Introduction

Absaroka-Beartooth Wilderness Lakes

The Absaroka-Beartooth Wilderness Area (A-B) established in 1978 encompasses 930,584 acres and contains more area over 10,000 feet in elevation than any other area in the U.S. It rates as one of the top four or five wilderness areas in the country, receiving about 320,000 visitor-days of use each year. For comparison, the Bob Marshall Wilderness Area receives about 150,000 visitor-days use yearly. The Absaroka-Beartooth Wilderness Area and lands immediately adjacent contain 948 high mountain lakes, 318 of which contain fish and 630 that are barren. Approximately 204 of these lakes have self-sustaining fisheries and 114 are stocked. Stocking schedules vary from yearly in some of the more heavily used areas to once every six to ten years in the lakes managed for trophy fisheries.

Pat Marcuson, during the time he worked for the Montana Department of Fish, Wildlife and Parks (MDFWP) out of Red Lodge, gathered a tremendous amount of information on the A-B lakes and created a massive database. In 1980 he developed fisheries management plans for each major drainage. Since that time, a computer database containing the latest information on the lakes with fisheries has also been developed. This database is located at the MDFWP Regional Headquarters in Billings. Additional information about individual lakes can be obtained from that office.

The purpose of this document is to update the 1980 lake management plan with the latest fisheries information available for the mountain lakes in the Clarks Fork of Yellowstone River Drainage.

Methods

Mountain lake information is collected primarily by a lake survey team consisting of two temporary employees who spend about eight weeks backpacking into the remote lakes of the A-B Mountains. Lakes scheduled for sampling are selected based on length of time since last survey, questions about the status of fish introductions, impending scheduled fish plants, and angler reports. Fish populations are monitored with lightweight experimental nylon gill nets, hook and line, and visual surveys. Additional information gathered includes lake access, pH, air and surface water temperatures, availability of firewood and campsites, and extent of recreational use. Observations are also made of aquatic invertebrates, cruising and rising fish, fish fry, and suitability of substrate for spawning. Inlet and outlet streams are visually surveyed for fish and spawning activity or potential.

Fish collected are weighed and measured, and scales are taken for later age determination. Live fish are released, dead fish are dissected to check for parasites and general health and condition; stomachs are examined for food organisms.

Spot creel checks are conducted by enforcement and fisheries personnel to determine catch rates and angler satisfaction with regulations. Additional angler use information was gathered during 1988 and 1989 with a voluntary trailhead creel information survey implemented at the major access points to the A-B Wilderness Area. The purpose of this survey was to address a proposed new three-fish limit, estimate harvest and catch rates, solicit public comments, and gather additional fisheries information. Supplemental fisheries information is also obtained from guides and outfitters, Wilderness Rangers and other Forest Service personnel, as well as reports from other wilderness users.

Information gathered from all sources is summarized and analyzed to make fish management decisions for the mountain lakes. Regulations are adjusted as necessary to help achieve desired fish population levels. Stocking rates and individual lake management strategies are adjusted as necessary to maintain desired angler catch rates, fish growth rates, and species distribution. Summarized information is used to update the computer database for each mountain lake sampled.

DESCRIPTION

Location and numbers of lakes

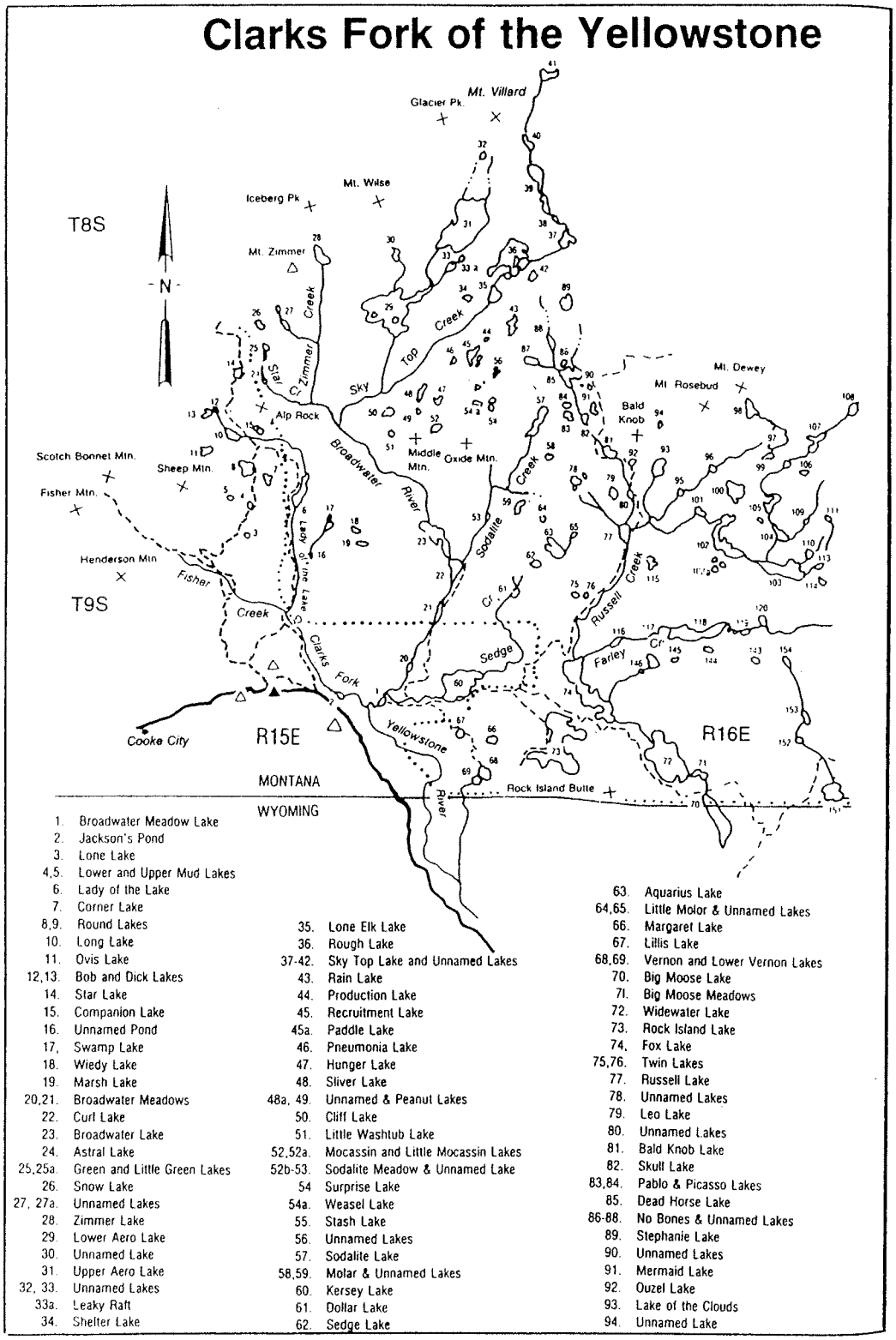
The Clarks Fork of the Yellowstone River originates in the high country of Montana as a maze of subdrainage streams. The river flows into Wyoming for some 60 stream miles before returning to Montana. The Clarks Fork drains 1,237 square miles of Park County, Wyoming (Kent and Pechacek 1972).

The Montana portion of the Clarks Fork River Drainage (Figure 1) drains 117.2 square miles of the south side of the Beartooth Mountain Range. The area is administered by the Gardiner Ranger District of the Gallatin National Forest. A scattering of mineral claims and deeded property is included within the southwest portion of the unit. Cooke City, Montana is the nearest town to the drainage.

The Gallatin National Forest portion of the drainage has 424 mountain lakes. Only Jackson's Pond (#2) is on private property. The majority, 286 lakes, are in Carbon County; Park County has 132; Fox Lake is shared by both Carbon and Park Counties; and five lakes are interstate waters on the Montana-Wyoming border. Except for Line Lake and 13 lakes near Cooke City, all the lakes are within the Absaroka-Beartooth Wilderness Area. Line Lake (#426) occupies a 24.5 square mile drainage in the Beartooth Ranger District of the Custer National Forest in Carbon County, Montana near the Wyoming state line.

Lake areas and depths

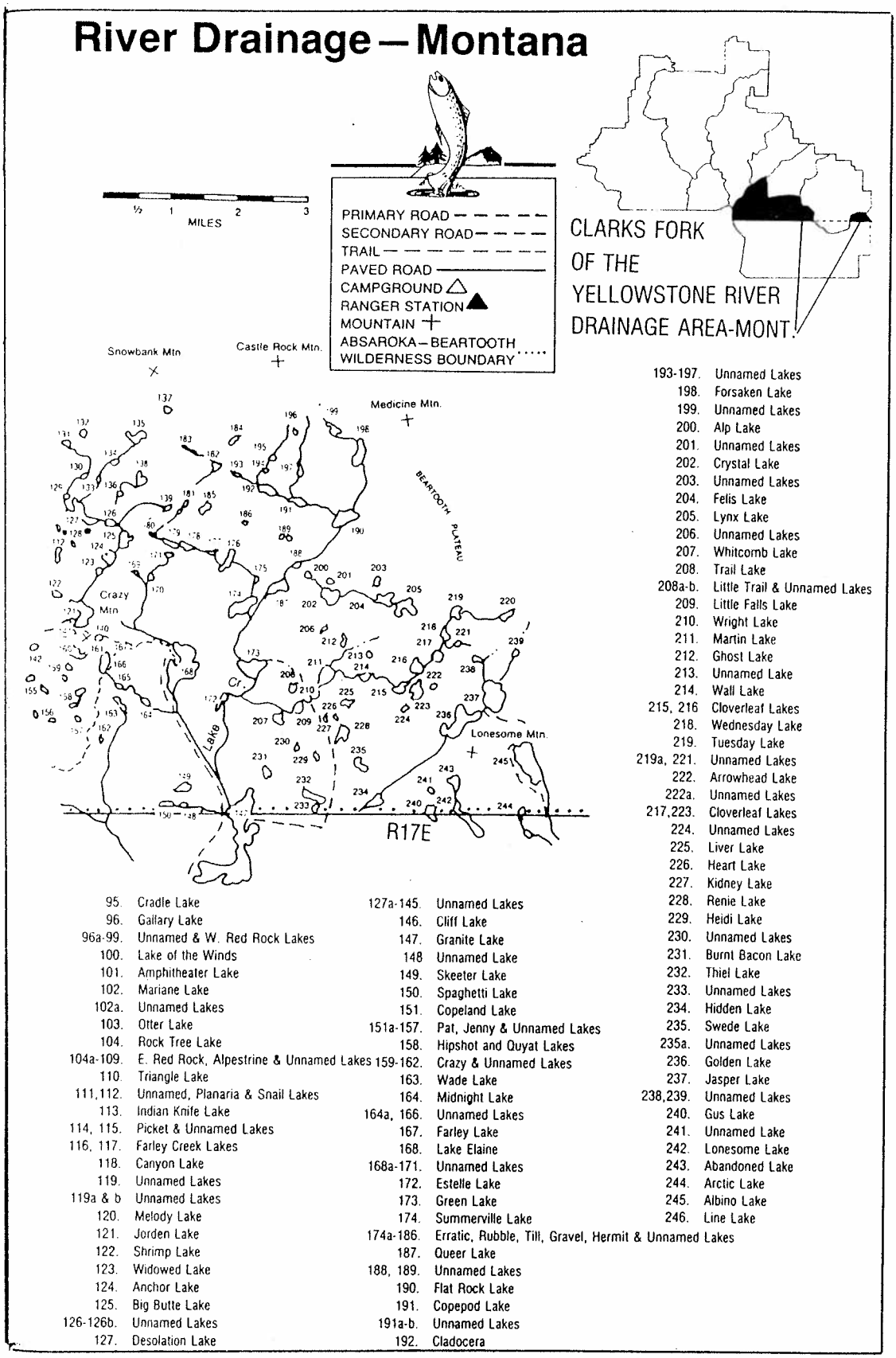
The Gallatin portion of the drainage has 4,273.6 acres of lake water, making 5.7% of this real estate under water. Lakes range from 0.4 acres to 291.8 acres with a 10-acre average for 425 lakes. The largest lake is Upper Aero at 291.8 acres, followed by Granite at 228.0 acres, Lower Aero at 189.9, and six other lakes that exceed 100 acres (Table 1). The total area of the 13 lakes outside the Absaroka-Beartooth Wilderness Area is 95.6 acres. Line Lake, in the Custer National Forest portion, is 4.7 acres with a maximum depth of 26 feet (Bishop 1967).



