

HISTORY OF TRANSPLANTING MOUNTAIN GOATS AND MOUNTAIN SHEEP – WYOMING

KEVIN P. HURLEY, Wyoming Game and Fish Department (WGFD), 356 Nostrum Road, Thermopolis, WY 82443

ROCKY MOUNTAIN GOATS

Two populations of Rocky Mountain goats have been established in Wyoming, due to immigrant goats entering Wyoming from out-of-state transplants. The Clarks Fork herd in northern Wyoming's Beartooth Mountains was established via immigration from a 1942 Montana Fish, Wildlife, and Parks (MTFWP) transplant of 14 goats into the Beartooth Mountains west of Red Lodge (Cooney 1946, Hanna 1989). Current estimates suggest 150-175 mountain goats occupy the Wyoming portion of the Beartooth Mountains.

A small but expanding herd of 15-30 mountain goats exists in the Snake River Range between Alpine and Wilson, southwest of Jackson, Wyoming. This herd started from goats moving into Wyoming from 1969, 1970, and 1971 transplants of at least 12 goats by the Idaho Department of Fish and Game (IDFG) in the Palisades area of Idaho's Unit 67 (Hayden 1984).

In addition to these free-ranging populations, in 1956 and 1957 10 goats from Montana were placed in captivity at WGFD's Sybille Research Unit southwest of Wheatland (WGFD 1956). An unverified report indicates Sybille received 9 mountain goats from the Harney Peak area of South Dakota in 1960.

ROCKY MOUNTAIN BIGHORN SHEEP

The earliest known transplant of mountain sheep within Wyoming by WGFD was in 1934 (Helms 1974), when 20 bighorns were captured in Flat Creek Canyon, east of the National Elk Refuge. In a project largely initiated by the Sheridan Sportsmen's Club, these 20 sheep were transplanted into Paintrock Canyon on the west slope of the Bighorn Mountains.

Interestingly, in August 1944, 7 desert bighorn sheep from Nevada (presumably from the Desert Game Range) were released in the Sweetwater Rocks of central Wyoming (Kinter et al. 1992). This transplant is the only known release of desert sheep into Wyoming.

No further capture or movement of bighorn sheep occurred in Wyoming until 1949, when a trapping program began at Whiskey Basin, just southeast of Dubois. Trapping efforts were sporadic between 1949-1956, largely resulting in movement of bighorns to the Sybille Unit for captive uses. After 1956, trapping was done primarily for relocation purposes.

Between 1949-1995, 1,904 bighorn sheep (Table 1) were captured and removed from various portions of the Whiskey Basin winter range. Out of 1,904 sheep captured, 1,888 bighorns were successfully released into the wild. In 61 separate transplant actions, 1,489 bighorns were released within Wyoming's borders (Fig. 1), while 399 bighorn sheep have been provided to 5 western states (South Dakota, Utah, New Mexico, Idaho, and Nevada) in 22 separate transplant actions (Fig. 2).

The only other known importation of mountain sheep into Wyoming occurred in 1992, when 22 Rocky Mountain bighorns from Morgan Creek (near Challis, Idaho) were released in Shell Canyon on the west slope of the Bighorn Mountains (Easterly 1996).

Over the past 6 decades, Wyoming has actively transplanted Rocky Mountain bighorn sheep into occupied and unoccupied range, within and outside its boundaries. For the foreseeable future, Wyoming's 6,200 bighorns should remain an important component of the mountain sheep resource in western North America.

Table 1. Rocky Mountain bighorn sheep removed and transplanted from the Whiskey Basin winter range, Dubois, Wyoming, 1949-1995. *Out-of-state releases are italicized.*

