

**BONNER SOIL & WATER  
CONSERVATION DISTRICT**

**1224 Washington Avenue, Suite 101  
Sandpoint, Idaho 83864**

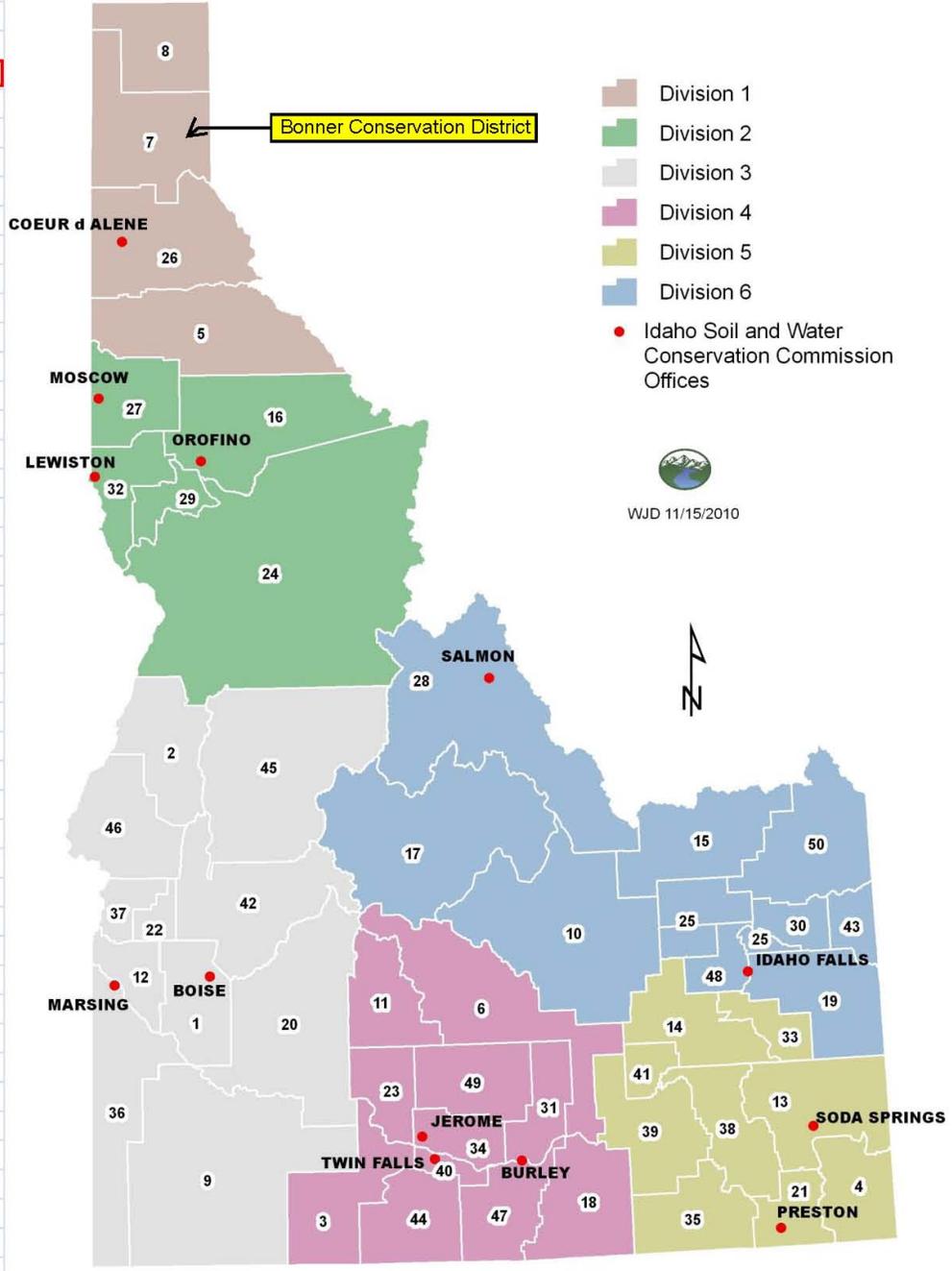
**FIVE-YEAR RESOURCE CONSERVATION  
BUSINESS PLAN**



**Updated March 2014**

1	Ada
2	Adams
3	Balanced Rock
4	Bear Lake
5	Benewah
6	Blaine
7	Bonner
8	Boundary
9	Bruneau River
10	Butte
11	Camas
12	Canyon
13	Caribou
14	Central Bingham
15	Clark
16	Clearwater
17	Custer
18	East Cassia
19	East Side
20	Elmore
21	Franklin
22	Gem
23	Gooding
24	Idaho
25	Jefferson
26	Kootenai-Shoshone
27	Latah
28	Lemhi
29	Lewis
30	Madison
31	Minidoka
32	Nez Perce
33	North Bingham
34	North Side
35	Oneida
36	Owyhee
37	Payette
38	Portneuf
39	Power
40	Snake River
41	South Bingham
42	Squaw Creek
43	Teton
44	Twin Falls
45	Valley
46	Weiser River
47	West Cassia
48	West Side
49	Wood River
50	Yellowstone

## Districts by IASCD Divisions 2010



## **Executive Summary**

The Bonner Soil and Water Conservation District is one of 51 Conservation Districts in Idaho. Idaho Soil and Water Conservation Districts are political subdivisions of state government but are not state agencies. Conservation Districts are charged with carrying out a program for the conservation, use and development of soil, water, and other natural resources.

Conservation Districts are the primary entities to provide assistance to private landowners and land users in the conservation, sustainment, improvement and enhancement of Idaho's natural resources. They are catalysts for coordinating and implementing conservation programs, channeling expertise from all levels of government into action at the local level. Programs are nonregulatory; science-based technical assistance, incentive-based financial programs and informational and educational programs at the local level.

Both by legislation and by agreement the USDA Natural Resources Conservation Service provides technical assistance to landowners and land users through Conservation Districts. Each Conservation District in Idaho has signed a Mutual Agreement with the Secretary of Agriculture and the Governor of Idaho that establishes a framework for cooperation.

This Annual Plan/ Five-Year Resource Conservation Business Plan was developed not only to guide the Conservation District, but also to encourage cooperation among landowners, government agencies, private organizations, and elected officials. Through knowledge and cooperation, all concerned can ensure a sustainable natural resource base for present and future generations in the Bonner Soil and Water Conservation District.

This document identifies the resource needs in the Conservation District and presents a resource conservation action plan for meeting these needs.

## Certificate of Adoption

The Board of elected supervisors of the Bonner Soil and Water Conservation District this 2<sup>nd</sup> day of June, 2009, do hereby approve the following document known as the Resource Conservation Business Plan. This Plan will be in effect for a five-year period ending June 30, 2014 during which time it will be updated annually and/or amended, as necessary.

As evidence of our adoption and final approval, we do hereby affix our signatures to this document.