1. Broadwater Meadow Lake
2. Jackson's Pond
3. Lone Lake
4,5. Lower and Upper Mud Lakes
6. Lady of the Lake
7. Corner Lake
8,9. Round Lakes
10. Long Lake
11. Ovis Lake
12,13. Bob and Dick Lakes
14. Star Lake
15. Companion Lake
16. Unnamed Pond
17. Swamp Lake
18. Wiedy Lake
19. Marsh Lake
20,21. Broadwater Meadows
22. Curl Lake
23. Broadwater Lake
24. Astral Lake
25,25a. Green and Little Green Lakes
26. Snow Lake
27, 27a. Unnamed Lakes
28. Zimmer Lake
29. Lower Aero Lake
30. Unnamed Lake
31. Upper Aero Lake
32, 33. Unnamed Lakes
33a. Leaky Raft
34. Shelter Lake
35. Lone Elk Lake
36. Rough Lake
37-42. Sky Top Lake and Unnamed Lakes
43. Rain Lake
44. Production Lake
45. Recruitment Lake
45a. Paddle Lake
46. Pneumonia Lake
47. Hunger Lake
48. Sliver Lake
48a, 49. Unnamed & Peanut Lakes
50. Cliff Lake
51. Little Washtub Lake
52,52a. Mocassin and Little Mocassin Lakes
52b-53. Sodalite Meadow & Unnamed Lake
54 Surprise Lake
54a. Weasel Lake
55. Stash Lake
56. Unnamed Lakes
57. Sodalite Lake
58,59. Molar & Unnamed Lakes
60. Kersey Lake
61. Dollar Lake
62. Sedge Lake
63. Aquarius Lake
64,65. Little Molor & Unnamed Lakes
66. Margaret Lake
67. Lillis Lake
68,69. Vernon and Lower Vernon Lakes
70. Big Moose Lake
71. Big Moose Meadows
72. Widewater Lake
73. Rock Island Lake
74. Fox Lake
75,76. Twin Lakes
77. Russell Lake
78. Unnamed Lakes
79. Leo Lake
80. Unnamed Lakes
81. Bald Knob Lake
82. Skull Lake
83,84. Pablo & Picasso Lakes
85. Dead Horse Lake
86-88. No Bones & Unnamed Lakes
89. Stephanie Lake
90. Unnamed Lakes
91. Mermaid Lake
92. Ouzel Lake
93. Lake of the Clouds
94. Unnamed Lake

Figure 1. Location of lakes in the Clarks Fork River Drainage.

Source: Marcuson, P. 1985. The Beartooth fishing guide. Falcon Press Publishing Co., Inc. Billings and Helena, Montana.



95. Cradle Lake
96. Gallary Lake
96a-99. Unnamed & W. Red Rock Lakes
100. Lake of the Winds
101. Amphitheater Lake
102. Mariane Lake
102a. Unnamed Lakes
103. Otter Lake
104. Rock Tree Lake
104a-109. E. Red Rock, Alpestrine & Unnamed Lakes
110. Triangle Lake
111,112. Unnamed, Planaria & Snail Lakes
113. Indian Knife Lake
114, 115. Picket & Unnamed Lakes
116, 117. Farley Creek Lakes
118. Canyon Lake
119. Unnamed Lakes
119a & b Unnamed Lakes
120. Melody Lake
121. Jorden Lake
122. Shrimp Lake
123. Widowed Lake
124. Anchor Lake
125. Big Butte Lake
126-126b. Unnamed Lakes
127. Desolation Lake
127a-145. Unnamed Lakes
146. Cliff Lake
147. Granite Lake
148 Unnamed Lake
149. Skeeter Lake
150. Spaghetti Lake
151. Copeland Lake
151a-157. Pat, Jenny & Unnamed Lakes
158. Hipshot and Quyat Lakes
159-162. Crazy & Unnamed Lakes
163. Wade Lake
164. Midnight Lake
164a, 166. Unnamed Lakes
167. Farley Lake
168. Lake Elaine
168a-171. Unnamed Lakes
172. Estelle Lake
173. Green Lake
174. Summerville Lake
174a-186. Erratic, Rubble, Till, Gravel, Hermit & Unnamed Lakes
187. Queer Lake
188, 189. Unnamed Lakes
190. Flat Rock Lake
191. Copepod Lake
191a-b. Unnamed Lakes
192. Cladocera
193-197. Unnamed Lakes
198. Forsaken Lake
199. Unnamed Lakes
200. Alp Lake
201. Unnamed Lakes
202. Crystal Lake
203. Unnamed Lakes
204. Felis Lake
205. Lynx Lake
206. Unnamed Lakes
207. Whitcomb Lake
208. Trail Lake
208a-b. Little Trail & Unnamed Lakes
209. Little Falls Lake
210. Wright Lake
211. Martin Lake
212. Ghost Lake
213. Unnamed Lake
214. Wall Lake
215, 216 Cloverleaf Lakes
218. Wednesday Lake
219. Tuesday Lake
219a, 221. Unnamed Lakes
222. Arrowhead Lake
222a. Unnamed Lakes
217,223. Cloverleaf Lakes
224. Unnamed Lakes
225. Liver Lake
226. Heart Lake
227. Kidney Lake
228. Renie Lake
229. Heidi Lake
230. Unnamed Lakes
231. Burnt Bacon Lake
232. Thiel Lake
233. Unnamed Lakes
234. Hidden Lake
235. Swede Lake
235a. Unnamed Lakes
236. Golden Lake
237. Jasper Lake
238,239. Unnamed Lakes
240. Gus Lake
241. Unnamed Lake
242. Lonesome Lake
243. Abandoned Lake
244. Arctic Lake
245. Albino Lake
246. Line Lake

Figure 1. Location of lakes in the Clarks Fork River Drainage (continued).

Table 1. Summary of locations, physical features and fisheries information for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range.

Location Code [1]	Name of lake	County [2]	Forest [3]	Elevation in feet	Area in acres t=total	Maximum depth in feet	Shoal (% of lake less than 15 ft. deep)	Ecological zone [4]	Fish species [5]	Fish population type [6]	Fish management [7]
	BROADWATER RIVER										
1	Broadwater Meadow	49	G	7,978	1.4	4	100	2	EB GR CT'Y	1 4 4	1 1 1
	LADY OF THE LAKE CREEK										
2	Jackson's Pond	49	P	8,005	.7	4	100	2	B		3
3	Lone	49	G	9,250	1.5	8	100	2	B		3
4	Mud	49	G	9,320	4.4	12	100	2	B		3
5	Schoolmarm (Upper Mud)	49	G	9,520	3.0	25	53	3	B		3
6	Lady of the Lake	49	G	8,800	42.8	29	64	2	EB CT'Y	1 1	1 1
7	Corner	49	G	9,220	11.1	42	37	2	CT'M	1	1
8	Round	49	G	9,340	31.0	32	39	3	EB CT'Y	1 1	1 1
10	Long	49	G	9,471	11.9	21	74	3	EB	1	1
11	Ovis	49	G	9,600	8.6	45	28	3	CT'M EB	3 1	2 1
12	Bob	49	G	9,480	2.3	15	100	3	EB	1	1
13	Dick	49	G	9,475	1.9	15	100	3	EB	1	1
	STAR CREEK										
14	Star	49	G	9,646	7.9	36	47	3	CT'M EB	2 1	2 1
	LADY OF THE LAKE CREEK										
15	Companion	49	G	9,040	5.2	24	62	3	EB	1	4
16	Unnamed	49	G	7,810	2.1	4	100	2	EB	1	1
16a	Unnamed	49	G	8.450	2.4	5	100	2	RB		3

Table 1. Summary of locations, physical features and fisheries information for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location Code [1]	Name of lake	County [2]	Forest [3]	Elevation in feet	Area in acres t=total	Maximum depth in feet	Shoal (% of lake less than 15 ft. deep)	Ecological zone [4]	Fish species [5]	Fish population type [6]	Fish management [7]
17	Swamp	49	G	8,940	10.4	21	77	2	CT'M	2	5
18	Wiedy	49	G	9,010	7.1	68	26	2	CT'M	2	6
18a	Mosquito	49	G	9,020	3.0	21	58	2	GR	2	6
19	Marsh	49	G	9,018	3.8	25	69	2	CT'M	2	6
	BROADWATER RIVER										
20	Broadwater Meadow	49	G	8,030	3.6	3	100	2	EB GR	1 4	1 1
21	Broadwater Meadow	49	G	8,317	7.8	4	100	2	EB GR	1 4	1 1
22	Curl	49	G	8,398	30.6	45	49	2	EB GR	1 4	1 1
23	Broadwater	49	G	8,398	93.6	64	53	2	EB GR	1 4	1 1
	STAR CREEK										
24	Astral	49	G	9,320	5.2	4	100	3	EB	1	1
25	Green	49	G	9,640	4.8	16	90	3	EB	1	1
25a	Little Green	49	G	9,580	1.8	6	100	3	EB	1	1
26	Snow	49	G	9,980	4.0	20	60	3	B		1
	ZIMMER CREEK										
27	Unnamed	49	G	10,360	1.3	3	100	3	B		3
27a	Unnamed	49	G	10,340	1.7	7	100	3	B		3
28	Zimmer	49	G	10,140	26.0	55	35	4	CT'M	2	2
	SKY TOP CREEK										
29	Lower Aero	49	G	9,995	189.9	185	40	3	EB CT'M	1 1	1 7
30	Unnamed	49	G	10,620	7.2	9	100	4	B		3

Table 1. Summary of locations, physical features and fisheries information for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location Code [1]	Name of lake	County [2]	Forest [3]	Elevation in feet	Area in acres t=total	Maximum depth in feet	Shoal (% of lake less than 15 ft. deep)	Ecological zone [4]	Fish species [5]	Fish population type [6]	Fish management [7]
31	Upper Aero	49	G	10,140	291.8	195	7	4	CT'M	2	2
32	Unnamed (5)	49	G	11,200	14.5+	15	100	4	B		3
33	Unnamed	49	G	10,180	1.8	11	100	4	B		3
33a	Leaky Raft	49	G	10,150	8.5	30	57	4	CT'M	2	2
34	Shelter	49	G	10,040	6.8	45	34	3	EB	1	1
35	Lone Elk	49	G	10,070	18.1	40	17	3	GR EB	1 1	1 1
36	Rough	49	G	10,150	102.2	110	46	3	GR EB	1 1	1 1
37	Sky Top	49	G	10,380	17.1	50	61	4	B		1
38	Sky Top	49	G	10,420	2.8	19	83	4	B		1
38a	Unnamed	49	G	10,430	1.9	12	100	4	B		3
38b	Unnamed	49	G	10,380	.7	4	100	4	B		3
39	Sky Top	49	G	10,450	45.2	50	66	4	B		1
39a	Unnamed	49	G	10,630	2.3	10	100	4	B		3
39b	Unnamed	49	G	10,140	2.0		100	4	B		3
40	Sky Top	49	G	10,460	9.0	4	100	4	B		3
41	Sky Top	49	G	11,100	1.1	5	100	4	B		3
41a	Sky Top	49	G	10,805	1.7	3	100	4	B		3
42	Unnamed	49	G	10,300	3.2	13	100	3	B		3
43	Rain	49	G	10,300	11.8	20	94	3	B		1
43a	Unnamed	49	G	10,295	1.0	9	100	3	B		1
43b	Unnamed	49	G	10,215	.8	10	100	3	B		1

Table 1. Summary of locations, physical features and fisheries information for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location Code [1]	Name of lake	County [2]	Forest [3]	Elevation in feet	Area in acres t=total	Maximum depth in feet	Shoal (% of lake less than 15 ft. deep)	Ecological zone [4]	Fish species [5]	Fish population type [6]	Fish management [7]
44	Production	49	G	10,070	3.1	42	36	3	EB	1	1
45	Recruitment	49	G	10,038	13.1	53	50	3	EB	4	7
45a	Paddle	49	G	10,040	3.6	27	85	3	B		1
46	Pneumonia	49	G	9,980	3.6	33	49	3	B		1
46a	Unnamed	49	G	9,885	.6	11	100	3	B		3
47	Hunger	49	G	9,665	5.1	31	75	3	EB	1	1
48	Sliver	49	G	9,520	6.9	22	48	3	EB	4	7
48a	Unnamed	49	G	9,480	1.3	15	100	3	B		3
48b	Unnamed (3)	49	G	9,300	1.6t	10	100	3	EB	1	1
49	Peanut	49	G	9,515	2.0	21	88	3	B		1
49a	Unnamed	49	G	9,900	0.4	3	100	3	B		3
50	Cliff	49	G	9,240	6.6	20	57	2	EB	1	1
51	Little Washtub	49	G	9,190	2.2	30	60	2	GR	2a	6
52	Moccasin	49	G	9,400	6.8	30	39	3	EB	1	1
52a	Little Moccasin	49	G	9,405	0.8	11	100	3	EB	1	1
52b	Unnamed	49	G	9,560	.4	3	100	3	B		3
53	SODALITE CREEK Sodalite Meadow	49	G	8,875	2.4	4	100	2	EB	1	1
54	Surprise	49	G	9,860	7.1	33	79	3	CT'M	2	2
54a	Weasel	49	G	9,940	3.7	20	81	3	B		2
55	Stash	49	G	9,985	3.1	24	68	3	B		2
55a	Unnamed	49	G	9,925	0.7	5	100	3	B		3

Table 1. Summary of locations, physical features and fisheries information for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location Code [1]	Name of lake	County [2]	Forest [3]	Elevation in feet	Area in acres t=total	Maximum depth in feet	Shoal (% of lake less than 15 ft. deep)	Ecological zone [4]	Fish species [5]	Fish population type [6]	Fish management [7]
56	Unnamed (11)	49	G	10,100	9.4t	16	99	3	B		3
57	Sodalite	49	G	9,840	25.8	90	30	3	EB	1	1
58	Molar	49	G	9,860	7.5	8	100	3	B		3
58a	Unnamed	49	G	9,830	1.6	10	100	3	B		3
59a	Unnamed	49	G	9,190	1.4	6	100	3	B		3
59b	Unnamed	49	G	9,170	6.8	15	100	3	B		1
59c	Unnamed	40	G	9,110	2.5	15	100	3	B		1
60	SEDGE CREEK Kersey	49	G	8,070	118.0	68	28	2	LT EB	2a 1	6 1
61	Dollar	49	G	8,920	1.1	12	100	2	GR CT'M	1 1	1 1
62	Sedge	49	G	9,100	4.7	28	72	2	GR CT'M	1 1	1 1
63	Aquarius	49	G	9,180	11.6	65	48	2	CT'M	1	1
64	SODALITE CREEK Little Molar	49	G	9,300	6.1	8	100	3	B		3
64a	Unnamed (2)	49	G	9,180	1.8t	11	100	3	B		3
65	SEDGE CREEK Unnamed	49	G	9,420	2.6	10	100	3	B		3
66	CLARKS FORK RIVER Margaret	49	G	8,100	3.9	22	50	2	CT'M	2	2
67	Lillis	49	G	8,140	2.7	30	33	2	EB	1	1
68	Vernon	49	G	7,900	8.2	32	31	2	CT'Y EB	1 1	1 1

