

Subject: **Powder/Tongue River Basin Plan  
Recreational Uses  
Task 2D**

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**GENERAL**

Attempts to put numerical values on water-based recreation in Wyoming have been hit-and-miss. For instance, the Wyoming Business Council has tracked information on recreation for some time, but doesn't distinguish between water-based recreation and other types. The U.S. Fish and Wildlife Service tracks water-based recreation in fishing and waterfowl hunting, but does so on a gross, national basis. And the U.S. Forest Service and Bureau of Land Management have little budget, time, or impetus to track such numbers.

The numbers that are available are presented here, and with them (and perhaps more importantly) are the qualitative assessments of water-based recreation in the Powder/Tongue River Basin. More in-depth looks at fishing, waterfowl, boating, instream flows, and swimming and a detailed picture of the most significant reservoir that supports recreation in the basin follow. In the last few sections, some of the information is provided to illustrate what reservoir levels and stream flows maximize recreational use of the water in the basin.

**Wyoming Business Council (WBC)**

The WBC has tracked information on recreation for some time, but has only been using the current vendor to create the Economic Impacts of Tourism since 1995. The council distributes information based only on the most recent years.

The council's vendor conducts surveys in Sheridan and Casper for the regions 3 and 4 (Goshen, Platte, Niobrara, Converse, Natrona, and Fremont counties comprise region 3; Park, Hot Springs, Washakie, Bighorn, Sheridan, Johnson, Campbell, Crook, and Weston counties comprise region 4). The organization does not attempt to break the information down per county, per basin, or per activity. The data included in the attached table were generated from statewide data on the assumption that the percentage of people engaging in an activity in Converse County approximates that of people in Sheridan County. On a positive note, the surveys for these two regions are collected in Casper and Sheridan, maximizing the possibility that survey respondents have visited or will visit those places.

The statewide breakout of activities enjoyed by visitors to Wyoming, provided below, also comes from the Wyoming Business Council:

<b>Activities of all Wyoming Visitors</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>
Visit Nat'l Forest	28%	30%	24%	27%	19%
Hike	25%	20%	19%	24%	14%
Camp	18%	19%	12%	12%	10%
Fish	16%	13%	10%	9%	10%
Hunting	4%	3%	2%	1%	1%

## U.S. Fish and Wildlife Service (USFWS)

To clarify the picture somewhat, the USFWS has attempted to quantify the economic impact of wildlife-related tourism. The federal agency has compiled data on income generated by wildlife-watchers in each state based on the *1996 National Survey of Fishing, Hunting and Wildlife-Associated Recreation*. It does not break out the numbers based on riparian-area wildlife or other wildlife closely tied with surface waters, but because much of the wildlife in Wyoming aggregates near streams or reservoirs, this information cannot be wholly dismissed.

According to the report, Wyoming enjoyed \$217.5 million in expenditures or sales related to wildlife watching, resulting in \$316.7 million in total industrial output. This activity created or maintained 6,193 jobs, which produced \$82.8 million in income, \$8.7 million in state sales tax revenue, and \$13.1 million in federal income taxes. The generated employment income as a percentage of total state wage and salary disbursements were 1.53 percent, second only to the State of Alaska's 3.02 percent (*1996 National and State Economic Impacts of Wildlife Watching*, U.S. Fish & Wildlife Service, 96-1, pp. 8-9).

## FISHING

Fishing represents the biggest recreation-related water use in the Powder/Tongue River Basin. And as with boating, fishing is a non-consumptive use dependent in most cases on water devoted to other uses like irrigation. The exception can be found in the instream flow segments filed in the basin by the Wyoming Game and Fish Department (see Instream Flow section).

The economic impact of sport and commercial fishing, broken out here on a statewide basis, is obvious:

### Five-year trends in Wyoming's sport fisheries program

Fiscal Year	Recreation Days	Fish/Day	Licenses Sold	License Revenue (\$)	Program Costs (\$)	Angler Expend. (\$)
1995	4,086,400	2.5	331,229	2,951,133	10,530,957	226,672,608
1996	4,035,300	2.5	428,186	3,431,432	10,546,977	228,317,274
1997	4,039,000	2.5	453,101	4,040,247	11,310,029	233,696,540
1998	4,553,489	2.5	475,096	4,038,267	11,420,299	267,699,618
1999	4,564,031	2.5	497,064	4,242,445	13,494,171	632,829,438

Recreation days revised to include unlicensed anglers, pioneers, and 6-13 year-olds.  
 License revenue does not include sale of nonresident special and nonresident youth elk and fishing license income.  
 Angler expenditure information is based on 1998 survey, "Wyoming 1998 Fishing Trip Expenditures" (Responsive Management National Office). The new information accounted for the nearly \$365,000,000 increase from the preceding year (1998).  
 All other agency revenue includes allocated application fees, conservation stamp revenue, federal/other grants and interest earned on Game & Fish cash balances.  
 Total Program Revenue based on fiscal year, all other figures on calendar year basis.

