

## Introduction

The Medicine Lodge 8-Digit Hydrologic Unit Code (HUC) subbasin contains 615,240 acres. Sixty six percent of the subbasin is in Clark County, 33 percent in Jefferson County and the remaining one percent is in Lemhi County. Thirty four percent of the basin is privately owned and 66 percent is publicly owned.

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

Elevations range from 10,423 feet in the northern portion of the HUC to 11,394 feet in the western portion, to 5,260 feet in the southern portion of the HUC.

Conservation assistance is provided by 1 Soil Conservation District, 3 Soil and Water Conservation Districts, and 1 Resource Conservation and Development office.

## Profile Contents

[Introduction](#)

[Physical Description](#)

[Landuse Map & Precipitation Map](#)

[Common Resource Area](#)

[Resource Settings](#)

[Progress/Status](#)

[Resource Concerns](#)

[Census and Social Data](#)

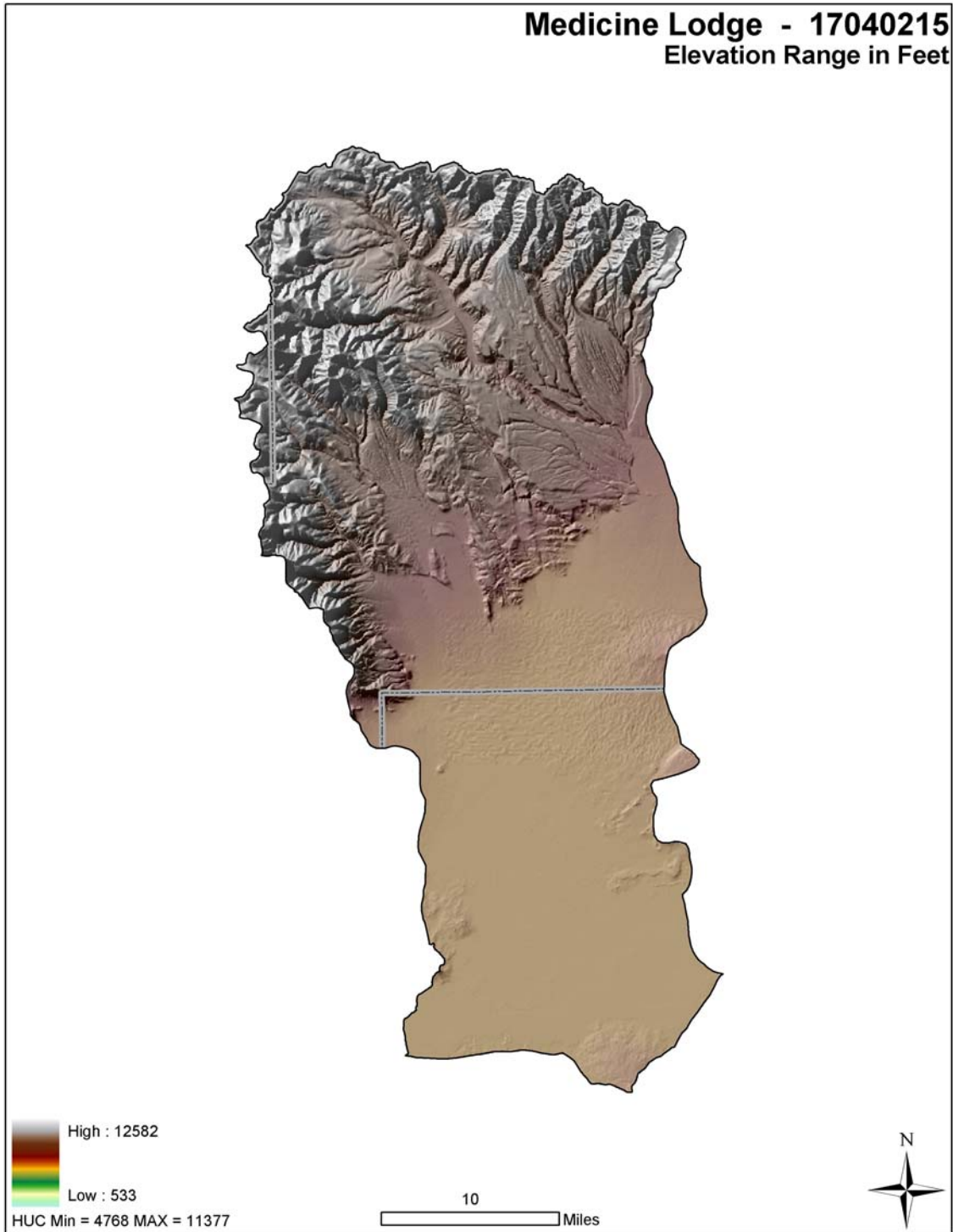
[Footnotes/Bibliography](#)

[Future Conservation Needs](#)

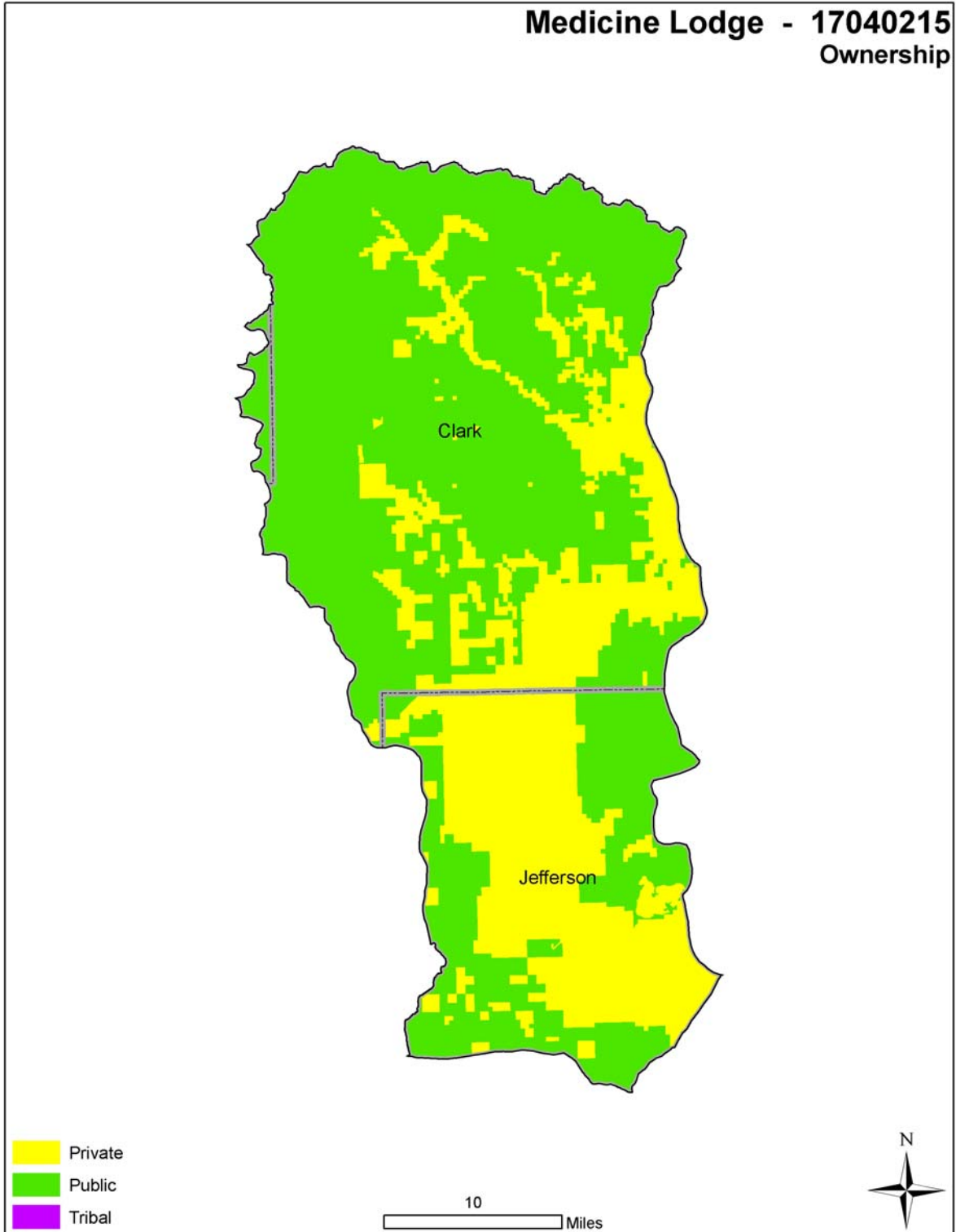
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**Relief Map**



