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FINAL REPORT
SOCIAL ECONOMIC PROFILE
for
Bureau of Land Management
Worland District, Wyoming
May 1977

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I. INTRODUCTION

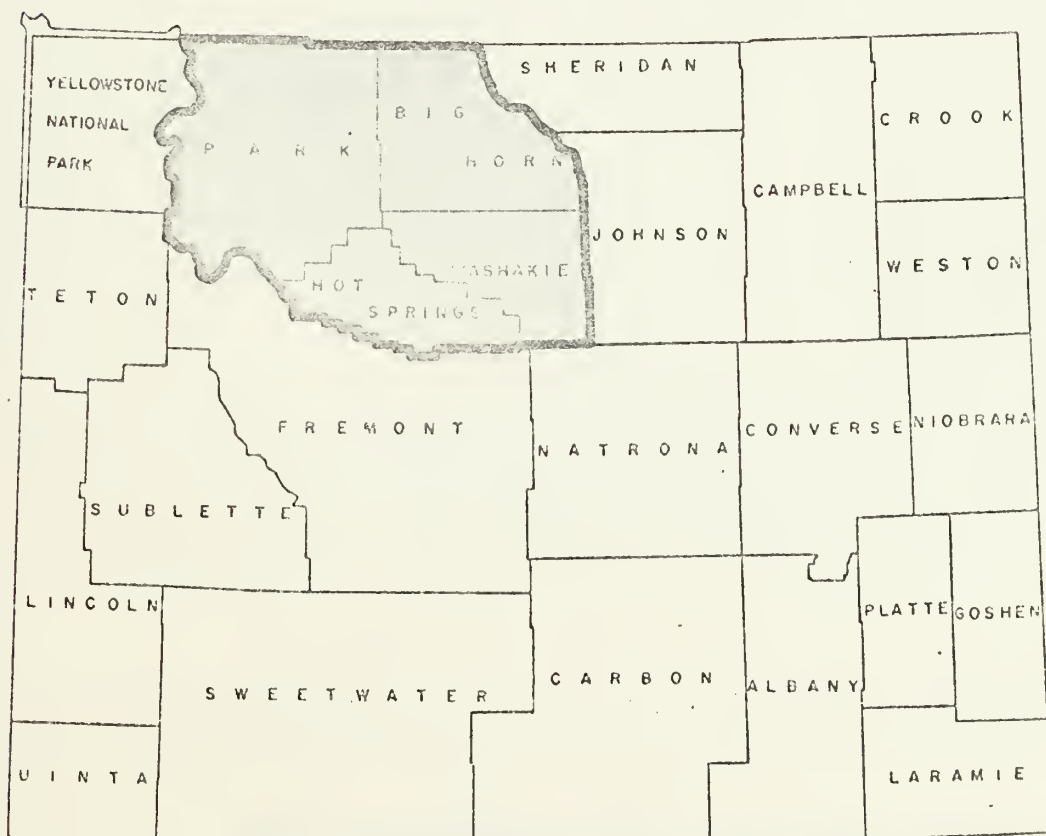
Introduction


In its overall planning system, the Bureau of Land Management (BLM) is required to examine and consider the social-economic impacts of administrative decisions and policies on communities, counties, and regions adjacent to public lands. This report, the Social-Economic Profile (SEP) for the Worland District,* is intended to assist the Worland BLM District in fulfilling these requirements.

The BLM's 1606-Social Economic Profile Manual provides the basic format utilized in this report. The report is divided into five data sections, including: general background, public utilities, infrastructure, economics, and the resident's attitudes and social-cultural values. Each section contains secondary and/or primary data, short narratives to highlight important points, and a concluding discussion summarizing the linkages between BLM policies and the important indicators in the Section. Also, data gaps which might hamper the BLM's decision-making process are enumerated.

*The study area, Social-Economic Profile Area (SEPA), closely approximates the Big Horn Basin Region (BHB) of Northern Wyoming and includes Big Horn, Hot Springs, Park, and Washakie Counties (Figure 1).

Figure I-1. Location map.



 Study Area

II. GENERAL BACKGROUND

General Background

Population

The population of the SEPA was 42,400 in 1975, Table II-2. This amounted to 11.3% of the total state population. Park County was the most populous of the four counties in the SEPA, having 18,600 people or 44% of the SEPA total. There are approximately 2.9 persons per square mile in the SEPA, indicating the rural, sparsely settled nature of the region. However, the whole of Wyoming is even more sparsely inhabited, having an average of 2.6 persons per square mile.

The population of the SEPA has increased by about 30% (13,386 people) from 1930 to 1975, Tables II: 1-2. During the same period, the state has experienced a 40% population growth. The divergence in growth rates has resulted because the SEPA, as a whole, has not shared proportionately in the growth industries of the state such as coal, oil and gas extraction, and manufacturing, but remains economically dominated by agriculture. Park County is an exception to these circumstances. From 1930 to 1975, Park County's population has gone up 56%. Washakie County has also shown above average growth for the state, with a 48% increase in population, while Big Horn County lost people, and Hot Springs County remained about the same. The major towns of the area have grown in the same pattern as their corresponding counties, Table II-3. Cody, Powell, and Worland have each increased in size about 50% since 1940. Thermopolis has grown minimally, as have the three small communities in Big Horn County. The fact that these towns have grown at all indicates a definite loss of rural population. Big Horn County markedly points up the decreasing agricultural population; the county as a whole lost population, yet the towns in the county managed to increase slightly in population. Farm and ranch people are leaving these types of employment and moving to town, when possible, or leaving the area entirely.

Table II-4 presents the most current population figures available.* These data indicate a nominal amount of growth in Big Horn and Washakie Counties and a slight decline in Hot Springs County from 1975.

The age distribution of the population is reported in Table II-5. Big Horn and Hot Springs Counties have lost greatly in the 0-4 category while gaining in the 65+ category over the last 20 years. In fact, in 1970 Hot Springs County had the third highest median age of the 23 counties in the state, while Big Horn was 7th. Park and Washakie Counties reflect the age situation for the state almost exactly, showing a loss of pre-school age children and those in the productive 20-44 years old age bracket with a slight increase in the other groups. Neither these two counties nor the state have the top-heavy age distribution which typifies Big Horn and Hot Springs Counties.

SEA I (Figure 1), which includes the SEPA, has experienced a negative net migration flow in the past 20 years, Tables II: 6-9 (as have most rural counties and regions in the Northern Great Plains during the same period [66]). The net loss in migration corresponds to other trends in the population data, completing the picture of a small, sparsely populated, rural area whose economy has been and remains dominated by agriculture.

*Park County is not included as it is outside the Regional Planning agreement which includes the other three counties of the SEPA.

Table II-1. Population in ten year intervals, 1930-70.

	1930	1940	1950	1960	1970
State					
Urban	70,097	93,577	144,618	187,551	201,111
Rural	<u>155,468</u>	<u>157,165</u>	<u>145,911</u>	<u>142,515</u>	<u>131,305</u>
Total	<u>225,565</u>	<u>250,742</u>	<u>290,529</u>	<u>330,066</u>	<u>332,416</u>
Big Horn Basin Region					
Urban		2,536	17,256	19,339	18,086
Rural	<u>29,014</u>	<u>31,816</u>	<u>23,604</u>	<u>24,681</u>	<u>22,389</u>
Total	<u>29,014</u>	<u>34,352</u>	<u>40,860</u>	<u>44,020</u>	<u>40,475</u>
Big Horn County					
Urban			2,508		
Rural	<u>11,222</u>	<u>12,911</u>	<u>10,668</u>	<u>11,898</u>	<u>10,202</u>
Total	<u>11,222</u>	<u>12,911</u>	<u>13,176</u>	<u>11,898</u>	<u>10,202</u>
Hot Springs County					
Urban			2,870	3,955	3,063
Rural	<u>5,476</u>	<u>4,607</u>	<u>2,380</u>	<u>2,410</u>	<u>1,889</u>
Total	<u>5,476</u>	<u>4,607</u>	<u>5,250</u>	<u>6,365</u>	<u>4,952</u>
Park County					
Urban		2,536	7,676	9,578	9,968
Rural	<u>8,207</u>	<u>8,440</u>	<u>7,506</u>	<u>7,296</u>	<u>7,784</u>
Total	<u>8,207</u>	<u>10,976</u>	<u>15,182</u>	<u>16,874</u>	<u>17,752</u>
Washakie County					
Urban			4,202	5,806	5,055
Rural	<u>4,109</u>	<u>5,858</u>	<u>3,050</u>	<u>3,077</u>	<u>2,514</u>
Total	<u>4,109</u>	<u>5,858</u>	<u>7,252</u>	<u>8,883</u>	<u>7,569</u>

Source: [1, 2, & 3].

Table II-2. Yearly population estimates, 1970-75.

	1970	1971	1972	1973	1974	1975
State	332,416	339,000	346,000	353,000	362,000	376,000
B.H.B. Region	40,475	41,300	41,600	42,000	41,600	42,400
Big Horn Co.	10,202	10,500	10,500	10,800	10,800	11,000
Hot Springs Co.	4,952	5,300	5,000	5,000	4,700	5,800
Park Co.	17,752	18,000	18,200	18,400	18,300	18,600
Washakie Co.	7,569	7,500	7,900	7,800	7,800	8,000

Source: [29].

Table II-3. Population of major towns, 1940-70.

	1940	1950	1960	1970
Big Horn				
Basin	1099	1220	1319	1145
Greybull	1828	2262	2286	1953
Lovell	2175	2508	2451	2371
Hot Springs				
Thermopolis	2422	2870	3955	3063
Park				
Cody	2536	3872	4838	5161
Meeteetse	373	404	514	459
Powell	1948	3804	4740	4807
Washakie				
Worland	2710	4202	5806	5055
Tensleep	345	289	314	320
State	250742	290529	330066	332416

Source: [4 & 5].

Table II-4. Population estimates by Census Tract, 1970 and 1976-77.