(WGFD Annual Report 2000, p. 80)

Though the discrepancy between the license revenue and the program costs indicates that the program is subsidized, the return in annual angler expenditures in the state more than outweighs this apparent subsidization and underscores the importance of angler recreation to state and private coffers.

These numbers aren't broken down to encompass the effects of angling in the Powder/Tongue River Basin, and the WGFD doesn't provide an accurate means of doing so. The information is provided as context only.

The relative attractiveness of the waters in the Powder/Tongue River Basin can also be used as an indicator of recreational water use. The State of Wyoming classifies trout streams under five designations (Wyoming Game and Fish Department, rev. 1991):

- Class 1 (blue) – Premium trout waters – fisheries of national importance
- Class 2 (red) – Very good trout waters – fisheries of statewide importance
- Class 3 (yellow) – Important trout waters – fisheries of regional importance
- Class 4 (brown) – Low production trout waters – fisheries frequently of local importance, but generally incapable of sustaining substantial fishing pressure
- Class 5 (no color) – Very low production waters – often incapable of sustaining a trout fishery

(Unfortunately, this map is no longer supported by the Wyoming Game and Fish Department because it was being inappropriately used.)

The Powder/Tongue River Basin contains two Class 1 streams and a dozen Class 2 streams, highlighting the high quality of water and habitat found in the basin in general.

The Wyoming Game and Fish Department (WGFD) maintains the most complete database on fisheries and anglers available. In response to a request for fishing activity in the basin, the WGFD provided its most recent database. Queries to that database yielded the following information about the fishing supported in the basin (Bob McDowell, WGFD, personal communication and *Sheridan Lake Data* database, 16 April 2001):

Recent Fishing Activity, Powder/Tongue River Basin  
Angler Days by Standing Water Type

<b>Type</b>	<b>Angler-Days</b>
Unsuitable	429
Natural Alpine Lake	15,566
Alpine Reservoir	38,189
Natural Lowland Lake	None
Lowland Reservoir	52,867
Trout Farm Pond	1,827
Mixed Farm Pond	300
Non-Trout Farm Pond	208
<b>Total</b>	<b>109,386</b>

The definition of alpine versus lowland in this list divides at 7,500 feet in elevation. Not surprisingly, the accessibility and species richness available in lowland reservoirs like Lake DeSmet drew the most fishing pressure.

The WGFD breaks out stream angling in a separate analysis for the basin (Bob McDowell, WGFD, personal communication and *Sheridan Stream Data* database, 18 April 2001). The 204 streams tracked for angling support 121,247 angler days.

The WGFD has also published *A Strategic Plan for the Comprehensive Management of Wildlife in Wyoming, 1984-1989*. Though the data provided in this publication lend themselves well to the analyses demanded in this project, WGFD personnel asked that the individual Basin Management Plans for each of the water bodies in the basin be used here for their more current information (Chris Burkett, WGFD, personal communication, 19 April 2001). The following table of usage data is taken from the management plans obtained from Bob McDowell. [Note: Data are taken from the database over a period of time; the basin plans are undated and can be expected to contain older information.]

## Angling pressure per drainage, from WG&F management plans

### Goose Creek Drainage:

Streams	Total Angling Pressure (angler days/yr)	15,266
Lakes/Reservoirs		10,337

### Tongue River Drainage (excluding Goose Creek):

Streams	Total Angling Pressure (angler days/yr)	57,111
Lakes/Reservoirs		10,204

Note: 88.9 percent of the surface water acreage is on private land;  
36.6 percent of the stream miles are on private land.