Table 1. Summary of locations, physical features and fisheries information for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location Code [1]	Name of lake	County [2]	Forest [3]	Elevation in feet	Area in acres t=total	Maximum depth in feet	Shoal (% of lake less than 15 ft. deep)	Ecological zone [4]	Fish species [5]	Fish population type [6]	Fish management [7]
69	Lower Vernon	49	G	7,880	1.9	10	100	2 EB	CT'Y 1 1 1		1
	CRAZY CREEK										
70	Big Moose	10 P	G S	8,000	83.8	46	64	2	EB 1 RB 1		1 1
71	Big Moose Meadow	10	G	8,004	7.5	3	100	2	EB 1 RB 1 GR 1		1 1 1
72	Widewater	10	G	8,008	110.7	110	13	2	RB 1 GR 1 EB 1		1 1 1
	CLARKS FORK RIVER										
73	Rock Island	49	G	8,166	137.0	110	13	2	EB 1 CT'M 2		1 2
	CRAZY CREEK										
74	Fox	49 10	G	8,055	111.4	75	57	2	GR 1 RB 1 EB 1		1 1 1
	RUSSELL CREEK										
75	Twin (2)	49	G	8,630 8,680	1.7 2.1	17 10	98 100	2 2	B B		1 1
77	Russell	10	G	8,780	27.5	95	18	3	EB 1		1
78	Unnamed	49	G	9,670	12.1	18	87	3	B		3
78a		49	G	9,840	2.0	5	100	3	B		3
b		49	G	9,820	1.7	6	100	3	B		3
c&d		49	G	9,750	1.2t	4	100	3	B		3
79	Leo	10	G	9,300	8.5	55	32	3	CT'Y 1		1
80	Unnamed (2)	10	G	9,115 9,125	2.4 1.0	3 2	100 100	3 3	EB 1 EB 1		1 1
81	Bald Knob	10	G	9,420	15.4	38	64	3	EB 1		1

Table 1. Summary of locations, physical features and fisheries information for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location Code [1]	Name of lake	County [2]	Forest [3]	Elevation in feet	Area in acres t=total	Maximum depth in feet	Shoal (% of lake less than 15 ft. deep)	Ecological zone [4]	Fish species [5]	Fish population type [6]	Fish management [7]
82	Skull	10	G	9,640	5.5	16	86	3	EB	1	1
83	Pablo	49	G	9,780	0.7	12	100	3	B		3
84	Picasso	49	G	9,800	8.1	28	85	3	GT		6
85	Deadhorse (Windy)	49	G	9,800	36.7	48	39	3	EB	1	1
86	Unnamed	49	G	9,900	2.6	20	90	3	B		1
87	No Bones (4)	49	G	9,980	7.8t	35	61	3	B		1
88	Unnamed (2)	49	G	9,900	4.1t	4	100	3	B		3
89	Stephanie	49	G	10,280	13.9	65	38	3	CT'M		2
89a	Unnamed			10,260	1.7	17	85	3	B		7
90	Unnamed (2)	49	G	9,900	1.8t	16	80	3	B		3
91	Mermaid	49	G	9,700	6.8	30	61	3	CT'M		2
92	Ouzel	10	G	9,410	3.5	24	75	3	CT'M		2
93	Lake of the Clouds	10	G	9,680	23.6	85	41	3	CT'M	2a	2a
94	Unnamed (2)	10	G	9,980	10.6t	3	100	3	B		3
95	Cradle	10	G	9,595	7.8	37	42	3	RB		7
96	Gallery	10	G	9,920	7.4	40	70	3	RB	2	6
96a	Unnamed (3)	10	G	10,075	4.5t	6	100	3	B		1
b									B		1
c									B		7
97	Red Rock (West)	10	G	10,620	23.6			4	B		1
98	Unnamed	10	G	10,950	11.6			4	B		3
98a	Unnamed	10	G	10,960	1.5			4	B		3

Table 1. Summary of locations, physical features and fisheries information for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location Code [1]	Name of lake	County [2]	Forest [3]	Elevation in feet	Area in acres t=total	Maximum depth in feet	Shoal (% of lake less than 15 ft. deep)	Ecological zone [4]	Fish species [5]	Fish population type [6]	Fish management [7]
99	Unnamed	10	G	10,600	1.0	10	100	4	B		3
100	Lake of the Winds	10	G	9,910	40.7	186	30	3	CT'M	2	2
101	Amphitheater	10	G	9,320	8.7	16	99	3	EB	1	1
102	Mariane	10	G	9,542	50.8	70	72	3	EB	1	1
102a	Unnamed (2)	10	G	9,610	1.3t	10	100	3	B		3
103	Otter	10	G	9,620	61.1	177	18	3	EB GR	1 4	1 7
104	Rock Tree	10	G	9,820	18.1	130	16	3	GT		6
a&b		10	G	9,830	5.6t	4	100	3	B		3
105	Z	10	G	9,880	20.4	10	100	3	B		1
106	Unnamed (3)	10	G	10,575	1.1t	5	100	4	B		3
107	Red Rock (East)	10	G	10,600	8.7			4	B		3
108	Alpestrine	10	G	11,000	8.7			4	B		3
109	Unnamed (2)	10	G	10,130	3.0t	3	100	4	B		3
110	Triangle	10	G	9,830	6.3	55	14	3	CT'M		2
111	Unnamed (4)	10	G	10,230	9.6t	20 3	51 100	3	B		1 3
112	Planaria	10	G	10,060	7.4	28	31	3	B		1
112a	Snail	10	G	9,980	2.9	20	60	3	B		1
112b	Unnamed	10	G	9,920	.6	6	100	3	B		3
113	Indian Knife	10	G	9,940	5.3	35	34	3	GR		6
114	RUSSELL CREEK Picket	10	G	9,700	3.4	12	100	3	B		3
115	Unnamed (8)	10	G	9,760	14.4t	10	100	3	B		3

Table 1. Summary of locations, physical features and fisheries information for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location Code [1]	Name of lake	County [2]	Forest [3]	Elevation in feet	Area in acres t=total	Maximum depth in feet	Shoal (% of lake less than 15 ft. deep)	Ecological zone [4]	Fish species [5]	Fish population type [6]	Fish management [7]
	FARLEY CREEK										
116	Farley Creek #1	10	G	8,500	1.7	4	100	2	H_2	1	1
117	Farley Creek #2	10	G	8,680	4.2	7	100	2	H_2	1	1
118	Canyon	10	G	8,780	65.7	87	62	3	RB	1	1
									CT'M	1	1
									H_2	1	1
119	Unnamed (2)	10	G	9,000	2.8t	8	100	3	CT'M	1	1
120	Melody	10	G	8,940	4.8	12	100	3	CT'M	1	1
121	Jorden	10	G	9,625	36.0	120	20	3	CT'M		7
122	Shrimp	10	G	9,720	3.2	13	100	3	B		3
123	Widowed	10	G	10,010	3.2	15	100	3	GT		7
124	Anchor	10	G	10,045	12.0	90	43	3	GT		7
125	Big Butte	10	G	10,060	22.1	55	43	3	GT	2a	6
126	Unnamed (2)	10	G	10,130	3.6	20	75	3	GT		7
					3.8	20	63	3	B		7
127	Desolation	10	G	10,155	31.4	75	30	3	GT	2a	6
127a	Unnamed	10	G	10,240	1.2	5	100	4	B		3
128	Unnamed (8)	10	G	10,340	3.8t	6	100	4	B		3
129	Unnamed	10	G	10,230	3.2	8	100	4	B		3
130	Unnamed (3)	10	G	10,390	1.2t	5	100	4	B		3
131	Unnamed	10	G	10,760	9.3	ice		4	B		5
132	Unnamed	10	G	10,840	2.2	ice		4	B		3
133	Unnamed	10	G	10,440	.9	3	100	4	B		3
133a	Unnamed	10	G	10,400	.7	3	100	4	B		3

Table 1. Summary of locations, physical features and fisheries information for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location Code [1]	Name of lake	County [2]	Forest [3]	Elevation in feet	Area in acres t=total	Maximum depth in feet	Shoal (% of lake less than 15 ft. deep)	Ecological zone [4]	Fish species [5]	Fish population type [6]	Fish management [7]
134	Unnamed	10	G	10,540	1.4	2	100	4	B		3
135	Unnamed	10	G	10,780	19.5	ice		4	B		3
135a	Unnamed	10	G	10,840	1.8	12	100	4	B		3
136	Unnamed	10	G	10,560	.4	3	100	4	B		3
136a	Unnamed	10	G	10,410	3.4	4	100	4	B		3
136b	Unnamed	10	G	10,760	1.8	4	100	4	B		3
137	Unnamed	10	G	11,110	3.8	ice		4	B		3
137a	Unnamed	10	G	10,630	.3	4	100	4	B		3
138	Unnamed	10	G	10,780	7.6	ice	100	4	B		3
138a	Unnamed	10	G	10,810	0.4		100	4	B		3
139	Unnamed	10	G	10,680	.8	8	100	4	B		3
140	Unnamed	10	G	9,950	5.0	16	91	3	B		1
141	Unnamed	10	G	9,420	2.3	7	100	3	B		3
142	Unnamed (7)	10	G	9,700	5.5t	16	100	3	B		1/3[8]
143	Unnamed	10	G	9,250	2.1	13	100	3	B		3
144	Unnamed	10	G	9,020	4.6			3	B		1
145	Unnamed	10	G	8,770	3.3			3	B		1
146	CRAZY CREEK Cliff	10	G	8,550	18.4	83	30	3	GR	1	1
146a	Lower Cliff	10	G	8,480	1.1	2	100	3	GR	1	1
147	LAKE CREEK Granite	10 P	G S	8,625	228.0	125	32	2	RB EB	1 1	1 1
148	Unnamed	10	G	9,205	3.7	8	100	2	B		7

Table 1. Summary of locations, physical features and fisheries information for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location Code [1]	Name of lake	County [2]	Forest [3]	Elevation in feet	Area in acres t=total	Maximum depth in feet	Shoal (% of lake less than 15 ft. deep)	Ecological zone [4]	Fish species [5]	Fish population type [6]	Fish management [7]
149	Skeeter	10	G	9,310	10.7	25	83	2	GR		6
150	Spaghetti & Unnamed	10	G	9,190 9,190	6.3 2.8	54 20	55 69	2 2	GR B		6 1
151	Copeland	10	G	8,780	36.0	125	13	2	EB	1	1
151a	Unnamed	10	G	8,950	2.3	8	100	2	B		3
152	Unnamed	10	G	9,130	3.0	8	100	2	B		3
153	Pat	10	G	9,190	4.5	11	100	2	B		3
154	Jenny	10	G	9,350	7.5	15	100	2	B		3
155	Unnamed (4)	10	G	9,675	6.2t	10	100	3	B		3
156	Unnamed (2)	10	G	9,760	1.5t	4	100	3	B		3
157	Unnamed (2)	10	G	9,600	3.4t	15	100	3	B		3
158	Hipshot	10	G	9,750	9.6	47	35	3	CT'M		2
158a	Quyat	10	G	9,650	2.5	6	100	3	B		7
159	Unnamed (6)	10	G	9,895	7.4t	15	10	3	B		3
160	Crazy	10	G	9,900	20.0	48	40	3	B		1
160a	Unnamed	10	G	9,896	.9	4	100	3	B		3
161	Little Crazy	10	G	9,920	4.2	20	87	3	B		1
162	Unnamed	10	G	9,400	3.1	8	100	3	B		3
163	Wade	10	G	9,620	10.5	15	100	3	EB	1	1
163a	Wade, Jr.	10	G	9,615	1.8	8	100	3	EB	1	1
164	Midnight	10	G	9,480	5.1	30	61	3	EB	1	1
164a	Unnamed	10	G	9,350	1.2	6	100	3	B		3