North Big Horn County			
<u>Census Tract</u>	<u>1970</u>	<u>1976-77</u>	
Byron	397	509	Nose count by Town Clerk, Nov. '76
Cowley	366	414	Based on housing counts, summer '75
Deaver	112	174	Nose count by Mayor, Dec. '76
Frannie	139	159	Estimate by Council and Clerk, March '77
Lovell	2,371	2,630	Based on a complete housing count, summer '75, updated by building permits, water services
Lovell Bench ¹	-	170	Based on housing counts, Jan. '77
Rest of area	1,230	1,182 ²	
CENSUS TRACT TOTAL	<u>4,627</u>	<u>5,238</u>	
Big Horn County			
<u>Census Tract</u>			
Burlington	-	150	Based on housing count, Dec. '76
Greybull	1,953	2,150	Based on housing counts, March '77
Otto	-	43	Nose count by RPO, Feb. '77
Shell Valley ³	-	600	Based on housing count in spring '76
Rest of area	1,226	320 ⁴	Based on housing count, March '77
CENSUS TRACT TOTAL	<u>3,179</u>	<u>3,263</u>	
South Big Horn County			
<u>Census Tract</u>			
Basin	1,145	1,178	Based on housing count, summer '75, updated winter '76
Manderson	117	151	Nose count by Town Clerk, Nov. '76
Paint Rock	-	188	Nose count by local land use committee, Nov. '76
Rest of area	1,134	966 ⁵	
CENSUS TRACT TOTAL	<u>2,396</u>	<u>2,483</u>	
COUNTY TOTAL	<u>10,202</u>	<u>10,984</u>	
Thermopolis East Census Tract (Hot Springs County)			
<u>Census Tract</u>			
East Thermopolis	316	400	Based on housing counts, RPO estimate
Rest of area	162	162	Assumed constant
CENSUS TRACT TOTAL	<u>478</u>	<u>562</u>	
Kirby	75	99	Nose count by RPO, Nov. '76
Thermopolis	3,063	3,600	RPO estimate based on water service, utilities, and housing count
Rest of area	1,336	1,336	Assumed constant
CENSUS TRACT TOTAL	<u>4,474</u>	<u>5,035</u>	
COUNTY TOTAL	<u>4,952</u>	<u>5,597</u>	
Ten Sleep Census Tract (Washakie County)			
<u>Census Tract</u>			
Ten Sleep	320	450	Estimate by Mayor, Nov. '76
Rest of area	409	409	Assumed constant
CENSUS TRACT TOTAL	<u>729</u>	<u>859</u>	
Worland Census Tract (Washakie County)			
<u>Census Tract</u>			
Worland	5,055	6,000 ⁶	Estimate by City Clerk, March '77, housing count March '77
Rest of area	1,785	1,785	Assumed constant
CENSUS TRACT TOTAL	<u>6,840</u>	<u>7,785</u>	
COUNTY TOTAL	<u>7,569</u>	<u>8,644</u>	

¹ A rural neighborhood of about 2 square miles directly south of Lovell

² Not comparable to Census due to exclusion of Lovell Bench

³ Includes Greybull Heights

⁴ Not comparable to Census due to exclusion of Shell, Otto, Burlington areas

⁵ Comparable to Census due to exclusion of Paint Rock area

⁶ May include some population in subdivisions immediately adjacent to but not legally within Worland



Table II-5. Percent age distribution of the population by ten year intervals and median age in years, 1950-70.

	0-4	5-19	20-44	45-64	65+	Median Age
<u>State Totals</u>						
1950	12	25	38	19	6	27.9
1960	12	29	32	19	8	27.3
1970	9	31	31	20	9	27.2
<u>Big Horn County</u>						
1950	13	30	33	17	7	25.7
1960	12	32	26	21	9	27.0
1970	8	31	24	24	13	31.5
<u>Hot Springs County</u>						
1950	13	25	35	19	8	28.0
1960	11	29	28	19	13	30.3
1970	7	28	25	24	16	36.5
<u>Park County</u>						
1950	13	26	39	16	6	27.5
1960	12	32	31	18	7	25.9
1970	8	33	29	21	9	27.7
<u>Washakie County</u>						
1950	14	27	39	15	5	25.6
1960	14	32	32	16	6	24.2
1970	8	33	28	22	8	27.7


Source: [3].



Figure II-1. Standard Economic Areas (SEA) of Wyoming.



Source: [6]

 SEA - Area I


 SEA - Area II

Table II-6. Total migration flows from each of the fifty states to Wyoming by Standard Economic Areas, 1955-60.

	Total	Area 1	Area 2
U.S.	67381	27048	40333
Maine	120	24	96
New Hampshire	23	8	15
Vermont	58	12	46
Massachusetts	361	65	296
Rhode Island	71	30	41
Connecticut	80	44	36
New York	867	233	634
New Jersey	297	85	212
Pennsylvania	495	167	328
Ohio	891	260	631
Indiana	350	102	248
Illinois	1342	521	821
Michigan	747	256	491
Wisconsin	497	219	278
Minnesota	885	339	546
Iowa	1212	507	705
Missouri	1425	576	849
North Dakota	1381	519	862
South Dakota	2648	798	1850
Nebraska	5562	1649	3913
Kansas	2119	813	1306
Delaware	21	4	17
Maryland	196	36	160
District of Columbia	151	46	105
Virginia	349	94	255
West Virginia	122	38	84
North Carolina	316	101	215
South Carolina	186	64	122
Georgia	273	69	204
Florida	526	135	391
Kentucky	314	106	208
Tennessee	462	94	368
Alabama	244	41	203
Mississippi	234	101	133
Arkansas	239	82	157
Louisiana	417	129	288
Oklahoma	1729	966	763
Texas	2701	1076	1625
Montana	5010	1274	3736
Wyoming	11307	6641	4666
Idaho	1489	823	666
Colorado	7949	3221	4728
New Mexico	1038	501	537
Arizona	739	326	413
Utah	1984	1121	863
Nevada	257	88	169
Washington	1374	531	843
Oregon	1028	454	574
California	4867	1524	3343
Alaska	273	51	222
Hawaii	155	84	71

Source: [6].

Table II-7. Total migration flows from each of the fifty states to Wyoming by Standard Economic Areas, 1965-70.

	Total	Area 1	Area 2
U.S.	63685	28517	35348
Maine	114	10	104
New Hampshire	33	8	25
Vermont	114	21	93
Massachusetts	158	53	105
Rhode Island	13	6	7
Connecticut	99	82	17
New York	810	305	505
New Jersey	411	189	222
Pennsylvania	430	149	281
Ohio	931	436	495
Indiana	520	178	342
Illinois	1183	540	643
Michigan	1264	423	841
Wisconsin	340	138	202
Minnesota	841	359	482
Iowa	922	479	443
Missouri	907	318	589
North Dakota	1380	449	931
South Dakota	2901	756	2145
Nebraska	3831	1402	2429
Kansas	1277	503	775
Delaware	100	47	53
District of Columbia	39	7	32
Virginia	487	168	319
West Virginia	106	31	75
North Carolina	241	56	185
South Carolina	180	57	123
Georgia	163	56	107
Florida	558	159	399
Kentucky	159	58	101
Tennessee	85	22	63
Alabama	264	101	163
Mississippi	365	129	236
Arkansas	204	35	169
Louisiana	318	171	147
Oklahoma	1087	468	619
Texas	2242	1073	1169
Montana	3429	871	2558
Idaho	1502	912	590
Wyoming	13902	8581	5321
Colorado	6960	3096	3864
New Mexico	1637	680	957
Arizona	1010	387	623
Utah	2925	1821	1104
Nevada	568	256	312
Washington	908	422	486
Oregon	801	296	505
California	4458	1614	2844
Alaska	355	62	293
Hawaii	93	58	35

Source: [7].

Table II-8. Total migration flows from Wyoming to the fifty states by Standard Economic Area, 1955-60.

Total	Area 1	Area 2	
73753	28066	45687	U.S.
101	24	77	Maine
57	4	53	New Hampshire
29		29	Vermont
271	53	218	Massachusetts
65	4	61	Rhode Island
214	135	79	Connecticut
696	218	478	New York
322	109	213	New Jersey
389	114	275	Pennsylvania
385	120	265	Ohio
476	116	360	Indiana
1628	439	1189	Illinois
327	106	221	Michigan
519	134	385	Wisconsin
594	108	486	Minnesota
654	222	432	Iowa
1156	424	732	Missouri
707	183	524	North Dakota
1927	341	1586	South Dakota
3100	888	2212	Nebraska
1133	362	771	Kansas
35	12	23	Delaware
260	123	137	Maryland
60	8	52	District of Columbia
439	85	354	Virginia
99	40	59	West Virginia
289	72	217	North Carolina
191	12	179	South Carolina
249	24	225	Georgia
691	163	528	Florida
193	90	103	Kentucky
240	30	210	Tennessee
231	45	186	Alabama
275	89	186	Mississippi
345	158	187	Arkansas
503	249	254	Louisiana
1357	670	687	Oklahoma
3666	1058	2608	Texas
3728	876	2852	Montana
2135	1107	1028	Idaho
11307	4666	6641	Wyoming
9922	4089	5833	Colorado
1824	773	1051	New Mexico
1828	677	1151	Arizona
4670	3290	1380	Utah
715	475	240	Nevada
2356	798	1558	Washington
1637	587	1050	Oregon
9072	3427	5645	California
478	211	267	Alaska
208	58	150	Hawaii

Source: [6].

Table II-9. Total migration flows from Wyoming to the fifty states by Standard Economic Area, 1965-70.

Total	Area 1	Area 2	
81015	30928	50087	U.S.
52	6	46	Maine
24	18	6	New Hampshire
13		13	Vermont
224	80	144	Massachusetts
43	14	29	Rhode Island
176	63	113	Connecticut
621	239	382	New York
205	59	146	New Jersey
576	143	433	Pennsylvania
688	235	453	Ohio
676	199	477	Indiana
1520	625	895	Illinois
836	291	545	Michigan
631	175	456	Wisconsin
1013	213	800	Minnesota
783	375	408	Iowa
990	381	609	Missouri
918	188	730	North Dakota
1626	259	1367	South Dakota
3014	654	2360	Nebraska
1270	672	598	Kansas
95	18	77	Delaware
423	82	341	Maryland
47	7	40	District of Columbia
634	239	395	Virginia
138	7	131	West Virginia
348	79	269	North Carolina
304	51	253	South Carolina
364	130	234	Georgia
1130	120	1010	Florida
152	38	114	Kentucky
335	59	276	Tennessee
325	60	265	Alabama
290	112	178	Mississippi
415	150	265	Arkansas
745	333	412	Louisiana
1455	655	800	Oklahoma
3230	1239	1991	Texas
4000	919	3081	Montana
1862	996	866	Idaho
13902	5321	8581	Wyoming
11914	5259	6655	Colorado
1156	451	705	New Mexico
2598	1100	1498	Arizona
3262	2018	1244	Utah
905	464	441	Nevada
3752	1481	2271	Washington
1685	647	1038	Oregon
8394	3520	4874	California
787	386	401	Alaska
469	98	371	Hawaii

Source: [7].

