MANAGEMENT SITUATION ANALYSIS

Rawlins Resource Management Plan

Tables

Section 2

The Bureau of Land Management
January 2003

Table 3.10-1. Paleontological Classification Descriptions and Procedures.

Class	Description	Procedure
I. (Critical)	Any locality from which holotype or critical reference material has been collected. Any type geologic reference section which is critical for future reference	No action will be allowed which will damage the fossil resource or alter the contextual relationships of fossil materials. Materials may be removed, but by special permit only to qualified professionals.
II. (Significant)	Any locality which contains rare, exceptionally well preserved or critical materials for stratigraphic or paleoenvironmnetal interpretation	Depending on the size of the deposit, approved mitigation may include total salvage or may be limited to a statistically valid sample of all forms present
III. (Important)	Any locality which has produced plentiful (relatively common in the locality and elsewhere) fossil materials which are useful for stratigraphic and variability studies	A statistically valid sample will be obtained to mitigate any adverse impact on the resource
IV. (Insignificant)	Any locality which produces poorly preserved, common elsewhere or stratigraphically unimportant material	Mitigation is optional
V. (Unimportant)	Any locality which has been intensively surveyed and determined to be of minimal scientific interest. This can include any outcrop of geological formations described as unfossiliferous in technical journals or publications	No mitigation necessary.

Source: (BLM 1987)

Table 3.10-2. Paleontological Significance of Units and Formations.

Unit Symbol[1]	Unit	Paleontological Class
	Quaternary	
Qa	Alluvium and Colluvium	V
Qt	Gravel, Pediment, and fan deposits	V
Ql	Playa and Lacustrine	V
Qls	Lanslide Deposits	V
Qs	Dune and Loess	V
Qg	Glacial Deposits	V
Qtc	Conglomerate	V
	Tertiary	
Tm	Miocene Rocks	III
Tmu	Upper Miocene Rocks	III
Tn	North Park Formation	II
Tbp	Browns Park Formation	II
Twr	White River Formation	II
Twrb	Brule Member	III
Twru	Upper Conglomerate Member	III
Twre	Chadron Member	III
Toe	Oligocene and Upper and Middle Geocene Rocks	III
Tip	Ice Point Conglomerate	III
Twa	Washakie Formation	II
Twb	Wagon Bed Formation	II
Tb	Bridger Formation	II
	Green River Formation	
Tgl	Laney Member	II
Tgt	Tipton Shale Member	II
Tglu	Luman Tongue	II
Tgw	Wilkens Peak	II
Tw	Wasatch Formation	II
Twc	Cathedral Bluffs Tongue	II
Twn	Niland Tongue	II
Twm	Main Body	II
Tbs	Battle Springs Formation	IV
Tbw	Transitional Unit between Battle Springs Formation	
	and Wasatch Formation	IV
Tfu	Fort Union Formation	II
Twdr	Wind River Formation	II
Tkf	Ferris Formation	II
Tco	Coalmont Formation	III
Tha	Hanna Formation	II
Tbf	Basal Flows and Intrusive Rocks	V

Table 3.10-2. Paleontological Significance of Units and Formations.

Unit Symbol[1]	Unit	Paleontological Class
Tml	Lower Miocene Rocks	III
Tmo	Lower Miocene and Upper Oligocene Rocks	III
	Cretaceous	
Kl	Lance Formation	IV
Kmb	Medicine Bow Formation	IV
Kle	Lewis Shale	IV
Kmv	Mesaverde Group	III
Ks	Steele Shale	IV
Ksn	Steele Shale and Niobrara Formation	IV
Kn	Niobrara Formation	IV
Knt	Niobrara, Frontier, Mowry, Thermopolis	IV
Kf	Frontier Formation	IV
Kmt	Frontier, Mowry, Thermopolis	IV
Kmt	Mowry, Thermopolis	IV
Kj	Cloverly, Morrison Formations	II
Kjs	Cloverly, Morrison, Sundance Formations	II
Kp	Pierre Shale	IV
	Jurassic	
Js	Sundance Formation	IV
	Triassic	
TrPg	Goose Egg Formation	IV
TrPcg	Chugwater, Goose Egg Formation	IV
Trc	Chugwater Formation	IV
TrPjs	Jelm, Chugwater, Forelle, Satanka	IV
MzPz	Mesozoic and Paleozoic Rocks	IV
	Pennsylvanian	
Pfg	Forelle Limestone, Satanka Shale	IV
PPc	Casper Formation	IV
PPcf	Casper, Fountain Formations	IV
PPM	Casper Formation and Madison Limestone	IV
PM	Tensleep and Amsden	IV
Pzr	Madison Limestone and Cambrian Rocks	IV
	Mississippian	
Mda	Guernsey Formation	
Mm	Madison Limestone	IV
Cr	Cambrian Rocks	V
	Precambrain Rocks	
Xsv	Medasedimentary and Metavolcanic Rocks	V
Xcl	Libby Creek Group	V
Xdl	Deep Lake Group	V

Table 3.10-2. Paleontological Significance of Units and Formations.

Unit Symbol[1]	Unit	Paleontological Class
MVsw	Metasedimentary and Metavolcanic Rocks	V
Ws	Metasedimentary Rocks	V
Wmu	Metamorphosed Mafic and Ultramafic Rocks	V
Wgn	Granite Gneiss	V
Ys	Sherman Granite	V
Yls	Pyroxene and hornblende syenite	V
Yla	Anorthosite and Norite	V
Xqd	Quartz Diorite	V
Xgy	Granitic Rocks of 1,700-Ma Age Group	V
Xm	Mafic Intrusive Rocks	V
Wg	Granitic Rocks of 2,600-Ma Age Group	V
Pw	Mafic Intrusive Rocks	V

[1]Geologic unit symbols can be correlated with Geologic Map of Wyoming
[2]Ma = million years (approximately)
[3]Source: (BLM 1987)

Table 3.11-1. Recreational Management System Information on Recreation Participants and Visitor Days in the RMPPA.

Recreation Participants and Visitor Days Rawlins Field Office[1]						
	Fiscal Year 1999		Fiscal Year 2000		Fiscal Year 2001	
	Number of Participants	# Visitor Days	Number of Participants	# Visitor Days	Number of Participants	# Visitor Days
Backpacking	1,935	6,440	1,935	6,440	156	747
Bicycling – Mountain	4,865	1,633	4,865	1,633	1,334	447
Camping	14,658	43,371	16,044	47,797	12,661	31,144
Canoe/Kayaking	0	0	0	0	8	5
Caving	50	25	50	25	0	0
Driving for Pleasure	122,552	61,275	122,550	61,275	24,000	12,000
Environmental Education	1,950	1,267	2,025	1,100	42	56
Fishing Freshwater	99,541	59,095	98,959	58,988	49,279	19,457
Gather Non-Commercial Products	3,700	2,467	3,700	2,467	2,400	800
Hiking/Walking/Running	16,078	9,089	16,075	9,088	14,600	5,350
Horseback Riding	5,191	2,205	5,535	2,732	2,770	1,387
Hunting – Big Game	73,603	248,184	74,180	251,754	30,997	59,453
Hunting – Small Game	1,650	1,100	1,650	1,100	0	0
Hunting – Upland Bird	1,600	1,067	1,600	1,067	0	0
Hunting – Waterfowl	2,600	1,733	1,040	1,360	500	333
Nature Study	2,600	967	2,600	967	300	25
OHV – ATV	3,350	1,117	3,350	1,117	4,800	1,600
OHV – Cars/Trucks/SUVs	46,611	31,068	46,618	31,068	33,984	16,838
OHV – Motorcycle	1,600	1,067	1,600	1,067	0	0
Photography	2,250	1,283	2,950	1,517	0	0
Picnicking	22,601	3,892	21,050	3,629	11,878	973
Power Boating	1,235	823	1,235	823	0	0
Rockhounding/Mineral Collection	1,890	1,212	1,910	1,222	0	0
Row/Float/Raft	14,492	5,309	11,109	4,296	7,180	2,409
Skiing – Cross Country	1,600	1,067	1,600	1,067	0	0
Snow Play – General	1,600	533	1,600	533	0	0
Snowmobiling	1,760	1,147	1,760	1,147	1,200	600
Target Practice	4,850	1,608	4,850	1,608	3,600	300
Trapping	1,800	1,167	1,644	1,089	0	0
Viewing – Wild Horses	1,600	1,067	1,600	1,067	0	0
Viewing – Wildlife	181,228	25,509	181,025	25,408	86,601	8,100

Source: BLM Recreation Management Information System, BLM Rawlins Field Office

Table 3.11-1. Recreational Management System Information on Recreation Participants and Visitor Days in the RMPPA.

1 - Changes to the RMIS system of data collection and estimation were made after Fiscal Year 2000. Recreation estimates prior to Fiscal Year 2001 were believed to be overestimates, so methodology for FY 2001 was improved and visitation estimates are significantly lower for the Rawlins Field Office in 2001. Large declines in visitation estimates between 2000 and 2001 should not be interpreted as an actual decrease in visits, but rather a change in estimation methodology.

Table 3.11-2. Recreation Visits by Location in the RMPPA.

Recreation Visits by Location: October 1998 – September 2001 Rawlins RMP Planning Area		
	Visits	**Visitor Days**
Dispersed Recreation	522,761	992,227
Developed/Undeveloped Recreation Sites	127,085	212,029

Source: BLM Recreation Management Information System, BLM Rawlins Field Office

Table 3.12-1. Geographic Characteristics of Socioeconomic Study Area.

	Socioeconomic Study Area					
	County				Wyoming	U.S.
Geographic Characteristic	**Albany**	**Carbon**	**Laramie**	**Sweetwater**		
Land Area (Million Acres)	2.7	5.1	1.7	6.7	62.1	2,200
Land Area (Sq. Miles)	4,273	7,896	2,686	10,425	97,100	3.5 Million
Persons Per Square Mile	7.5	2.0	30.4	3.6	5.1	79.6

Table 3.12-2. Population Centers in the Rawlins Socioeconomic Study Area.

Population Centers				
County	City	Population		
		1990	2000	% Change
Albany	Laramie	26,687	27,204	1.9
Carbon	Rawlins	9,380	8,538	-9.0
	Saratoga	1,969	1,726	-12
Laramie	Cheyenne	50,008	53,011	6
	Pine Bluffs	1,054	1,153	9.4
Sweetwater	Green River	12,711	11,808	-7.1
	Rock Springs	19,050	18,708	-1.8

Table 3.12-3. Components of Population Change in the Socioeconomic Study Area.