### Little Bighorn River Drainage:

Streams	Total Angling Pressure (angler days/yr)	7,039
Lakes/Reservoirs		238

### Little Powder River Drainage:

Streams	Total Angling Pressure (angler days/yr)	2,573
Lakes/Reservoirs		518

### Clear Creek Drainage:

Streams	Total Angling Pressure (angler days/yr)	31,382
Lakes/Reservoirs		57,280*
Lake DeSmet		43,389**

Note: \*Excludes Lake DeSmet  
\*\*Dated 1996

### Powder River Drainage:

Streams	Total Angling Pressure (angler days/yr)	891
Lakes/Reservoirs		3,769

### Crazy Woman Creek Drainage:

Streams	Total Angling Pressure (angler days/yr)	11,046
Lakes/Reservoirs		4,262

### Middle Fork Powder River Drainage:

Streams	Total Angling Pressure (angler days/yr)	14,914
Lakes/Reservoirs		1,668

Though these numbers give some idea of the impact of the surface water resources on fishing in the Powder/Tongue River Basin, they do not give any impression of the stream flows and lake levels that would maximize recreational opportunities. Various angling experts and biologists asked for this type of information reflected that the information doesn't exist on a quantitative level, for the most part.

Two attempts to provide a quantitative analysis of what small reservoirs maximize chances of good fisheries (and thus, good recreational fishing) were authored by University of Wyoming professor Wayne Hubert and Paula Guenther. The first study indicates that lack of inflowing water, high elevation, extensive ice and snow, small surface area, and abundant aquatic macrophytes contribute to low dissolved oxygen concentrations during the winter that would in turn trigger fish mortality (Guenther and Hubert, *Great Basin Naturalist*, p. 284). The follow-up study created a winterkill risk rating system for fisheries managers to use as a decision-making tool in quandaries over stocking (Guenther and Hubert, *Environmental Management*, p. 647). Taken together, these analytical tools and observations are limited to small, cold-water reservoirs (<100 ha and <20°C), but provide the tools to assess what small reservoirs could support fisheries, and their likelihood of maximizing recreational use. But no application of these tools could be found.

In part, the reason for this lack lies in the extreme variability in the geographic and geological areas of the Powder/Tongue River Basin. Respondents to these questions noted that it would be necessary to

determine which stream, which segment on that stream should be analyzed before an optimum level for recreational use could be determined. They had a similar response to standing water optimization.

## **WATERFOWL HUNTING**

The harvest of migratory waterfowl is a recreational pursuit affected by the presence or absence of water. Wetlands and open water are needed for breeding, nesting, rearing, feeding and isolation from land-based predators. In the Powder/Tongue River Basin, waterfowl hunting is pursued where sufficient local or migratory populations are available. The Powder/Tongue River Basin represents the western extreme of the central flyway (Barry Floyd, April 10, 2001).

Ducks Unlimited is interested in the Powder/Tongue River Basin for its status as a secondary, pothole terrain for waterfowl. The organization considers the area a priority for long-range planning. In addition to its natural amenities for ducks, the Powder/Tongue River Basin doesn't have the pesticides or predator pressures that are found in the traditionally more productive plains regions to the east. As a result, the area supports a higher ratio of young per nest than can be found to the east (ibid).

Waterfowl hunters spend a significant amount of money in the hunt every year, according to the U.S. Fish and Wildlife Service (USFWS), but in the Powder/Tongue River Basin, many hunters hunt ducks and geese only when other hunts are out of season. By one estimation, only 50 percent of the approximately 12,000 duck stamp purchasers in the state are committed to hunting ducks (ibid), making the economic impacts of waterfowl hunting difficult to assess.

That being said, the 1996 USFWS national survey notes that migratory bird hunters make the following average expenditures:

### **Trip and Equipment Expenditures for Migratory Bird Hunting: 1996**

<i>Expenditure Item</i>	<i>Ave. Expenditure (\$)</i>
Trip-Related	\$216
Equipment	\$312
Auxiliary Equipment	\$183
Specialized Equipment	\$2,195
<b>TOTAL</b>	<b>\$2,906</b>

The USFWS includes food and lodging, transportation, and various fees in its trip-related expense. Equipment includes decoys, ammunition, dogs, firearms, and associated costs. Auxiliary equipment includes camping equipment, binoculars, specialized personal gear, and taxidermy. Specialized equipment includes boats, campers, cabins, trail bikes, etc.