Year	# Sheep Removed	# Sheep Released	Destination/Release Site	Additional Information/Reference
1949	7	7	Sweetwater Rocks	WGFD 1950; Kinter et al. 1992
1950	13	13	Sweetwater Rocks	WGFD 1950; Kinter et al. 1992
1956	7	7	Sybilie Research Unit	WGFD 1956
1957	31	31	Sybilie Research Unit	WGFD 1957
1958	9	2	Sybilie Research Unit	Hiatt 1978; Kinter et al. 1992
		7	Morgan Creek/Seminole Mtns.	
1959	21	4	Sybilie Research Unit	Hiatt 1978; Kinter et al. 1992
		13	Morgan Creek/Seminole Mtns.	
		4	Faintrock Creek/ Bighorn Mountains	
1960	6	6	Sybilie Research Unit	
1962	6	6	Sybilie Research Unit	
1963	39	18	Sybilie Research Unit	WGFD 1962
		21	N Fk Crazy Woman Creek/ Bighorn Mountains	
1964	91	21	Sinks Canyon/Wind River Mtns.	Ryder and Lanka 1996
		20	N Fk Little Laramie River/ Laramie Mountains	WGFD 1964; Hengel et al. 1992
		20	Pole Draw/Laramie Peak/ Laramie Mountains	WGFD 1964; Hengel et al. 1992
		18	N Fk Crazy Woman Creek/ Bighorn Mountains	WGFD 1963
		10	Sybilie Research Unit	
1965	110	15	Sybilie Research Unit	Ryder and Lanka 1996
		20	Sinks Canyon/Wind River Mtns.	
		20	Labonte Canyon/ Laramie Mountains	WGFD 1965; Hengel et al. 1992
		16	N Fk Little Laramie River/ Laramie Mountains	Hengel et al. 1992
		27	Faintrock Canyon/ Bighorn Mountains	Stelter 1983
		22	Custer State Park - South Dakota	
1966	71	18	Faintrock Canyon/ Bighorn Mountains	Stelter 1983
		21	Labonte Canyon/ Laramie Mountains	WGFD 1966; Hengel et al. 1992
		18	Sinks Canyon/Wind River Mtns.	Ryder and Lanka 1996
		14	Borelder Canyon/Mantua - Utah	
1967	18	18	Morgan Creek/Seminole Mtns.	Hiatt 1978; Kinter et al. 1992
1969	12	12	Inyan Kara Mountains/Black Hills	
1970	53	13	A-Bar-A Ranch, Saratoga	WGFD 1970; Haas 1979; Cook et al. 1990
		28	Savage Run, Saratoga	WGFD 1970; Haas 1979; Cook et al. 1990
		19	Wheeler Peak/Sangre de Cristo Mountains - New Mexico	
		1	Sandia Mountains - New Mexico	
		8	Hill Creek Extension/Uintah Curay Reservation - Utah	WGFD 1970
		23	Castle Creek/Absaroka Range	WGFD 1976; Oudin 1996
1971	13	13	Cherry Creek/Wind River Mtns.	Ryder and Lanka 1996
1973	123	39	Cherry Creek/Wind River Mtns.	WGFD 1973; Ryder and Lanka 1996
		17	Dennison Place/Absaroka Range	WGFD 1976
		27	Duck Creek/Laramie Mountains	WGFD 1973; Hengel et al. 1992
		18	Porcupine Creek/ Bighorn Mountains	WGFD 1973; Coates et al. 1990
1974	61	60	N Fk Powder River/Bighorn Mtns.	Loog 1980