COMPONENTS OF POPULATION CHANGE 1980 – 1999 COUNTIES IN STUDY AREA										
1990 – 1999										
County	**1990 Population**	**1999 Population**	**Numeric Change in Population 1990-1999**	**Percentage Change in Total Population 1990-1999**	**Cumulative Births**	**Cumulative Deaths**	**Natural Change in Population**	**Natural Percentage Change in Population**	**Net Migration**	**Percentage Change in Population Due to Net Migration**
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Albany, WY	30,797	29,060	-1,737	-5.64%	3,596	1,487	2,109	6.8%	-3,846	-12.49%
Carbon, WY	16,602	15,437	-1,165	-7.02%	1,715	1,205	510	3.1%	-1,675	-10.09%
Laramie, WY	73,142	78,877	5,735	7.84%	11,110	5,330	5,780	7.9%	-45	-0.06%
Sweetwater, WY	38,823	39,322	499	1.29%	5,245	2,085	3,160	8.1%	-2,661	-6.85%
Study Area	159,364	162,696	3,332	2.09%	21,666	10,107	11,559	7.3%	-8,227	-5.16%
Wyoming	469,557	453,589	-15,968	-3.40%	91,165	32,059	59,106	6.00%	-1,382	-0.30%
1980-1990										
County	**1980 Population**	**1990 Population**	**Numeric Change in Population 1980-1990**	**Percentage Change in Total Population 1980-1990**	**Cumulative Births**	**Cumulative Deaths**	**Natural Change in Population**	**Natural Percentage Change in Population**	**Net Migration**	**Percentage Change in Population Due to Net Migration**
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Albany, WY	29,062	30,797	1,735	5.97%	4,664	1,526	3,138	10.80%	-1,403	-4.83%
Carbon, WY	21,896	16,659	-5,237	-23.92%	3,589	1,406	2,183	9.97%	-7,420	-33.89%
Laramie, WY	68,649	73,142	4,493	6.54%	13,342	5,064	8,278	12.06%	-3,785	-5.51%
Sweetwater, WY	41,723	38,823	-2,900	-6.95%	8,823	2,022	6,801	16.30%	-9,701	-23.25%
Study Area	161,330	159,421	-1,909	-1.18%	8,253	2,932	5,321	3.30%	-22,309	-13.83%
Wyoming	453,589	479,602	26,013	5.70%	60,099	32,704	27,395	12.60%	-1,382	-16.00%

Sources: U.S. Census Bureau (2002a-f)

Table 3.12-4. Personal Income in the Socioeconomic Study Area.

Personal Income 1979, 1989 and 1999 for Economic Study Area			
	Real Dollars (2001$)		
	1979	**1989**	**1999**
Total Personal Income (1,000$)	$3,444,385	$3,447,162	$4,435,341
Labor Income	$2,704,076	$2,395,632	$2,892,684
Investment Income	$489,972	$687,741	$1,037,285
Transfer Payments	$250,336	$363,789	$505,372
Population	157,881	160,738	162,696
Per Capita Personal Income ($)	$21,816	$21,446	$27,262
Per Capita Labor Earnings ($)	$17,127	$14,904	$17,780
Per Capita Transfer Payments ($)	$1,586	$2,263	$3,106
Percentage of Total Personal Income			
Labor Income	78.5%	69.5%	65.2%
Investment Income	14.2%	20.0%	23.4%
Transfer Payments	7.3%	10.6%	11.4%
	100.0%	100.0%	100.0%
Personal Income Growth	**1979-1999**	**1979-1989**	**1989-1999**
Total Personal Income	28.8%	0.1%	28.7%
Labor Income	7.0%	-11.4%	20.7%
Investment Income	111.7%	40.4%	50.8%
Transfer Payments	101.9%	45.3%	38.9%
Per Capita Personal Income	25.0%	-1.7%	27.1%
Per Capita Labor Earnings ($)	3.8%	-13.0%	19.3%
Per Capita Transfer Payments ($)	95.9%	42.7%	37.2%

[A] *Includes Albany, Carbon, Lincoln and Sweetwater Counties in Wyoming.*

1. Personal contributions for social insurance are included in earnings by type but they are excluded from personal income. An adjustment for residence is calculated as the net inflow of earnings from inter-area commuters.
2. Labor income includes wages, salaries and self-employment income.
3. Investment income includes rents, dividends and interest earnings.
4. Transfer payments are largely derived from Social Security benefits, Medicare and Medicaid benefits and other income support assistance.

Source: Data derived from the U.S. Department of Commerce, Bureau of Economic Analysis, Table CA05 - Personal Income by Major Source and Earnings by Industry, 1979-1999.

Table 3.12-5. Estimated Poverty Rates in the Socioeconomic Study Area.

Estimated Poverty Rates		
Location	**1989**	**1998**
Albany, Co.	19.8%	14%
Carbon, Co.	10.0%	11.8%
Laramie, Co.	10.6%	10.7%
Sweetwater, Co.	8.0%	8.1%
Wyoming	11.9%	11.4%
West	12.5%	14.6%
U.S.	12.8%	13.3%

Source: U.S. Census Bureau, State Model Estimates of the Percentage of Persons of All Ages in Poverty 2002c

Table 3.12-6. Change in Civilian Labor Force in the Socioeconomic Study Area.

CHANGE IN CIVILIAN LABOR FORCE 1991-2000		
Location	**Change in Civilian Labor Force Between 1991-2000**	**Percentage Change in Civilian Labor Force Between 1991-2000**
Albany County, WY	2,516	15.6
Carbon County, WY	-278	-3.2%
Laramie County, WY	582	9.7%
Sweetwater County, WY	-550	-2.71%
Economic Study Area	7,084	8.7%
Wyoming	32,810	14.0%

Source: U.S. Department of Labor, Bureau of Labor Statistics, Local Area Unemployment Statistics, 2002

Table 3.12-7. Economic Diversity in the Socioeconomic Study Area.

Measure of Economic Diversity Using Sources of Personal Income (2001$)							
Albany, Carbon, Laramie and Sweetwater Counties, Wyoming							
	Income Source	**Personal Income by Source (1,000$)**			**Percentage of Total Personal Income from Outside Sources**		
		1979	**1989**	**1999**	**1979**	**1989**	**1999**
Labor Income	Agriculture	$41,115	$29,010	$43,793	1%	1%	1%
	Construction	$333,761	$138,645	$196,167	10%	4%	4%
	Mining	$573,533	$382,010	$317,154	17%	11%	7%
	Manufacturing	$138,933	$119,805	$220,108	4%	3%	5%
	Federal and State Government	$492,348	$621,270	$640,878	14%	18%	14%
Non-Labor Income	Transfer payments	$250,336	$363,789	$505,372	7%	11%	11%
	Investment Income	$146,992	$206,322	$311,185	4%	6%	7%
	Total Personal Income	$3,444,385	$3,447,162	$4,435,341	57.4%	54.0%	50.4%

Table 3.12-8. Estimated Value of Grazing Activities on BLM Lands within the Rawlins RMPPA for 1997.

Estimated Value of Grazing Activities on BLM Lands within the Rawlins Field Office for 1997				
Total Annual Cattle AUMs Attributable to Grazing within Rawlins Field Office - 1997	Total Annual Sheep AUMs Attributable to Grazing within Rawlins Field Office -1997	Value of Cattle Grazing – 1997 ($1,000)[a]	Value of Sheep Grazing - 1997 ($1,000)[b]	Total Value of Grazing on BLM Lands ($1,000)
309,725	30,977	$9,851	$850	$10,701

[a] Cattle Grazing was valued per AUM at $31.80/AUM based on data from the Wyoming Agriculture Statistical Service
[b] Sheep Grazing was valued per AUM at $27.44/AUM based on data from the Wyoming Agriculture Statistical Service

Table 3.12-9. Percentage of Agricultural Sales in the Sociocconomic Study Area Attributed to Grazing on BLM Lands in the Rawlins RMPPA for 1997.

Percentage of Agricultural Sales in Study Area Attributed to Grazing on BLM Lands in Rawlins Field Office for 1997				
Total Agricultural Sales - Study Area ($1,000)	Total Livestock Sales Study Area ($1,000)	Estimated Value of Grazing on BLM Lands - Rawlins Field Office ($1,000)	Percentage of Total Livestock Sales	Percentage of Total Agricultural Sales
$180,575	$155,117	$10,701	6.9%	5.9%

Source: U.S. Department of Agriculture, National Agriculture Statistical Service, *Census of Agriculture, 1997.*

Table 3.12-10. Assessed Property Valuations within the Socioeconomic Study Area.

Assessed Property Valuations by County for 2001									
	Valuation of State- Assessed Property			Valuation of Locally Assessed Property					
County	Non-Minerals	Minerals	Total State Assessed Property	Agricultural Land	Residential Land, Improvements and Personal Property	Commercial Land, Improvements and Personal Property	Industrial Property	Total Locally Assessed Property	Total State and Locally Assessed Property
Albany	$23,792,281	$3,324,167	$27,116,448	$5,636,217	$107,891,145	$34,425,664	$6,475,411	$154,428,437	$181,544,885
Carbon	$41,628,203	$426,289,238	$467,917,441	$6,262,236	$37,701,960	$14,333,269	$27,848,535	$86,146,000	$554,063,441
Laramie	$44,719,001	$17,992,517	$62,711,518	$9,790,261	$265,897,775	$98,510,417	$28,210,102	$402,408,555	$465,120,073
Sweetwater	$122,849,306	$980,185,196	$1,103,034,502	$3,105,344	$110,041,844	$32,191,664	$158,602,935	$303,941,787	$1,406,976,289
Total - Study Area	$232,988,791	$1,427,791,118	$1,660,779,909	$24,794,058	$521,532,724	$179,461,014	$221,136,983	$946,924,779	$2,607,704,688

Table 3.12-11. Value of Oil and Gas Production in the Socioeconomic Study Area.

Assessed Value of Oil and Gas Production and Property in Study Area for Fiscal Year 2001					
County	**Oil and Gas Valuation - Production**	**Oil and Gas Valuation as Percentage of Total Mineral Valuation**	**Oil and Gas Extraction and Refining Property Valuation**	**Oil and Gas Property as a Percentage of Total Property Valuation**	**Oil and Gas Valuation as Percentage of Total State and Local Assessed Property Valuation**
Albany	$1,866,033	56.14%	$104,284	0.07%	1%
Carbon	$393,684,237	92.35%	$25,146,585	29.19%	76%
Laramie	$10,676,916	59.34%	$8,756,014	2.18%	4%
Sweetwater	$670,371,775	68.39%	$42,161,137	13.87%	51%
Total Study Area	**$1,076,598,961**	**75.40%**	**$25,250,869**	**2.67%**	**42%**

Table 3.12-12. Mineral Ad Valorem Tax Revenues in the Socioeconomic Study Area.

