



**Idaho Conservation
Data Center**

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Idaho Wetland Conservation Prioritization Plan



Chase Lake Wetland, Photo by Robert Moseley

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INTRODUCTION

From 1780 to 1980, approximately 56% [156,200 hectares (386,000 acres)] of Idaho's wetlands were lost to drainage, dredging, filling, leveling, flooding, and other anthropogenic alterations (Dahl 1990). However, in the last 20 years the rate of wetland loss across the nation has decreased significantly (Dahl 2000). Greater recognition of the benefits and functions of wetlands has led to strengthened wetland regulations, policies, and conservation. In particular, the Emergency Wetlands Resources Act (EWRA) (U. S. Fish and Wildlife Service 1990) and associated National Wetlands Priority Conservation Plan (NWPCP) (U. S. Fish and Wildlife Service 1991) provided the framework and guidance for wetlands conservation. The EWRA mandates that to be eligible for Land and Water Conservation Funds (LWCF) states must address wetlands as an important recreation and natural resource in their State Comprehensive Outdoor Recreation and Tourism Plan (SCORTP) in a manner consistent with the NWPCP. Specifically, each state is directed to develop a prioritized list of wetlands that meet three broad threshold criteria: (1) support rare or declining wetland types; (2) experience a high level of threats to wetland functions; and (3) represent a diversity or high levels of important functions and values (including recreation), or especially high value for specific functions (U.S. Fish and Wildlife Service 1991). In Idaho, SCORTP is revised and updated at approximately four year intervals by the Idaho Department of Parks and Recreation (IDPR). The Idaho Wetland Conservation Prioritization Plan identifies priority wetlands for conservation as required for SCORTP under EWRA.

METHODS

For this report a wetland is defined as 'a land inclusion that has a predominance of hydric soils; is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation; and supports a prevalence of such vegetation under normal circumstances (e.g., marsh, vernal pool, riparian zone, wet meadow, peatland).' We used the Idaho Wetlands Information System (IWIS) and conservation site databases of the Idaho Department of Fish and Game (IDFG) Idaho Conservation Data Center (IDCDC) as the primary sources of spatial and ecological data to generate a candidate list of wetlands for initial consideration. The IWIS is a comprehensive relational database pertaining specifically to wetlands in Idaho. The information consists of wetland classification, size, ownership, potential partners for acquisition, preservation, recreation value, unique feature (e.g., rare plant or animal), potential threat, and public access for each site. These data were initially compiled for the SCORTP process in 1992 (Pfeifer and Towell 1992) and updated by IDFG as additional data become available. By 2002, IWIS included 192 wetlands, excluding relatively narrow riparian habitat.

The conservation site database contains spatial and ecological information on more than 500 sites in Idaho that include a wetland component. Sites represent a variety of ecosystems consisting of intact ecological processes, exemplary native plant communities, unique geologic processes, or important habitat for species (e.g., Important Bird Areas). Conservation site boundaries often include most of the land area

necessary to maintain the ecological processes of interest. Each site record contains information pertaining to location, biological significance, ecological processes and functions, ecological condition and integrity, conservation status, and stewardship.

We considered wetlands from throughout the state, however, large information gaps exist for significant portions of Idaho. For example, data are lacking on wetlands in many of the areas designated as Wilderness in central Idaho, or along Wild, Scenic, and Recreation rivers (e.g., Middle Fork of the Salmon River, main stem of the Salmon River, Snake River in Hells Canyon, Rapid River, Lochsa River, Selway River, and Middle Fork of the Clearwater River).

Candidate List

We identified a list of 200 wetlands using coarse filter analyses on the conservation sites database and the IWIS. First, we removed from consideration wetland related conservation sites with the following attributes: (1) entirely protected by designated Wilderness, National Park Service, U.S. Forest Service Research Natural Areas or Special Interest Areas; (2) entirely surrounded by federal land (unless highly unique and unprotected or juxtaposed a private land in-holding); or (3) containing only narrow riparian habitat, typically found on low-order streams, in geologically confined canyons, or around subalpine lakes. Second, we removed from consideration wetlands ranked in the lower 25 percentile of the previous IWIS (Pfeifer and Toweill 1992), unless they consisted of a uniquely valuable biological attribute (e.g., rare plant community). Third, conservation sites and IWIS wetlands were georeferenced and records that were spatially redundant were eliminated. In addition, conservation sites and IWIS wetlands less than 1 km were considered one wetland. The result was a list of 200 wetlands that was sent to IDFG biologists for their deductive assessments. Based on the input from biologists, it appeared the most significant wetlands were included among the list of 200.

Wetland Ranking Method

Consistent with the intent of NWPCP and previous SCORP documents, we prioritized the 200 wetlands by ranking each of the three wetland criteria separately, based on each criteria score, and then summed the three criteria ranks and scores. The higher the criteria rank sum, the higher the final rank. In cases of a tie criteria rank sum, the higher criteria score sum results in a higher final rank (Table 1).

Wetland Ranking Criteria

Wetland Type: We used the statewide coverage of ecological systems described in the Idaho Comprehensive Wildlife Conservation Strategy (Idaho Department of Fish and Game 2005 a) to measure landscape level diversity at a mid-scale. "Ecological systems represent recurring groups of biological communities that are found in similar physical environments and are influenced by similar dynamic ecological processes, such as fire or flooding. They are intended to provide a classification unit that is readily mappable,

often from remote imagery, and readily identifiable by conservation and resource managers in the field (Comer et al. 2003).” We assumed that wetlands with the greatest diversity of wetland ecological systems were the most valuable, and were assigned a correspondingly higher value than those with relatively less diversity.

Wetland Function and Value: As required by NWPCP, wetland function and value should be considered during the prioritization process. We independently measured habitat and recreation attributes to determine the function and value for each wetland. Habitat attributes were measured in two ways that placed a greater value on wetlands associated with wetland dependent rare species (plants and animals) and globally rare (G1-G3) wetland plant communities. First, we used the frequency of rare species and rare plant communities (Idaho Conservation Data Center 2005, Idaho Department of Fish and Game 2005 b) to assign a richness score for habitat function and value. Second, we used Class I and Class II wetlands as described in Wetland Conservation Strategies for the state of Idaho (Bottum 2004, 2005; Jankovsky-Jones 1996, 1997 a, 1997 b, 1997 c, 1998, 1999, 2001 a, 2001 b; Jankovsky-Jones and Bottum 2003) to indicate high quality wetland sites. Specifically, we assigned a score of two to wetlands with all or part of it considered as a Class I wetland, one to Class II, and zero to all others. For example, a wetland with three rare species, two rare plant communities, and a Class II designation received a nominal score of seven ($3+2+2=7$).

The recreation attributes were measured in two ways. First, we determined the presence or absence of recreational opportunities (e.g., boating, camping, environmental education, fishing, hiking, hunting, swimming, nature observation) based on 1. a geospatial data compilation of managed areas by various federal and state agencies, 2. BLM recreation sites (U. S. Bureau of Land Management 2005), 3. private land access points (Idaho Department of Fish and Game 2005 c), 4. IWIS recreation designation (Pfeifer and Toweill 1992), 5. maps and atlases. Second, as a measure of accessibility to human populations we assigned a score of one to all wetlands less than 80 kilometers (km) (less than 50 miles) to an urban center (high intensity urban ecological system or towns and cities with a population greater than 1000) (NatureServe 2004). Wetlands greater than 80 km received a score of zero. For example, if the same wetland as mentioned in the habitat example also had facilities specifically for boating and camping, was managed to provide hunting opportunities (e.g., IDFG Wildlife Management Area), and was less than 80 km to an urban center it was assigned a score of four ($3+1=4$). As a result, the overall score for the function and value of the wetland in this example is eleven [$(3+2+2)+(3+1)=11$: (habitat) + (recreational) = sum score for wetland function and value].

Wetland Threat: The NWPCP requires threat assessments for wetlands. We measured the threat for each wetland based on water quality, land use, and watershed processes and hydrologic connectivity. The frequency of water quality impairments (e.g., ammonia, bacteria, dissolved oxygen, flow alteration, habitat alteration, metals, organic pollutants, sediment, pesticides) as a threat to function and value for each wetland was derived from the Total Maximum Daily Loads (TMDL) that exceeded water quality standards (Idaho Department of Environmental Quality 2005). The percentage of a

wetland in urban and agricultural land uses (geospatial data) (percent normalized by dividing by 10), and the density of roads associated with a wetland (geospatial data) (length / wetland area and normalized by multiplying by 10) were used as a surrogate measure of the potential threat of these environments (e.g., wetland drainage, filling, dredging, stream channelization and diversion, and alteration of the natural hydrologic regime). Last, we used the frequency and impact of dams and diversions in the vicinity of a wetland (Idaho Department of Water Resources et al. 2002) to indicate potential disruption of watershed processes and hydrologic connectivity at the landscape level.

RESULTS AND CONCLUSIONS

We used a variety of wetland related data, GIS analyses, and refined criteria to prioritize wetlands in Idaho. The results are limited by the quality and accuracy of the data available at present time. A cursory examination of the top ten wetlands indicates the results are representative of the diversity of wetlands found throughout Idaho (Table 1). Moreover, the data of the top ten wetlands in Idaho (based on criteria in this report) are summarized to facilitate different synthesis based on a variety of objectives (Appendices 1-5). Detailed narratives and associated maps for the top ten wetlands supports the conclusion that wetlands of all types found throughout Idaho have the potential to be extremely valuable depending upon the context (Appendices 6 and 7).

Wetlands are highly valued by the citizens of Idaho for their habitat and recreational functions and values. Many wetlands are threatened by a variety of factors. This Plan identified and ranked 200 wetlands for conservation actions based on NWPCP and EWRA criteria.

Table 1. Criteria rank, score, and final rank for 200 wetlands in Idaho.

Wetland	Criteria rank (Criteria score)				Final Rank
	Type +	Function +	Threat =	Sum	
Upper Snake River/Lower Henrys Fork	199.5 (10)	199.0 (55)	170.5 (13.22)	569.0 (78.22)	1
Big Lost River Valley	164.5 (6)	186.5 (29)	197.0 (17.94)	548.0 (52.94)	2
Bear Lake Wetlands	164.5 (6)	194.0 (35)	170.5 (12.70)	529.0 (53.70)	3
Lake Walcott/Lake Channel Canyon	164.5 (6)	190.5 (30)	170.5 (12.51)	525.5 (48.51)	4
American Falls Reservoir/Fort Hall Bottoms	164.5 (6)	197.0 (37)	154.0 (11.60)	515.5 (54.60)	5
Teton Basin	164.5 (6)	177.0 (24)	170.5 (12.84)	512.0 (42.84)	6
Clark Fork River Delta	164.5 (6)	173.5 (23)	170.5 (12.98)	508.5 (41.98)	7
Silver Creek	164.5 (6)	158.0 (19)	182.5 (13.57)	505.0 (38.57)	8
Lower Coeur d'Alene River Valley	164.5 (6)	136.5 (15)	194.5 (16.55)	495.5 (37.55)	9
Hoodoo Lake/Lambertson Lake/Kelso Lake Wetlands	184.0 (7)	190.5 (30)	108.5 (6.81)	483.0 (43.81)	10
Blackfoot Reservoir/Wilson Flat	164.5 (6)	186.5 (29)	131.0 (10.23)	482.0 (45.23)	11
Grays Lake Wetlands	196.5 (9)	171.0 (22)	114.5 (8.24)	482.0 (39.24)	12
Lolo Creek Canyon	184.0 (7)	127.5 (14)	170.5 (12.72)	482.0 (33.72)	13
Camas Creek (Jeffereson County)/Mud Lake	133.0 (5)	190.5 (30)	154.0 (11.80)	477.5 (46.80)	14
Pack River	164.5 (6)	152.5 (17)	154.0 (11.72)	471.0 (34.72)	15
North Fork Clearwater River	199.5 (10)	195.5 (36)	72.5 (2.58)	467.5 (48.58)	16
McArthur Lake	164.5 (6)	180.5 (25)	122.5 (8.78)	467.5 (39.78)	17
Pahsimeroi River Valley	90.5 (4)	180.5 (25)	182.5 (13.92)	453.5 (42.92)	18
Salmon River Bottoms	133.0 (5)	164.0 (20)	154.0 (11.75)	451.0 (36.75)	19
St. Joe River	184.0 (7)	164.0 (20)	102.5 (6.21)	450.5 (33.21)	20
Middle Snake River Springs	90.5 (4)	177.0 (24)	182.5 (13.73)	450.0 (41.73)	21
Henrys Lake	196.5 (9)	177.0 (24)	72.5 (2.54)	446.0 (35.54)	22
Upper Priest Lake Wetlands	196.5 (9)	200.0 (72)	48.5 (2.28)	445.0 (83.28)	23
Kootenai National Wildlife Refuge	133.0 (5)	152.5 (17)	154.0 (12.38)	439.5 (34.38)	24
Priest River Wetlands	133.0 (5)	198.0 (41)	102.5 (6.46)	433.5 (52.46)	25
Payette River/Birding Islands	90.5 (4)	144.0 (16)	194.5 (17.05)	429.0 (37.05)	26
Moyie River Valley	133.0 (5)	186.5 (29)	108.5 (6.99)	428.0 (40.99)	27
North Fork Payette River - McCall to Cascade Reservoir	133.0 (5)	164.0 (20)	131.0 (9.81)	428.0 (34.81)	28
Lower Selway/Middle Fork Clearwater River	193.0 (8)	158.0 (19)	72.5 (2.84)	423.5 (29.84)	29
Billingsley Creek/Hagerman Valley	90.5 (4)	144.0 (16)	188.0 (14.78)	422.5 (34.78)	30
Thurmon Creek	184.0 (7)	144.0 (16)	94.0 (4.92)	422.0 (27.92)	31
Lake Fork Creek	133.0 (5)	99.5 (12)	188.0 (14.72)	420.5 (31.72)	32
Twin Lakes	133.0 (5)	164.0 (20)	122.5 (9.47)	419.5 (34.47)	33
Bismark Meadows	133.0 (5)	193.0 (31)	85.0 (3.83)	411.0 (39.83)	34
C.J. Strike Reservoir	53.5 (3)	186.5 (29)	170.5 (13.41)	410.5 (45.41)	35
Hixon Preserve	184.0 (7)	171.0 (22)	48.5 (2.37)	403.5 (31.37)	36