Table II-10. Residence of the population five years old and over, 1960 and 1965.

<u>1960</u>	State	Big Horn	Hot Springs	Park	Washakie
Same house	120,835	5,435	2,218	6,032	2,665
Different house in U.S.	163,315	4,981	3,338	8,642	4,920
Same county	81,916	3,032	1,358	4,701	2,392
Same state	25,325	846	925	1,425	1,206
Different state	56,074	1,103	1,055	2,516	1,322
 <u>1965</u>					
Same house	146,359	5,162	2,442	7,857	3,264
Different house in U.S.	141,997	3,948	1,961	7,862	3,241
Same county	64,170	1,766	932	4,040	1,374
Same state	27,864	997	539	1,330	951
Different state	49,963	1,185	490	2,492	916

Source: [6 & 8].

Housing

The Census data presented in Tables II: 11-13 are quite old and consequently difficult to analyze for this point in time given the relative price situation between 1970-77, the population movements from rural to urban areas, and the change in property values. Some points which are evident are: 1) the median values of rural, owner occupied housing units were higher in the SEPA than the state average (except Big Horn County), 2) the median values of total owner occupied housing units were lower in the SEPA than the state average (except Park County), and 3) gross rents were generally lower than the state average. These facts indicate that property values were somewhat lower in the SEPA than in the remainder of Wyoming and that rentals were not as scarce as in some areas of the state where rapid growth has distorted the market.

Estimating the supply-demand situation for housing in the SEPA is beyond the scope of this report and, in fact, would require a full-blown empirical research effort. However, Table II-14 does provide some insight into the current housing situation. One thing is clear, housing and rental prices have greatly increased since 1970. Also, there are some unoccupied housing units in each town in the SEPA with the exception of Cody. Table II-15 presents housing data supplied by the Regional Planning Office. Because of definitional differences, data from the different sources are not comparable.

The lack of comprehensive housing information is a major data gap in this report. BLM decisions could cause difficulties in this area, but without adequate data is it not possible to determine the point where supply and demand for housing would constitute a shortage or critical problem. Perhaps the best solutions to the data gap are to wait for the 1980 Census of Housing or further work by the Regional Planning Office.

Table II-11. Number of housing units, 1970.

	Total	Rural	Occupied Rural Farm
State	116323	47172	10139
Big Horn	3775	3775	688
Hot Springs	1984	686	203
Park	6193	2696	868
Washakie	2659	901	267

Source: [9].

Table II-12. Total and rural owned occupied housing by valuation, 1970.

TOTAL	\$ 0- 5000	\$5000- 9999	\$10000- 14999	\$15000- 19999	\$20000- 24999	\$25000- 34999	\$35000- +	Total	Median \$
State	2856	8171	11861	12166	6273	4620	2253	48200	15400
Big Horn	191	542	377	226	43	26	25	1430	9800
Hot Springs	104	174	157	198	58	27	57	775	13600
Park	50	243	570	808	300	299	94	2364	16900
Washakie	51	192	472	290	111	60	24	1200	13900
RURAL									
State	1912	3534	3122	2378	1098	918	420	13482	11800
Big Horn	191	542	377	226	43	26	25	1430	9800
Hot Springs	61	26	16	47	19	15	-	184	13300
Park	34	70	84	155	60	47	33	483	17200
Washakie	17	59	83	16	11	12	5	203	11800

Source: [9].

Table II-13. Total and rural renter occupied housing by valuation, 1970.

Total	\$ 0- 39	\$40- 79	\$80- 149	\$150- 199	\$200- +	No Cash	Total	Median \$
State	1172	10401	13653	2296	527	3601	31650	87
Big Horn	46	322	271	5	-	169	813	76
Hot Springs	54	251	203	6	9	52	575	74
Park	75	578	733	47	5	122	1560	84
Washakie	34	280	287	10	-	56	667	79
Rural								
State	415	2357	2903	451	139	1679	7944	85
Big Horn	46	322	271	5	-	169	813	76
Hot Springs	12	18	42	6	-	21	99	83
Park	39	123	143	12	-	75	392	79
Washakie	-	29	36	5	-	29	99	87

Source: [9].

Table II-14. Housing ownership and vacancy rates and average rental and purchase prices, 1975-76.

Big Horn County	1975	1976
Basin		
Home ownership	72%	72%
Home vacancy	2%	2%
Government housing	0%	0%
Average monthly rental		
2 bedroom	\$100	
3 bedroom	\$170	\$180
Average purchase price		
2 bedroom	\$18000	
3 bedroom	\$25000	\$30000 est.
Creybull		
Home ownership	58%	58%
Home vacancy	9%	1%
Government housing	0%	1 building
Average monthly rental		
2 bedroom	\$110	
3 bedroom	\$140	\$160
Average purchase price		
2 bedroom	\$18000	
3 bedroom	\$24000	\$30000 est.
Lovell		
Home ownership	75%	75%
Home vacancy	10%	10%
Government housing	2 units	2 units
Average monthly rental		
2 bedroom	\$110	
3 bedroom	\$160	\$175
Average purchase price		
2 bedroom	\$23000	
3 bedroom	\$28000	\$30000
New 31 unit senior citizen housing complex		
Hot Springs County		
Thermopolis		
Home ownership	75%	75%
Home vacancy	less than 1%	1%
Government housing	0	0
Average monthly rental		
2 bedroom	\$125	
3 bedroom	\$180	\$225
Average purchase price		
2 bedroom	\$21000	
3 bedroom	\$27500	\$33500
Park County		
Cody		
Home ownership	85%	85%
Home vacancy	0%	0%
Government housing	1 unit	1 unit
Average monthly rental		
2 bedroom	\$150	
3 bedroom	\$175	\$250
Average purchase price		
2 bedroom	\$29000	
3 bedroom	\$35000	\$40000
Powell		
Home ownership	90%	90%
Home vacancy	1%	1%
Government housing	0%	0%
Average monthly rental		
2 bedroom	\$125	
3 bedroom	\$200	\$250
Average purchase price		
2 bedroom	\$27000	
3 bedroom	\$32000	\$36000
71 unit senior citizen housing complex		
Housing project planned		
Nelson subdivision		
Powell Lumber subdivision		
Washakie County		
Worland		
Home ownership	80%	90%
Home vacancy	2%	5%
Government housing	0%	0%
Home rentals	18%	5%
Average monthly rental		
2 bedroom	\$125	
3 bedroom	\$150	\$250
Average purchase price		
2 bedroom	\$20000	
3 bedroom	\$24000	\$34000

Source: [10 & 11].

Table II-15. Number of single family dwellings, mobile homes, duplexes, and apartments for selected communities, 1976.

	<u>Single Family</u>	<u>Mobile Homes</u>	<u>Duplexes</u>	<u>Apartments</u>
<u>Big Horn County</u>				
Basin ('75)	367	47	6	27 units
Byron ('76)	126	45	1	-
Cowley (')			-	-
Deaver ('76)	32	15	-	4 units
Frannie ('75)	53	13	-	1 bldg., ? units
Greybull ('77)				
Lovell ('76)	736	79	1	50 units
Manderson ('75)	40	5	2	-
<u>Hot Springs County</u>				
East Thermopolis	NA	NA	NA	NA
Kirby	31	7	-	-
<u>Washakie County</u>				
Ten Sleep ('75)	112	32	-	-
Worland ('77)	1,465	229	-	190 units

Source: [64].

Land Ownership and Use

Land ownership patterns are presented in Table II-16. The salient feature of the data is the vast amount of federally owned land in the SEPA; only 24% of the total land area is privately held. The BLM is the largest single landowner in the SEPA, controlling 39.2% of the land, including 56.5% of Big Horn County and 66.9% of Washakie County. The SEPA total figures are similar to the state totals; 20.5% of all land in Wyoming is privately owned, and the BLM administers another 33.6%.

The predominant land use, measured in dollars of output, in the SEPA and the state is mineral extraction, Table II-17. The extraction of all minerals increased between 1970-75, excepting natural gas. Coal mining exhibited the greatest gain. There is minimal coal mining in the SEPA, 3,978 tons compared to the state total of 23,141,105 tons in 1975. The most prominent minerals in the SEPA are oil (and the associated processing in Park County) and natural gas. These minerals are available in limited quantities in the area, and their depletion over time, forestalling any new major production fields, will mean serious economic problems for the region.

The predominant land use, in terms of acreage, is agriculture, and the leading agricultural use is extensive grazing by domestic livestock, Table II-20. Land in farms decreased from 1969-75 in the state and in all counties in the SEPA except Washakie, Table II-18. Also, the average farm has grown somewhat larger in the SEPA, and the number of farms has decreased, Table II-19. These are all predictable trends, generally paralleling the patterns of agricultural reorganization that are evidenced throughout the United States.

One of the prime limiting factors to land use in the SEPA is climate. The average annual precipitations are very low, requiring irrigation for practically all forms of agriculture, the growing season is short, and the winters (number of days below 32° F) are long, Table II-21.

Table II-16. Land ownership, 1970.

	Total	Private	Wind River Indian Reservation	State	B.L.M.	Forest Service	Other Federal
State	62,305,975	25,683,255	1,886,374	4,785,010	17,527,000	9,252,048	3,172,288
Acres							
%	100.0	41.2	3.0	7.7	28.1	14.9	5.1
B.H.B. Region							
Acres	7,951,290	1,905,830	265,790	391,000	3,120,260	1,992,380	275,970
%	100.0	24.0	3.3	4.9	39.2	25.1	3.5
Big Horn Co.							
Acres	2,001,320	361,280		75,600	1,130,880	357,160	76,400
%	100.0	18.1		3.8	56.5	17.8	3.8
Hot Springs Co.							
Acres	1,337,110	391,000	265,790	76,500	540,980	59,700	3,080
%	100.0	29.2	19.9	5.7	40.5	4.7	0.2
Park Co.							
Acres	3,186,260	815,530		143,820	493,370	1,540,290	193,250
%	100.0	25.6		4.5	15.5	48.3	6.1
Washakie Co.							
Acres	1,426,600	338,020		95,080	955,030	35,230	3,240
%	100.0	23.7		6.7	66.9	2.5	0.2

Sources: [12 & 29].

