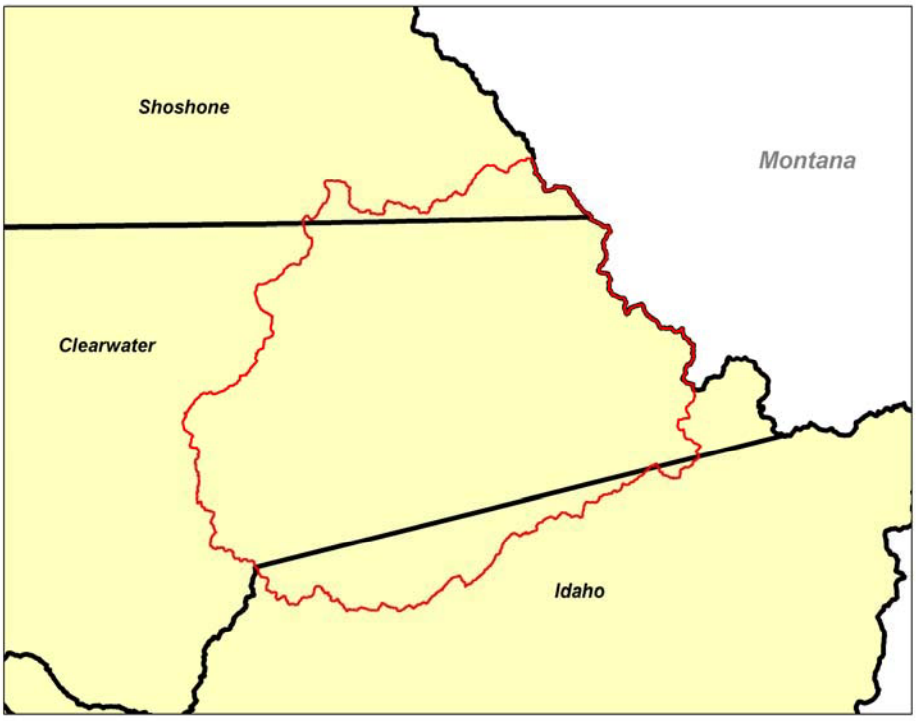
# Upper North Fork Clearwater - 17060307

Idaho 8 Digit Hydrologic Unit Profile August 2006




## Introduction

The Upper North Fork Clearwater 8-Digit Hydrologic Unit Code (HUC) subbasin contains 829,000 acres. Approximately 83 percent of the subbasin is in Clearwater County, 12 percent in Idaho County and the remainder in Shoshone County. Ninety-six percent of the basin is publicly owned.

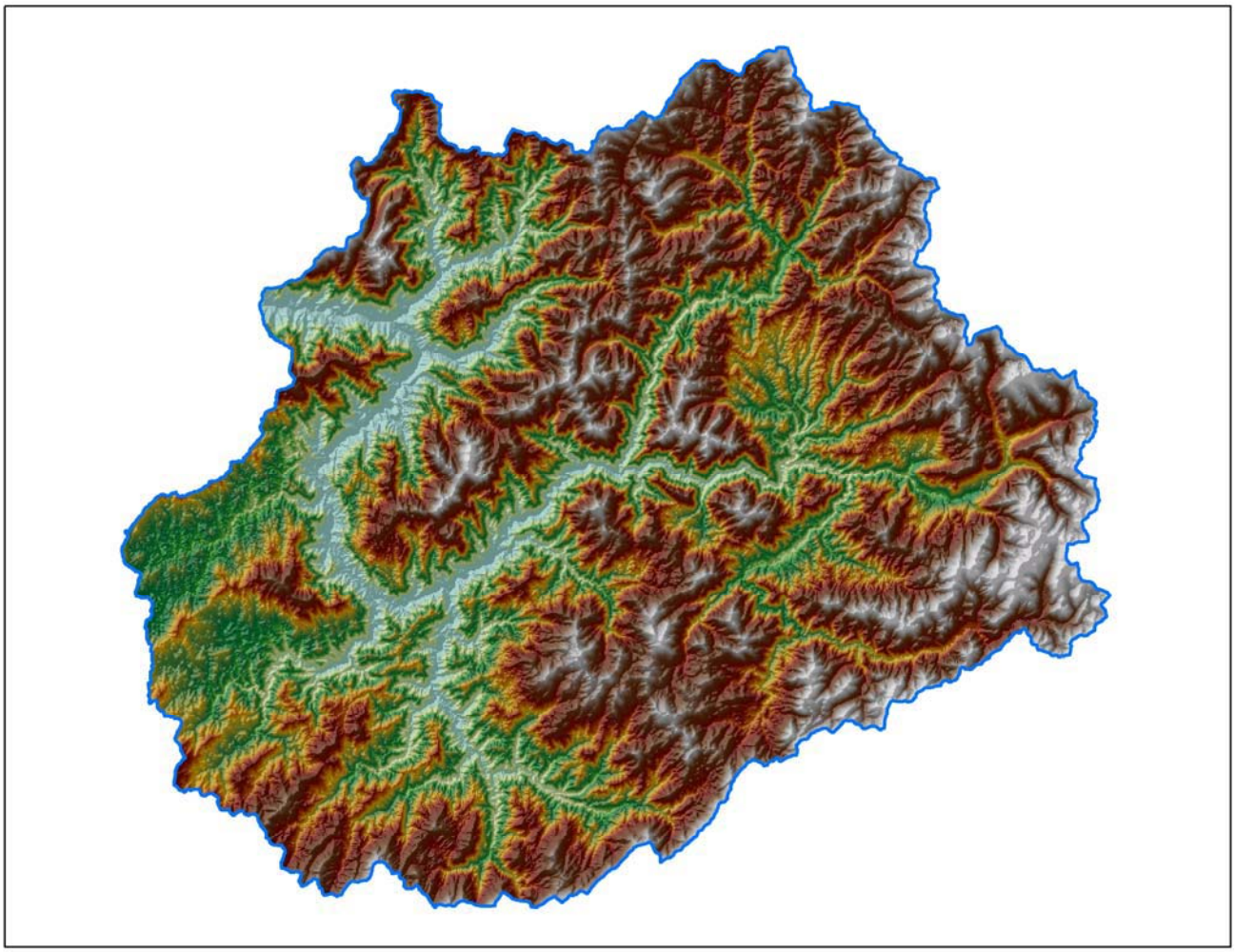
Eighty-three percent of the basin is in forest. Fourteen percent is shrubland, rangeland, grass, pasture or hayland. The remainder is in water, wetlands, developed or barren. There is no cropland.

Elevations range from under 1,700 feet in the eastern subbasin to over 7,800 feet on the western side.