Wetland	Criteria rank (Criteria score)					Final Rank			
	Type	+	Function	+	Threat		=	Sum	
Summit Creek	133.0	(5)	173.5	(23)	94.0	(5.26)	400.5	(33.26)	37
Sheridan Creek	184.0	(7)	60.0	(9)	154.0	(11.80)	398.0	(27.80)	38
Lower Boise River Valley/Fort Boise	53.5	(3)	144.0	(16)	199.0	(18.84)	396.5	(37.84)	39
East Fork Salmon River	196.5	(9)	127.5	(14)	72.5	(2.82)	396.5	(25.82)	40
Upper Coeur d'Alene River	193.0	(8)	113.0	(13)	85.0	(4.17)	391.0	(25.17)	41
Rose Lake	133.0	(5)	152.5	(17)	102.5	(6.06)	388.0	(28.06)	42
Hauser Lake	133.0	(5)	113.0	(13)	140.0	(10.78)	386.0	(28.78)	43
Duck Creek	133.0	(5)	136.5	(15)	114.5	(8.21)	384.0	(28.21)	44
Salmon River (Squaw Bar to Lucile)	184.0	(7)	127.5	(14)	72.5	(2.51)	384.0	(23.51)	45
Rock Creek	90.5	(4)	99.5	(12)	191.5	(16.00)	381.5	(32.00)	46
Eighteenmile Creek	164.5	(6)	113.0	(13)	102.5	(5.60)	380.0	(24.60)	47
Chase Lake/Lee Lake	133.0	(5)	195.5	(36)	48.5	(2.34)	377.0	(43.34)	48
Hotel Creek	164.5	(6)	127.5	(14)	85.0	(4.20)	377.0	(24.20)	49
Owyhee Canyonlands	90.5	(4)	190.5	(30)	94.0	(5.32)	375.0	(39.32)	52
Cocolalla Slough	133.0	(5)	88.0	(11)	154.0	(12.43)	375.0	(28.43)	50
Thomas Fork Valley	133.0	(5)	88.0	(11)	154.0	(12.14)	375.0	(28.14)	51
Hill City Marsh	90.5	(4)	144.0	(16)	140.0	(10.65)	374.5	(30.65)	53
Marsh Valley	90.5	(4)	113.0	(13)	170.5	(12.97)	374.0	(29.97)	54
Kalispell Bay Fen	133.0	(5)	152.5	(17)	85.0	(4.27)	370.5	(26.27)	55
Upper Blackfoot River (Upper Valley/Lanes Creek)	184.0	(7)	113.0	(13)	72.5	(2.83)	369.5	(22.83)	56
Texas Creek	90.5	(4)	164.0	(20)	114.5	(7.58)	369.0	(31.58)	57
Portneuf River Valley	164.5	(6)	7.0	(4)	197.0	(17.89)	368.5	(27.89)	58
Lower St. Joe River/River in a Lake	133.0	(5)	113.0	(13)	122.5	(8.72)	368.5	(26.72)	59
Boise River (Barber to Boise)	27.5	(2)	158.0	(19)	182.5	(13.97)	368.0	(34.97)	60
Hughes Meadows	193.0	(8)	152.5	(17)	21.0	(1.08)	366.5	(26.08)	61
Stanley Basin	90.5	(4)	152.5	(17)	122.5	(9.15)	365.5	(30.15)	62
Island Park Reservoir	164.5	(6)	127.5	(14)	72.5	(3.40)	364.5	(23.40)	63
Bear Valley	133.0	(5)	182.0	(26)	48.5	(1.73)	363.5	(32.73)	64
Banner Creek Fen	164.5	(6)	177.0	(24)	21.0	(.73)	362.5	(30.73)	65
Coeur d'Alene Lake (Wolf Lodge, Beauty, and Blue Creek Bays)	164.5	(6)	75.0	(10)	122.5	(8.64)	362.0	(24.64)	66
Upper Blackfoot River (Lower Valley/Woodall Springs)	90.5	(4)	99.5	(12)	170.5	(12.54)	360.5	(28.54)	67
Payette River/Montour Valley	90.5	(4)	136.5	(15)	131.0	(10.27)	358.0	(29.27)	68
Lamb Creek Meadows	133.0	(5)	152.5	(17)	72.5	(2.56)	358.0	(24.56)	69
Robinson Lake/Round Prairie	164.5	(6)	144.0	(16)	48.5	(1.92)	357.0	(23.92)	70
Burgdorf Meadow	133.0	(5)	144.0	(16)	72.5	(3.01)	349.5	(24.01)	71
Muskrat Lake	133.0	(5)	45.0	(8)	170.5	(13.04)	348.5	(26.04)	72
Coeur d'Alene Lake (Spokane River Outlet)	90.5	(4)	60.0	(9)	197.0	(18.27)	347.5	(31.27)	73
Morton Slough	133.0	(5)	60.0	(9)	154.0	(11.61)	347.0	(25.61)	74

Wetland	Criteria rank (Criteria score)					Final Rank			
	Type	+	Function	+	Threat		=	Sum	
Crystal Springs	27.5	(2)	136.5	(15)	182.5	(13.51)	346.5	(30.51)	75
Gamlin Lake/Beaver Lake South	133.0	(5)	164.0	(20)	48.5	(2.26)	345.5	(27.26)	76
Birch Creek Valley	53.5	(3)	177.0	(24)	114.5	(8.35)	345.0	(35.35)	77
Robinson Creek	184.0	(7)	88.0	(11)	72.5	(2.73)	344.5	(20.73)	78
Kelly Park (Soda Springs)	53.5	(3)	99.5	(12)	182.5	(14.37)	335.5	(29.37)	79
South Fork Boise River (Featherville to Pine)	133.0	(5)	127.5	(14)	72.5	(2.77)	333.0	(21.77)	80
Pole Creek Meadows	133.0	(5)	171.0	(22)	21.0	(1.29)	325.0	(28.29)	83
St. Maries River	133.0	(5)	88.0	(11)	102.5	(6.31)	323.5	(22.31)	84
Tule Lake/Warm Lake	90.5	(4)	183.5	(28)	48.5	(2.42)	322.5	(34.42)	85
Coeur d'Alene Lake (Windy Bay)	90.5	(4)	75.0	(10)	154.0	(11.94)	319.5	(25.94)	86
Sand Creek	133.0	(5)	75.0	(10)	108.5	(7.16)	316.5	(22.16)	87
Coeur d'Alene Lake (Rockford Bay)	90.5	(4)	30.5	(7)	191.5	(16.03)	312.5	(27.03)	88
Henrys Fork/Flat Ranch	90.5	(4)	127.5	(14)	94.0	(5.19)	312.0	(23.19)	89
Carey Lake	53.5	(3)	75.0	(10)	182.5	(14.18)	311.0	(27.18)	90
Fernan Lake	133.0	(5)	75.0	(10)	102.5	(6.31)	310.5	(21.31)	91
North Fork Payette River Meanders/North Beach Payette Lake	133.0	(5)	127.5	(14)	48.5	(1.96)	309.0	(20.96)	92
Beaver Creek Fen	133.0	(5)	152.5	(17)	21.0	(.86)	306.5	(22.86)	93
Oxford Slough/Swan Lake	27.5	(2)	164.0	(20)	114.5	(8.22)	306.0	(30.22)	94
Hobo Creek Cedar Grove	133.0	(5)	88.0	(11)	85.0	(3.91)	306.0	(19.91)	95
Bear Creek Fen	90.5	(4)	164.0	(20)	48.5	(2.23)	303.0	(26.23)	96
Blue Lake	90.5	(4)	127.5	(14)	85.0	(3.85)	303.0	(21.85)	97
Packer Meadows	164.5	(6)	113.0	(13)	21.0	(.66)	298.5	(19.66)	98
Perkins Lake	90.5	(4)	183.5	(28)	21.0	(1.45)	295.0	(33.45)	99
Soda Springs Natural Scenic Area	9.0	(1)	113.0	(13)	170.5	(13.05)	292.5	(27.05)	100
Westmond Lake	90.5	(4)	30.5	(7)	170.5	(12.61)	291.5	(23.61)	101
Boyer Slough	90.5	(4)	30.5	(7)	170.5	(12.56)	291.5	(23.56)	102
Chester Wetlands/Henrys Fork	90.5	(4)	60.0	(9)	140.0	(10.59)	290.5	(23.59)	103
Keyser's Slough	53.5	(3)	45.0	(8)	191.5	(16.06)	290.0	(27.06)	104
Bruneau River/Jarbidge River	53.5	(3)	164.0	(20)	72.5	(3.34)	290.0	(26.34)	105
Salmon River (Allison Creek Island)	53.5	(3)	113.0	(13)	122.5	(9.43)	289.0	(25.43)	106
Red River Meadows	90.5	(4)	88.0	(11)	108.5	(6.66)	287.0	(21.66)	107
Lake Lowell	53.5	(3)	99.5	(12)	131.0	(10.50)	284.0	(25.50)	108
Little Wood River/High Five	27.5	(2)	99.5	(12)	154.0	(12.36)	281.0	(26.36)	109
Willow Creek (Valley County)	90.5	(4)	18.5	(6)	170.5	(12.81)	279.5	(22.81)	110
Coeur d'Alene Lake (Cougar Bay)	90.5	(4)	88.0	(11)	94.0	(5.15)	272.5	(20.15)	111
Spirit Lake	133.0	(5)	45.0	(8)	94.0	(5.47)	272.0	(18.47)	112
Duck Valley Indian Reservation	53.5	(3)	144.0	(16)	72.5	(3.23)	270.0	(22.23)	113
Walsh Lake	90.5	(4)	7.0	(4)	170.5	(13.07)	268.0	(21.07)	114

Wetland	Criteria rank (Criteria score)				Final Rank
	Type +	Function +	Threat =	Sum	
Fleming Creek	53.5 (3)	60.0 (9)	154.0 (12.41)	267.5 (24.41)	115
Middle Snake River (Twin Falls to Devils Corral)	27.5 (2)	99.5 (12)	140.0 (11.34)	267.0 (25.34)	116
Kootenai River (Shorty's Island)	27.5 (2)	99.5 (12)	140.0 (10.76)	267.0 (24.76)	117
Toms Creek/Buffalo River Wetlands	133.0 (5)	113.0 (13)	21.0 (.66)	267.0 (18.66)	118
Secesh Meadows	90.5 (4)	127.5 (14)	48.5 (1.73)	266.5 (19.73)	119
Mesa Marsh	184.0 (7)	60.0 (9)	21.0 (1.17)	265.0 (17.17)	120
Black Prince Creek	184.0 (7)	60.0 (9)	21.0 (.51)	265.0 (16.51)	121
Mica Creek	184.0 (7)	30.5 (7)	48.5 (2.31)	263.0 (16.31)	122
Salmon River (Cronks Canyon)	53.5 (3)	136.5 (15)	72.5 (3.18)	262.5 (21.18)	123
Crooked Creek/Warm Spring Creek	90.5 (4)	75.0 (10)	94.0 (4.56)	259.5 (18.56)	126
Hayden Lake	90.5 (4)	60.0 (9)	108.5 (6.64)	259.0 (19.64)	127
Palouse River Bottomland/Harvard	53.5 (3)	3.5 (3)	200.0 (21.31)	257.0 (27.31)	128
Captain John Creek	164.5 (6)	88.0 (11)	4.5 (.05)	257.0 (17.05)	129
Little Lost River Valley	27.5 (2)	88.0 (11)	140.0 (10.86)	255.5 (23.86)	130
Gold Fork River/Lake Cascade	53.5 (3)	60.0 (9)	140.0 (10.82)	253.5 (22.82)	131
Upper North Fork Clearwater River/Black Canyon Cedar Groves	90.5 (4)	113.0 (13)	48.5 (1.73)	252.0 (18.73)	132
Shoshone Falls	53.5 (3)	75.0 (10)	122.5 (8.59)	251.0 (21.59)	133
Weiser River/Jackson Creek Confluence	90.5 (4)	88.0 (11)	72.5 (3.25)	251.0 (18.25)	134
Fortynine Meadows	184.0 (7)	18.5 (6)	48.5 (2.11)	251.0 (15.11)	135
Marsh Creek (Cape Horn to Bling Summit Fen)	53.5 (3)	169.0 (21)	21.0 (1.29)	243.5 (25.29)	136
Grays Lake Outlet	53.5 (3)	7.0 (4)	182.5 (13.72)	243.0 (20.72)	137
Salmon River (Deadwater)	9.0 (1)	136.5 (15)	94.0 (4.74)	239.5 (20.74)	138
Wyoming Creek/Moss Spring	90.5 (4)	127.5 (14)	21.0 (1.28)	239.0 (19.28)	139
Medicine Lodge Creek Valley	53.5 (3)	45.0 (8)	140.0 (10.65)	238.5 (21.65)	140
Cub Creek Peatland	90.5 (4)	99.5 (12)	48.5 (2.43)	238.5 (18.43)	141
Herman Lake	90.5 (4)	99.5 (12)	48.5 (2.39)	238.5 (18.39)	142
Bear River/Oneida Narrows	53.5 (3)	88.0 (11)	94.0 (4.58)	235.5 (18.58)	143
Lava Butte Wetlands/Elk Meadows	184.0 (7)	30.5 (7)	21.0 (.63)	235.5 (14.63)	144
Milner	27.5 (2)	18.5 (6)	188.0 (14.54)	234.0 (22.54)	145
Willow Creek Headwaters	164.5 (6)	18.5 (6)	48.5 (2.40)	231.5 (14.40)	146
Malad River Valley	9.0 (1)	30.5 (7)	191.5 (15.87)	231.0 (23.87)	147
Coeur d'Alene Lake (Kid Island Bay)	90.5 (4)	30.5 (7)	108.5 (7.08)	229.5 (18.08)	148
Hidden Lake	133.0 (5)	45.0 (8)	48.5 (2.14)	226.5 (15.14)	149
Bonner Lake	90.5 (4)	113.0 (13)	21.0 (1.14)	224.5 (18.14)	150
North Form Kennally Creek Trough	90.5 (4)	113.0 (13)	21.0 (.84)	224.5 (17.84)	151
Formation Springs	9.0 (1)	60.0 (9)	154.0 (11.69)	223.0 (21.69)	152
South Leigh Creek	9.0 (1)	60.0 (9)	154.0 (11.57)	223.0 (21.57)	153
Crooked Creek Easement	53.5 (3)	45.0 (8)	122.5 (8.91)	221.0 (19.91)	154

Wetland	Criteria rank (Criteria score)						Final Rank	
	Type	+	Function	+	Threat	=		Sum
East Fork Wood River	53.5	(3)	113.0	(13)	48.5	(2.18)	215.0 (18.18)	155
Big Wood River/Mahoney Flat	53.5	(3)	113.0	(13)	48.5	(2.02)	215.0 (18.02)	156
Granite Creek Meadows	90.5	(4)	75.0	(10)	48.5	(1.70)	214.0 (15.70)	157
Craters of the Moon-North Unit	164.5	(6)	45.0	(8)	4.5	(.19)	214.0 (14.19)	158
Wardenhoff Meadows	164.5	(6)	45.0	(8)	4.5	(.00)	214.0 (14.00)	159
Walker's Park Cedar Grove (Kinney Creek/Middleton Creek)	133.0	(5)	30.5	(7)	48.5	(2.32)	212.0 (14.32)	160
Camas Creek Meadows	90.5	(4)	3.5	(3)	114.5	(8.34)	208.5 (15.34)	161
Lund Creek	184.0	(7)	11.5	(5)	4.5	(.39)	200.0 (12.39)	162
Rose Fen	90.5	(4)	88.0	(11)	21.0	(1.42)	199.5 (16.42)	163
Colburn Creek	27.5	(2)	1.0	(2)	170.5	(13.45)	199.0 (17.45)	164
Upper North Fork Payette Meadows	133.0	(5)	45.0	(8)	21.0	(1.06)	199.0 (14.06)	165
Meadow Creek Hill	53.5	(3)	3.5	(3)	140.0	(11.11)	197.0 (17.11)	166
Thomas Flat Springs	27.5	(2)	113.0	(13)	48.5	(2.23)	189.0 (17.23)	169
Ponderosa Peninsula	27.5	(2)	113.0	(13)	48.5	(1.82)	189.0 (16.82)	170
Curlew Valley/Grandine	9.0	(1)	45.0	(8)	131.0	(9.60)	185.0 (18.60)	171
Ashton Marsh	27.5	(2)	3.5	(3)	154.0	(11.92)	185.0 (16.92)	172
Stump Creek	27.5	(2)	60.0	(9)	94.0	(5.38)	181.5 (16.38)	173
Buck Creek	164.5	(6)	11.5	(5)	4.5	(.43)	180.5 (11.43)	174
Lower Little Wood River	9.0	(1)	75.0	(10)	94.0	(5.27)	178.0 (16.27)	175
Mud Lake (Valley County)	27.5	(2)	127.5	(14)	21.0	(1.37)	176.0 (17.37)	176
Raft River Valley	9.0	(1)	30.5	(7)	131.0	(10.00)	170.5 (18.00)	177
Freeman Lake	90.5	(4)	30.5	(7)	48.5	(1.75)	169.5 (12.75)	178
Camas Creek	27.5	(2)	18.5	(6)	122.5	(9.11)	168.5 (17.11)	179
Ditch Creek Meadows	133.0	(5)	30.5	(7)	4.5	(.00)	168.0 (12.00)	180
Hubbard Reservoir	1.5	(0)	11.5	(5)	154.0	(11.53)	167.0 (16.53)	181
Elk Valley	90.5	(4)	45.0	(8)	21.0	(1.32)	156.5 (13.32)	182
North Fork Owyhee River	9.0	(1)	60.0	(9)	72.5	(3.17)	141.5 (13.17)	183
Stanley Creek	27.5	(2)	88.0	(11)	21.0	(1.23)	136.5 (14.23)	184
Blue Spring Creek	27.5	(2)	60.0	(9)	48.5	(2.13)	136.0 (13.13)	185
Rabbit Creek Springs	27.5	(2)	60.0	(9)	48.5	(1.95)	136.0 (12.95)	186
Dodson Pass Wetlands	53.5	(3)	60.0	(9)	21.0	(.70)	134.5 (12.70)	187
Lodge Creek Cedar Grove	53.5	(3)	30.5	(7)	48.5	(2.22)	132.5 (12.22)	188
Big Spring/Pebble Creek	9.0	(1)	45.0	(8)	72.5	(3.19)	126.5 (12.19)	189
Huff Creek Meadow	27.5	(2)	75.0	(10)	21.0	(1.46)	123.5 (13.46)	190
Goodrich Creek	27.5	(2)	75.0	(10)	21.0	(.75)	123.5 (12.75)	191
Slide Canyon	53.5	(3)	11.5	(5)	48.5	(2.09)	113.5 (10.09)	192

Wetland	Criteria rank (Criteria score)					Final Rank
	Type +	Function +	Threat =	Sum		
Warm River Fen	27.5 (2)	60.0 (9)	21.0 (.70)	108.5 (11.70)	193	
Owyhee Tablelands Vernal Lakes	27.5 (2)	75.0 (10)	4.5 (.37)	107.0 (12.37)	194	
Fivemile Meadows	1.5 (0)	11.5 (5)	85.0 (3.80)	98.0 (8.80)	195	
Canyon Creek (Lemhi County)	27.5 (2)	18.5 (6)	48.5 (2.20)	94.5 (10.20)	196	
Summer Creek/Sheep Peak	53.5 (3)	30.5 (7)	4.5 (.15)	88.5 (10.15)	197	
Big Lost River Sinks	9.0 (1)	18.5 (6)	48.5 (2.06)	76.0 (9.06)	198	
Ingals Creek Fen	9.0 (1)	45.0 (8)	21.0 (1.11)	75.0 (10.11)	199	
Salmon Falls Creek Reservoir Playas	9.0 (1)	18.5 (6)	21.0 (.62)	48.5 (7.62)	200	

GLOSSARY

Alkaline wetland A wetland with pH of water and/or soil greater than 7.4 (Novitzki et al. 1996).