\_\_\_\_\_ Chairman  
Herman B. Collins

\_\_\_\_\_ Vice Chairman  
Dale Van Stone

\_\_\_\_\_ Secretary/Treasurer  
Vernon Hollett

\_\_\_\_\_ Member  
Alice Wallace

\_\_\_\_\_ Member  
Cassie Tauber

Supporting Idaho Conservation Partners (As applicable)

\_\_\_\_\_ Natural Resources Conservation Service

\_\_\_\_\_ Soil Conservation Commission

\_\_\_\_\_ Idaho Association of Soil Conservation Districts



# **5-Year Resource Conservation Plan Business Plan (2009 to 2014) BONNER Soil & Water Conservation District**

**For More Information Contact: Linda O'Hare, 208-263-5310,  
linda.ohare@id.nacdnet.net**

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## **Organization of the Bonner Soil & Water Conservation District**

A political subdivision of the State of Idaho – authorities, power and structure contained in Soil Conservation District Law, Title 22, Chapter 27, Idaho Code

- Organized on July 15, 1946, to provide voluntary land and water conservation, technical and financial assistance to landowners and uses with the Bonner SWCD boundary
  - First District board members were M.A. Roberts, Chairman, Blanchard; Glen Reed, Vice Chairman, Sagle; H.L. King, Priest River; Sloan Crawford, Sandpoint; A.M. Derr, Sagle. Ed Nurmi was selected to fill the Soil Conservation Service position during this time.
  - Early district reports show an objective of the District was to aid the livestock grower in classifying the range land and conditions to select the most profitable grazing system. Other high priorities for the area were proper fertilization, residue management, woodland management, and proper hay seedings. Some areas in Bonner County needed education on draining practices and others were in need of help with irrigation. This shows the diversity of the District.
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## **Mission of the Bonner Soil & Water Conservation District**

- To take available technical, financial and educational resources whatever their source and focus and coordinate them to meet the needs of the landowners
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## **Who We Serve & Why**

- We serve the people and natural resources in Bonner County for the purpose of conserving the natural resources for the beneficial and sustainable use by all.
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## **Values of the Bonner Soil & Water Conservation District**

- Sustainable use of natural resources
  - Support for agriculture activity that uses sustainable, economic feasible practices
  - Value and respect for the Idaho Conservation Partnership
  - Conservation education for adults and youth
  - Coordination among agencies, municipalities, and people
- 

## **Natural Resource Priorities and Goals:**

- Information and Education/District Operations
- Water Resources – Water Quality and Riparian Buffers
- Urban Conservation
- Timber and Woodland
- Fish, Wildlife, and Recreation
- Pasture and Hayland

## Natural Resource Priorities and Goals continued:

### 1. Public Outreach

- By 2010 BSWCD will provide current information to constituents on the new Bonner County codes that affect stormwater and conservation, and the new Farm Bill Programs through the district semi-annual newsletter
- By 2010 will continue to advance Lake\*A\*Syst (L\*A\*S) and Stormwater and Erosion Education Program (SEEP) by adding 2 chapters to the L\*A\*S book, one on boats and recreation and one on aquatic invasive species – and put this updated information on the L\*A\*S website
- Annually conduct youth environmental education programs and increase participation in the Idaho State Forestry Contest and the Pend Oreille Water Festival
- Annually sponsor a booth at an event, Bonner County Fair, Earth Day, or Arbor Day
- Coordinate with USDA in developing noxious weed education strategy for north Idaho
- Support efforts of sixriversmarket.org, a local fresh produce marketing effort via newsletter
- Support Schweitzer Road upgrade

### 2. Water Quality

- Attend Pend Oreille Lake Nearshore, Pack River Watershed Council, Clark Fork WAG, Priest River WAG, and Cococalla Lake Association meetings, and administer financial funds for administrative assistance. (ongoing)
- By 2010 provide stormwater information to landowners and municipalities in Bonner county through newsletters and Lake\*A\*Syst outreach
- By 2010 re-establish Lake\*A\*Syst program for Priest Lake with CDs and Guide Book
- By 2014 establish Lake\*A\*Syst program for Twin Lakes if funding is available
- Work with developers & landscapers to maintain shoreline and streambank vegetation & stabilization through Lake\*A\*Syst and Stormwater Erosion & Education Program (S.E.E.P.)
- Participate in Bonner Aquatic Invasive Species Task Force to address invasive species in the Clark-Fork/Pend Oreille and Pries Lake Subbasins

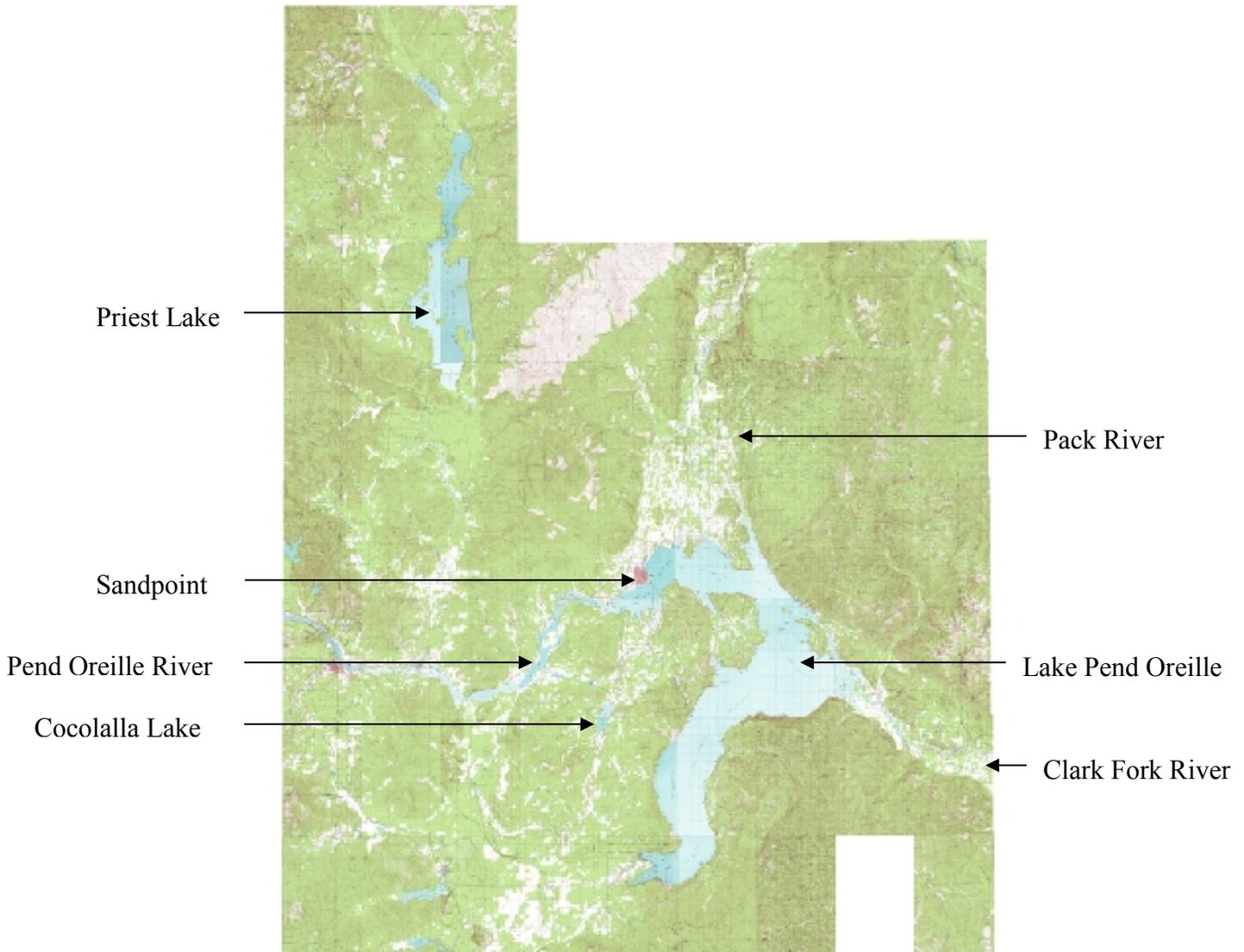
### 3. Reduction of invasive and noxious weeds, terrestrial and aquatic

- By 2011 invasive and noxious weeds in Selkirk Cooperative Weed Management Area in Bonner SWCD will be listed by location and degree of problem.
- District will help sponsor a Weed Control Workshop annually in April with a target of reaching 40 landowners and operators with other members of the Selkirk CWMA.
- Purchase one boat wash station and arrange manpower for it for five years – manage 2 boat inspection stations for 2011, 2012, 2013, 2014
- Conduct boater surveys and aquatic weed education through grants and the LAS program
- Support Memorial Boat Launch improvements to reduce aquatic invasive species