Table II-17. Mineral extraction, 1970-75.

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>
Big Horn						
Bentonite (Tons)	381168	387097	634049	690773	862926	857768
Gypsum (Tons)	81235	92193	125636	172467	164780	103224
Oil (Barrels)	5947442	5946185	6105512	5775842	6075234	6712645
Gas (MCF)	1320484	1287059	1681001	1551436	1697628	1206739
Hot Springs						
Oil (Barrels)	10564681	9711219	8910525	8854384	9194951	8896667
Gas (MCF)	562502	339464	522422	213740	213869	196685
Coal (Tons)	8311	7657	8463	7870	6707	3978
Misc. minerals						12677
Park						
Gypsum (Tons)	122346	128374	140375	126145	135231	113320
Oil (Barrels)	31597680	30520110	28279353	26889998	26935159	27357841
Gas (MCF)	9510841	8867621	8488049	10699630	10110062	9085234
Washakie						
Bentonite (Tons)	0	0	0	0	30000	161878
Oil (Barrels)	2178571	1853565	1970837	1956504	1847706	1715369
Gas (MCF)	14332973	13833681	13174163	11567956	10380218	9104538
State						
Oil (Barrels)	141546503	132588059	125220375	126943274	127557252	120629951
Gas (MCF)	260037715	282320781	285426141	287818223	265600635	248528881
Coal (Tons)	7039980	7743347	10043161	14272350	19957726	23141105
Uranium (Tons)	2042074	2044943	23900100	2588011	2287697	
Iron Ore (Tons)	4533320	4643856	5078345	5131692	5266517	
Bentonite (Tons)	2228978	1813066	2062384	2614779	3422635	
Trona (Tons)	4022304	4203677	4783946	6029984	7070617	
Gypsum (Tons)				297708		
Misc. minerals						91360904

Source: [13 & 14].

Table II-18. Number of farms, acres in farms, and average farm size for all farms, 1967 and 1974.

1969	All farms (number)	Land in farms (acres)	Ave. size of farms (acres)
State	8833	35476374	4014
Big Horn	539	525531	975
Hot Springs	126	804582	6386
Park	642	1166453	1817
Washakie	198	326238	1648
1974			
State	8329	34404521	4131
Big Horn	526	515486	980
Hot Springs	114	825614	7242
Park	617	1116396	1809
Washakie	218	464837	2132

Source: [15].

Table II-19. Number of farms, acres in farms, and average farm size for farms with sales of \$1,000 and over, 1969 and 1974.

	All farms (number)	Land in farms (acres)	Average size of farms (acres)
1969			
State	8025	35332992	4403
Big Horn	498	522189	1049
Hot Springs	113	803305	7109
Park	555	1155539	2082
Washakie	186	325213	1748
1974			
State	7915	34268294	4330
Big Horn	507	515276	1016
Hot Springs	106	824990	7783
Park	565	1113398	1971
Washakie	208	463358	2228

Source: [15].

Table II-20. Land use patterns in acres, 1958 and 1967.

Acres in 1958	Total Inventory	Cropland Land	Pasture Land	Range Land	Forest Land	Other Land
State	32870420	2493900	467400	28170900	1585820	152400
Big Horn	415200	122700		278400	10000	4100
Hot Springs	757900	21600	2500	692000	37400	4400
Park	945800	155800	10900	768000	3900	7200
Washakie	485600	49600		429100	5100	1800
Acres in 1967						
State	32152752	3043823	320240	27009363	1554421	224905
Big Horn	399459	125928		244635	20123	8773
Hot Springs	733599	16494	108	658786	57400	811
Park	908200	142148	331	695638	34002	36101
Washakie	457866	48325	712	388474	16320	4035

Source: [17].

Table II-21. Climatic data.

Big Horn County

Average annual precipitation	6.89 in.
Average annual snow-sleet	21.3 in.
Average annual temperature	44.4 ^o F
January monthly average temperature	16.5 ^o F
July monthly average temperature	71.4 ^o F
Date of average last freeze	12 May
Date of average first freeze	25 September
Average no. days 32 ^o F and below	213

Hot Springs County

Average annual precipitation	11.01 in.
Average annual snow-sleet	40.70 in.
Average annual temperature	46.3 ^o F
January monthly average temperature	20.5 ^o F
July monthly average temperature	72.3 ^o F
Date of average last freeze	22 May
Date of average first freeze	17 September
Average no. days 32 ^o F and below	194

Park County

Average annual precipitation	7.5 in.
Average annual snow-sleet	24.7 in.
Average annual temperature	46.2 ^o F
January monthly average temperature	22.4 ^o F
July monthly average temperature	70.5 ^o F
Date of average last freeze	22 May
Date of average first freeze	19 September
Average no. days 32 ^o F and below	177

Washakie County

Average annual precipitation	7.76 in.
Average annual snow-sleet	22.0 in.
Average annual temperature	44.9 ^o F
January monthly average temperature	15.5 ^o F
July monthly average temperature	72.0 ^o F
Date of average last freeze	13 May
Date of average first freeze	23 September
Average no. days 32 ^o F and below	192

Source: [18].

Welfare and Social Services

The SEPA has above state average recipient rates* for nearly all the welfare statistics presented in Tables II: 22-27. The data presented in these tables were only available for 1970 and 1972. This lack of current data, coupled with the volatile nature of welfare indicators, makes it impossible to view or analyze trends. This is not a serious data gap in the SEP, as it is not clear that BLM policies could significantly influence the welfare situation in the SEPA.** Also, even though the data in these tables have been collected for more recent years, they have not been tabulated or summarized by the various state agencies for general distribution. If it were absolutely necessary, this type of data could be assessed.***

The only conclusion that can be drawn from these tables is that there appears to be no clear correlations between years, indicators, or counties. This emphasizes the point that welfare problems are functions of other than economic considerations. This sets welfare and social problems apart from the other indicators that have been and will be discussed; all other variables we will deal with are functionally tied to the economy of the area.

*Recipient rates indicate how many persons, as a ratio of total population, are receiving welfare payments of the various types.

**Also, there are a myriad of other intertwined variables which influence these indicators, and BLM policies could not be separated out.

***But not without the expenditure of much time; so much in fact that the effort would be equal to that necessary for the collection of primary data.

Table II-22. Average monthly recipient rate (per 1,000 population) and rank by county of old age assistance payments, 1970 and 1972.

	<u>Rate</u>		<u>Rank</u>	
	<u>1970</u>	<u>1972</u>	<u>1970</u>	<u>1972</u>
Big Horn	6.99	7.20	3	3
Hot Springs	5.02	6.92	10	4
Park	4.73	3.87	12	13
Washakie	6.85	5.32	4	7

Source: [19].

Table II-23. Average monthly recipient rate (per 1,000 population) and rank by county of aid for dependent children payments, 1970 and 1972.

	<u>Rate</u>		<u>Rank</u>	
	<u>1970</u>	<u>1972</u>	<u>1970</u>	<u>1972</u>
Big Horn	4.51	4.02	7	13
Hot Springs	3.63	4.62	11	9
Park	4.56	6.85	6	5
Washakie	5.81	4.68	5	8

Source: [19].

Table II-24. Average monthly recipient rate (per 1,000 population) and rank by county of general relief payments, 1970 and 1972.

	<u>Rate</u>		<u>Rank</u>	
	<u>1970</u>	<u>1972</u>	<u>1970</u>	<u>1972</u>
Big Horn	0.78	0.65	16	18
Hot Springs	1.82	0.19	10	22
Park	1.86	1.10	9	13
Washakie	1.45	1.56	14	10

Source: [19].

Table II-25. Average monthly recipient rate (per 1,000 population) and rank by county of medical assistance payments, 1970 and 1972.

	<u>Rate</u>		<u>Rank</u>	
	<u>1970</u>	<u>1972</u>	<u>1970</u>	<u>1972</u>
Big Horn	0.39	0.19	10	16
Hot Springs	0.81	0.38	4	10
Park	0.11	1.05	22	17
Washakie	0.13	0.0	21	22.5

Source: [19].

Table II-26. Average monthly recipient rate (per 1,000 population) and rank by county of food stamp payments, 1970 and 1972.

	<u>Rate</u>		<u>Rank</u>	
	<u>1970</u>	<u>1972</u>	<u>1970</u>	<u>1972</u>
Big Horn	10.64	46.73	2	3
Hot Springs	8.20	27.13	8	14
Park	6.87	39.67	11	5
Washakie	5.93	39.09	14	6

Source: [19].

Table II-27. Rate of deaths by suicide (per 1,000 population) and rank by county, 1970 and 1972.

	<u>Rate</u>		<u>Rank</u>	
	<u>1970</u>	<u>1972</u>	<u>1970</u>	<u>1972</u>
Big Horn	N.A.	0.09	N.A.	20
Hot Springs	N.A.	0.19	N.A.	10
Park	N.A.	0.11	N.A.	18
Washakie	N.A.	0.13	N.A.	17

Source: [19].

Health

The SEPA is well-supplied with health facilities. There are hospitals near each of the major towns and at least one nursing home in each county, Table II-28. None of the hospitals exceeds a 50% occupancy rate, and each of the four counties has a favorable persons per hospital bed ratio, Table II-31. The nursing home situation is somewhat poorer: only Big Horn County has any significant excess capacity, while the other nursing homes are at 95%+ occupancy rates. The Powell nursing home reported their occupancy rate at 103%, indicating a definite need for more facilities. Even considering these occupancy rates, the SEPA Counties, except Park, are well off relative to the rest of the state in terms of persons per nursing home bed, Table II-32.