Estimated Mineral Ad Valorem Tax Revenues - Fiscal Year 2001									
County	**Natural Gas**	**Crude Oil**	**Coal**	**Trona**	**Granite Ballast**	**Sand and Gravel**	**Total**	**Property Tax Levy[a]**	**Mineral Tax Levy as Percentage of County Tax Levy**
Albany	$0	$117,446	$0	$0	$0	$5,094	$122,541	$12,481,661	1%
Carbon	$22,455,265	$1,927,568	$2,001,986	$0	$0	$17,404	$26,402,224	$34,927,573	76%
Laramie	$21,974	$710,730	$0	$0	$438,322	$58,908	$1,229,933	$34,322,378	4%
Sweetwater	$35,541,587	$6,989,927	$6,544,036	$13,083,494	$0	$28,479	$62,187,523	$89,145,656	70%
Total Study Area	$58,018,826	$9,745,670	$8,546,023	$13,083,494	$438,322	$109,886	$89,942,220	$170,877,268	53%

Table 3.12-13. Ad Valorem Tax Revenues on Oil and Gas and Coal in the Socioeconomic Study Area.

Estimated Ad Valorem Tax Revenues on Oil and Gas and Coal Property - FY 2001				
County	**Oil and Gas Property Assessment**	**Coal Property Assessment**	**Average Tax Levy**	**Total Estimated Ad Valorem - Property**
Albany	$104,284	$0	62.94	$6,564
Carbon	$13,557,345	$1,459,743	61.94	$930,158
Laramie	$813,889	$0	68.63	$55,857
Sweetwater	$42,161,137	$3,944,703	63.44	$2,924,954
Total Study Area	**$56,636,655**	**$5,404,446**	**124.88**	**$3,917,534**

Table 3.12-14. Oil and Gas Tax Revenues as a Percentage of County Property Tax.

Table 3.12-12
Oil and Gas Tax Revenues as Percentage of Total County Property Taxes - Fiscal Year 2001

County	Total Ad Valorem Tax Revenue - Oil and Gas	Property Tax Levy[a]	Oil and Gas Tax Revenue as Percentage of County Tax Levy
Albany	$124,010	$12,481,661	1%
Carbon	$25,222,507	$34,927,573	72%
Laramie	$788,556	$34,322,378	2%
Sweetwater	$45,206,413	$89,145,656	51%
Total Study Area	$71,341,487	$170,877,268	42%

[a] Wyoming Taxpayers Association, *Wyoming Property Taxation, 2001*.

Table 3.12-15. Severance Tax Distribution for Government Entities in the Socioeconomic Study Area.

Total Severance Tax Distributions for Government Entities in the Study Area, FY 2001	
Area	**Severance Tax Distributions**
Counties in Study Area	$4,801,380
Total Severance Taxes Distributed to All Counties in WY	$13,843,706
Percentage Distributed to Study Area Counties	35%
Cities and Towns in Study Area	$13,638,594
Total Severance Taxes Distributed to All Cities/ Towns in WY	$35,370,306
Percentage Distributed to Study Area Cities/Towns	39%

Source: Annual Report of the Treasurer of the State of Wyoming, June 30, 2001.

Table 3.12-16. Severence Tax by Product in the Socioeconomic Study Area.

Severance Taxes Generated by Product										
County	**Natural Gas**	**Crude Oil**	**Stripper Oil**	**Coal - Surface**	**Coal - Underground**	**Granite Ballast**	**Trona**	**Sand and Gravel**	**Total**	**Percentage of Total Severance Taxes Generated in Each County**
Albany	$0	$77,664	$20,140	$0	$0	$0	$0	$1,619	$99,423	0.1%
Carbon	$21,028,585	$1,566,690	$145,466	$623,286	$878,246	$0	$0	$5,620	$24,247,893	30.6%
Laramie	$18,572	$462,391	$89,784	$0	$0	$127,744	$0	$17,168	$715,658	0.9%
Sweetwater	$32,491,495	$6,233,244	$32,737	$7,220,190	$0	$0	$8,248,759	$8,978	$54,235,402	68.4%
Total - Study Area	$53,538,651	$8,339,989	$288,127	$7,843,476	$878,246	$127,744	$8,248,759	$33,385	$79,298,377	100.0%
Percentage of Severance Taxes Generated from Each Product	67.5%	10.5%	0.4%	9.9%	1.1%	0.2%	10.4%	0.04%	100.0%	0.0%

Table 3.12-17. Estimated Ad Valorem Tax Production.

Estimated Ad Valorem Tax - Production - Rawlins Field Office (Federal Lands)					
Product	**Total Annual Production**	**Taxable Valuation Per Unit[a]**	**Assessed Valuation**	**Average Tax Levy[a]**	**Total Estimated Ad Valorem**
(1)	**(2)**	**(3)**	**(4) = (2)*(3)**	**(5)**	**(6) = (4)/1000*(5)**
Oil (BBLs)	1,557,123	$24.47	$38,102,800	58.849	$2,242,312
Natural Gas (MCF)	81,540,962	$2.60	$212,006,501	58.849	$12,476,371
Coal (Underground)	1,409,233	$16.62	$23,421,452	61.935	$1,450,608
Coal (Surface)	705,958	$3.91	$2,760,296	61.935	$170,959
Total			**$276,291,049**		**$16,340,249**

[a] Source: Wyoming Department of Revenue Annual Report - Fiscal Year 2001, Cheyenne, WY.

[b] Source: Wyoming Taxpayers Association, "Wyoming Property Taxation 2001, Cheyenne, WY.

Table 3.12-18. Estimated Severance Tax Production.

Estimated Severance Tax - Production - Rawlins Field Office (Federal Lands)					
Product	**Total Annual Production (BBLs/MCF)**	**Taxable Valuation Per Unit[a]**	**Assessed Valuation**	**Average Severence Tax Per Unit of Production[a]**	**Total Estimated Severance Tax**
(1)	**(2)**	**(3)**	**(4) = (2)*(3)**	**(5)**	**(6) = (4)*(5)**
Oil	1,557,123	$24.47	$38,102,800	0.060	$2,286,168
Natural Gas	81,540,962	$2.60	$212,006,501	0.060	$12,720,390
Coal (Underground)	1,409,233	$16.62	$23,421,452	0.070	$1,639,502
Coal (Surface)	705,958	$3.91	$2,760,296	0.0375	$103,511
Total			**$276,291,049**		**$16,749,571**

[a] Source: Wyoming Department of Revenue Annual Report - Fiscal Year 2001, Cheyenne, WY.

Table 3.12-19. Estimated Federal Royalties Production.

Estimated Federal Royalties - Production - Rawlins Field Office (Federal Lands)					
Product	**Total Annual Production (BBLs/MCF)**	**Taxable Valuation Per Unit[a,b]**	**Assessed Valuation**	**Federal Royalty Rate**	**Total Estimated Federal Royalties**
(1)	**(2)**	**(3)**	**(4) = (2)*(3)**	**(5)**	**(6) = (4)*(5)**
Oil	1,557,123	$22.92	$35,687,082	0.125	$4,460,885
Natural Gas	81,540,962	$2.10	$171,619,263	0.125	$21,452,408
Coal (Underground)	1,409,233	$16.62	$23,421,452	0.125	$2,927,681
Coal (Surface)	705,050	$3.91	$2,760,296	0.125	$345,037
Total			**$233,488,093**		**$29,186,011**

[a] Source: Wyoming Department of Revenue Annual Report - Fiscal Year 2001, Cheyenne, WY.

[b] The taxable valuation for oil and gas was decreased to account for allowable cost deductions taken by operators prior to paying federal royalties. Therefore, the taxable valuation per barrel of oil is 93.66% of total valuation and 80.95% of total value.

Table 3.12-20. Lodging Tax Distributions in the Socioeconomic Study Area.

Lodging Tax Distributions			
County	**FY 1999**	**FY 2000**	**FY 2001**
Albany	$176,937	$278,992	$296,795
Carbon	$176,051	$202,998	$197,689
Laramie	$333,245	$379,875	$408,164
Sweetwater	$247,099	$270,368	$307,111
Total	**$933,332**	**$1,132,233**	**$1,209,759**

Source: Wyoming Department Revenue Annual Report - FY 2001

Table 3.12-21. Sales and Use Tax Distributions in the Socioeconomic Study Area.

Sales and Use Tax Distributions, 2000			
Jurisdiction	**FY 1999**	**FY 2000**	**FY 2001**
Albany[a]	$11,184,686	$12,638,203	$12,638,203
Carbon[a]	$8,127,805	$10,151,339	$10,151,399
Laramie[a]	$22,630,054	$29,173,211	$29,173,211
Sweetwater[a]	$19,190,295	$22,413,185	$22,413,185
Total	**$61,132,840**	**$74,375,938**	**$74,375,998**

Source: Wyoming Department Revenue Annual Report - FY 2001
[a] Includes distribution to county and cities and town within each county.

Table 3.12-22. Population Distribution by Race and Hispanic Status in the Socioeconomic Study Area of the RMPPA.

Population Distribution (Percentage) by Race and Hispanic by County: 2000								
County	**White**	**Black or African American**	**American Indian and Alaska Native**	**Asian**	**Native Hawaiian and Other Pacific Islander**	**Some Other Race**	**Two or More Races**	**Hispanic or Latino (of any race)**
Albany	91.3	1.1	1.0	1.7	0.1	2.6	2.2	7.5
Carbon	90.1	0.7	1.3	0.7	0.1	5.2	2.1	13.8
Laramie	88.9	2.6	0.8	1.0	0.1	4.0	2.6	10.9
Sweetwater	91.6	0.7	1	0.6	0.0	3.6	2.4	9.4
Wyoming	92.1	0.8	2.3	0.6	0.1	2.5	1.8	6.4

Source: U.S. Bureau of Census (2002a-f)

Percentages may not add to 100 because of individuals may report ethnicity under more than one category.

Table 3.13-1. Statewide Soil Zones and the Soil Descriptions Occurring Within them in the RMPPA.