**General Ownership<sup>1</sup>**





# Medicine Lodge - 17040215

Idaho

8 Digit Hydrologic Unit Profile

January 2008

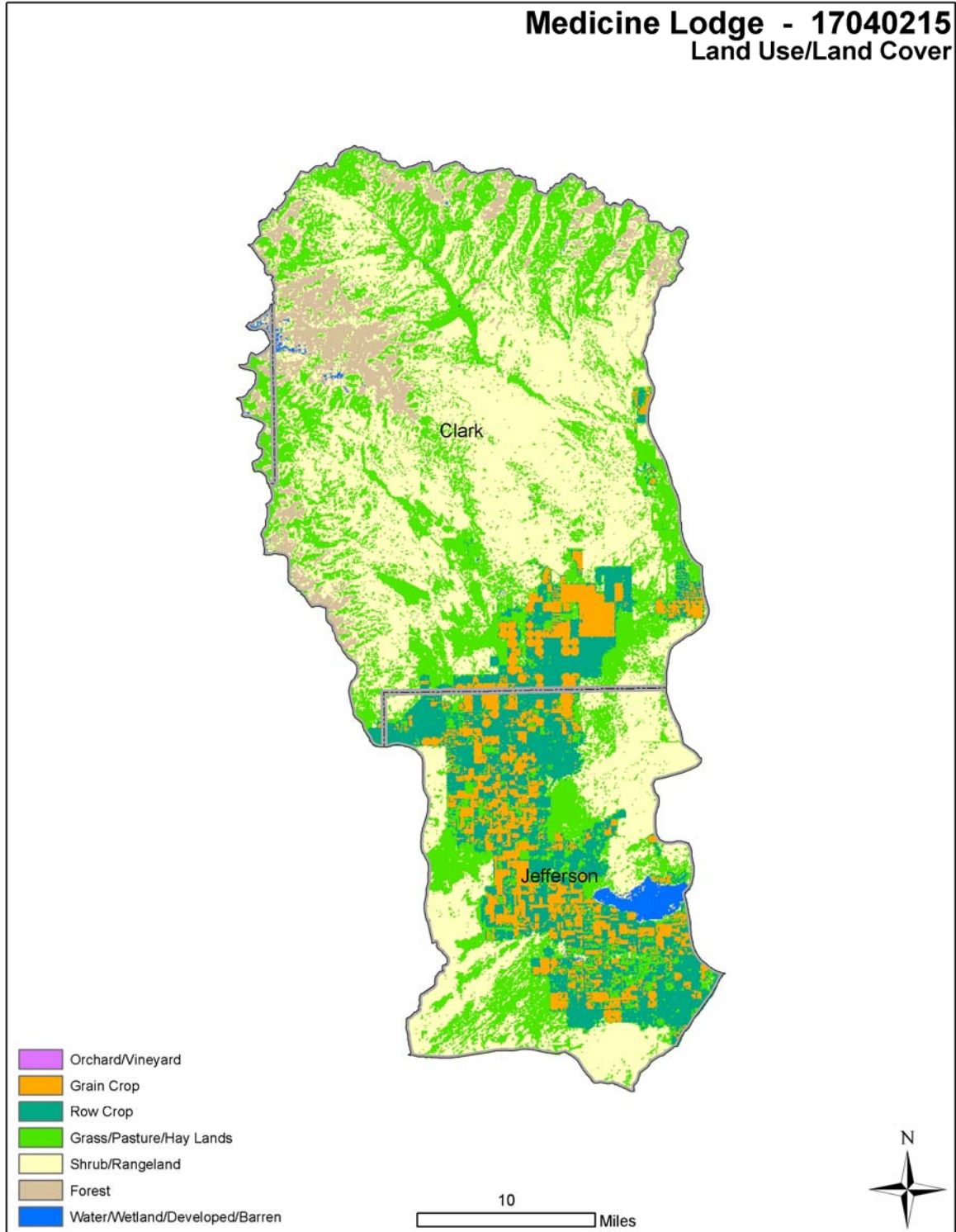
## Physical Description

| Land Cover/<br>Land Use<br>( <i>NLCD</i> <sup>/2</sup> ) | Ownership - ( <i>2003 Draft BLM Surface Map Set</i> <sup>/1</sup> ) |            |                |            |                             |           |                 | Totals      | % of HUC |
|--|---|------------|----------------|------------|-----------------------------|-----------|-----------------|-------------|----------|
|  | Public  |            | Private        |            | Tribal                      |           |                 |             |          |
|  | Acres   | %          | Acres          | %          |                             | %         |                 |             |          |
| Forest   | 43,940  | 7%         | 560            | <1%        |                             | --        | 44,500          | 7%          |          |
| Grain Crops  |   | --         | 46,750         | 8%         |                             |           | 46,750          | 8%          |          |
| Conservation Reserve<br>Program (CRP) Land <sup>/3</sup> |   | --         | 1,010          | <1%        |                             |           | 1,010           | <1%         |          |
| Grass/Pasture/Hay Lands                                  | 104,220   | 17%        | 61,870         | 10%        |                             | --        | 166,090         | 27%         |          |
| Orchards/Vineyards/Berries                               |   | --         |                | --         |                             | --        |                 | --          |          |
| Row Crops  |   | --         | 54,460         | 9%         |                             | --        | 54,460          | 9%          |          |
| Shrub/Rangelands   | 248,900   | 40%        | 44,170         | 7%         |                             | --        | 293,070         | 47%         |          |
| Water/Wetlands/<br>Developed/Barren                      | 5,960   | 1%         | 3,400          | 1%         |                             | --        | 9,360           | 2           |          |
| <b>Idaho HUC Totals</b>                                  | <b>403,020</b>  | <b>66%</b> | <b>212,220</b> | <b>34%</b> |                             | <b>--</b> | <b>615,240</b>  | <b>100%</b> |          |
| <b>Irrigated Lands</b> <sup>/4</sup>                     | <b>Type of Land</b>   |            | <b>ACRES</b>   |            | <b>% of Irrigated Lands</b> |           | <b>% of HUC</b> |             |          |
|  | Cultivated Cropland   |            | 101,400        |            | 74.1                        |           | 16.5            |             |          |
|  | Non-Cultivated Cropland *   |            | 30,200         |            | 22.1                        |           | 4.9             |             |          |
|  | Pastureland   |            | 5,300          |            | 3.9                         |           | 0.9             |             |          |
|  | <b>Total Irrigated Lands</b>  |            | <b>136,900</b> |            | <b>100.0</b>                |           | <b>22.2</b>     |             |          |

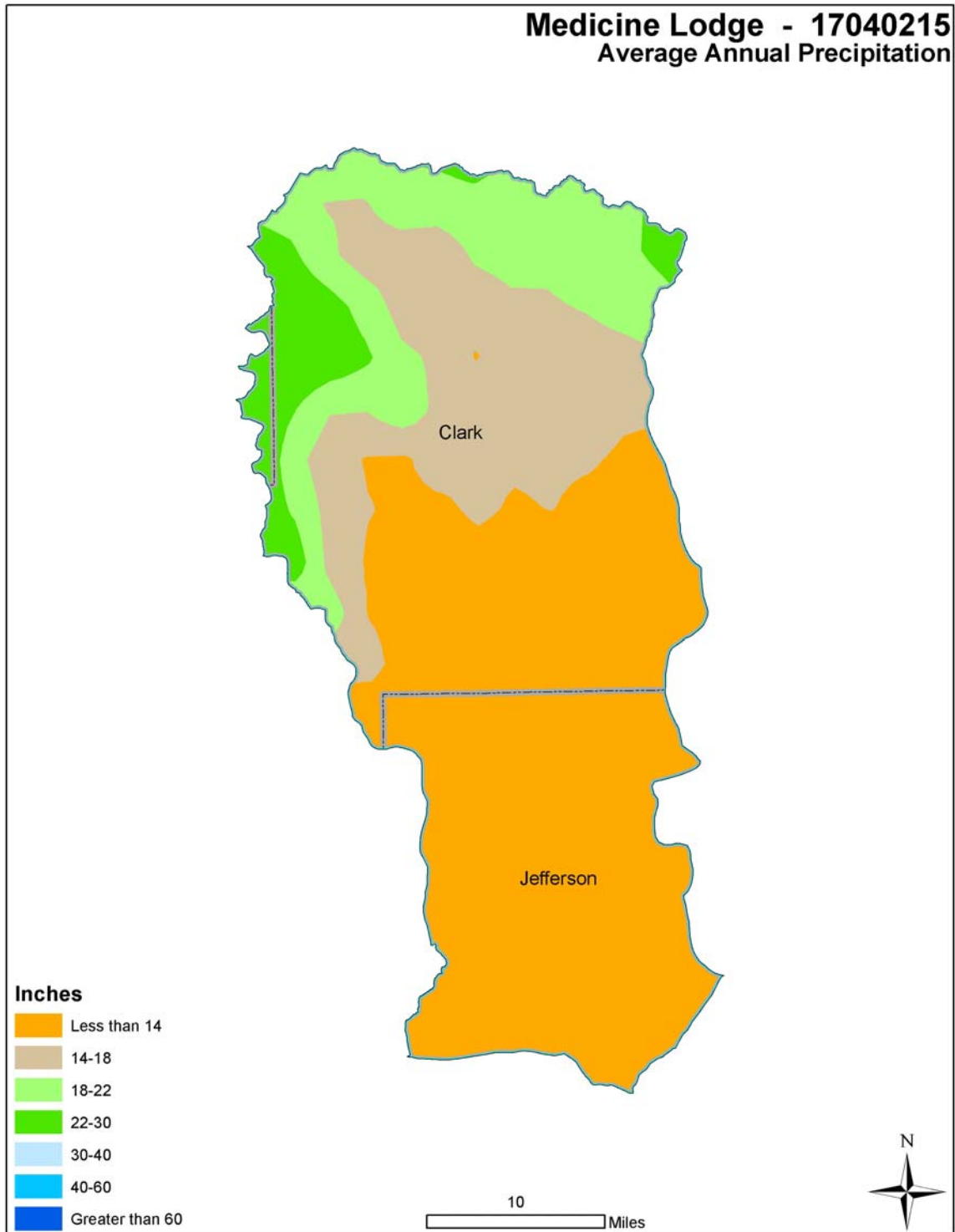
\* Includes permanent hayland and horticultural cropland.

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

**Land Use/Land Cover<sup>2</sup>**

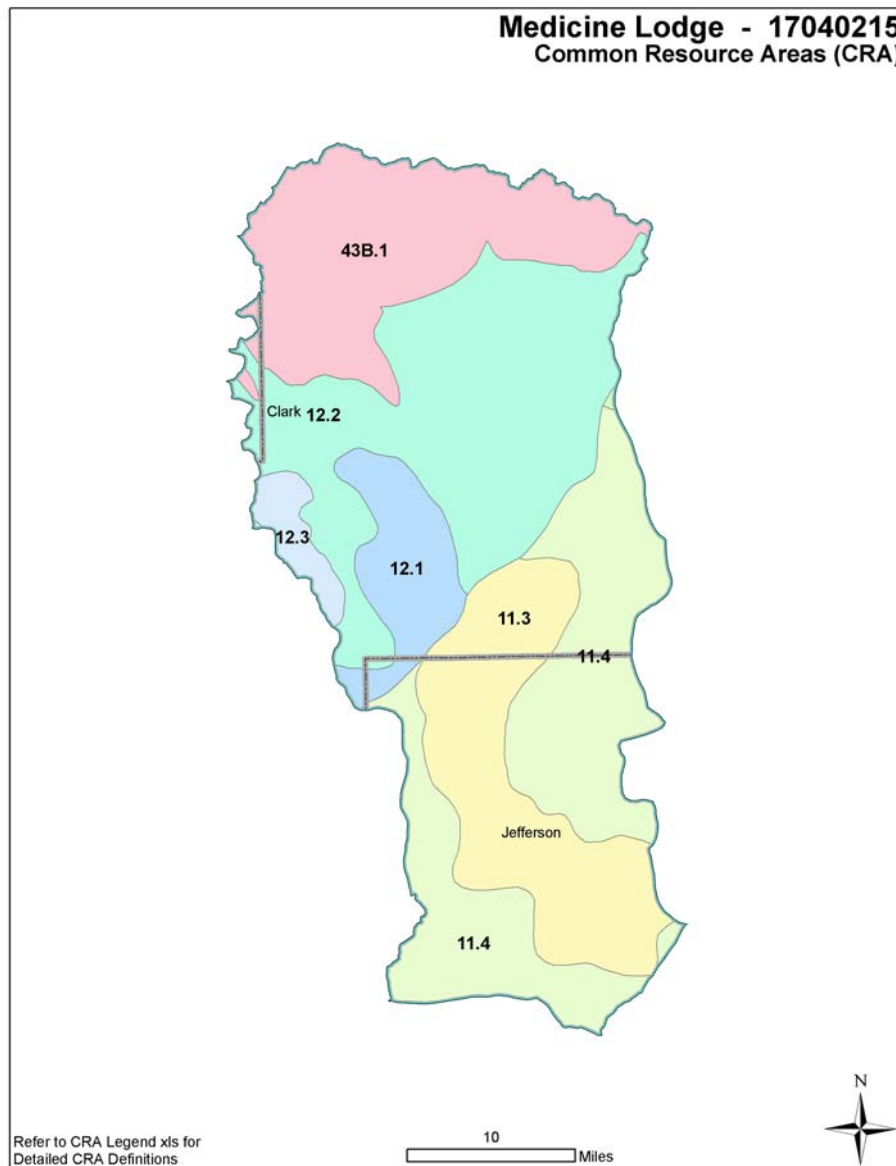


**Average Annual Precipitation<sup>LS</sup>**



## Common Resource Area Map

The Common Resource Areas (CRA) delineated below for the Medicine Lodge HUC are described in the next section (for additional information, see [http://www.id.nrcs.usda.gov/technical/soils/common\\_res\\_areas.html](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 Plain:** This unit is characterized by shallow, stony soils that are unsuitable for cultivation. Only small areas have soils deep enough to be farmed under sprinkler irrigation. Rangeland is widespread. Potential natural vegetation is mostly sagebrush and bunchgrass. It is cool enough to have some regeneration capacity and still contains native plants.