### 4. Timber and Woodland

- Conduct a conservation tree sale program annually to encourage constituents to develop conservation and farmstead wind breaks. Explore potential of carbon sequestration credits
- Coordinate pursuit of woody biomass plant – coordinate with agencies and municipalities and lumber industry

## Critical Geographic Areas: (attached map)



Critical areas for natural resource concerns in Bonner County include the shorelines of the major waterways which include three lakes, Pend Oreille, Priest, and Cocolalla, and three rivers, Clark Fork River leading into Lake Pend Oreille from Montana, Pend Oreille River leading out of Lake Pend Oreille to Washington, and the Pack River which leads into Lake Pend Oreille from the north. As Northern Idaho continues to grow, pressures on the natural resources of the area increase. Much of the new development is occurring along waterfront areas, adding pressure to the sensitive riparian areas and increasing the direct impact to lake water quality. Some issues that accompany shoreline development include habitat fragmentation, decrease in riparian buffers, wastewater disposal, increased stormwater runoff volume and velocity, and improper planning and/or installation of erosion and sediment control techniques. These can result in degradation of terrestrial and aquatic habitat, increased erosion, and increased pollutant delivery to waterways that can impact drinking water and increase the cost of community infrastructure (water treatment needs, clogged drainage ways, etc).

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## **Information – Education Priorities and Goals:**

- Provide current information to constituents through the district semi-annual newsletter
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## **District Operations Priorities, Goals:**

- New supervisors will have completed new Supervisor Training
  - By July 31 of each year complete effective and efficient operations including accounting, personnel management, training and development, annual planning and reporting
  - In cooperation with Conservation Districts develop and carry out an effective legislative outreach program to ensure 90% State matching funds for all Districts
  - Conduct Conservation District elections
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## **Trends Impacting Conservation in the Bonner Soil & Water Conservation District**

- Urban impact on agriculture production and stormwater issues
  - Poorly planned growth in agricultural and forested areas
  - Increasing number of small acreage farms, five acres or less
  - Limited availability of State funds for conservation
  - Focus on water quality compared to other conservation and environmental issues
  - Increased paper work to getting the job done
  - Trend to regulate agriculture and ranching. Noxious weeds associated with subdivision of land. Increased density of onsite subsurface sewage disposal
  - Noxious weeds, both aquatic and terrestrial
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## **Strategies to Address Trends**

- More education but not the usual – more outreach instead of publications. Examples: Nearshore marketing campaign, Lake Assist demonstrations and partnerships.
  - Determine opportunities to coordinate outreach activities with traditional and non-traditional partners
  - Raise awareness of conservation values with state legislature and elected officials – help decision makers be better informed
  - Strengthen locally led efforts
  - Supervisors become more informed on current issues impacting working lands, Farm Bill programs, information from agencies, and supplement this with information from the NRCS District Conservationist
  - Continue involvement with County Planning and Zoning and County Commissioners on issues impacting natural resources. Continue help with buffer plant list, subdivision review, Land Use Code review, and implementation and coordination with Lake Assist program
  - Work with partner agencies to provide current information to constituents on the new Bonner County codes that affect stormwater and conservation, and the new Farm Bill Programs
  - Work with partners to map terrestrial and aquatic noxious invasive weeds to more effectively target weed control efforts.
  - Establish a data base to track resource conditions – BMP tracking
  - Take a proactive approach to funding natural resource projects on non-ag land
  - Identify the information methods to communicate with small land owners
  - Sponsor project proposals with other districts and partners
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## Annual Budget Needs

### Bonner Soil & Water Cons. District Budget Overview: FY2015 Budget July 2014 - June 2015

Income				
	County Appropriations		7,000	
	State Appropriation			
	8500 + 10,500		19,000	
	Grant Admin		25,400	
	AIS Sticker Sales	5,000		
	Boat Inspection	9,000		
	Forestry Contest	2,000		
	Lake Assist	2,000		
	Pack River/Mon – Avista	400		
	POBC – State of Idaho	6,000		
	Water Festival	1,000		
	Interest		450	
	Tree Income		4,000	
	Prior years' unrestricted funds for half-time position		11,500	
	<b>GROSS INCOME</b>			<b>67,350</b>
Expense				
	Payroll – 1.5 people		49,000	
	Audit		2,800	
	Donations		100	
	Dues		2,975	
	Election Expense		120	
	Equipment/Repair		550	
	Liability Insurance		975	
	Medical Insurance		3,150	
	Office Supplies		600	
	Petty Cash		280	
	Postage		400	
	Public Outreach		1,500	
	Subscriptions		200	
	Travel		4,500	
	District Employee	1500		
	Supervisors	3000		
	Uncategorized		200	
	<b>GROSS EXPENSE</b>			<b>67,350</b>
<b>NET INCOME</b>				<b>0</b>

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## **Key Decision Makers**

- Citizens in Conservation District
- County Commissioners: Mike Nielsen, Cary Kelly and Glen Bailey
- County Officials:
  - Clare Marley, Planning and Zoning
  - Leslie Marshall, Bonner County Public Works
  - Brad Bluemer, County Weeds Supervisor
- City of Sandpoint Officials:
  - Mayor Carrie Logan
  - Kody Van Dyck, Director of Public Works
- Legislators:
  - Senator Shawn Keough
  - Senator Sheryl Nuxoll
  - Rep. George Eskridge
  - Rep. Eric Anderson
- Conservation District Supervisors
  - Herman B. Collins
  - Dale Van Stone
  - Vernon Hollett
  - Alice Wallace
  - Cassie Tauber
- Greater Sandpoint Chamber of Commerce: Kate McAlister, Exec. Director
- Priest River Chamber of Commerce: Jim Martin, Priest River Mayor
- Priest Lake Chamber of Commerce: Craig Hill
- Bonner County Aquatic Invasive Species Task Force
- Pend Oreille Basin Commission: Ford Elsaesser, Chairman, and Erin Mader, Coordinator

## **Physical Characteristics of the District**

Bonner County is in the northern Idaho Panhandle. The total area is 1920 square miles, with 9.1% being surface water, the most of any Idaho county. Bonner County's Lake Pend Oreille is Idaho's largest natural lake, covering 90,000 acres and reaching depths of about 1,200 feet. Priest Lake and Upper Priest Lake in the northwestern portion of the County are known for their exceptionally high water quality and natural aesthetics. Lower Priest Lake is the third largest natural lake entirely within Idaho. The land area consists of rugged, forested mountainous or hilly terrain and of comparatively narrow valleys that open to the south – 84% of the land is forested. The glacially sculptured Selkirk Mountains are in the northern and western parts of the area, and the Cabinet Mountains are in the eastern part. Most prominent of the valleys is the Selle Lowland, which is an extension of the Purcell Trench north of Sandpoint. Other valleys include the Clark Fork Valley in the eastern part of the area, the Priest River Valley in the northwestern part, and Blanchard, Hoodoo, and Cocolalla Valleys in the southern part.

Sandpoint is the county seat of Bonner County, and has a population of 8169. Its elevation at the north end of Lake Pend Oreille is about 2,100 feet. The highest elevations are in the northern part of the county where some mountain peaks are more than 7,000 feet high.

Soil, water, and timber are the most important natural resources in the area. Livestock, crops, and timber are marketable products derived from the soil. Millions of board feet of lumber are cut annually from ponderosa pine, lodgepole pine, western red cedar, western hemlock, and spruce. Boards, poles, posts,

shingles, and shakes are among the main products of the forest industry, while small logs and chips are used in the pulp industry. Some local timber is also used for veneer.