Soil Zone and Soil Descriptions Within Each Zone
Zone 3 (Middle Rocky Mountains)
• **WY06: Typic Haplocryalfs, Typic Dystrocryepts and Typic Haplocryolls**—loamy-skeletal and Histic Cryaquepts, fine-loamy over sandy or sandy-skeletal. On stable slopes which are older than Pinedale (Late Wisconsin), the predominate soils are Haplocryalfs. Dystrocryepts occur on slopes greater than 40%, and on Pinedale and younger surfaces (Pinedale tills and holocene surfaces). Haplocryolls occur under mountain meadow vegetation and are most common on south facing slopes. Cryaquepts are found along narrow riparian areas (Munn & Arneson 1998).
Zone 4 (Bighorn Basin/Intermountain Basin)
• **WY09: Typic Haplargids and Typic Haplocalcids**—fine-loamy over sandy or sandy-skeletal, mesic and Typic Torriorthents, fine-loamy and coarse-loamy, mesic. Aridisols occur on colluvial and alluvial landscapes while Entisols occur on residual landscapes.
• **WY10: Typic Torripsamments**—mesic. These soils are on stabilized dunes. They show little horizon development; thin A horizons are the most apparent change from the parent material (stabilized dune sand).
• • **WY11: Calcic Haplosalids**— fine, mesic. These soils are associated with marine shales and occur in topographic depressions where run off water from the surrounding landscape accumulates and evaporates concentrating salt (Munn & Arneson 1998).
Zone 5 (Powder River Basin/Northern Great Plains)
• **WY17: Typic Torriorthents**—loamy-skeletal, mesic and Rock Outcrop. These stony soils occupy ridge crests where coal bed fires have created clinker. The soils tend to be much coarser than the soils on the adjacent lower slopes, and contain hard clasts.
Zone 7 (Southeast Wyoming/Northern Great Plains)
• **WY10: Typic Torripsamments** –as in Zone 4, except soil temperature regime is frigid.
• **WY23: Typic Argiustolls**— fine-loamy and **Typic Argiustolls** fine-loamy over sandy or sandy-skeletal, mixed, frigid. These soils occur on Tertiary and Pleistocene parent materials (mostly alluvial fan deposits of Tertiary age, or local alluvium of Pleistocene age.)
• **WY24: Ustic Haplocambids and Ustic Torriorthents**—fine, frigid. These moderately and weakly developed soils occur on gentle to steep slopes over the Tertiary White River formation. Profile development is shallow or moderately deep.
• **WY25: Ustic Torriorthents and Aridic Ustochrepts**—loamy-skeletal, frigid. These soils occur along the front of the Laramie Range and the Hartville uplift. The Ustochrepts support scattered stands of Ponderosa Pine. Soils are shallow or moderately deep and coarse textured.
• **WY26: Ustic Torriorthents and Ustic Haplocambids**—fine, frigid. These soils have developed on Cretaceous age bedrock (shale) and are moderately deep or shallow. The Haplocambids are on low gradient fans and slopes; Torriorthents occur on steeper slopes (greater than 15%).
• **WY27: Typic Torrifluvents and Typic Haplaquolls**—fine-loamy over sandy or sandy-skeletal, mixed, frigid These soils occur along riparian areas with the Torrifluvents developing along channels scoured by flooding and the Haplaquolls developing on low gradient channel sections where vegetation is well established and high water tables occur during most of the year.
• **WY44: Ustic Haplargids and Ustic Torrifluvents**—fine-loamy over sandy or sandy-skeletal, mixed, mesic. These soils occur on alluvium and slopes of Pleistocene and Holocene age over a variety of bedrocks. The Torrifluvents occur on the active floodplain; Haplargids occur on more stable

Table 3.13-1. Statewide Soil Zones and the Soil Descriptions Occurring Within them in the RMPPA.

Soil Zone and Soil Descriptions Within Each Zone
landscape segments (Munn & Arneson 1998).
Zone 8 (Medicine Bow and Laramie Mountains/ Mountains)
• **WY28: Typic Haplocryalfs and Typic Dystrocryepts**—loamy-skeletal, mixed and Typic Haplocryolls, fine-loamy, mixed. Haplocryalfs occur under forest on till parent materials older than Pinedale (140,000 years old and older) and on nonglaciated landforms where the slope gradient is less than approximately 10%. Dystrocryepts occur under forest on till of Pinedale age and on slopes (>10%) that were unstable during the Pinedale glaciation. Haplocryolls occur under grasses and shrubs on west and south aspects and in dry parks on Tertiary age parent materials.
• **WY29: Histic Cryaquepts and Typic Cryaquolls**—fine-loamy over sandy or sandy-skeletal, mixed. These are poorly drained soils along riparian areas. Only A horizon thickness is different between the two soils (thicker in the Mollisols). Depth to water table in the profile varies from 0 to 50 cm over the course of the summer.
• **WY30: Typic Dystrocryepts and Lithic Cryorthents**—loamy skeletal, mixed and Rock Outcrop. These soils are found at high elevation and on very resistant parent materials. They are on eroding slopes, or the youngest tills in the region (Neoglacial).
• **WY31: Typic Dystrocryepts and Typic Cryorthents**—loamy skeletal, mixed. This unit occurs on Triassic, Permian and Cretaceous sedimentary rock along the flanks of the mountain range. The soils are moderately deep or shallow.
• **WY32: Typic Dystrocryepts** - loamy-skeletal, mixed and **Rock Outcrop**. These soils occur on Precambrian granitic parent materials. The Inceptisols are mostly moderately deep with less than 12% clay in their thin B horizons (Bw). The rock outcrops take the form of rounded boulders and sheets of rock.
• **WY45: Typic Hapludalfs and Aridic Haplustepts**—loamy-skeletal, mixed, frigid. These soils occur along the base of the mountain ranges in the region and support open stands of Ponderosa pine as well as other conifers. The Hapludalfs are on low relief slopes and nearly level surfaces. The Haplustepts are on slopes greater than 15% and on the narrow valley floors of canyons (Munn & Arneson 1998).
Zone 9 (Laramie and Wind River Basins/Intermountain basins)
• **WY09: Ustic Haplargids and Ustic Haplocalcids**—fine-loamy over sandy or sandy-skeletal, frigid and Ustic Torriorthents, fine-loamy and coarse-loamy, frigid. In this region, the soils in this unit have frigid temperature regimes. These soils occur on old alluvial terraces along major rivers. Soils younger than mid-Pleistocene age are an association of Haplargids and Haplocalcids. On older landscapes, Haplocalcids predominate. Torriorthents occur along south facing terrace scarps; textural family is determined by underlying bedrock.
• **WY10: Typic Torripsamments**—frigid. These soils on stabilized dunes show little profile development, but are quite productive under native rangeland.
• **WY33: Lithic Torriorthents**—loamy-skeletal, frigid and Rock Outcrop. These soils occur along both sides of bedrock outcrops that form ridges along the flanks of the basins. The rock outcrop is usually sandstone or limestone.
• **WY34: Ustic Haplargids and Ustic Natrargids**—fine-loamy, frigid. These soils occur as an association on residual landscapes and in local colluvium derived from Tertiary age parent materials. Natrargids show less productivity under sagebrush and grass than Haplargids.
• WY35: Typic Natrargids and Typic Torriorthents— fine, frigid. These soils occur on landscapes underlain by Triassic and Cretaceous bedrock (shales). The Torriorthents occur in a badlands type

Table 3.13-1. Statewide Soil Zones and the Soil Descriptions Occurring Within them in the RMPPA.

Soil Zone and Soil Descriptions Within Each Zone
topography, while the Natrargids occur on small, local alluvial fans at the foot of badland scarps, and on low gradient slopes.
• **WY36: Ustic Torriorthents and Ustic Haplocalcids**—coarse-loamy, frigid. These soils occur on calcareous sandstone of Permian age (redbeds). Haplocalcids occur on low gradient slopes; Torriorthents on slopes greater than 10%.
• **WY37: Typic Petrocalcids and Ustic Calciargids**—fine-loamy over sandy or sandy-skeletal, frigid. These soils occur on the highest terraces along major streams where the surfaces are mid Pleistocene age or older. On some surfaces, the petrocalcic horizon of the Palecalcids is nearly continuous; on other surfaces, Palecalcids and Haplocalcids occur as a complex.
• **WY38: Ustic Haplocambids and Ustic Haplargids**---coarse-loamy, frigid. These soils occur as a complex on late Pleistocene age terraces along major streams, and on slopes of less than 15% gradient of the same age.
• **WY44: Ustic Haplargids and Typic Torrifluvents**—fine-loamy over sandy or sandy-skeletal, mixed, mesic. These soils occur below 5,000 feet in elevation in a relatively small area in the Wind River Basin. The Haplargids occur on alluvial terraces; the Torriorthents occur along the scarp slopes (Munn & Arneson 1998).
Zone 10 (Green River Basin/Intermountain basin)
• **WY06: Typic Haplocryalfs, Typic Dystrocryepts and Typic Haplocryolls**—loamy-skeletal, mixed and **Histic Cryaquepts**, fine-loamy over sandy or sandy-skeletal, mixed. These soils are similar to those in the same unit in Soil Zone 3. They are confined to the highest elevations of this region.
• **WY10: Typic Torripsamments**—frigid. These soils are very similar to Torripsamments in other areas of the state, except that they are intermingled with active dunes.
• **WY11: Typic Haplosalids**—fine, frigid. These Haplosalids occur in saline playas and are similar to those of this unit in Zone 4, except that they are frigid.
• **WY17: Rock Outcrop and Typic Torriorthents**—loamy-skeletal, mixed, frigid. These soils are similar to those in Soil Zone 5 except that the coarse fraction of the soil consists of clasts of the local bedrock, rather than clinker.
• **WY39: Ustic Haplargids, Ustic Haplocambids and Ustic Natrargids**---fine-loamy, mixed, frigid. On Tertiary parent materials along the flank of the Wyoming Range uplift, the soils are found in an association reflecting slope position and parent material sodium content. The Haplargids occur on stable, low gradient slopes. Haplocambids are on steeper slopes and Natrargids occur on fans where erosional processes have accumulated high sodium materials.
• **WY40: Ustic Haplocambids and Ustic Torriorthents**—coarse-loamy, mixed and Typic Torrifluvents, loamy-skeletal, mixed, frigid. This landscape has shallow and moderately deep Haplocambids and Torriorthents occurring on slopes along ephemeral channels and Torrifluvents along gully bottoms.
• **WY41: Aridic Haplustolls and Ustic Haplocambids**—fine-loamy, frigid. These soils are on Tertiary age parent materials along the edges of the basins under sagebrush-grasslands. The Haplustolls are on sites with extra moisture which promotes greater productivity (Munn & Arneson 1998).

Table 3.15-1. RMPPA Vegetation Zones Mapped from Plant Community Classes Developed from GAP Satellite Imagery, Including Zone Total Area and Description.

Vegetation Types and Map Zones	GAP Plant Community Classes	Area (Acres)	Description
Agriculture/Town		1,055,429	areas modified for crop growing, intensive agriculture, municipal and industrial uses
	human settlement type		
	irrigated crop type		
	dry-land crop type		
	forest dominated riparian		primarily hayfields with linear cottonwood stands
	mining operation type		
Barren Communities		255,251	unproductive lands—either exposed rock, badlands, or playas
	open water		large, deep lakes and reservoirs
	alpine exposed type		
	basin exposed rock/soil type		including badland shale interspersed with sand dunes
	unvegetated playa type		
Forest and Woodland Communities			
Broadleaf Communities		220,355	aspen dominated foothills and desert ridges
	aspen forest type		
Conifer Communities			
Juniper Woodland		78,999	juniper dominated foothills and desert mesas, especially on rocky escarpments
	juniper woodland type		
Other Conifer		1,198,762	forests dominated by pine, fir, and spruce; mid- to upper mountain elevations
	limber pine woodland and scrub type		shrub understory
	lodgepole pine intact type		
	ponderosa pine intact type		
	spruce-fir intact type*		
	subalpine meadow type*		
	Douglas-fir type*		
	logged conifer type*		
Grassland Communities		2,656,896	grass dominated prairie
	short grass prairie type		including desert grassland
	mixed grass prairie type		
Shrub Communities			
Greasewood		478,440	greasewood dominated desert
	greasewood fans and flats type		

Table 3.15-1. RMPPA Vegetation Zones Mapped from Plant Community Classes Developed from GAP Satellite Imagery, Including Zone Total Area and Description.