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

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

**12.3 Lost River Valleys and Mountains - Barren Mountains:** This unit is largely underlain by quartzite and carbonate-rich rocks and is drier than mountainous units to the north. Elevations range from about 6,800 to 10,000 feet. Open-canopied Douglas-fir/lodgepole pine/subalpine fir forests, aspen groves, sagebrush, mountain brush, and grasses occur. Forests are limited to a narrow elevational band and are most widespread on north-facing slopes. Pacific forest elements are absent and barrens are common.



## Common Resource Area Descriptions - Continued

**43B.1 Central Rocky Mountains - High Mountains:** This area is in western and southwestern Montana, eastern and northeastern Idaho, and northwestern Wyoming. Rugged mountains are the dominant feature of this area. Nearly all of this area is federally owned and administered. High mountains with steep slopes and sharp crests are cut by narrow valleys, most of which have steep gradients. Average annual precipitation is mainly 400 to 1525 mm, increasing with elevation. The average annual temperature ranges from 2 to 7 degrees C. Average frost free period is 30 to 60 days. Frost occurs every month of the year on high mountains. Most soils are skeletal and are medium to moderately coarse textured. This area supports coniferous forests. It also includes areas above treeline that have tundra and alpine grasslands. There are also lower mountain passes that are drier and have shrubs and grasses used for grazing.

## Streamflow Summary [↗](#)

The Medicine Lodge Creek has a drainage area of about 870 square miles and is similar to other rivers in eastern Idaho in that it becomes subterranean after sinking into a depression of volcanic soils. Birch Creek, Little Lost River and Big Lost River are examples of other rivers in adjacent basins with this unique characteristic.

Hydrologic data is limited in the Medicine Lodge HUC. The only active USGS gaging station in the basin is Medicine Lodge Creek near Small, Idaho. The historic streamflow record is discontinuous, making it difficult to quantify streamflows in this region. The station was operated 1921-23, 1941-49 and 1985 to present. The station monitors drainage from an area of about 270 square miles and is located in the lower third of the basin. Streamflows are used for irrigation which also depletes the already minimal water supplies. There are many small diversions above the station for irrigation and water is also diverted during the winter by up stream ranches.

Based on historic streamflow data, it appears there is a delay in streamflow runoff from when the snow melts. Average annual streamflow is 43,000 acre-feet. The May-July period accounts for 38 percent of the annual runoff, 16,220 acre-feet. June provides the greatest volume 15 percent of the annual runoff, May accounts for 12 percent and July 11 percent.

## Climatic Stations

Dubois Experimental Station is the only active valley National Weather Service station in Clark County. In rural Medicine Lodge watershed, there are two snow courses, Irving Creek and Webber Creek, that are measured monthly during the winter snow season to inventory the mountain snowpack for monitoring the water supply. Irving Creek Snow Course has an elevation of 7,280 feet and Webber Creek Snow Course sits at 6,700 feet. The average April 1 snow water content for both sites is about 6 inches while the average snow depth for both sites is 23 inches. The nearest automated NRCS SNOTEL site is Beagle Springs which is located over the divide in Montana.



# Medicine Lodge - 17040215

Idaho

8 Digit Hydrologic Unit Profile

January 2008

|   |  | CFS                       |              |
|---|--|---------------------------|--------------|
| <b>Irrigated Adjudicated Water Rights</b> <sup>(6)</sup>  | Surface Water  | 353                       |              |
|   | Groundwater  | 2073                      |              |
|   | Total Irrigated Adjudicated Water Rights   | 2426                      |              |
|   |  |                           |              |
| <b>Stream Flow Data</b> <sup>(7)</sup>  | USGS #13116500, Medicine Lodge Creek near Small, ID; intermittent record 1921-2006                   | Average Annual            | 43,000       |
|   |  | May – July Average        | 16,220       |
|   |  | Percent of Average Annual | 38           |
|   |  |                           |              |
| <b>Stream Data</b><br><i>*Percent of Total Miles of streams in HUC</i>  | Total Stream Miles <sup>(8)</sup>  | 1,479                     |              |
|   | Water quality impaired streams <sup>(9,10)</sup>   | 360                       | 24%          |
|   | Anadromous Fish Presence (Streamnet) <sup>(11)</sup>   | --                        |              |
|   | Bull Trout Presence (Streamnet) <sup>(11)</sup>  | --                        |              |
|   |  |                           |              |
| <b>Land Cover/Use</b> <sup>(2)</sup><br>based on a 100 ft. stretch on both sides of all streams in the 100K Hydro Layer |  |                           | <b>ACRES</b> |
|   | Forest   | 3,284                     | 5%           |
|   | Grain Crops  | 3,676                     | 6%           |
|   | Grass/Pasture/Hay Lands  | 21,130                    | 34%          |
|   | Row Crops  | 4,453                     | 7%           |
|   | Shrub/Rangelands – Includes CRP Lands  | 28,630                    | 46%          |
|   | Water/Wetlands/Developed/Barren  | 1,251                     | 2%           |
|   | <b>Total Acres of 100 ft stream buffers</b>  | <b>62,424</b>             | <b>100%</b>  |
| <b>Land Capability Class</b> <sup>(4)</sup>   | <b>I</b> – slight limitations  | 0                         | 0            |
|   | <b>II</b> – moderate limitations   | 0                         | 0            |
|   | <b>III</b> – severe limitations  | 80,800                    | 65%          |
|   | <b>IV</b> – very severe limitations  | 28,800                    | 23%          |
|   | <b>V</b> – no erosion hazard, but other limitations  | 500                       | 0            |
|   | <b>VI</b> – severe limitations, unsuited for cultivation, limited to pasture, range, forest          | 10,700                    | 9%           |
|   | <b>VII</b> – very severe limitations, unsuited for cultivation, limited to grazing, forest, wildlife | 3,600                     | 3%           |
|   | <b>VIII</b> – misc areas have limitations, limited to recreation, wildlife, and water supply         | 0                         | 0            |
|   | <b>Total Crop &amp; Pasture Lands</b>  | <b>124,400</b>            | <b>100%</b>  |

| <b>Confined Animal Feeding Operations – Dairies/Feedlots</b> <sup>/12,13,26</sup> |        |      |         |             |             |         |
|---|--------|------|---------|-------------|-------------|---------|
|   | Number | <200 | 200-500 | 500-750     | 750-1000    | >1000   |
| <b>Dairy</b>  | 9      | 7    | 2       | -           | -           | -       |
|   | Number | <300 | 300-999 | 1,000-4,999 | 5,000-9,000 | >10,000 |
| <b>Feedlots</b>   | 18     | 13   | 5       | -           | -           | -       |

## 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.

### 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%.

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.

**Resource Settings** - continued**Hayland**

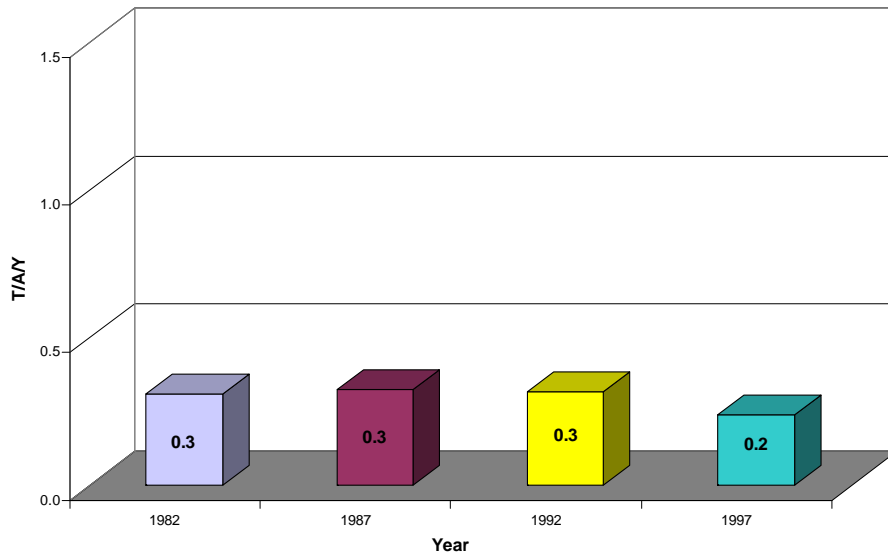
Conventionally tilled, surface and sprinkler irrigated on 0-7% slopes. Irrigation water is normally plentiful. Small grains and alfalfa are grown in rotation, with alfalfa typically maintained for 4-6 years. Grazing of crop aftermath is common. Nutrient, pest or irrigation water management may be less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

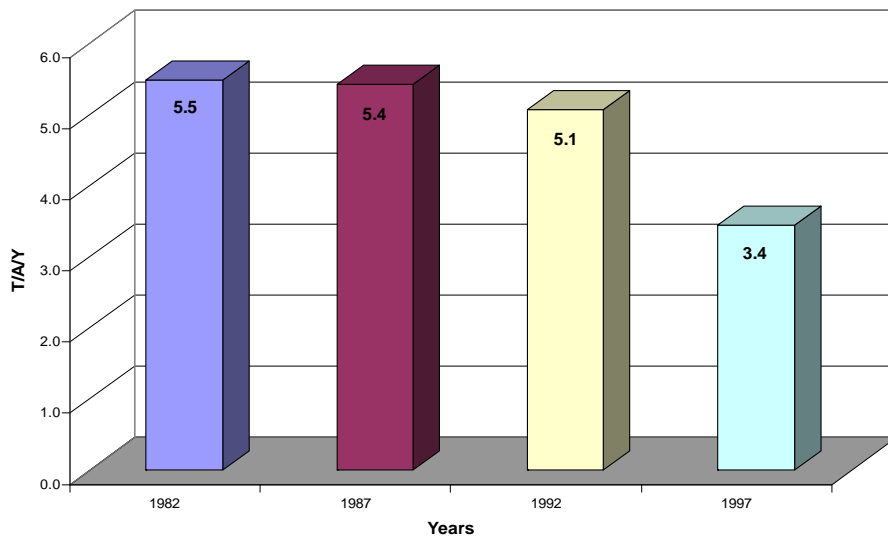
**Resource Concerns**

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



Sheet and rill erosion by water on the sub basin croplands, pasturelands and CRP have been essentially static since 1982. Sheet and rill erosion is not a major issue on cropland in this sub basin. Susceptibility to sheet and rill erosion is low in this sub basin because the natural precipitation is low and the cropland is relatively flat.