Ducks Unlimited regional biologist Jon Roaldson notes that hunters won't make these expenditures unless the waterfowl are present. He says the water needs of ducks (and by extension, hunters and bird-watchers) are straightforward. In general, the best water conditions can be found in littoral zones, where light penetrates to the bottom of the channel or still water. This allows a number of invertebrates to survive that in turn provide waterfowl with the protein they need in breeding and brooding seasons. For everything except diving ducks, the optimal depth is approximately three feet, with anything greater than six feet being excessive (Roaldson, D.U., April 2001).

The Powder/Tongue River Basin has been pockmarked with glacial or wind-formed palustrine basins that migratory waterfowl consider attractive, according to Roaldson. The shallow, warmer waters of these basins provide good breeding and courtship habitat, but must have seasonal wetlands of heavy brush to support brooding activities.

Many of the dams created to hold coalbed methane discharge water create the shallow basins Roaldson talks about, but they need time to develop proper benthic life or their water quality is not conducive to that life, limiting their productivity for waterfowl.

The USFWS sets nationwide waterfowl hunting seasons and bag limits. Since 1995, the agency has set seasons to manage duck harvest rates under the concept of “Adaptive Harvest Management” or AHM (USFWS, 1999). This concept is described by the USFWS as follows:

The annual process of setting duck-hunting regulations in the United States is based on a system of resource monitoring, data analysis, and rule making. Each year, monitoring activities such as aerial surveys and hunter questionnaires provide information on harvest levels, population size, and habitat conditions. Data collected from this monitoring program are analyzed each year, and proposals for duck-hunting regulations are developed by Flyway Councils, States, and the U.S. Fish and Wildlife Service (USFWS). After extensive public review, the USFWS announces a regulatory framework within which States can set their hunting seasons.

Essentially, AHM allows annual duck population surveys and hunter input to re-evaluate seasons and harvest on an annual basis. States are then allowed to impose more stringent seasons and bag limits than the USFWS sets, if they wish. As populations increase above the desired population goal, hunting seasons and bag limits are made more liberal, while population decreases have the opposite effect. The primary population studied by the USFWS is the mid-continent mallard stock, with efforts underway to include other stocks and species. In recent years, duck populations have been strong and liberal seasons and bag limits have benefited sportsmen.

Harvest objectives are not currently used (post-1993), because harvest is taken into account in the setting of season length and bag limits by the USFWS using AHM. In effect, the desired harvest is a prospective number using past hunter success, population effects, and regulations in concert with current-year populations. With current duck populations and hunting pressure, it appears there is a sufficient resource to provide a quality duck hunting experience now and in the near future, with the existing water resources of the basin.

Similarly, goose hunting seasons and bag limits are set under guidelines from the USFWS, although states have more flexibility in setting bag and possession limits. And like duck populations, goose populations are strong and increasing. With approval from USFWS, states can set special seasons to allow depredation harvest from growing local flocks. According to historic estimates, the Rocky Mountain Population (RMP) of Canada geese has grown approximately four-fold since 1972 (Wilkins and Cooch, 1999). Since 1989, populations have increased at a rate of eight percent per year.

## **BOATING**

Many of the Powder/Tongue River Basins’ lakes support boating activities, including whitewater, scenic, fishing, or water skiing. Boaters tend to use Dome Lake No. 1, Kearney, Lake DeSmet, Tie Hack, Twin Lakes, and Willow Park reservoirs, with DeSmet getting the lion’s share of motorized boating. Boating is a non-consumptive use because it depends on waters being maintained for other purposes.

Because permits are not required for boating anywhere in the Powder/Tongue River Basin, usage numbers that could be used to indicate capacity limits and pressures are not available from management agencies. The Bureau of Reclamation’s default figure of one boat per 10 surface acres of water is used to estimate capacities elsewhere, but until use numbers are generated, that guideline cannot be used.

Game and Fish and reservoir operations personnel note that the optimum reservoir level for boaters is at maximum reservoir level (Bob McDowell, personal communication, and Michael Strohbusch, personal communication). Otherwise, boaters must pay close attention to emerging hazards, particularly if towing water-skiers. Strohbusch also notes that until the water levels in Lake DeSmet rise to float the docks, use stays low. In 2001, this will be particularly apparent in the wake of a 10-foot drawdown last year to dredge sediment. Until boating and recreation in general are granted capacity in reservoirs, they will be subject to the variations that come with drawdowns from other uses (irrigation in particular). As Sheridan county engineer Bruce Yates noted, full development of Lake DeSmet’s water rights would make the lake’s levels bob up and down “like a yo-yo” every year (personal communication).