Table 1. Summary of locations, physical features and fisheries information for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location Code [1]	Name of lake	County [2]	Forest [3]	Elevation in feet	Area in acres t=total	Maximum depth in feet	Shoal (% of lake less than 15 ft. deep)	Ecological zone [4]	Fish species [5]	Fish population type [6]	Fish management [7]
165	Unnamed	10	G	9,590	1.4	4	100	3	EB	1	1
166	Unnamed	10	G	9,620	2.4	12	100	3	EB	1	1
167	Farley	10	G	9,740	24.0	35	51	3	EB	1	1
168	Lake Elaine	10	G	9,250	132.4	156	28	3	EB	1	1
168a	Unnamed (7)	10	G	9,400	3.2+	5	100	3	EB	1	1 [9]
168b	Unnamed	10	G	9,550	.6	3	100	3	B		3
169	Unnamed (2)	10	G	10,100	2.5t	3	100	3	B		3
170	Unnamed	10	G	10,170	1.0	3	100	3	B		3
171	Unnamed (4)	10	G	10,250	5.8t	20	45	4	B		1/3 [10]
172	Estelle	10	G	9,200	18.7	30	44	3	EB CT'Y	1	1 7
	Unnamed (2)	10	G	9,190 9,180	.6 .6	12 8	100 100	3 3	B B		3 3
173	Green	10	G	9,150	35.7	129	18	3	EB	1	1
173a	Unnamed	10	G	9,470	0.5	4	100	3	B		3
174	Summerville	10	G	9,560	43.0	50	16	3	EB	1	1
174a	Unnamed	10	G	9,940	2.1	11	100	3	B		3
175	Unnamed (Figure 2)	10	G	9,720	3.2	3	100	3	B		1
176	Erratic "	10	G	10,130	12.5	8	100	3	B		1
176a	Unnamed (2) "	10	G	10,130 10,150	5.5 .5	12 6	100 100	3 3	B B		3 1
177	Rubble "	10	G	10,150	6.2	22	49	3	B		1
177a	Unnamed "	10	G	10,160	1.5	10	100	3	B		3

Table 1. Summary of locations, physical features and fisheries information for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location Code [1]	Name of lake	County [2]	Forest [3]	Elevation in feet	Area in acres t=total	Maximum depth in feet	Shoal (% of lake less than 15 ft. deep)	Ecological zone [4]	Fish species [5]	Fish population type [6]	Fish management [7]
178	Till (Figure 2)	10	G	10,190	12.0	47	65	3	B		1
178a	Unnamed (3) "	10	G	10,200	2.1t	8	100	4	B		3
179	Gravel "	10	G	10,240	6.8	43	45	4	B		1
180	Unnamed "	10	G	10,300	2.5	4	100	4	B		3
181	Unnamed "	10	G	10,500	5.4	8	100	4	B		3
182	Unnamed "	10	G	10,840	4.6	30	62	4	B		3
183	Unnamed "	10	G	11,100	3.6	-	100	4	B		3
184	Unnamed	10	G	11,250	18.0	ice	100	4	B		3
185	Hermit	10	G	10,690	5.9	25	63	4	B		1
186	Unnamed (5)	10	G	10,600	8.3t	4	100	4	B		3
187	Queer	10	G	9,600	26.4	49	46	3	EB	1	1
188	Unnamed (2)	10	G	9,550	2.8t	13	100	3	B		3
189	Unnamed (3)	10	G	10,840	4.0t	7	100	4	B		3
190	Flat Rock	10	G	9,990	37.0	85	31	3	CT'M	2	2
191	Copepod	10	G	10,400	11.2	33	60	4	B		1
191 a&b	Unnamed (4)	10	G	10,560	1.0t	4	100	4	B		3
192	Cladocera	10	G	10,540	17.2	37	72	4	B		1
193	Unnamed	10	G	10,860	1.4	10	100	4	B		3
194	Unnamed	10	G	10,650	1.2	3	100	4	B		3
195	Unnamed	10	G	10,850	0.7	12	100	4	B		3
196	Unnamed (2)	10	G	11,090	4.1t	8	100	4	B		3

Table 1. Summary of locations, physical features and fisheries information for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location Code [1]	Name of lake	County [2]	Forest [3]	Elevation in feet	Area in acres t=total	Maximum depth in feet	Shoal (% of lake less than 15 ft. deep)	Ecological zone [4]	Fish species [5]	Fish population type [6]	Fish management [7]
197	Unnamed	10	G	10,600	14.0	32	49	4	B		1
198	Forsaken	10	G	10,450	30.5	66	22	4	CT'M	2	2
198a	Unnamed (2)	10	G	10,540	.4	5	100	4	B		3
b				10,550	.7	8	100	4	B		3
199	Unnamed	10	G	10,780	8.8	23	90	4	B		1
200	Alp	10	G	9,760	2.8	25	80	3	CT'M		2
201	Unnamed (5)	10	G	9,990	3.7t	5	100	3	B		3
202	Crystal	10	G	9,910	27.5	85	24	3	CT'M	2	2
203	Unnamed (2)	10	G	10,520	2.3t	12	100	4	B		3
204	Felis	10	G	10,440	17.5	62	10	4	B		1
205	Lynx	10	G	10,450	21.7	20	75	4	B		1
206	Unnamed (2)	10	G	10,020	2.0t	7	100	4	B		3
				10,120				4			
207	Robin (Hunter)	10	G	9,575	8.3	58	54	3	EB	1	1
									RB	1	1
208	Trail	10	G	9,800	7.1	55	33	3	CT'M		2
208a	Little Trail	10	G	9,799	1.4	8	100	3	B		7
208b	Unnamed (6)	10	G	9,810	1.4t	3	100	3	B		3
209	Little Falls	10	G	9,620	11.4	40	35	3	EB	1	1
210	Wright	10	G	9,650	7.9	40	52	3	EB	1	1
210a	Unnamed	10	G	9,620	0.7	4	100	3	EB	1	1
211	Martin	10	G	9,660	31.4	42	26	3	EB	1	1
212	Ghost	10	G	10,100	6.2	22	63	3	B		1

Table 1. Summary of locations, physical features and fisheries information for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location Code [1]	Name of lake	County [2]	Forest [3]	Elevation in feet	Area in acres t=total	Maximum depth in feet	Shoal (% of lake less than 15 ft. deep)	Ecological zone [4]	Fish species [5]	Fish population type [6]	Fish management [7]
213	Unnamed	10	G	10,380	2.3	3	100	4	B		3
214	Wall	10	G	9,900	14.4	28	53	3	EB	1	1
215	Cloverleaf	10	G	10,170	18.4	66	29	3	CT'M	2	2
216	Cloverleaf	10	G	10,180	23.9	30	52	3	CT'M	2	2
217	Unnamed	10	G	10,190	2.9	12	100	3	CT'M	2	7
218	Wednesday	10	G	10,200	6.2	12	100	4	B		1
219	Tuesday	10	G	10,210	14.0	30	20	4	B		1
219a	Unnamed	10	G	10,460	0.3	5	100	4	B		3
220	Unnamed	10	G	10,840	9.0	ice		4	B		3
221	Unnamed (2)	10	G	10,350	4.1t	10	100	4	B		3
222	Arrowhead	10	G	10,380	10.2	45	36	4	B		1
222a	Unnamed	10	G	10,300	1.8	12	100	4	B		3
223	Cloverleaf	10	G	10,150	31.0	65	35	3	CT'M	2	2
224	Unnamed (5)	10	G	10,320	5.0t	15	100	4	B		3
225	Liver	10	G	9,910	7.2	8	100	3	B		1
226	Heart	10	G	10,000	2.9	35	8	3	B		1
227	Kidney	10	G	9,910	2.8	15	100	3	EB	1	1
228	Renie	10	G	9,900	15.3	55	51	3	EB	1	1
229	Heidi	10	G	9,720	8.2	25	80	3	EB	1	1
230	Unnamed (4)	10	G	9,780	8.2t	12	100	3	B		3
231	Burnt Bacon	10	G	8,950	15.0	46	45	3	B		2
232	Tiel	10	G	9,260	18.5	35	50	3	EB	1	1

Table 1. Summary of locations, physical features and fisheries information for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location Code [1]	Name of lake	County [2]	Forest [3]	Elevation in feet	Area in acres t=total	Maximum depth in feet	Shoal (% of lake less than 15 ft. deep)	Ecological zone [4]	Fish species [5]	Fish population type [6]	Fish management [7]
233	Unnamed (4)	10	G	9,300	9.1t	30	45	3	EB CT'M	1 1	1 [11] 7
234	Hidden	10	G	9,500	18.0	46	40	3	GT CT'M	1 1	1 1 [12]
235	Swede	10	G	9,810	11.8	84	37	3	B		6
235a	Unnamed (5)	10	G	10,040	8.6t	13	100	3	B		3
236	Golden	10	G	10,130	48.9	90	26	3	CT'M		7
237	Jasper	10	G	10,150	54.8	107	17	3	CT'M	2	2
238	Unnamed	10	G	10,340	4.2	24	90	4	B		1
239	Unnamed	10	G	10,540	1.2	3	100	4	B		3
240	BEARTOOTH CREEK Gus	10 Wyo	G S	9,890	16.7	19	82	3	B		3
241	Unnamed (3)	10	G	10,230	3.4t	8	100	4	B		3
242	Lonesome	10 Wyo	G S	10,050	35.3	38	43	3	EB	1	1
243	Abandoned	10	G	10,100	10.5	25	63	3	EB	1	1
244	Arctic	10 Wyo	G S	10,140	3.7	17	53	3	B		1
245	Albino	10	G	10,000	39.2	149	27	3	CT'M	2	2
246	LINE CREEK Line	10	C	9,680	4.7	26	52	3	CT'M	2	2

1/ See Figure 1 for locations.

2/ 10 = Carbon; 49 = Park; P = Park county, Wyoming

3/ C = Custer National Forest; G = Gallatin National Forest; S = Shoshone National Forest; P = Private

4/ 1 = Transition; 2 = Canadian; 3 = Sub alpine; 4 = Alpine

5/ RB = Rainbow trout; CT'Y = Yellowstone cutthroat trout; CT'M = McBride cutthroat trout; EB = Brook trout; H_2 = CTxRB hybrid; LT = Lake trout; B = Barren of fish.

6/ 1 = Self-sustaining; 2 = Stocked; 2a = Stocked but may become self-sustaining; 3 = Self-sustaining and stocked; 4 = Drifted in from upstream source.

7/ 1 = No immediate management necessary; 2 = Stock at intervals; 3 = No fisheries potential; 4 = Rehabilitate and stock new species; 5 = Stock new species after present fisheries die out; 6 = Stock to establish self-sustaining population; 7 = Inhabit from upstream source.

8/ One lake has potential, the other six have none.

9/ Four lakes have brookies, three have no potential.

10/ One lake has potential, three have none.

11/ One lake is barren and has no potential (B-3).

12/ Cutthroat trout from Jasper Lake.

The deepest lake in the drainage is Upper Aero at 195 feet (Marcuson & Bishop 1974). Lakes deeper than 100 feet follow:

Lake Number	Name	Maximum Depth
31	Upper Aero	195
100	Lake of the Winds	186
29	Lower Aero	185
103	Otter	177
168	Lake Elaine	156
245	Albino	149
104	Rock Tree	130
173	Green	129
151	Copeland	125
147	Granite	125
121	Jorden	120
73	Rock Island	110
72	Widewater	110
36	Rough	110
237	Jasper	107

There are 33 lakes between 50-100 feet, 186 between 10 and 50 feet, and 186 less than 10 feet deep (Marcuson & Bishop 1970, 1971, 1974, 1975, 1976). Six lakes were ice covered and no depths were measured.

Lake elevations and ecological zones

The highest lake in the drainage is Unnamed #32 at 11,200 feet. In the same area near Granite Peak, is the uppermost Sky Top Lake at 11,100 feet. The lake at the lowest altitude in the drainage is Lower Vernon at 7,880 feet (Marcuson & Bishop 1972). The 426 lakes in the Clarks Fork River Drainage are distributed at the following elevations:

Altitude in Feet	Number of Lakes
7,000	4
8,000	27
9,000	213
10,000	170
11,000	12

Ninety percent of the lakes are in the 9,000 to 10,000-foot range. Only four lakes above 10,500 feet have names. Sixty-one percent of the lakes occupy the Sub-alpine environment, 28% are in the Alpine Zone, and 11% are in the timbered habitat typical of the Canadian Zone.

Accessibility

U. S. Highway 212 between Red Lodge and Cooke City, Montana provides vehicle access to the area. Many four-wheel-drive trails, not designated as Forest roads, have been closed because of habitat destruction. The only roadways within the Montana portion are the Goose Lake jeep trail #3,230, Lulu Pass road #6,943 and Daisy Pass road #212. Other roads from Highway 212 lead to trail heads in Wyoming which provide routes to waters in Montana. These include Lily Lake - Crazy Lake jeep trail #130, Muddy Creek, Clay Butte and Island Lake spur roads.

The drainage has some good trails providing access to most of the lake regions. Most of the country above timberline is easily traveled without trails. Many unmaintained trails traverse the drainage, few of which are on maps. Of the 426 lakes, 13 can be driven to by 4x4 vehicle, 275 can be reached by horse, 138 are restricted to foot traffic, 78 lakes have trails to their lake shores or reasonably close, and 348 lakes have no trails.

Water chemistry

According to surveys during the 1970's, chemical attributes for 90 lakes (Table 2) had a mean hydrogen ion concentration of 6.4. Conductivities ranged from 7 to 82 mhos. The average silica content was 1.0 ppm, iron averaged .10 ppm, alkalinity averaged 21 ppm and total hardness was 9 ppm. Waters were usually clear except those green lakes at high elevations influenced by glacial milk. Most lake substrates were visible to depths of 18 feet on clear, sunny days. Secchi disks were visible to 26 feet in the majority of the lakes. High flows caused little turbidity.

Thermal

Surface water temperatures peak about the 31st of August for most years. Ice goes off lakes and wide waters east of Cooke City from mid-May to early June. The majority of the lakes are much later with some ice-free by August 1, and others near the divide to the north never becoming totally ice-free. Lakes in ecological zone 2, Canadian, generally have approximately 153 ice-free days, subalpine waters have 125, and alpine waters have about 106 ice-free days.

