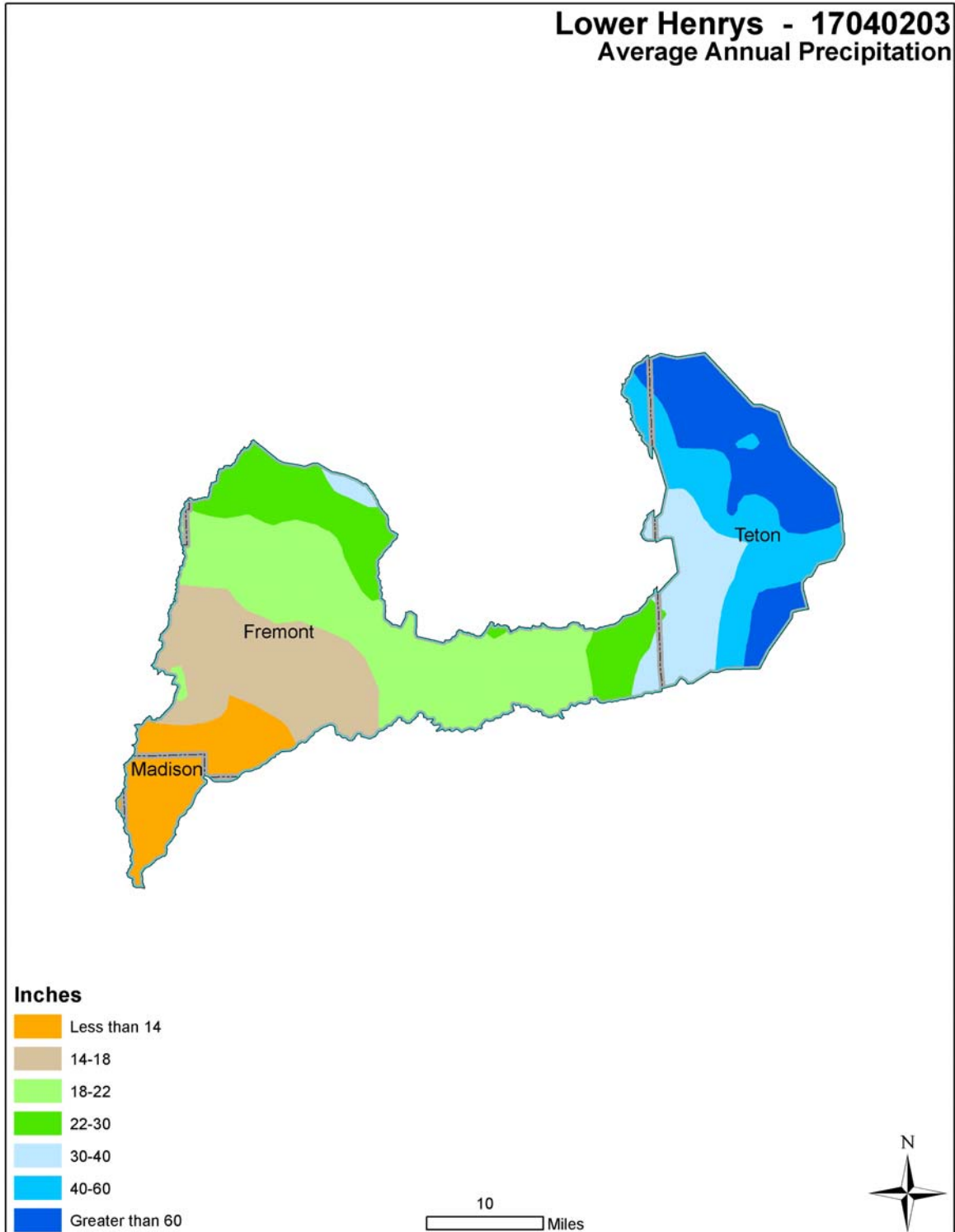
- ³ CRP acres are included in Grass/Pasture/Haylands.

* Any differences between the acres in the above Table and the Future Conservation Needs Tables in the back of this document are due to the differences in Land Cover acres as opposed to Land Use acres. However the Total Private acres balance between the Land Use and Land Cover acres.

Land Use/Land Cover²

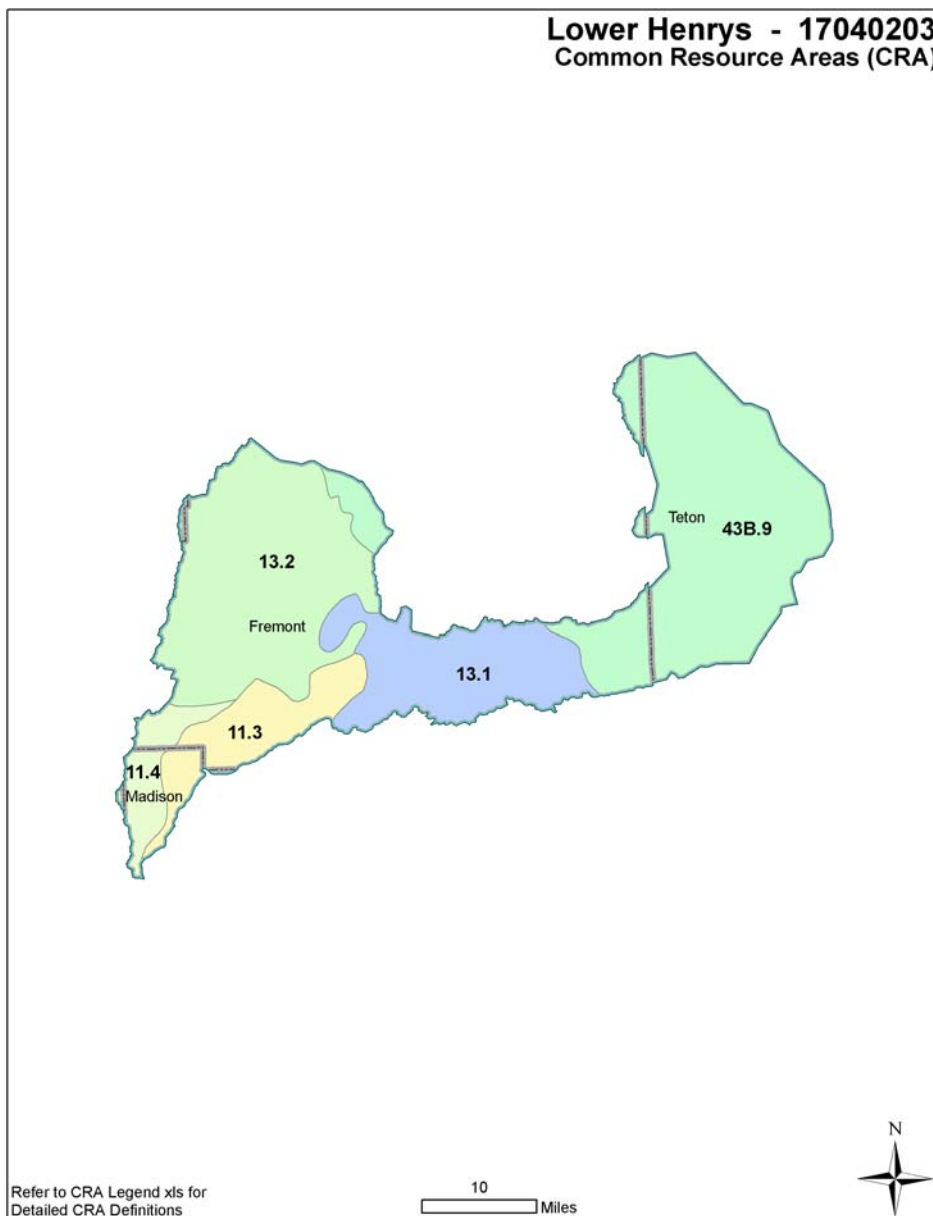


Average Annual Precipitation^{LS}



Common Resource Area Map

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



Common Resource Area Descriptions

The National Coordinated CRA Geographic Database provides:

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

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

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

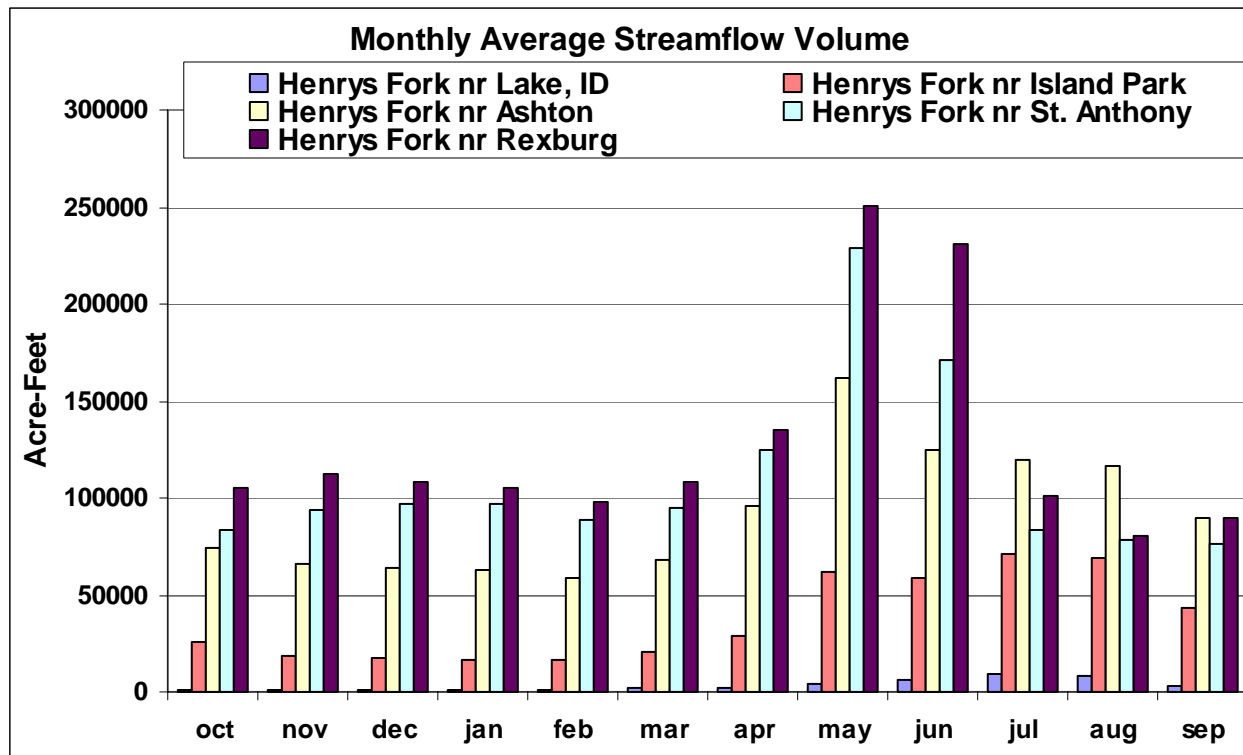
13.1 Eastern Idaho Plateaus – Dissected Plateaus and Teton Basin: This unit is used for cropland and rangeland. Potatoes are an important cash crop. Sprinkler irrigated land supports potatoes, alfalfa, and pasture. Non-irrigated land supports small grains. Mollisols developed in thick loess deposits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

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

43B.9 Central Rock Mountains – Yellowstone Basin: Nearly all this area is used as wildlife habitat, for recreation, and for timber production. Most of this area is high mountains. Mean annual precipitation is 625 to 1,525 mm. Mean annual air temperature is 2 to 7 °C. Average frost-free period is 30 to 60 days. Frost occurs every month of the year on high mountains. It has a coniferous forest-shrubland mosaic. Forests dominated by Douglas-fir, lodgepole pine, and aspen are most common on north-facing slopes and flatter uplands. Recreation is a very important land use but mining, grazing, and logging also occur.

Streamflow Summary [↗](#)

Lower Henry's Fork (Hydrologic Unit Code #17040203) has seven USGS streamflow gages on the Henry's Fork River and Falls River. The Henry's Fork River flows through vastly different environments ranging from forested mountains with permanent winter snowpacks, to desert sand dunes. The River hosts diverse wildlife habitat, provides recreation opportunities and water for irrigation, hydropower and groundwater recharge. Between Henry's Lake and Island Park Reservoir, there is a combination of six SNOTEL and snow courses that monitor mountain weather and snowpack that are used to forecast summer streamflow volumes and assist with reservoir operations. There are more SNOTEL sites and snow courses in the Teton and Falls River drainages that contribute to the downstream flow and other lower elevation valley climate stations that exist in the Henry's Fork Watershed. The mean annual flow of the Henry's Fork near Ashton, ID for years 1923-2006 is 1,102,423 Acre-Feet and the April through July runoff period accounts for 46% of the yearly flow. The mean annual flow of the Henry's Fork near St. Anthony for years 1919-2006 is 1,315,816 Acre-Feet and the April through July flow accounts for 46% of the yearly streamflow volume. Above the gage, the Falls River empties into the Henry's Fork and about 58,000 acres are irrigated above this gage. The Henry's Fork near Rexburg gage (drainage area about 2920 square miles) has a mean annual streamflow of 1,524,066 Acre-Feet for years 1909-2006 and the April through July runoff period accounts for 47% of the total. Above the gage, the Teton River and numerous other tributaries empty into the Henry's Fork. Over 200,000 acres of land depend on irrigated water from the Henry's Fork River near Rexburg. About 21,000 of these acres receive water by ground water pumping. Above the station, water from the Henry's Fork seeps into the ground and helps recharge the Snake River Plain Aquifer. The streamflow by all these gages are regulated by Henry's Lake, Island Park Reservoir, Grassy Lake and powerplant operations on the Ashton Reservoir.





Idaho

Lower Henrys - 17040203
8 Digit Hydrologic Unit Profile

August 2008

| | | CFS | |
|--|--|---------------------------|----------------|
| Irrigated Adjudicated Water Rights^{/6)} | Surface Water | 4,111.5 | |
| | Groundwater | 252.7 | |
| | Total Irrigated Adjudicated Water Rights | 4,364.2 | |
| | | | |
| Stream Flow Data^{/7)} | Henry's Fork near Rexburg, Idaho; USGS ID #13056500; 1909-2006 | Average Annual | 1,524,066 |
| | | April - July Average | 716,809 |
| | | Percent of Average Annual | 47 |
| | | | |
| Stream Data <i>*Percent of Total Miles of streams in HUC</i> | Total Stream Miles ^{/8)} | 1,700 | PERCENT |
| | Water quality impaired streams ^{/9,10)} | 65 | 4 |
| | 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 |
| | Forest | 20,020 | 33% |
| | Grain Crops | 5,740 | 10% |
| | Grass/Pasture/Hay Lands | 13,560 | 23% |
| | Row Crops | 5,220 | 9% |
| | Shrub/Rangelands – Includes CRP Lands | 9,180 | 15% |
| | Water/Wetlands/Developed/Barren | 6,240 | 10% |
| | Total Acres of 100 ft stream buffers | 59,960 | 100% |
| Land Capability Class^{/4)} | I – slight limitations | 0 | 0.0 |
| | II – moderate limitations | 1,500 | 1.0 |
| | III – severe limitations | 79,700 | 52.6 |
| | IV – very severe limitations | 50,300 | 33.2 |
| | V – no erosion hazard, but other limitations | 5,900 | 3.9 |
| | VI – severe limitations, unsuited for cultivation, limited to pasture, range, forest | 2,200 | 1.5 |
| | VII – very severe limitations, unsuited for cultivation, limited to grazing, forest, wildlife | 7,000 | 4.6 |
| | VIII – misc areas have limitations, limited to recreation, wildlife, and water supply | 5,000 | 3.3 |
| | Total Crop, Pasture Lands & CRP | 151,600 | 100 |



Lower Henrys - 17040203

Idaho

8 Digit Hydrologic Unit Profile

August 2008

| Confined Animal Feeding Operations – Dairies/Feedlots ^{/12,13,26} | | | | | | |
|--|--------|------|---------|-------------|-------------|---------|
| | Number | <200 | 200-500 | 500-750 | 750-1000 | >1000 |
| Dairy | 8 | 7 | 1 | 0 | 0 | 0 |
| | Number | <300 | 300-999 | 1,000-4,999 | 5,000-9,000 | >10,000 |
| Feedlots | 6 | 4 | 2 | 0 | 0 | 0 |

Resource Settings

Pasture

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

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

Dry Cropland

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

Surface Irrigated Cropland

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

Sprinkler Irrigated Cropland

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

Resource Settings - continued

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

Hayland

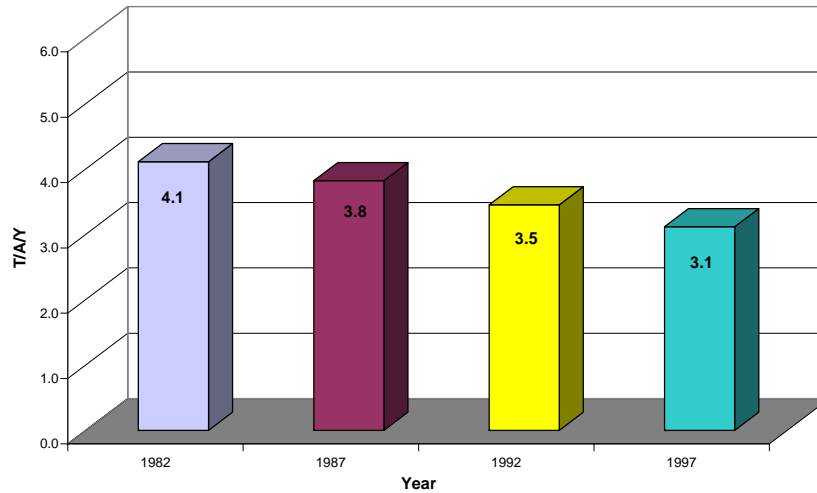
Conventionally tilled, surface and sprinkler irrigated on 0-7% slopes. Irrigation water is normally plentiful. Small grains and alfalfa are grown in rotation, with alfalfa typically maintained for 4-6 years. Grazing of crop aftermath is common. Nutrient, pest or irrigation water management may be less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