At present, no central agency controls float trips on the larger streams, though locals float the Powder River on occasion. No numbers are available on this use of streams within the basin.

**MINIMUM (CONSERVATION) POOLS AND MINIMUM FLOW RELEASES**

According to the Wyoming Game and Fish Department, the following table summarizes the minimum pool and releases from Powder/Tongue River Basin reservoirs.

<i>Reservoir</i>	<i>Minimum Flow Release (cfs)</i>	<i>Minimum Pool (af)</i>
Park	4.5	588
Dull Knife	None	100
Willow Park	None	325
Kearney	None	Original Lake
Cloud Peak	None	Original Lake
Tie Hack	6	780
Twin Lake	The lesser of 2.5 or inflow	None

**INSTREAM FLOWS WITHIN THE POWDER/TONGUE RIVER BASIN**

Instream flow by definition is an arrangement tailored to keep water in streams. It can be accomplished through current direct-flow rights (i.e., changing the point of use of a water right), building storage for the purpose, or changing the timing on reservoir releases.

Existing instream flow rights filed in the Powder/Tongue River Basin are listed in Table 1 and shown in Figure 1.

Of the instream flow applications in Table 1, three have been approved by the Wyoming State Engineer’s Office (Little Bighorn, Middle Fork Powder, and Tongue River); the others are pending. Only the Tongue River segment has been adjudicated. These instream flow segments are provided in a GIS data theme for the Powder/Tongue River Basin as part of this study.

Because environmental concerns are interested in instream flows throughout the state, the number and location of these rights are subject to change. Wyoming Game and Fish Department instream flow supervisor Tom Annear is currently evaluating a number of streams in the Powder/Tongue River Basin as candidates for instream flow rights.

**SWIMMING**

Swimming is generally undertaken incidentally to other activities. While some lakes and reservoirs are suitable for swimming and waterskiing (i.e. Lake DeSmet), many are too cold for comfort or have bottom strata that are not conducive to swimming.