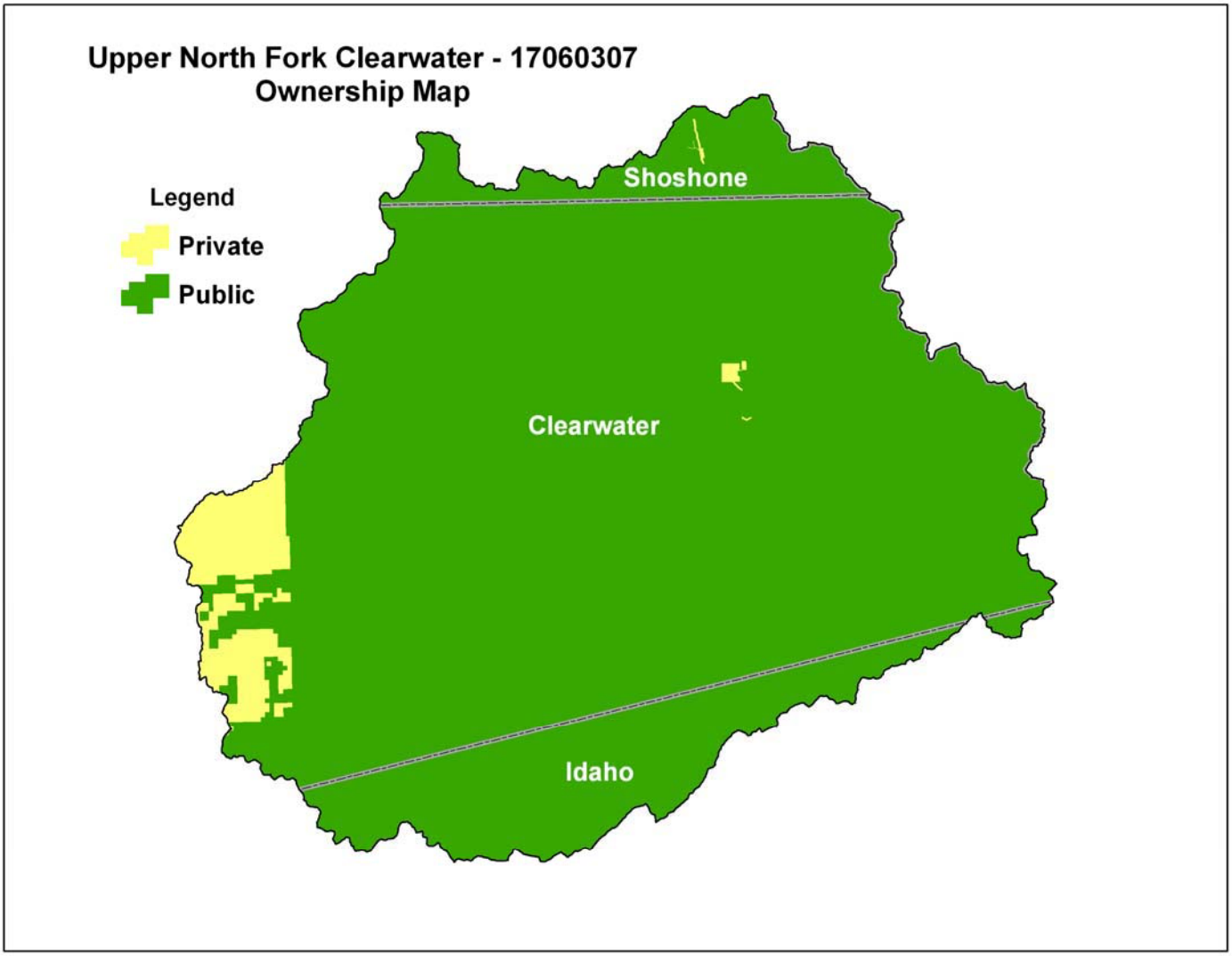
Conservation assistance is provided by two Soil and Water Conservation Districts, one Soil Conservation District and the Clearwater Resource Conservation and Development office.