Plankton

Volume and numbers of plankton found in samples from 110 lakes in the drainage vary widely (Table 3). The presence of large zooplankton, Diaptomus shoshone, Daphnia middendorffiana and D. pulex, are especially important to lakes with fisheries and/or lakes with fisheries potential. These large forms were found in 44% of the 110 lakes.

Table 2. Chemical attributes of lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range.

Location code 1/	Name of lake	pH	Conductivity (mhos)	Alkalinity (ppm)	Total hardness (ppm)	Silica (ppm)	Iron (ppm)	Total phosphate (P) t = trace (no units)
5	Schoolmarm	6.2		10	5	1.6	0	t
6	Lady of the Lake	6.8	44	40	18	1.0	.03	-
7	Corner	6.6		20	20	3.8	0	-
8	Round	6.3	82	90	25	1.0	0	0
10	Long	6.4	21	0	10	.8	.15	.03
11	Ovis	6.2		15	15	3.0	0	t
12	Bob	6.3	10	0	5	.7	.09	.02
14	Star	6.9	8	0	5	.5	.30	.04
15	Companion	6.3	8	0	3	.7	.15	.03
17	Swamp	7.0	16	75	20	.9	.05	.01
18	Wiedy	6.8	16	50	25	1.8	.05	.15
18a	Mosquito	6.6	17	45	20	1.6	.08	.15
20	Broadwater Meadow	6.2	20	15	15	.8	.11	.03
22	Curl	6.3	13	20	8	.6	0	.02
24	Astral	6.2	18	0	5	.6	.12	.02
25	Green	6.5	21	30	10	1.3	.02	-
28	Zimmer	6.3	11	20	8	1.5	.07	-
29	Lower Aero	6.4	9	19	17	.9	.11	.06
31	Upper Aero	6.2	11	0	5	.6	0	0
33a	Leaky Raft	6.5	10	45	30	.8	.08	.13
34	Shelter	6.3	12	8	10	.9	.05	.02

Table 2. Chemical attributes of lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location code [1]	Name of lake	pH	Conductivity (mhos)	Alkalinity (ppm)	Total hardness (ppm)	Silica (ppm)	Iron (ppm)	Total phosphate (P) t = trace (no units)
35	Lone Elk	6.6	11	20	10	.9	.06	.03
36	Rough	6.2	10	0	5	.8	.02	.05
44	Production	6.2	8	5	5	.8	.03	.02
45	Recruitment	6.5	10	50	18	.8	.03	.02
47	Hunger	6.2	15	10	8	.9	.07	0
48	Sliver	6.2	13	30	2	.6	.04	-
50	Cliff	6.6	11	45	20	1.8	.10	.01
52	Moccasin	6.5	18	30	8	1.0	.02	-
52a	Little Moccasin	6.3	18	20	12	.3	0	0
54	Surprise	6.2	10	15	2	.8	.09	.05
57	Sodalite	6.4	10	0	3	.6	.04	.02
60	Kersey	6.7	46	67	10	1.4	.09	.07
62	Sedge	6.3	24	60	15	1.5	.20	.20
63	Aquarius	6.3	23	40	10	.6	0	.05
66	Margaret	6.5	39	65	19	2.9	.21	.12
67	Lillis	6.5	65	117	39	4.0	.03	.16
68	Vernon	6.5	45	83	33	3.2	.10	.17
70	Big Moose	6.1	10	10	5	.6	.15	-
72	Widewater	6.3	8	5	5	1.3	0	t
73	Rock Island	6.6	32	52	18	1.4	.02	.07
74	Fox	6.8	9	0	2	.5	.15	.02
77	Russell	6.8	9	0	2	.8	.10	0

Table 2. Chemical attributes of lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location code 1/	Name of lake	pH	Conductivity (mhos)	Alkalinity (ppm)	Total hardness (ppm)	Silica (ppm)	Iron (ppm)	Total phosphate (P) t = trace (no units)
79	Leo	6.5	9	0	3	.7	.05	.04
81	Bald Knob	6.6	8	0	3	1.1	.21	.02
82	Skull	6.0	10	0	1	1.2	.60	.07
84	Picasso	6.6	7	0	2	.7	1.20	0
86	Dead Horse	6.3	9	0	4	.7	0	.07
92	Ouzel	6.4	8	0	4	.8	.04	0
93	Lake of the Clouds	6.4	10	13	5	.8	0	.04
96	Gallery	6.4	10	17	4	.8	0	.02
100	Lake of the Wind	6.2	10	10	3	.8	.26	.10
101	Amphitheater	6.2	9	0	3	.6	.05	0
102	Mariane	6.4	8	10	3	.5	.05	.09
103	Otter	6.2	7	0	5	.5	.08	.04
109	Rock Tree	6.4	9	20	5	.5	0	0
110	Triangle	6.3	8	12	5	.6	.28	.12
113	Indian Knife	6.3	10	20	5	.7	.15	.11
118	Canyon	-	11	-	-	-	-	-
121	Jordan	6.3	10	10	3	1.0	0	-
125	Big Butte	6.2	8	20	7	.6	.37	-
127	Desolation	6.2	8	15	4	.9	.20	-
151	Copeland	6.5	11	20	10	.3	.25	-
158	Hipshot	6.1	10	25	5	.5	.21	-
163	Wade	6.3	14	15	5	.6	.05	-

Table 2. Chemical attributes of lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location code [1]	Name of lake	pH	Conductivity (mhos)	Alkalinity (ppm)	Total hardness (ppm)	Silica (ppm)	Iron (ppm)	Total phosphate (P) t = trace (no units)
167	Farley	6.3	15	23	5	.8	.02	-
173	Green	6.4	9	0	2	.8	0	0
174	Summerville	6.3	8	0	3	.7	.09	.10
187	Queer	6.2	11	7	10	.7	.10	.10
190	Flatrock	6.5	11	5	5	.8	.11	.13
198	Forsaken	6.3	10	3	5	1.0	.12	.35
200	Alp	6.4	15	10	5	1.0	.05	.05
202	Crystal	6.3	15	10	8	.9	.20	.09
208	Trail	6.4	16	15	8	.5	.35	.11
209	Little Falls	6.2	11	10	3	.2	.10	.06
215	Cloverleaf	6.4	11	40	18	1.1	.05	.06
216	Cloverleaf	-	11	-	-	-	-	-
219	Tuesday	7.0	13	40	22	1.3	.07	.10
222	Arrowhead	6.8	11	45	22	.6	.11	.06
228	Renie	6.4	9	2	3	.7	.22	.02
229	Heidi	6.4	10	20	10	1.1	.05	.47
231	Burnt Bacon	6.2	15	10	8	1.3	.11	.13
232	Tiel	6.0	11	12	10	.4	.19	.20
234	Hidden	6.1	10	5	3	2.0	0	.47
235	Swede	6.3	10	9	5	1.3	0	t
237	Jasper	6.7	13	35	15	1.0	.09	.09
238	Unnamed	-	12	-	-	-	-	-

Table 2. Chemical attributes of lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location code [1]	Name of lake	pH	Conductivity (mhos)	Alkalinity (ppm)	Total hardness (ppm)	Silica (ppm)	Iron (ppm)	Total phosphate (P) t = trace (no units)
242	Lonesome	6.2	10	10	8	.6	0	.09
245	Albino	6.5	11	5	5	1.1	0	.06
246	Line	6.2	55	40	17	1.0	.07	.05

[1] See Figure 1 for locations.

Table 3. Plankton samples from lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range.

Location code [1]	Name of lake	Sample date	Volume of plankton cc/m^3	Number/m^3 of zooplankton	Number/m^3 of large zooplankton	Species of large zooplankton
5	Schoolmarm	08/10/76	1.29	158	120	D. shoshone
		07-20-78	2.20	135		
6	Lady of the Lake	08/31/78	.32	0		
7	Corner	04/09/76	.60	1,484		
		07-10-78	2.90	3,303		
8	Round	04/02/78	5.99	0		
		07/20/78	1.60	3,568		
10	Long	08/15/78	4.63	694		
11	Ovis	08/10/76	2.15	766		
		08/15/78	.47	239		
12	Bob	08/07/79	.22	314		
14	Star	08/15/78	3.19	1,053		
		08/07/79	2.80	3,783	1,326	D. pulex
15	Companion	08/16/78	5.40	287		
17	Swamp	08/31/78	1.10	176		
18	Wiedy	08/31/78	1.80	18	18	D. shoshone
18a	Mosquito	08/31/78	4.78	180	170	D. shoshone
22	Curl	08/10/79	.30	60		
24	Astral	08/07/79	1.60	33		
25	Green	08/29/78	.62	69		
28	Zimmer					
29	Lower Aero	08/16/76	8.91	2,958	1,470	D. shoshone
		08/29/78	.17	8	8	D. shoshone
31	Upper Aero	08/30/78	.15	23	23	D. shoshone
33a	Leaky Raft	08/30/78	.10	31		

Table 3. Plankton samples from lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location code [1]	Name of lake	Sample date	Volume of plankton cc/m^3	Number/m^3 of zooplankton	Number/m^3 of large zooplankton	Species of large zooplankton
34	Shelter	08/09/79	.22	651	45	D. shoshone
35	Lone Elk	08/30/78	.25	6		
36	Rough	08/09/79	.11	65		
44	Production	08/10/79	3.80	2,000		
45	Recruitment	08/20/78	.96	182	10	D. shoshone
					10	D. middendorffiana
47	Hunger	08/10/79	4.80	2,681	909	D. pulex
48	Sliver	08/31/78	1.54	113		
50	Cliff	09/06/73	2.60	2,166		
		09/31/78	.36	43	14	D. shoshone
52	Moccasin	08/31/78	1.44	57		
52a	Little Moccasin	08/10/79	5.70	6,778	1,436	D. shoshone
					5,112	D. middendorffiana
54	Surprise	08/10/79	8.3	5,882	1,304	D. shoshone
					5,495	D. middendorffiana
57	Sodalite	08/16/79	.06	308		
60	Kersey	04/02/78	.72	72	72	D. middendorffiana
61	Dollar	04/03/78	3.60	0	-	D. shoshone
				-		D. pulex
62	Sedge	04/02/78	2.60	212		
		07/19/78	2.69	323	323	D. shoshone
63	Aquarius	04/03/78	3.20	1,927		
		07/18/78	4.31	1,809	408	D. shoshone
66	Margaret	08/11/76	1.68	1,005		
		04/03/78	3.30	4,741		
		10/10/79	20.00	13,488	12,975	D. pulex
				103	103	D. shoshone
67	Lillis	08/11/76	.96	215		

Table 3. Plankton samples from lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location code [1]	Name of lake	Sample date	Volume of plankton cc/m^3	Number/m^3 of zooplankton	Number/m^3 of large zooplankton	Species of large zooplankton
68	Vernon	08/11/76	.48 3.30	72 0	-	D. pulex
70	Big Moose	08/26/75	6.50	144		
72	Widewater	08/11/76	9.97	598	-	D. pulex
73	Rock Island	04/07/78	1.12	11		
77	Russell	08/16/79	.03	82		
79	Leo	08/17/79	2.10	246	164	D. shoshone
81	Bald Knob	08/17/79	2.60	6,205	539	D. pulex
82	Skull	08/16/79	.03	33		
84	Picasso	08/17/79	2.90	2,843	1,177	D. middendorffiana
85	Dead Horse	08/17/79	.02	18		
91	Mermaid	08/17/79	3.30	566	348 218	D. shoshone D. middendorffiana
92	Ouzel	08/16/79	.04	0		
93	Lake of the Clouds	08/21/75 08/28/79	.90 .99	1,537 768	507	D. shoshone
96	Gallery	08/21/75 08/28/79	0 .03	0 56	46	D. middendorffiana
100	Lake of the Winds	09/07/73 08/28/79	4.50 .73	1,346 982	444 -	D. shoshone D. middendorffiana
101	Amphitheater	08/28/79	.39	0		
102	Mariane	09/07/73	5.40	539		
103	Otter	08/12/75	.40	115		
104	Rock Tree	08/12/75	.20	24	24	D. shoshone
105	Z Lake	08/29/79	-	-	-	D. shoshone

Table 3. Plankton samples from lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location code [1]	Name of lake	Sample date	Volume of plankton cc/m^3	Number/m^3 of zooplankton	Number/m^3 of large zooplankton	Species of large zooplankton
110	Triangle	08/12/75	6.20	957	479	D. middendorffiana
111	Unnamed	08/29/79	-	-	-	D. middendorffiana
113	Indian Knife	08/12/75	.60	431		
118	Canyon	09/06/73	4.80	3	1	D. shoshone
		04/04/78	.98	0		
121	Jorden	08/22/75	1.80	1,785		
123	Widowed	08/12/75	4.50	299		
124	Anchor	08/13/75	.50	41		
		08/29/79	2.05	862	21	D. shoshone
					205	D. middendorffiana
125	Big Butte	08/13/75	.10	29		
		08/28/79	.78	140		
126	Unnamed	08/13/75	.40	40		
127	Desolation	08/29/79	.02	23	23	D. shoshone
138	Unnamed	08/22/75	1.20	60	60	D. shoshone
151	Copeland	08/29/79	1.99	399		
158	Hipshot	08/28/79	.50	184	33	D. shoshone
163	Wade	08/29/79	7.18	7,237		
167	Farley	08/28/79	.22	112		
173	Green	08/22/79	.29	57		
174	Summerville	08/22/79	1.12	0		
187	Queer	08/22/79	.02	0		
190	Flatrock	08/22/79	.03	53	27	D. shoshone
					27	D. middendorffiana

Table 3. Plankton samples from lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location code 1/	Name of lake	Sample date	Volume of plankton cc/m^3	Number/m^3 of zooplankton	Number/m^3 of large zooplankton	Species of large zooplankton
200	Alp	08/22/79	.03	0		
202	Crystal	08/22/79	6.90	1,644	1,552	D. shoshone
208	Trail	08/21/79	3.00	658	30	D. shoshone
					90	D. middendorffiana
209	Little Falls	08/22/79	.08	154		
214	Wall	09/06/78	.12	0		
		08/21/79	.30	60		
215	Cloverleaf	09/06/78	.84	27		
216	Cloverleaf	09/06/78	.01	9		
		08/21/79	.02	139		
218	Wednesday	09/07/78	0	0		
219	Tuesday	09/06/78	0	0		
220	Unnamed	09/06/78	0	0		
228	Renie	08/23/79	.02	3,650		
229	Heidi	08/23/79	.04	341		
231	Burnt Bacon	08/23/79	.07	130		
232	Tiel	08/23/79	1.16	417	23	D. middendorffiana
234	Hidden	08/31/76	5.13	3,596	428	D. shoshone
					3,168	D. middendorffiana
235	Swede	08/31/76	2.05	1,470	34	D. shoshone
					205	D. middendorffiana
236	Golden	09/06/78	17.95	3,135	527	D. middendorffiana
237	Jasper	09/07/78	-	-	-	D. shoshone
						D. middendorffiana
		08/24/79	6.00	1,268	933	D. shoshone
					335	D. middendorffiana

Table 3. Plankton samples from lakes in the Clarks Fork River drainage of the Beartooth Mountain Range (Continued).