The SEPA also had an above state average number of physicians and dentists per 1,000 persons in 1972, Tables II: 29-30. Washakie County had more dentists per person than any of the other 23 counties in the state in 1972. However, these ratios can change dramatically in a short period, necessitating careful use and interpretation (this also applies to the welfare data in the previous section). For example, Table II-29, in 1970 Hot Springs County ranked 21st in the state in persons per physician, having an incredible ratio of one M.D. for every 707 persons. Between 1970 and 1972, three physicians either retired or left Hot Springs County. That abruptly dropped the state rank down to 12th as the persons per physician ratio jumped to 1,300 to one. Now, the community has replaced the lost doctors, and the ratio is again near the 1970 level. When interpreting these data, one must keep in mind that two areas with the same persons per doctor ratio may still involve greatly different situations. For example, Hot Springs County has one of the most aged populations in the state, while Albany County has the youngest. Older people tend to need more medical attention than do the young and so, even if the two areas have the same number of persons per physician, one might still expect Hot Springs County doctors to have larger case loads and less excess capacity.

The rates of live births and infant deaths, Tables II: 33-34, in the SEPA are low relative to other Wyoming counties, reflecting the good medical facilities and low persons per physician ratios. The overall death rate, Table II-35, varies widely. The death rates in Park and Washakie Counties changed a great deal between 1970-72, while Big Horn remained relatively stable, and Hot Springs County continued to have the highest death rate in the state.

Table II-28. Locations and occupancy rates for hospitals and nursing homes serving communities in the SEPA, 1976.

Big Horn County:

Basin: South Big Horn County Hospital (8 mi. N.)
30-bed occupancy rate, 38%

Greybull: South Big Horn County Hospital
30-bed occupancy rate, 30%

Nursing home in Lovell (30 miles)
30-bed occupancy rate, 66%

Lovell: North Big Horn Hospital
30-bed occupancy rate, 41%

Nursing wing - 30 bed; occupancy rate 66%

Hot Springs County:

Thermopolis: Memorial Hospital
50 bed occupancy rate, 48%

Nursing home -
80-bed occupancy rate 98%

Wyoming Pioneer Home
132-bed occupancy rate 86%

Gottsche Rehabilitation Center

Park County:

Cody: West Park County Hospital
43-bed occupancy rate 45%

40-bed nursing home

Powell: Powell Hospital
47-bed occupancy rate 50%

Powell Nursing Home
73-bed occupancy rate 103%

Retirement Home & Rocky Mountain Manor

Washakie County:

Worland: Washakie Memorial Hospital
36-bed occupancy rate 41%

Nursing home
76 beds, 98% occupancy

Source: [11].

Table II-29. Persons per physician, rate and county rank, 1970 and 1972.

	<u>Rate</u>		<u>Rank</u>	
	<u>1970</u>	<u>1972</u>	<u>1970</u>	<u>1972</u>
Big Horn	1,457	1,528	10	10
Hot Springs	707	1,300	21	12
Park	986	952	17	16
Washakie	1,081	962	14	15

Source: [19].

Table II-30. Persons per dentist, rate and county rank, 1970 and 1972.

	<u>Rate</u>		<u>Rank</u>	
	<u>1970</u>	<u>1972</u>	<u>1970</u>	<u>1972</u>
Big Horn	2,040	2,140	16	16
Hot Springs	2,476	2,600	10	10
Park	1,972	1,810	17	20
Washakie	1,514	1,283	20	23

Source: [19].

Table II-31. Persons per hospital bed, rate and county rank, 1970 and 1972.

	<u>Rate</u>		<u>Rank</u>	
	<u>1970</u>	<u>1972</u>	<u>1970</u>	<u>1972</u>
Big Horn	170	178	15	16
Hot Springs	99	104	22	22
Park	178	188	13	14
Washakie	210	214	9	9

Source: [19].

Table II-32. Persons per nursing home bed, rate and county rank, 1970 and 1972.

	<u>Rate</u>		<u>Rank</u>	
	<u>1970</u>	<u>1972</u>	<u>1970</u>	<u>1972</u>
Big Horn	928	181	1	12
Hot Springs	85	90	17	17
Park	282	287	7	5
Washakie	100	101	16	15

Source: [19].

Table II-33. Live births (per 1,000 population), rate and county rank, 1970 and 1972.

	<u>Rate</u>		<u>Rank</u>	
	<u>1970</u>	<u>1972</u>	<u>1970</u>	<u>1972</u>
Big Horn	16.57	16.07	18	12
Hot Springs	16.56	12.88	19	20
Park	17.58	15.64	15	16
Washakie	19.02	15.97	12	14

Source: [19].

Table II-34. Infant deaths under one year (per 1,000 population), rate and county rank, 1970 and 1972.

	<u>Rate</u>		<u>Rank</u>	
	<u>1970</u>	<u>1972</u>	<u>1970</u>	<u>1972</u>
Big Horn	29.59	52.53	4	1
Hot Springs	12.20	0.0	16	21.5
Park	6.41	7.07	20	19.0
Washakie	20.83	32.52	11	3

Source: [19].

Table II-35. Rate of deaths (per 1,000 population), rate and county rank, 1970 and 1972.

	<u>Rate</u>		<u>Rank</u>	
	<u>1970</u>	<u>1972</u>	<u>1970</u>	<u>1972</u>
Big Horn	11.86	11.03	5	7
Hot Springs	16.16	18.08	1	1
Park	6.93	7.62	20	16
Washakie	9.64	6.36	10	21

Source: [19],

Transportation

Transportation entails the movement of goods, services, and passengers from one point to another, and includes highway, rail, air, and pipeline systems. On the national level automobiles dominate as the primary private mode of passenger transportation followed by bus, railroads, and airlines. In terms of cargo transportation, national trends from 1961-1971 indicated that rail led in terms of cargo ton miles, followed by water, and oil pipelines, intercity motor vehicles, and air transport [42].

All these modes of public and private transportation (except water) are found in the Big Horn Basin, although not every community is accessible to or served by all of the public transportation forms. The following sections provides some basic information on each of the modes of transportation in the Big Horn Basin region.

Highway. Although railroads were instrumental in opening up the State of Wyoming, today auto and motor carriers are the dominant modes of transportation in the State. The state as a whole and the Big Horn Basin have well-developed networks of roads, these being essential where population density is as low as it is in this area with 3.4/sq. mile.* The existing highway system in the Big Horn Basin is portrayed in Figure II-2. In order to describe the system it is important to understand the designations used. The State Primary System (called State Highway in Figure II-2) is the network developed by the State to link centers of population and commerce, and to provide principal connections with systems of neighboring states. Each state builds the primary system according to its own criteria, and further divides the system into rural highways and municipal extension.

Under the 1921 Federal Highway Act, mileage equal to 7% of total rural road mileage became eligible for federal funds, thus facilitating the establishment of the nation's principal road network. Roads in the Basin receiving funding under this act are indicated by the blue lines on the map. It will be noted that while the FAP roads are synonymous with the state system in most instances, in some areas they are federal aid roads only.

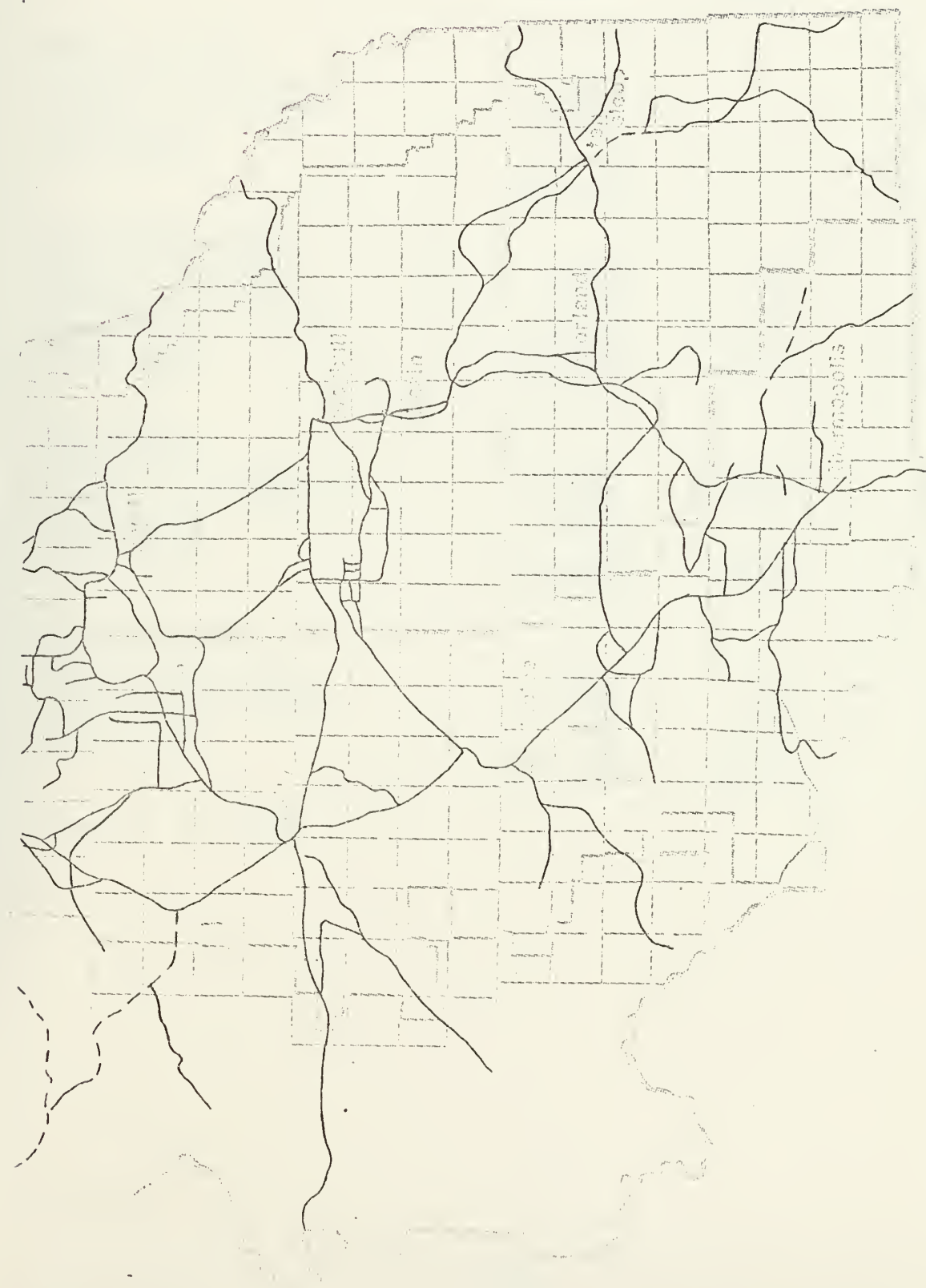
The same act provided funds for Federal Aid Secondary roads to link major farm, mail delivery, and school bus routes to the Primary Systems. These roads also were synonymous with state highways in most instances and are indicated in red in Figure II-2. It is apparent that the majority of highway roads in the Basin are under federal aid classification. None of the federal interstate system traverses the Basin, and there are no multi-land highways. All of the State Primary, Federal Aid Primary, and Federal Aid Secondary roads are surfaced.