## Profile Content

## Relief Map



## General Ownership[/1]

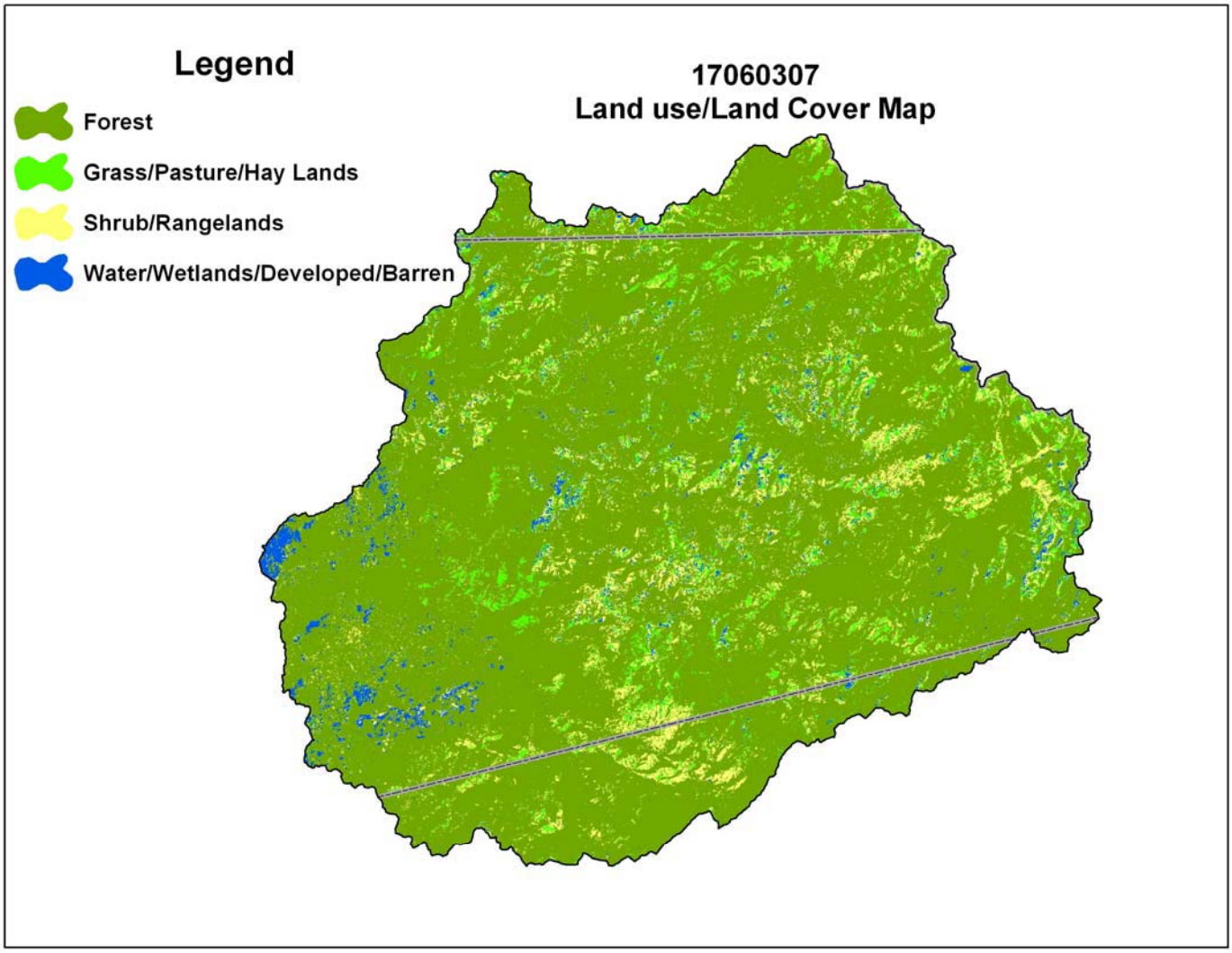


## Physical Description

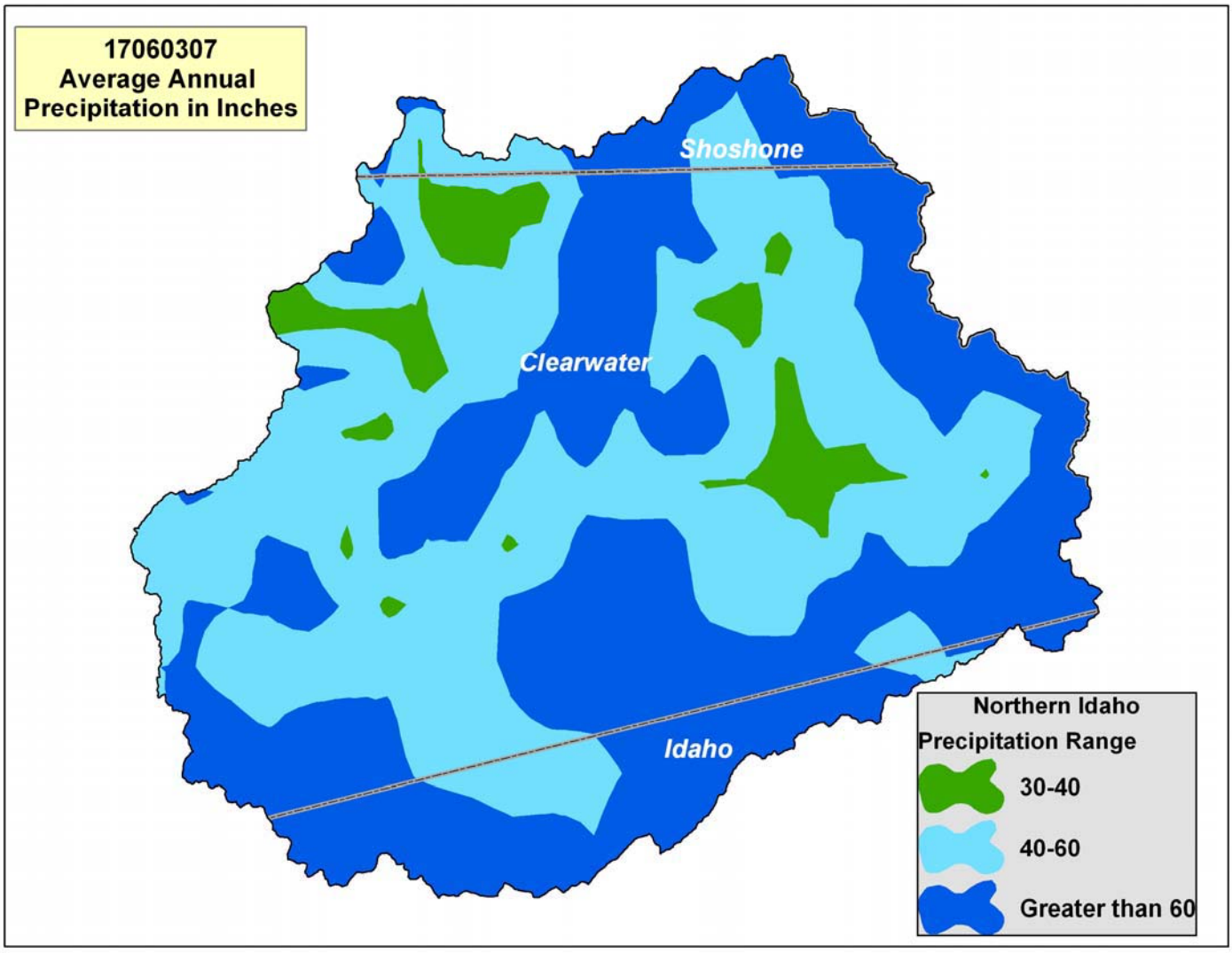
| Land Cover/ Land Use (NLCD[2]) | Ownership - (2003 Draft BLM Surface Map Set[1]) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Public | | Private | | Tribal | | Totals | % of HUC |
| | Acres | % | Acres | % | | % | | |
| Forest | 662,300 | 80% | 25,300 | 3% | | -- | **687,600** | **83%** |
| Grain Crops | | -- | | -- | | -- | | **--** |
| Conservation Reserve[3] Program (CRP) Land | | -- | | -- | | -- | | **--** |
| Grass/Pasture/Hay Lands | 48,500 | 6% | 410 | <1% | | -- | **48,910** | **6%** |
| Orchards/Vineyards/Berries | | -- | | -- | | -- | | **--** |
| Row Crops | | -- | | -- | | -- | | **--** |
| Shrub/Rangelands | 68,360 | 8% | 1,650 | <1% | | -- | **70,010** | **8%** |
| Water/Wetlands/ Developed/Barren | 17,950 | 2% | 4,530 | <1% | | -- | **22,480** | **2%** |
| **Idaho HUC Totals** | **797,110** | **96%** | **31,890** | **4%** | | **--** | **829,000** | **100%** |

| Irrigated Lands[4] | Type of Land | ACRES | % of Irrigated Lands | % of HUC |
|---|---|---|---|---|
| | Cultivated Cropland | 0 | | |
| | Non-Cultivated Cropland | 0 | | |
| | Pastureland | 0 | | |
| | **Total Irrigated Lands** | **0** | | |