Vegetation Types and Map Zones	GAP Plant Community Classes	Area (Acres)	Description
Mountain Shrub		733,199	mountain mahogany or other shrub dominated foothills region
	bitterbrush shrub steppe		
	mesic upland shrub steppe		serviceberry, choke cherry
	xeric upland shrub steppe		mountain mahogany
Sagebrush**		4,194,383	communities frequently dominated by big sage in the desert to mountain foothills
	black sagebrush		Wyoming big sagebrush type
	mountain sagebrush		basin big sagebrush
	Wyoming sagebrush		mountain big sagebrush/grassland
			silver-sagebrush/grasslands
			alkali sagebrush
			birdsfoot sagebrush
			Wyoming three tip sagebrush
Saltbush		634,776	saltbush dominated plant communities of the saline desert
	desert shrub		hopsage and shadscale
	saltbush fans and flats type		
Sand		63,307	sand dune areas with plant communities of grasses and small shrubs
	active sand dune type		
	sand dune complex type		
Wetland and Riparian Areas		87,445	
	graminoid / forb dominated wetland type		
	graminoid / forb dominated riparian type		
	riparian shrub		

*These coniferous types occur within the RMPPA but primarily on USDA Forest Service ground.

**The GAP plant community classes and the descriptions associated with the sagebrush zone are not associated. The species of sagebrush actually found cannot readily be partitioned among the GAP classes.

Table 3.15-2. Plant Species Typical of Wetlands and Wet Meadows in Wyoming.

Species	Scientific Name
Forbs	
Horsetail	*Equisetum spp.*
Iris	*Iris missouriensis*
Grasses	
Western wheatgrass	*Agropyron smithii*
Timothy	*Phleum pratense*
Thickspike wheatgrass	*Agropyron dasystachyum*
Smooth brome	*Bromus inermis*
Saltgrass	*Distichlis stricta*
Orchard grass	*Dactylis glomerata*
Meadow barley	*Hordeum brachyantherum*
Kentucky bluegrass	Poa pratensis
Foxtail barley	*Hordeum jubatum*
Basin wildrye	*Elymus cinereus*
Alkaligrass	*Puccinellia nuttalliana*
Alkali sacaton	*Sporobolus airoides*
Alkali cordgrass	*Spartina gracilis*
Shrubs	
Wood rose	*Rosa woodsii*
Silver sagebrush	*Artemisia cana*
Silver buffaloberry	*Shepherdia argentea*
Shrubby cinquefoil	*Potentilla fruticosa*
Saltcedar	*Tamarix chinensis*
Rubber rabbitbrush	*Chrysothamnus nauseosus*
Greasewood	*Sarcobatus vermiculatus*
Common snowberry	*Symphoricarpos albus*
Sedges	
Cattail	*Typha sp.*
Water sedge	*Carex aquatilis*
Beaked sedge	*Carex rostrata*
Nebraska sedge	*Carex nebrascensis*

Table 3.15-3. Threatened And Endangered Plants In The RMPPA.

Common Name	Scientific Name	Status	Habitat
Blowout Penstemon	*Penstemon haydenii*	Endangered	Open sandy habitat of blowouts.
Ute Ladies'-Tresses	*Spiranthes diluvialis*	Threatened	Seasonally moist soils and wet meadows Of drainages below 7,000 feet.
Western Prairie Fringed Orchid	*Platanthera praeclara*	Threatened	Riparian area – Platte River watershed.
Colorado Butterfly Plant	*Gaura neomexicana* ssp. *Coloradensis*	Threatened	Moist areas of floodplains in a small area of southeastern Wyoming, western Nebraska, and north-central Colorado.

Table 3.15-4. BLM Sensitive Plant Species in RMPPA.

Sensitive Species Common Name	Scientific Name	Habitat
Laramie Columbine	*Aquilegia taramiensis*	Crevices of granite boulders & cliffs 6,400-8,000 '
Nelson's Milkvetch	*Astragalus nelsonianus –or- Astragalus pectinatus var. platyphylius*	Alkaline clay flats, shale bluffs and gullies, pebbly slopes, in sparsely vegetated sagebrush, juniper & cushion plant communities, 5200 –7600
Cedar Rim Thistle	*Cirsium aridum*	Barren, chalky hills, gravelly slopes & fine textured sand-shaley draws, 6700-7200'
Weber's Scarlet Gilia	*Ipomopsis aggregata ssp. Weberi*	Openings in coniferous forests & scrub oak woodlands 8,500-9,600'
Gibbens Beardstongue	*Penstomon gibbensii*	Sparsely vegetated shale or sandy-clay slopes 5,500-7,400'
Persistent Stepal Yellowcress	*Rorippa calycina*	Riverbanks & shorelines on sandy soils near high water line
Pale Blue-eyed Grass	*Sisyrinchium pallidum*	Wet meadows, stream banks, roadside ditches & irrigated meadows 7,000-7,900'
Laramie False Sagebrush	*Sphaeromeria simplex*	Cushion plant communities on rocky limestone ridges & gentle slopes 7,500-8,600'

Table 3.15-5. Poisonous Plants in the RMPPA.

Species	Dangerous Season(s)	Kind of Livestock Endangered
Arrowgrass	All	All
Chokecherry	All	All, especially sheep
Death camas	Early Spring	All, especially sheep
Greasewood	Spring	All, but mostly sheep
Halogeton	Fall and winter	All, but mostly sheep
Horsebrush	Spring	Sheep
Horsetail	Haying season	All, especially cattle and horses
Low larkspur	Early spring	Cattle
Tall larkspur	Early summer	Cattle
Loco	All, especially spring	All
Lupine	Summer	Sheep
Prince's plume	Spring and summer	All
Senecio	Spring and summer	All
Woody Aster	Spring and summer	All

Source: Stoddart, Smith, and Box, 1975

Table 3.16-1. Visual Resource Management Classifications and Acreages in the RMPPA.

Visual Resource Management Classifications and Acreage.	
Classification	**Acres**
I	33,165
II	160,640
III	3,582,195
IV	224,000
TOTAL	**4,000,000**

Source: (BLM 1988)

Table 3.17-1. Watersheds and Their Acreage Within the RMPPA.

Watersheds				
1st Order	**2nd Order**	**3rd Order**	**4th Order**	**ACRES**
Missouri	North Platte	North Platte	Glendo Reservoir	1,354,118
Missouri	North Platte	North Platte	Horse	1,070,448
Missouri	North Platte	North Platte	Little Medicine Bow	654,576
Missouri	North Platte	North Platte	Lower Laramie	1,528,285
Missouri	North Platte	North Platte	Medicine Bow	920,518
Missouri	North Platte	North Platte	Middle North Platte-Casper	2,210,280
Missouri	North Platte	North Platte	Pathfinder-Seminoe Reservoirs	637,713
Missouri	North Platte	North Platte	Pumpkin	641,775
Missouri	North Platte	North Platte	Sweetwater	1,845,320
Missouri	North Platte	North Platte	Upper Laramie	1,384,875
Missouri	North Platte	North Platte	Upper North Platte	1,849,524
Missouri	South Platte	South Platte	Cache La Poudre	1,207,681
Missouri	South Platte	South Platte	Crow	890,192
Missouri	South Platte	South Platte	Lone Tree-Owl	361,861
Missouri	South Platte	South Platte	Lower Lodgepole	853,707
Missouri	South Platte	South Platte	Sidney Draw	474,460
Missouri	South Platte	South Platte	Upper Lodgepole	726,583
Upper Colorado	Great Divide - Upper Green	Great Divide Closed Basin	Great Divide Closed Basin	2,473,410
Upper Colorado	Great Divide - Upper Green	Upper Green	Bitter	1,413,961
Upper Colorado	Great Divide - Upper Green	Upper Green	Vermilion	609,582
Upper Colorado	White-Yampa	White-Yampa	Little Snake	1,940,746
Upper Colorado	White-Yampa	White-Yampa	Muddy	649,962

Table 3.17-2. Discharge from Selected USGS Gaging Stations in the RMPPA.

Mean yearly and monthly discharge from selected USGS gaging stations throughout the Rawlins Field Office planning area.															
					Stream Discharge in cubic feet[2]										
Stream and Location	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Peak Flow	Drainage Area (miles[2])
North Platte River Above Seminoe Reservoir	1,145	318	350	555	1,417	3,163	4,378	1,412	502	314	415	429	352	14,500	4,175
North Platte River Above Northgate Canyon	436	84	89.4	177	753	1,139	1,472	637	265	149	162	153	104	6,740	1,431
Encampment River at the Platte River Confluence	247	62.3	63.1	70.9	149	771	1,184	283	67.9	55.9	79	78.9	69.7	4,510	265
Little Snake River at the Wyoming/Colorado Line	231	31.9	32.8	51.4	263	1,089	946	161	39.8	29.6	39.1	36.5	32.5	4,200	285
Laramie River at the Platte River Confluence	125	77.7	83.9	100	170	357	349	135	73.1	64.5	72.9	81.8	79.1	6,260	4,564
Medicine Bow River at the Platte River Confluence	184	32.5	49.4	143	328	570	670	179	54.2	29.2	43.4	51.3	38.7	6,010	1,942

Table 3.18-1. Wild Horse Management Areas (HMAs) and Other Areas Affected by Wild Horses, with Appropriate Management Levels (AMLs), and Estimated Populations in the RMPPA*.

Area	Public Acres	Other Acres	AML	Estimated Population			
				1999	2000	2001	2002
HMAs							
Adobe Town	441,000	29,000	700	900[1]	1500[2]	1740[3]	2000[3]
Stewart Creek	155,000	11,000	150	350[2]	452[2]	400[3]	195[1]
Lost Creek	235,000	15,000	70	300[1]	380[2]	120[3]	145[3]
Other Areas Affected by Wild Horses							
I 80 South	359,000	195,000	0	20[2]	133[4]	179[3]	200[3]
I 80 North	333,000	356,000	0	210[2]	111[2]	34[4]	25[1]
Bairoil	6,000	1,000	0				
TOTAL	1,529,000	607,000	920	1790	2,576		

* 1971 populations of existing HMAs was 635; 1971 overall populations in the RMPPA, estimated as closely as possible given administrative boundary changes, were 1,235.

[1] estimated based on information from a partial gather; less accurate than actual count or projection

[2] actual count

[3] projection from prior actual count plus knowledge of herd reproduction

[4] emigration from other areas

Source: BLM 2001, Reed 2002

Table 3.18-2. The Association of RMPPA Wild Horse Herds with Regional Metapopulations.