The abundant water resources include Pend Oreille and Priest Lakes and the three major rivers are the Clark Fork, Pack, and Priest Rivers. Overall, water quality in the area is considered to be excellent. Large quantities of ground water and the principal recharge area for the Rathdrum aquifer are in the southern part of the County. Wetlands are scattered throughout the area, but the major areas are adjacent to the Pend Oreille and Pack Rivers.

The boundaries of the District coincide with the boundaries of Bonner County, Idaho. The acreage of the District is as follows:

<u>Land Ownership</u>	<u>Acres</u>
Federal Land	492,593
BLM	11,162
Nat'l Forests	472,575
Other	8,856
State Land	170,053
Endowment Land	167,640
Fish & Game	1,415
Parks & Recreation	803
University of Idaho Land	195
Private Land	440,780
County Land	4,521
Municipal Land	4,117
<b>Total Land Acreage</b>	<b>1,112,064</b>

The above acreage figures were provided by the Idaho Department of Commerce website. <http://www.idoc.state.id.us/idcomm/profiles/pdfs/Bonner.pdf>

\*An interesting note: Total water acreage exceeds total croplands.

\*\*Nearly one quarter of all Idaho surface water lies in Bonner County

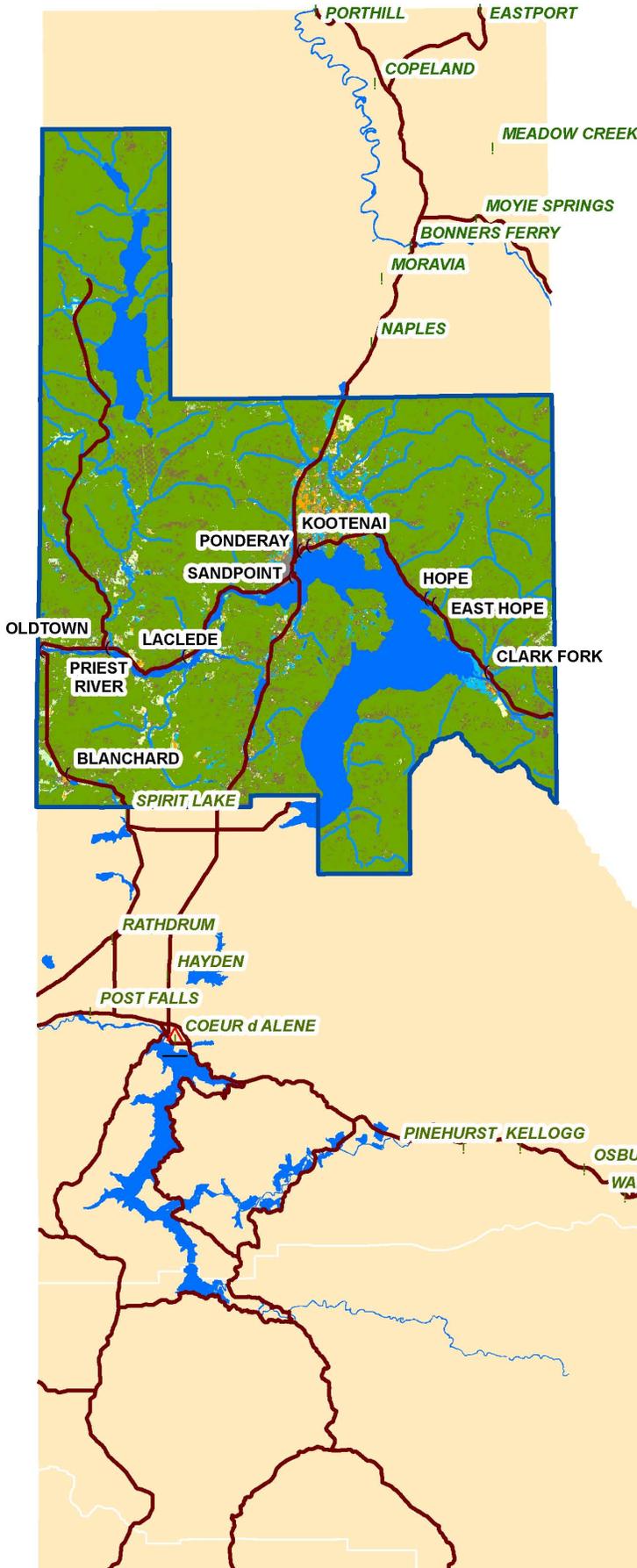
# Bonner Conservation District Land Status Map

Based on BLM data

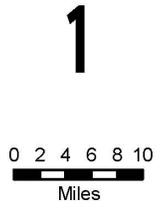


# Bonner Conservation District Land Cover Map

Derived from National Land Cover  
Data 2001 dataset



-  Open Water (117,340 acres)
-  Developed (14,795 acres)
-  Barren Land (406 acres)
-  Forest (937,695 acres)
-  Shrub/Range (94,505 acres)
-  Grassland (22,340 acres)
-  Hay/Pasture (8,925 acres)
-  Cropland (3,875 acres)
-  Wetlands (27,000 acres)
-  Bonner SWCD Boundary
-  Lakes
-  Major Streams
-  Major Roads
-  Bonner SWCD Towns
-  Other towns
-  SWC Offices



Private Lands estimated  
cover type distribution :

1. Forest	338,260 acres
2. Shrub \ Range	52,865 acres
3. Grasslands	19,130 acres
4. Hay \ Pasture	8,740 acres
5. Wetlands	23,170 acres
6. Cropland	3,835 acres
7. Developed	14,310 acres
8. Open Water	115,104 acres
9. Barren Land	244 acres



WJD 1/6/2010

## District Resources

<u>Land Use*</u>	<u>Acres</u>
Urban Land	3,400
Cropland	44,800
Pastureland	28,000
Forest	1,034,200
Water	110,700
Wetland	1,200
<b>Total</b>	<b>1,222,300</b>

\*USGS land use/cover classification system. The water category and the rounding and estimating of satellite based data usually results in slightly higher totals for land use.

The above data obtained from the Idaho Department of Commerce website and modified with 1997 National Resources Inventory data.

<http://www.idoc.state.id.us/idcomm/profiles/pdfs/Bonner.pdf>

## Soil Resources

The greater part of the county is mountainous with narrow flat bottom stream valleys. Purcell Trench, a long comparatively narrow valley passes through the center of the county from North to South. The trench varies from 1 ½ miles wide at the north end near Elmira, to more than 8 miles at the north end of Lake Pend Oreille. Here the trench divides. The deepest branch is occupied by Lake Pend Oreille, and the other branch comprises Cocolalla Valley.

East of the trench are the Cabinet and Coeur d'Alene Mountains rising to 7,000 feet. They are separated by the Clark Fork River entering from the east. West of the trench are the high Selkirk Mountains rising to elevations exceeding 7,500 feet. Lake Pend Oreille River, which forms the outlet of Lake Pend Oreille, cuts across the Selkirk Mountains entering Washington to the west before turning north to the Columbia River in Canada. The larger tributaries forming the major agricultural valleys are Priest River, Pack River; Sand, Cocolalla, and Hoodoo Creeks.

The larger valleys are broken by scattered, poorly defined moraines and outcrops of bedrock. Outwash plains and terraces lie at various elevations. Terraces reach a maximum elevation of 2,600 feet above sea level. Lake Pend Oreille was stabilized at 2,062.5 feet by construction of Albeni Falls Dam in 1954. Sandpoint, situated on a delta or lake terrace at the north end of the lake is 2,100 feet in altitude.

Hoodoo Valley in the southwest portion of the county is a southward pre-glacial extension of Priest River Valley. West of the Hoodoo lies Blanchard Valley, extending from north to south along the Idaho-Washington border.

All of the agricultural soils in the District are of glacial origin. The mountains have residual soils from granite. Most of the agricultural soils are cutover type and are low in organic matter. The 1981 Bonner County Soil Survey breaks soils into the following broad map unit descriptions and percentages of land in the county.