County roads in each of the four counties have low volumes of traffic and many have gravel or dirt surface. Municipal federal aid mileage is relatively insignificant in view of the small communities in the Basin. Table II-36 provides a summary of the mileage of the major systems in the State and in the study area.

Actual use of the highway system in the Basin, or in the State, is not easily determined. The highways are almost the universal mode of transportation and there exists no origin-destination and commodity data for unregulated motor carriers. The numbers and types of licensed vehicles can only provide a vague indication of some of the actual usage. As Table II-37 shows, the Big Horn Basin accounts for a small percentage (10-13%) of state totals in all categories and types of vehicles for 1975.** Park County accounts for the larger share of all licensed vehicles in the Basin.

*1970 Census of Population.

**Information for 1976 is not available as the Wyoming Department of Revenue and Taxation changed their collection procedures and in so doing experienced difficulties with computerized output.



LEGEND

- Federal Aid Primary and State Highway
- - - Federal Aid Primary not State Highway
- Federal Aid Secondary and State Highway
- - - Federal Aid Secondary not State Highway
- State Highway Only
- County Road

FIGURE II - 2.

HIGHWAY SYSTEMS MAP

Sources: [33, 44, & 58]

Table II-36. Highway system mileage - 1976.

System	State Highway System (SHS)	Not SHS	Total
<u>State</u>			
Interstate	910.739	-	910.739
Federal Aid Primary	2,857.757	72.607	2,930.364
Federal Aid Secondary	1,959.123	255.898	2,215.021
State System	344.604	-	344.604
Urban System	64.898	194.775	259.673
	<u>6,137.121</u>	<u>523.280</u>	<u>6,660.401</u>
<u>Big Horn Basin</u>			
Federal Aid Primary	528.506	38.127	566.633
Federal Aid Secondary	282.792	44.562	327.354
State System	27.136	-	27.136
Urban System	-	12.005	12.005
	<u>838.434</u>	<u>92.694</u>	<u>933.128</u>
<u>Big Horn County</u>			
Federal Aid Primary	182.935	-	182.935
Federal Aid Secondary	107.377	-	107.377
State System	5.493	-	5.493
Urban System	-	-	-
	<u>295.805</u>	<u>-</u>	<u>295.805</u>
<u>Hot Springs County</u>			
Federal Aid Primary	74.750	-	74.750
Federal Aid Secondary	43.448	7.370	50.818
State System	0.597	-	0.597
Urban System	-	-	-
	<u>118.795</u>	<u>7.370</u>	<u>126.165</u>
<u>Park County</u>			
Federal Aid Primary	193.585	38.127	231.712
Federal Aid Secondary	73.674	29.632	103.306
State System	13.952	-	13.952
Urban System	-	-	-
	<u>281.211</u>	<u>67.759</u>	<u>348.970</u>
<u>Washakie County</u>			
Federal Aid Primary	77.236	-	77.236
Federal Aid Secondary	58.293	7.560	65.853
State System	7.094	-	7.094
Urban System	-	12.005	12.005
	<u>142.623</u>	<u>19.565</u>	<u>162.188</u>

Sources: [33 & 58].

Table II-37. Number of Licensed vehicles - 1975.

	Passenger	Trucks	Trailers	House Trailers	Motorcycles
State Totals	200,968	123,968	38,606	15,974	15,645
Big Horn Basin	22,048	12,935	4,709	2,000	1,757
Big Horn County	5,155	4,303	1,124	462	456
Hot Springs County	2,798	2,113	583	300	219
Park County	9,897	7,157	2,123	906	697
Washakie County	4,198	3,235	879	332	385

Source: [71].

Bus Service. The Big Horn Basin is served by three bus lines, two of which are local or regional. The only major line in the Basin is the Denver-Colorado Springs-Pueblo Motorway, Inc. (Continental Trailways) which provides services between Frannie and Casper seven days/week.* E. B. Willard (Box 1916, Worland) operates a call and demand charter service primarily between Worland and the Girl Scout Camp near Ten Sleep. His facilities include two renovated school buses, one for regular service and one used for standby.

The Cody Bus Line operates out of Cody and is run by H. R. Henry and Marth S. Coe. Its route is from Cody through Powell to Frannie, where connections can be made with the Continental line. The bus runs five days a week and can be chartered. Also seasonal service (June 1 - Sept. 1) is offered daily from Cody to Pahaska Tepee -- located just east of East entrance of Yellowstone National Park. Facilities include one bus and one van.

*One trip each way per day.

Sources: [60 & 71].

Railroads. The early history and development of the State of Wyoming is largely the story of the railroads. Not only did the coming of the railroads have national significance in linking of the extremes of the county, but its construction meant the birth of new cities and towns, work for thousands and the opening of new markets for every type of commodity. Although the rail system has had to compete, since the 1930's, with other modes of transportation it has continued to be a significant factor in state economy, and continues to evolve in response to changing needs.

The rail system of the Big Horn Basin has a slightly different background than has been outlined for the State. The Basin is served by one railroad line, the Burlington Northern. This line was formed between 1968-70 by the merger of the Chicago-Burlington-and-Quincy, Northern Pacific, Great Northern, and Pacific Coast Railroads. All of the early railroad construction in the Basin was under the auspices of the Chicago-Burlington system. The CB&Q rail system was not oriented in any specific direction, but stretched out in many directions, building or adding to lines. This network reached Wyoming in 1901 when a branch line was completed from Toluca, Montana to Cody. By 1907 the line stretched thru the Big Horn Basin, connecting from Frannie Junction to Kirby (north of Thermopolis). By 1914 connections were complete from the northern portion of the Basin through Casper.

Figure II-3 shows the route of the Burlington Northern through the Basin. The original branch of the Chicago-Burlington and Quincy is a spur line running from Deaver to Powell to Cody. The main line passes through nearly all major Basin communities. Rail service in the Basin is limited to freight traffic.

LEGEND
Existing Railroad

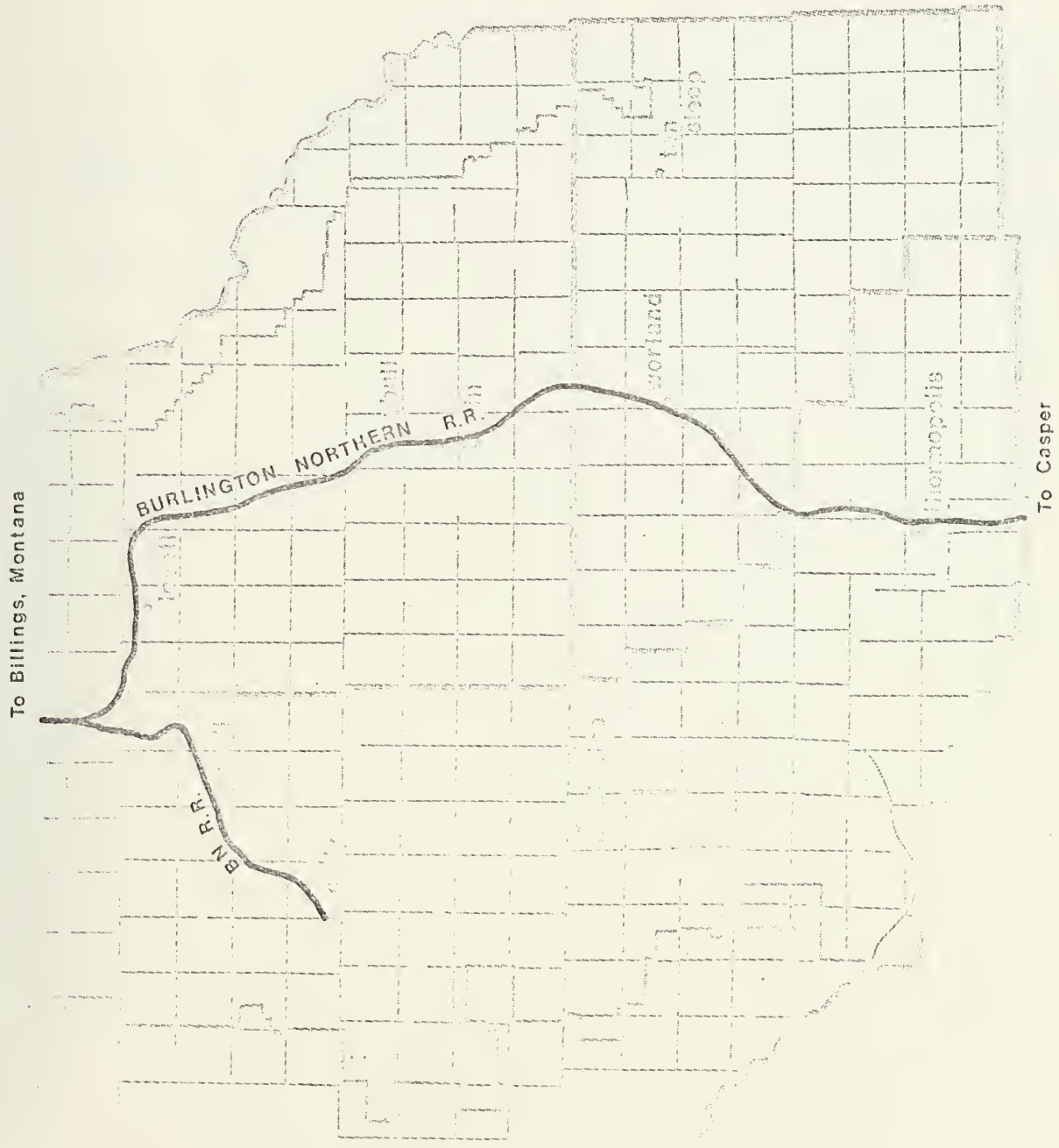


FIGURE II - 3.