Bryophyte Nonflowering plants, including mosses, liverworts, and hornworts.

Class I wetland These wetlands “represent examples of plant associations in near pristine condition and often provide habitat for high concentrations of state rare plant or animal species. The high-quality condition of the plant association is an indicator of intact site features such as hydrology and water quality. Impacts to Class I sites should be avoided as these sites are not mitigatable and alteration (and in some cases enhancement) of these sites will result in significant degradation” (Bottum 2005).

Class II wetland These wetlands are “differentiated from Class I sites based on condition or biological significance. Class II sites may provide habitat for state rare plant or animal species. However, human influences are apparent (i.e., portions of wetland include remnants that are in excellent condition, however, drier, accessible sites are impacted). Good to excellent assemblages of common plant associations or the occurrence of rare plant associations qualifies a site as Class II. Wetlands with unique biological, geological, or other features may be included here. Impacts and modification to remnants within Class II sites should be avoided. Where impacts such as grazing are present, they should be managed intensively or removed. Class II federal lands should be designated as RNA, ACEC, or SIA. Private lands should be acquired by conservation organizations or have voluntary or legal protection” (Bottum 2005).

Conservation Site Database This database contains spatial and associated ecological information on over 700 sites in Idaho, about 500 of which include wetland and/or riparian components. Along with spatial data, each database record describes site location, biological significance, ecological processes and functions, ecological condition and integrity, protection status, and stewardship concerns. They represent a variety of ecosystems in Idaho including areas that support intact ecological processes, high quality examples of native plant communities, unique geologic processes, habitat for rare plants or animals, or critical habitat for wide ranging species (e.g., Important Bird Areas) (Idaho Conservation Data Center 2005).

Ecological system A recurring biological community that is found in similar physical environments and is influenced by similar dynamic ecological processes, such as fire or flooding (Comer et al. 2003, Idaho Department of Fish and Game 2005 a).

EWRA Emergency Wetlands Resources Act of 1986.

Ericad A plant in the Ericaceae family.

Fen Minerotrophic peatlands receiving nutrients from water that has percolated through mineral soil and bedrock, or which has run off from terrestrial lands into a surface

source such as a creek . Fens range from poor fens, which tend toward bog conditions and are dominated predominantly by bryophytes (especially Sphagnum moss) and some vascular species (sedges and ericads) and have pH of 4.0 to 5.5; to intermediate fens with pH of 5.6 to 7.0; to rich fens, which are dominated by sedges, other graminoids, and true mosses and have pH of less 7.0. (Bursik and Moseley 1995).

Geographic Information System (GIS) An organized assembly of people, data, techniques, computers, and programs for acquiring, analyzing, storing, retrieving, and displaying spatial information about the real world (Idaho Department of Fish and Game 2005 a).

Globally Important Bird Area Typically an area that supports a concentration of greater than 20,000 birds at a site as defined by the National Audubon Society and the American Bird Conservancy.

Globally rare (Global rank or G-rank) The network of Natural Heritage Programs and Conservation Data Centers ranks the rangewide, or global rank, status of plants, animals, and plant communities on a scale of 1 to 5. The rank is based on the number of known occurrences, habitat quality, narrowness of range of habitat, trends in habitat, threats to the element, and other factors. G = Global rank indicator; denotes rank based on rangewide status. 1 = Critically imperiled because of extreme rarity or because some factor of its biology makes it especially vulnerable to extinction (typically 5 or fewer occurrences). 2 = Imperiled because of rarity or because other factors demonstrably make it very vulnerable to extinction (typically 6 to 20 occurrences). 3 = Rare or uncommon but not imperiled (typically 21 to 100 occurrences).

Graminoid A grasslike plant, including grasses (Poaceae), sedges (Cyperaceae), and rushes (Juncaceae).

IDCDC Idaho Conservation Data Center is a member of the Natural Heritage Program network and part of Idaho Department of Fish and Game.

IDFG Idaho Department of Fish and Game.

IDPR Idaho Department of Parks and Recreation.

Important Bird Areas Sites that provide essential habitat for one or more species of bird. IBAs include sites for breeding, wintering, and/or migrating birds. IBAs may be a few acres or thousands of acres, but usually they are discrete sites that stand out from the surrounding landscape. IBAs may include public or private lands, or both, and they may be protected or unprotected.

IWIS Idaho Wetlands Information System. A simple relational database (Microsoft Access) designed to provide a comprehensive central source of information regarding wetland sites in Idaho. Along with spatial data, site information includes wetland classification, size, ownership, potential partners for acquisition, preservation, recreation

values, unique features (including rare plants and animals), potential threats, and public access for each site. (Pfeifer and Toweill 1992, Idaho Department of Parks and Recreation 2002).

LWCF Land and Water Conservation Fund Act of 1965.

Minerotrophic Descriptive of a habitat where nutrients are derived from ground or surface water flow as opposed to exclusively rainwater (ombrotrophic).

NWPCP National Wetlands Priority Conservation Plan of 1991.

Peatland Wetlands with waterlogged substrates and at least 30 cm of peat accumulation. The term peatland encompasses all wetlands occurring on peat soils (bogs and fens). All peatlands are on a trophic gradient from nutrient-poor (bog and poor fen) to mesotrophic (intermediate fen) to relatively nutrient-rich (rich fen) and one type can grade imperceptibly into another. Further classification of peatlands include: floating mat, shrub carr, and paludified forest (Bursik and Moseley 1995).

Research Natural Area An area (USDA Forest Service or USDA Bureau of Land Management) designated in perpetuity to preserve natural biological and physical features for research, education, and the maintenance of biological diversity.

SCORTP State Comprehensive Outdoor Recreation and Tourism Plan.

Scrub-shrub Areas dominated by woody vegetation less than 6 meters (20 feet) tall. The vegetation includes true shrubs, young trees, and trees or shrubs that may be stunted because of environmental conditions. Scrub-shrub wetlands are flooded for extended periods during the growing season. This type of woody vegetation can be invasive into slightly higher elevation areas within a marsh.

Shrub carr Shrub dominated fen habitats (Bursik and Moseley 1995).

Special Interest Area An area (USDA Forest Service) designated under the Federal Land Policy and Management Act of 1976 to protect natural resources, systems, or processes that have more than local significance or have qualities or circumstances that make them rare, irreplaceable, or vulnerable to adverse change.

Sphagnum A genus of mosses commonly called peat moss due to its prevalence in peat bogs. Members of this genus can hold large quantities of water inside their cells; some species can hold up to 20 times their dry weight in water, which is why peat moss is commonly sold as a soil amendment. Peat moss can acidify its surroundings and its undecomposed remains form peat.

Travertine springs Springs with water high in dissolved calcium carbonate characterized by terraced calcium carbonate deposits (travertine) which form at spring sources and along outflow channels.

Wetland A land inclusion that has a predominance of hydric soils; is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation; and supports a prevalence of such vegetation under normal circumstances (e.g., marsh, vernal pool, riparian zone, wet meadow, peatland).

Wilderness area Areas of land federally designated wilderness under the 1964 Wilderness Act.

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Appendix 1. Ecological systems; rare plants, animals, and plant communities for top ten priority wetlands in Idaho.

1. Upper Snake River / Lower Henrys Fork

Ecological System		
Inter-Mountain Basins Greasewood Flat		
North American Arid West Emergent Marsh		
Northern Rocky Mountain Conifer Swamp		
Northern Rocky Mountain Lower Montane Mesic Deciduous Shrubland		
Open Water		
Rocky Mountain Lower Montane Riparian Woodland and Shrubland		
Rocky Mountain Subalpine Mesic Meadow		
Rocky Mountain Subalpine Mesic Spruce-Fir Forest and Woodland		
Rocky Mountain Subalpine-Montane Riparian Shrubland		
Rocky Mountain Subalpine-Montane Riparian Woodland		
Plants	Scientific Name	Common Name
	<i>Epipactis gigantea</i>	Giant Helleborine
	<i>Hierochloa odorata</i>	Holy Grass
	<i>Spiranthes diluvialis</i>	Ute Ladies' Tresses
Animals	Scientific Name	Common Name
	<i>Aechmophorus occidentalis</i>	Western Grebe
	<i>Ameletus sparsatus</i>	A Mayfly
	<i>Ardea alba</i>	Great Egret
	<i>Bubulcus ibis</i>	Cattle Egret
	<i>Bufo boreas</i>	Western Toad
	<i>Catostomus discobolus</i>	Bluehead Sucker
	<i>Chlidonias niger</i>	Black Tern
	<i>Coccyzus americanus</i>	Yellow-billed Cuckoo
	<i>Colligyrus greggi</i>	Rocky Mountain Dusksnail
	<i>Cygnus buccinator</i>	Trumpeter Swan
	<i>Egretta thula</i>	Snowy Egret
	<i>Haliaeetus leucocephalus</i>	Bald Eagle
	<i>Larus californicus</i>	California Gull
	<i>Larus delawarensis</i>	Ring-billed Gull
	<i>Larus pipixcan</i>	Franklin's Gull
	<i>Nycticorax nycticorax</i>	Black-crowned Night-heron
	<i>Oncorhynchus clarkii bouvieri</i>	Yellowstone Cutthroat Trout
	<i>Plegadis chihi</i>	White-faced Ibis
	<i>Podiceps nigricollis</i>	Eared Grebe
	<i>Sterna forsteri</i>	Forster's Tern
	<i>Valvata utahensis</i>	Desert Valvata
Plant Communities	Scientific Name	Common Name
	<i>Alnus incana/Cornus sericea</i>	mountain alder/red-osier dogwood
	<i>Artemisia cana/Festuca idahoensis</i>	silver sagebrush/Idaho fescue
	<i>Betula occidentalis</i>	water birch cover type
	<i>Betula occidentalis/Cornus sericea</i>	water birch/red-osier dogwood
	<i>Carex praegracilis</i>	clustered field sedge
	<i>Crataegus douglasii/Rosa woodsii</i>	black hawthorn/Woods rose
	<i>Elaeagnus commutata</i>	American silverberry
	<i>Eleocharis rostellata</i>	wandering spikerush
	<i>Populus angustifolia/Chrysopsis villosa</i>	narrowleaf cottonwood/hairy goldenaster
	<i>Populus angustifolia/Elaeagnus commutata</i>	narrowleaf cottonwood/American silverberry
	<i>Populus angustifolia/Rhus trilobata</i>	narrowleaf cottonwood/skunkbush sumac

Plant Communities	Scientific Name	Common Name
	<i>Populus trichocarpa/Cornus sericea</i>	black cottonwood/red-osier dogwood
	<i>Populus trichocarpa/Crataegus douglasii</i>	black cottonwood/black hawthorn
	<i>Populus trichocarpa/Symphoricarpos albus</i>	black cottonwood/common snowberry
	<i>Salix exigua/Mesic Forbs</i>	coyote willow/mesic forbs
	<i>Salix lasiandra/Bench</i>	whiplash willow/bench
	<i>Salix lutea</i>	yellow willow
	<i>Scirpus americanus</i>	threesquare bulrush
	<i>Scirpus pungens</i>	sharp bulrush
	<i>Sporobolus airoides</i>	alkali sacaton
	Thermal springs Aquatic	thermal springs aquatic community

2. Big Lost River Valley

Ecological System

North American Arid West Emergent Marsh
Northern Rocky Mountain Lower Montane Mesic Deciduous Shrubland
Open Water
Rocky Mountain Alpine-Montane Wet Meadow
Rocky Mountain Subalpine-Montane Riparian Shrubland
Rocky Mountain Subalpine-Montane Riparian Woodland

Plants	Scientific Name	Common Name
	<i>Aster junciformis</i>	Rush Aster
	<i>Astragalus diversifolius</i>	Meadow Milkvetch
	<i>Astragalus leptaleus</i>	Park Milkvetch
	<i>Epilobium palustre</i>	Swamp Willow-weed
	<i>Lomatogonium rotatum</i>	Marsh Felwort

Animals	Scientific Name	Common Name
	<i>Ameletus sparsatus</i>	A Mayfly
	<i>Bufo boreas</i>	Western Toad
	<i>Centroptilum selanderorum</i>	A Mayfly
	<i>Margaritifera falcata</i>	Western Pearlshell
	<i>Numenius americanus</i>	Long-billed Curlew

Plant Communities	Scientific Name	Common Name
	<i>Alnus incana/Mesic Forbs</i>	mountain alder/mesic forbs
	<i>Betula occidentalis/Cornus sericea</i>	water birch/red-osier dogwood
	<i>Muhlenbergia richardsonis</i>	mat muhly
	<i>Poa juncifolia</i>	alkali bluegrass
	<i>Populus trichocarpa/Alnus incana</i>	black cottonwood/mountain alder
	<i>Populus trichocarpa/Cornus sericea</i>	black cottonwood/red-osier dogwood
	<i>Populus trichocarpa/Salix exigua</i>	black cottonwood/coyote willow
	<i>Salix lutea</i>	yellow willow
	<i>Sarcobatus vermiculatus/Elymus cinereus</i>	greasewood/Great Basin wildrye
	<i>Spartina gracilis</i>	akali cordgrass

3. Bear Lake Wetlands

Ecological System

North American Arid West Emergent Marsh
Northern Rocky Mountain Lower Montane Mesic Deciduous Shrubland
Open Water
Rocky Mountain Alpine-Montane Wet Meadow
Rocky Mountain Subalpine Mesic Meadow
Rocky Mountain Subalpine-Montane Riparian Shrubland

Plants	Scientific Name	Common Name
	<i>Salicornia rubra</i>	Red Glasswort
	<i>Thalictrum dasycarpum</i>	Purple Meadow-rue

Animals	Scientific Name	Common Name
	<i>Aechmophorus occidentalis</i>	Western Grebe
	<i>Bubulcus ibis</i>	Cattle Egret
	<i>Chlidonias niger</i>	Black Tern
	<i>Cottus extensus</i>	Bear Lake Sculpin
	<i>Cygnus buccinator</i>	Trumpeter Swan
	<i>Egretta thula</i>	Snowy Egret
	<i>Haliaeetus leucocephalus</i>	Bald Eagle
	<i>Larus californicus</i>	California Gull
	<i>Larus pipixcan</i>	Franklin's Gull
	<i>Nycticorax nycticorax</i>	Black-crowned Night-heron
	<i>Oncorhynchus clarki utah</i>	Bonneville Cutthroat Trout
	<i>Phalacrocorax auritus</i>	Double-crested Cormorant
	<i>Plegadis chihi</i>	White-faced Ibis
	<i>Podiceps nigricollis</i>	Eared Grebe
	<i>Prosopium abyssicola</i>	Bear Lake Whitefish
	<i>Prosopium gemmifer</i>	Bonneville Cisco
	<i>Prosopium spilonotus</i>	Bonneville Whitefish
	<i>Pyrgulopsis pilsbryana</i>	Bear Lake Springsnail
	<i>Rana pipiens</i>	Northern Leopard Frog
	<i>Sterna caspia</i>	Caspian Tern
	<i>Sterna forsteri</i>	Forster's Tern