Rangeland

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

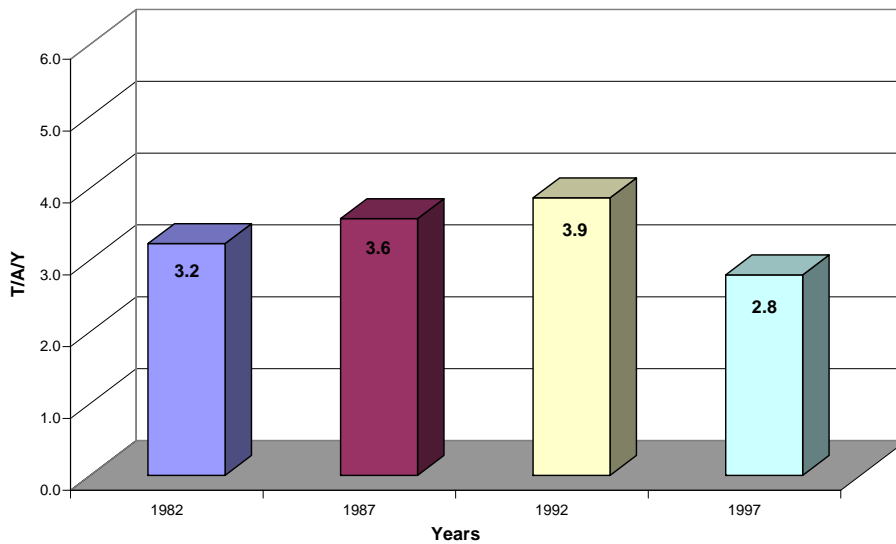
Resource Concerns

**Soil Loss by Water Erosion
For Cropland, Pasture & CRP
Lower Henrys**



Water erosion steadily decreased in the sub basin from a high of about 4.1 tons per acre per year in 1987 to a low of about 3.1 tons per acres per year in 1997. An increase of CRP acreage between 1987 and 1997 probably accounts most of the reduction of water erosion in this sub basin.

**Soil Loss by Wind Erosion
Cropland, Pasture and CRP
Lower Henrys**



Wind is not a signification issue in the Lower Henrys Watershed because of a moist climate during seasons of potential wind erosion and large acreages of pasture and CRP reduce the hazard of wind erosion.

Resource Concerns – Continued

| Impacted Water Bodies ^{9,10} (ID17040203) | Stream Miles | Sediment, Siltation or TSS | Nutrients | Bacteria | Temperature | Dissolved Oxygen | Flow/Habitat Alteration ¹ | Other or Unknown |
|---|--------------|----------------------------------|-----------|----------|-------------|---------------------|---|---------------------|
| Squirrel Creek (SK007_03) | 19.4 | | | | | | | x |
| Squirrel Creek (SK007_02) | 45.3 | | | x | | | | x |
| | | | | | | | | |
| TOTAL STREAM MILES²: | 64.7 | | | | | | | |

¹ Flow and habitat alteration are not considered pollutants by the Idaho Department of Environmental Quality, and are not addressed by the TMDL.

² The majority of streams in this watershed have not been assessed; no subbasin assessment has been completed.

Approximately 100 miles of streams in the Lower Henry's Fork subbasin are designated as state "recreational" or "natural" protected rivers by the Idaho Department of Water Resources. Additionally, Henry's Fork and Fall Creek are Special Resource Waters as designated by IDEQ. No subbasin assessment has been conducted to date in the Lower Henry's Fork. The watershed was not scheduled for a subbasin assessment because no water bodies were listed on the Idaho 1998 303d list. Since that time, data have indicated that some streams in the southeastern portion of the basin are not supporting beneficial uses. Specific pollutant sources have not yet been identified. Earlier surface water studies (1980s) within the basin identified sediment and nitrate problems impacting Conant Creek and Squirrel Creek subwatersheds. Monitoring indicated that most of the nitrate and sediment concerns originated in the lower portions of these watersheds, where agriculture is the predominant land use. Elevated levels of ammonia were occasionally found at the forest boundary. This was attributed to decomposition of forest organic matter, and was quickly oxidized downstream.

Two areas within the subbasin have nitrate-impaired groundwater. The Ashton (Ashton, Drummond, Teton River) Nitrate Priority Area is ranked eighth on the IDEQ list of twenty-five priority areas. From 1990 to 2003, there has been a considerable increase in median nitrate value (7.4 mg/L), with over 75% of wells exceeding 5 mg/L. Some pesticides have also been detected. The wells providing drinking water to the city of Ashton have shown elevated nitrate levels, but have not exceeded 10 mg/L to date. A ground water quality management plan for the Ashton Nitrate Priority Area is scheduled for completion by IDEQ in 2009. The St. Anthony Nitrate Priority Area (ranked 16th of 25) is located just north of the town of St. Anthony in the western portion of the watershed. Wells in this area had a mean nitrate concentration level of 7.6 mg/l in 2003, with maximum values exceeding 30 mg/l.

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



Lower Henrys - 17040203
 8 Digit Hydrologic Unit Profile

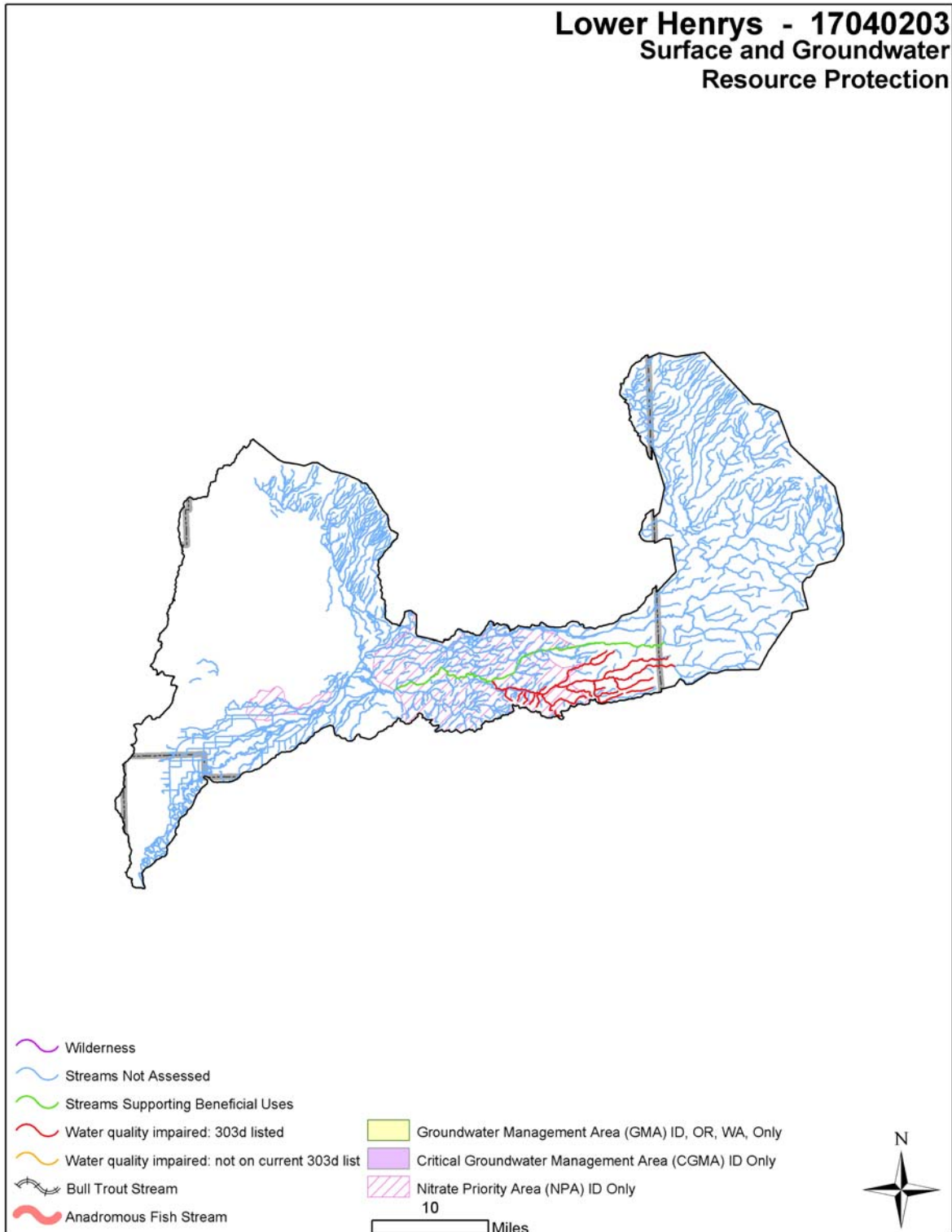
Idaho

August 2008

| Watershed Projects, Plans, Studies, and Assessments* | |
|--|---|
| Federal: | State: |
| NRCS Watershed Plans/Studies/Assessments^{/14,15} | IDEQ TMDLs^{/16} |
| | None |
| | IDEQ 319 Projects^{/17} |
| | Ashton Groundwater Protection Project (2000-06) |
| | |
| NWPCC Subbasin Plans and Assessments^{/18} | SCC Plans/Projects^{/19} |
| Upper Snake Province Assessment (2004) | Squirrel Creek SAWQP/WQPA |
| | Upper Conant Creek SAWQP/WQPA |
| | Enterprise Canal WQPA |
| | Ashton WQPA |
| | Bitch Creek North SAWQP/WQPA |
| | |
| | ISDA Regional Water Quality Projects^{/20} |
| | Central Henrys Fork Basin Regional GW Study (on-going) |
| | Ashton Local Study Area (2005) |
| | IDWR Comprehensive Basin Plans^{/21} |
| | Henrys Fork Basin Comp State Water Plan (1992) |