Year	# Sheep Removed	# Sheep Released	Destination/Release Site	Additional Information/Reference
1975	16	16	Mount Mariah/Ruby Range-Nevada	
1976	113	98	M Fk Powder River/Bighorn Mtns.	Long 1980
		52	Encampment River Canyon/ Sierra Madre Mountains	Haas 1979; Cook et al. 1990
		11	Wheeler Peak/Sangre de Cristo Mountains - New Mexico	*(New Mexico has no record of this transplant action)
1977	17	17	Encampment River Canyon/ Sierra Madre Mountains	Haas 1979; Cook et al. 1990
1978	73	19	M Fk Powder River/Bighorn Mtns.	Long 1980
		27	Morgan Creek/Seminole Mtns.	Hiatt 1980; Kinter et al. 1992
		27	Big Lost River/Elbow Canyon/ Unit 50/Lost River Range - Idaho	
1980	111	61	Morgan Creek/Seminole Mtns.	Hiatt 1980; Kinter et al. 1992
		14	Stinking Springs/ Gros Ventre Range	Roby 1980
		11	Flat Creek/Gros Ventre Range	Roby 1980
		11	M Fk Powder River/Bighorn Mtns.	Long 1980
		11	Jaggles Canyon/Unit 50 Lost River Range - Idaho	
1981	79	35	Mt. Darby/Fish Creek Mountain/ Wyoming Range	Johnson 1981
		27	Mount Nebo - Utah	
		15	Mount Mariah/Ruby Range - Nevada	
1982	48	27	Laramie Peak/Laramie Mountains	Hengel et al. 1992, Rothwell 1982
		21	Mount Nebo - Utah	
1983	42	19	Bridger Creek/Unit 51 Little Lost River - Idaho	
		19	Bare Top Mountain/Uinta Mountains - Utah	
1984	72	22	Uhole Ike's Creek/Unit 51 Little Lost River - Idaho	
		18	Shoup Bridge/Unit 21 Salmon River - Idaho	
		17	Bare Top Mountain/Uinta Mountains - Utah	
		14	Deep Creek Range - Utah	
1985	100	100	Ferris Mountains	Kinter et al. 1992
1987	102	54	Sinks Canyon/Wind River Mtns.	Ryder and Lanka 1994
		25	Fish Creek Mtn./Wyoming Range	Wollrab 1987
		23	M Fk Popo Agie Creek/ Wind River Mountains	Ryder and Lanka 1994
1988	70	23	Sybilie Research Unit	
		47	Wind River Indian Reservation/ South Fork Little Wind River	USFWS 1995
1989	99	20	Marshall/Laramie Mountains	Bohne 1990; Hengel et al. 1992
		19	Encampment River Canyon/ Sierra Madre Mountains	Cook et al. 1990
		21	Sheep Creek/Uinta Mountains - Utah	
		23	Woop Lake/Uinta Mountains - Utah	
		16	Deep Creek Range - Utah	
1990	48	30	Three Creeks/Unit 18 Snake River - Idaho	
		17	Mount Mariah/Ruby Range - Nevada	
1992	26	26	Shell Canyon/Bighorn Mtns.	Easterly 1996
1993	70	28	Shell Canyon/Bighorn Mtns.	Easterly 1996
		42	Wind River Indian Reservation/ South Fork Little Wind River	USFWS 1995
1994	34	35	Shell Canyon/Bighorn Mtns.	Easterly 1996
1995	43	43	Wind River Indian Reservation/ Teeter Canyon/Wind River Canyon	USFWS 1995
Total 1,904 1,888 (1,489 In-state) 399 Out-of-state)				