Plant

Communities	Scientific Name	Common Name
	<i>Crataegus douglasii/Rosa woodsii</i>	black hawthorn/Woods rose
	<i>Elymus cinereus-Distichlis stricta</i>	Great Basin wildrye-interior saltgrass
	Thermal springs Aquatic	thermal springs aquatic community

4. Lake Walcott / Lake Channel Canyon

Ecological System

Columbia Basin Foothill Riparian Woodland and Shrubland
Great Basin Foothill and Lower Montane Riparian Woodland and Shrubland
Inter-Mountain Basins Greasewood Flat
North American Arid West Emergent Marsh
Northern Rocky Mountain Lower Montane Mesic Deciduous Shrubland
Open Water

Animals	Scientific Name	Common Name
	<i>Aechmophorus clarkii</i>	Clark's Grebe
	<i>Aechmophorus occidentalis</i>	Western Grebe
	<i>Bubulcus ibis</i>	Cattle Egret
	<i>Chlidonias niger</i>	Black Tern
	<i>Coccyzus americanus</i>	Yellow-billed Cuckoo
	<i>Cygnus buccinator</i>	Trumpeter Swan
	<i>Egretta thula</i>	Snowy Egret
	<i>Haliaeetus leucocephalus</i>	Bald Eagle
	<i>Larus californicus</i>	California Gull
	<i>Larus delawarensis</i>	Ring-billed Gull
	<i>Numenius americanus</i>	Long-billed Curlew
	<i>Nycticorax nycticorax</i>	Black-crowned Night-heron
	<i>Oncorhynchus clarkii bouvieri</i>	Yellowstone Cutthroat Trout
	<i>Pelecanus erythrorhynchos</i>	American White Pelican
	<i>Phalacrocorax auritus</i>	Double-crested Cormorant
	<i>Podiceps nigricollis</i>	Eared Grebe
	<i>Rana pipiens</i>	Northern Leopard Frog
	<i>Sterna caspia</i>	Caspian Tern
	<i>Sterna forsteri</i>	Forster's Tern

Animals	Scientific Name	Common Name
	<i>Valvata utahensis</i>	Desert Valvata

Plant

Communities	Scientific Name	Common Name
	<i>Carex praegracilis</i>	clustered field sedge
	<i>Hordeum brachyantherum</i>	meadow barley
	<i>Scirpus americanus</i>	threesquare bulrush

5. American Falls Reservoir / Fort Hall Bottoms

Ecological System

Columbia Basin Foothill Riparian Woodland and Shrubland
 Great Basin Foothill and Lower Montane Riparian Woodland and Shrubland
 Inter-Mountain Basins Greasewood Flat
 North American Arid West Emergent Marsh
 Open Water
 Rocky Mountain Subalpine-Montane Riparian Shrubland

Plants	Scientific Name	Common Name
	<i>Allenrolfea occidentalis</i>	Iodine Bush
	<i>Muhlenbergia racemosa</i>	Green Muhly
	<i>Salicornia rubra</i>	Red Glasswort

Animals	Scientific Name	Common Name
	<i>Aechmophorus clarkii</i>	Clark's Grebe
	<i>Aechmophorus occidentalis</i>	Western Grebe
	<i>Anodonta californiensis</i>	California Floater
	<i>Ardea alba</i>	Great Egret
	<i>Bubulcus ibis</i>	Cattle Egret
	<i>Bufo boreas</i>	Western Toad
	<i>Chlidonias niger</i>	Black Tern
	<i>Coccyzus americanus</i>	Yellow-billed Cuckoo
	<i>Cygnus buccinator</i>	Trumpeter Swan
	<i>Egretta thula</i>	Snowy Egret
	<i>Haliaeetus leucocephalus</i>	Bald Eagle
	<i>Larus californicus</i>	California Gull
	<i>Larus delawarensis</i>	Ring-billed Gull
	<i>Numenius americanus</i>	Long-billed Curlew
	<i>Nycticorax nycticorax</i>	Black-crowned Night-heron
	<i>Oncorhynchus clarkii bouvieri</i>	Yellowstone Cutthroat Trout
	<i>Phalacrocorax auritus</i>	Double-crested Cormorant
	<i>Plegadis chihi</i>	White-faced Ibis
	<i>Podiceps nigricollis</i>	Eared Grebe
	<i>Rana pipiens</i>	Northern Leopard Frog
	<i>Sterna caspia</i>	Caspian Tern
	<i>Sterna forsteri</i>	Forster's Tern
	<i>Sterna hirundo</i>	Common Tern
	<i>Valvata utahensis</i>	Desert Valvata

Plant

Communities	Scientific Name	Common Name
	<i>Carex praegracilis</i>	clustered field sedge
	<i>Populus angustifolia/Rhus trilobata</i>	narrowleaf cottonwood/skunkbush sumac

6. Teton Basin

Ecological System

Great Basin Foothill and Lower Montane Riparian Woodland and Shrubland
 Inter-Mountain Basins Greasewood Flat
 Northern Rocky Mountain Lower Montane Mesic Deciduous Shrubland
 Open Water
 Rocky Mountain Subalpine-Montane Riparian Shrubland

Ecological System		
Rocky Mountain Subalpine-Montane Riparian Woodland		
Plants	Scientific Name	Common Name
	<i>Aster junciformis</i>	Rush Aster
	<i>Carex livida</i>	Pale Sedge
	<i>Epilobium palustre</i>	Swamp Willow-weed
	<i>Eriophorum viridicarinatum</i>	Green Keeled Cotton-grass
	<i>Kobresia simpliciuscula</i>	Simple Kobresia
	<i>Muhlenbergia racemosa</i>	Green Muhly
	<i>Primula incana</i>	Jones' Primrose
	<i>Salix candida</i>	Hoary Willow
Animals	Scientific Name	Common Name
	<i>Cygnus buccinator</i>	Trumpeter Swan
	<i>Haliaeetus leucocephalus</i>	Bald Eagle
	<i>Histrionicus histrionicus</i>	Harlequin Duck
	<i>Oncorhynchus clarkii bouvieri</i>	Yellowstone Cutthroat Trout
	<i>Stagnicola montanensis</i>	Mountain Marshsnail
Plant Communities	Scientific Name	Common Name
	<i>Betula glandulosa/Carex simulata</i>	bog birch/short-beaked sedge
	<i>Carex buxbaumii</i> community	Buxbaums sedge
	<i>Crataegus douglasii/Rosa woodsii</i>	black hawthorn/Woods rose
	<i>Eleocharis rostellata</i>	wandering spikerush
	<i>Salix geyeriana/Mesic Graminoids</i>	Geyer willow/mesic graminoids
7. Clark Fork River Delta		
Ecological System		
Columbia Basin Foothill Riparian Woodland and Shrubland		
Northern Rocky Mountain Conifer Swamp		
Northern Rocky Mountain Lower Montane Mesic Deciduous Shrubland		
Northern Rocky Mountain Lower Montane Riparian Woodland and Shrubland		
Northern Rocky Mountain Western Hemlock-Western Red-cedar Forest		
Open Water		
Plants	Scientific Name	Common Name
	<i>Carex leptalea</i>	Bristle-stalked Sedge
	<i>Tuckermannopsis sepincola</i>	Lichen
	<i>Collema curtisporum</i>	Short-spored Jelly Lichen
	<i>Ramalina pollinaria</i>	Powdery Twig Lichen
	<i>Thalictrum dasycarpum</i>	Purple Meadow-rue
Animals	Scientific Name	Common Name
	<i>Aechmophorus occidentalis</i>	Western Grebe
	<i>Bucephala clangula</i>	Common Goldeneye
	<i>Gavia immer</i>	Common Loon
	<i>Haliaeetus leucocephalus</i>	Bald Eagle
	<i>Histrionicus histrionicus</i>	Harlequin Duck
	<i>Lophodytes cucullatus</i>	Hooded Merganser
	<i>Myotis yumanensis</i>	Yuma Myotis
	<i>Oncorhynchus clarkii lewisi</i>	Westslope Cutthroat Trout
	<i>Prosopium coulterii</i>	Pygmy Whitefish
	<i>Rana pipiens</i>	Northern Leopard Frog
Plant Communities	Scientific Name	Common Name
	<i>Populus trichocarpa/Cornus sericea</i>	black cottonwood/red-osier dogwood
	<i>Salix bebbiana</i>	Bebb willow
	<i>Scirpus microcarpus</i>	small-fruit bulrush

8. Silver Creek

Ecological System

Inter-Mountain Basins Greasewood Flat
 North American Arid West Emergent Marsh
 Northern Rocky Mountain Lower Montane Mesic Deciduous Shrubland
 Open Water
 Rocky Mountain Alpine-Montane Wet Meadow
 Rocky Mountain Subalpine-Montane Riparian Shrubland

Plants	Scientific Name	Common Name
	<i>Cypripedium parviflorum</i> var. <i>pubescens</i>	Small Yellow Lady's-slipper

Animals	Scientific Name	Common Name
	<i>Cottus leiopomus</i>	Wood River Sculpin
	<i>Haliaeetus leucocephalus</i>	Bald Eagle
	<i>Oncorhynchus mykiss gairdneri</i>	Inland Redband Trout

Plant

Communities	Scientific Name	Common Name
	<i>Artemisia tridentata tridentata/Elymus cinereus</i>	basin big sagebrush/Great Basin wildrye
	<i>Betula occidentalis</i> /Mesic Forbs	water birch/mesic forbs
	<i>Carex buxbaumii</i> community	Buxbaums sedge
	<i>Carex lanuginosa</i>	woolly sedge
	<i>Eleocharis rostellata</i>	wandering spikerush
	Silver Creek Desert Aquatic Ecosystem	Silver Creek desert aquatic ecosystem
	<i>Spartina gracilis</i>	akali cordgrass

9. Lower Coeur d'Alene River Valley

Ecological System

Columbia Basin Foothill Riparian Woodland and Shrubland
 Northern Rocky Mountain Conifer Swamp
 Northern Rocky Mountain Lower Montane Mesic Deciduous Shrubland
 Northern Rocky Mountain Lower Montane Riparian Woodland and Shrubland
 Northern Rocky Mountain Western Hemlock-Western Red-cedar Forest
 Open Water

Plants	Scientific Name	Common Name
	<i>Epilobium palustre</i>	Swamp Willow-weed
	<i>Ludwigia polycarpa</i>	Many-fruit False-loosestrife
	<i>Vallisneria americana</i>	Tapegrass

Animals	Scientific Name	Common Name
	<i>Bufo boreas</i>	Western Toad
	<i>Chlidonias niger</i>	Black Tern
	<i>Haliaeetus leucocephalus</i>	Bald Eagle
	<i>Oncorhynchus clarki lewisi</i>	Westslope Cutthroat Trout

Plant

Communities	Scientific Name	Common Name
	Valley peatland Floating Mat	valley peatland floating mat

10. Hoodoo Lakes / Lambertson Lake / Kelso Lake Wetlands

Ecological System

Northern Rocky Mountain Conifer Swamp
 Northern Rocky Mountain Lower Montane Mesic Deciduous Shrubland
 Northern Rocky Mountain Lower Montane Riparian Woodland and Shrubland
 Northern Rocky Mountain Western Hemlock-Western Red-cedar Forest
 Open Water
 Rocky Mountain Subalpine-Montane Riparian Shrubland
 Rocky Mountain Subalpine-Montane Riparian Woodland

Plants	Scientific Name	Common Name
	<i>Carex comosa</i>	Bristly Sedge
	<i>Carex lacustris</i>	Lake-bank Sedge

Plants	Scientific Name	Common Name
	<i>Carex leptalea</i>	Bristle-stalked Sedge
	<i>Cicuta bulbifera</i>	Bulb-bearing Waterhemlock
	<i>Dryopteris cristata</i>	Crested Shield-fern
	<i>Epilobium palustre</i>	Swamp Willow-weed
	<i>Hypericum majus</i>	Large Canadian St. John's-wort
	<i>Nymphaea leibergii</i>	Leiberg's Water-lily
	<i>Petasites sagittatus</i>	Arrowleaf Coltsfoot
	<i>Rhynchospora alba</i>	White Beakrush
	<i>Scheuchzeria palustris</i>	Pod Grass
	<i>Schoenoplectus subterminalis</i>	Water Clubrush

Animals	Scientific Name	Common Name
	<i>Haliaeetus leucocephalus</i>	Bald Eagle
	<i>Oncorhynchus clarki lewisi</i>	Westslope Cutthroat Trout

Plant Communities	Scientific Name	Common Name
	<i>Alnus incana/Lysichitum americanum</i>	mountain alder/skunk cabbage
	<i>Alnus incana/Spiraea douglasii</i>	mountain alder/pink spiraea
	<i>Carex vesicaria</i>	inflated sedge
	<i>Juncus effusus</i>	common rush
	<i>Scirpus microcarpus</i>	small-fruit bulrush
	Valley peatland Floating Mat	valley peatland floating mat

Appendix 2. Function and value criteria scoring for habitat and recreation attributes for top ten priority wetlands in Idaho.

Wetland	Rare species ¹	Rare communities ¹	Class I and Class II Wetlands ²	Recreation ³
Upper Snake River / Lower Henrys Fork	24	22	0	9
Big Lost River Valley	10	10	0	9
Bear Lake Wetlands	23	3	0	9
Lake Walcott / Lake Channel Canyon	20	3	0	7
American Falls Reservoir / Fort Hall Bottoms	27	2	1	7
Teton Basin	13	5	0	6
Clark Fork River Delta	15	3	0	5
Silver Creek	4	7	1	7
Lower Coeur d'Alene River Valley	7	1	0	7
Hoodoo lakes / Lambertson Lake / Kelso Lake Wetlands	14	6	2	8

¹ Rare species and rare plant communities according to Idaho Conservation Data Center.

² 0 = Neither Class I or Class II wetland; 1 = Class II wetland; 2 = Class I wetland.

³ Boating + Camping + Environmental education + Fishing + Hiking + Hunting + Swimming + Nature observation + <80 Km to urban center.

Appendix 3. Detailed function and value criteria scoring for recreation attributes for top 10 priority wetlands in Idaho. ¹

Wetland	Recreation score	Present (1) / Absent (0)								
		Boating	Camping	Environmental education	Fishing	Hiking	Hunting	Swimming	Nature observation	<80 Km to urban center
Upper Snake River / Lower Henrys Fork	9	1	1	1	1	1	1	1	1	1
Big Lost River Valley	9	1	1	1	1	1	1	1	1	1
Bear Lake Wetlands	9	1	1	1	1	1	1	1	1	1
Lake Walcott / Lake Channel Canyon	7	1	0	1	1	1	1	0	1	1
American Falls Reservoir / Fort Hall Bottoms	7	1	1	0	1	1	1	0	1	1
Teton Basin	6	1	0	0	1	1	1	0	1	1
Clark Fork River Delta	5	1	0	0	1	1	1	0	1	0
Silver Creek	7	1	1	0	1	1	1	0	1	1
Lower Coeur d'Alene River Valley	7	1	1	1	1	1	0	1	1	0
Hoodoo Lakes / Lambertson Lake / Kelso Lake Wetlands	8	1	1	1	1	1	1	1	1	0

¹ **Recreation score** = Boating + Camping + Environmental education + Fishing + Hiking + Hunting + Swimming + Nature observation + <80 Km to urban center.