HMA		METAPOPULATION		HMA(S) IN THE METAPOPULATION	TYPE OF INTERACTION	POINTS OF CONTACT
NAME	AML	NAME	AML			
ADOBE TOWN	700	Stateline	1250	Adobe Town Salt Wells Sand Wash (Co)	Male migration, female exchange	Haystacks, Alkali, Sand Creek, Powder Wash
STEWART CREEK	150	Red Desert	950	Stewart Cr Green Mt Crooks Mt Lost Creek Antelope Hills Divide Basin	Male migration, female exchange	Hay Reservoir, Bare ring, Hadsell, Osborne Draw
LOST CREEK	70	Red Desert	950	Stewart Cr Green Mt Crooks Mt Lost Creek Antelope Hills Divide Basin	Male migration, female exchange	Hay Reservoir Bare ring, Hadsell, Osborne Draw

Source: BLM 1999.

Table 3.18-3. Grazing Within the Wild Horse Management Areas (HMAs) of the RMPPA.

HMA	Number of Operators	Number of Allotments	Permitted AUMs Available	Types of Grazing	Grazing Seasons
Adobe Town	15	15	29,781 AUMs	Sheep, cattle	W, Sp, S, F
Stewart Creek	3	2	9,763 AUMs	Cattle	S, W
Lost Creek	5	1	28,230 AUMs	Sheep, cattle	W, S

Source: BLM 1999.

Table 3.18-4. Age and Sex Distribution of Wild Horses in the I-80 South Area of the RMPPA in 1999—an Example.

Age	Number of Females	Number of Males	Total Number of Individuals	Percent for Age
0	80	84	164	24.5%
1	42	54	96	14.3%
2	44	56	100	14.9%
3	27	14	41	6.1%
4	29	15	44	6.6%
5	5	7	12	1.8%
6	21	6	27	4.0%
7	15	13	28	4.2%
8	15	16	31	4.6%
9	3	15	18	2.7%
10	10	11	21	3.1%
11	4	20	24	3.6%
12	14	12	26	3.9%
13	3	6	9	1.3%
14	3	4	7	1.0%
15	6	4	10	1.5%
16	1	2	3	0.4%
17		1	1	0.1%
18		2	2	0.3%
19				
20	1	5	6	0.9%
21-30	0	0	0	0
	323	347	670	

Source: BLM 2001

Table 3.18-5. Status of Riparian Areas Surveyed in HMAs of the RMPPA.

A. Current status of lotic riparian PFC inventory on public land in the Wild Horse and Burro Management areas. 'Negligible' indicates that small isolated areas probably exist on streams in remote areas.

Herd Management Area	Proper Functioning Condition Rating				
	Proper Functioning (mi)	Functioning at Risk Trend Upward (mi)	Functioning at Risk Trend not Apparent (mi)	Functioning at Risk, Trend Downward (mi)	Not Functioning (mi)
Adobe Town	0.0	0.125	1.125	0.0	0.0
Stewart Creek	7.0	0.0	1.125	0.125	0.0
Lost Creek	0.0	0.0	0.0	Negligible	Negligible

B. Current status of lentic riparian PFC inventory on public land in the Wild Horse and Burro Management areas.

Herd Management Area	Proper Functioning Condition Rating				
	Proper Functioning (ac)	Functioning at Risk Trend Upward (ac)	Functioning at Risk Trend not Apparent (ac)	Functioning at Risk, Trend Downward (ac)	Not Functioning (ac)
Adobe Town	1.5	5.0	5.0	7.5	2.5
Stewart Creek	0.0	0.0	5.0	5.0	0.0
Lost Creek	0.0	0.0	0.0	5.0	5.0

C. Privately-Owned And Controlled Lands.

HMA	PRIVATELY CONTROLLED	PERCENT OF HMA
Adobe Town	29,000	6.1%
Stewart Creek	11,000	6.6%
Lost Creek	15,000	6.0%

Source: BLM 1999.

Table 3.19-1. Acreage for Pronghorn Herd Units and Hunt Areas in the RMPPA.

MAJOR HUs IN RMPPA	HERD UNIT	HUNT AREA	ACRES	TOTAL ACRES IN HU	PERCENTAGE of TOTAL HU ACRES CONSIDERED
Bitter Creek	414	57	1137746.93		
	414	58	699833.71	1837580.64	13.7%
Baggs	438	53	643451.52		
	438	55	245632.32	889083.84	6.6%
Chalk Bluffs	520	111	282823.47	282823.47	2.1%
Iron Mountain	523	104	311202.80		
	523	38	304931.39		
	523	39	668441.50		
	523	40	223514.81	1508090.5	11.2%
Medicine Bow	525	41	279407.13		
	525	42	431422.83		
	525	46	246394.46		
	525	47	708931.74		
	525	48	583374.13	2249530.29	16.7%
Cooper Lake	526	43	291878.30	291878.3	2.2%
Centennial	527	37	218174.00		
	527	44	275772.52		
	527	45	420115.78	914062.3	6.8%
Elk Mountain	528	50	756518.31	756518.31	5.6%
Big Creek	529	51	203409.05	203409.05	1.5%
Red Desert	615	60	1030972.17		
	615	61	803292.60		
	615	64	333549.11	2167813.88	16.1%
Iron Springs	630	108	118166.80		
	630	52	395588.30		
	630	56	172718.39	1020022.6	7.6%
	633	68	519175.04	519175.04	3.9%
North Ferris	636	63	330188.28	330188.28	2.5%
South Ferris	637	62	467573.96	467573.96	3.5%
				13437750.46	100.0%

Table 3.19-2. Pronghorn Harvest in the Primary Herd Management Areas of the RMPPA.

Herd Unit Name-Herd Unit #-Hunt Area #	1991			1992			1993			
	Buck	Doe	Fawn	Buck	Doe	Fawn	Buck	Doe	Fawn	
Bitter Creek-414-57&58	601	672	59	1506	2446	170	871	1641	195	
Baggs-438-53&55	703	843	40	1027	1382	124	916	1303	118	
Chalk Bluffs-520-111	128	76	14	116	59	3	127	75	13	
Iron Mountain-523-38&39&40&104	570	362	51	719	765	69	660	694	105	
Medicine Bow-525-41&42&46&47&48	3152	2845	568	3947	4696	702	2537	3012	394	
Cooper Lake-526-43	372	273	87	326	377	56	144	173	40	
Centennial-527-37&44&45	572	799	96	769	1523	229	675	760	133	
Elk Mountain-528-50	512	330	39	527	451	64	527	507	66	
Big Creek-529-51	41	55	6	37	43	2	34	47	9	
Red Desert-615-60&61&64	1029	819	70	1193	1216	90	621	442	59	
Iron Springs-630-108&52&56	599	364	82	893	786	106	713	423	71	
North Ferris-636-63	282	72	12	284	69	6	182	2	0	
South Ferris-637-62	262	8	1	420	276	55	356	82	12	
Total	8823	7518	1125	11764	14089	1676	8363	9161	1215	
Grand Total			17466			27529			18739	

Herd Unit Name-Herd Unit #-Hunt Area #	1994			1995			1996			1997		
	Buck	Doe	Fawn	Buck	Doe	Fawn	Buck	Doe	Fawn	Buck	Doe	Fawn
Bitter Creek-414-57&58	438	0	0	425	5	0	516	33	0	510	38	0
Baggs-438-53&55	301	145	24	326	0	0	170	18	0	128	40	7
Chalk Bluffs-520-111	138	80	7	115	56	6	80	84	16	118	101	7
Iron Mountain-523-38&39&40&104	625	471	59	451	322	52	492	373	33	705	518	49
Medicine Bow-525-41&42&46&47&48	1599	1371	224	889	546	77	705	133	3	886	273	19
Cooper Lake-526-43	144	125	36	117	28	10	106	53	10	130	81	12
Centennial-527-37&44&45	417	579	100	317	372	71	284	236	51	267	338	15
Elk Mountain-528-50	458	470	62	362	288	54	352	47	16	366	44	7
Big Creek-529-51	47	57	11	39	101	9	40	71	11	50	79	19
Red Desert-615-60&61&64	527	463	63	377	240	21	390	41	0	378	10	0
Iron Springs-630-108&52&56	628	414	93	602	366	71	487	168	49	422	87	30
North Ferris-636-63	167	4	0	174	7	0	164	0	0	170	3	0
South Ferris-637-62	259	73	4	175	1	0	166	6	0	175	5	0
Total	5748	4252	683	4369	2332	371	3952	1263	189	4305	1617	165
Grand Total			10683			7072			5404			6087

Herd Unit Name-Herd Unit #-Hunt Area #	1998			1999			2000			
	Buck	Doe	Fawn	Buck	Doe	Fawn	Buck	Doe	Fawn	
Bitter Creek-414-57&58	525	21	0	561	32	3	500	14	0	
Baggs-438-53&55	132	41	2	211	19	2	273	75	0	
Chalk Bluffs-520-111	113	61	6	112	43	22	104	80	15	
Iron Mountain-523-38&39&40&104	805	349	86	909	551	76	888	455	84	
Medicine Bow-525-41&42&46&47&48	899	217	27	1139	279	40	1321	432	46	
Cooper Lake-526-43	134	110	12	188	138	34	251	140	27	
Centennial-527-37&44&45	401	321	36	509	397	46	645	367	44	
Elk Mountain-528-50	369	75	5	309	120	16	330	118	14	
Big Creek-529-51	47	49	4	49	66	0	58	56	3	
Red Desert-615-60&61&64	377	13	0	377	5	0	415	183	14	
Iron Springs-630-108&52&56	416	56	22	407	79	12	406	76	9	
North Ferris-636-63	248	4	0	171	2	0	156	0	3	
South Ferris-637-62	231	5	0	217	5	0	203	54	3	
Total	4697	1322	200	5159	1736	251	5550	2050	260	
Grand Total			6219			7146			7860	

Table 3.19-3. Mule Deer Harvest in the Primary Herd Management Areas of the RMPPA.