Figure 1. IN STATE RELEASE SITES FOR ROCKY MOUNTAIN BIGHORN SHEEP TRAPPED AT/TRANSPLANTED FROM WHISKEY BASIN 1949-1995

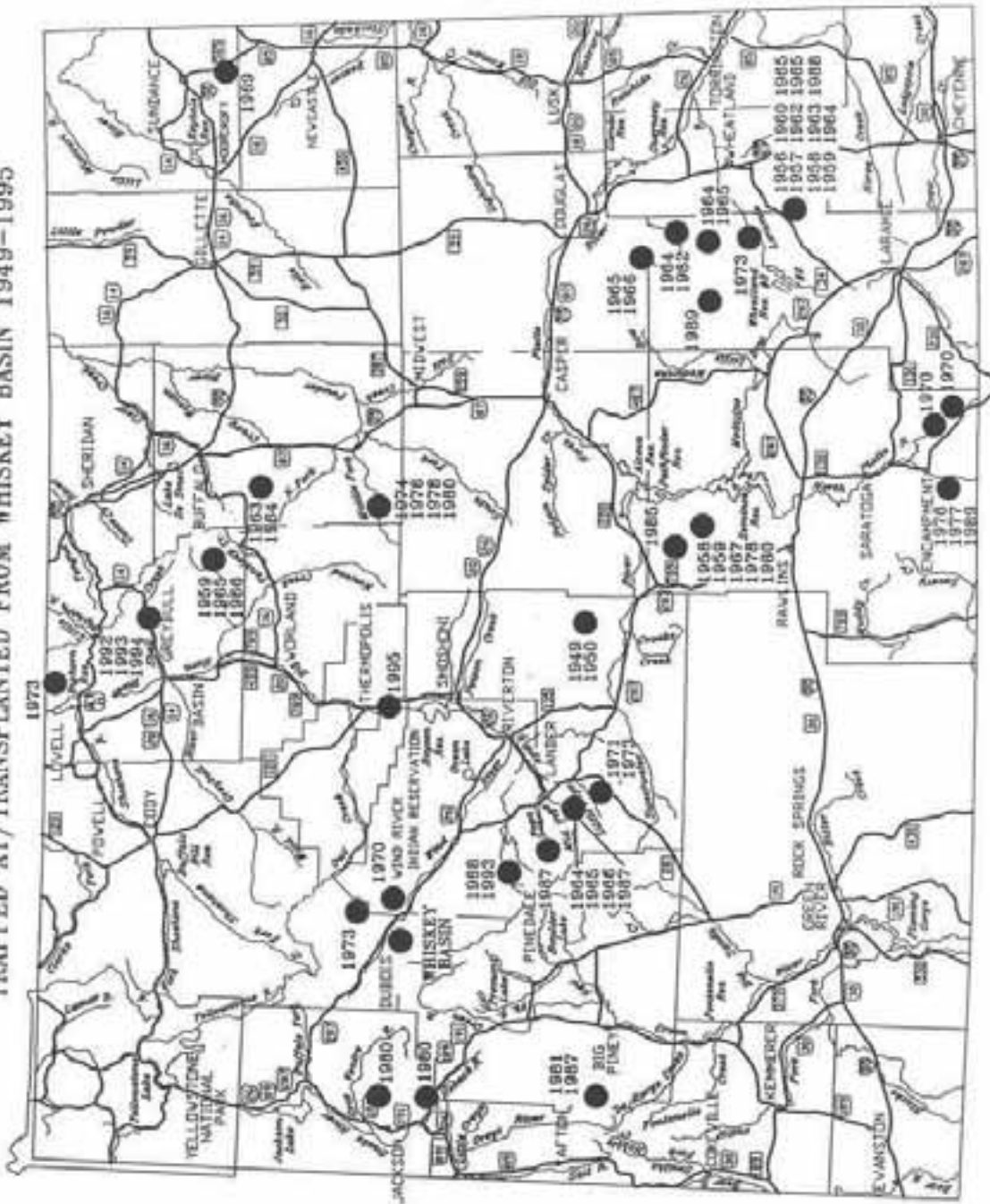
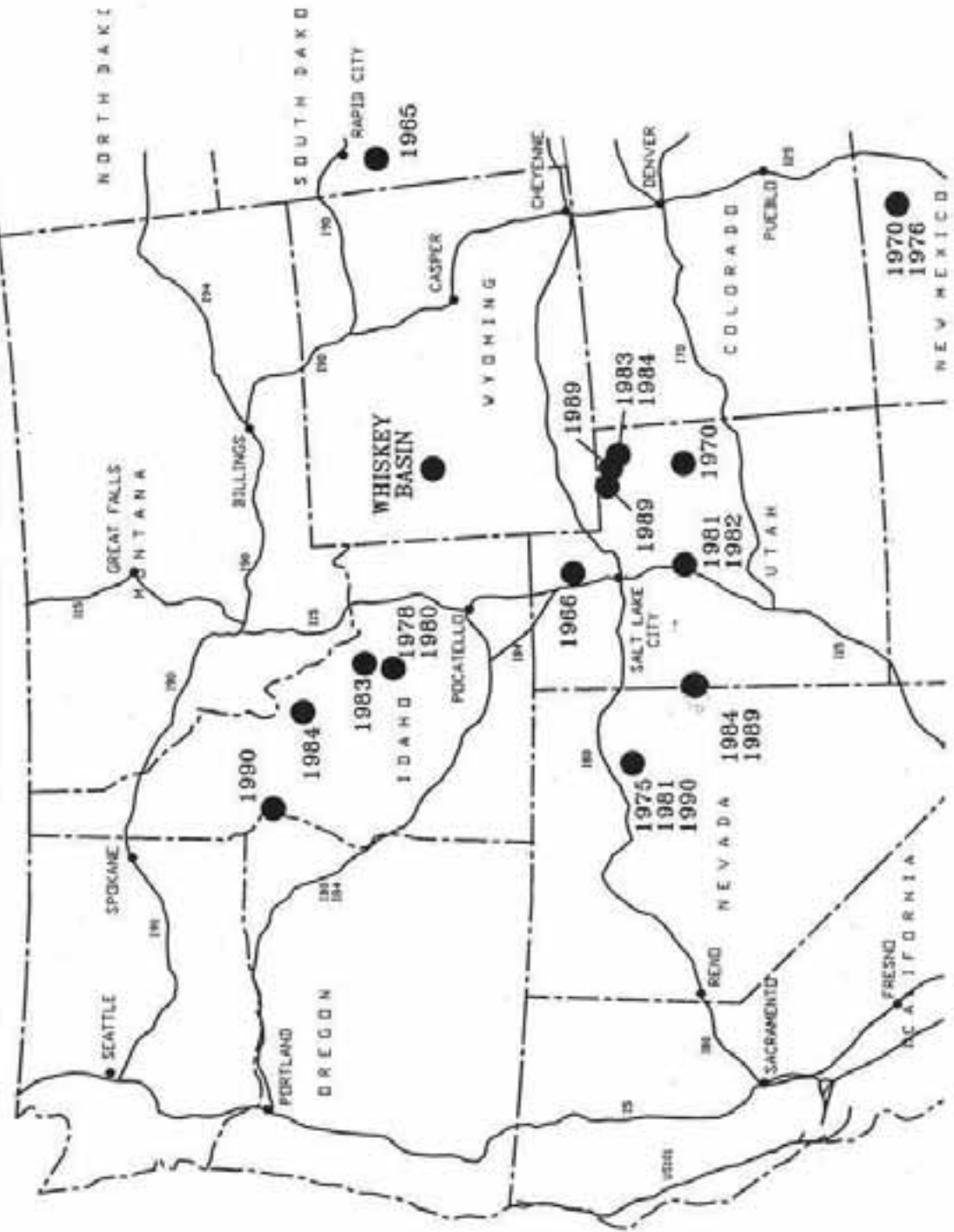