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

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





Lower Henrys - 17040203

Idaho

8 Digit Hydrologic Unit Profile

August 2008

Resource Concerns – Continued

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

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

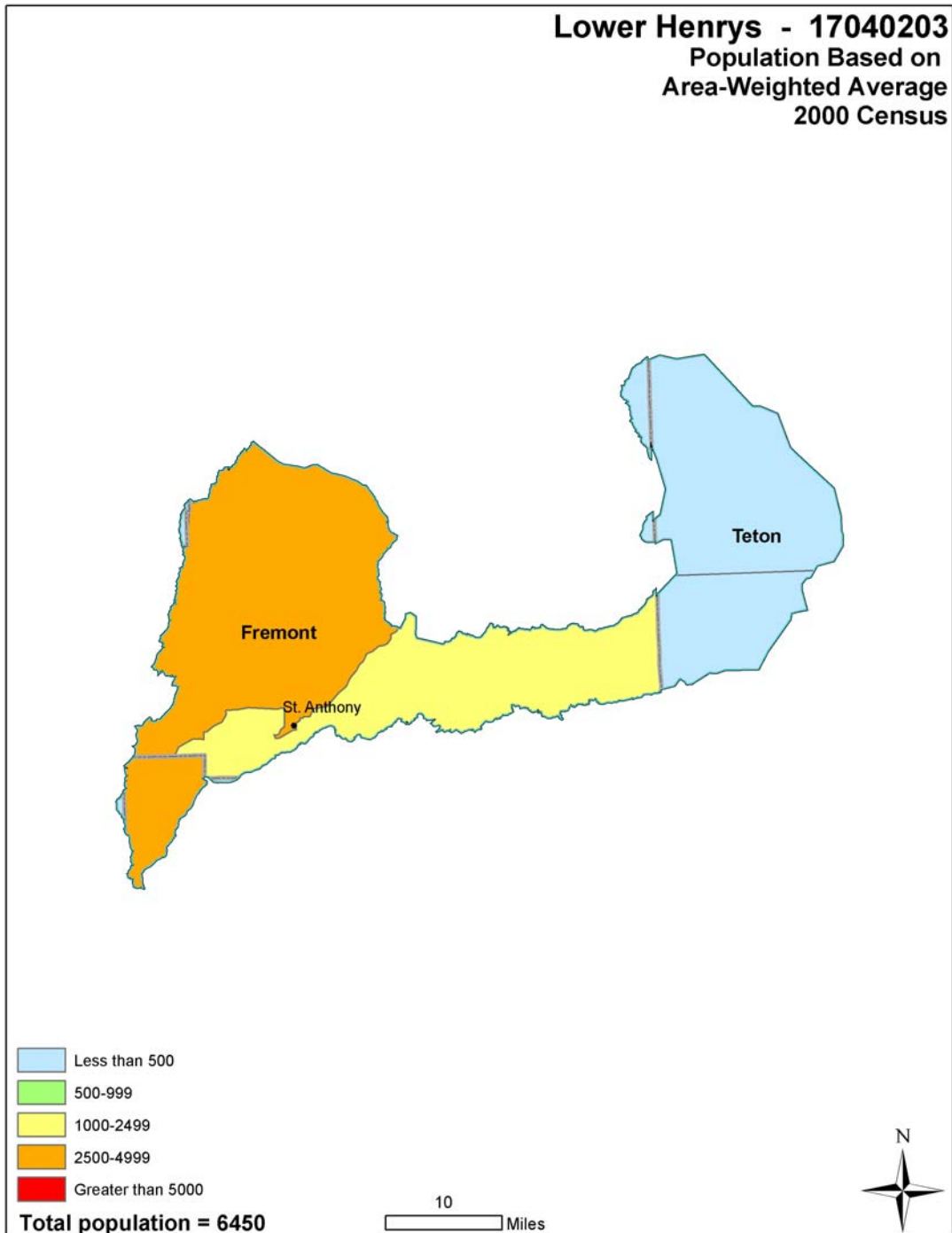
Human considerations: Implementation of conservation practices and enhancement has the potential for change in management and cost of production. Installation of practices will have an upfront cost and require maintenance. In the short run increased management may be required as new techniques are learned. 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 – Gray Wolf, Lynx, Grizzly Bear Birds – None Fish – None Invertebrates – None Plants – None | Plants – Ute Ladies' Tresses PROPOSED SPECIES None |
| ESSENTIAL FISH HABITAT – None | CRITICAL FISH HABITAT – None |

Census and Social Data [/26](#)

Population: 6,450

Number of Farms: 443





Census and Social Data - continued

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.

Census and Social data shown below are based on county-wide statistics and records and may not accurately reflect the actual watershed-specific portion of the counties.

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; women make up 9.6 percent of the total. Ninety-eight 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 540 acres. Agricultural land in the watershed is a mix of cropland, range, pasture and hay land. Land users in the watershed utilize EQIP, CRP, Continuous CRP and other programs to implement conservation plans.

For the period of 1997 through 2002, the number of farms in the watershed has increased by 11.0 percent. Farm size is down 10.0 percent. The market value of production is down, dropping 3.3 percent. Government payments to farmers have increased by 33.0 percent. 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.

| | Number of farms | Average size farm | Market Value of Production (Average Farm) | Government Payments (Average Farm) |
|--------|-----------------|-------------------|---|------------------------------------|
| 1997 | 399 | 600 | \$147,900 | \$9,700 |
| 2002 | 443 | 540 | \$143,000 | \$12,900 |
| Change | 11.0% | -10.0% | -3.3% | 33.0% |

Economic Profile:

| | Watershed | Idaho | United States |
|------------------------------------|-----------|-----------|---------------|
| Population | 6,450 | 1,466,000 | 299,398,000 |
| Per Capita Personal Income (2005) | \$20,800 | \$28,500 | \$34,500 |
| Median Home Value (2000) | \$84,400 | \$106,300 | \$119,600 |
| Percent Unemployment (2006) | 3.6% | 3.4% | 4.6% |
| Percent Below Poverty Level (2004) | 12.8% | 11.5% | 12.7% |



Idaho

Lower Henrys - 17040203
8 Digit Hydrologic Unit Profile

August 2008

Progress/Status

| PRS Data | | | | | | | |
|--|------|------|-------|------|------|----------|-------|
| Conservation Treatment Acres | FY04 | FY05 | FY06 | FY07 | FY08 | Avg/Year | Total |
| Animal Trails and Walkways (575) (ft) | 0 | 288 | 0 | 0 | 0 | 57.6 | 288 |
| Comprehensive Nutrient Management Plan (100) (number) | 0 | 0 | 8 | 0 | 0 | 1.6 | 8 |
| Conservation Cover (327) (acres) | 2089 | 1964 | 1591 | 882 | 137 | 1332.6 | 6663 |
| Conservation Crop Rotation (328) (acres) | 0 | 129 | 3064 | 812 | 756 | 952.2 | 4761 |
| Contour Farming (330) (acres) | 0 | 0 | 1437 | 0 | 0 | 287.4 | 1437 |
| Cover Crop (340) (acres) | 0 | 0 | 0 | 163 | 0 | 32.6 | 163 |
| Critical Area Planting (342) (acres) | 0 | 1 | 0 | 0 | 0 | 0.2 | 1 |
| Deep Tillage (324) (acres) | 0 | 0 | 2926 | 401 | 292 | 723.8 | 3619 |
| Fence (ft) | 396 | 1456 | 7090 | 0 | 0 | 1788.4 | 8942 |
| Forage Harvest Management (511) (acres) | 0 | 0 | 233 | 0 | 48 | 56.2 | 281 |
| Irrigation Canal or Lateral (320) (ft) | 0 | 1550 | 0 | 0 | 0 | 310.0 | 1550 |
| Irrigation Land Leveling (464) (acres) | 0 | 0 | 48 | 20 | 0 | 13.6 | 68 |
| Irrigation System, Microirrigation (441) (acres) | 1 | 9 | 0 | 0 | 0 | 2.0 | 10 |
| Irrigation System, Sprinkler (442) (acres) | 92 | 1014 | 2260 | 564 | 409 | 867.8 | 4339 |
| Irrigation Water Conveyance, Pipeline, High Pressure, Underground Plastic (430DD) (ft) | 4299 | 1270 | 3700 | 3680 | 4859 | 3561.6 | 17808 |
| Irrigation Water Conveyance, Pipeline, Steel, (430FF) (ft) | 0 | 0 | 0 | 60 | 0 | 12.0 | 60 |
| Irrigation Water Management (449) (acres) | 0 | 360 | 940 | 1216 | 1182 | 739.6 | 3698 |
| Nutrient Management (590) (acres) | 0 | 8514 | 14188 | 7356 | 1276 | 6266.8 | 31334 |
| Pasture and Hay Planting (512) (acres) | 0 | 0 | 205 | 125 | 48 | 75.6 | 378 |
| Pest Management (acres) | 1024 | 1798 | 4718 | 7500 | 415 | 3091.0 | 15455 |
| Pipeline (516) (ft) | 30 | 294 | 6142 | 0 | 0 | 1293.2 | 6466 |
| Prescribed Grazing (528&528A) (acres) | 0 | 3794 | 3420 | 1485 | 5964 | 2932.6 | 14663 |
| Pumping Plant (533) (number) | 2 | | 2 | 4 | 2 | 2.5 | 10 |
| Residue and Tillage Management, Mulch Till (345) (acres) | 0 | 690 | 3208 | 812 | 859 | 1113.8 | 5569 |