Appendix 4. Detailed threat scoring for water quality impairments for top 10 priority wetlands in Idaho.¹

Wetland	TMDL total score	Present (1) / Absent (0)																	
		Bacteria	Channel Stability	Dissolved Oxygen	Flow Alteration	Habitat Alteration	Mercury	Metals - Unknown	Ammonia	Nutrients	Oil & Gas	Organics	Pesticides	pH	Salinity	Sediment	Total Dissolved Gases	Temperature	Unknown
Upper Snake River / Lower Henrys Fork	4	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0	1
Big Lost River Valley	6	0	0	1	1	0	0	0	0	1	0	0	0	0	0	1	0	1	1
Bear Lake Wetlands	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
Lake Walcott / Lake Channel Canyon	8	1	0	1	1	0	0	0	1	1	1	0	1	0	0	1	0	0	0
American Falls Reservoir / Fort Hall Bottoms	5	1	0	1	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0
Teton Basin	5	0	0	0	1	1	0	0	0	1	0	0	0	0	0	1	0	1	0
Clark Fork River Delta	6	0	0	0	1	1	0	1	0	0	0	0	0	0	0	1	1	0	1
Silver Creek	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lower Coeur d'Alene River Valley	7	0	0	1	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0
Hoodoo Lakes / Lambertson Lake / Kelso Lake Wetlands	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0

¹ **TMDL total score** = Total of bacteria + channel stability + dissolved oxygen + flow alteration + habitat alteration + mercury + metals - unknown + ammonia + nutrients + oil & gas + organics + pesticides + pH + salinity + sediment + total dissolved gases + temperature + unknown.

Appendix 5. Detailed threat scoring for landuse and landscape threats for top 10 priority wetlands in Idaho.

Wetland	Urban ¹	Agriculture ²	Roads ³	Dams and Diversions ⁴
Upper Snake River / Lower Henrys Fork	0.09	6.11	1.02	2
Big Lost River Valley	0.00	7.62	1.32	3
Bear Lake Wetlands	0.05	5.13	0.52	5
Lake Walcott / Lake Channel Canyon	0.00	1.50	1.02	2
American Falls Reservoir / Fort Hall Bottoms	0.00	3.66	0.93	2
Teton Basin	0.00	7.03	0.81	0
Clark Fork River Delta	0.00	4.73	1.25	1
Silver Creek	0.00	9.16	1.41	2
Lower Coeur d'Alene River Valley	0.00	5.28	1.26	3
Hoodoo Lakes / Lambertson Lake / Kelso Lake Wetlands	0.00	3.74	1.07	0

¹ **Urban** = percentage of wetland in urban landuse normalized by dividing by 10.

² **Agriculture** = percentage of wetland in agriculture landuse normalized by dividing by 10.

³ **Roads** = density of roads associated with wetland (length / wetland area and normalized by multiplying by 10).

⁴ **Dams and Diversions** = frequency and impact of dams and diversions in the vicinity of wetland.

Appendix 6. Detailed accounts of top ten priority wetlands in Idaho.

1. Upper Snake River / Lower Henrys Fork

This wetland is primarily comprised of the broad, dynamic South Fork Snake River floodplain below Palisades Dam. The wetland contains the most extensive and intact narrowleaf cottonwood gallery forest in the Intermountain west. From Swan Valley, at the base of the Palisades Mountains, downstream through a canyon reach, and fanning out into the Snake River Plains north of Idaho Falls, the area includes a vast number of other ecological habitats making it one of the most unique and biologically diverse ecosystems in Idaho. The wetland includes tributary stream riparian areas, springs (including travertine and hot springs), scrub-shrub wetlands on the lower Henrys Fork, and marsh and alkaline wetlands (at Market Lake) on the Plains. In addition to having a world famous native Yellowstone cutthroat trout fishery and high recreation and scenic values, the wetland is valuable habitat for waterfowl and songbirds. Twenty-four different rare species can be found here, as well as 22 rare plant communities and ten ecological systems. The landscape includes agriculture, as well as abundant roads and housing developments and its hydrology is altered by dams and diversions.

2. Big Lost River Valley

This wetland begins where the Big Lost River leaves the Boulder and Pioneer Mountains and enters the broad, cold desert alluvial basin at the base of Mount Borah and the scenic Lost River Range. Many recreation opportunities exist. The wetland includes spring-fed cattail marshes and sedge, Baltic rush, and alkaline wet meadows at Thousand Springs-Chilly Slough wetlands. This large wetland supports 11 rare species, ten rare plant communities and six ecological systems. In addition to the highly productive rainbow trout fishery on the Big Lost River, there is also a valuable fishery on Thousand Springs Creek. Above Mackay Reservoir, the Big Lost River floodplain is dynamic and broad due to movement of sediments, channel braiding, and deposition of coarse woody debris. Intact stands of cottonwood (both narrowleaf and black), willows, and alder, as well as meadows occur. The lower reaches of the Big Lost River, downstream of Darlington Sinks, is a wide valley bottom that historically supported a floodplain at least 0.5 miles wide. The river corridor includes sloughs with emergent and aquatic vegetation, along with dense stands of willows and cottonwoods. The river progressively becomes smaller and intermittent, mainly due to agricultural water withdrawals, below the site. The wetland also includes many roads and several water quality impairments.

3. Bear Lake Wetlands

Located at the outlet of Bear Lake, this wetland supports extensive bulrush and cattail marshes surrounded by meadows of sedge, Baltic rush, tufted hairgrass, and alkaline communities. Twenty-three rare species can be found there as well as 6 ecological systems. Much of the wetland occurs within the Bear Lake National Wildlife Refuge. The refuge is important for white-faced ibis and redhead duck nesting. Bear Lake has many roads within the site and is managed as storage for agricultural water uses. As a result, water levels fluctuate, influencing wetland ecology, waterfowl breeding, and shorebird use. Downstream of Bear Lake, the wetland includes a narrowleaf

cottonwood bottomland forest within the wide floodplain of the Bear River. The Bear Lake site lies in a high, cold basin surrounded by mountains and is valued for its exceptional recreation and scenic values.

4. Lake Walcott / Lake Channel Canyon

This wetland consists of Lake Walcott reservoir and the Snake River canyon above the reservoir; a site rich with both freshwater and alkaline wetlands. Abundant aquatic vegetation is found in small bays and inlets of the lake. Several islands and a narrow riparian zone consisting of trees and shrubs along shorelines provide habitat for nesting colonial birds. Much of this area lies within the Minidoka National Wildlife Refuge and is very popular for various recreational activities. Twenty rare species can be found here as well as three rare plant communities and six ecological systems. Approximately 100,000 ducks and geese inhabit the area during spring and fall migrations. Upstream of the reservoir, many historic wetlands in adjacent basalt canyons have been converted to livestock pastures and cultivated croplands. However, unusual and isolated alkaline depressions, as well as sedge and Baltic rush meadow, bulrush marsh, and willow scrub-shrub wetlands remain. The alkaline wetlands support several rare plant communities. The primary upland habitat is sagebrush steppe and exotic grassland, as well as sand dunes and basalt outcroppings.

5. American Falls Reservoir / Fort Hall Bottoms

The wetland encompasses the reservoir and surrounding marshes and alkaline wetlands at Sterling. It also includes extensive willow and black cottonwood riparian forest and alkaline meadows at Fort Hall Bottoms upstream on the Snake River. American Falls Reservoir provides shallow feeding areas for waterfowl and mudflats for migrating shorebirds (it is the most important shorebird habitat in Idaho). The wetland is recognized as a Globally Important Bird Area, with over 200 bird species recorded, including species of conservation concern. The area has extensive low elevation emergent marshes as well as isolated wetlands. The alkaline wetlands support the only known occurrence in Idaho of the iodine bush community, at the very northern edge of its range. The wetland supports 27 rare species and six ecological systems. It is also valued by its many recreational opportunities and proximity to urban centers. The wetland is set in an agriculture-dominated landscape of gently rolling basaltic terrain with abundant roads, and the hydrology is altered through dams and diversions.

6. Teton Basin

This extensive complex of wetlands occurs in the cold, high mountain basin located between the Big Hole Range and the scenic Teton Mountains. Numerous mountain streams and spring-fed creeks, which support peatlands, emanate from the valley floor and coalesce to form the headwaters of the Teton River. Riparian and wetland communities along the Teton River and tributaries typically contain a mosaic of sedge, rush, and mesic grass meadows, shrubby cinquefoil and willow scrub-shrub wetlands, and black cottonwood and aspen forested wetlands. There are many recreational opportunities such as fishing and hunting. The basin supports 13 rare species, five rare plant communities, and six ecological systems. The basin is set in a landscape mosaic

of sagebrush-steppe shrublands, agricultural lands, aspen, and expanding low density housing development.

7. Clark Fork River Delta

The Clark Fork River forms a delta where it enters Lake Pend Oreille in a broad valley at the south end of the Cabinet Mountains and north end of the Coeur d'Alene Mountains. The islands support mature western redcedar and grand fir forest, black cottonwood bottomland forest, willow and red-osier dogwood scrub-shrub wetlands, and mesic grasslands. Broad meadows occupy the former floodplain of the Clark Fork River at the south end of the wetland. Wetter portions of the meadows are dominated by emergent marsh, while reed canarygrass (a non-native) dominates drier meadows (especially where water levels have been manipulated). The wetlands support 15 rare species, three rare plant communities, and six ecological systems. Large numbers of migrating and wintering waterfowl (counts as high as 60,000 ducks (including 20,000 redheads), 15,000 Canada Geese, and 2,000 tundra swans, as well as numerous grebe species and loons) utilize this area. Lake Pend Oreille is an important wintering area for bald eagles migrating south from Canada, with over 300 present in the delta by early December. Lake Pend Oreille is also an important nesting area for ospreys, with the greatest densities occurring in the Clark Fork River delta. Recreation opportunities exist within the wetland. Agriculture as well as roads and water quality impairments are prevalent.

8. Silver Creek

Silver Creek lies in a broad agricultural valley at the base of the Picabo Hills. The wetland encompasses the headwaters of Silver Creek, a renowned fly fishing stream and premier example of a high-desert cold springs aquatic community. Emergent wetlands containing bulrush, cattail, and sedges alternate along stream channels with willows and water birch. Shrubby cinquefoil, sedge, and alkaline grassland communities are present in spring-fed meadows that have not been converted to agricultural use. Aspen stands are present at what may formerly have been spring heads. Seven rare plant communities and six ecological systems exist at Silver Creek in the sagebrush-steppe dominated landscape. Agricultural use and housing development dating back several decades has altered the native vegetation and hydrology.

9. Lower Coeur d'Alene River Valley

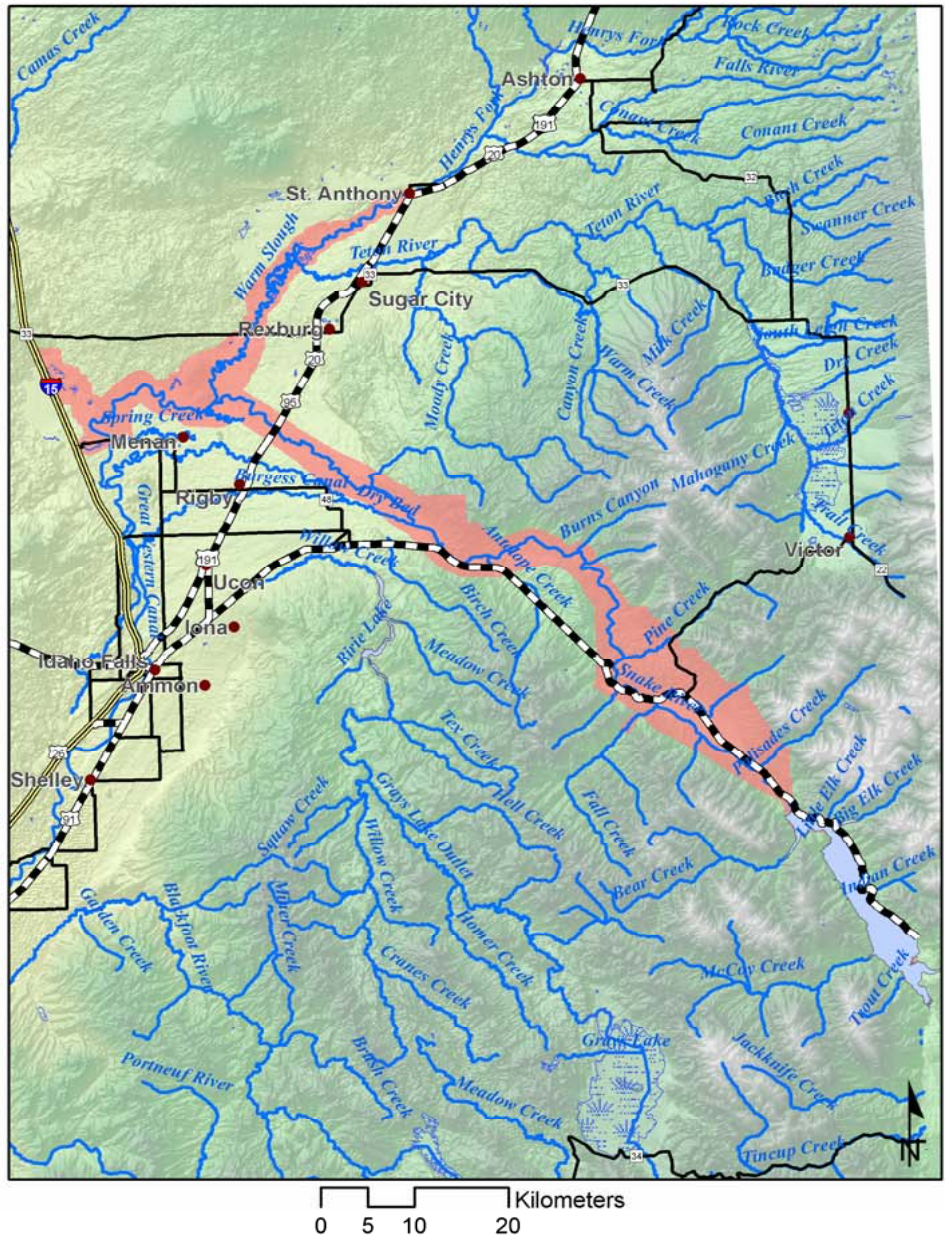
The reach of river from Cataldo downstream to Lake Coeur d'Alene supports significant wetlands important for recreation, as well as bird and wildlife habitat. Extensive and diverse emergent marsh, peatlands, black cottonwood gallery forest, moist conifer forest, and willow and birch riparian habitats occur in and adjacent to the floodplain. These habitats support seven rare species and six ecological systems. Most marshes and peatlands are associated with several lakes occurring in the valley which are usually hydrologically connected to the floodplain. One example is Thompson Lake which has extensive floating and fixed mats with Sphagnum moss, sedge, and hardhack dominated fens around its margin. On the river, hydrologic processes are natural, but flood and erosion control developments have altered connectivity to the floodplain in

some areas. In addition, the hydrology of naturally occurring marshes has been altered by historic drainage attempts and current water level management of Lake Coeur D'Alene caused by operation of Post Falls Dam. Historic mining in the upper watershed has contributed contaminated sediments to the system that are deposited in this stretch of the river. Shoreline erosion and subsequent movement of these sediments is of high concern for water quality. Maintenance of wetland and riparian areas in this site is critical for shoreline stabilization and water quality improvement.

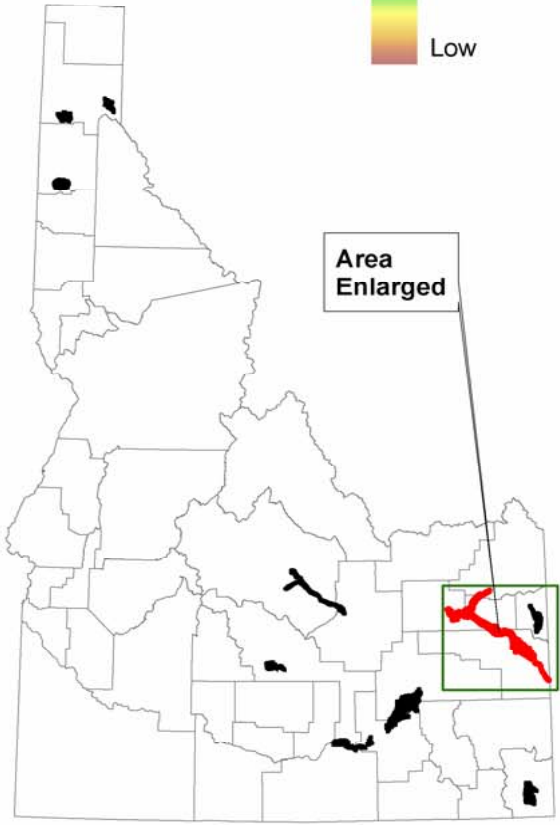
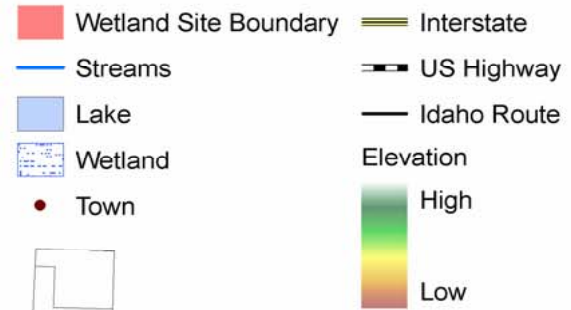
10. Hoodoo Lakes / Lambertson Lake / Kelso Lake Wetlands

This wetland is located in the zone of glacial moraine deposits between the trench of Lake Pend Oreille and the outwash plains of the Rathdrum Prairie. This extensive chain of wetlands is situated in a landscape managed primarily for timber and hay production, along with extensive agricultural lands and roads. Wetlands are associated with glacial kettles, including at least six lakes, broad sedge and rush meadows (some of which are hayed), and streamside riparian areas. Although the hydrology of the wetland is altered by drainage, forested swamps and extensive peatlands are still present. These wetlands support 14 rare species, including one of only a few bristly sedge occurrences in Idaho (at Hoodoo Lake), six rare communities and seven ecological systems. Within the site, Lambertson Lake, a kettle lake, has the most extensive peatland, as well as well-developed aquatic communities. Beaver, Round, Granite, and Kelso Lakes are also included in the site because of their hydrologic connectivity and the presence of fen communities surrounding the lakes. The area has many recreational opportunities.