Fig. 2. OUT OF STATE RELEASE SITES FOR ROCKY MOUNTAIN BIGHORN SHEEP TRAPPED AT / TRANSPLANTED FROM WHISKEY BASIN, 1949-1995



LITERATURE CITED

- Bohne, J. 1990. Laramie Peak bighorn sheep. WGFD 1989 Annual Job Completion Report, District V, Laramie, WY.
- Coates, K. P., S. D. Schemnitz, and J. T. Peters. 1990. Use of rodent middens as mineral licks by bighorn sheep. Proc. Bienn. Symp. North. Wild Sheep and Goat Council. 7:206-209.
- Cooney, R.F. 1946. Trapping and transplanting mountain goats. Pp. 106-109 in 26th Ann. Proc. W. Assoc. State G&F Commissions.
- Cook, J. G., E. B. Arnett, L. L. Irwin, and F. G. Lindzey. 1990. Population dynamics of two transplanted bighorn sheep herds in southcentral Wyoming. Proc. Bienn. Symp. North. Wild Sheep and Goat Council. 7:19-30.
- Easterly, T. 1996. Shell Canyon bighorn sheep transplant. Final Project Report. WGFD, Greybull, WY.
- Haas, W. L. 1979. Ecology of an introduced herd of Rocky Mountain bighorn sheep in southcentral Wyoming. M.S. Thesis. Colorado State Univ., Fort Collins. 299pp.
- Hanna, J. 1989. Beartooth Mountain goat study. WY Cooperative Wildlife Research Unit, Laramie, WY. 24 pp.
- Hayden, J. 1984. Introduced mountain goats in the Snake River Range, Idaho: Characteristics of vigorous population growth. Proc. Bienn. Symp. North. Wild Sheep and Goat Council. 4:94-119.
- Helms, W. 1974. Wyoming's bighorn sheep transplants. Proc. North. Wild Sheep Council. Symp. 2:93-95.
- Hengel, D. A., S. A. Anderson, and W. G. Hepworth. 1992. Population dynamics, seasonal distribution and movement patterns of the Laramie Peak bighorn sheep herd. Proc. Bienn. Symp. North. Wild Sheep and Goat Council. 8:83-96.
- Hiatt, G. 1978. Ferris bighorn sheep. WGFD 1977 Annual Job Completion Report, District VI, Lander, WY.
- Hiatt, G. 1979. Ferris bighorn sheep. WGFD 1978 Annual Job Completion Report, District VI, Lander, WY.
- Hiatt, G. 1980. Ferris bighorn sheep. WGFD 1978 Annual Job Completion Report, District VI, Lander, WY.
- Johnson, B. 1981. Darby Mountain bighorn sheep. WGFD 1980 Annual Job Completion Report, District I, Jackson, WY.
- Kinter, L., G. Hiatt, and G. Stout. 1992. Ferris/Seminole bighorn sheep lambing study. Third Annual Report in WGFD 1991 Annual Job Completion Report, District VI, Lander, WY.
- Long, A. J. 1980. An unsuccessful bighorn sheep (*Ovis canadensis canadensis*) transplant on the Middle Fork of the Powder River, Wyoming. Proc. Bienn. Symp. North. Wild Sheep and Goat Council. 2:168-189.
- Oudin, J. 1996. Personal communication. WGFD, Cody, WY.
- Roby, G. 1980. Jackson bighorn sheep. WGFD 1979 Annual Job Completion Report, District I, Jackson, WY.
- Rothwell, R. 1982. Laramie Peak bighorn sheep. WGFD 1981 Annual Job Completion Report, District V, Laramie, WY.
- Ryder, T.J and B. Lanka. 1996. Temple Peak bighorn sheep study. Final Project Report. WGFD, Lander, WY.
- Stelter, V. 1983. Paintrock bighorn sheep herd. WGFD 1982 Annual Job Completion Report, District II, Cody, WY.
- USFWS. 1995. Status of bighorn sheep transplanted to the South Fork Little Wind River, Wind River Indian Reservation. Unpubl. report, Lander, WY.
- USFWS. 1996. Status of bighorn sheep transplanted to Wind River Canyon, Wind River Indian Reservation. Unpubl. report, Lander, WY.
- WGFD. 1950. Trapping and transplanting of bighorn sheep. Federal Aid Job Completion Report W-31-D-3, Work Plan No. 5, Job No. 1. 10pp.
- WGFD. 1956. Trapping and transplanting of bighorn sheep. Federal Aid Job Completion Report W-31-D-9, Work Plan No. 5, Job No. 1. 5pp.
- WGFD. 1957. Trapping and transplanting of bighorn sheep. Federal Aid Job Completion Report W-31-D-10, Work Plan No. 5, Job No. 1. 9pp.
- WGFD. 1962. WGFD Annual Report. Cheyenne, WY.
- WGFD. 1963. WGFD Annual Report. Cheyenne, WY.
- WGFD. 1964. WGFD Annual Report. Cheyenne, WY.
- WGFD. 1965. WGFD Annual Report. Cheyenne, WY.
- WGFD. 1966. WGFD Annual Report. Cheyenne, WY.
- WGFD. 1970. WGFD Annual Report. Cheyenne, WY.
- WGFD. 1973. WGFD Annual Report. Cheyenne, WY.
- WGFD. 1976. Summary of bighorn sheep tagging, tag recovery and releases in the Francis Peak bighorn sheep management area. Unpubl. report, Thermopolis, WY. 3pp.
- Wollrab, L. 1987. Darby Mountain bighorn sheep. WGFD 1986 Annual Job Completion Report, District I, Jackson, WY.