Progress/Status – continued

| PRS Data - continued | | | | | | | |
|--|------|------|------|------|------|----------|-------|
| Conservation Treatment Acres | FY04 | FY05 | FY06 | FY07 | FY08 | Avg/Year | Total |
| Riparian Forest Buffer (391) (acres) | 0 | 0 | 0 | 7 | 0 | 1.4 | 7 |
| Streambank and Shoreline Protection (580) (ft) | 0 | 1259 | 0 | 0 | 0 | 251.8 | 1259 |
| Structure for Water Control (587) (number) | 1 | 8 | 2 | 31 | 0 | 8.4 | 42 |
| Surface Roughening (609) (acres) | 0 | 79 | 1269 | 389 | 429 | 433.2 | 2166 |
| Tree/Shrub Establishment (612) (acres) | 0 | 1 | 0 | 10 | 0 | 2.2 | 11 |
| Upland Wildlife Habitat Management (645) (acres) | 1024 | 6525 | 4231 | 1503 | 698 | 2796.2 | 13981 |
| Use Exclusion (472) (acres) | 1342 | 2127 | 1554 | 544 | 0 | 1113.4 | 5567 |
| Waste Storage Facility (313) (number) | | | 3 | | | 3.0 | 3 |
| Water and Sediment Control Basins (638) (number) | 0 | 18 | 73 | 25 | 9 | 25.0 | 125 |
| Water Well (642) (number) | 1 | 3 | 1 | 1 | 0 | 1.2 | 6 |
| Watering Facility (614) (number) | 0 | 4 | 7 | 1 | 0 | 2.4 | 12 |
| Wetland Creation (658) (acres) | 0 | 2 | 0 | 0 | 0 | 0.4 | 2 |
| Wetland Enhancement (359) (acres) | 0 | 0 | 0 | 0 | 39 | 7.8 | 39 |
| Wetland Restoration (657) (acres) | 0 | 62 | 0 | 0 | 0 | 12.4 | 62 |
| Wetland Wildlife Management (644) (acres) | 0 | 71 | 0 | 70 | 0 | 28.2 | 141 |
| Windbreak/Shelterbelt Establishment (380) (ft) | 1175 | 7862 | 0 | 0 | 0 | 1807.4 | 9037 |

Progress in the last five years has been focused on:

- ~ irrigation water management
- ~ nutrient management
- ~ pest management
- ~ erosion control

Resource concerns that require ongoing attention:

- ~ erosion control
- ~ irrigation water management
- ~ nutrient management
- ~ water quality and water quantity
- ~ prescribed grazing
- ~ pest management
- ~ wildlife habitat improvements

Lands Removed from Production through Farm Bill Programs

- Conservation Reserve Program (CRP): **23,300 Acres**
- Wetland Reserve Program (WRP): **320 Acres**

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/technical/NRI/>
5. PRISM Climate Mapping Project. Annual precipitation data. See http://www.ocs.orst.edu/prism_new.html for further information.
6. Irrigated Adjudicated Water Rights – Idaho Department of Water Resources
<http://www.idwr.idaho.gov/water/srba/mainpage/>
7. USGS Idaho Streamflows, gaging station data (<http://waterdata.usgs.gov/id/nwis/sw/>) and estimates for ungaged streams based on statistical data (<http://streamstats.usgs.gov/html/idaho.html>).
8. National Hydrology Dataset (NHD). Developed by the US Geological Survey in cooperation with U.S. Environmental Protection Agency and other state and local partners (<http://nhd.usgs.gov>).
9. IDEQ. 2002 Integrated Report (approved December 2005).
http://www.deq.idaho.gov/water/data_reports/surface_water/monitoring/integrated_report.cfm.
10. IDEQ. 2004. Lower Henrys Subbasin Assessment and TMDL.
http://www.deq.idaho.gov/water/data_reports/surface_water/tmdls/snake_river_henrys_creek/henrys_fork_snake_river.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.idaho.gov/gisdata/gis_data.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_Plns.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/tmdl/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.idaho.gov/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/>
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/WOPA%20FACT%20SHEET.doc>
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/>
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



Conservation Activities and Future Conservation Needs

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 systems for the years 2004 through 2008.

The following Future Conditions Tables are estimates 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 additional conservation needs to reach "Resource Management System" level of treatment based on benchmark conditions in the watershed
2. Local knowledge of the area, past and ongoing project activities and professional judgment
3. 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.
4. Urban development of land that was open space as farmland or rangeland presents its own type of resource problems that will require treatment as well as reduce the projected needs for traditional conservation associated with existing cropland and rangeland that is converted to urban use.



Idaho

Lower Henrys - 17040203
8 Digit Hydrologic Unit Profile

August 2008

Conservation Activities for Dry Cropland

| Current Conditions | Total acres | Riparian Potential |
|-----------------------------------|-------------|--------------------|
| Total Dry Cropland | 26,810 | 3,220 |
| Typical Management Unit/Ownership | | |
| Current Farm Bill participation | | |

| Future Conditions | Riparian Potential | Total Acres |
|----------------------------|--------------------|-------------|
| Dry Cropland Acres | | 23,590 |
| Conversion to Riparian RMS | 3,220 | |
| Total Acres | | 26,810 |

| Projected Treatment Needs 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. | 23,590 | | | +3 | +2 | +2 | +3 | | | | |
| Conservation Crop Rotation (328) | Ac. | 5,900 | \$ - | \$ - | | | | | X | | | X |
| Contour / Cross Slope Farming (330) | Ac. | 5,900 | 44,300 | 14,800 | | | | | X | | | X |
| Deep Tillage (324) | Ac. | 5,900 | 265,500 | 88,500 | | | | | X | | | X |
| Diversion (362) | Ft. | 11,880 | 32,700 | 700 | | | | | X | | | X |
| Forage Harvest Management (511) | Ac. | 2,360 | - | - | | | | | X | | | X |
| Grassed Waterway (412) | Ac. | 135 | 243,000 | 4,900 | | | | | X | X | | X |
| Nutrient Management (590) | Ac. | 5,900 | 88,500 | 29,500 | | | | | X | | | X |
| Pasture & Hayland Planting (512) | Ac. | 2,360 | 377,600 | 3,800 | | | | | X | | X | X |
| Pest Management (595) | Ac. | 5,900 | 141,600 | 47,200 | | | | | X | | | X |
| Residue Management, Mulch Till (345) | Ac. | 5,900 | 265,500 | 88,500 | | | | | X | | | X |

Conservation Activities for Dry Cropland – Continued

| Projected Treatment Needs for Dry Cropland (Continued): | | | | | | | | | | | | |
|--|------------|---------------|----------------------------|---------------------------|--------------------|---------------|-----------|-----------|----------------|------|------|-------|
| 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. | 23,590 | | | +3 | +2 | +2 | +3 | | | | |
| Residue Management, No Till/Strip Till/Direct Seed (329) | Ac. | 5,900 | 531,000 | 177,000 | | | | | X | | | X |
| Sediment Basin (350) | No. | 37 | 70,300 | 2,100 | | | | | X | | X | X |
| Stripcropping (585) | Ac. | 2,950 | 73,800 | 700 | | | | | X | | | X |
| Terrace (600) | Ft. | 291,460 | 816,100 | 8,200 | | | | | X | | | X |
| Upland Wildlife Habitat Management (645) | Ac. | 3,540 | 106,200 | 35,400 | | | | | X | | | X |
| Water and Sediment Control Basin (638) | No. | 295 | 309,800 | 9,300 | | | | | X | | | X |
| Windbreak/Shelterbelt Establishment (380) | Ft. | 23,670 | 35,700 | 400 | | | | | X | | | X |
| Dry Cropland Riparian | Ac. | 3,220 | | | +3 | +2 | +3 | +3 | | | | |
| Channel Bank Vegetation (322) | Ft. | 149,860 | \$ 307,200 | \$ 6,100 | | | | | X | | | X |
| Channel Stabilization (584) | Ft. | 149,860 | 3,746,500 | 187,300 | | | | | X | | | X |
| Fence (382) | Ft. | 52,800 | 92,400 | 1,800 | | | | | X | X | | X |
| Nutrient Management (590) | Ac. | 3,220 | 48,300 | 16,100 | | | | | X | X | | X |
| Pest Management (595) | Ac. | 3,220 | 77,300 | 25,800 | | | | | X | | | X |
| Pipeline (516) | Ft. | 53,130 | 143,500 | 2,900 | | | | | X | | | X |
| Prescribed Grazing (528) | Ac. | 3,220 | 48,300 | 16,100 | | | | | X | | | X |
| Pumping Plant (533) | No. | 20 | 250,200 | 2,500 | | | | | X | | | X |
| Riparian Forest Buffer (391) | Ac. | 34 | 51,000 | 500 | | | | | X | | | X |
| Riparian Herbaceous Cover (390) | Ac. | 34 | 10,200 | 100 | | | | | X | X | | X |
| Streambank & Shoreline Prot (580) | Ft. | 7,380 | 350,600 | 35,100 | | | | | X | X | | X |
| Tree/Shrub Establishment (612) | Ac. | 10 | 4,700 | - | | | | | X | X | | X |