## Land Use/Land Cover[/2]

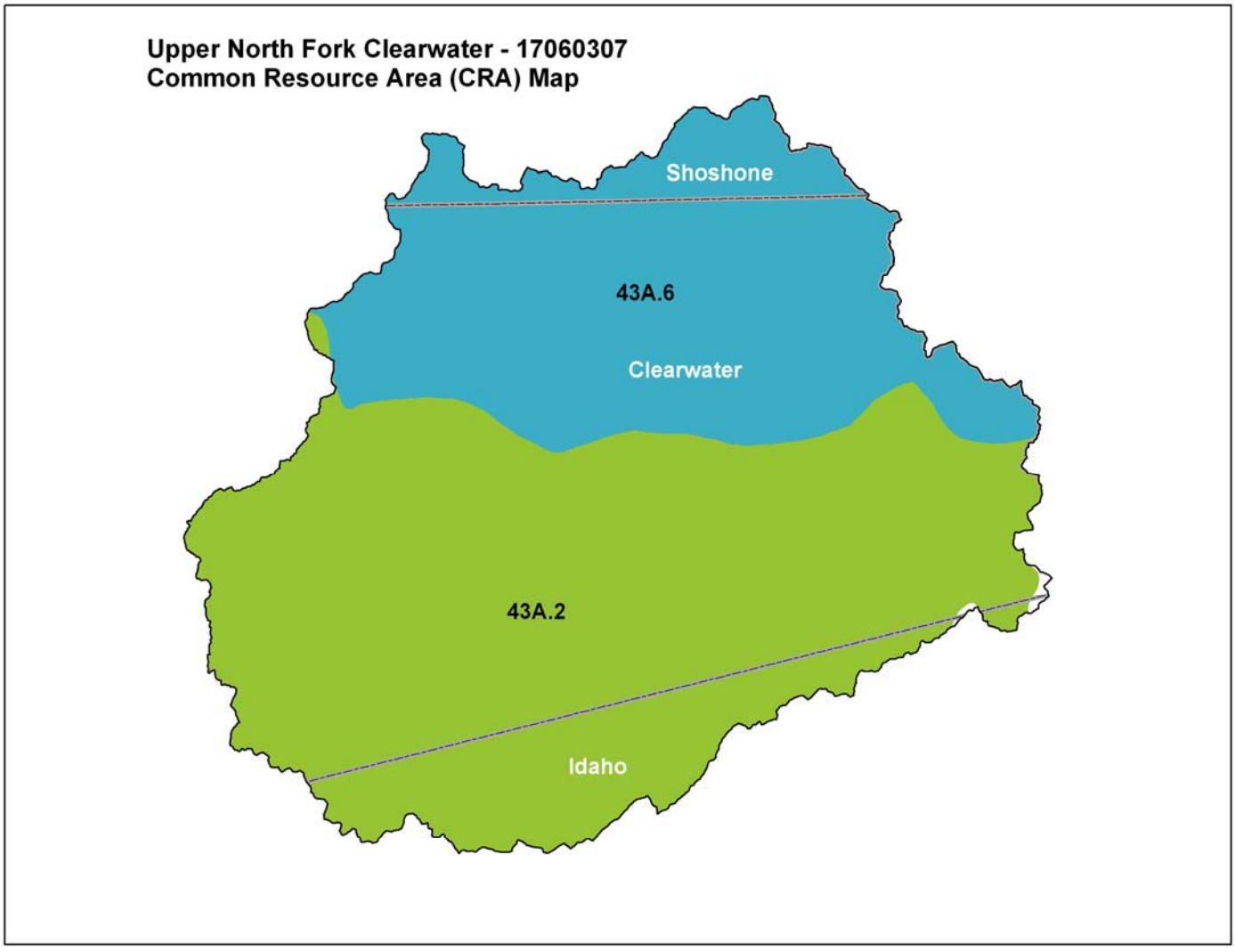


## Average Annual Precipitation[/5]



# Common Resource Area Map

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



## Common Resource Area Descriptions

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

**43A.2 Northern Rocky Mountains - Clearwater Mountains and Breaks:** The Clearwater Mountains and Breaks Ecoregion is exposed to substantial maritime influence, mantled by thick volcanic ash, and underlain by granitics. Its moist coniferous forests lack Western hemlock and are transitional between those of the Idaho Panhandle and the drier forests of the southern Idaho Batholith.

**43A.6 Northern Rocky Mountains - St. Joe Schist-Gneiss Zone:** The St. Joe Schist-Gneiss Zone is mountainous, mantled by volcanic ash, and prone to landslides. High gradient streams dissect the region and receive episodic sedimentation from slides. Streams were used to transport logs to mills; log drives greatly altered aquatic ecosystems and stream morphology. Pacific influence is greater than to the south. Potential natural vegetation is mapped as cedar-hemlock-pine but hemlock is absent in the south. Near tree-line, mountain hemlock, subalpine fir, Engelmann spruce and whitebark pine occur.

# Physical Description

| | | | |
|---|---|---|---|
| | | **CFS** | |
| **Irrigated Adjudicated Water Rights**[6] | Surface Water | 0 | |
| | Groundwater | 0 | |
| | Total Irrigated Adjudicated Water Rights | 0 | |
| **Stream Flow Data**[7] | USGS 13340600, North Fork Clearwater nr Canyon Ranger Station (1971-2000) | | **ACRE-FEET** |
| | | Average Annual | 3,507,000 |
| | | Mar - July Average | 2,643,000 |
| | | Percent of Average Annual | Mar - Jul 75% |
| | | **MILES** | **PERCENT** |
| **Stream Data** **Percent of Total Miles of streams in HUC* | Total Stream Miles [8] | 1,498 | -- |
| | Water quality impaired streams[9,10] | 337.4 | 23%* |
| | Anadromous Fish Presence (Streamnet)[11] | -- | -- |
| | Bull Trout Presence (Streamnet) [11] | 741 | 50%* |
| | | **ACRES** | **PERCENT** |
| **Land Cover/Use**[2] based on a 100 ft. stretch on both sides of all streams in the 100K Hydro Layer | Forest | 29,335 | 81% |
| | Grain Crops | | -- |
| | Grass/Pasture/Hay Lands | 2,248 | 6% |
| | Row Crops | | -- |
| | Shrub/Rangelands | 3,579 | 10% |
| | Water/Wetlands/Developed/Barren | 1,130 | 3% |
| | **Total Acres of 100 ft stream buffers** | **36,264** | 100% |
| **Land Capability Class**[4] | **I** – slight limitations | 0 | -- |
| | **II** – moderate limitations | 0 | -- |
| | **III** – severe limitations | 0 | -- |
| | **IV** – very severe limitations | 0 | -- |
| | **V** – no erosion hazard, but other limitations | 0 | -- |
| | **VI** – severe limitations, unsuited for cultivation, limited to pasture, range, forest | 0 | -- |
| | **VII** – very severe limitations, unsuited for cultivation, limited to grazing, forest, wildlife | 0 | -- |
| | **VIII** – misc areas have limitations, limited to recreation, wildlife, and water supply | 0 | -- |
| | **Total Crop & Pasture Lands** | **0** | -- |

| Confined Animal Feeding Operations – Dairies/Feedlots[12, 13, 26] | | | | |
|---|---|---|---|---|
| **Operation Type** | **Number** | **300-999** | **1000-4999** | **>10,000** |
| **Dairy** | 0 | | | |
| **Feedlots** | 0 | | | |

## Resource Settings

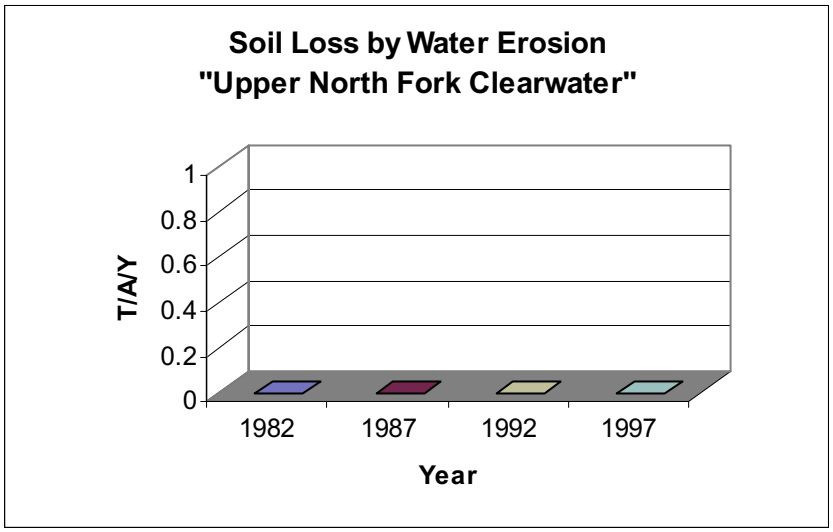
**Forests and Grazed Forests:** The riparian forest consists of mixed conifers and deciduous trees. The associated understory is comprised of grasses and brush species with inclusions of wetter areas. Soils are silt loams and clay loams that are shallow to deep, and can have low to high rock fragment content. They range from somewhat poorly to well drained. Average annual precipitation ranges from 18 to 35 inches. The forest landscape is characterized by level to nearly level landforms. Riparian grazing units typically exhibit impacts to riparian vegetation and a loss of woody species. Important wildlife species include elk, deer, moose, bear, raptors and songbirds.

Ponderosa pine and drier Douglas fir habitat types are found at elevation ranges from 1800 to 4000 feet on a variety of soil types. Annual precipitation is less than 25 inches with hot, dry summers. Slopes are less than 35 percent. The forest understory is dominated by ninebark/oceanspray and associated brush species. Grass and forb species are common. Livestock grazing occurs during the summer and early fall period, and overgrazing is common. Important wildlife species include elk, deer, moose, bear, raptors and songbirds.

Douglas fir, grand fir, and wetter habitat types are found at elevations greater than 4000 feet on a variety of soil types. Slopes are greater than 35 percent. Annual precipitation is greater than 25 inches, most of which falls in the winter and spring. Summers are warm and relatively dry. The forest understory is dominated by forbs and scattered grass species, with associated brush species such as snowberry, willow and alder. Livestock grazing occurs during the mid-summer and early fall period, and overgrazing is common. Livestock tend to concentrate along the road corridors and riparian areas. Important wildlife species include elk, deer, moose, bear, raptors and songbirds.

## Resource Concerns

This watershed does not contain any cropland, pasture/hayland or CRP. Water erosion in this subbasin is not a major issue.