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



Wind erosion on the sub basin's croplands, pasturelands and CRP has steadily reduced since 1982. Erosion rates decreased from about 5.5 tons per acre per year in 1982 to about 3.4 tons per acre per year in 1997. Wind erosion on the eastern side of the HUC is a moderate to severe problem after low residue crops. The I values of the soils range from 86 to 134-220.

**Resource Concerns – Continued**

| Impacted Water Bodies <sup>9,10</sup><br>(ID17040215) | Stream Miles | Sediment,<br>Siltation or<br>TSS | Nutrients | Bacteria       | Temperature    | Dissolved<br>Oxygen | Flow<br>Alteration <sup>1</sup> | Other or<br>Unknown |
|---|--------------|----------------------------------|-----------|----------------|----------------|---------------------|---------------------------------|---------------------|
| Crooked Creek (SK021_02)                              | 53.1         |                                  |           |                | x <sup>2</sup> |                     |                                 | x                   |
| Crooked Creek (SK021_03)                              | 3.7          |                                  |           |                | x <sup>2</sup> |                     |                                 |                     |
| Deep Creek (SK018_02)                                 | 77.1         |                                  |           |                |                |                     |                                 | x                   |
| Divide Creek (SK014_02)                               | 13.9         |                                  |           | x <sup>3</sup> |                |                     |                                 |                     |
| Dry Creek (SK009_02)                                  | 5.2          | x <sup>3</sup>                   |           |                | x <sup>2</sup> |                     |                                 |                     |
| Dry Creek (SK009_03)                                  | 10.5         |                                  |           |                | x <sup>2</sup> |                     |                                 |                     |
| Edie Creek (SK010_02)                                 | 10.2         | x                                |           |                | x <sup>2</sup> |                     |                                 | x <sup>1</sup>      |
| Fritz Creek (SK016_02)                                | 15.3         |                                  |           |                | x              |                     |                                 |                     |
| Horse Creek (SK015_02)                                | 8.4          | x <sup>3</sup>                   |           |                | x <sup>2</sup> |                     |                                 | x                   |
| Indian Creek (SK003_03)                               | 6.0          |                                  |           |                | x <sup>2</sup> |                     |                                 | x                   |
| Indian Creek (SK003_02)                               | 10.5         |                                  |           |                | x <sup>2</sup> |                     |                                 |                     |
| Irving Creek (SK012_03)                               | 2.6          | x                                |           |                | x <sup>2</sup> |                     |                                 | x <sup>1</sup>      |
| Irving Creek (SK012_02)                               | 13.7         | x                                |           | x <sup>3</sup> | x <sup>2</sup> |                     |                                 |                     |
| Medicine Lodge Creek (SK006_04)                       | 14.7         | x                                |           |                | x              |                     | x <sup>1</sup>                  |                     |
| Middle Creek (SK007_03)                               | 5.6          |                                  |           | x <sup>3</sup> | x <sup>2</sup> |                     |                                 | x                   |
| Middle Creek (SK008_02)                               | 12.1         | x <sup>3</sup>                   |           |                | x <sup>2</sup> |                     |                                 |                     |
| Middle Creek (SK007_02)                               | 27.4         |                                  |           |                | x <sup>2</sup> |                     |                                 |                     |
| Warm Creek (SK013_02,03)                              | 17.3         |                                  |           |                | x <sup>2</sup> |                     |                                 |                     |
| Webber Creek (SK017_02)                               | 28.3         |                                  |           |                | x <sup>2</sup> |                     |                                 |                     |
| WF Indian Creek (SK005_02)                            | 24.5         |                                  |           | x <sup>3</sup> |                |                     |                                 | x                   |
| <b>TOTAL STREAM MILES:</b>                            | <b>360.1</b> |                                  |           |                |                |                     |                                 |                     |

<sup>1</sup> Flow alteration and habitat alteration is not considered a pollutant by the Idaho Department of Environmental Quality, and is not addressed by the TMDL.

<sup>2</sup> TMDL recommends listing on the next Integrated Report

<sup>3</sup> Not addressed in the Subbasin Assessment

Shading indicates TMDL in place.

Medicine Lodge Creek's designated beneficial uses include salmonid spawning, coldwater biota, primary contact recreation, and domestic water supply. It is also a state-designated Special Resource Water. The primary surface water quality concerns within the watershed are sediment and temperature. Subsurface fine sediments impact the abundance and quality of fish habitat. The primary source of sediment appears to be streambank erosion. Pollutant sources include land disturbance from grazing (uncontrolled animal access), roads/road crossings that are not maintained, crop production, recreation, and irrigation diversions. Many areas of the Medicine Lodge watershed are in the process of re-establishing a flood plain following a large flooding event in 1995. Streambank condition is used as a surrogate for streambank erosion estimates.

**Resource Concerns – Continued**

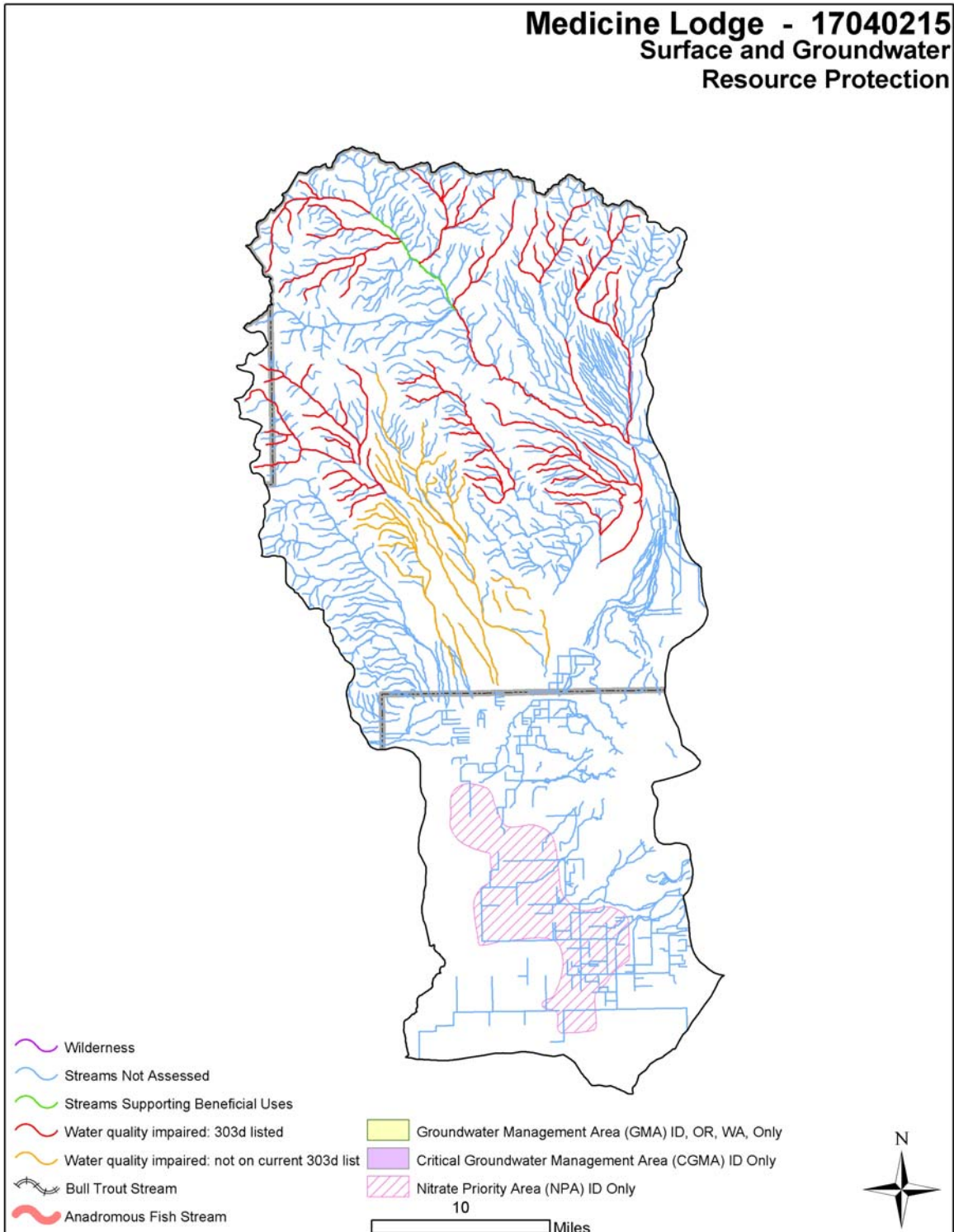
The subsurface fine sediment target for Medicine Lodge is less than or equal to 28%, in potential or known salmonid spawning habitat. Some water bodies in the watershed have been impacted by flow or habitat alteration, but these impacts are not addressed in the TMDL. The Mud Lake nitrate priority area is located in the southern portion of the watershed, and ranks 21<sup>st</sup> of 25 nitrate-impacted areas in the state. The median nitrate level in sampled wells was 2.5 mg/L in 2001, and appears to be trending upwards. A few pesticides have been detected, but all were low-level detections. Irrigated agriculture, livestock, and human activities/development (e.g., septic systems, lawn care) all contribute to aquifer impact.