**SIGNIFICANT LAKES AND RESERVOIRS**

**Lake DeSmet**

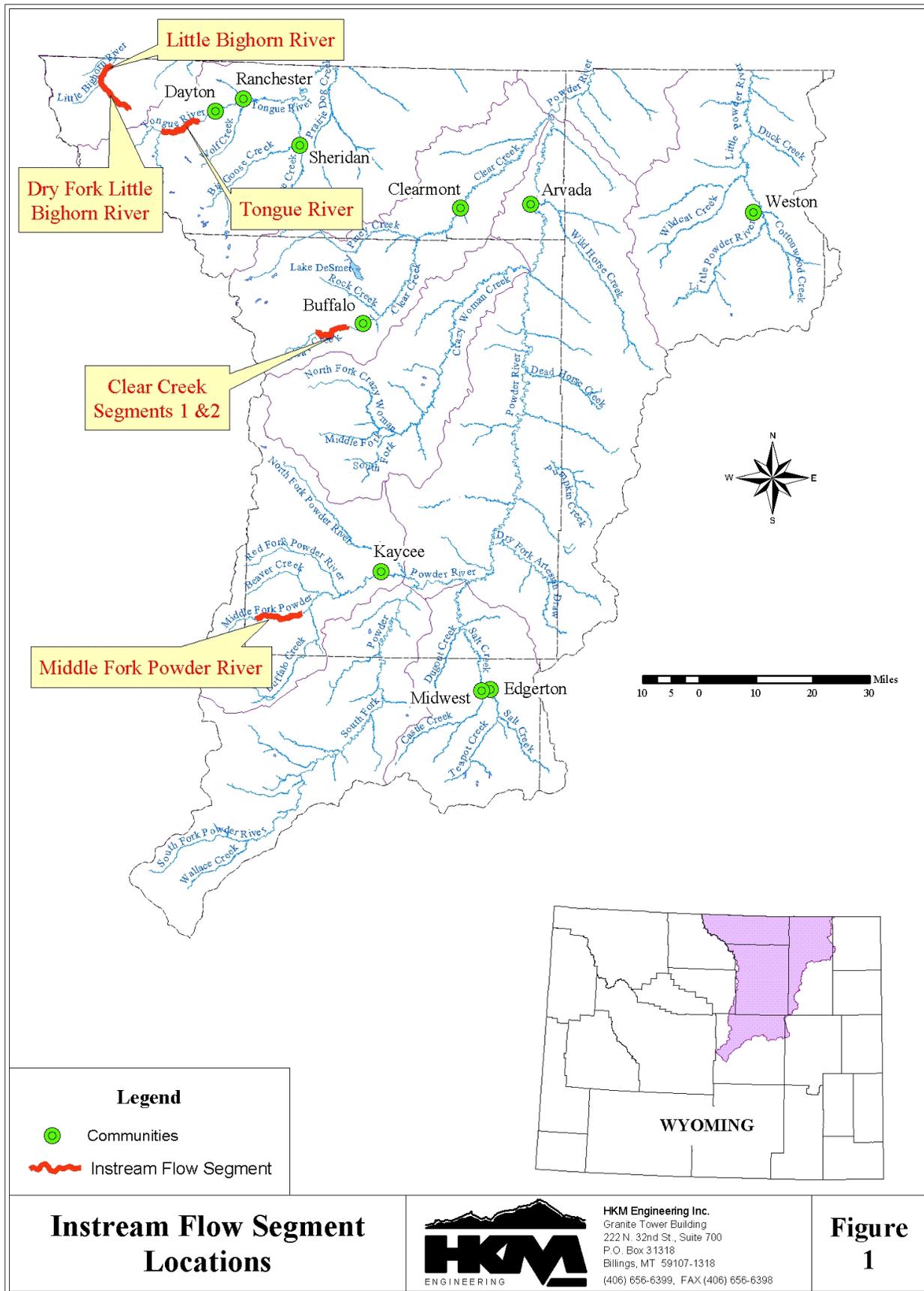
*General*

The biggest still-water recreation attraction in the Powder/Tongue River Basin, Lake DeSmet supports skiing, fishing, swimming, boating, and camping and has a long history of doing so, despite its history of ownership by large corporations. Named after an early Jesuit priest, the lake now hosts the annual Buffalo Lions Club annual Memorial Day Weekend fishing Derby, which draws 5,000 – 7,000 people.

**Table 1: Instream Flow Filings, Wyoming Game and Fish Department**

Drainage	Tributary	Location	Flow/Timing	Priority
Little Bighorn	Dry Fork	Mouth of Garland Gulch (section 35, township 57, range 89) to mouth of Dry Fork (NE ¼ of the NW ¼, section 12, township 57, range 90) (7.4 miles long)	20 cfs, Oct. 1 – March 31 25 cfs, April 1 – June 30 25 cfs, July 1 – Sept. 30 *	11/30/2000
	Little Bighorn	Mouth of Dry Fork (NE ¼ of NW ¼, section 12, township 57, range 90) to north boundary of SW ¼ of SW ¼, section 20, township 58, range 89 (4.40 miles long)	60 cfs, Oct. 1 – Nov. 15 50 cfs, Nov. 16 – March 31 60 cfs, April 1 – June 30 62 cfs, July 1 – Sept. 30	3/6/1989
Powder River	Clear Creek	Confluence of North and South Clear Creek (NW ¼ of SE ¼ of section 7, township 50, range 83) to the SE ¼ of NW ¼, section 10, township 50, range 83 (4.9 miles long)	7.8 cfs, Oct. 1 – March 31 40 cfs, April 1 – June 30 30 cfs, July 1 – Sept. 30	10/6/1994
	Clear Creek	Ending point of last segment to SE 1/4 NW 1/4, Section 6, Township 50 N, Range 82 W, approximately 750 ft downstream of USGS gage 06318500 (3.2 miles long)	6 cfs, Oct. 1 – March 31 40 cfs, April 1 – June 30 25 cfs, July 1 – Sept. 30	10/6/1994
	Middle Fork Powder	West side of section 28, township 42, range 85 to east boundary of NE ¼ of NE ¼, section 22, township 42, range 84 (9.96 miles long)	12 cfs, July 1 – March 31 25 cfs, April 1 – June 30	2/2/1987
Tongue River	Tongue River	USFS boundary upstream to the confluence of the South Fork of the Tongue. From the confluence of the North and South forks (NE ¼ of NW ¼, section 22, township 56, range 88) downstream to east section of section 10, township 56, range 87 (8.28 miles long)	60 cfs, July 1 – March 31 80 cfs, April 1 – April 30 180 cfs, May 1 – June 30	6/16/1987

\* The Wyoming Game and Fish Department also recommended a channel maintenance flow as part of the instream flow allocation for the Dry Fork of the Little Bighorn. This has not been approved by the State Engineer's Office.