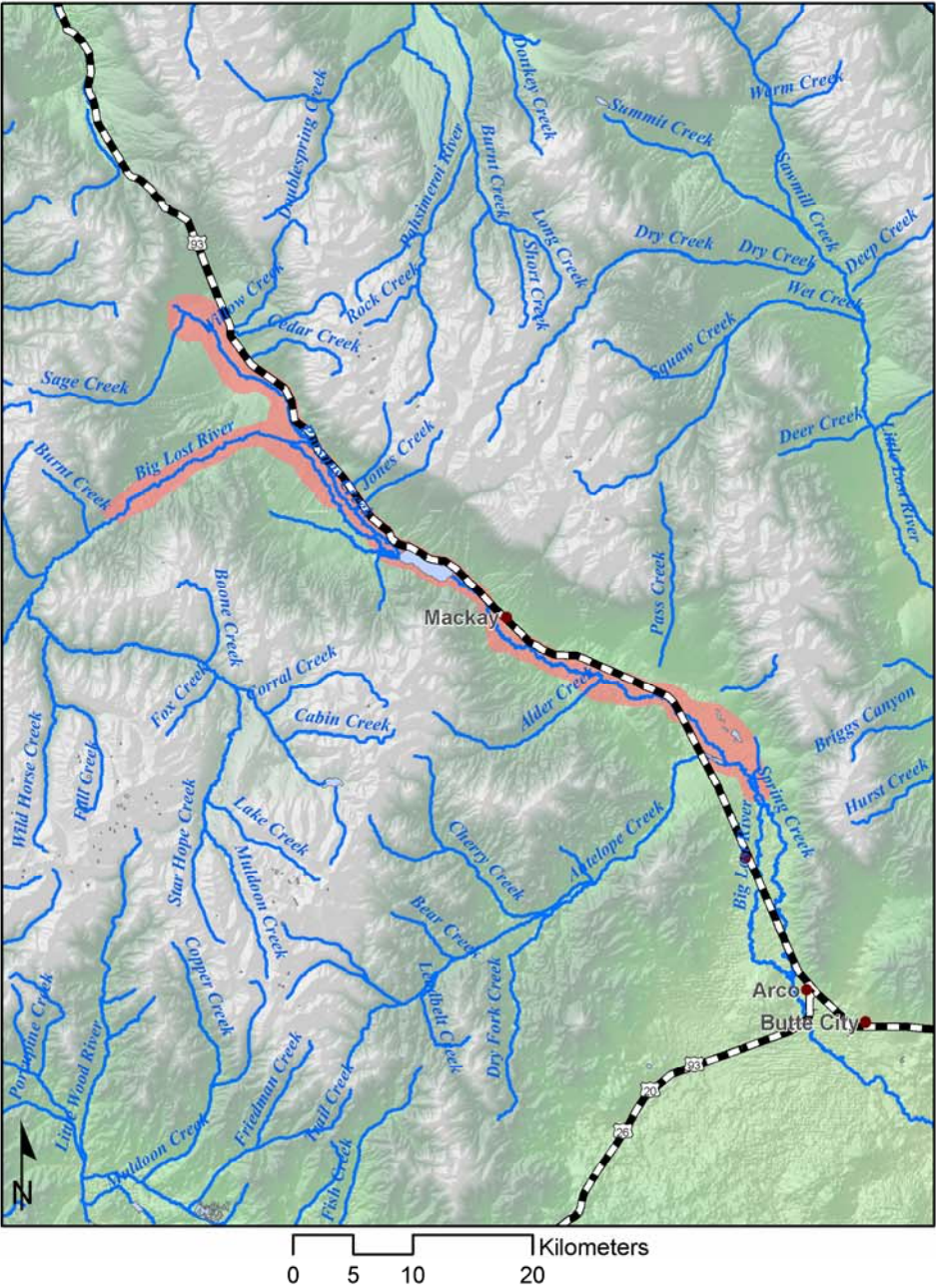
Appendix 7. Maps of top ten priority wetlands in Idaho.



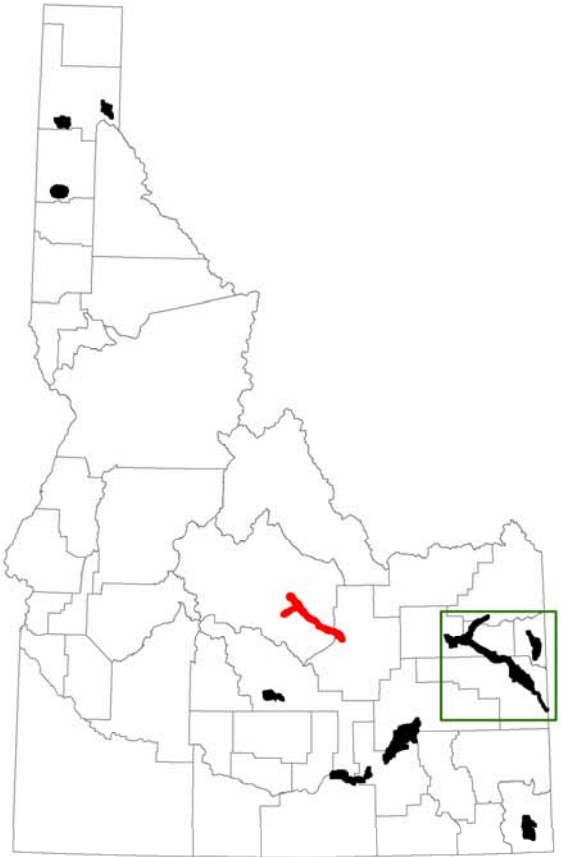
1. UPPER SNAKE RIVER / LOWER HENRYS FORK



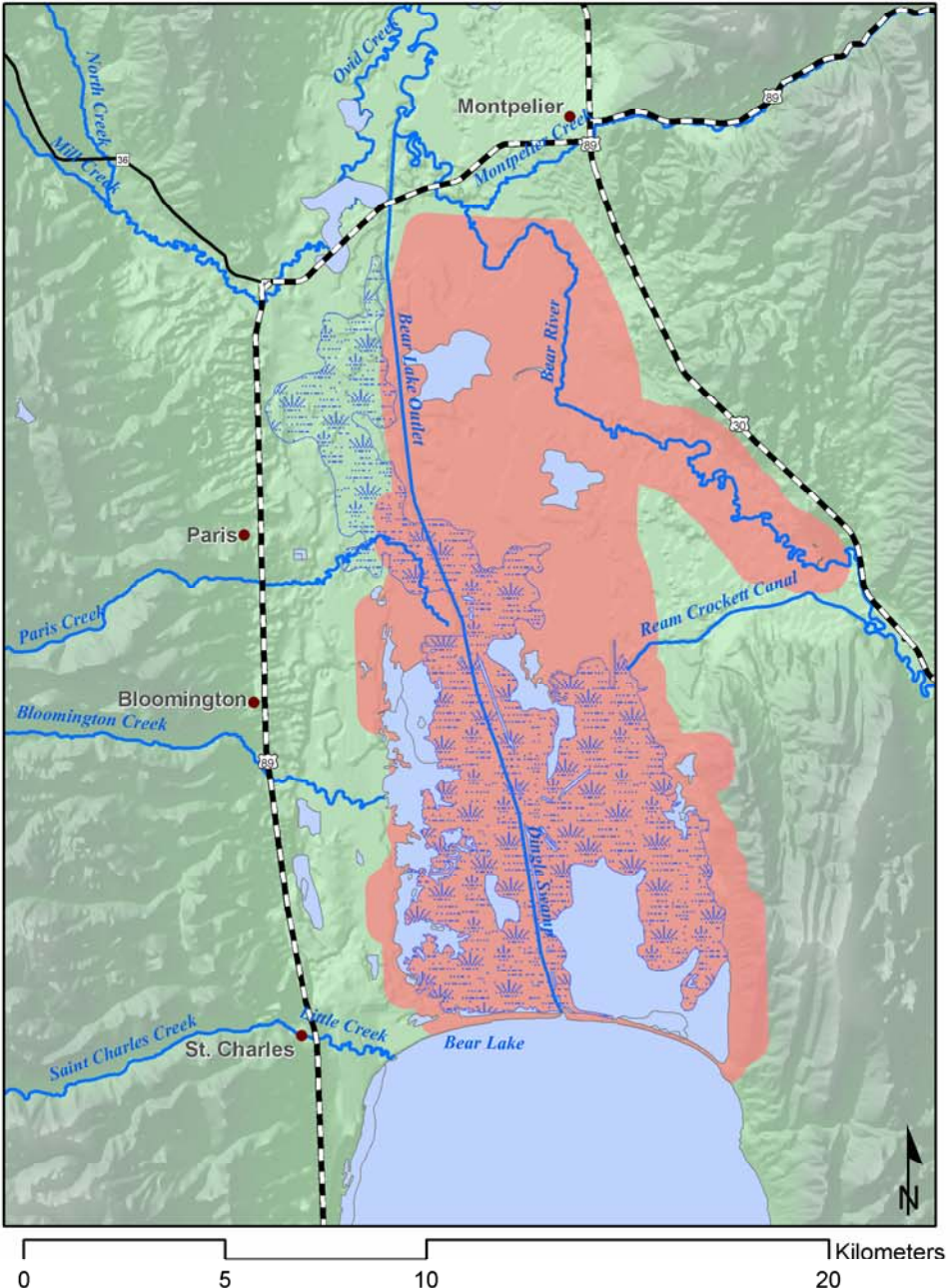
2. BIG LOST RIVER VALLEY



- Wetland Site Boundary
- Lake
- Streams
- Town
- Interstate
- US Highway
- Idaho Route
- Elevation
- High

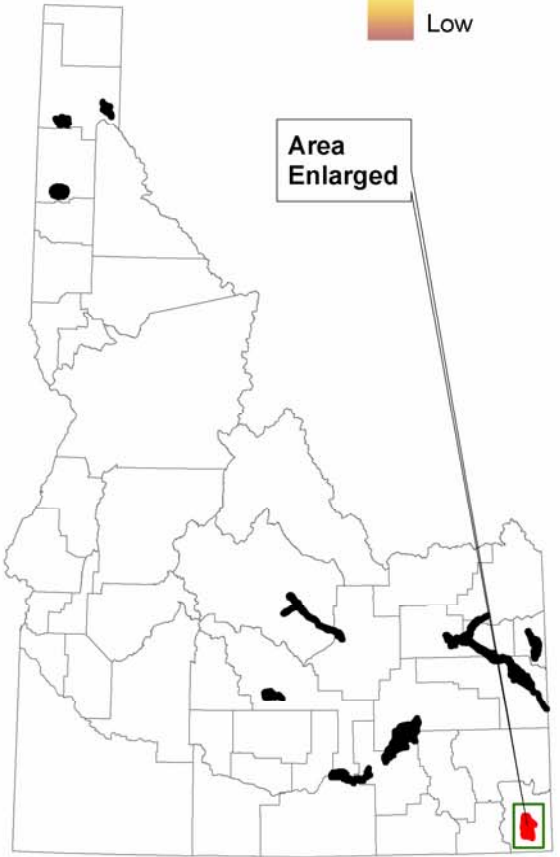


3. BEAR LAKE WETLANDS

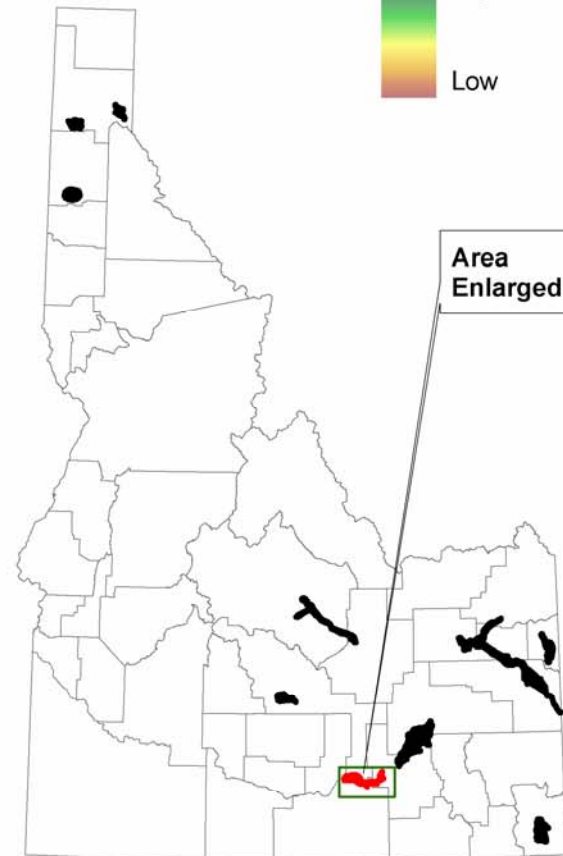
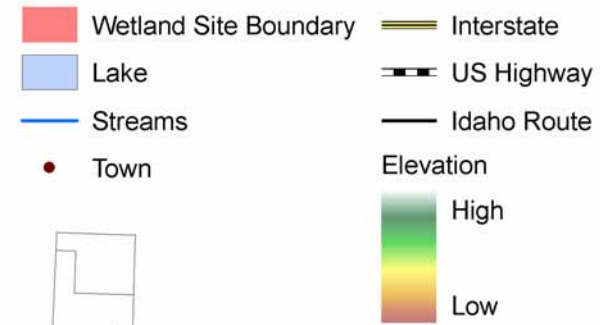
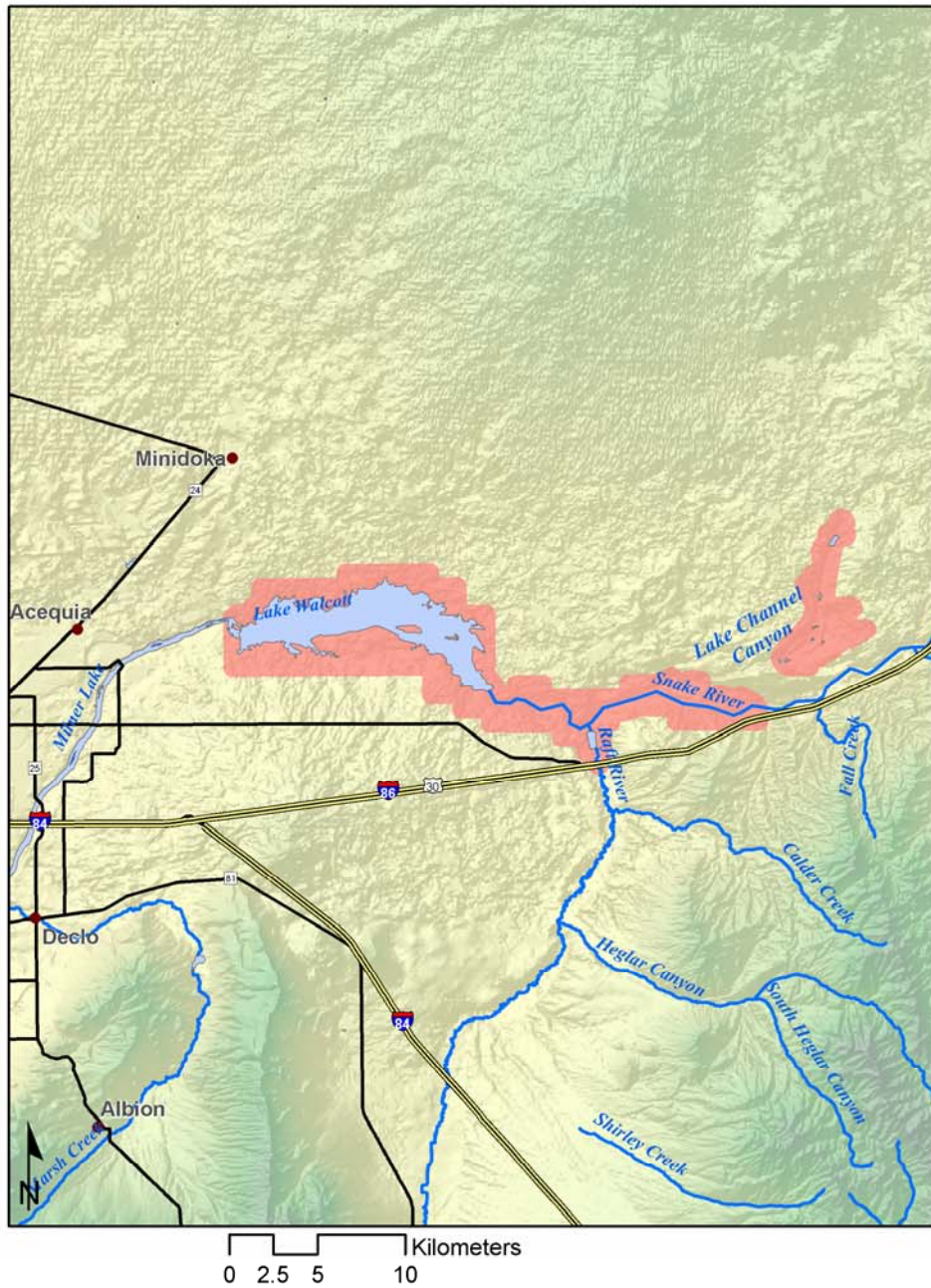