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## Resource Concerns - continued

| Impacted Water Bodies[9,10] (ID17060307) | Stream Miles | Sediment, Siltation or TSS | Nutrients | Bacteria | Temperature | Dissolved Oxygen | Flow Alteration | Other or Unknown |
|---|---|---|---|---|---|---|---|---|
| Cold Springs Creek (CL040_02) | 11.3 | | | | x | | | |
| Collins Creek (CL048_03) | 5.8 | | | | x | | | |
| Cougar Creek (CL045_02) | 6.0 | | | | x | | | |
| Deception Gulch Creek (CL032_02a) | 6.4 | x | | | x | | | |
| Elizabeth Creek (CL039_02) | 8.9 | | | | x | | | |
| Grass Creek (CL021_02b) | 1.7 | | | | x | | | |
| Gravey Creek (CL021_02, 021_03, 021_03a) | 23.3 | | | | x | | | |
| Grizzly Creek (CL044_02a) | 4.5 | | | | x | | | |
| Hem Creek ((CL007_02b) | 10.0 | | | | x | | | |
| Hemlock Creek (CL010_02) | 39.5 | | | | x | | | |
| Lake Creek (CL033_03) | 4.9 | | | | x | | | |
| Little Moose Creek (CL029_02) | 21.2 | | | | x | | | |
| Marten Creek ((CL021_02a) | 7.6 | | | | x | | | |
| Middle Creek and Tribs. (CL012_02, 012_02a, 012_03, 012_03a) | 34.3 | | | | x | | | |
| Orogrande Creek (CL005_04, 006_02, 006_03) | 53.4 | | | | x | | | |
| Osier Creek (CL030_02, 030_03) | 22.8 | | | | x | | | |
| Quartz Creek (CL044_03) | 6.2 | | | | x | | | |
| Rock Creek (CL043_02) | 15.9 | | | | x | | | |
| Skull Creek (CL046_04, 047_04) | 3.9 | | | | x | | | |
| Sneak Creek (CL001_02a) | 5.4 | | | | x | | | |
| Sugar, Pollock Creeks (CL030_02a) | 13.8 | | | | x | | | |
| Sylvan Creek (CL007_02a) | 5.7 | | | | x | | | |
| Tamarack Creek (CL005_02a) | 5.7 | | | | x | | | |
| Washington Creek (CL003_03) | 8.9 | | | | x | | | |
| Weitas Creek (CL011_04) | 10.3 | | | | x | | | |
| | | | | | | | | |
| **Total Stream Miles** | 337.4 | | | | | | | |
| | | | | | | | | |

Shading indicates TMDL in place.

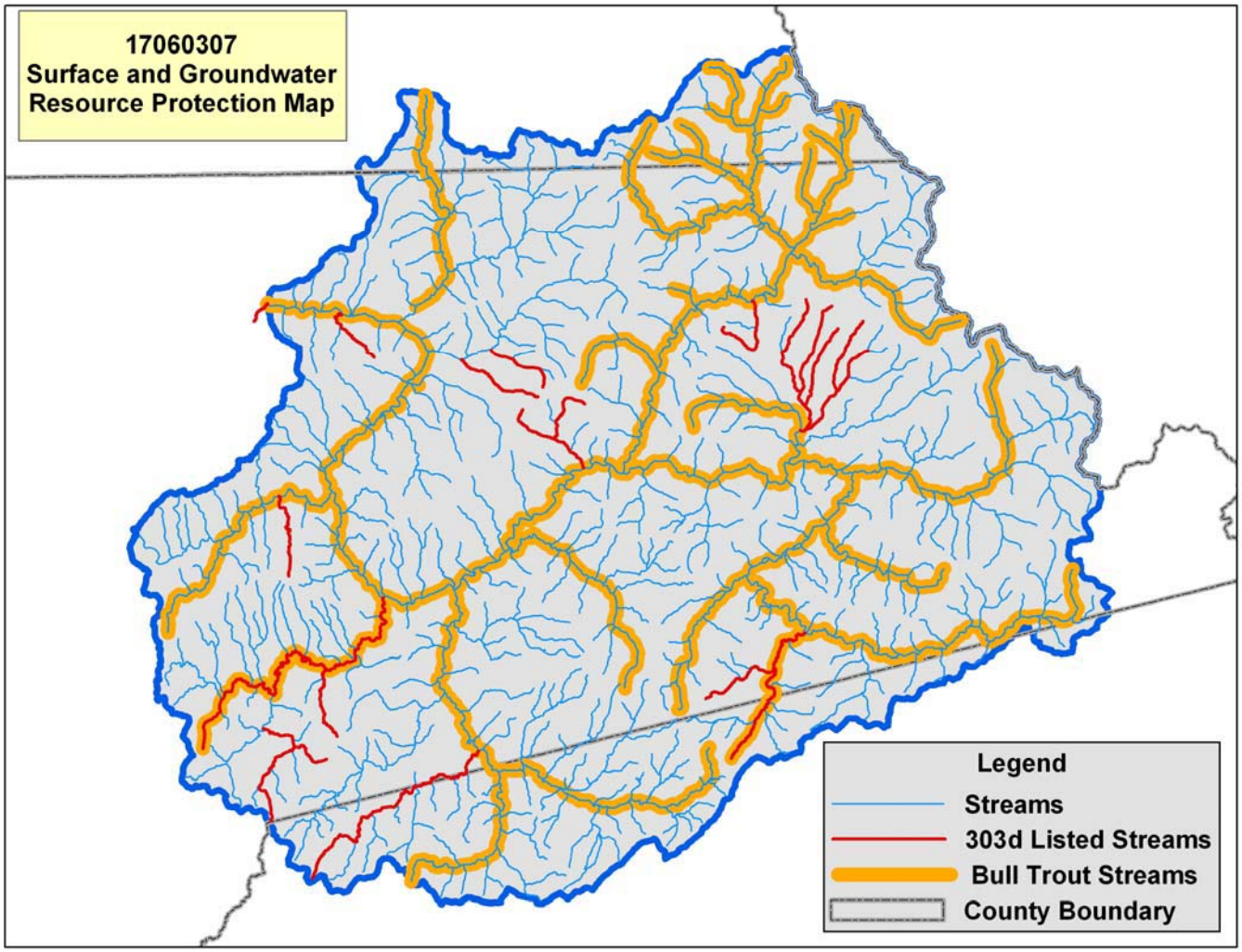
All of the listed streams are temperature-impaired. Elevated stream temperatures may be due to inadequate riparian shade, stream channel widening, altered flood plain and hyperheic zone hydrology, or other anthropogenic or natural sources. Sediment sources from forest activities, mining, roads and trails, and recreation have been addressed through the TMDL process.

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

| Watershed Projects, Plans, Studies, and Assessments* | |
|---|---|
| ***Federal:*** | ***State:*** |
| **NRCS Watershed Plans/Studies/Assessments**[14,15] | **IDEQ TMDLs**[16] |
| | Upper NF Clearwater TMDL (2003) |
| | **IDEQ 319 Projects/**[17] |
| | |
| **NWPCC Subbasin Plans and Assessments**[18] | **SCC Plans/Projects**[19] |
| Clearwater Subbasin Assessment (2003) | |
| | |
| | **ISDA Regional Water Quality Projects**[20] |
| | |
| | **IDWR Comprehensive Basin Plans**[21] |
| | NF Clearwater Basin (1996) |

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

## Surface and Groundwater Resource Protection /22, 23. 24




No groundwater impacted areas in watershed.