The lake began as a 1,500-surface-acre natural lake and was developed into a reservoir with 3,265 surface acres at operational maximum. It has an average depth of 69 feet and a maximum depth of 120 feet at capacity. This supports what the Wyoming Game and Fish Department calls “the most important reservoir trout fishery in northeastern Wyoming,” (“Basin Management Plan for Fisheries: Lake DeSmet [SN116],” Wyoming Game and Fish Department, March 1996, p. 2). At least part of what makes the lake so valuable a fishery is its stable volume. The industrial rights for the lake are not developed at present, allowing the lake’s level to be maintained within four to seven feet of capacity during most years. This also provides a stable base for boating under normal circumstances. (In the fall of 2000, reservoir operations dropped the level 10 feet to dredge sediment from around the launch areas.)

Recreation in the lake was permitted by Texaco, which allowed boat ramps and public toilets. Current facilities include 36 camping spots, two boat ramps and a subsidiary boat launching area, and three public toilets. The lake has recently undergone a change in ownership, from Texaco to a coalition of Johnson, Sheridan, and Campbell counties in the first half of 2001. The coalition owns the water only. A little more than 30 acres were given to Johnson County as part of the transfer, but according to the DeSmet director, the area south of the main boat ramps, which was previously leased, will not be developed in the near future out of lack of funds.

***Boating and Camping***

Nevertheless, public access (restrooms, boat ramps, docks, picnic and camping facilities) attract many visitors to Boat Dock Bay and Barkey Draw within the Mikesell-Potts access area. Texaco, Johnson County Recreation District, the Buffalo Lion’s Club, Wyoming Game and Fish Department, and a grant from the Game and Fish Department have provided and maintained the sources for development and maintenance of public access.

As any frequent visitor to Lake DeSmet can attest, the lake’s recreation management has recently undergone changes as well, and now charges fees for access and use from May 15-Sept. 15. The fee system began in 1997 and has allowed recreation without tax levy infusions from nearby counties. The following table details the fee structure, the fees collected, the budget produced for the lake’s recreation operation (Mike Strobusch, e-mail communication, 11 April 2001).

Year	Fees			Income			
	Camping	Ramp		Camping	Ramp	Total	Budget
	Daily	Daily	Annual				
FY 96-97	\$5	\$3	\$20	\$4,149	\$7,103	\$11,252	\$10,200
FY 97-98	\$5	\$3	\$20	\$6,376	\$7,747	\$14,123	\$13,659
FY 98-99	\$5	\$3	\$20	\$7,840	\$10,823	\$18,663	\$12,900
FY 99-00	\$5	\$3	\$20	\$8,064	\$10,504	\$18,568	\$12,900
FY 00-01*	\$6	\$4	\$25	\$5,553	\$7,249	\$12,802	

(\* Lake DeSmet’s fiscal year runs from July - June; data provided are for July 2000-April 2001.)

Unfortunately, these fee figures are the only basis for counts of people using Lake DeSmet for recreation – and they require extrapolation. Because envelope and people counts haven’t been performed, these fee numbers will have to stand as indicators of usage from the recreation management on the lake.

***Fishing***

The Wyoming Game and Fish Department stocks and maintains the fishery in Lake DeSmet primarily for the Eagle Lake Rainbow Trout, but a number of species have been caught or spotted in the lake in the past 10 years (WGFD, *ibid.*):

<b>Species</b>	<b>Native or Introduced</b>	<b>Relative Abundance</b>
Eagle Lake Rainbow Trout	Introduced	Abundant
Brown Trout	Introduced	Common
Lake Trout	Introduced	Rare
Yellow Perch	Introduced	Common
Rock Bass	Introduced	Common
Black Crappie	Introduced	Rare
Walleye	Introduced	Rare
Common Carp	Introduced	Common
White Sucker	Native	Common
Longnose Sucker	Native	Rare
Flathead Minnow	Native	Rare
Emerald Shiner	Introduced	Common
Creek Chub	Native	Rare

Fishing pressure on the lake has been calculated to be 43,400 angler-days (13.3/acre) and 166,300 hours (51/acre) in a 1991 creel survey. By director Strohbusch's estimation, 90 percent of these anglers come from the three nearby counties (Johnson, Sheridan, and Gillette), and the remainder are from the rest of the state and nation (Strohbusch, personal communication).

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