Herd Unit Name-Herd Unit #-Hunt Area #	1991			1992			1993			
	Buck	Doe	Fawn	Buck	Doe	Fawn	Buck	Doe	Fawn	
Baggs-427-100&85&84&82	1971	1012	95	1863	924	103	1125	1063	153	
Laramie Peak-537-64&73	1089	214	14	837	579	60	697	396	24	
Iron Mountain-538-59&60&61&62&63	802	429	30	900	462	14	647	362	19	
Sheep Mountain-539-74&75&76&77	819	16	0	758	498	45	569	414	40	
Shirley Mountain-540-70	589	204	13	669	508	54	509	454	46	
Platte Valley-541-161&78&79&80&81&83	1526	532	69	1513	819	33	1036	654	25	
Ferris-647-86&87	329	16	1	180	140	3	88	65	4	
Chain Lakes-650-98	47	2	7	35	9	0	10	48	0	
	7172	2425	229	6755	3939	312	4681	3456	311	
			9826			11006			8448	

Herd Unit Name-Herd Unit #-Hunt Area #	1994			1995			1996			1997		
	Buck	Doe	Fawn	Buck	Doe	Fawn	Buck	Doe	Fawn	Buck	Doe	Fawn
Baggs-427-100&85&84&82	677	0	0	981	0	0				1217	32	0
Laramie Peak-537-64&73	693	0	0	542	0	0				419	0	0
Iron Mountain-538-59&60&61&62&63	495	194	0	421	38	5				306	18	3
Sheep Mountain-539-74&75&76&77	450	7	0	374	0	0				292	0	0
Shirley Mountain-540-70	295	0	0	206	0	0				158	0	0
Platte Valley-541-161&78&79&80&81&83	818	0	0	575	0	0				508	0	0
Ferris-647-86&87				80	0	0				126	0	0
Chain Lakes-650-98				13	0	0				22	0	0
	3428	201	0	3192	38	5	0	0	0	3048	50	3
			3629			3235			0			3101

Herd Unit Name-Herd Unit #-Hunt Area #	1998			1999			2000			
	Buck	Doe	Fawn	Buck	Doe	Fawn	Buck	Doe	Fawn	
Baggs-427-100&85&84&82	1282	314	12	1868	492	70	2033	255	33	
Laramie Peak-537-64&73	385	0	0	846	0	0	665	5	2	
Iron Mountain-538-59&60&61&62&63	505	18	0	540	12	0	505	13	0	
Sheep Mountain-539-74&75&76&77	327	0	0	477	0	0	594	11	11	
Shirley Mountain-540-70	187	0	0	346	0	0	300	0	0	
Platte Valley-541-161&78&79&80&81&83	700	0	0	1180	0	0	1866	0	0	
Ferris-647-86&87	110	0	0	183	0	0	202	0	0	
Chain Lakes-650-98	17	0	0	26	0	0	41	0	0	
	3513	332	12	5466	504	70	6206	284	46	
			3857			6040			6536	

Table 3.19-4. Elk Harvest in the Primary Herd Management Areas of the RMPPA.

Herd Unit Name-Herd Unit #-Hunt Area #	1991				1992				1993			
	Bull	Spike	Cow	Calf	Bull	Spike	Cow	Calf	Bull	Spike	Cow	Calf
Sierra Madre-425-13&14&15&21&108&124&100&5&6	359	15	529	77	675	308	633	112	538	254	583	102
Iron Mountain-531-5&6	56	12	73	12	71	13	71	8	61	3	93	27
Snowy Range-533-114&110&11&10&9&12&8&125	484	279	459	87	454	277	604	103	611	249	901	210
Shirley Mountain-534-16&17&18	53	18	79	17	61	28	85	15	48	23	79	14
Ferris-639-22&111	22	8	47	6	29	1	41	8	42	7	64	11
Shamrock-643-118	0	0	0	0	9	0	9	3	7	1	11	1
Laramie Pk/Muddy Gap-741-19&7&20	208	68	172	57	330	81	234	30	249	105	266	73
Total	1182	398	1359	256	1629	708	1677	279	1556	642	1997	438
Grand Total				3195				4293				4633

Herd Unit Name-Herd Unit #-Hunt Area #	1994				1995				1996				1997			
	Bull	Spike	Cow	Calf	Bull	Spike	Cow	Calf	Bull	Spike	Cow	Calf	Bull	Spike	Cow	Calf
Sierra Madre-425-13&14&15&21&108&124&100&5&6	761	463	535	126	482	335	494	90	447	7	601	100				
Iron Mountain-531-5&6	83	18	97	19	74	23	103	8	97	13	95	28				
Snowy Range-533-114&110&11&10&9&12&8&125	474	199	442	113	422	206	433	118	363	111	779	126				
Shirley Mountain-534-16&17&18	56	21	54	7	52	9	76	14	63	11	108	8				
Ferris-639-22&111	35	10	63	12	32	1	49	6	46	8	74	10				
Shamrock-643-118	7	1	6	1	5	2	6	1	8	0	14	2				
Laramie Pk/Muddy Gap-741-19&7&20	235	73	330	68	314	50	252	50	328	35	508	65				
Total	1651	785	1527	346	1381	626	1413	287	1352	185	2179	339	0	0	0	0
Grand Total				4309				3707				4055				0

Herd Unit Name-Herd Unit #-Hunt Area #	1998				1999				2000			
	Bull	Spike	Cow	Calf	Bull	Spike	Cow	Calf	Bull	Spike	Cow	Calf
Sierra Madre-425-13&14&15&21&108&124&100&5&6	546	271	708	64	662	392	800	212	650	313	936	158
Iron Mountain-531-5&6	91	14	74	6	87	10	90	18	108	7	115	28
Snowy Range-533-114&110&11&10&9&12&8&125	540	158	562	111	547	203	592	192	467	117	658	153
Shirley Mountain-534-16&17&18	59	12	60	13	63	22	107	23	55	11	48	15
Ferris-639-22&111	54	6	72	12	58	6	72	11	72	1	93	13
Shamrock-643-118	21	0	10	15	20	2	24	3	12	3	32	8
Laramie Pk/Muddy Gap-741-19&7&20	342	98	511	121	385	68	451	78	394	112	486	124
Total	1653	559	1997	342	1822	703	2146	537	1738	564	2366	499
Grand Total				4551				5208				5167

Table 3.19-5. Documented Presence of Upland Game Birds, Small Game Mammals, and Furbearers in Management Areas of the RMPPA

	Upland Game Birds									Small Game Mammals			
	Pheasant	**Chukar**	**Gray Partridge**	**Blue Grouse**	**Ruffed Grouse**	**Sage Grouse**	**Sharp-tailed Grouse**	**Mourning Dove**	**Wild Turkey**		**Cottontail**	**Snowshoe Hare**	**Squirrel**
Wyoming 2000 Total Harvest	45,946	10,016	16,154	14,864	6,710	20,685	11,676	34,250	3,398		44,207	409	1,388
Management Area													
9 Red Desert						X					X		
10 Bitter Creek						X		X			X		
22 Shirley Mountains			X	X		X					X	X	
24 Snowy Range				X		X					X	X	X
25 Sierra Madre			X	X		X	X	X			X	X	X
(27) Laramie Peak	X	X	X	X		X	X	X	X		X		X
28 Iron Mountain		X		X		X	X	X			X		X
(30) Southeast	X	X	X				X	X			X		X
45 Ferris				X		X		X			X		
Laramie County									X				

	Furbearers										
	Badger	**Bobcat**	**Marten**	**Weasel**	**Coyote**	**Raccoon**	**Red Fox**	**Skunk**	**Beaver**	**Mink**	**Muskrat**
Wyoming 2000 Total Harvest	1,295	1,239	503	19	8,183	1,218	3,568	47	3,339	128	3,400
Management Area											
9 Red Desert					X						
10 Bitter Creek		X			X						
22 Shirley Mountains											
24 Snowy Range	X				X	X	X	X	X		X
25 Sierra Madre	X		X	X	X	X	X	X	X		X
(27) Laramie Peak	X	X			X	X	X	X	X	X	X
28 Iron Mountain	X	X		X	X	X	X		X		X
(30) Southeast	X	X			X	X	X	X	X	X	X
45 Ferris											
Laramie County											

Table 3.19-6. Characterization of Raptor Nests in the RMPPA.

Species Code	Species	# Nests	Percent of Nests	Height of Substrate	Height of Nest	Primary Nest Substrates*	Number of Nests Considered for Substrate Evaluation
AFH	artificial ferruginous hawk	104	2.6%	8-40	8-40	ANS (38.8%); MMS (56.3%)	103
AGE	artificial golden eagle	13	0.3%	8-28	8-28	MMS (94.1%)	17
BO	burrowing owl	44	1.1%	0	0	ABB (64.3%); GHS (33.3%)	42
CH	Cooper's hawk	112	2.8%	12-65	6-35	ASP (90.1%)	111
FH	ferruginous hawk	1800	45.3%	0-340	0-200	CLF (13.0%); GHS (16.1%); ROK (41.3%); ROP (10.1%)	1687
GE	golden eagle	734	18.5%	0-440	0-300	CLF (66.9%); ROK (12.9%)	652
GH	great horned owl	86	2.2%	12-200	8-150	CLF (28.9%); CTL (23.7%)	76
GS	goshawk	18	0.5%	20-60	2-50	ASP (52.9%); LPP (41.2%)	17
HL	bald eagle	12	0.3%	35-60	2-50	CTL (80.0%)	5
KE	American kestrel	91	2.3%	0-800	8-65	CLF (31.0%); ROK (27.4%)	84
LE	long-eared owl	12	0.3%	15-50	8-40	ASP (72.7%)	11
NH	northern harrier	27	0.7%	0-10	0-9	GHS (72.0%)	25
PF	prairie falcon	260	6.5%	10-300	10-60	CLF (69.4%); ROK (19.8%)	222
RT	red-tailed hawk	414	10.4%	7-450	6-420	ASP (25%); CLF (26.6%); CTL (21.1%)	380
SE	short-eared owl	2	0.1%	12	9	WIL (100%)	1
SH	Swainson's hawk	95	2.4%	6-100	6-75	ASP (30.0%); CTL (36.3%)	80
SO	screech owl	1	0.0%			LIM (100%)	1
SP	osprey	3	0.1%	60-70	60-70	BLS (33.3%); CTD (33.3%); LPP (33.3%)	3
SS	sharp-shinned hawk	1	0.0%	35	12	ASP (100%)	1
UB	unknown buteo	57	1.4%				
UO	unknown owl	1	0.0%				
UR	unknown raptor	85	2.1%				
	TOTALS	3972	100.0%				3518

* ABB=Abandoned Burrow
ANS=Artificial Nesting Structure
ASP=Aspen Tree
BLS=Blue Spruce
CLF=Cliff
CTL=Cottonwood (live)
CTD=Cottonwood (dead)
GHS=Ground/Hillside
LIM=Limber Pine
LPP=Lodgepole Pine
MMS=Manmade Structure
ROK=Rock Outcrop
ROP=Rock Pillar
WIL=Willow

Source: Apple 2002a

Table 3.19-7. Federally Threatened and Endangered Wildlife Species in the Rawlins RMP Planning Area.

Species	Scientific Name	Habitat
Mammals		
Black-footed ferret	*Mustela nigripes*	Prairie dog communities
Canada lynx	*Lynx canadensis*	Forest areas
Preble's meadow jumping mouse	*Zapus hudsonius preblei*	Riparian habitats east of Laramie Mountains and south of Douglas
Raptors		
Bald eagle	*Haliaeetus leucocephalus*	Nesting and winter migrant and Platte River drainage
Birds		
Whooping crane	*Grus Americana*	Resident/migrant and Platte River drainage
Mountain plover	*Charadrius montanus*	Grasslands statewide
Yellow-billed cuckoo	*Coccyzus americanus*	Riparian areas west of Continental Divide
Piping plover	*Charadrius melodus*	Platte River drainage
Eskimo curlew	*Numenius borealis*	Platte River drainage

Table 3.19-8. State of Wyoming Sensitive Mammal and Bird Species.