## 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 or Ungrazed Forest** |
| Soil Erosion | Sheet and rill | | | | | | | |
| | Ephemeral or classic gully | | | | | | | |
| | Wind | | | | | | | |
| | Streambank | | | | | | | x |
| Water Quantity | Inefficient use on irrigated lands | | | | | | | |
| Water Quality, Surface | Suspended sediment | | | | | | | x |
| | Nutrients and organics | | | | | | | x |
| Water Quality, Ground | Nutrients and organics | | | | | | | |
| | Pesticides | | | | | | | |
| Soil Condition | Organic matter depletion | | | | | | | |
| | Compaction | | | | | | | x |
| Plant Condition | Productivity, health and vigor | | | | | | | x |
| | Noxious and invasive plants | | | | | | | x |
| | Wildfire hazard | | | | | | | x |
| Domestic Animals | Inadequate feed or water | | | | | | | x |
| Fish and Wildlife | Inadequate water | | | | | | | |
| | Inadequate cover/shelter | | | | | | | x |

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

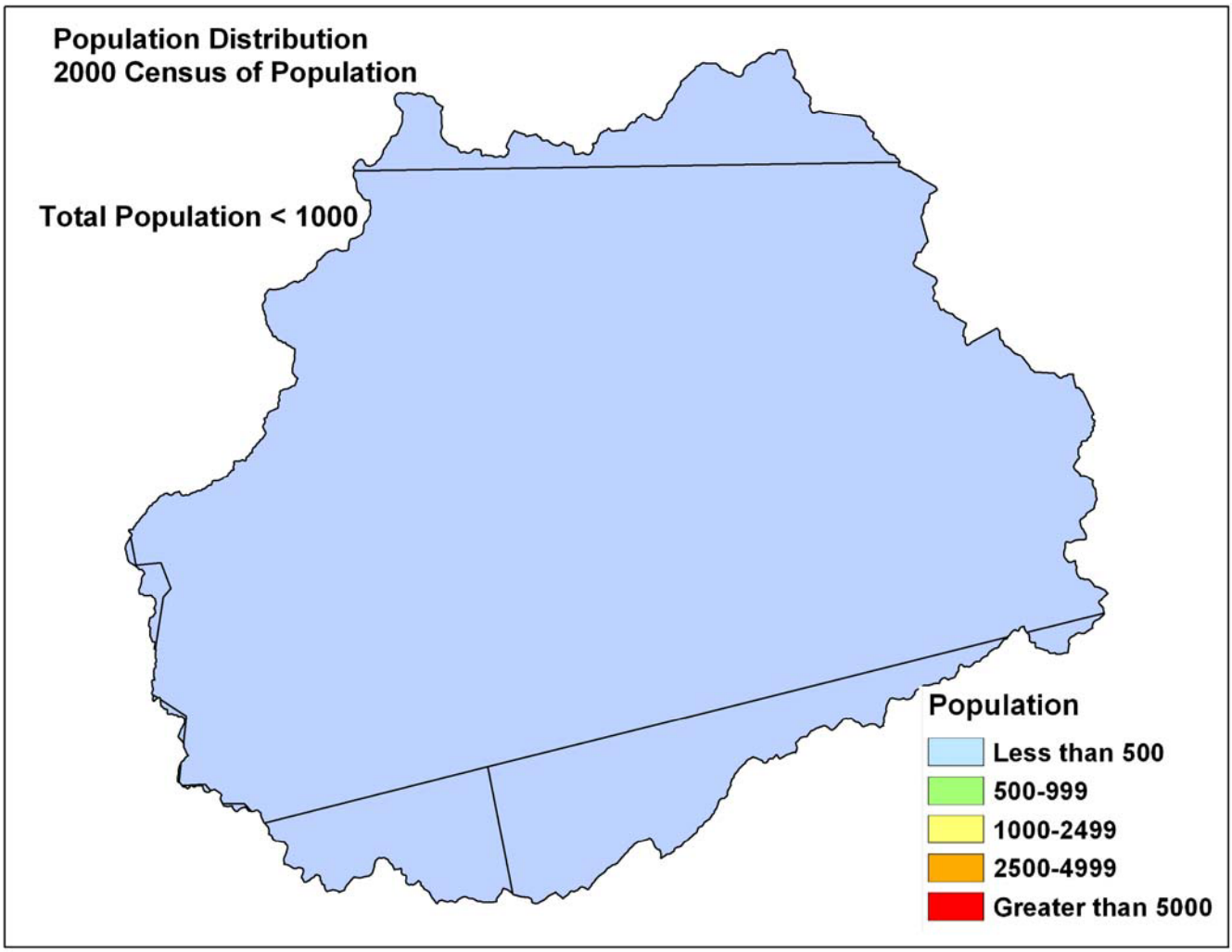
| FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES[25] | |
|---|---|
| **Threatened Species** | **Candidate Species** |
| **Mammals –** Lynx, Gray Wolf<br>**Birds –** None<br>**Fish –** Bull Trout<br>**Invertebrates –** None<br>**Plants –** None | **Fish** - None<br>**Birds –** None<br><br>**PROPOSED SPECIES** None |
| **ESSENTIAL FISH HABITAT – None** | **CRITICAL HABITAT - None** |

## Census and Social Data[/26]

**Population: <1000**

**Number of Farms: 56**

| | 0-49 acres | 50-1000 acres | 1000+ acres |
|---|---|---|---|
| **Number of Farms** | 15 | 33 | 8 |



## Census and Social Data - continued

Fifty-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 8 percent of the total. Ninety-two percent of all operators are white. Non-white operators are of Hispanic and American Indian background.

Farm size ranges from less than 10 acres to more than 1000 acres with an average of 370 acres. Agricultural land in the watershed is a mix of woodland, cropland, range, pasture and hayland. Landusers in the watershed utilize EQIP, CRP, Continuous CRP, WHIP and other programs to implement conservation plans.

Farm size, market value of production and government payments to farmers are up over the past several years. Farm sales range from less than $1000 to more than $500,000 per year. Eighty-eight percent of farms reported sales of less than $50,000 per year.

| | Average size farm | Market Value of Production (Average Farm) | Government Payments (Average Farm) |
|---|---|---|---|
| 1997 | 310 | $20,400 | $6,700 |
| 2002 | 370 | $29,300 | $10,300 |
| Change | 19.0% | 44.0% | 54.0% |

Economic Profile:

| | Watershed | Idaho | United States |
|---|---|---|---|
| Population | > 1,000 | | |
| Per Capita Personal Income | $21,200 | $24,500 | $30,400 |
| Median Home Value | $80,500 | $106,600 | $119,600 |
| Percent Unemployment | 13.5% | 5.4% | 5.8% |
| Percent Below Poverty Level | 12.8% | 11.7% | 12.1% |

The Upper North Fork Clearwater encompasses portions of Clearwater (83%), Idaho (12%) and Shoshone counties (5%). Ninety-six percent of the land ownership in the watershed is public owned. Land use on privately owned land is predominantly forestland held by a few private industrial forest companies. The 2000 Census data indicates that there are fewer than 1,000 people living in the watershed.