Location code [1]	Name of lake	Sample date	Volume of plankton cc/m^3	Number/m^3 of zooplankton	Number/m^3 of large zooplankton	Species of large zooplankton
238	Unnamed	09/07/78	0	0		
242	Lonesome	08/24/79	.10	838	20	D. shoshone
245	Albino	09/01/76	.34	0		
		09/07/78	.11	22	11	D. shoshone
		08/24/79	.09	38		
246	Line	06/27/76	4.62	5,960		
		06/29/78	1.00	718		
		07/06/79	23.50	18,668		
	Upper Sheep-herder, Wyoming	03/06/76	11.00	1,199	1,199	D. pulex

See Figure 1 for locations.

Fisheries

At the time this report was written, 31% (132) of the 426 lakes had a fishery. If all stocking were ended and the existing hatchery fish aged out and died, the 426 lakes in the drainage would have the following:

Number of lakes	Fisheries status
1	lake trout, brook trout mixed
57	brook trout (EB)
2	grayling (GR)
5	cutthroat trout (CT)
294	fishless
4	rainbow trout (RB), EB, GR mixed
3	RBxCT hybrids (H_2)
3	RB, EB mixed
1	CT, GT mixed
10	CT, EB mixed
2	CT, GR mixed
1	EB, CT, GR mixed

At present, another 30 lakes are periodically stocked with cutthroat trout (and one with rainbow trout) to maintain a fishery. Under a no-management option, it is assumed that the above fish distribution (89 lakes) would remain reasonably static; fish densities would, however, be expected to fluctuate. Mixed fisheries would ultimately favor brook trout dominance where they are present with possible elimination of those species in cohabitation.

The stocking history for those plants with records (Table 4) is quite incomplete. During the late 1930's, an account of the first stocking of rainbow trout by Paul Tarrant, Billings, Montana was described by Herman Hendrickson (Marcuson 1980). Brook trout 2-5 inches in length were hauled from the state hatchery at Big Timber to the Billings Municipal Airport and flown to three remote lakes 2 miles east of Goose Lake and 1 mile southeast of Grasshopper Glacier. The position best describes Upper and Lower Aero lakes and Rough Lake. A plant of 15,000 trout was made in 4 hours' flight time.

Brook trout, some albinos, were stocked in the late 1930's along the Goose Lake jeep trail. These fish provided stock for many subsequent transplants made primarily by Tommy Garrison, Cooke City, Montana.

Numerous other plants of brook trout were made by ranchers, prospectors and members associated with the Red Lodge Rod and Gun Club. These brook trout were transplanted from the holding area at old Richel Lodge to lakes in Wyoming and Montana. Fish were hauled on horseback to several lakes in the Tiel-Green-Lake Elaine area of the Clarks Fork Drainage.

Table 4. Fish planted by the State of Montana in lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range.

Location code [1]	Name of lake	Number of fish	Species and strains [2]	Number/acre	Date planted	Comments
1	Broadwater	4,000	ct'y	2857	7/22/69	
	Meadow	6,795	RB	4853	7/15/41	
5	Schoolmarm (Upper Mud)	450	CT'M	150	8/17/77	One time plant
7	Corner	1,002	CT'M	90	8/7/80	One time plant
8	Round	3,570	RB	115	6/14/49	
		4,000	CT'Y	129	9/7/46	
		13,888	CT'Y	448	8/9/41	
		10,000	EB	322	8/26/40	
		7,720	EB	249	8/17/39	
		15,550	EB	501	9/8/33	
10	Long	10,396	CT'Y	873	8/9/41	
		11,400	EB	957	8/26/40	
		4,900	EB	411	8/17/38	
		6,255	EB	525	7/25/36	
		7,500	EB	630	9/11/33	
11	Ovis	1,294	CT'M	150	8/3/88	
			CT'M		1985	
		666	CT'M	77	7/28/82	
		638	CT'M	74	8/16/79	3 year rotation
		215	CT'M	74	8/10/76	
		500	CT'Y	58	8/27/70	
12	Bob	16,800	CT'Y	7304	8/21/36	
14	Star	789	CT'M	99	8/3/88	
		800	CT'M	101	8/18/84	
		790	CT'M	100	8/10/76	
		1,000	CT'Y	126	8/27/70	4 year rotation
		4,060	CT'Y	513	10/14/64	
		5,575	RB	705	8/30/59	
		10,000	eb	1265	8/23/40	
17	Swamp	1,300	CT'M	125	8/7/89	
		500	GR	48	8/5/85	
		1,000	CT'Y	96	8/27/70	
		1,000	CT'Y	96	7/26/67	
18	Wiedy	875	CT'M	123	8/7/89	
		300	GR	42	8/5/85	

Table 4. Fish planted by the State of Montana in lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location code [1]	Name of lake	Number of fish	Species and strains [2]	Number/acre	Date planted	Comments
18A	Mosquito	200	GR		8/5/85	Stock with grayling
19	Marsh	375	CT'M	98	8/7/89	
		402	RB	105	8/7/80	6 year rotation
23	Broadwater	7,500	EB	80	9/1/33	
28	Zimmer	2,600	ct'm	100	8/18/84	8 year rotation
		4,550	CT'M	175	8/10/76	
		3,010	CT'Y	115	8/1/68	
31	Upper Aero	29,180	CT'M	153	8/18/88	
		29,264	CT'M	154	8/18/82	
		29,250	ct'm	154	8/6/76	6 year rotation
		31,000	CT'Y	158	8/2/69	
		2,110	CT'Y	11	8/5/59	
		16,000	CT'Y	84	9/7/46	
33A	Leaky Raft	850	CT'M	100	8/18/84	
		425	CT'M	50	8/10/76	8 year rotation
36	Rough	4,320	EB	42	8/17/38	
37	Sky Top	50,000	GR	eggs	7/20/55	Stock GT when available
39	Sky Top	50,000	GR	EGGS	7/20/55	Stock GT when available
51	Little Washtub	200	GR	90	8/5/85	Survey in 1991
54	Surprise	400	CT'M	56	8/7/89	
		708	CT'M	99	7/22/85	8 year rotation
		700	CT'M	98	8/17/77	
		1,300	CT'Y	183	7/23/68	
54A	Weasel	394	CT'M	106	8/13/90	8 year rotation
		547	CT'M	127	8/16/79	
55	Stash	406	CT'M	130	8/2/83	8 year rotation
57	Sodalite	2,110	CT'Y	81	8/5/59	EB now in lake. Overcrowded. Plant Lt

Table 4. Fish planted by the State of Montana in lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location code [1]	Name of lake	Number of fish	Species and strains [2]	Number/acre	Date planted	Comments
60	Kersey	5,000	LT	42	7/14/81	
		22,675	CT'Y	192	6/11/69	
		4,600	EB	38	7/14/47	
		12,420	EB	105	8/4/41	
		20,000	EB	169	8/23/40	
		8,000	EB	67	7/25/39	
		9,100	EB	77	9/5/33	
63	Aquarius	600	CT'M	51	8/17/7	
		2,000	CT'Y	172	8/27/70	Appears to be SS [3]
		3,000	CT'Y	258	7/28/67	
		20,000	GR	EGGS	7/20/55	
66	Margaret	534	CT'M	136	10/8/90	
		490	CT'M	125	8/7/89	
		529	CT'M	135	8/5/81	6 year rotation
		1,600	CT'M	410	8/24/78	
		1,320	CT'Y	338	8/9/72	
		1,760	CT'Y	451	8/29/55	
73	Rock Island	13,633	CT'M	99	8/13/90	
		13,723	CT'M	100	8/13/87	
		13,700	CT'M	100	8/18/84	
		5,995	CT'M	43	8/5/81	3 year rotation
		26,119	CT'M	190	8/7/80	
		13,700	CT'M	100	7/23/77	
		5,040	CT'M	36	8/27/74	
		15,290 (Avg)	CT'Y	111	Avg 1942-72	
		10,133 (Avg)	EB	73	1933-39	
79	Leo	3,120	CT'Y	367	8/23/68	SS
84	Picasso	1,500	GT	185	9/15/84	Status unknown stock GT when available
		2,200	CT'Y	271	8/4/71	
89	Stephanie	1,392	CT'M	100	8/13/90	8 year rotation
		2,778	CT'M	199	7/28/82	
91	Mermaid	683	CT'M	100	8/13/90	8 year rotation
		695	CT'M	102	7/28/82	

Table 4. Fish planted by the State of Montana in lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location code [1]	Name of lake	Number of fish	Species and strains [2]	Number/acre	Date planted	Comments
92	Ouzel	525	CT'M	150	8/7/89	
			CT'M		1985	4 year rotation
		423	CT'M	120	8/5/81	
		400	CT'M	114	8/17/77	
		1,100	CT'Y	314	8/5/71	
93	Lake of the Clouds	2,364	CT'M	100	8/13/90	
		3,500	CT'M	148	8/18/84	6 year rotation
		2,360	CT'M	100	8/10/76	
		1,000	CT'Y	42	7/26/67	
96	Gallery	1,480	RB	200	9/7/89	Re-evaluate
		1,608	RB	217	8/7/80	before 1997
100	Lake of the Winds	4,087	CT'M	100	7/22/85	8 Year rotation
		4,000	CT'M	98	8/17/77	
		10,052	GT	246	9/26/56	
103	Otter	456	RB	7	7/17/56	EB introduced by T. Garrison
104	Rock Tree	2,065	GT	114	8/18/82	Stock GT when
		2,510	CT'Y	138	7/23/68	available
110	Triangle	1,000	CT'M	158	8/13/87	8 year rotation
		1,026	CT'M	162	8/17/79	Survey 1991
113	Indian Knife	300	GR	56	8/5/85	Survey 1992
121	Jorden	7,230	CT'M	200	8/5/81	SS
		4,000	CT'Y	111	7/28/67	
		2,110	CT'Y	58	8/1/59	
125	Big Butte	5,600	GT	253	8/18/82	Stock GT when
		7,500	CT'Y	339	7/30/68	available
126	Upper & Lower Whitney	3,250	GT	902	9/24/82	
127	Desolation	6,500	GT	207	9/24/82	Stock GT when
		5,530	GT	176	8/18/82	available
146	Cliff	10,000	GR	eggs	7/20/55	SS

Table 4. Fish planted by the State of Montana in lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location code [1]	Name of lake	Number of fish	Species and strains [2]	Number/acre	Date planted	Comments
149	Skeeter	500	GR	46	8/5/85	
150	Spaghetti	300	GR	47	8/5/85	
151	Copeland	21,000	CT'Y	583	8/15/34	EB SS
158	Hipshot	1,000	CT'M	104	8/13/87	
		1,026	CT'M	106	8/17/79	8 year rotation
173	Green	11,900	EB	333	8/1/37	SS
190	Flat Rock	7,392	CT'M	199	7/29/86	8 year rotation
		8,000	CT'M	216	8/24/78	
		10,010	CT'Y	270	7/23/68	
198	Foresaken	4,578	CT'M	150	7/22/85	8 year rotation
		3,700	CT'M	121	8/17/77	
200	Alp	311	CT'M	111	8/13/87	EB also present
		319	CT'M	113	8/17/79	8 year rotation
202	Crystal	2,730	CT'M	99	7/29/86	8 year rotation
		4,000	CT'M	145	8/24/78	
		8,500	CT'Y	309	8/1/68	
208	Trail	710	CT'M	100	8/13/87	8 year rotation
		708	CT'M	99	8/17/79	
210	Wright	9,600	EB	1215	8/1/37	
211	Martin	6,620	EB	210	8/4/37	
		4,000	EB	127	8/27/37	EB SS
		8,400	CT'Y	267	8/21/36	
216	Cloverleaf	11,440	CT'M	478	9/8/75	Stock 3 yr. After
		18,282	CT'M	764	9/8/75	die out - fish
		3,000	CT'Y	125	7/29/67	stocked in 3
		8,400	CT'Y	351	8/30/36	lakes(215,16&223)
227	Kidney	1,600	EB	571	7/27/37	SS
234	Hidden	11,500	EB	974	8/6/37	CT & GT now occupy lake
235	Swede	1,168	CT'M	98	8/3/88	8 year rotation
		1,179	CT'M	99	8/7/80	

Table 4. Fish planted by the State of Montana in lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location code 1/	Name of lake	Number of fish	Species and strains 2/	Number/acre	Date planted	Comments
236	Golden	3,080	CT'M	62	7/29/86	8 year rotation
		7,052	CT'Y	144	8/1/68	
237	Jasper	5,465	CT'M	99	8/13/90	
		5,788	CT'M	105	7/28/82	8 year rotation
		7,200	CT'M	131	8/27/74	
		7,040	CT'Y	128	8/27/68	
242	Lonesome	15,860	EB	449	8/2/37	EB SS
		6,600	RB	186	8/24/36	
245	Albino	7,800	CT'M	198	8/13/87	
		7,778	CT'M	198	8/2/83	
		8,000	CT'M	204	8/24/78	4 year rotation
		8,060	CT'M	205	8/10/75	
		7,920	CT'M	202	8/24/74	
		4,000	CT'Y	102	7/28/67	
		2,110	CT'Y	53	8/5/59	
		5,000	EB	127	7/25/40	
246	Line	710	CT'M	151	8/13/87	
		761	CT'M	161	8/2/83	
		433	CT'M	92	7/28/82	
		324	CT'M	68	8/7/80	4 year rotation
		600	CT'M	127	8/31/77	
		500	CT'Y	106	8/27/70	
		500	CT'Y	106	8/2/69	
		2,500	CT'Y	531	9/10/58	
		1,040	EB	221	8/27/38	
		4,400	EB	936	8/6/37	

1/ See Figure 1 for locations.