Moderately steep to very steep, well drained soils on mountains	35%
Rolling to very steep, well drained soils on foothills and mountains	35%
Level to hilly, well drained soils on glacial moraines and terraces	15%
Level to hilly, poorly drained to excessively drained soils on alluvial fans, terraces, and dunes	9%
Level to nearly level, poorly drained to very poorly drained soils on low stream terraces, flood plains, and bottomlands	3%

**Climatic conditions**

The Bonner Soil Conservation District has a modified continental climate. Summers are comparatively short and cool, and extremes of cold winter temperatures are of short duration.

Comparatively little rain falls during the summer. July and August are the driest months of the year. The heaviest precipitation occurs from November to April, with much of the precipitation in the form of snow.

The following table shows the climate statistics from two cities in the county.

<u>Location</u>	<u>Elevation (ft.)</u>	<u>Lowest Aver. Daily Min. Temp.</u>	<u>Highest Aver. Daily Max. Temp.</u>	<u>Mean Annual Precip. inches</u>	<u>Snowfall inches</u>
Sandpoint	2,085	21°	81.2°	33.3	87.8
Priest River	2,077	18.8°	82.6°	33.1	94.3

Climatic data obtained from Idaho Department of Commerce website.  
<http://www.idoc.state.id.us/idcomm/profiles/index.html>

Due to the varied topography – as low as 2,000 feet to as high as 7,000 feet - weather patterns vary in temperature and precipitation.

**Economic Condition and Outlook for the District**

Population: (In 2011 Bonner County population decreased to 40,808)

	<u>1970</u>	<u>1980</u>	<u>1990</u>	<u>2002</u>	<u>2010</u>
Sandpoint	4,144	4,460	5,203	7,167	8,159
Bonner County	15,560	24,163	26,622	37,479	41,782

## County Labor Force Data

### Non Farm Employment (2000)

Total Non Farm Employment	11,856
Food Products	283
Lumber & Wood Products	961
Chemicals	*
Metals	71
Machinery (exc. elect)	77
Electronics & Elec. Equip.	131
Other Manufacturing	284
Construction	816
Mining	75
Trans/Comm/Util	470
Wholesale and Retail Trade	3,505
Finance, Insur, & Real Est	421
Services & Misc.	2,505
Government	2,257

\* Indicates no employment or suppressed data

<u>Civilian Labor Force</u>	<u>2000</u>	<u>2001</u>	<u>2010</u>	<u>2011</u>
Total Labor Force	17,396	17,547	20,643	22,519
Total Employment	15,836	16,123	18,503	
Total Unemployed	1,560	1,425	2,118	
Percent Unemployed	9	8	10	
Farm Employment	295	300		

### Agricultural Economy

<u>Farms, Cropland, &amp; Livestock</u>	<u>1987</u>	<u>1992</u>	<u>1997</u>
Total number, All Farms	516	476	501
Total Acres in Farms	136,833	150,021	98,662
Avg. Farm Size (acres)	265	315	197
Total Farms in Crops	446	414	439
Total Acres in Crops	46,034	42,641	36,975
Cattle and Calves Inventory	14,129	13,828	9,210
Number of Irrigated Farms	85	81	86
Number of Irrigated Acres	4,984	2,617	1,962

<u>Farms by Size (Acres)</u>	<u>1987</u>	<u>1992</u>	<u>1997</u>
Under 10	26	34	37
10 to 49	121	118	180
50 to 179	190	157	144
180 to 499	125	122	96
500 to 999	33	27	26
1,000 & over	21	18	18

<u>Principal Occupation of Farm Operators</u>	<u>1987</u>	<u>1992</u>	<u>1997</u>
Farming	245	232	217
Other	271	244	284

The above charts were obtained from the Idaho Department of Commerce website.  
<http://www.idoc.state.id.us/idcomm/profiles/pdfs/Bonner.pdf>

Wage statistics from <http://www.indicatorsnorthwest.org/DrawRegion.aspx?PageID=13&RegionID=16009> show 2011 average annual wage in Bonner County as \$33,238, the mean household income at \$42,109, and December 2011 unemployment at 9.6%.

Forestry is the top revenue producing industry of the district. The primary agriculture income is received from hay, pasture, and cattle. In the last few years, several dairies have gone out of business.

Increased demand for land to provide lakeshore home sites, summer home cabins, resorts, and recreation facilities is expected to continue in coming years. Several farms have already changed to suburban home development and recreation enterprises. Development of winter sports areas will provide year round recreation and create greater demand for land to be used for home site development and recreation.

Many public and private campgrounds, resorts, and motels, provide excellent facilities for all types of water sports, picnicking, boating, and fishing.

### Overall trends and conditions in water quality

Less impact from timber and agriculture are expected, as the Forest Practices Act is implemented and there is less agricultural activity in the county. Conservation needs are increased education and implementation of the Forest Practices Act. Agriculture producers need to be involved in the initial phases of water quality improvement plans. Their involvement is needed in development of agricultural BMPs. There is also a need for development of Best Management Practices for wetland grazing.

More problems are expected from cultural eutrophication, recreation, urban runoff, building and development. Conservation needs include education and encouragement of erosion control methods and public awareness of how their activities may affect water quality.

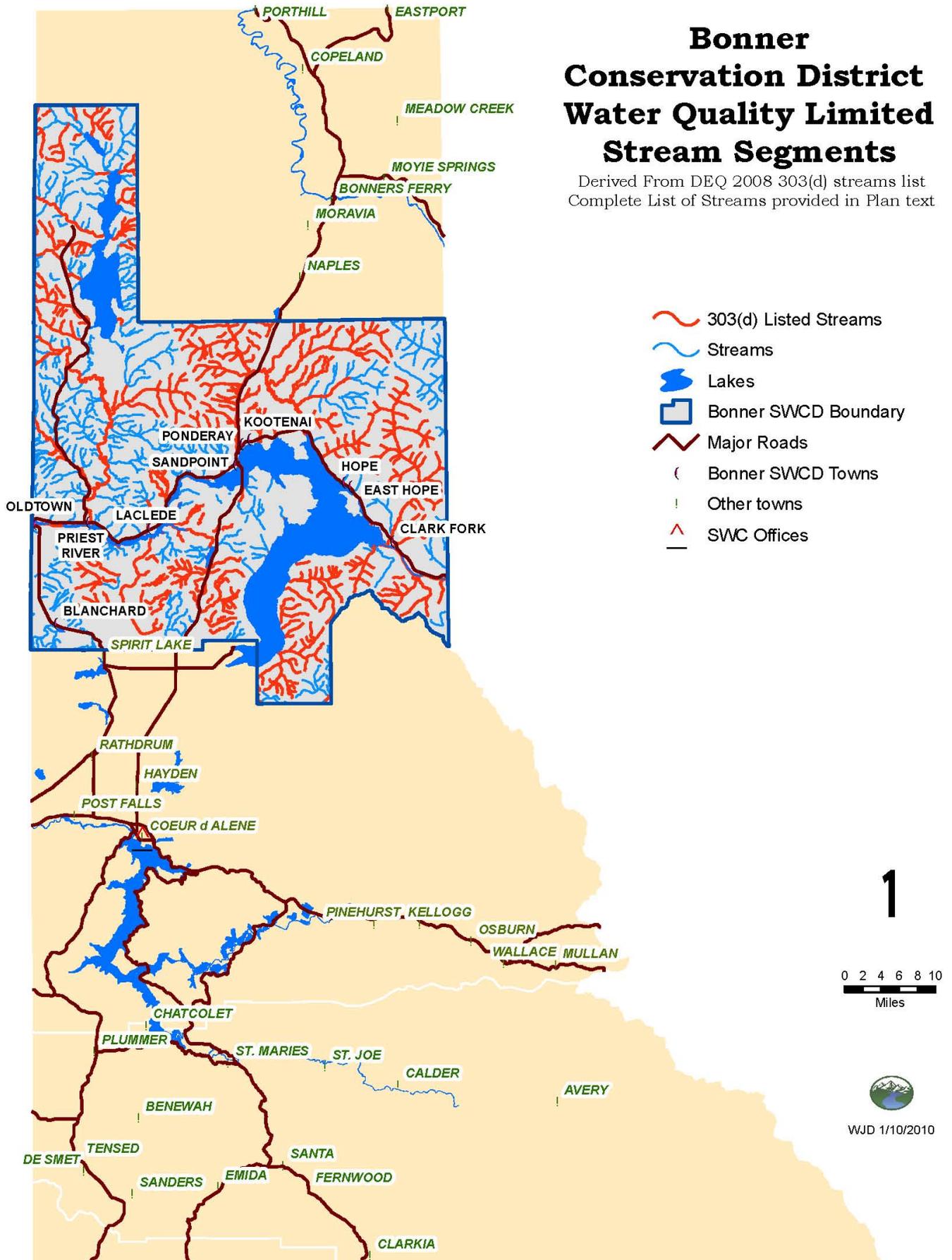
Conservation needs to achieve desired surface water quality:

- Proper design, installation, and maintenance of all roads, road ditches, and culverts
- Proper sites for individual septic treatment facilities
- Technical assistance to farmers because farmland field ditches can deliver sediments, nutrients, and floodwaters at an increased rate to streams, rivers, and lakes
- Technical assistance to farmers for feedlot runoff from confined animal feeding operations
- Technical assistance for streambank erosion
- Educational programs for proper farmland and residential use of organic and inorganic fertilizers

2008 data from the Department of Environmental Quality is provided to show 303(d) listed streams in Bonner County.

# Bonner Conservation District Water Quality Limited Stream Segments

Derived From DEQ 2008 303(d) streams list  
Complete List of Streams provided in Plan text



**303(d) Listed Streams**

STREAM NAME	Segments	Total Miles Listed
Pend Oreille Lake	1	0.88
BRC Creek	1	2.16
Bear Creek	1	1.38
Beaver Creek	2	3.27
Berry Creek	5	7.05
Binarch Creek	4	7.33
Blanc Creek	1	0.09
Boulder Creek	3	6.54
Boyer Slough	3	4.54
Branch North Gold Creek	4	4.39
Brush Creek	1	1.99
Bug Creek	2	0.99
Butler Creek	4	4.15
Button Creek	1	1.35
Canyon Creek	2	7.70
Careywood Creek	3	4.30
Caribou Creek	7	6.79
Carr Creek	1	0.05
Cascade Creek	3	4.18
Cedar Creek	2	4.25
Char Creek	1	2.10
Cheer Creek	2	2.28
Chicopee Creek	1	2.20
Chute Creek	1	1.21
Clark Fork	10	11.59
Clatter Creek	1	1.14
Cocolalla Creek	12	22.88
Cocolalla Lake	5	3.09
Colburn Creek	5	6.83
Curtis Creek	2	3.15
Deep Creek	2	2.81
Deer Creek	1	2.00
Deer Gulch	1	1.31
Delyle Creek	1	3.08
Dry Creek	3	8.16
Dry Gulch	4	4.35
Dyree Creek	1	0.55
East Fork Creek	3	3.58
East Fork Trapper Creek	2	2.81
East River	2	2.50
Elk Gulch	1	1.33
Fall Creek	1	1.38
Falls Creek	1	4.60
Fish Creek	7	6.31
Floss Creek	2	2.65

**303(d) Listed Streams**

STREAM NAME	Segments	Total Miles Listed
Flume Creek	3	1.86
French Creek	2	3.03
Gem Creek	1	1.03
Glazier Creek	1	1.44
Gold Creek	16	20.40
Goose Creek	5	3.97
Gordon Creek	1	1.12
Granite Creek	18	20.75
Grouse Creek	19	20.56
Hallway Creek	1	1.67
Hellroaring Creek	4	6.49
Hoodoo Creek	5	16.94
Independence Creek	1	0.78
Indian Creek	1	2.31
Jack Creek	1	2.62
Jinks Gulch	1	1.35
Johnson Creek	11	10.12
Jones Creek	1	1.17
Jost Creek	1	1.27
Kalispell Creek	5	8.32
Keokee Creek	2	2.58
Kilroy Creek	1	1.70
Kreiger Creek	2	3.03
Lamb Creek	6	12.55
Ledge Creek	1	1.08
Lightning Creek	41	23.75
Lindsey Creek	1	0.10
Lion Creek	4	2.65
Little Sand Creek	4	7.04
Lower West Branch Priest River	17	15.82
Lucky Creek	1	2.85
Lunch Creek	1	1.32
McArthur Lake	1	0.03
Micro Creek	1	1.21
Middle Fork East River	9	11.17
Moore Creek	4	5.27
Moose Creek	1	2.89
Morris Creek	3	3.25
Morton Slough	4	1.00
Mosquito Creek	2	6.11
Mud Creek	1	1.62
Muskegon Creek	2	1.04
North Fork Clark Fork	4	3.38
North Fork Coeur d'Alene River	2	0.99
North Fork East River	1	2.22

**303(d) Listed Streams**

STREAM NAME	Segments	Total Miles Listed
North Fork Granite Creek	1	0.38
North Fork Grouse Creek	4	4.34
North Fork Indian Creek	1	0.39
North Fork Twin Creek	2	2.77
North Gold Creek	5	6.16
North Twin Creek	3	2.75
Pack River	17	30.29
Packsaddle Creek	1	2.23
Pend Oreille Lake	66	82.18
Pend Oreille Lake-Sagle Slough	3	2.27
Pend Oreille River	55	38.95
Plank Creek	1	1.64
Porcupine Creek	3	3.48
Priest River	24	35.15
Quartz Creek	2	2.26
Rapid Lightning Creek	6	7.79
Rattle Creek	4	4.97
Reeder Creek	6	7.69
Regal Creek	2	1.72
Riley Creek	5	4.03
Ruby Creek	1	1.77
Ruen Creek	1	1.35
Sand Creek	18	20.00
Savage Creek	1	1.67
Schafer Gulch	1	1.02
Schweitzer Creek	3	4.84
Sheep Creek	1	1.40
Shertz Creek	1	1.26
Silvertip Creek	1	1.64
Skip Creek	1	1.76
Smorgasbord Creek	1	1.12
Snow Creek	1	1.22
Soldier Creek	1	1.78
South Fork Clark Fork	1	1.75
South Fork Gold Creek	1	3.30
South Fork Grouse Creek	3	5.48
South Fork Indian Creek	1	0.27
South Fork Lion Creek	1	0.93
South Fork Porcupine Creek	1	1.70
South Fork Wellington Creek	1	2.07
South Twin Creek	1	1.19
Spruce Creek	1	0.18
Steep Creek	1	1.43
Swede Creek	1	3.07
Syringa Creek	2	1.33

**303(d) Listed Streams**

STREAM NAME	Segments	Total Miles Listed
Taffy Creek	1	2.41
Tarlac Creek	1	3.29
Tavern Creek	1	2.02
Tepee Gulch	1	1.17
Three Sisters Creek	3	2.63
Toms Gulch	4	2.13
Trapper Creek	5	5.92
Trestle Creek	10	8.94
Trickle Creek	1	3.96
Trout Creek	5	4.85
Tumbledown Creek	1	2.67
Tunnel Creek	1	1.96
Twin Creek	6	6.79
Two Mouth Creek	6	2.89
Uleda Creek	2	3.67
Upper West Branch Priest River	7	10.82
Webb Canyon Creek	1	2.55
Wellington Creek	3	4.73
West Gold Creek	3	3.09
West Johnson Creek	4	2.72
Wylie Creek	1	3.21
UnNamed Segments	274	319.49