Idaho

Lower Henrys - 17040203
8 Digit Hydrologic Unit Profile

August 2008

Conservation Activities for Dry Cropland – Continued

| Projected Treatment Needs for Dry Cropland (Continued): | | | | | | | | | | | | |
|--|----------|----------|----------------------------|---------------------------|--------------------|---------------|---------|----|----------------|------|------|-------|
| 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 Riparian | Ac. | 3,220 | | | +3 | +2 | +3 | +3 | | | | |
| Upland Wildlife Management (645) | Ac. | 480 | 14,400 | 4,800 | | | | | X | X | | X |
| Use Exclusion (472) | Ac. | 160 | 5,400 | 200 | | | | | X | X | | X |
| Watering Facility (614) | No. | 40 | 34,800 | 300 | | | | | X | | | X |
| Wetland Wildlife Management (644) | Ac. | 320 | 9,600 | 3,200 | | | | | X | | | X |
| Total RMS Costs | | | \$ 8,596,000 | \$ 813,800 | | | | | | | | |

| Potential RMS Effects Summary for Dry Cropland | | |
|---|---------------------|-------------------|
| Cost Items and Programs | Costs | O&M Costs |
| Non Farm Bill Programs | \$ 429,800 | \$ 40,700 |
| Potential Farm Bill Programs | \$ 8,166,200 | \$ 773,100 |
| Operator O&M and Management Cost | | \$ 813,800 |
| Annual Management Incentives (3 yrs - Incentive Payments) | \$ 1,640,500 | |
| Operator Investment | \$ 3,692,700 | |
| Federal Costshare | \$ 3,262,800 | |
| Total RMS Costs | \$ 8,596,000 | \$ 813,800 |
| Estimated Level of Participation | | 75% |
| Total Acres in RMS System | | 20,108 |
| Anticipated Cost at Estimated Level of Participation | \$ | 6,447,000 |
| Participating landowners will be in compliance with TMDLs | | |
| Improves habitat for ESA endangered & threatened species | | |



Idaho

Lower Henrys - 17040203
8 Digit Hydrologic Unit Profile

August 2008

Conservation Activities for Irrigated Cropland / Hayland

| Current Conditions | Total Acres | Riparian Potential |
|--------------------------------------|-------------|--------------------|
| Total Irrigated Cropland/Hayland | 60,700 | |
| Typical Management Unit/Ownership | 540 | |
| Surface Irrigated Cropland/Hayland | 6,070 | |
| Sprinkler Irrigated Cropland/Hayland | 54,630 | |
| Current Farm Bill participation | 15% | |
| Conversion to Riparian RMS | | 5,460 |

| Future Conditions | Riparian Potential | Total Acres |
|--|--------------------|-------------|
| Sprinkler Irrigated Cropland/Hayland | | 55,240 |
| Conversion to Riparian RMS | 5,460 | 5,460 |
| Total Irrigated Cropland/Hayland Acres | | 55,240 |

| Projected Treatment Needs for Irrigated Cropland/Hayland: | | | | | | | | | | | | |
|--|----------|----------|----------------------------|---------------------------|--------------------|---------------|---------|----|----------------|------|------|-------|
| Irrigated Cropland/Hayland | Quantity | | Costs | | Effects | | | | Implementation | | | |
| | Unit | Quantity | Additional Investment Cost | Annual O&M and Mngt. Cost | Water Conservation | Water Storage | Habitat | WQ | EQIP | WHIP | CREP | Other |
| Sprinkler Irrigation | Ac. | 55,240 | | | +3 | +2 | +2 | +3 | | | | |
| Cover Crop (340) | Ac. | 6,900 | \$ 345,000 | \$ 3,500 | | | | | X | | | X |
| Conservation Crop Rotation (328) | Ac. | 27,620 | - | - | | | | | X | | | X |
| Constructed Wetland (656) | No. | 6 | 109,200 | 1,100 | | | | | X | | | X |
| Forage Harvest Management (511) | Ac. | 6,900 | - | - | | | | | X | | | X |
| Irrigation System, Microirrigation (441) | Ac. | 5,500 | 7,480,000 | 374,000 | | | | | X | | | X |
| Irrigation System, Sprinkler (442) | Ac. | 6,070 | 3,338,500 | 66,800 | | | | | X | | | X |
| Irrigation Water Conveyance (430DD) | Ft. | 100,320 | 861,700 | 4,300 | | | | | X | | | X |



Idaho

Lower Henrys - 17040203
8 Digit Hydrologic Unit Profile

August 2008

Conservation Activities for Irrigated Cropland / Hayland – Continued

| Projected Treatment Needs for Irrigated Cropland/Hayland (Continued): | | | | | | | | | | | | |
|--|----------|----------|----------------------------|---------------------------|--------------------|---------------|---------|----|----------------|------|------|-------|
| Irrigated Cropland/Hayland | Quantity | | Costs | | Effects | | | | Implementation | | | |
| | Unit | Quantity | Additional Investment Cost | Annual O&M and Mngt. Cost | Water Conservation | Water Storage | Habitat | WQ | EQIP | WHIP | CREP | Other |
| Sprinkler Irrigation (Continued) | Ac. | 55,240 | | | +3 | +2 | +2 | +3 | | | | |
| Irrigation Water Management (449) - Low level | Ac. | 19,330 | 290,000 | 96,700 | | | | | X | | | X |
| Irrigation Water Management (449) - Meters and Moisture Sensors | Ac. | 8,290 | 373,100 | 124,400 | | | | | X | | | X |
| Nutrient Management (590) | Ac. | 27,620 | 828,600 | 276,200 | | | | | X | | | X |
| Pest Management (595) | Ac. | 27,620 | 662,900 | 221,000 | | | | | X | | | X |
| Pumping Plant (533) | No. | 38 | 475,400 | 4,800 | | | | | X | | | X |
| Residue Mngt, Mulch Till (345) | Ac. | 27,620 | 1,242,900 | 414,300 | | | | | X | | | X |
| Residue Management Seasonal (344) | Ac. | 27,620 | 621,500 | 207,200 | | | | | X | | | X |
| Residue Mngt, No Till/Strip Till (329) | Ac. | 5,520 | 496,800 | 165,600 | | | | | X | | | X |
| Sediment Basin (350) | No. | 40 | 76,000 | 2,300 | | | | | X | | | X |
| Structure for Water Control (587) -Fish Screen | No. | 170 | 566,100 | 5,700 | | | | | X | | | X |
| Surface Roughening (609) | Ac. | 27,620 | 621,500 | 207,200 | | | | | X | | | X |
| Upland Wildlife Habitat Management (645) | Ac. | 4,140 | 124,200 | 41,400 | | | | | X | | | X |
| Well Decommissioning (355) | No. | 21 | 17,900 | - | | | | | X | | | X |
| Windbreak/Shelterbelt Establishment (380) | Ft. | 227,040 | 342,800 | 3,400 | | | | | X | | | X |
| Riparian | Ac. | 5,460 | | | +1 | +1 | +3 | +3 | | | | |
| Channel Bank Vegetation (322) | Ft. | 3,330 | \$ 6,800 | \$ 100 | | | | | X | | | X |
| Channel Stabilization (584) | Ft. | 3,300 | 82,500 | 4,100 | | | | | X | | | X |
| Pasture & Hayland Planting (512) | Ac. | 2,180 | 348,800 | 3,500 | | | | | X | | | X |
| Pest Management (595) | Ac. | 5,460 | 131,000 | 43,700 | | | | | X | | | X |



Idaho

Lower Henrys - 17040203
8 Digit Hydrologic Unit Profile

August 2008

Conservation Activities for Irrigated Cropland / Hayland – Continued

| Projected Treatment Needs for Irrigated Cropland/Hayland (Continued): | | | | | | | | | | | | |
|--|----------|----------|----------------------------|---------------------------|--------------------|---------------|---------|----|----------------|------|------|-------|
| Irrigated Cropland/Hayland | Quantity | | Costs | | Effects | | | | Implementation | | | |
| | Unit | Quantity | Additional Investment Cost | Annual O&M and Mngt. Cost | Water Conservation | Water Storage | Habitat | WQ | EQIP | WHIP | CREP | Other |
| Riparian (Continued) | Ac. | 5,460 | | | +1 | +1 | +3 | +3 | | | | |
| Riparian Forest Buffer (391) | Ac. | 80 | 120,000 | 1,200 | | | | | X | | | X |
| Riparian Herbaceous Cover (390) | Ac. | 80 | 24,000 | 200 | | | | | X | X | X | X |
| Streambank & Shoreline Prot (580) | Ft. | 8,330 | 395,700 | 19,800 | | | | | X | | | X |
| Tree/Shrub Establishment (612) | Ac. | 40 | 18,800 | 200 | | | | | X | X | | X |
| Upland Wildlife Management (645) | Ac. | 820 | 24,600 | 8,200 | | | | | X | | | X |
| Wetland Wildlife Management (644) | Ac. | 550 | 16,500 | 5,500 | | | | | X | | | X |

| Potential RMS Effects Summary for Irrigated Cropland/Hayland | | |
|---|---------------------|--------------------|
| Cost Items and Programs | Costs | O&M Costs |
| Non Farm Bill Programs | \$ 1,002,100 | \$ 115,300 |
| Potential Farm Bill Programs | \$19,040,700 | \$2,191,100 |
| Operator O&M and Management Cost | | \$2,306,400 |
| Annual Management Incentives (3 yrs - Incentive Payments) | \$ 5,433,600 | |
| Operator Investment | \$ 7,805,700 | |
| Federal Cost Share | \$ 6,803,500 | |
| Total RMS Costs | \$20,042,800 | \$2,306,400 |
| Estimated Level of Participation | | 75% |
| Total Acres in RMS System | | 45,500 |
| Anticipated Cost at Estimated Level of Participation | \$ | 15,032,100 |
| Total Acre Feet of Water Saved Annually | | 38,285 |
| Increases infiltration and storage of water in soil profile | | |
| Participating landowners will be in compliance with TMDLs | | |
| Improves habitat for ESA endangered & threatened species | | |