- Wetland Site Boundary
 - Lake
 - Wetland
 - Streams
 - Town
 - Interstate
 - US Highway
 - Idaho Route
- Elevation
- High

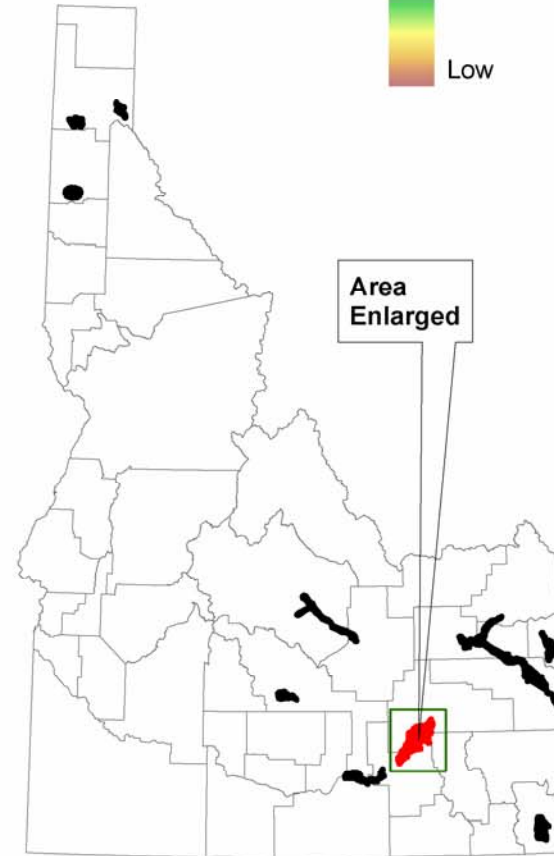
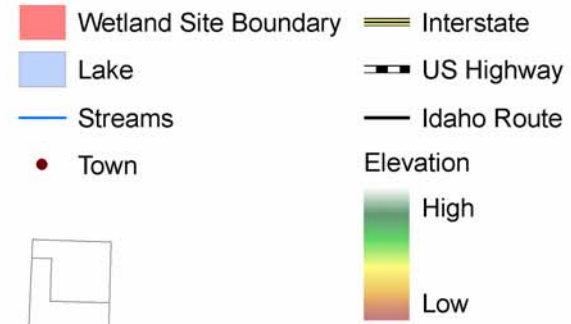
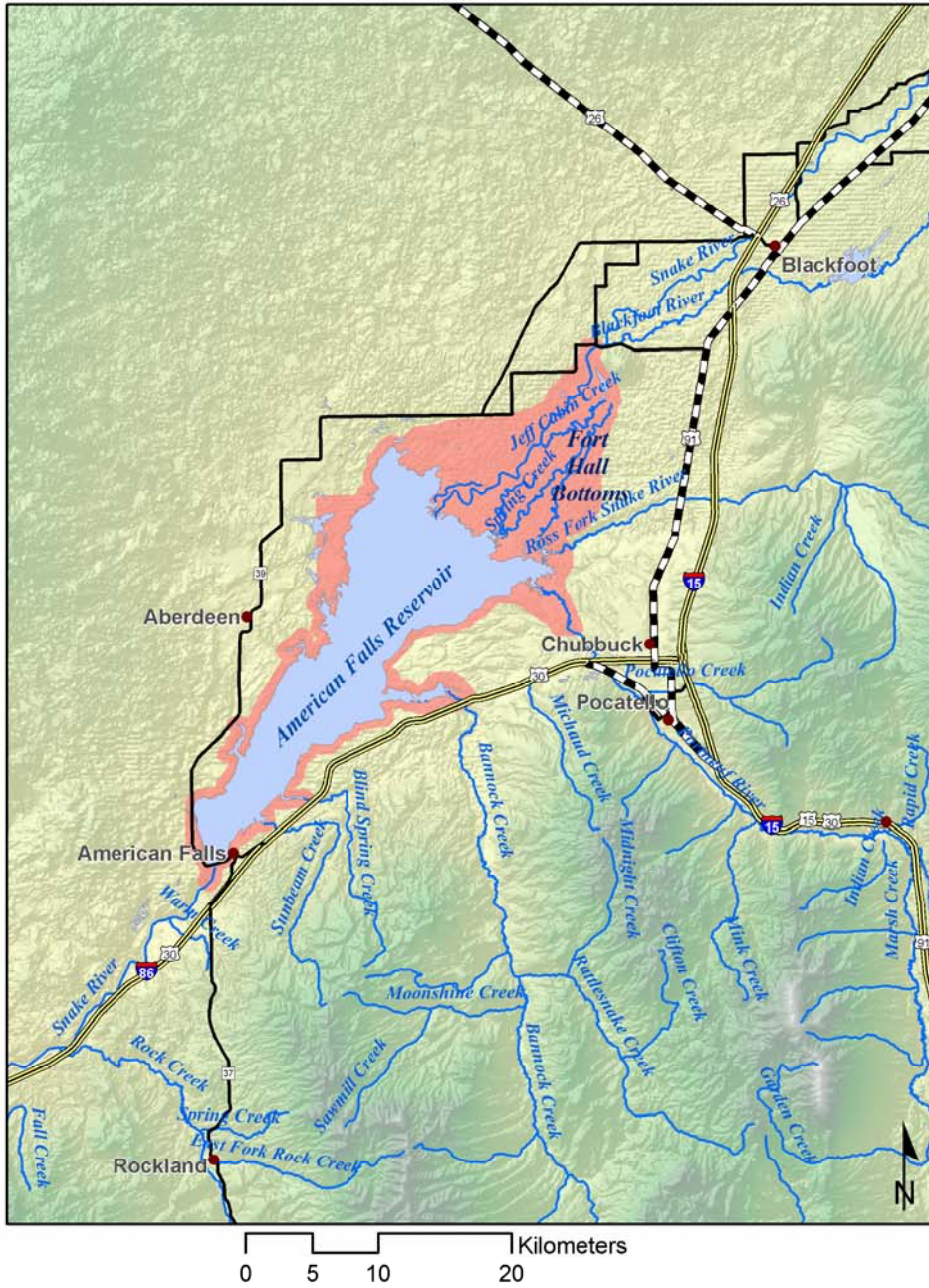
Low



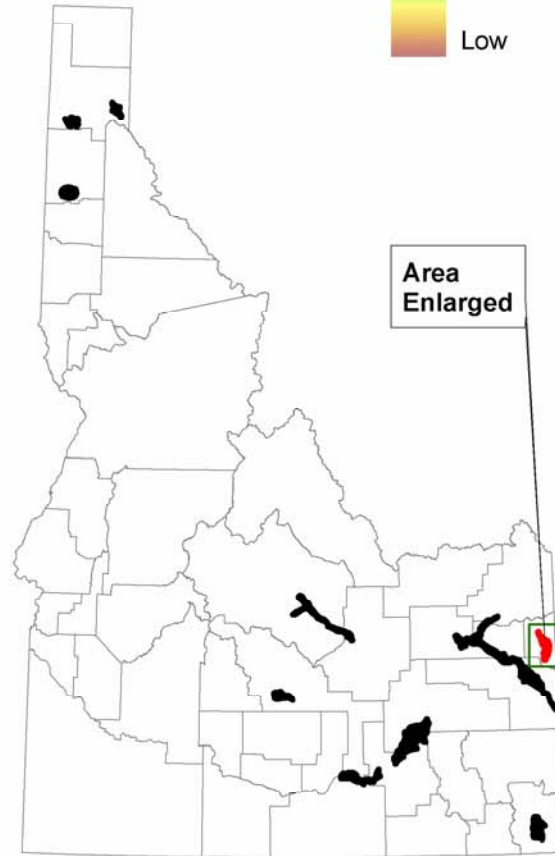
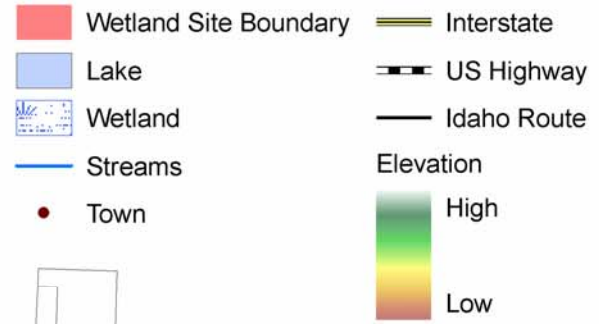
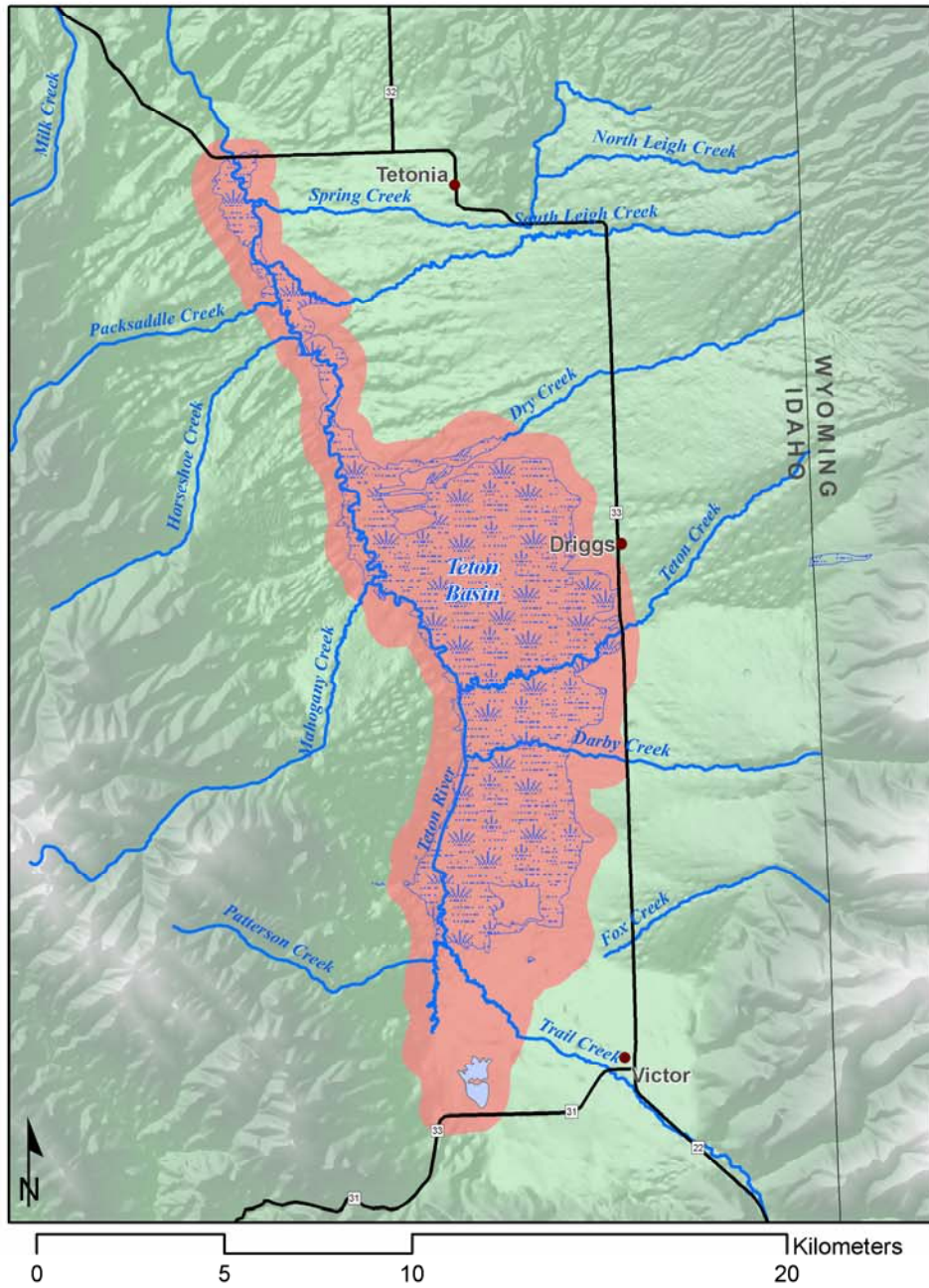
4. LAKE WALCOTT / LAKE CHANNEL CANYON