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

| <b>Watershed Projects, Plans, Studies, and Assessments*</b>      |  |
|--|--|
| <b>Federal:</b>  | <b>State:</b>  |
| <b>NRCS Watershed Plans/Studies/Assessments<sup>/14,15</sup></b> | <b>IDEQ TMDLs<sup>/16</sup></b>                                |
| None   | Medicine Lodge Subbasin Assessment and TMDL (2003)             |
|  | <b>IDEQ 319 Projects<sup>/17</sup></b>                         |
|  | Medicine Lodge Creek TMDL Implementation Project (on-going)    |
|  |  |
| <b>NWPCC Subbasin Plans and Assessments<sup>/18</sup></b>        | <b>SCC Plans/Projects<sup>/19</sup></b>                        |
| Upper Snake Province Assessment (2004)                           | Medicine Lodge TMDL Agric Implementation Plan (2003)           |
|  |  |
|  | <b>ISDA Regional Water Quality Projects<sup>/20</sup></b>      |
|  | Mud Lake Regional Water Monitoring Project (2002)              |
|  | Medicine Lodge Subbasin Quality Monitoring Report (IASCD-2005) |
|  | <b>IDWR Comprehensive Basin Plans<sup>/21</sup></b>            |
|  | None   |

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

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







# Medicine Lodge - 17040215

Idaho

8 Digit Hydrologic Unit Profile

January 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                         |           |                            |
|                                       | Ephemeral or classic gully         |         |         |           |                         | X                         |           |                            |
|                                       | Irrigation-induced                 |         |         |           | X                       |                           |           |                            |
|                                       | Wind                               |         |         |           | X                       | X                         |           |                            |
|                                       | Streambank                         | X       | X       |           | X                       | X                         | X         |                            |
| Water Quantity                        | Inefficient use on irrigated lands |         |         |           | X                       | X                         |           |                            |
| Water Quality, Surface                | Suspended sediment                 | X       | X       |           | X                       | X                         | X         |                            |
|                                       | Nutrients and organics             | X       | X       |           | X                       | X                         |           |                            |
| Water Quality, Ground                 | Nutrients and organics             |         | X       |           | X                       | X                         |           |                            |
|                                       | Pesticides                         |         | X       |           | X                       | X                         |           |                            |
| Soil Condition                        | Organic matter depletion           |         |         |           |                         | X                         |           |                            |
|                                       | Compaction                         | X       |         |           |                         | X                         |           |                            |
| Plant Condition                       | Productivity, health and vigor     | X       | X       |           |                         |                           | X         |                            |
|                                       | Noxious and invasive plants        | X       | X       |           | X                       | X                         | X         |                            |
|                                       | Wildfire hazard                    |         | X       |           |                         |                           | X         |                            |
| Domestic Animals                      | Inadequate feed or water           | X       |         |           |                         |                           | X         |                            |
| Fish and Wildlife                     | Inadequate water                   | X       | X       |           |                         |                           | X         |                            |
|                                       | Inadequate cover/shelter           | X       | X       |           | X                       | X                         | X         |                            |

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

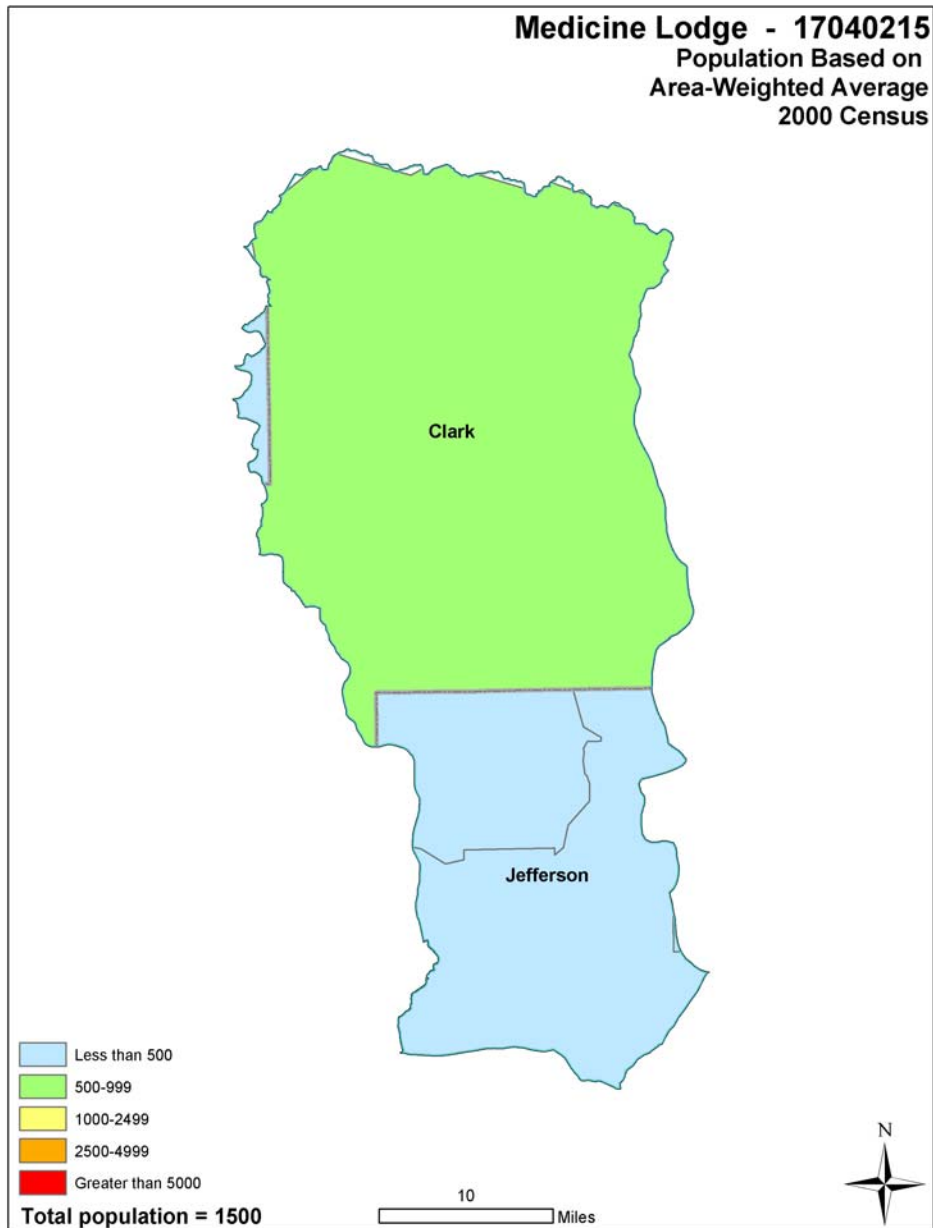
**Human considerations:** Implementation of conservation practices and enhancement has the potential for change in management and cost of production. Installation of practices will have an upfront cost and require maintenance. In the short run increased management may be required as new techniques are 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 <sup>/25</sup>   |  |
|---|--|
| Threatened and Endangered Species   | Candidate Species  |
| <b>Mammals</b> – Lynx<br><b>Birds</b> – None<br><b>Fish</b> – None<br><b>Invertebrates</b> – None<br><b>Plants</b> – None | <b>Plants</b> – None<br><br><b>PROPOSED SPECIES</b> – None |
| <b>ESSENTIAL FISH HABITAT</b> – None  | <b>CRITICAL FISH HABITAT</b> – None                        |

**Census and Social Data** [/26](#)

Population: 1,500

Number of Farms: 250





## Medicine Lodge - 17040215

Idaho

8 Digit Hydrologic Unit Profile

January 2008

### Census and Social Data - continued

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.

Sixty-one 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 6.4 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 850 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, farm size is up 13.3 percent. The market value of production is nearly unchanged, rising 0.1 percent. Government payments to farmers have increased 17.7 percent. Farm sales range from less than \$1,000 to more than \$500,000 per year. Seventy-one percent of farms reported sales of less than \$50,000 per year.

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

|        | Number of farms | Average size farm | Market Value of Production (Average Farm) | Government Payments (Average Farm) |
|--------|-----------------|-------------------|---|------------------------------------|
| 1997   | 283             | 750               | \$260,800                                 | \$14,700                           |
| 2002   | 250             | 850               | \$261,100                                 | \$17,300                           |
| Change | - 11.6%         | 13.3%             | 0.1%                                      | 17.7%                              |

#### Economic Profile:

|                                    | Watershed | Idaho     | United States |
|------------------------------------|-----------|-----------|---------------|
| Population                         | 1,500     | 1,466,000 | 299,398,000   |
| Per Capita Personal Income (2005)  | \$20,500  | \$28,500  | \$34,500      |
| Median Home Value (2000)           | \$79,700  | \$106,600 | \$119,600     |
| Percent Unemployment (2006)        | 6.9%      | 5.8%      | 5.4%          |
| Percent Below Poverty Level (2004) | 12.6%     | 11.5%     | 12.7%         |



# Medicine Lodge - 17040215

Idaho

8 Digit Hydrologic Unit Profile

January 2008

## Progress/Status

| PRS Data  |       |       |       |       |              |       |
|---|-------|-------|-------|-------|--------------|-------|
| Conservation Treatment Acres                              | FY04  | FY05  | FY06  | FY07  | Avg/<br>Year | Total |
| CNMP (100) (no.)  | 0     | 1     | 0     | 1     | 0.5          | 2     |
| Conservation Crop Rotation (328) (acres)                  | 300   | 928   | 571   | 578   | 594.3        | 2377  |
| Dam (402) (ac-ft)   | 0     | 0     | 1     | 0     | 0.3          | 1     |
| Fence (382) (ft)  | 7363  | 7134  | 27352 | 6033  | 11970.5      | 47882 |
| Forage Harvest Management (511) (acres)                   | 776   | 989   | 0     | 154   | 479.8        | 1919  |
| Grade Stabilization Structure (410) (no.)                 | 0     | 0     | 6     | 0     | 1.5          | 6     |
| Heavy Use Area Protection (561) (acres)                   | 1     | 0     | 0     | 0     | 0.3          | 1     |
| Irrigation Field Ditch (388) (ft.)                        | 0     | 0     | 10011 | 0     | 2502.8       | 10011 |
| Irrigation System, Microirrigation (441) (acres)          | 0     | 5     | 12    | 0     | 4            | 17    |
| Irrigation System, Sprinkler (442) (acres)                | 2736  | 1648  | 1664  | 1215  | 1815.8       | 7263  |
| Irrigation System, Surface (443) (acres)                  | 24    | 14    | 7     | 0     | 11.3         | 45    |
| Irrigation Conveyance High Pressure Pipeline (430DD) (ft) | 8450  | 10477 | 17648 | 23714 | 15072.3      | 60289 |
| Irrigation Water Management (449) (acres)                 | 1783  | 1476  | 1417  | 434   | 1277.5       | 5110  |
| Nutrient Management (590)(acres)                          | 454   | 529   | 3839  | 2798  | 1905.0       | 7620  |
| Open Channel (582) (ft)                                   | 0     | 0     | 10250 | 0     | 2562.5       | 10250 |
| Pasture and Hay Planting (512) (acres)                    | 180   | 1622  | 416   | 0     | 554.5        | 2218  |
| Pest Management (595) (acres)                             | 776   | 989   | 870   | 595   | 807.5        | 3230  |
| Pipeline (516) (ft)                                       | 10700 | 1786  | 0     | 20680 | 8291.5       | 33166 |
| Prescribed Grazing (528A&528) (acres)                     | 0     | 1816  | 389   | 301   | 626.5        | 2506  |
| Pumping Plant (533) (no.)                                 | 0     | 4     | 3     | 7     | 3.5          | 14    |
| Residue Management Mulch Till (328B&345) (acres)          | 0     | 776   | 152   | 0     | 232.0        | 928   |
| Streambank and Shoreline Protection (580) (ft)            | 6436  | 885   | 500   | 614   | 2108.8       | 8435  |
| Structure for Water Control (587) (no.)                   | 11    | 3     | 4     | 1     | 4.8          | 19    |
| Upland Wildlife Habitat (645) (acres)                     | 1465  | 1183  | 866   | 156   | 917.5        | 3670  |
| Waste Storage Facility (313) (no.)                        | 0     | 1     | 2     | 0     | 0.8          | 3     |
| Water Well (642) (no.)                                    | 0     | 1     | 0     | 0     | 0.3          | 1     |
| Watering Facility (614) (no.)                             | 0     | 4     | 3     | 1     | 2.0          | 8     |
| Windbreak/Shelterbelt Est. (380) (ft)                     | 0     | 5760  | 10441 | 6568  | 5692.3       | 22769 |