Idaho

Lower Henrys - 17040203
8 Digit Hydrologic Unit Profile

August 2008

Conservation Activities for Irrigated Pasture

| Current Conditions | Total Acres | Riparian/ Wetland Potential |
|-----------------------------------|-------------|-----------------------------|
| Surface Irrigated Pasture | 13,440 | |
| Sprinkler Irrigated Pasture | 3,360 | |
| Total Irrigated Pasture | 16,800 | 2,020 |
| Typical Management Unit/Ownership | 540 | |
| Current Farm Bill participation | 15% | |

| Future Conditions | Total Acres |
|--|-------------|
| Surface Irrigated Pasture | |
| Sprinkler Irrigated Pasture | 14,780 |
| Total Conversion to Riparian Pasture RMS | 2,020 |
| Total Acres | 16,800 |

| Projected Treatment Needs for Irrigated Pasture: | | | | | | | | | | | | |
|---|----------|----------|-----------------|---------------------------|--------------------|---------------|---------|----|----------------|------|------|-------|
| Practices | Quantity | | Costs | | Effects | | | | Implementation | | | |
| | Unit | Quantity | Investment Cost | Annual O&M and Mngt. Cost | Water Conservation | Water Storage | Habitat | WQ | EQIP | WHIP | CREP | Other |
| Sprinkler Irrigation | Ac. | 4,780 | | | +3 | +3 | +2 | +3 | | | | |
| Fence (382) | Ft. | 195,360 | \$ 423,900 | \$ 8,500 | | | | | X | | | X |
| Irrigation Water Conveyance (430DD) | Ft. | 264,000 | 1,821,600 | 9,100 | | | | | X | | | X |
| Irrigation System Sprinkler (442) | Ac. | 11,820 | 6,501,000 | 130,000 | | | | | X | | | X |
| Irrigation Water Management (449) | Ac. | 11,820 | 177,300 | 59,100 | | | | | X | | | X |
| Nutrient Management (590) | Ac. | 11,820 | 177,300 | 59,100 | | | | | X | | | X |

Conservation Activities for Irrigated Pasture - Continued

| Projected Treatment Needs for Irrigated Pasture (Continued): | | | | | | | | | | | | |
|---|----------|----------|-----------------|---------------------------|--------------------|---------------|---------|----|----------------|------|------|-------|
| Practices | Quantity | | Costs | | Effects | | | | Implementation | | | |
| | Unit | Quantity | Investment Cost | Annual O&M and Mngt. Cost | Water Conservation | Water Storage | Habitat | WQ | EQIP | WHIP | CREP | Other |
| Sprinkler Irrigation (Continued) | Ac. | 4,780 | | | +3 | +3 | +2 | +3 | | | | |
| Pasture & Hayland Planting (512) | Ac. | 4,730 | 756,800 | 7,600 | | | | | X | | | X |
| Pest Management (595) | Ac. | 11,820 | 283,700 | 94,600 | | | | | X | | | X |
| Pipeline (516) | Ft. | 198,000 | 580,100 | 2,900 | | | | | X | | | X |
| Prescribed Grazing (528) | Ac. | 11,820 | 177,300 | 59,100 | | | | | X | | | X |
| Structure for Water Control (587)- Fish Screen | No. | 150 | 499,500 | 5,000 | | | | | X | X | | X |
| Upland Wildlife Management (645) | Ac. | 2,220 | 66,600 | 22,200 | | | | | X | | | X |
| Watering Facility (614) | No. | 74 | 64,400 | 600 | | | | | X | | | X |
| Windbreak/Shelterbelt Establish(380) | Ft. | 195,360 | 295,000 | 3,000 | | | | | X | | | X |
| Riparian Pastures | Ac. | 2,020 | | | +1 | +1 | +3 | +3 | | | | |
| Animal Trails and Walkways (575) | Ft. | 16,900 | \$ 84,500 | \$ 800 | | | | | X | | | X |
| Channel Bank Vegetation (322) | Ft. | 920 | 1,900 | - | | | | | X | | | X |
| Channel Stabilization (584) | Ft. | 920 | 23,000 | 1,200 | | | | | X | | | X |
| Fence (382) | Ft. | 66,000 | 143,200 | 2,900 | | | | | X | X | X | X |
| Nutrient Management (590) | Ac. | 2,020 | 30,300 | 10,100 | | | | | X | | | X |
| Pasture & Hayland Planting (512) | Ac. | 810 | 129,600 | 1,300 | | | | | X | | | X |
| Pest Management (595) | Ac. | 2,020 | 48,500 | 16,200 | | | | | X | | | X |
| Pipeline (516) | Ft. | 33,000 | 96,700 | 500 | | | | | X | | | X |
| Prescribed Grazing (528) | Ac. | 2,020 | 30,300 | 10,100 | | | | | X | | | X |
| Riparian Forest Buffer (391) | Ac. | 21 | 31,500 | 300 | | | | | X | | | X |
| Riparian Herbaceous Cover (390) | Ac. | 21 | 6,300 | 100 | | | | | X | | | X |
| Streambank & Shoreline Prot (580) | Ft. | 2,300 | 109,300 | 5,500 | | | | | X | X | X | X |
| Stream Crossing (578) | No. | 50 | 175,000 | 8,800 | | | | | X | | | X |



Idaho

Lower Henrys - 17040203
8 Digit Hydrologic Unit Profile

August 2008

Conservation Activities for Irrigated Pasture - Continued

| Projected Treatment Needs for Irrigated Pasture (Continued): | | | | | | | | | | | | |
|--|----------|----------|----------------------|---------------------------|--------------------|---------------|---------|----|----------------|------|------|-------|
| Practices | Quantity | | Costs | | Effects | | | | Implementation | | | |
| | Unit | Quantity | Investment Cost | Annual O&M and Mngt. Cost | Water Conservation | Water Storage | Habitat | WQ | EQIP | WHIP | CREP | Other |
| Riparian Pastures (Continued) | Ac. | 2,020 | | | +1 | +1 | +3 | +3 | | | | |
| Tree/Shrub Establishment (612) | Ac. | 12 | 5,600 | 100 | | | | | X | X | | X |
| Upland Wildlife Management (645) | Ac. | 300 | 9,000 | 3,000 | | | | | X | | | X |
| Use Exclusion (472) | Ac. | 100 | 3,400 | 100 | | | | | X | X | X | X |
| Watering Facility (614) | No. | 25 | 21,800 | 200 | | | | | X | | X | X |
| Wetland Wildlife Management (644) | Ac. | 200 | 6,000 | 2,000 | | | | | X | | | X |
| Total RMS Costs | | | \$ 12,780,400 | \$ 524,000 | | | | | | | | |



Idaho

Lower Henrys - 17040203
8 Digit Hydrologic Unit Profile

August 2008

Conservation Activities for Irrigated Pasture - Continued

| RMS Cost Summary for Irrigated Pasture: | | |
|--|----------------------|----------------------|
| Cost Items and Programs | Costs | O&M Costs |
| Non Farm Bill Programs | \$ 639,000 | \$ 26,200 |
| Potential Farm Bill Programs | \$ 12,141,400 | \$497,800 |
| Operator O&M and Management Cost | | \$524,000 |
| Annual Management Incentives (3 yrs - Incentive Payments) | \$ 1,006,300 | |
| Operator Investment | \$ 6,206,600 | |
| Federal Costshare | \$ 5,567,500 | |
| Total RMS Farm Bill Costs | \$ 12,780,400 | |
| Estimated Level of Participation | | 60% |
| Total Acres in RMS System | | 10,100 |
| Anticipated Cost at Estimated Level of Participation | \$ | 7,668,200 |
| Total Acre Feet of Water Saved Annually | | 14,310 |
| Total Annual Forage Production Benefits (animal unit months) | | 40,500 |
| Improves ground water and surface water quality by minimizing off-site transport | | |
| Improves riparian habitat for ESA endangered & threatened species | | |