## Progress/Status

| PRS Data | | | | | |
|---|---|---|---|---|---|
| **Conservation Treatment Acres** | FY04 | FY05 | FY06 | Avg/Year | Total |
| Forest Stand Improvement (acres) | 0 | 0 | 0 | 0.0 | 0 |
| Forest Trails and Landings (acres) | 0 | 0 | 0 | 0.0 | 0 |
| Tree/Shrub Preparation (acres) | 0 | 0 | 0 | 0 | 0 |
| Nutrient Management (acres) | 0 | 0 | 0 | 0.0 | 0 |
| Pest Management (acres) | 0 | 0 | 0 | 0 | 0 |
| Wildlife Habitat (acres) | 0 | 0 | 0 | 0 | 0 |

*All Federal land or private industrial forestland in this watershed:

~ water quality resource concerns regarding temperature-impairment are a problem

~ 741 miles of Bull Trout streams

~ noxious weeds are a problem

### Lands Removed from Production through Farm Bill Programs

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

# Footnotes/Bibliography



1. Ownership Layer – Source: This spatial data contains surface management land status (sometimes known as "ownership") and Public Land Survey System (PLSS) information for Idaho. The Bureau of Land Management (BLM) in Idaho creates and maintains these spatial data layers. The primary source of the spatial features is the BLM Geographic Coordinate Database (GCDB), which contains official survey records and corresponding geodetic control information maintained by the BLM Cadastral program. In areas where GCDB records are unavailable, the spatial features are taken from a variety of sources including the BLM Idaho Resource Base Data collection, US Geological Survey Digital Line Graphs (DLGs), and US Forest Service Cartographic Feature Files (CFFs), among others. The source of the attribute information is the BLM Master Title Plats (MTPs) and careful cooperation with other government agencies that own or manage land parcels. The layer is available from the Inside Idaho (Interactive Numeric & Spatial Information Data Engine): http://inside.uidaho.edu For current ownership status, consult official records at appropriate federal, state or county offices. Ownership classes grouped to calculate Public Ownership vs. Private Ownership.
2. National Land Cover Dataset (NLCD): NLCD 92 (National Land Cover Data 1992) is a 21-category land cover classification scheme that has been applied consistently over the conterminous U.S. It is based primarily on the unsupervised classification of Landsat TM (Thematic Mapper) 1992 imagery. Ancillary data sources included topography, census, agricultural statistics, soil characteristics, other land cover maps, and wetlands data. The NLCD 92 classification is provided as raster data with a spatial resolution of 30 meters. The layer is available from: http://edcwww.cr.usgs.gov/products/landcover/nlcd.html Description: Abstract: These data can be used in a geographic information system (GIS) for any number of purposes such as assessing wildlife habitat, water quality, pesticide runoff, land use change, etc. The State data sets are provided with a 300 meter buffer beyond the State border to facilitate combining the State files into larger regions.
3. Farm Services Agency, USDA, 2005. CRP acres from GIS (CLU) database.
4. ESTIMATES FROM THE 1997 NRI DATABASE (REVISED DECEMBER 2000) REPLACE ALL PREVIOUS REPORTS AND ESTIMATES. Comparisons made using data published for the 1982, 1987, or 1992 NRI may produce erroneous results. This is due to changes in statistical estimation protocols, and because all data collected prior to 1997 were simultaneously reviewed (edited) as 1997 NRI data were collected. All definitions are available in the glossary. In addition, this December 2000 revision of the 1997 NRI data updates information released in December 1999 and corrects a computer error discovered in March 2000. For more information: http://www.nrcs.usda.gov/technical/NRI/
5. PRISM Climate Mapping Project. Annual precipitation data. See http://www.ocs.orst.edu/prism_new.html for further information.
6. Irrigated Adjudicated Water Rights – Idaho Department of Water Resources http://www.idwr.idaho.gov/water/srba/mainpage/
7. USGS Idaho Streamflows, gaging station data (http://waterdata.usgs.gov/id/nwis/sw/ ), USDA-NRCS Centralized Forecast System (http://www.id.nrcs.usda.gov/snow/watersupply/), and estimates for ungaged streams based on statistical data ( http://streamstats.usgs.gov/html/idaho.html).
8. National Hydrology Dataset (NHD). Developed by the US Geological Survey in cooperation with U.S. Environmental Protection Agency and other state and local partners (http://nhd.usgs.gov).
9. IDEQ. 2002 Integrated Report (Formerly 303d List) (approved December 2005). http://www.deq.idaho.gov/water/data_reports/surface_water/monitoring/integrated_report.cfm.
10. IDEQ. 2003. Upper North Fork Clearwater Subbasin Assessment and TMDL. http://www.deq.state.id.us/water/data_reports/surface_water/tmdls/clearwater_river_unf/clearwater_river_unf.cfm

11. StreamNet is a cooperative venture of the Pacific Northwest's fish and wildlife agencies and tribes and is administered by the Pacific States Marine Fisheries Commission. Streamnet provided data and data services in support of the region's Fish and Wildlife Program and other efforts to manage and restore the region's aquatic resources. Official Streamnet website: http://www.streamnet.org/
12. (Dairy) Idaho Department of Water Resources: http://www.idwr.state.id.us/gisdata/gis_data-new.htm
13. (Feedlot) Idaho State Department of Agriculture: http://www.agri.state.id.us/ FOIA request.
14. Natural Resource Conservation Service, Watershed Projects Planned and Authorized, http://www.nrcs.usda.gov/programs/watershed
15. Natural Resource Conservation Service, Watershed Plans, Studies and Assessments completed, http://www.nrcs.usda.gov/programs/watershed/Surveys_Plng.html#Watershed%20Surveys%20and%20Plan
16. Idaho Department of Environmental Quality (IDEQ), Surface Water Quality: Subbasin Assessments, TMDLs, and Implementation Plans. http://www.deq.state.id.us/water/data_reports/surface_water/tmdls/sba_tmdl_master_list.cfm
17. Idaho Department of Environmental Quality, Watershed protection: Nonpoint source management (319 grant), Reports and program resources. http://www.deq.state.id.us/water/data_reports/surface_water.nps/reports/cfm
18. Subbasin assessments and plans are developed by local groups (SWCDs, Watershed Councils, Tribes and others) as part of the Northwest Power and Conservation Council's fish and wildlife program in the Columbia River Basin. This program is funded and implemented by the Bonneville Power Administration. http://www.nwcouncil.org/fw/subbasinplanning/Default.htm
19. Idaho Soil Conservation Commission (SCC), TMDL watershed implementation plans: agricultural com http://www.deq.state.id.us/water/data_reports/surface_water/nps/reports.cfmponent. http://www.scc.state.id.us/PDF/Ag%Component%20Status%20Report%20-%202004.pdf
20. Idaho State Department of Agriculture (ISDA). Groundwater water quality regional projects. http://www.agri.idaho.gov/gw/gwdatasummary.htm
21. Idaho Department of Water Resources (IDWR). State Comprehensive Water Plans. http://www.idwr.idaho.gov/waterboard/planning/Comp_Basin_Plans.htm
22. 303d Listed Streams designated by the Idaho Department of Environmental Quality (1998) and approved by the Environmental Protection Agency, Section 303d Clean Water Act
23. Groundwater Management Areas and Critical Groundwater Management Areas designated by the Idaho Department of Water Resources. http://www.idwr.idaho.gov/hydrologic/projects/gwma/
24. Nitrate Priority Areas. IDEQ has developed a list of degraded ground water areas. This list focuses on nitrate and ranks the top 25 nitrate-degraded areas (referred to as "nitrate priority areas") in the state based on the severity of the degradation, the population affected, and the trend; the rank of "1" indicates the most severely impacted area in the state. http://www.deq.state.id.us/water/prog_issues/ground_water/nitrate.cfm#ranking
25. NRCS Field Office Technical Guide, Section II, Threatened and Endangered List and the Idaho Conservation Data Center, Idaho Department of Fish and Game http://fishandgame.idaho.gov/cms/tech/CDC/
26. Data were taken from the 2002 Agricultural Census and adjusted by percent of HUC in the county or by percent of zip code area in the HUC, depending on the level of data available. Data were also taken from the U.S. Census, 2000 by zip code and adjusted by percent of zip code in the HUC. http://www.nass.usda.gov/Census_of_Agriculture/Census_by_State/Idaho/index.asp