RAILROADS

Sources: [43 & 68]

Air. At first glance Wyoming appears to lend itself naturally to air transportation because of the size of the State and the distances between communities. Yet, even though air service has helped to an extent in minimizing some of the isolation in the State, lack of population has impeded the growth of air services.

In the Big Horn Basin there is only one air carrier service in operation. Frontier Airlines, formed in 1950 by the merger of three small carriers, Monarch - Challenger Airlines - Arizona Airways, has terminal offices at Cody and Worland. The main flight route through the Basin extends from Casper or Worland to Billings, Montana.

The Basin has six airports and five landing strips (see Figure II-4). Of the airport facilities only two, Cody and Worland have regularly scheduled air carrier service. Table II-38 indicates traffic exchange between these terminals and other Wyoming communities. Details on each of the six airport facilities are provided in Tables II-39 through II-44. The landing strips tend to be privately owned and used by their owners. They are characteristically dirt or grass and are usable only in good weather.

Table II-45 shows the numbers and relationships of pilots and registered aircraft in the Basin as compared to the same data for the State. It can be seen that the Basin as a whole is comparable to the State, and in some areas, betters the State average. Big Horn County has the highest percentage of registered aircraft, and has over twice as many per 1,000 population as does the State. Park County boasts the highest ratio of pilots to aircraft.

Future trends in aviation in the Basin are provided in Tables II-46 through II-48.

LEGEND

- Airport
- Landing Strip

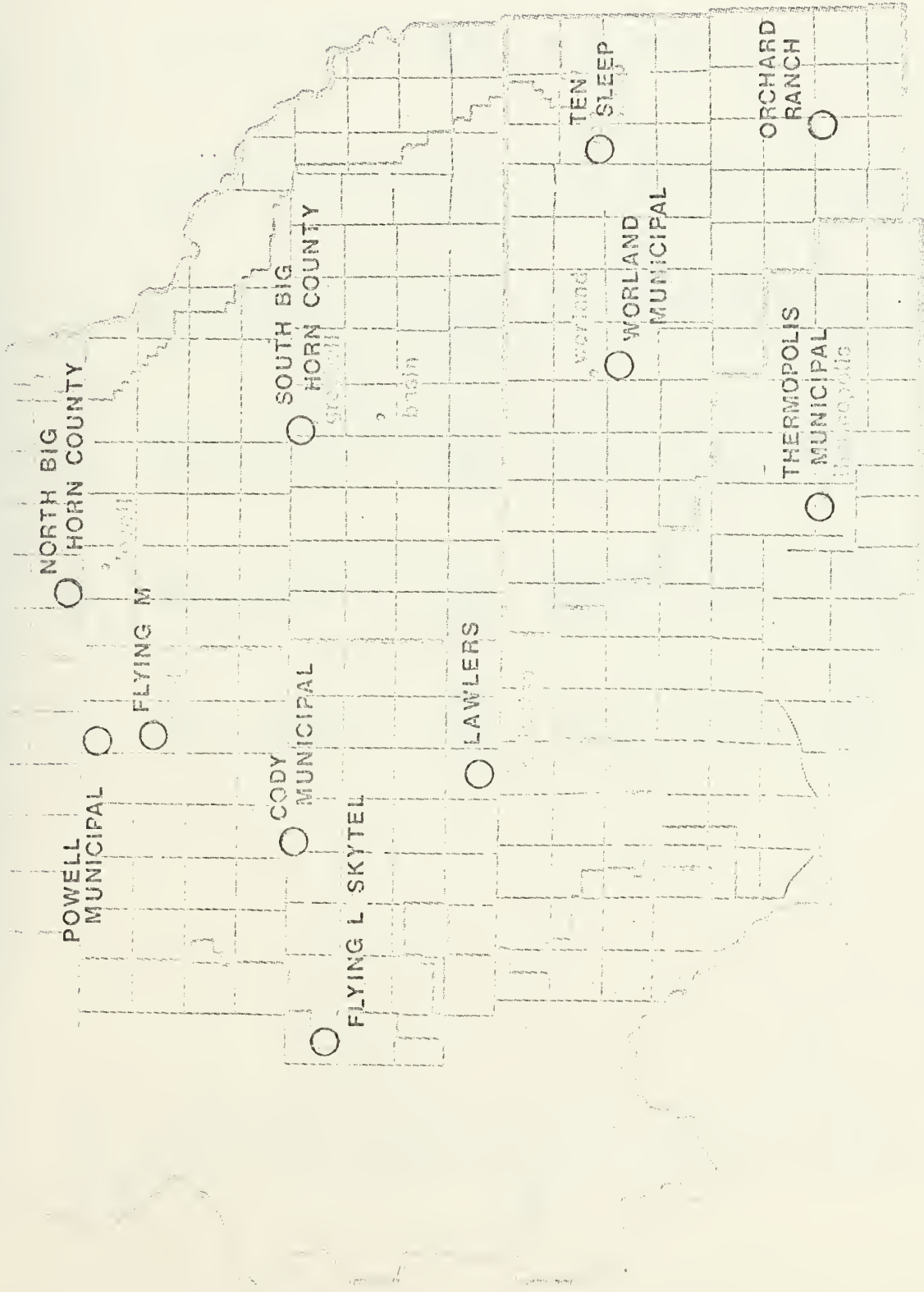


FIGURE II - 4.

EXISTING AIRPORTS AND LANDING STRIPS

Sources: [34, 37, & 45].

Table II-38. City pairs - traffic exchange or flights between city pairs within Wyoming.

City Pairs	1967	1968	1969	1970	1971	1972	1973	1974	Total	% of Total
<u>CODY to:</u>										
Casper	370	380	550	320	160	170	200	200	1,050	19.6
Cheyenne	680	480	660	380	330	430	520	740	2,400	44.8
Jackson	30	40	10	30	40	20	10	--	100	1.9
Laramie	140	370	170	290	190	250	270	330	1,330	24.7
Riverton	60	80	10	20	--	80	90	70	260	4.9
Rock Springs	70	60	--	60	20	20	20	20	140	2.6
Sheridan	--	10	--	20	--	--	10	--	30	.6
Worland	30	10	30	10	20	10	--	10	50	.9
TOTAL	1,380	1,430	1,430	1,130	760	980	1,120	1,370	5,360	100.0
<u>WORLAND to:</u>										
Casper	240	380	290	400	230	50	70	200	950	15.2
Cheyenne	600	570	850	570	780	790	920	680	3,740	59.6
Cody	30	10	30	10	20	10	--	10	50	.8
Jackson	40	--	30	10	10	30	20	--	70	1.1
Laramie	370	350	310	230	230	290	210	180	1,140	18.2
Riverton	70	110	50	60	--	30	50	10	150	2.4
Rock Springs	200	60	110	70	--	60	40	--	170	2.7
Sheridan	--	--	--	--	--	--	--	--	--	--
TOTAL	1,550	1,480	1,670	1,350	1,270	1,260	1,310	1,080	6,270	100.0

Source: [35].

Table II-39. Data summary - North Big Horn County Airport.



Airport Name: NORTH BIG HORN COUNTY
 Associated Community: COMLEY-LOVELL-BYRON
 County: BIG HORN
 FAA Site Number: 27768
 Location: Two Miles North of COMLEY
 Elevation: 4087 S
 Operator: BIG HORN COUNTY
 Owner: BIG HORN COUNTY
 Existing Facilities and Services: No fixed base operator, fuel or repair services
 Master Plan: NONE. Airport Layout Plan 12/14.
 Classification: 1975 - 2000 BU
 Mean Maximum Temperature - Hottest Month: 88°
 Existing Landing Aids: Beacon (C.G.), Wind indicator, UNICOM, IIRL.



PROPOSED IMPROVEMENT SCHEDULE

Year	Improvement	Estimated Cost	
		1975	Adjusted
1976-1980	No development		
1981-1990	Install segmented circle, lighted wind cone, NIREL, and VASI	\$ 86,400	\$ 86,400
	Light taxiway stub and apron	1,500	1,500
	Install water, gas, electricity and sewage	10,000	13,200
	Subtotal	97,900	101,100
1991-2000	Pave auto parking	3,200	5,500
	Subtotal	3,200	5,500
	TOTAL	\$101,100	\$106,600

*Based on long term growth trend

	1975	1980	1990	2000
Population Served (Estimated)	5,400	6,200	6,700	7,400
Based Aircraft (Total)	2	3	5	7
Single Engine	2	3	5	6
Multi Engine	0	0	0	1
Turbo Jet	0	0	0	0
Annual Operations (Total)	792	1,221	2,150	3,144
Local	356	549	967	1,415
Itinerant	436	672	1,183	1,729
Air Carrier Operations	0	0	0	0
Air Carrier Enplanements	0	0	0	0
Military Operations	0	0	0	0

Source: [37].

Table II-40. Data summary - South Big Horn County Airport.