# Water Quality Component

The summaries below were taken from DEQ website:

[http://www.deq.idaho.gov/water/data\\_reports/surface\\_water/tmdls/sba\\_tmdl\\_master\\_list.cfm](http://www.deq.idaho.gov/water/data_reports/surface_water/tmdls/sba_tmdl_master_list.cfm)

## Surface Water: Lower Clark Fork River Subbasin Assessment and Total Maximum Daily Loads

> [Link to document](#)

The Subbasin at a Glance

<b>Hydrologic Unit Code</b>	17010213
<b>Size of Subbasin Area Addressed in this Document</b>	247 square miles
<b>§303(d) Listed Stream Segments</b>	Clark Fork River (main stem in Idaho), Cascade Creek, Dry Creek, Twin Creek, East Fork Creek, Johnson Creek, Lightning Creek, Mosquito Creek, Rattle Creek, Savage Creek, and Wellington Creek
<b>Beneficial Uses Affected</b>	Cold water aquatic life, salmonid spawning, primary and secondary contact recreation, domestic water supply, special resource water
<b>Pollutants of Concern</b>	Sediment, temperature, metals, total dissolved gas
<b>Major Land Uses</b>	Forestry, agriculture, rural residential, recreation
<b>Date Approved by U.S. EPA</b>	October 2007 > <a href="#">View Approval Letter</a>

### Background

The federal Clean Water Act requires that states and tribes restore and maintain the chemical, physical, and biological integrity of the nation's waters. States and tribes must adopt water quality standards necessary to protect fish, shellfish, and wildlife while providing for recreation in and on the waters whenever possible.

Section 303(d) of the Clean Water Act establishes requirements for states and tribes to identify and prioritize water bodies that are water quality limited (i.e., water bodies that do not meet water quality standards). States and tribes must periodically publish a priority list of impaired waters, currently every two years. For waters identified on this list, states and tribes must develop water quality improvement plans known as total maximum daily loads (TMDLs) that establish allowable pollutant loads set at levels to achieve water quality standards.

## Overview

Primarily located in the state of Montana, the 320-mile long Clark Fork River flows from near Butte, Montana to Lake Pend Oreille in Idaho. This document addresses the lower-most 247 square miles of the subbasin located in north Idaho. The Lower Clark Fork River provides over 92% of the inflow to Lake Pend Oreille, the recreational and economic hub of the area.

The Lightning Creek watershed harbors a regionally significant bull trout population and supports many other native fish. Both the mainstem Lower Clark Fork River and Lightning Creek are designated Special Resource Waters by the state of Idaho. Special protections of beneficial uses in these waters are given in recognition of their outstanding or unique characteristics. Primarily, this designation prohibits additional point source pollution permits to protect current beneficial uses.

Metals and total dissolved gas pollution are the pollutants of concern in the mainstem Clark Fork River. Intensive mining around the headwaters of the Clark Fork River in Montana left residues of heavy metals behind, which still pose a risk to water quality throughout the basin.

Temperature is identified as a pollutant in the Lower Clark Fork River below the Idaho/Montana border. However, the Lower Clark Fork River on the Montana side of the border has not been found to violate Montana water quality standards for temperature. To better address this issue at a watershed level, Idaho and Montana will investigate available information before the five-year review of this TMDL. Temperature will remain in Section 5 of Idaho's Integrated Report until this time.

Sediment and temperature are the pollutants of concern in the tributaries to the Lower Clark Fork River. Thick glacial outwash sediments in steep drainages combined with timber harvest and road construction have created potential sediment problems in several of the tributaries to the Clark Fork River. Temperatures exceed Water Quality Standards for salmonid spawning throughout the subbasin. Fire and historic timber harvest have created a more open canopy and related stream warming compared to background conditions.

TMDLs were developed for each stream determined to not fully support beneficial uses in accordance with state of Idaho Water Quality Standards. The TMDLs included in this document address in-stream sediment, metal, and temperature reduction goals to maintain or restore cold water aquatic life and salmonid spawning in the tributaries. Cadmium, zinc, copper, and total dissolved gas TMDLs were developed for the main stem Clark Fork River. Sediment and temperature TMDLs were developed in the Lightning Creek drainage and for Twin and Johnson Creeks. The TMDLs help quantify needed improvements and target management actions to address water quality improvement measures and timelines.

### Streams and Pollutants for Which TMDLs Were Developed

Clark Fork River (main stem in Idaho)	Metals, total dissolved gas
Cascade Creek	Temperature
Dry Creek	Temperature
Mosquito Creek	Temperature
Twin Creek	Sediment, temperature
East Fork Creek	Sediment, temperature
Johnson Creek	Sediment, temperature

Lightning Creek	Sediment, temperature
Rattle Creek	Sediment, temperature
Savage Creek	Sediment, temperature
Wellington Creek	Sediment, temperature

## Surface Water: Clark Fork/Pend Oreille Subbasin Assessment and Total Maximum Daily Loads

- > [Link to document](#)
- > [Link to implementation plans](#)
- > [Link to addenda: Pack River Nutrients TMDL, Pend Oreille Lake Tributaries Temperature TMDLs, and Pend Oreille Lake Tributaries Sediment TMDLs](#)

The Subbasin at a Glance

<b>Hydrologic Unit Codes</b>	17010213 and 17010214
<b>Size</b>	25,000 square miles (in Idaho and Montana)
<b>§303(d) Listed Stream Segments</b>	Lake Pend Oreille, Granite Creek, Gold Creek, Pack River, Caribou Creek, Grouse Creek, North Fork Grouse Creek, Trestle Creek, Pend Oreille River, Cocolalla Lake, Cocolalla Creek, Fish Creek, Hoodoo Creek, Clark Fork River*, Lightning Creek*, East Fork Lightning Creek*, Rattle Creek*, Wellington Creek*, Porcupine Creek*, Spring Creek*, Twin Creek*, Johnson Creek*
<b>Beneficial Uses Affected</b>	Cold water biota, salmonid spawning, warm water biota, primary contact recreation, secondary contact recreation, agricultural water supply, industrial water supply, domestic water supply
<b>Pollutants of Concern</b>	Sediment, dissolved oxygen, nutrients, flow, habitat alteration, metals, pathogens, pesticides, thermal modification
<b>Major Land Uses</b>	Agriculture, grazing, roads, hydropower, mining, timber harvest, urban
<b>Date Approved by U.S. EPA</b>	April 2001 > <a href="#">View Approval Letter</a> September 2000 > <a href="#">View Approval Letter</a>
<b>Date Temperature TMDL Addendum Approved by U.S. EPA</b>	April 2008 > <a href="#">View Approval Letter</a>
<b>Date Sediment TMDL Addendum Approved by U.S. EPA</b>	January 2008 > <a href="#">View Approval Letter</a>
<b>Date Pack River Nutrients TMDL Approved by U.S. EPA</b>	December 2008 > <a href="#">View Approval Letter</a>

\* These water bodies are located in the Clark Fork Subbasin (17010213). They are analyzed in the Clark Fork/Pend Oreille Subbasin Assessment document and are assigned TMDLs in the [Lower Clark Fork River Subbasin Assessment and Total Maximum Daily Loads](#) developed in 2007.

## Background

The federal Clean Water Act requires that states and tribes restore and maintain the chemical, physical, and biological integrity of the nation's waters. States and tribes must adopt water quality standards necessary to protect fish, shellfish, and wildlife while providing for recreation in and on the waters whenever possible.

Section 303(d) of the Clean Water Act establishes requirements for states and tribes to identify and prioritize water bodies that are water quality limited (i.e., water bodies that do not meet water quality standards). States and tribes must periodically publish a priority list of impaired waters, currently every two years. For waters identified on this list, states and tribes must develop water quality improvement plans known as total maximum daily loads (TMDLs) that establish allowable pollutant loads set at levels to achieve water quality standards.