## **Progress/Status - continued**

### **Progress in the last four years has been focused on:**

- ~ livestock water availability
- ~ wildlife habitat management
- ~ grazing management
- ~ 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
- ~ rangeland health
- ~ wildlife habitat improvements

## **Lands Removed from Production through Farm Bill Programs**

- Conservation Reserve Program (CRP): **1,010 acres**
- Wetland Reserve Program (WRP): **0 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](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://water.usgs.gov/osw/streamstats/idaho.html>).
8. National Hydrography 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](http://www.deq.idaho.gov/water/data_reports/surface_water/monitoring/integrated_report.cfm).
10. IDEQ. 2004. Medicine Lodge Subbasin Assessment and TMDL. [http://www.deq.idaho.gov/water/data\\_reports/surface\\_water/tmdls/medicine\\_lodge/medicine\\_lodge.cfm](http://www.deq.idaho.gov/water/data_reports/surface_water/tmdls/medicine_lodge/medicine_lodge.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](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\\_Plng.html#Watershed%20Surveys%20and%20OPlan](http://www.nrcs.usda.gov/programs/watershed/Surveys_Plng.html#Watershed%20Surveys%20and%20OPlan)
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](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.idaho.gov/water/data\\_reports/surface\\_water/nps/reports.cfm](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/waq.htm>, 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.state.id.us/Categories/Environment/water/gwReports.php>
21. Idaho Department of Water Resources (IDWR). State Comprehensive Water Plans. [http://www.idwr.idaho.gov/waterboard/planning/Comp\\_Basin\\_Plans.htm](http://www.idwr.idaho.gov/waterboard/planning/Comp_Basin_Plans.htm)
22. IDEQ. 2002 Integrated Report (approved December 2005). [http://www.deq.idaho.gov/water/data\\_reports/surface\\_water/monitoring/integrated\\_report.cfm](http://www.deq.idaho.gov/water/data_reports/surface_water/monitoring/integrated_report.cfm).
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](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.agcensus.usda.gov/Publications/2002/Census\\_by\\_State/Idaho/index.asp](http://www.agcensus.usda.gov/Publications/2002/Census_by_State/Idaho/index.asp)



Idaho

## Medicine Lodge - 17040215

8 Digit Hydrologic Unit Profile

January 2008

### Conservation Activities and Future Conservation Needs

The following Future Conditions Tables are estimates of the future needs of conservation practices in the watershed. The Tables are based on the already applied conservation activities as well as estimates of percentage of each land use that already meets Resource Quality Criteria as defined in the USDA NRCS electronic Field Office Technical Guide.

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.





Idaho

# Medicine Lodge - 17040215

## 8 Digit Hydrologic Unit Profile

January 2008

### Conservation Activities for Irrigated Cropland

| <b>Current Conditions</b>            |  | Total acres |
|--------------------------------------|--|-------------|
| Total Irrigated Cropland/Hayland     |  | 132,500     |
| Typical Management Unit/Ownership    |  | 1,150       |
| Surface Irrigated Cropland/Hayland   |  | 48,230      |
| Sprinkler Irrigated Cropland/Hayland |  | 84,270      |
| Current Farm Bill participation      |  | 15%         |

| <b>Future Conditions</b>               |  |     | Total Acres |
|--|--|-----|-------------|
| Sprinkler Irrigated Cropland/Hayland   |  |     | 132,500     |
| Total Riparian                         |  | 100 |             |
|  |  |     |             |
| Total Irrigated Cropland/Hayland Acres |  |     | 132,500     |



Idaho

**Medicine Lodge - 17040215**  
 8 Digit Hydrologic Unit Profile

January 2008

**Conservation Activities for Irrigated Cropland\* - Continued**

| Project Additional Treatment Needs for Irrigated Cropland/Hayland: |          |          |                 |                           |                    |               |         |    |                |      |      |       |
|--|----------|----------|-----------------|---------------------------|--------------------|---------------|---------|----|----------------|------|------|-------|
| Irrigated Cropland/Hayland   | Quantity |          | Costs           |                           | Effects            |               |         |    | Implementation |      |      |       |
|  | Unit     | Quantity | Investment Cost | Annual O&M and Mngt. Cost | Water Conservation | Water Storage | Habitat | WQ | EQIP           | WHIP | CREP | Other |
| <b>Sprinkler Irrigation</b>  | Ac.      | 132,500  |                 |                           | +3                 | +2            | +2      | +3 |                |      |      |       |
| Cover Crop (340)   | Ac.      | 33,130   | \$ 1,656,500    | \$ 16,600                 |                    |               |         |    | X              |      |      | X     |
| Conservation Crop Rotation (328)                                   | Ac.      | 130,120  | -               | -                         |                    |               |         |    | X              |      |      | X     |
| Constructed Wetland (656)  | No.      | 13       | 236,600         | 2,400                     |                    |               |         |    | X              |      |      | X     |
| Forage Harvest Management (511)                                    | Ac.      | 130,580  | -               | -                         |                    |               |         |    | X              |      |      | X     |
| Irrigation System, Microirrigation (441)                           | Ac.      | 3,860    | 5,249,600       | 262,500                   |                    |               |         |    | X              |      |      | X     |
| Irrigation System, Sprinkler (442)                                 | Ac.      | 44,370   | 24,403,500      | 488,100                   |                    |               |         |    | X              |      |      | X     |
| Irrigation Water Conveyance (430DD)                                | Ft.      | 794,640  | 5,483,000       | 27,400                    |                    |               |         |    | X              |      |      | X     |
| Irrigation Water Management (449) - Low level                      | Ac.      | 88,030   | 1,320,500       | 440,200                   |                    |               |         |    | X              |      |      | X     |
| Irrigation Water Management (449) - Meters and Moisture Sensors    | Ac.      | 39,750   | 1,788,800       | 596,300                   |                    |               |         |    | X              |      |      | X     |
| Nutrient Management (590)  | Ac.      | 125,445  | 3,763,400       | 1,254,500                 |                    |               |         |    | X              |      |      | X     |
| Pest Management (595)  | Ac.      | 129,905  | 3,117,700       | 1,039,200                 |                    |               |         |    | X              |      |      | X     |
| Pumping Plant (533)  | No.      | 300      | 5,130,000       | 102,600                   |                    |               |         |    | X              |      |      | X     |
| Residue Mngt, Mulch Till (345)                                     | Ac.      | 131,570  | 5,920,700       | 1,973,600                 |                    |               |         |    | X              |      |      | X     |
| Residue Management Seasonal (344)                                  | Ac.      | 132,500  | 2,981,300       | 993,800                   |                    |               |         |    | X              |      |      | X     |
| Residue Mngt, No Till/Strip Till (329)                             | Ac.      | 13,250   | 1,192,500       | 397,500                   |                    |               |         |    | X              |      |      | X     |



Idaho

**Medicine Lodge - 17040215**  
8 Digit Hydrologic Unit Profile

January 2008

**Conservation Activities for Irrigated Cropland\* - Continued**

| Project Additional Treatment Needs for Irrigated Cropland/Hayland 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 |
| Sediment Basin (350)   | No.        | 160        | 304,000             | 9,100                     |                    |               |           |           | X              |      |      | X     |
| Structure for Water Control (587) - Fish Screen                              | No.        | 410        | 1,365,300           | 13,700                    |                    |               |           |           | X              |      |      | X     |
| Surface Roughening (609)   | Ac.        | 132,500    | 2,981,300           | 993,800                   |                    |               |           |           | X              |      |      | X     |
| Upland Wildlife Habitat Management (645)                                     | Ac.        | 16,590     | 497,700             | 165,900                   |                    |               |           |           | X              |      |      | X     |
| Well Decommissioning (355)   | No.        | 105        | 89,300              | -                         |                    |               |           |           | X              |      |      | X     |
| Windbreak/Shelterbelt Establishment (380)                                    | Ft.        | 1,070,191  | 1,616,000           | 16,200                    |                    |               |           |           | X              |      |      | X     |
| <b>Riparian</b>  | <b>Ac.</b> | <b>100</b> |                     |                           | <b>+1</b>          | <b>+1</b>     | <b>+3</b> | <b>+3</b> |                |      |      |       |
| Channel Bank Vegetation (322)  | Ac.        | 100        | \$ 200              | \$ -                      |                    |               |           |           | X              |      |      | X     |
| Channel Stabilization (584)  | Ft.        | 42,000     | 1,050,000           | 52,500                    |                    |               |           |           | X              |      |      | X     |
| Fence (382)  | Ft.        | 84,020     | 194,100             | 3,900                     |                    |               |           |           | X              | X    | X    | X     |
| Pasture & Hayland Planting (512)   | Ac.        | 50         | 8,000               | 100                       |                    |               |           |           | X              |      |      | X     |
| Pest Management (595)  | Ac.        | 100        | 2,400               | 800                       |                    |               |           |           | X              |      |      | X     |
| Pipeline (516)   | Ft.        | 30,000     | 87,900              | 400                       |                    |               |           |           | X              |      |      | X     |
| Prescribed Grazing (528)   | Ac.        | 75         | 1,100               | 400                       |                    |               |           |           | X              |      |      | X     |
| Riparian Forest Buffer (391)   | Ac.        | 100        | 150,000             | 1,500                     |                    |               |           |           | X              |      |      | X     |
| Riparian Herbaceous Cover (390)  | Ac.        | 100        | 30,000              | 300                       |                    |               |           |           | X              | X    | X    | X     |
| Streambank & Shoreline Prot (580)  | Ft.        | 21,000     | 997,500             | 49,900                    |                    |               |           |           | X              |      |      | X     |
| Tree/Shrub Establishment (612)   | Ac.        | 100        | 46,500              | 500                       |                    |               |           |           | X              |      |      | X     |
| Upland Wildlife Management (645)   | Ac.        | 15         | 500                 | 200                       |                    |               |           |           | X              |      |      | X     |
| Use Exclusion (472)  | Ac.        | 25         | 900                 | -                         |                    |               |           |           | X              | X    | X    | X     |
| Watering Facility (614)  | No.        | 10         | 8,700               | 100                       |                    |               |           |           | X              |      | X    | X     |
| Wetland Wildlife Management (644)  | Ac.        | 10         | 300                 | 100                       |                    |               |           |           | X              |      |      | X     |
| <b>Total RMS Costs</b>   |            |            | <b>\$ 1,675,800</b> | <b>\$8,904,100</b>        |                    |               |           |           |                |      |      |       |