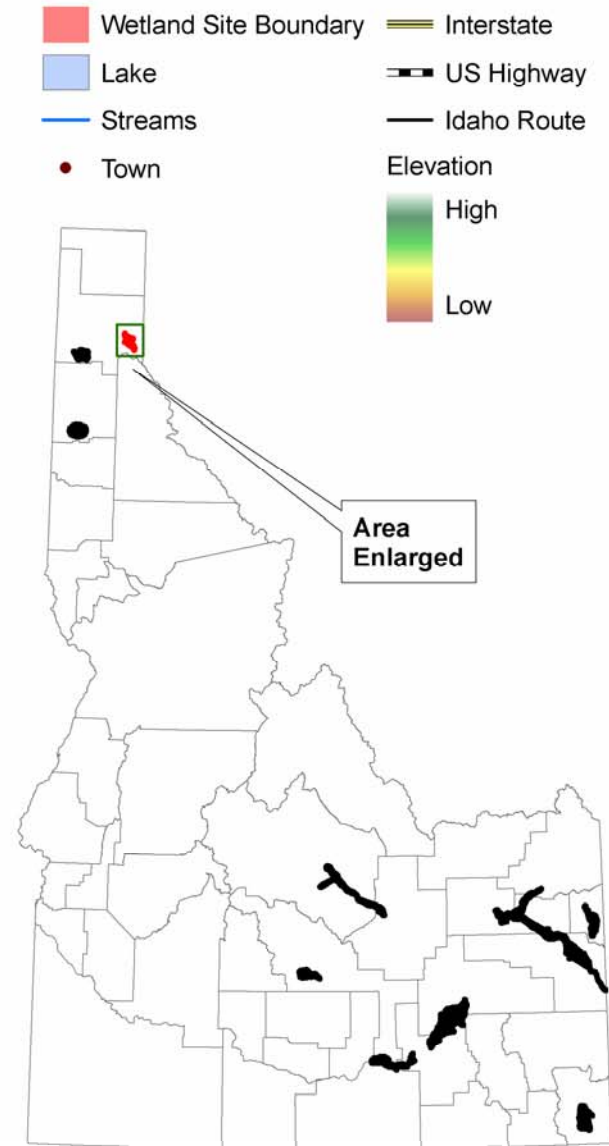
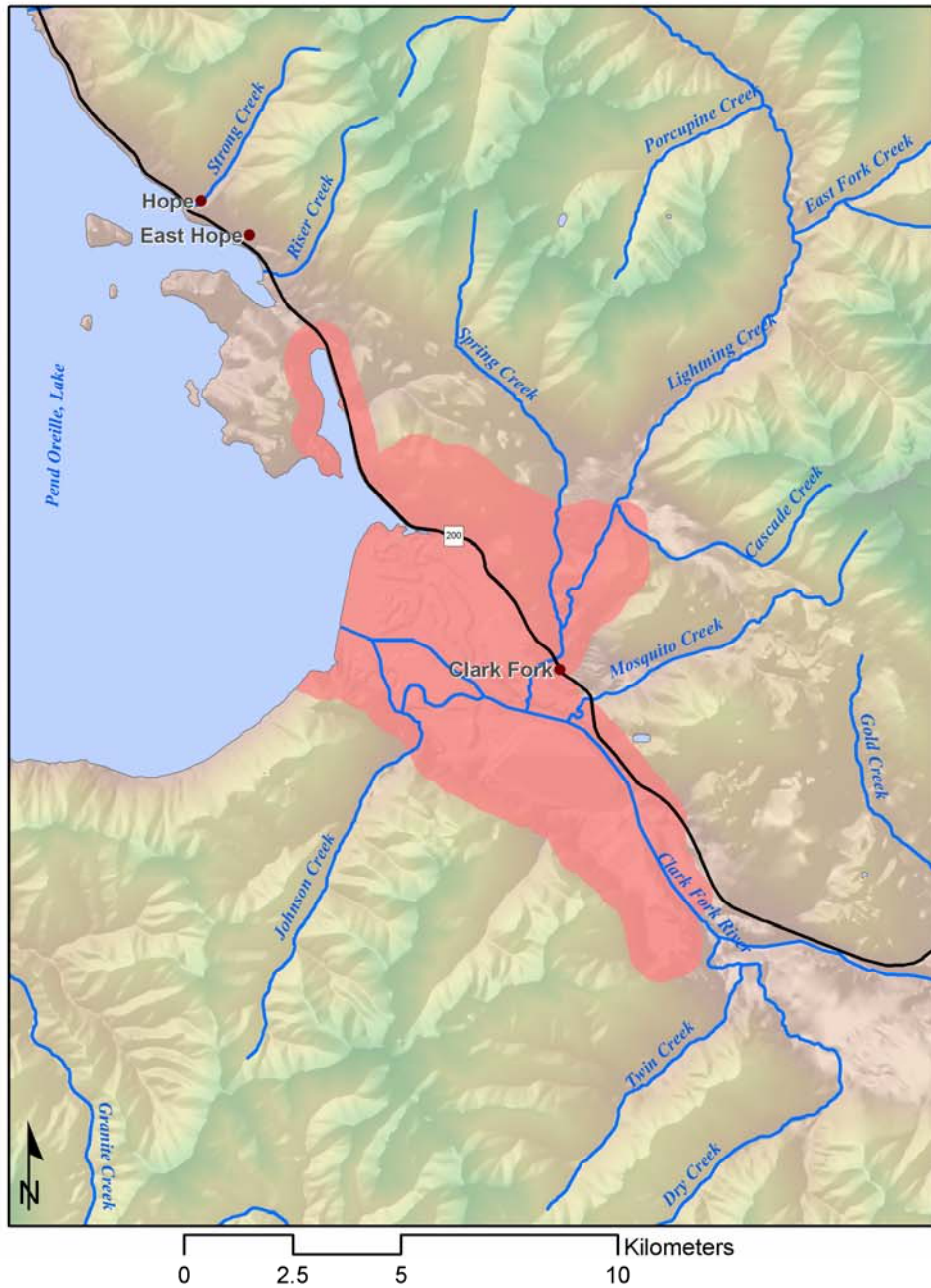
5. AMERICAN FALLS RESERVOIR / FORT HALL BOTTOMS



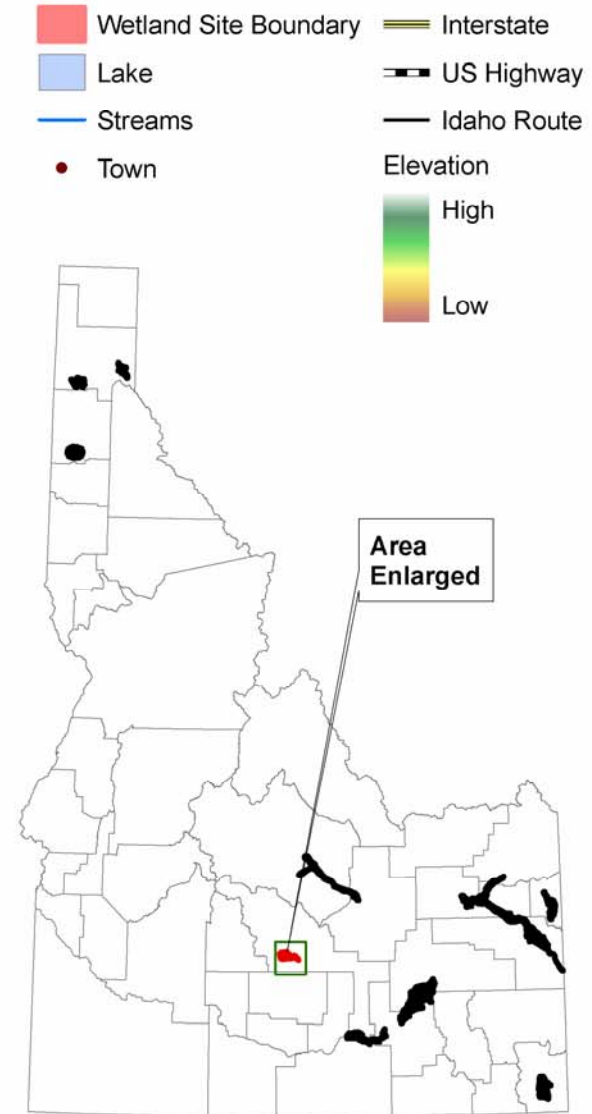
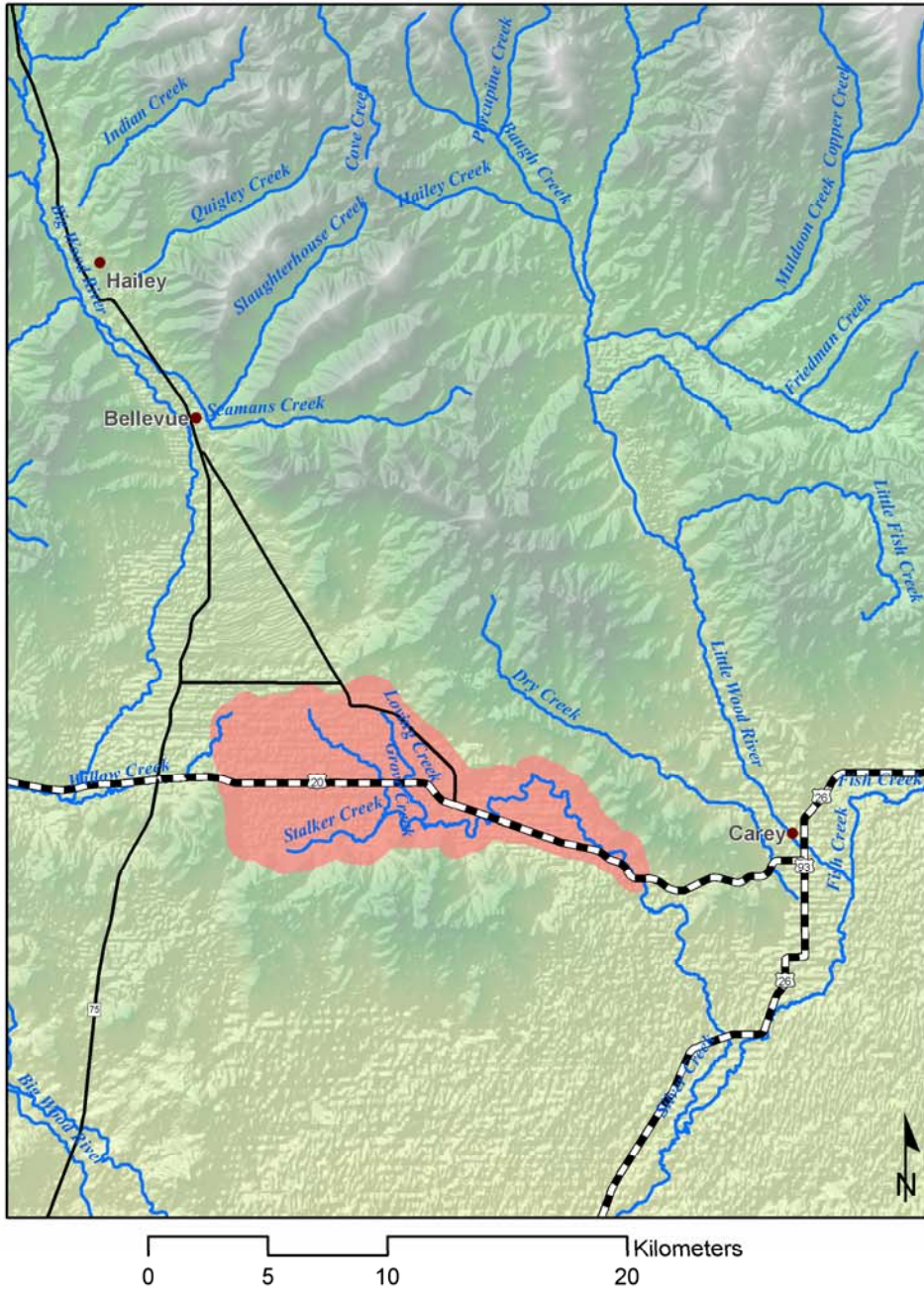
6. TETON BASIN



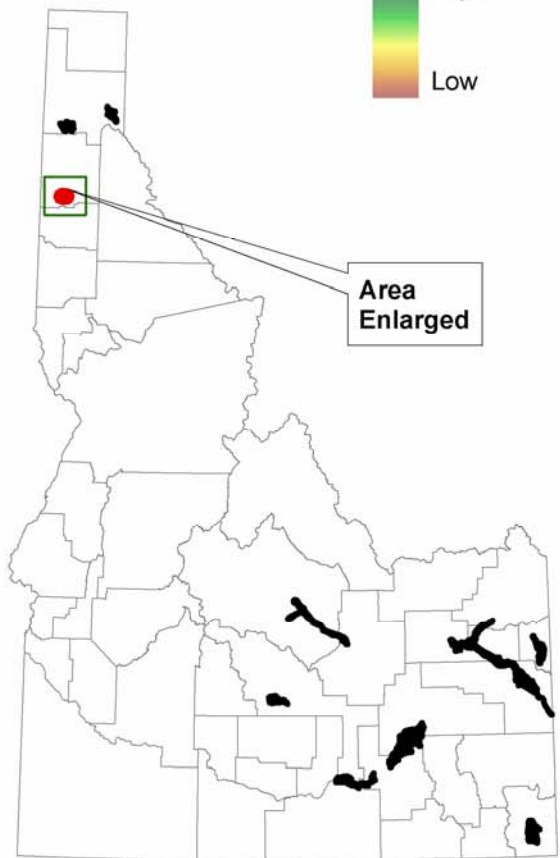
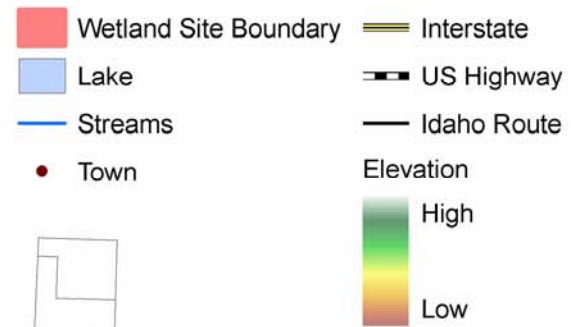
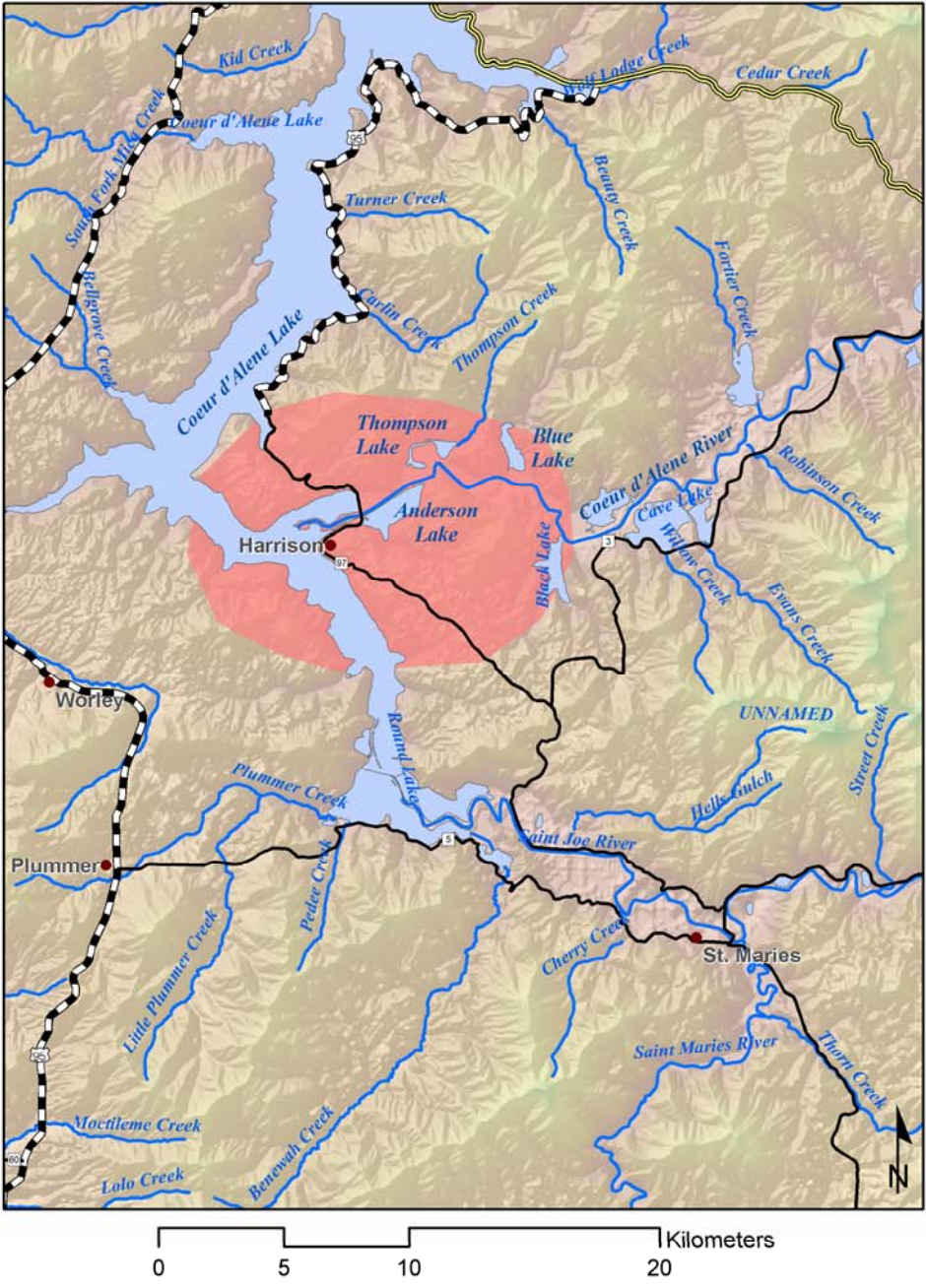
7. CLARK FORK RIVER DELTA



8. SILVER CREEK



9. LOWER COEUR D'ALENE RIVER VALLEY



10. HOODOO LAKES / LAMBERTSON LAKE / KELSO LAKE WETLANDS