## Overview

The Clark Fork-Pend Oreille subbasin lies in western Montana, northern Idaho, and northwestern Washington. The subbasin is the source of the water that enters and leaves Lake Pend Oreille, the largest and deepest natural lake in Idaho. Inflow and outflow of the lake are regulated by hydroelectric facilities.

The Pend Oreille portion of this subbasin assessment examined 11 streams, one major river, and two lakes. Of the 11 streams, five were water quality impaired and required load allocations, primarily for sediment. Both Lake Pend Oreille and the Pend Oreille River were found to fully support their beneficial uses and were recommended for delisting.

The Clark Fork portion of this subbasin assessment was tabled until its scheduled due date in 2004. Insufficient time to complete the assessment and the prospect of more data available at that time drove this decision.

### Streams and Pollutants for Which TMDLs Were Developed

Cocolalla Creek (lower)	Sediment
Cocolalla Creek (upper)	Sediment
North Fork Grouse Creek	Sediment
Hoodoo Creek	Sediment
Pack River	Sediment
Cocolalla Lake	Phosphorus

## Surface Water: Pend Oreille Lake Nearshore Waters Nutrient Subbasin Assessment and Total Maximum Daily Load

> [Link to document](#)

> [Link to implementation plan](#)

The Subbasin at a Glance

<b>Hydrologic Unit Code</b>	17010214
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<b>Size</b>	44,740 acres
<b>§303(d) Listed Stream Segment</b>	Nearshore waters of Pend Oreille Lake
<b>Beneficial Uses Affected</b>	Water supply, recreation, salmonid spawning, cold water biota, wildlife habitat, aesthetics
<b>Pollutant of Concern</b>	Total phosphorus
<b>Major Land Uses</b>	Forestry, urban, shrubland, wetland, pasture/cropland
<b>Date Approved by U.S. EPA</b>	October 2002 > <a href="#">View Approval Letter</a>

### Background

The federal Clean Water Act requires that states and tribes restore and maintain the chemical, physical, and biological integrity of the nation's waters. States and tribes must adopt water quality standards necessary to protect fish, shellfish, and wildlife while providing for recreation in and on the waters whenever possible.

Section 303(d) of the Clean Water Act establishes requirements for states and tribes to identify and prioritize water bodies that are water quality limited (i.e., water bodies that do not meet water quality standards). States and tribes must periodically publish a priority list of impaired waters, currently every two years. For waters identified on this list, states and tribes must develop water quality improvement plans known as total maximum daily loads (TMDLs) that establish allowable pollutant loads set at levels to achieve water quality standards.

### Overview

Pend Oreille Lake is part of the Clark Fork-Pend Oreille Basin, which lies in western Montana, northern Idaho, and northeastern Washington. The Clark Fork River begins near Butte, Montana, and drains an extensive area of western Montana before entering Pend Oreille Lake, in Idaho, at the lake's northeast corner. The lake is the source of the Pend Oreille River in northeastern Washington, which ultimately drains to the Columbia River.

Pend Oreille Lake was placed on Idaho's 1994 §303(d) list as a "threatened" water body and retained on the 1996 and 1998 lists. Because of this listing, DEQ prepared a problem assessment for the lake, which recommended developing a TMDL for the nearshore waters of the lake to mitigate increasing eutrophication along the shoreline. This TMDL addresses this recommendation.

### Stream and Pollutant for Which a TMDL Was Developed

Nearshore waters of Pend Oreille Lake Total Phosphorus

## Surface Water: Priest River Subbasin Assessment and Total Maximum Daily Loads

> [Link to document](#)

> [Link to addendum](#)

The Subbasin at a Glance

<b>Hydrologic Unit Code</b>	17010215
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<b>Size</b>	981 square miles
<b>§303(d) Listed Stream Segments</b>	Trapper Creek, Two Mouth Creek, East River (main stem, middle fork, north fork), Tango Creek, Reeder Creek, Kalispell Creek, Lamb Creek, Binarch Creek, Lower West Branch Priest River, Lower Priest River
<b>Beneficial Uses Affected</b>	Cold water aquatic life, salmonid spawning
<b>Pollutants of Concern</b>	Sediment, heat (solar radiation), habitat alteration, flow alteration
<b>Major Land Uses</b>	Forestry, agriculture, rural recreation
<b>Date Approved by U.S. EPA</b>	March 2002 (Addendum approved: June 2003) > <a href="#">View Approval Letter</a> > <a href="#">View Addendum Approval Letter</a>

### Background

The federal Clean Water Act requires that states and tribes restore and maintain the chemical, physical, and biological integrity of the nation's waters. States and tribes must adopt water quality standards necessary to protect fish, shellfish, and wildlife while providing for recreation in and on the waters whenever possible.

Section 303(d) of the Clean Water Act establishes requirements for states and tribes to identify and prioritize water bodies that are water quality limited (i.e., water bodies that do not meet water quality standards). States and tribes must periodically publish a priority list of impaired waters, currently every two years. For waters identified on this list, states and tribes must develop water quality improvement plans known as total maximum daily loads (TMDLs) that establish allowable pollutant loads set at levels to achieve water quality standards.

### Overview

The Priest River basin falls primarily within the northwest corner of the Idaho Panhandle in Bonner and Boundary counties. The headwaters of Upper Priest River originate within the Nelson Mountain Range of British Columbia; headwaters of major streams on the western side of the basin originate in northeast Washington.

In 1994 and again in 1996, ten segments within the Priest River basin were classified as water quality limited under §303(d) of the Clean Water Act. All Priest River basin §303(d)-listed streams are listed for sediment (except Lower West Branch Priest River, which had no listed pollutants of concern, but sediment is implied). Nutrients are a listed pollutant for Tango Creek, and dissolved oxygen, temperature, and flow alteration are listed for East River. Habitat alteration is listed for Trapper Creek and Two Mouth Creek.

It is DEQ's position that while habitat alteration and flow alteration may adversely affect beneficial uses, they are not pollutants under §303(d) of the Clean Water Act; therefore, TMDLs will not be developed to address habitat and flow alteration as pollutants.

In March 2002, EPA approved sediment TMDLs for two water bodies: Kalispell Creek and Lower West Branch Priest River. Action on other segments was delayed at DEQ's request to allow for further data collection and analysis. An addendum addressing the water bodies for which delays were requested was submitted to EPA for review in February 2003 and approved in June 2003.

## Streams and Pollutants for Which TMDLs Were Developed

### Original TMDL:

Kalispell Creek	Sediment
Lower West Branch Priest River	Sediment

### Addendum:

Reeder Creek	Sediment
Binarch Creek	Sediment
East River	Sediment (entire watershed), heat
Middle Fork East River	Heat
North Fork East River	Heat
Lower Priest River	Sediment

**IDAHO SOIL & WATER  
CONSERVATION COMMISSION**

**DISTRICT:** Bonner SWCD

**FIVE-YEAR (5) PLAN and  
ANNUAL WORK PLAN  
CERTIFICATION**

**FOR FISCAL YEAR:**

2015

**DUE :**

March 31, 2014

**CERTIFICATION**

On behalf of my local Board of Supervisors, I hereby certify that the attached Five-Year (5) Plan and Annual Work Plan is true and accurate, and further submit said Plan for the above named District and fiscal year.

A copy of this Five-Year (5) Plan and Annual Work Plan shall be kept at the District office and is available for public inspection.

Board Supervisor Signature

*Herman B. Collins*

Printed Name

Herman B. Collins

Date

March 4, 2014

Telephone

linda.ohare@id.nacdnet.net

District Email Address

**FOR SWC USE ONLY:**

**DATE OF CONFIRMATION:**  
\_\_\_\_\_