## Future Conservation Needs

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

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

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

# Conservation Activities for Forestland

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

| **Current Conditions** | | | Total Acres |
|---|---|---|---|
| Total Private Forestland | | | 27,360 |
| Riparian Potential | | | 2,740 |
| Current Farm Bill participation | | | 0% |

| **Current Level of Treatment for Forestland:** | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Forestland | Quantity | | Costs | | Effects | | | | Implementation | | | | |
| Practices | Unit | Quantity | | Annual O&M and Mngt. Cost | Water Conser-vation | Water Storage | Habitat | WQ | EQIP | WHIP | WRP | CREP | Other |
| Forestland (Ungrazed) | Ac. | 27,360 | | | +/- | +/- | -2 | -2 | | | | | |
| | Ac. | | | $ - | | | | | | X | X | | X |

# Conservation Activities for Ungrazed Forestland

| Future Conditions | | Ungrazed | Riparian | Total Acres |
|---|---|---|---|---|
| Forestland | | 24,620 | 2,740 | 27,360 |

**Project Future Level of Treatment for Ungrazed Forestland:**

| Forestland | Quantity | | Costs | | Effects | | | | Implementation | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Practices | Unit | Quantity | Investment Cost | Annual O&M and Mgt. Cost | Water Conser-vation | Water Storage | Habitat | WQ | EQIP | WHIP | WRP | CREP | Other |
| Forestland (Ungrazed) | Ac. | 24,620 | | | +2 | +2 | +3 | +3 | | | | | |
| Access Road (560) | Ft. | 25,080 | $ 351,100 | $ 52,700 | | | | | | | X | | X |
| Critical Area Planting (342) | Ac. | 2,460 | $ 1,168,500 | $ 35,100 | | | | | | | X | | X |
| Firebreak (394) | Ft. | 50,160 | $ 96,800 | $ 19,400 | | | | | | | X | | X |
| Forest Slash Treatment (384) | Ac. | 700 | $ 262,500 | $ - | | | | | | | | | X |
| Forest Stand Improvement (666) | Ac. | 12,310 | $ 5,539,500 | $ 27,700 | | | | | | | X | | X |
| Forest Trails and Landings (655) | Ac. | 250 | $ 237,500 | $ 1,200 | | | | | | | | | X |
| Fuel Break (383) | Ac. | 90 | $ 63,000 | $ 6,300 | | | | | | | | | X |
| Nutrient Management (590) | Ac. | 24,620 | $ 369,300 | $ 123,100 | | | | | | | | | X |
| Pest Management (595) | Ac. | 24,620 | $ 738,600 | $ 246,200 | | | | | | | X | | X |
| Prescribed Burning (338) | Ac. | 190 | $ 76,000 | $ - | | | | | | X | X | | X |
| Prescribed Forestry (409) | Ac. | 760 | $ 17,100 | $ 5,700 | | | | | | X | X | | X |
| Tree/Shrub Establishment (612) | Ac. | 6,160 | $ ,772,000 | $ 27,700 | | | | | | X | X | | X |
| Forest Site Preparation (490) | Ac. | 2,460 | $ 615,000 | $ - | | | | | | X | X | | X |
| Tree/Shrub Pruning (660) | Ac. | 580 | $ 150,800 | $ 1,500 | | | | | | | | | X |
| Upland Wildlife Habitat Mngt (645) | Ac. | 4,920 | $ 73,800 | $ 24,600 | | | | | | X | X | | X |
| Wetland Wildlife Management (644) | No. | 180 | $ 2,700 | $ 900 | | | | | | X | X | | X |

## Conservation Activities for Ungrazed Forestland – Continued

| **Project Future Level of Treatment for Ungrazed Forestland:** | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Forestland | Quantity | | Costs | | Effects | | | | Implementation | | | | |
| Practices | Unit | Quantity | Investment Cost | Annual O&M and Mgt. Cost | Water Conser-vation | Water Storage | Habitat | WQ | EQIP | WHIP | WRP | CREP | Other |
| Forestland Riparian | Ac. | 2,740 | | | +2 | +2 | +3 | +3 | | | | | |
| Access Road (560) | Ft. | 2,640 | $ 37,000 | $ 5,600 | | | | | | | | | X |
| Critical Area Planting (342) | Ac. | 270 | $ 128,300 | $ 3,800 | | | | | | X | X | | X |
| Firebreak (394) | Ft. | 5,650 | $ 10,900 | $ 2,200 | | | | | | X | X | | X |
| Forest Slash Treatment (384) | Ac. | 80 | $ 30,000 | $ - | | | | | | | | | X |
| Forest Stand Improvement (666) | Ac. | 1,370 | $ 616,500 | $ 3,100 | | | | | | X | X | | X |
| Forest Trails and Landings (655) | Ac. | 30 | $ 28,500 | $ 100 | | | | | | | | | X |
| Fuel Break (383) | Ac. | 10 | $ 7,000 | $ 700 | | | | | | | | | X |
| Nutrient Management (590) | Ac. | 2,740 | $ 41,100 | $ 13,700 | | | | | | | | | X |
| Pest Management (595) | Ac. | 2,740 | $ 82,200 | $ 27,400 | | | | | | X | X | | X |
| Prescribed Burning (338) | Ac. | 20 | $ 8,000 | $ - | | | | | | X | X | | X |
| Prescribed Forestry (409) | Ac. | 80 | $ 1,800 | $ 600 | | | | | | X | X | | X |
| Riparian Forest Buffer (391) | Ac. | 80 | $ 240,000 | $ 2,400 | | | | | | X | X | | X |
| Stream Habitat Improve & Mgnt (395) | Ac. | 41 | $ 733,900 | $ 14,700 | | | | | | X | X | | X |
| Streambank&Shoreline Protec (580) | Ft. | 17,820 | $ 427,700 | $ 42,800 | | | | | | X | X | | X |
| Tree/Shrub Establishment (612) | Ac. | 690 | $ 310,500 | $ 3,100 | | | | | | X | X | | X |
| Forest Site Preparation (490) | Ac. | 270 | $ 67,500 | $ - | | | | | | | | | X |
| Tree/Shrub Pruning (660) | Ac. | 70 | $ 18,200 | $ 200 | | | | | | | | | X |
| Upland Wildlife Habitat Mngt (645) | Ac. | 550 | $ 8,300 | $ 2,800 | | | | | | X | X | | X |
| Wetland Wildlife Management (644) | No. | 20 | $ 300 | $ 100 | | | | | | X | X | | X |
| Total RMS Costs | | | $ 15,331,900 | $ 695,400 | | | | | | | | | |

# Conservation Activities for Private Ungrazed Forestland

| Potential RMS Effects Summary for Private Ungrazed Forestlands | | | |
|---|---|---|---|
| Cost Items and Programs | | Costs | O&M Costs |
| Non Farm Bill Programs (100%) | | $ 15,331,900 | $ 695,400 |
| Total RMS Costs | | $ 15,331,900 | $ 695,400 |
| Estimated Level of Participation | 65% | | |
| Cost of treatment at estimated participation level. | | $ 9,965,700 | $ 452,000 |
| Total Acres in RMS System | | | $ 17,800 |
| Improves forest productivity, health and ecological sustainability | | | |
| Reduces forest fuel loading and fire danger | | | |
| Reduces forest disease and insect mortality risk | | | |
| Improves infiltration and storage of water in soil profile | | | |
| Improves upland wildlife habitat for elk, deer, antelope and other species | | | |
| Improves water quality by reducing erosion and sediment delivery to streams | | | |