2/ CT'M = McBride cutthroat trout; CT'Y = Yellowstone cutthroat trout; GR = Arctic grayling; GT = Golden trout; LT - Lake trout; RB - Rainbow trout; EB = Brook trout.

3/ SS = Self-sustaining population.

The State of Montana, Department of Fish and Game, started stocking lakes with their own airplane in the 1940's. Brook trout were flown to Sodalite Lake in 1959, introducing the species to yet another area within the drainage.

From all the brook trout plants, fish were available for transplants, and connected waters were soon invaded by the species. Numerous waters were and still are the result of these early introductions of brookies.

Rainbow trout were planted by the Department in several waters in the drainage. These fish are still evident in Fox, Widewater, Canyon and the other Crazy lakes downstream. The species was also introduced in other lakes in 1959, but were wiped out after brook trout were introduced and out-competed the rainbow trout.

More recent plants include the introduction of grayling in 1955 to Aquarius, Sky Top and Cliff lakes. Present distribution has shifted these species downstream from these sites (Marcuson 1974). Plants now are almost exclusively cutthroat trout (Table 4).

In addition to cutthroat plants, other introductions made since 1980 include rainbow trout into Gallery Lake and lake trout into Kersey Lake. Rainbow trout from Gallery Lake have moved downstream into one unnamed lake and into Cradle Lake. Arctic grayling were introduced into Little Washtub, Indian Knife, Swamp, Mosquito, Skeeter, Spaghetti and Wiedy lakes. Golden trout were planted into Big Butte, Desolation, Picasso, Rock Tree and Upper and Lower Whitney lakes. The status of most of these introductions is unknown at this time, and all are scheduled to be surveyed.

Six lakes have or had cutthroat trout populations that are yet unexplained. No hatchery records explain their origin. Plants in Lake of the Clouds, Big Butte and Zimmer Lakes are assumed to be stocking errors from air plants.

During 1988 and 1989 (Poore & Frazer 1990), a voluntary trailhead creel information survey was implemented at the major access points to the Absaroka-Beartooth Wilderness Area (A-B). That study showed, in spite of liberal fish limits for the A-B Mountains, anglers kept only 26% of their catch in 1988 and 27% in 1989. Anglers release three out of four fish they presently catch without being required to by restrictive regulations. By a four to one majority, those fishermen responding to the survey wanted to see the present liberal fish limits retained in the A-B.

A-B anglers kept 35% of the brook trout they caught, 24% of the rainbows and 22% of cutthroat. The average catch per hour for each fish species was; 0.94 for cutthroat trout, 0.72 for rainbow trout, and 1.27 for brook trout. Catch rates for 1988 and 1989 were identical with 2.6 fish per hour on lakes, 4.3 fish per hour on streams, and 2.4 fish per hour for people fishing both lakes and streams.

MANAGEMENT RECOMMENDATIONS FOR LAKES IN THE CLARKS FORK RIVER DRAINAGE

Brook trout are by far the most numerous fish species in the 102 lakes with fish. No additional lakes are recommended for this prolific species. Ideally, the fishery of this drainage would be enhanced if brookies were replaced by other trout in some subdrainages. Practically, such an undertaking would be prohibitive and in many circumstances next to impossible. One lake, Companion #15, has however been recommended for extermination of brook trout and replacement with grayling. The brook trout population has been reduced to only a few individuals and only a minimal amount of rotenone would be needed to completely eliminate the existing fishery.

Experimental applications of rotenone have reduced the stunted population of brook trout in Long Lake. The food base has made some recovery and fish growth was improved enough that it is receiving some renewed angling interest. By applying rotenone under the ice in March or April when the lake is low in dissolved oxygen, a small amount of this expensive chemical had a significant impact. This technique should be used periodically on certain waters containing severely stunted populations of fish.

Another alternative is the use of a predator to control overpopulation. Marcuson recommended lake trout (Salvelinus namaycush) for Kersey and Otter lakes to help control overpopulation of brook trout. Lake trout were introduced into Kersey Lake in 1981 and appear to be helping to control brook trout numbers. The average size of the brook trout has also increased since the lake trout were planted. Based on the Kersey Lake success, lake trout are recommended for introduction into Sodalite and Mariane lakes. Both these waters have stunted brook trout populations and physical features similar to those of Kersey Lake. Otter Lake was removed from the planting recommendations because a 1990 survey determined the brook trout were an acceptable size and appeared healthy. These introductions of a piscivorous species should be monitored to evaluate effectiveness and potential for other lakes with stunted brook trout populations.

It is not to be implied that brook trout are wholly undesirable in Beartooth waters. First, little can be done to alter their overwhelming presence and second, they provide considerable angling opportunity and camp fare. It is regrettable that they were not confined to closed lake systems which would have provided ample opportunity to fish for this species.

At present, grayling reside alone in eight lakes and in combination with other species of fish in thirteen lakes. Grayling occur in limited numbers in several other drainage areas of the Absaroka-Beartooth Study Area. The status of grayling does not appear to be endangered, but efforts to find suitable habitat to disperse distribution is advisable (Marcuson 1974). The most

stable isolated populations of grayling exist in Cliff and Lower Cliff lakes. The latter lake is only a pond environment and winterkills regularly, but is restocked by recruitment from Cliff Lake upstream.

Most lakes with grayling have shown continued declines in number. One may be hard pressed to find a grayling in the lower Broadwater system. Where grayling were once the dominant fish in size and number in Fox and Widewater lakes, they now occupy a subdominant role.

Because of declining numbers of grayling, availability of suitable habitat and special concern status, grayling were stocked in the following lakes: Swamp, Wiedy, Mosquito, Little Washtub, Indian Knife, Skeeter, Spaghetti and Burnt Bacon lakes (Table 5). It is too soon to know if these lakes have developed self-sustaining populations of grayling, but additional monitoring and plants are scheduled in all these lakes except Swamp and Wiedy, which were planted with cutthroat trout after the grayling died out.

In fewer waters, but with fair population abundance in the Clarks Fork River Drainage, are rainbow trout. In 1980, Gallery #96 was stocked with this species to add some angling diversity and attraction to a geographic area not readily used by people. Gallery and Cradle, located downstream, are the sole lakes in the drainage containing only rainbow trout.

With the exception of the 1920's introductions of brook trout into the Clarks Fork Drainage, the next fish species introduced was the golden trout. During the summer of 1938 an unknown number of golden trout fry were stocked in Jasper Lake. These fish were originally from Cottonwood Lakes in California, shipped via the National Fish Hatchery in Bozeman, Montana. These fish matured and subsequently invaded Golden Lake (hence, its name) and Hidden Lake downstream. A remnant population of goldens coexisting with cutthroat trout still occupies Hidden Lake. On September 26, 1956 a transplant of goldens from Sylvan Lake was stocked in Lake of the Winds. These fish provided a unique fishery in Lake of the Winds until 1970 when they died out as 14-year-old fish.

A study of this species revealed that golden trout populations statewide in Montana and nearby states are very limited (Marcuson 1984). By legislative action in California, no golden trout eggs were to be shipped out of California after 1939 (McCloud 1943).

It was also learned that goldens were long-lived fish, that natural reproduction occurred in outlet streams with gravels containing less than 1% of silt-sized materials along shoal areas under the influence of moving outlet water (Marcuson 1984). A search of suitable habitat for goldens in the Absaroka-Beartooths revealed few vacant niches. The lakes with the most suitable

Table 5. Species distribution, average length, population status and latest survey date for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range.

Location code [1]	Name of lake	Fish species [2]	Average catch/net	Average length	Sustaining population	Stocked population	Survey date
01	Broadwater Meadow	EB,GR,CT	0	-	X		09/05/75
05	Schoolmarm Lake	CT	0	-			07/19/78
06	Lady of the Lake	EB	45	7.7	X		08/07/69
07	Corner Lake	CT L Chub	14 6	8.7 6.2	X X		08/11/88
08 & 09	Round Lake	EB CT	17 2	9.4 7.1	X X		09/15/87
10	Long Lake	EB	12	7.8	X		09/15/87
11	Ovis Lake	CT EB	0 14	0 10.4	 X	X	09/15/87
12	Bob Lake	EB	4	7.7	X		07/29/69
13	Dick Lake	EB	8	8.1	X		07/29/69
14	Star Lake	CT	20	10.2		X	07/24/90
15	Companion Lake	EB	24	9.2	X		08/27/80
16	Unnamed	EB	0	-			07/90
17	Swamp	GR CT	0	-		X	07/14/89
18	Wiedy	GR CT	0	-		X	07/19/89
18a	Mosquito	GR	0	-		X	07/28/89
19	Marsh	RB CT	0	-		X	1989
20	Broadwater	GR EB	0	-	X		09/05/75
21	Broadwater	GR EB	0	-	X		09/05/75
22	Curl	EB	55	7.4	X		08/29/73

Table 5. Species distribution, average length, population status and latest survey date for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location code [1]	Name of lake	Fish species [2]	Average catch/net	Average length	Sustaining population	Stocked population	Survey date
23	Broadwater	GR	0	-			08/29/73
		EB	45	7.6	X		
24	Astral	EB	59	7.5	X		08/07/72
25	Green	EB	18	7.3	X		08/08/72
25a	Little Green	EB	0	-	X		08/08/72
28	Zimmer	CT	32	8.9		X	09/02/80
29	Lower Aero	EB	21	9.6	X		08/08/73
		CT	0	-		X	
31	Upper Aero	CT	15	10.8		X	07/29/87
33A	Leaky Raft	CT	6	14.3		X	09/09/81
34	Shelter	EB	24	7.6	X		08/08/73
35	Lone Elk	EB	25	7.8	X		07/29/87
		GR	0	-	?		
36	Rough	EB	35	8.3	X		07/29/87
		GR	0	-	?		
37	Sky Top Lakes	GR	0	-		X	08/09/73
44	Production	EB	19	9.1	X		08/05/73
45	Recruitment	EB	2	19.7			08/04/73
46	Pneumonia	None	0	-			07/30/87 08/04/73
47	Hunger	EB	37	7.2	X		07/19/73
48	Sliver	EB	2	19.5			07/18/73
48b	Unnamed (3)	EB	12	7.0	X		07/15/73
50	Cliff	EB	1	13.3	X		07/18/73

Table 5. Species distribution, average length, population status and latest survey date for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location code [1]	Name of lake	Fish species [2]	Average catch/net	Average length	Sustaining population	Stocked population	Survey date
51	Little Washtub	GR (stocked 1985)	0	-			07/19/73
52	Moccasin	EB	35	6.9	X		07/19/73
52a	Little Moccasin	EB	0	-	X		07/19/73
53	Sodalite Meadow	EB	0	-	X		07/09/72
54	Surprise	CT	9	12.8		X	07/30/87
54a	Weasel	CT	0	-		X	07/30/87
55	Stash	CT	3	11.9		X	07/30/87
57	Sodalite	EB	32	8.6	X		08/27/70
60	Kersey	LT EB	3 8	15.6 11.6	 X	X	08/15/89
61	Dollar	GR CT	9 0	8.3 -	X X		07/09/72
62	Sedge	GR CT	4 4	11.0 12.1	X X		07/19/78
63	Aquarius	CT	6	11.6	X		09/02/87
66	Margaret	CT	0	-		X	09/10/90
67	Lillis	EB	3	10.0	X		06/29/72
68	Vernon	EB CT	4 13	8.9 8.3	X X		06/29/72
69	Lower Vernon	EB CT	0	-	X		06/29/72
70	Big Moose	RB EB	17 6	11.1 7.3	X X		09/02/81
71	Big Moose Meadow	RB EB GR	0	-	X		08/27/75