Idaho

**Medicine Lodge - 17040215**  
8 Digit Hydrologic Unit Profile

January 2008

**Conservation Activities for Irrigated Cropland\* - Continued**

| <b>Potential RMS Effects Summary for Irrigated Cropland/Hayland</b> |                     |                      |
|---|---------------------|----------------------|
| <b>Cost Items and Programs</b>                                      | <b>Costs</b>        | <b>O&amp;M Costs</b> |
| Non Farm Bill Programs  | \$ 3,583,800        | \$ 445,200           |
| Potential Farm Bill Programs  | \$68,092,000        | \$8,458,900          |
| Operator O&M and Management Cost                                    |                     | \$8,904,100          |
| Annual Management Incentives (3 yrs - Incentive Payments)           | \$23,568,200        |                      |
| Operator Investment   | \$25,845,700        |                      |
| Federal Cost Share  | \$22,261,900        |                      |
| <b>Total RMS Costs</b>  | <b>\$71,675,800</b> | <b>\$8,904,100</b>   |
| Estimated Level of Participation                                    |                     | 75%                  |
| Total Acres in RMS System   |                     | 99,400               |
| Anticipated Cost at Estimated Level of Participation                | \$                  | 53,756,900           |
| Total Acre Feet of Water Saved Annually                             |                     | 95,755               |
| 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

## Medicine Lodge - 17040215

### 8 Digit Hydrologic Unit Profile

January 2008

### Conservation Activities for Irrigated Pasture

| <b>Current Conditions</b>         | Total Acres | Riparian/ Wetland Potential |
|-----------------------------------|-------------|-----------------------------|
| Surface Irrigated Pasture         | 4,770       |                             |
| Sprinkler Irrigated Pasture       | 530         |                             |
| Total Irrigated Pasture           | 5,300       | 640                         |
| Typical Management Unit/Ownership | 1,150       |                             |
| Current Farm Bill participation   | 15%         |                             |

| <b>Future Conditions</b>                 | Total Acres |
|--|-------------|
| Surface Irrigated Pasture                | 470         |
| Sprinkler Irrigated Pasture              | 4,190       |
| Total Conversion to Riparian Pasture RMS | 640         |
| Total Acres                              | 5,300       |



Idaho

**Medicine Lodge - 17040215**  
8 Digit Hydrologic Unit Profile

January 2008

**Conservation Activities for Irrigated Pasture – Continued**

| <b>Project Treatment Needs for Irrigated Pasture:</b> |          |          |                 |                           |                    |               |         |    |                |      |      |       |
|---|----------|----------|-----------------|---------------------------|--------------------|---------------|---------|----|----------------|------|------|-------|
| 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 |
| <b>Surface Irrigation</b>                             | Ac.      | 470      |                 |                           | +1                 | +1            | +1      | +1 |                |      |      |       |
| Fence (382)   | Ft.      | 7,660    | \$ 16,600       | \$ 300                    |                    |               |         |    | X              |      |      | X     |
| Irrigation System Surface (443)                       | Ac.      | 5        | 800             | -                         |                    |               |         |    | X              | X    | X    | X     |
| Irrigation Tailwater Recovery (447)                   | No.      | 1        | 15,100          | 500                       |                    |               |         |    | X              |      |      | X     |
| Above Ground, Multi-Outlet Pipeline (431)             | Ft.      | 15,840   | 71,300          | 700                       |                    |               |         |    | X              |      |      | X     |
| Irrigation Water Conveyance (430EE)                   | Ft.      | 31,680   | 170,400         | 900                       |                    |               |         |    | X              |      |      | X     |
| Irrigation Water Management (449)                     | Ac.      | 470      | 7,100           | 2,400                     |                    |               |         |    | X              |      |      | X     |
| Nutrient Management (590)                             | Ac.      | 470      | 7,100           | 2,400                     |                    |               |         |    | X              |      |      | X     |
| Pasture & Hayland Planting (512)                      | Ac.      | 190      | 30,400          | 300                       |                    |               |         |    | X              |      |      | X     |
| Pest Management (595)                                 | Ac.      | 470      | 11,300          | 3,800                     |                    |               |         |    | X              |      |      | X     |
| Prescribed Grazing (528)                              | Ac.      | 470      | 7,100           | 2,400                     |                    |               |         |    | X              |      |      | X     |
| Structure for Water Control (587) - Fish Screen       | No.      | 6        | 20,000          | 200                       |                    |               |         |    | X              | X    |      | X     |
| Upland Wildlife Management (645)                      | Ac.      | 70       | 2,100           | 700                       |                    |               |         |    | X              |      |      | X     |
| Watering Facility (614)                               | No.      | 6        | 5,200           | 100                       |                    |               |         |    | X              |      |      | X     |
| Windbreak/Shelterbelt Establish (380)                 | Ft.      | 7,920    | 12,000          | 100                       |                    |               |         |    | X              |      |      | X     |



Idaho

## Medicine Lodge - 17040215 8 Digit Hydrologic Unit Profile

January 2008

### Conservation Activities for Irrigated Pasture – Continued

| Project 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 |
| <b>Sprinkler Irrigation</b>                              | Ac.      | 4,190    |                 |                           | +3                 | +3            | +2      | +3 |                |      |      |       |
| Fence (382)  | Ft.      | 84,410   | \$ 183,200      | \$ 3,700                  |                    |               |         |    | X              |      |      | X     |
| Irrigation Water Conveyance (430DD)                      | Ft.      | 79,200   | 546,500         | 2,700                     |                    |               |         |    | X              |      |      | X     |
| Irrigation System Sprinkler (442)                        | Ac.      | 4,090    | 2,249,500       | 45,000                    |                    |               |         |    | X              |      |      | X     |
| Irrigation Water Management (449)                        | Ac.      | 3,800    | 57,000          | 19,000                    |                    |               |         |    | X              |      |      | X     |
| Nutrient Management (590)                                | Ac.      | 3,800    | 57,000          | 19,000                    |                    |               |         |    | X              |      |      | X     |
| Pasture & Hayland Planting (512)                         | Ac.      | 1,680    | 268,800         | 2,700                     |                    |               |         |    | X              |      |      | X     |
| Pest Management (595)                                    | Ac.      | 3,695    | 88,700          | 29,600                    |                    |               |         |    | X              |      |      | X     |
| Pipeline (516)   | Ft.      | 79,200   | 232,100         | 1,200                     |                    |               |         |    | X              |      |      | X     |
| Prescribed Grazing (528)                                 | Ac.      | 3,630    | 54,500          | 18,200                    |                    |               |         |    | X              |      |      | X     |
| Structure for Water Control (587) - Fish Screen          | No.      | 45       | 149,900         | 1,500                     |                    |               |         |    | X              | X    |      | X     |
| Upland Wildlife Management (645)                         | Ac.      | 630      | 18,900          | 6,300                     |                    |               |         |    | X              |      |      | X     |
| Watering Facility (614)                                  | No.      | 60       | 52,200          | 500                       |                    |               |         |    | X              |      |      | X     |
| Windbreak/Shelterbelt Establish (380)                    | Ft.      | 79,200   | 119,600         | 1,200                     |                    |               |         |    | X              |      |      | X     |
| <b>Riparian Pastures</b>                                 | Ac.      | 640      |                 |                           | +1                 | +1            | +3      | +3 |                |      |      |       |
| Animal Trails and Walkways (575)                         | Ft.      | 60       | \$ 300          | \$ -                      |                    |               |         |    | X              |      |      | X     |
| Channel Bank Vegetation (322)                            | Ac.      | 56,600   | 116,000         | 2,300                     |                    |               |         |    | X              |      |      | X     |
| Channel Stabilization (584)                              | Ft.      | 1,940    | 48,500          | ,400                      |                    |               |         |    | X              |      |      | X     |
| Fence (382)  | Ft.      | 39,020   | 84,700          | 1,700                     |                    |               |         |    | X              | X    | X    | X     |
| Nutrient Management (590)                                | Ac.      | 640      | 9,600           | 3,200                     |                    |               |         |    | X              |      |      | X     |
| Pasture & Hayland Planting (512)                         | Ac.      | 260      | 41,600          | 400                       |                    |               |         |    | X              |      |      | X     |
| Pest Management (595)                                    | Ac.      | 640      | 15,400          | 5,100                     |                    |               |         |    | X              |      |      | X     |
| Pipeline (516)   | Ft.      | 21,120   | 61,900          | 300                       |                    |               |         |    | X              |      |      | X     |



Idaho

**Medicine Lodge - 17040215**  
8 Digit Hydrologic Unit Profile

January 2008

**Conservation Activities for Irrigated Pasture – Continued**

| <b>Project Treatment Needs for Irrigated Pasture Continued:</b> |          |          |                     |                           |                    |               |         |    |                |      |      |       |
|---|----------|----------|---------------------|---------------------------|--------------------|---------------|---------|----|----------------|------|------|-------|
| 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 |
| Prescribed Grazing (528)  | Ac.      | 640      | 9,600               | 3,200                     |                    |               |         |    | X              |      |      | X     |
| Riparian Forest Buffer (391)                                    | Ac.      | 45       | 67,500              | 700                       |                    |               |         |    | X              |      |      | X     |
| Riparian Herbaceous Cover (390)                                 | Ac.      | 45       | 13,500              | 100                       |                    |               |         |    | X              |      |      | X     |
| Streambank & Shoreline Prot (580)                               | Ft.      | 4,595    | 218,300             | 10,900                    |                    |               |         |    | X              | X    | X    | X     |
| Stream Crossing (578)   | No.      | 30       | 105,000             | 5,300                     |                    |               |         |    | X              |      |      | X     |
| Tree/Shrub Establishment (612)                                  | Ac.      | 25       | 11,800              | 100                       |                    |               |         |    | X              |      |      | X     |
| Upland Wildlife Management (645)                                | Ac.      | 100      | 3,000               | 1,000                     |                    |               |         |    | X              |      |      | X     |
| Use Exclusion (472)   | Ac.      | 30       | 1,000               | -                         |                    |               |         |    | X              | X    | X    | X     |
| Watering Facility (614)   | No.      | 16       | 13,900              | 100                       |                    |               |         |    | X              |      | X    | X     |
| Wetland Wildlife Management (644)                               | Ac.      | 65       | 2,000               | 700                       |                    |               |         |    | X              |      |      | X     |
| <b>Total RMS Costs</b>  |          |          | <b>\$ 5,278,000</b> | <b>\$ 202,900</b>         |                    |               |         |    |                |      |      |       |





Idaho

**Medicine Lodge - 17040215**  
8 Digit Hydrologic Unit Profile

January 2008

**Conservation Activities for Irrigated Pasture – Continued**

| <b>RMS Cost Summary for Irrigated Pasture:</b>                                   |                     |                      |
|--|---------------------|----------------------|
| <b>Cost Items and Programs</b>   | <b>Costs</b>        | <b>O&amp;M Costs</b> |
| Non Farm Bill Programs   | \$ 263,900          | \$ 10,100            |
| Potential Farm Bill Programs   | \$ 5,014,100        | \$ 192,800           |
| Operator O&M and Management Cost   |                     | \$ 202,900           |
| Annual Management Incentives (3 yrs - Incentive Payments)                        | \$ 350,400          |                      |
| Operator Investment  | \$ 2,595,800        |                      |
| Federal Costshare  | \$ 2,331,800        |                      |
| <b>Total RMS Farm Bill Costs</b>   | <b>\$ 5,278,000</b> |                      |
| Estimated Level of Participation   |                     | 60%                  |
| Total Acres in RMS System  |                     | 3,200                |
| Anticipated Cost at Estimated Level of Participation                             | \$                  | 3,166,800            |
| Total Acre Feet of Water Saved Annually  |                     | 5,780                |
| Total Annual Forage Production Benefits (animal unit months)                     |                     | 13,700               |
| Improves ground water and surface water quality by minimizing off-site transport |                     |                      |
| Improves riparian habitat for ESA endangered & threatened species                |                     |                      |