Idaho

Lower Henrys - 17040203
8 Digit Hydrologic Unit Profile

August 2008

Conservation Activities for Grazed Rangeland, Dry Pasture and Forestland

| Current Conditions | Grazed | Ungrazed | Riparian/Wetland/Potential | Total Acres |
|-----------------------------------|---------|----------|----------------------------|-------------|
| Private Rangeland and Dry Pasture | 125,650 | | 15,080 | 125,650 |
| Typical Management Unit/Ownership | 540 | | | |
| Current Farm Bill participation | 15% | | | |

| Future Conditions | Rangeland / Pasture | Riparian | Total Acres |
|--------------------------|---------------------|----------|-------------|
| | 110,570 | 15,080 | 125,650 |

| Projected Treatment Needs for Grazed Rangeland, Dry Pasture and Forestland: | | | | | | | | | | | | | |
|--|----------|----------|-----------------|---------------------------|--------------------|---------------|---------|----|----------------|------|-----|------|-------|
| Practices | Quantity | | Costs | | Effects | | | | Implementation | | | | |
| | Unit | Quantity | Investment Cost | Annual O&M and Mngt. Cost | Water Conservation | Water Storage | Habitat | WQ | EQIP | WHIP | WRP | CREP | Other |
| Grazed Range, Dry Pasture & Forestland | Ac. | 110,570 | | | +3 | +2 | +3 | +3 | | | | | |
| Animal Trails and Walkways (575) | Ft. | 908,160 | \$ 4,540,800 | \$ 45,400 | | | | | X | | | | X |
| Brush Management (314) | Ac. | 36,490 | 1,824,500 | 18,200 | | | | | X | | | | X |
| Fence (382) | Ft. | 910,800 | 1,976,400 | 39,500 | | | | | X | | | | X |
| Firebreak (394) | Ft. | 454,080 | 908,200 | 18,200 | | | | | X | | | | X |
| Pasture & Hayland Planting (512) | Ac. | 11,060 | 1,769,600 | 17,700 | | | | | X | | | | X |
| Pest Management (595) | Ac. | 110,570 | 2,653,700 | 884,600 | | | | | X | | | | X |
| Pipeline (516) | Ft. | 454,080 | 1,330,500 | 6,700 | | | | | X | | | | X |
| Pond (378) | No. | 45 | 306,000 | 3,100 | | | | | X | | | | X |
| Prescribed Grazing (528) | Ac. | 110,570 | 663,400 | 221,100 | | | | | X | | | | X |
| Range Planting (550) | Ac. | 36,490 | 3,649,000 | 36,500 | | | | | X | | | | X |
| Spring Development (574) | No. | 85 | 204,000 | 1,000 | | | | | X | X | | | X |



Idaho

Lower Henrys - 17040203 8 Digit Hydrologic Unit Profile

August 2008

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

| Projected Treatment Needs for Grazed Rangeland, Dry Pasture and Forestland (Continued): | | | | | | | | | | | | | |
|---|----------|----------|---------------------|---------------------------|--------------------|---------------|---------|----|----------------|------|-----|------|-------|
| Practices | Quantity | | Costs | | Effects | | | | Implementation | | | | |
| | Unit | Quantity | Investment Cost | Annual O&M and Mngt. Cost | Water Conservation | Water Storage | Habitat | WQ | EQIP | WHIP | WRP | CREP | Other |
| Grazed Range, Dry Pasture & Forestland (Continued) | Ac. | 110,570 | | | +3 | +2 | +3 | +3 | | | | | |
| Upland Wildlife Management (645) | Ac. | 22,120 | 663,600 | 221,200 | | | | | X | X | | | X |
| Watering Facility (614) | No. | 170 | 147,900 | 1,500 | | | | | X | | | | X |
| Well (642) | No. | 85 | 573,800 | 5,700 | | | | | X | | | | X |
| Range & Dry Pasture Riparian | Ac. | 15,080 | | | +3 | +2 | +3 | +3 | | | | | |
| Channel Bank Vegetation (322) | Ft. | 6,890 | 14,100 | 300 | | | | | X | | | | X |
| Channel Stabilization (584) | Ft. | 6,890 | 172,300 | 8,600 | | | | | X | | | | X |
| Fence (382) | Ft. | 126,720 | 275,000 | 5,500 | | | | | X | X | X | | X |
| Pasture & Hayland Planting (512) | Ac. | 1,510 | 241,600 | 2,400 | | | | | X | | | | X |
| Pest Management (595) | Ac. | 15,080 | 361,900 | 120,600 | | | | | X | | | | X |
| Pipeline (516) | Ft. | 63,360 | 185,600 | 900 | | | | | X | | | | X |
| Prescribed Grazing (528) | Ac. | 15,080 | 90,500 | 30,200 | | | | | X | | | | X |
| Pumping Plant (533) | No. | 12 | 34,600 | 300 | | | | | X | | | | X |
| Riparian Forest Buffer (391) | Ac. | 80 | 120,000 | 1,200 | | | | | X | | | | X |
| Riparian Herbaceous Cover (390) | Ac. | 80 | 24,000 | 200 | | | | | X | X | X | | X |
| Stream Crossing (578) | No. | 190 | 665,000 | 33,300 | | | | | X | X | X | | X |
| Streambank & Shoreline Prot (580) | Ft. | 17,230 | 818,400 | 40,900 | | | | | X | X | | | X |
| Tree/Shrub Establishment (612) | Ac. | 40 | 18,800 | 200 | | | | | X | X | | | X |
| Upland Wildlife Management (645) | Ac. | 3,020 | 90,600 | 30,200 | | | | | X | X | | | X |
| Use Exclusion (472) | Ac. | 750 | 25,500 | 800 | | | | | X | X | X | | X |
| Watering Facility (614) | No. | 25 | 21,800 | 200 | | | | | X | | X | | X |
| Wetland Wildlife Management (644) | Ac. | 1,510 | 45,300 | 15,100 | | | | | X | | X | | X |
| Total RMS Costs | | | \$24,416,400 | \$1,811,300 | | | | | | | | | |



Idaho

Lower Henrys - 17040203
8 Digit Hydrologic Unit Profile

August 2008

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

| RMS Cost Summary for Grazed Rangeland, Pasture and Forestland: | | |
|---|---------------------|----------------------|
| Cost Items and Programs | Costs | O&M Costs |
| Non Farm Bill Programs | \$ 1,220,800 | \$ 90,600 |
| Potential Farm Bill Programs | \$23,195,600 | \$1,720,700 |
| Operator O&M and Management Cost | | \$1,811,300 |
| Annual Management Incentives (3 yrs - Incentive Payments) | \$ 4,569,000 | |
| Operator Investment | \$ 8,671,400 | |
| Federal Costshare | \$11,176,000 | |
| Total RMS Farm Bill Costs | \$24,416,400 | |
| Estimated Level of Participation | | 35% |
| Total Acres in RMS System | | 44,000 |
| Anticipated Cost at Estimated Level of Participation | \$ | 8,545,700 |
| Total Annual Forage Production Benefits (acre unit months) | | 6,600 |
| 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 of 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. Note that an AFO can be designated as a CAFO regardless of number of animals if it is found to be a significant polluter.

Kinds and amounts of component practices required for proper operation are site specific, but typically include the following: Anaerobic Digester (366), Composting Facility (317), Access Road (560), Corral Dust Management (785), 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), 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 | | Total |
|---------------------------------|-----|-------|
| CAFOs | | |
| AFOs | | 14 |
| Current Farm Bill participation | 15% | |
| Total CAFOs and AFOs | | 14 |

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



Idaho

Lower Henrys - 17040203
8 Digit Hydrologic Unit Profile

August 2008

Conservation Activities for Headquarters – Continued

| Projected Treatment Needs for Headquarters: | | | | | | | | | | | | | |
|--|----------|----------|----------------------------|---------------------------|--------------------|---------------|---------|----|----------------|------|-----|------|-------|
| Practices | Quantity | | Costs | | Effects | | | | Implementation | | | | |
| | Unit | Quantity | Additional Investment Cost | Annual O&M and Mngt. Cost | Water Conservation | Water Storage | Habitat | WQ | EQIP | WHIP | WRP | CREP | Other |
| Dairy | No. | | | | +3 | +2 | +3 | +3 | | | | | |
| Structural/Management Practices | | | | | | | | | | | | | |
| Waste Storage Facility (313) CAFO | No. | - | - | - | | | | | X | | | | X |
| Waste Storage Facility (313) AFO | No. | - | - | - | | | | | X | | | | X |
| Feed Lot | No. | | | | +3 | +1 | +3 | +3 | | | | | |
| Structural/Management Practices | | | | | | | | | | | | | |
| Waste Storage Facility (313) CAFO | No. | - | - | - | | | | | X | | | | X |
| Waste Storage Facility (313) AFO | No. | 2 | 90,000 | 1,800 | | | | | X | | | | X |
| Total RMS Costs | | | \$ 90,000 | \$ 1,800 | | | | | | | | | |



Idaho

Lower Henrys - 17040203
8 Digit Hydrologic Unit Profile

August 2008

Conservation Activities for Headquarters – Continued

| RMS Cost Summary for Headquarters | | |
|---|------------------|----------------------|
| Cost Items and Programs | Costs | O&M Costs |
| Non Farm Bill Programs | \$ 4,500 | \$ 100 |
| Potential Farm Bill Programs | \$ 85,500 | \$ 1,700 |
| Operator O&M and Management Cost | | \$ 1,800 |
| Annual Management Incentives (3 yrs - Incentive Payments) | \$ 9,000 | |
| Operator Investment | \$ 42,800 | |
| Federal Costshare | \$ 38,200 | |
| Total RMS Costs | \$ 90,000 | |
| Estimated Level of Participation | | 35% |
| Total CAFO/AFO in RMS System | | 1 |
| Anticipated Cost at Estimated Level of Participation | \$ | 31,500 |
| Reduces impact to ground and surface water quality | | |
| 90% participation reflects Local, State and Federal regulations | | |