Table 5. Species distribution, average length, population status and latest survey date for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location code [1]	Name of lake	Fish species [2]	Average catch/net	Average length	Sustaining population	Stocked population	Survey date
72	Widewater	RB	17	10.4	X		08/01/89
		GR	0	-	X		
		EB	19	8.8	X		
73	Rock Island	CT	9	10.7		X	07/29/72
		EB	4	14.5	X		
74	Fox	GR	1	9.3	X		07/31/89
		EB	15	9.2	X		
		RB	5	11.5	X		
77	Russell	EB	18	8.3	X		07/08/72
79	Leo	CT	10	10.2	X		08/22/90
80	Unnamed (2)	EB	0	-	X		09/04/75
81	Bald Knob	EB	77	7.2	X		08/26/70
82	Skull	EB	61	7.3	X		08/26/70
84	Picasso	GT	11	13.4		X	08/08/89
85	Windy	EB	27	7.5	X		08/25/70
89	Stephanie	CT	20	10.8		X	08/09/89
91	Mermaid	CT	3	16.8		X	08/08/89
92	Ouzel	CT	0	-		X	08/23/90
		EB	19	8.9	X		
93	Lake of the Clouds	CT	12	11.6		X	08/03/89
95	Cradle	RB	8	13.3		X	09/03/87
96	Gallery	RB	6	9.6		X	09/03/87
100	Lake of the Winds	CT	13	11.3		X	08/03/89
101	Amphitheater	EB	52	8.1	X		08/22/75
102	Mariane	EB	69	8.9	X		08/22/90

Table 5. Species distribution, average length, population status and latest survey date for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location code [1]	Name of lake	Fish species [2]	Average catch/net	Average length	Sustaining population	Stocked population	Survey date
103	Otter	EB	13	9.9	X		07/18/90
		GR	1	14.3	?		
104	Rock Tree	GT	0	-		X	08/22/90
			1	8.1		X	08/23/88
110	Triangle	CT	3	10.1		X	08/23/86
113	Indian Knife	GR	5	14.8		X	08/23/88
116	Farley Creek #1	CTXRB	0	-	X		09/05/73
117	Farley Creek #2	CTXRB	0	-	X		09/05/73
118	Canyon	CTXRB	3	11.0	X		08/21/86
119	Unnamed (2)	CT	0	-	X		08/14/75
120	Melody	CT	21	10.1	X		08/14/75
121	Jorden	CT	15	13.1	X		08/23/88
123	Widowed	GT	0	-			08/24/84
124	Anchor	GT	0	-			08/24/90
			1	8.5			08/24/84
125	Big Butte	GT	0	-			07/19/90
			40	8.2			08/24/88
127	Desolation	GT	0	-			07/19/90
			1	16.1			08/24/88
146	Cliff	GR	10	8.1	X		08/02/89
146a	Lower Cliff	GR	5	Fry	X		08/02/89
147	Granite	RB	9	11.8	X		08/03/90
		EB	41	8.2	X		
		CT	3	15.0	X		
149	Skeeter	GR	1	14.9		X	07/25/89
150	Spaghetti	GR	2	15.9			07/25/89

Table 5. Species distribution, average length, population status and latest survey date for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location code [1]	Name of lake	Fish species [2]	Average catch/net	Average length	Sustaining population	Stocked population	Survey date
151	Copeland	EB	2	8.8	X		08/19/75
158	Hipshot	CT	1	11.5			08/22/86
163	Wade	EB	22	9.1	X		08/15/75
163a	Wade, Jr.	EB	0	-	X		08/14/75
164	Midnight	EB	53	7.9	X		08/15/75
165	Unnamed	EB	0	-	X		08/14/75
166	Unnamed	EB	20	7.9	X		08/15/75
167	Farley	EB	20	9.9	X		08/14/75
168	Lake Elaine	EB	47	8.9	X		08/02/90
168a	Unnamed (7)	EB	0	-	X		08/13/75
172	Estelle	EB	21	8.5	X		08/21/74
		CT	1	14.2	X		
173	Green	EB	97	7.6	X		08/21/74
174	Summerville	EB	44	8.4	X		08/21/74
187	Queer	EB	99	8.0	X		08/22/74
190	Flat Rock	CT	21	10.1		X	07/26/89
198	Forsaken	CT	12	9.6		X	08/01/90
200	Alp	CT	1	17.5		X	07/30/85
		EB	15	7.1	X		
202	Crystal	CT	3	15.1		X	07/30/85
207	Robin	RB	3	9.8	X		08/20/74
		EB	29	9.9	X		
208	Trail	CT	1	12.7		X	07/29/85
209	Little Falls	EB	60	7.5	X		08/20/74

Table 5. Species distribution, average length, population status and latest survey date for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location code [1]	Name of lake	Fish species [2]	Average catch/net	Average length	Sustaining population	Stocked population	Survey date
210	Wright	EB	35	8.2	X		08/21/74
210A	Unnamed	EB	0	-	X		08/20/74
211	Martin	EB	37	7.6	X		08/20/74
214	Wall	EB	40	7.2	X		08/26/74
215 & 16	Cloverleaf	CT	16	10.0		X	09/11/81
217	Unnamed	CT	0	-			08/15/74
223	Cloverleaf	CT	16	10.0		X	09/11/81
227	Kidney	EB	10	7.4	X		08/26/74
228	Renie	EB	26	10.3	X		08/22/74
229	Heidi	EB	28	7.3	X		08/21/74
231	Burnt Bacon	Never Stocked	0	-		X	07/25/89
232	Tiel	EB	25	7.7	X		08/27/74
233	Unnamed (4)	CT EB	1 9	17.0 11.6	? X		08/28/74
234	Hidden	CT GT	20 0	10.8 -	X ?		07/14/89
235	Swede	CT	13	11.0		X	07/20/89
236	Golden	CT	26	13.8		X	07/18/89
237	Jasper	CT	6	17.2		X	07/18/89
242	Lonesome	EB	38	7.9	X		08/26/74
243	Abandoned	EB	38	8.2	X		08/27/74
245	Albino	CT	46	12.7		X	07/18/89
246	Line	CT	5	14.8		X	07/22/89

1) See Figure 1 for locations

2) CT = Cutthroat trout
GT = Golden trout
GR = Arctic grayling
EB = Brook trout
RB = Rainbow trout
LT = Lake trout

habitat in the study area appear to be in the Desolation to Jorden Lake chain of seven lakes. Another chain of lakes with potential for golden trout is the Cloverleaf Chain. Better areas exist in the Martin to Robin (Whitcomb Lake on new Forest Service map) lake chain, but this ideal water is saturated with brook trout.

Golden trout were planted into Desolation, Big Butte, Upper and Lower Whitney (all located in the Desolation to Jorden Lake chain) and Rock Tree lakes during 1982. Initial survival appeared good, but by 1990 no goldens were found in any of these lakes. Additional plants are scheduled for these lakes in 1991. Goldens introduced into Picasso Lake in 1984 are doing well and should be closely monitored. If the species fails in these lakes, they could be managed for cutthroat trout.

Because of the limited amount of suitable habitat available, high angler demand, and very limited distribution, golden trout are recommended for the Cloverleaf and Sky Top chains of lakes ((Table 6). Cloverleaf Lakes (#215, #216, and #223) were last planted with cutthroat in 1975. It was recommended to allow them to age-out because of a heavy trematode infestation. Sky Top Lakes (#1, #2, and #3) were planted with grayling in the 1950's, but the lakes are now barren. Goldens planted into both chains of lakes would be isolated from other fish species and would have the potential to establish self-sustaining populations. If the species fails in these waters, Sky Top Lakes should be allowed to revert back to barren status, and Cloverleaf Lakes should be managed for cutthroat trout.

The basic management fish in high country lakes is the cutthroat trout, because of its suitability, performance, endemic status, and availability and size when needed for aerial stocking. Stocking recommendations for this species are presented in Table 6. Swamp, Wiedy and Marsh lakes are recommended for cutthroat trout because of poor success with grayling plants in these lakes. Cutthroat trout plants in this table will represent the fluctuating fisheries in the drainage. The plan is for fish to be at various states of growth if stocked in nearby waters.

Table 6. Fish stocking proposed for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range.

Location code [1]	Name of lake	Next stocking year	Stocking frequency (years) [2]	Fish species and strain [3]	Number of fish	Number of fish/acre
11	Ovis	1991	3	CT'M	860	100
14	Star	1992	4	CT'M	800	100
17	Swamp	1995	6	CT'M	1040	100
18	Wiedy	1997	8	CT'M	710	100
18A	Mosquito	When Available	0	GR	200	66
19	Marsh	1995	6	CT'M	380	100
28	Zimmer	1992	8	CT'M	2600	100
31	Upper Aero	1992	6	CT'M	29180	100
33A	Leaky Raft	1992	8	CT'M	850	100
37	Sky Top	When Available	0	GR	2000	30
51	Little Washtub	When Available	0	GR	200	90
54	Surprise	1993	8	CT'M	700	98
54A	Weasel	1998	8	CT'M	394	106
55	Stash	1991	8	CT'M	400	129
57	Sodalite	When Available	0	LT	1290	50
66	Margaret	1996	6	CT'M	487	125
73	Rock Island	1993	3	CT'M	13700	100
84	Picasso	When Available	0	GT	1500	185
89	Stephanie	1998	8	CT'M	1392	100
91	Mermaid	1998	8	CT'M	683	100
92	Ouzel	1993	4	CT'M	525	150
93	Lake of the Clouds	1996	6	CT'M	2364	100
96	Gallery	1997	8	RB'D	1400	200
100	Lake of the Winds	1993	8	CT'M	4070	100

Table 6. Fish stocking proposed for lakes in the Clarks Fork River Drainage of the Beartooth Mountain Range (continued).

Location code [1]	Name of lake	Next stocking year	Stocking frequency (years) [2]	Fish species and strain [3]	Number of fish	Number of fish/acre
102	Mariane	When Available	0	LT	2540	50
104	Rock Tree	1991	0	GT	1810	100
110	Triangle	1995	8	CT'M	1000	158
113	Indian Knife	When Available	0	GR	300	56
125	Big Butte	1991	0	GT	2210	100
127	Desolation	1991	0	GT	3140	100
126	Upper Whitney	When Available	0	GT	360	100
149	Skeeter	When Available	0	GR	500	46
150	Spaghetti	When Available	0	GR	300	47
158	Hipshot	1995	8	CT'M	1000	104
190	Flatrock	1994	8	CT'M	3700	100
198	Foresaken	1993	8	CT'M	4575	150
200	Alp	1995	8	CT'M	300	107
202	Crystal	1994	8	CT'M	2750	100
208	Trail	1995	8	CT'M	710	100
216	Cloverleaf	When Available	0	GT	3665	50
235	Swede	1996	8	CT'M	1168	98
236	Golden	1994	8	CT'M	5000	102
237	Jasper	1998	8	CT'M	5465	99
245	Albino	1991	4	CT'M	7840	200
246	Line	1991	4	CT'M	705	150

1/ See Figure 1 for locations.

2/ 0 = One time plant; other numbers signify repetition in years.

3/ CT'M = McBride cutthroat trout; GT = Golden trout; GR = Arctic grayling; EB = Brook trout; RB = Rainbow trout; RB'D = DeSmet rainbow trout; LT = Lake trout.

Many lakes should be left in a fishless state as potential study areas, niches for future fisheries sites or areas undisturbed by outside influences (Marcuson 1976). Of the 294 lakes presently fishless, 52 have fisheries potential. If this plan was carried out, the drainage would have the following:

Status	Number of Lakes	Percent
Brook trout (EB)	54	
Cutthroat trout (CT)	31	
Rainbow trout (RB)	2	
Grayling (GR)	8	32
Golden trout (GT)	14	
Mixed species[1/]	27	
Barren	290	68

[1/]Includes: LT, EB - 3; RBxCT (H_2) - 3; RB, EB - 3; RB, EB, GR - 4; GT, CT - 1; CT, EB - 10; CT, GR - 3 (LT = lake trout).

Many stream fisheries exist in the Clarks Fork Drainage, much more so than typical of the majority of the Absaroka-Beartooth Study Area. It is unlikely that any of these waters had any indigenous stocks. The gradient of the Clarks Fork River channel east of Sunlight Basin probably deterred any natural upstream movement of fish. Most of the streams have brookies. Rainbow trout occupy Crazy and Lake creeks, and grayling are found in Cliff Creek. Distribution of the species follows introductions into the lentic habitats.

Numbers of people using the drainage have been increasing steadily since the early 1970's. Associated with this increased traffic has been an increase in the number of anglers. Implementation of more restrictive regulations throughout the entire A-B Wilderness at this time is not warranted because: 1) Use is restricted by difficult access and the large number of lakes containing fisheries. Maintained trails lead to less than half the lakes with fish. 2) Many A-B lakes need more harvest because they contain overabundant populations of brook trout and (in some lakes) Yellowstone cutthroat. 3) Unlike most wilderness lakes many A-B lakes are uniquely fertile and productive. Even with liberal limits, optimum harvest has not been reached. 4) Our trailhead creel survey indicates people are regulating their own harvest and prefer this to being required to follow unnecessarily stringent regulations.

Several areas along major trails (especially where horses are allowed) are showing signs of overuse and may require some type of special management. Most A-B wilderness users, however, are satisfied with present management and the resource is in excellent shape.

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