Idaho

**Medicine Lodge - 17040215**  
8 Digit Hydrologic Unit Profile

January 2008

**Conservation Activities for Grazed Rangeland, Dry Pasture and Forestland**

| <b>Current Conditions</b>         | Grazed | Ungrazed | Riparian/Wetland/Potential | Total Acres |
|-----------------------------------|--------|----------|----------------------------|-------------|
| Private Rangeland and Dry Pasture | 71,020 |          | 8,520                      | 71,020      |
| Typical Management Unit/Ownership | 1,150  |          |                            |             |
| Current Farm Bill participation   | 15%    |          |                            |             |

| <b>Future Conditions</b> | Rangeland / Pasture | Riparian | Total Acres |
|--------------------------|---------------------|----------|-------------|
|                          | 62,500              | 8,520    | 71,020      |

| <b>Project Treatment Needs for Grazed Rangeland, Dry Pasture and Forestland:</b> |            |               |                 |                           |                    |               |           |           |                |      |     |      |       |
|--|------------|---------------|-----------------|---------------------------|--------------------|---------------|-----------|-----------|----------------|------|-----|------|-------|
| 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 |
| <b>Grazed Range, Dry Pasture &amp; Forestland</b>                                | <b>Ac.</b> | <b>62,500</b> |                 |                           | <b>+3</b>          | <b>+2</b>     | <b>+3</b> | <b>+3</b> |                |      |     |      |       |
| Animal Trails and Walkways (575)   | Ft.        | 517,440       | \$ 2,587,200    | \$ 25,900                 |                    |               |           |           | X              |      |     |      | X     |
| Brush Management (314)   | Ac.        | 20,630        | 1,031,500       | 10,300                    |                    |               |           |           | X              |      |     |      | X     |
| Fence (382)  | Ft.        | 988,554       | 2,145,200       | 42,900                    |                    |               |           |           | X              |      |     |      | X     |
| Firebreak (394)  | Ft.        | 258,720       | 517,400         | 10,300                    |                    |               |           |           | X              |      |     |      | X     |
| Pasture & Hayland Planting (512)   | Ac.        | 2,920         | 467,200         | 4,700                     |                    |               |           |           | X              |      |     |      | X     |
| Pest Management (595)  | Ac.        | 62,500        | 1,500,000       | 500,000                   |                    |               |           |           | X              |      |     |      | X     |
| Pipeline (516)   | Ft.        | 258,720       | 758,000         | 3,800                     |                    |               |           |           | X              |      |     |      | X     |
| Pond (378)   | No.        | 25            | 170,000         | 1,700                     |                    |               |           |           | X              |      |     |      | X     |
| Prescribed Grazing (528)   | Ac.        | 61,806        | 370,800         | 123,600                   |                    |               |           |           | X              |      |     |      | X     |
| Range Planting (550)   | Ac.        | 20,630        | 2,063,000       | 20,600                    |                    |               |           |           | X              |      |     |      | X     |
| Spring Development (574)   | No.        | 100           | 240,000         | 1,200                     |                    |               |           |           | X              | X    |     |      | X     |
| Upland Wildlife Management (645)   | Ac.        | 12,500        | 375,000         | 125,000                   |                    |               |           |           | X              | X    |     |      | X     |
| Watering Facility (614)  | No.        | 100           | 87,000          | 900                       |                    |               |           |           | X              |      |     |      | X     |
| Well (642)   | No.        | 50            | 337,500         | 3,400                     |                    |               |           |           | X              |      |     |      | X     |



Idaho

**Medicine Lodge - 17040215**  
8 Digit Hydrologic Unit Profile

January 2008

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

| Project 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 |
| Range & Dry Pasture Riparian  | Ac.      | 8,520    |                     |                           | +3                 | +2            | +3      | +3 |                |      |     |      |       |
| Channel Bank Vegetation (322)   | Ft.      | 11,000   | 22,600              | 500                       |                    |               |         |    | X              |      |     |      | X     |
| Channel Stabilization (584)   | Ft.      | 21,970   | 549,300             | 27,500                    |                    |               |         |    | X              |      |     |      | X     |
| Fence (382)   | Ft.      | 21,970   | 47,700              | 1,000                     |                    |               |         |    | X              | X    | X   |      | X     |
| Pasture & Hayland Planting (512)  | Ac.      | 430      | 68,800              | 700                       |                    |               |         |    | X              |      |     |      | X     |
| Pest Management (595)   | Ac.      | 8,520    | 204,500             | 68,200                    |                    |               |         |    | X              |      |     |      | X     |
| Pipeline (516)  | Ft.      | 17,160   | 50,300              | 300                       |                    |               |         |    | X              |      |     |      | X     |
| Prescribed Grazing (528)  | Ac.      | 8,520    | 51,100              | 17,000                    |                    |               |         |    | X              |      |     |      | X     |
| Pumping Plant (533)   | No.      | 10       | 28,800              | 300                       |                    |               |         |    | X              |      |     |      | X     |
| Riparian Forest Buffer (391)  | Ac.      | 250      | 375,000             | 3,800                     |                    |               |         |    | X              |      |     |      | X     |
| Riparian Herbaceous Cover (390)   | Ac.      | 250      | 75,000              | 800                       |                    |               |         |    | X              | X    | X   |      | X     |
| Stream Crossing (578)   | No.      | 210      | 735,000             | 36,800                    |                    |               |         |    | X              | X    | X   |      | X     |
| Streambank & Shoreline Prot (580)   | Ft.      | 53,096   | 2,522,100           | 1,261,100                 |                    |               |         |    | X              | X    |     |      | X     |
| Tree/Shrub Establishment (612)  | Ac.      | 130      | 61,100              | 600                       |                    |               |         |    | X              |      |     |      | X     |
| Upland Wildlife Management (645)  | Ac.      | 1,700    | 51,000              | 17,000                    |                    |               |         |    | X              | X    |     |      | X     |
| Use Exclusion (472)   | Ac.      | 250      | 8,500               | 300                       |                    |               |         |    | X              | X    | X   |      | X     |
| Watering Facility (614)   | No.      | 48       | 41,800              | 400                       |                    |               |         |    | X              |      | X   |      | X     |
| Wetland Wildlife Management (644)   | Ac.      | 850      | 25,500              | 8,500                     |                    |               |         |    | X              |      | X   |      | X     |
| <b>Total RMS Costs</b>  |          |          | <b>\$17,567,900</b> | <b>\$2,319,100</b>        |                    |               |         |    |                |      |     |      |       |



Idaho

**Medicine Lodge - 17040215**  
8 Digit Hydrologic Unit Profile

January 2008

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

| <b>RMS Cost Summary for Grazed Rangeland, Pasture and Forestland:</b>       |                      |                      |
|---|----------------------|----------------------|
| <b>Cost Items and Programs</b>  | <b>Costs</b>         | <b>O&amp;M Costs</b> |
| Non Farm Bill Programs  | \$ 878,400           | \$ 116,000           |
| Potential Farm Bill Programs  | \$ 16,689,500        | \$ 2,203,100         |
| Operator O&M and Management Cost  |                      | \$ 2,319,100         |
| Annual Management Incentives (3 yrs - Incentive Payments)                   | \$ 2,577,900         |                      |
| Operator Investment   | \$ 6,523,000         |                      |
| Federal Costshare   | \$ 8,467,000         |                      |
| <b>Total RMS Farm Bill Costs</b>  | <b>\$ 17,567,900</b> |                      |
| Estimated Level of Participation  |                      | 35%                  |
| Total Acres in RMS System   |                      | 21,900               |
| Anticipated Cost at Estimated Level of Participation                        | \$                   | 6,148,800            |
| Total Annual Forage Production Benefits (acre unit months)                  |                      | 3,700                |
| 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                            |     | 27    |
| Current Farm Bill participation | 15% |       |
| Total CAFOs and AFOs            |     | 27    |

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



Idaho

**Medicine Lodge - 17040215**  
8 Digit Hydrologic Unit Profile

January 2008

**Conservation Activities for Headquarters – Continued**

| Projected Additional Treatment Needs for Headquarters: |          |          |                 |                           |                    |               |         |    |                |      |     |      |       |
|--|----------|----------|-----------------|---------------------------|--------------------|---------------|---------|----|----------------|------|-----|------|-------|
| 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 |
| Dairy  | No.      |          |                 |                           | +3                 | +2            | +3      | +3 |                |      |     |      |       |
| Structural/Management Practices                        |          |          |                 |                           |                    |               |         |    |                |      |     |      |       |
| Waste Storage Facility (313) CAFO                      | No.      | -        | -               | -                         |                    |               |         |    | X              |      |     |      | X     |
| Waste Storage Facility (313) AFO                       | No.      | 7        | 315,000         | 6,300                     |                    |               |         |    | 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.      | 15       | 675,000         | 13,500                    |                    |               |         |    | X              |      |     |      | X     |
| <b>Total RMS Costs</b>                                 |          |          | \$ 990,000      | \$ 19,800                 |                    |               |         |    |                |      |     |      |       |



Idaho

**Medicine Lodge - 17040215**  
8 Digit Hydrologic Unit Profile

January 2008

**Conservation Activities for Headquarters – Continued**

| <b>RMS Cost Summary for Headquarters</b>                        |                   |                      |
|---|-------------------|----------------------|
| <b>Cost Items and Programs</b>                                  | <b>Costs</b>      | <b>O&amp;M Costs</b> |
| Non Farm Bill Programs  | \$ 49,500         | \$ 1,000             |
| Potential Farm Bill Programs                                    | \$ 940,500        | \$ 18,800            |
| Operator O&M and Management Cost                                |                   | \$ 19,800            |
| Annual Management Incentives (3 yrs - Incentive Payments)       | \$ 99,000         |                      |
| Operator Investment   | \$ 470,300        |                      |
| Federal Costshare   | \$ 420,700        |                      |
| <b>Total RMS Costs</b>  | <b>\$ 990,000</b> |                      |
| Estimated Level of Participation                                |                   | 35%                  |
| Total CAFO/AFO in RMS System                                    |                   | 8                    |
| Anticipated Cost at Estimated Level of Participation            | \$                | 346,500              |
| Reduces impact to ground and surface water quality              |                   |                      |
| 90% participation reflects Local, State and Federal regulations |                   |                      |