Common Name	Scientific Name
Mammals	
Dwarf shrew	Sorex nanus
Long-eared myotis	*Myotis evotis*
Fringed myotis	*Myotis thysanodes*
Spotted bat	*Euderma maculatum*
Townsend's big-eared bat	*Corynarhinus townsendii*
White-tailed prairie dog	*Cynomys leucurus*
Wyoming pocket gopher	*Thomomya chisius*
Swift fox	*Vulpes velox*
Birds	
White-faced ibis	*Plegadis chihi*
Trumpeter swan	*Cygnus buccinator*
Northern goshawk	*Accipeter gentiles*
Peregine falcon	*Falco peragrinus*
Greater sage grouse	*Centrocercus urophasianus*
Columbia sharptailed grouse	*Tymanuchus phasianellus columbianus*
Longbilled curlew	*Numanius americanus*
Burrowing owl	*Athene cunicularia*
Sage thrasher	*Oreoscopies montanus*
Loggerhead shrike	Lanius ludovicanus
Brewer's sparrow	*Spizella breweri*
Sage sparrow	*Amphispetta billineosa*
Baird's sparrow	*Ammodramus bairdii*

Table 3.19-9. Fish species present in the RMPPA.

Species	Scientific Name	Native vs Non native
Catastomidae		
Utah sucker	*Catostomus ardens*	Native
White sucker	*Catostomus commersoni*	Non native
Bluehead sucker	*Catostomus discobolus*	Native
Flannelmouth sucker	*Catostomus latipinnis*	Native
Mountain sucker	*Catostomus platyrhynchus*	Native
Centrarchidae		
Smallmouth bass	*Micropterus salmoides*	Non native
Cottidae		
Mottled sculpin	*Cottus bairdi*	Native
Paiute sculpin	*Cottus beldingi*	Native
Cyprinidae		
Lake chub	*Couesius plumeus*	Non native
Common carp	*Cyprinus carpio*	Non native
Leatherside chub	*Gila copei*	Native
Roundtail chub	*Gila robusta*	Native
Sand shiner	*Notropis stramineus*	Non native
Fathead minnow	*Pimephlaes promelas*	Non native
Longnose dace	*Rhinichthys cataractae*	Native
Speckled dace	*Rhinichthys osculus*	Native
Redside shiner	*Richardsonius balteatus*	Native
Creek chub	*Semotilus atromaculatus*	Non native
Ictaluridae		
Channel catfish	*Ictalurus punctatus*	Non native
Percidae		
Iowa darter	*Etheostoma exile*	Non native
Salmonidae		
Colorado cutthroat	*Onchorhychus clarki*	Native
Rainbow trout	*Onchorhynchus mykiss*	Non native
Brown trout	*Salmo trutta*	Non native
Brook trout	*Salvelinus fontinalis*	Non native
Mountain whitefish	*Prosopium williamsoni*	Native
Downstream Residents		
Pallid Sturgeon	*Scaphirhynchus albus*	Native Platte River
Razorback sucker	*Xyrauchen texanus*	Native Colorado River
Bonytail chub	*Gila elegans*	Native Colorado River
Humpback chub	*Gila cypha*	Native Colorado River
Colorado pikeminnow	*Ptychocheilus lucius*	Native Colorado River

Table 3.20-1. Recreational Management System Information for Special Management Areas Within the RMPPA.

Numbers of Participants and Visitor Days October 1, 1998 – September 30, 2001						
	Continental Divide National Scenic Trail SRMA		North Platte River SRMA		Shirley Mountain Caves SRMA	
	Number of Participants	# Visitor Days	Number of Participants	# Visitor Days	Number of Participants	# Visitor Days
Backpacking	626	3,347				
Bicycling – Mountain	64	32				
Camping	2,525	4,904	12,597	39,834	1,200	4,800
Canoe/Kayaking			8	5		
Caving					100	50
Driving for Pleasure	5,100	2,550	1	0		
Fishing – Freshwater			81,007	38,151	100	50
Gather Non-Commercial Products					1,000	667
Hiking/Walking/Running	3,000	2,000	14,952	7,175		
Horseback Riding	900	450				
Hunting – Big Game	1,227	2,418	6,680	16,280	7,001	19,001
Hunting Small Game					100	67
Hunting – Waterfowl			1,940	1,293		
Nature Study			2,300	358		
OHV – ATV	300	100				
OHV – Cars/Trucks/SUVs	4,210	2,807	402	34	12,601	7,800
Photography			1,500	500	500	167
Picnicking	75	6	26,155	3,979	5,400	850
Rockhounding/Mineral Collection	180	90	420	210		
Row/Float/Raft			29,944	10,680		
Snowmobiling	120	60			200	100
Target Practice					100	17
Trapping			244	122		
Viewing – Wildlife			72,502	23,250	12,601	5,100

Source: BLM Recreation Management Information System, BLM Rawlins Field Office

Chapter 4 Tables

Table 4.0-1. Assumptions for MSA Impact Analysis.

Assumptions for MSA Impact Analysis	
General	♦ Impacts identified in this MSA analysis are limited to those that are currently occurring and would continue to result under the current management direction ♦ The BLM would comply with applicable laws, regulations, and policies in implementation of continued management direction ♦ Adequate funding and staff available would be available for implementation of planning objectives and actions ♦ The Standards for Healthy Rangelands would continue to direct the on-the-ground management of BLM lands, especially with respect to watershed functions, riparian areas, water quality and sustainability of viable populations and diversity of native plant and animal species
Air Quality	♦ Current sources of air emissions would increase proportionally with growth in oil/natural gas development, increased use of roads, and increased visitation to RMPPA ♦ No air quality modeling has been conducted for this MSA analysis; modeling will be done for EIS impact analysis
Cultural Resources	♦ When avoidance would be detrimental to other resource values and management direction, mitigation of impacts cultural resources would be performed in proportion to their significance ♦ Cultural resources would continue to be found throughout the RMPPA ♦ Cultural resource protection would occur in accordance with SHPO coordination requirements and other Federal regulations
Fire	♦ Wildfire extent from such sources as lightning and human-caused sources would continue ♦ Prescribed fires would occur at recent or slightly increased rates ♦ Mechanical manipulation of vegetation to control fuels would be used where more beneficial and practical than prescribed burns ♦ Fire planning would be in compliance with the National Fire Plan
Forestry	♦ Current forest health trends would continue ♦ Forest harvest would remain at current levels ♦ Forests would continue to support a number of other resources, such as recreation, visual resources, and wildlife
Hazardous Materials and Safety	♦ Potential hazardous material or waste spills, use, and safety concerns would increase with growth in oil and natural gas development ♦ No substantial new hazardous material uses and/or waste generation would occur within the RMPPA
Lands and Realty	♦ Land transfers would generally continue at current rates and occur where new opportunities to reach land management objectives arise ♦ Numbers of rights-of-way, permits, and leases would increase over a 20-year period, primarily due to increased oil and natural gas development ♦ New locations of rights-of-way corridors would be identified, but use of existing corridors would be emphasized where practicable
Livestock Grazing	♦ Range improvements would continue to occur at current rates to reach rangeland improvement goals ♦ Livestock would be managed to balance impacts and competition with wildlife ♦ Prescribed burns would continue to occur at current rates, and burn areas would be rested from livestock grazing for the first two growing seasons following prescribed burns

Table 4.0-1. Assumptions for MSA Impact Analysis.

Minerals and Geology	♦ Leasing for access to oil and natural gas resources would continue according to current trends ♦ The RMPPA would continue to have a high potential for oil and natural gas development, as identified in the Mineral Occurrence and Development Potential Report and the Reasonable Foreseeable Development analysis conducted by the BLM ♦ High and moderate potential natural gas development areas could have densities as high as 16 wells per square mile; low natural gas development areas could have densities of less than one well per square mile ♦ Through 2020, projections from the Mineral Occurrence and Development Potential Report and the Reasonably Foreseeable Development analysis conducted by the BLM call for almost 14,300 new wells to be drilled in the RMPPA with an estimated 20,600 acres of surface disturbance associated with these wells ♦ There are seven coal areas classified as having development potential, but of these, the Carbon Basin tract (with a project area of 18,360 acres) is viewed as having the most probable development potential through 2020 ♦ The goal of increased domestic mineral development would continue to increase in importance because of national security concerns and increasing energy demand ♦ Infrastructure and support facilities such as processing facilities and pipelines would continue to be developed to support increased oil and gas development
OHV	♦ OHV use would continue to show increases ♦ OHV use would be managed to avoid/mitigate potential conflicts with other resource uses
Paleontological Resources	♦ When avoidance would be detrimental to other resource values and management direction, mitigation methods to paleotological resources would be considered ♦ Significant fossils may be expected to be found within the RMPPA
Recreation	♦ Recreation use would continue to grow for all major recreation types ♦ While some new developed recreation sites may be established, the recreation focus within the RMPPA would be a continuation of dispersed recreational activities
Socioeconomics	♦ Employment and income would continue to be a driver of economic and population growth in the socioeconomic study area ♦ Economic benefits to the study area would accrue from BLM-influenced activities such as oil and gas development, livestock grazing, and recreation
Soils	♦ Soil erosion would continue to be a major source of concern within the RMPPA ♦ Management actions would adjust to the wet/dry cycles associated with climate patterns ♦ Maintenance of soils quality and quantity would be driven by Wyoming surface disturbing activities guidance and healthy rangeland standards
Transportation and Access	♦ Additional roads would be developed as needed to support expanded oil and gas operations in compliance with the multiple use concepts within FLPMA ♦ Development of other new roads would be minimal ♦ Use of roads would increase, based on anticipated increases in oil and gas activity and recreational use ♦ Unauthorized roads may be closed and reclaimed
Vegetation	♦ Vegetation trends involving vegetative health, use as wildlife habitat, displacement by noxious weeds, and changes in plant community locations would continue

Table 4.0-1. Assumptions for MSA Impact Analysis.

	♦ Adequate forage is available if wildlife numbers remain relatively static however management actions would adjust to wet/dry cycles associated with climate patterns
Visual Resources	♦ Visual resource management designations would be incorporated into all project planning ♦ Current visual resource designations would not change, except those pertaining to WSA's which would be treated as VRM Class I.
Water Quality	♦ The types of developments that could affect water quality within the RMPPA would remain essentially the same as current
Wild Horses	♦ Horses would be managed at AML (appropriate management level)
Wildlife	♦ Existing trends on wildlife health and numbers would continue, with no major changes in wildlife types, locations, and movement patterns ♦ Wildlife populations would continue to be managed by the Wyoming Game and Fish Department ♦ BLM would continue to manage wildlife habitat ♦ Wildlife support developments (e.g., wells, guzzlers, fences, etc.) would continue to be developed at current rates ♦ Big game habitat would be managed in coordination with Wyoming Game and Fish herd objectives
Special Management Areas	♦ Management of specially designated areas such as ACECs, SRMAs, WSAs, and WSRs would generally be the same as current management, including interim management policies for WSAs