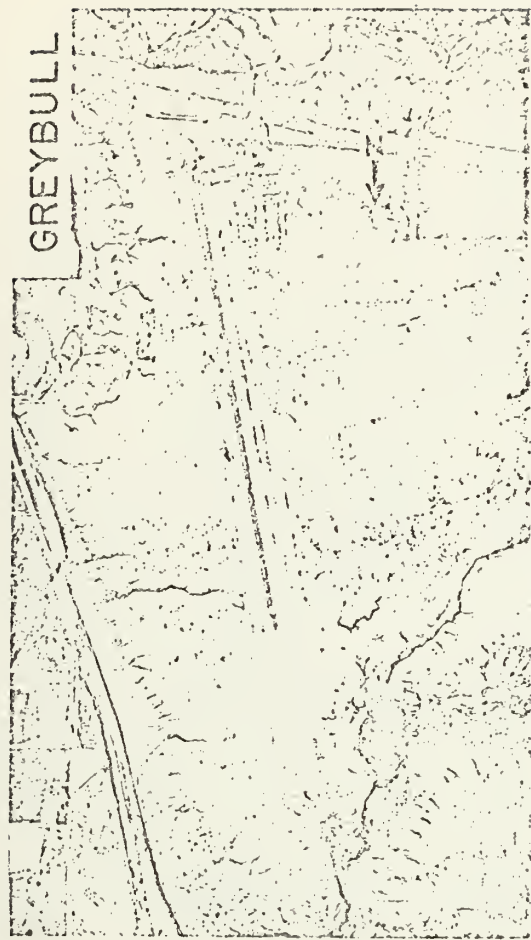
Airport Name: SOUTH BIG HORN COUNTY
 Associated Community: GREYBULL
 County: BIG HORN
 FAA Site Number: 27804 A
 Location: Two Miles Northwest of GREYBULL
 Elevation: 3933 E
 Operator: BIG HORN COUNTY
 Owner: BIG HORN COUNTY

Existing Facilities and Services: Fixed base operator, repair, fuel, oxygen, flight instruction, aircraft charter, rental and sales.
 Master Plan: NONE. Airport Layout Plan 2/72
 Classification: 1975 - 1980 CU; 1990-2000 GT.
 Mean Maximum Temperature - Hottest Month: 92°
 Existing Landing Aids: MIRL, Beacon (c & R), wind indicator, UNICOM

Nearest Flight Service Station: Worland
 Weather Availability: NONE
 General Information: Nine helicopter and twenty-two C-119 or PR4Y used for fire bombers based on field.

	1975	1980	1990	2000
Population Served (Estimated)	5,300	6,100	6,600	7,200
Based Aircraft (Total)	46	55	86	108
Single Engine	13	18	33	40
Multi Engine	22	27	41	54
Turbo Jet	0	0	1	2
Annual Operations (Total)	19,810	25,233	40,320	51,620
Local	8,914	11,355	18,144	23,229
Itinerant	10,896	13,878	22,176	28,391
Air Carrier Operations	0	0	0	0
Air Carrier Enplanements	0	0	0	0
Military Operations	0	0	0	0

Source: [37].



PROPOSED IMPROVEMENT SCHEDULE

Year	Improvement	Estimated Costs	
		1975	Adjusted
1976-1980	Buy land and fence property	\$ 21,900	\$ 22,300
	Subtotal	21,900	22,300
1981-1990	No development		
1991-2000	Extend runway to 9400'x100', 1205, 200D, 3700X strength	1,165,200	2,070,100
	Upgrade taxiway 4, extend MIRL	95,000	95,000
	Extend apron, pave taxiway	5,384,700	9,231,600
	Provide utilities to site	8,000	13,900
	Build auto parking	6,400	11,100
	Build hangar	432,000	616,300
	Build General Aviation terminal	30,000	42,800
	Subtotal	7,121,300	12,030,600
	TOTAL	\$7,153,200	\$12,053,100

*Based on long term growth trend

Table II-41. Data summary - Hot Springs County, Thermopolis Municipal Airport.



Airport Name: HOT SPRINGS COUNTY - THERMOPOLIS MUNICIPAL
 Associated Community: THERMOPOLIS
 County: HOT SPRINGS
 FAA Site Number: 27997 A
 Location: North Edge of THERMOPOLIS
 Elevation: 4560 S
 Operator: Hot Springs County

Owner: HOT SPRINGS COUNTY
 Existing Facilities and Services: Fuel, repair, flight instruction, aircraft sales, charter and rental.
 Master Plan: NONE. Study recommended to determine site and needed facilities.
 Classification: 1975 - 1990 CAT; 1990-2000 CT
 Mean Maximum Temperature - Hottest Month: 92°
 Existing Landing Aids: ILRL, UNICOM

Nearest Flight Service Station: England
 Weather Availability: NONE
 General Information: High unlighted hills around airport penetrate airspace restricting IFR and night operations. Cost estimates based on new site.

	1975	1980	1990	2000
Population Served (Estimated)	5,000	6,000	6,300	6,900
Based Aircraft (Total)	17	22	33	41
Single Engine	10	13	19	21
Multi Engine	7	9	13	18
Turbo Jet	0	0	1	2
Annual Operations (Total)	6,907	9,260	14,620	19,689
Local	3,188	4,167	6,579	8,860
Itinerant	3,799	5,093	8,041	10,829
Air Carrier Operations	0	0	0	0
Air Carrier Enplanements	0	0	0	0
Military Operations	0	0	0	0



THERMOPOLIS

PROPOSED IMPROVEMENT SCHEDULE

Year	Improvement	1975	Estimated Cost Adjusted*
1976-1980	Buy land and fence property	\$ 213,900	\$ 216,800
	Subtotal	213,900	216,800
1981-1990	Build runway 6100'x75', 12.5 S strength	552,600	727,900
	Install 10' beacon, windcone, segmented circle, VASI-2, MIRL, move unicom	98,800	98,800
	Build apron	67,400	87,500
	Provide utilities to site	10,000	13,700
	Pave access road and auto parking	84,000	102,900
	Build hangar	216,000	258,100
	Build General Aviation terminal	76,100	91,700
	Subtotal	1,054,900	1,319,600
1991-2000	Extend and widen runway to 8900'x100'	1,618,400	3,152,400
	100S, 120D, 180DT strength	121,700	121,700
	Upgrade to VASI-4, relocate MIRL	2,150,100	3,671,100
	Overlay apron, extend taxiway	48,000	68,500
	Expand hangar facilities	4,138,200	7,033,700
	Subtotal	8,076,400	14,047,600
	TOTAL	\$5,407,000	\$8,550,100

*Based on long term growth trend

Source: [37].

Table II-42. Data summary - Cody Municipal Airport.

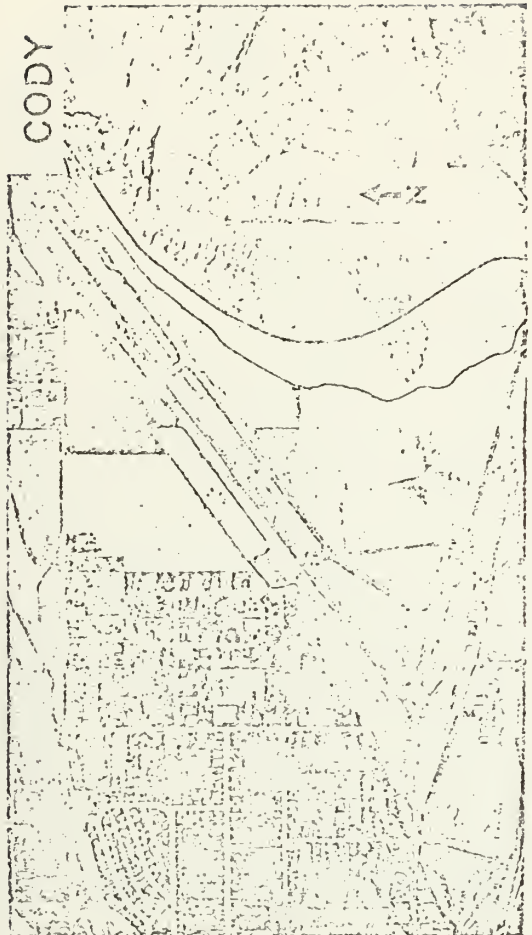
Airport Name: CODY MUNICIPAL
 Associated Community: CODY
 County: PARK
 FAA Site Number: 27765 A
 Location: Two Miles Southeast of Cody
 Elevation: 5089 S.
 Operator: City of Cody
 Owner: City of Cody
 Existing Facilities and Services: Three fixed base operators, repair, auto rental, gasoline, aircraft sales and charter, flight instruction, oxygen service.
 Master Plan: Underway, Airport Layout Plan 3/67
 Classification: Air Carrier CV-580 - 1975; 1980-2000 -- P-737
 Mean Maximum Temperature - Hottest Month: 86°
 Existing Landing Aids: NIEL, UNICOM, Wind, Tur., Beacon (c.f.s.)

Pentest Flight Service Station: MORLAND
(Day Time Only)

Weather Availability: National Weather Service and Flight Service Station

General Information: Adjacent terrain penetrates airspace restricting IFR operations and limiting night operations. Costs estimates based on new site.

	1975	1980	1990	2000
Population Served (Estimated)	8,400	10,500	12,100	13,200
Based Aircraft (Total)	26	30	44	53
Single Engine	20	24	35	41
Multi Engine	4	4	6	8
Turbo Jet	2	2	3	4
Annual Operations (Total)	11,656	13,692	20,990	26,329
Local	5,245	6,161	9,446	11,843
Itinerant	6,411	7,531	11,544	14,481
Air Carrier Operations	---	1,890	3,000	4,658
Air Carrier Enplanements	---	7,086	11,249	17,469
Military Operations	---	0	0	0



PROPOSED IMPROVEMENT SCHEDULE

Year	Improvement	Estimated Cost	
		1975	Adjusted*
1976-1980	Buy land and fence property	\$ 690,000	\$ 696,000
1981-1990	Subtotal	690,000	696,000
1991-2000	Build runway to 10,000'x150' for 85 S, 1000', 1700ft strength	3,849,900	5,071,500
	Inst.-- 36" rotating beacon, 2 wind cones, 2 VASI-4, 2 REIL, and NIRE	196,900	196,900
	Build taxiway and apron, install lighting and tie-downs	1,680,700	2,187,000
	Install water, sewer, gas and electrical systems	10,000	13,200
	Build access roads and auto parking	97,600	113,500
	Build hangars	396,000	473,200
	Build Air Carrier terminal	53,600	64,100
	Build General Aviation terminal	29,400	35,100
	Subtotal	6,309,100	8,154,500
	Build crosswind runway 6050'x60'	447,700	776,200
	12.5 S strength		
	Install NIRE, VASI and REIL on crosswind, ILS on main runways	506,200	506,200
	Extend apron	270,200	459,400
	Extend auto parking	2,100	3,600
	Build hangars	84,000	119,800
	Extend Air Carrier terminal	19,300	27,500
	Subtotal	1,329,500	1,892,700
	TOTAL	\$8,329,500	\$10,743,200

*Based on long term growth trend

Source: [37].

Table II-43. Data summary -- Powell Municipal Airport.



Airport Name: POWELL MUNICIPAL
 Associated Community: POWELL
 County: PARK
 FAA Site Number: 77370
 Location: Eight Miles North of POWELL
 Elevation: 5091 S
 Operator: Airport Board (City)

Owner: CITY OF POWELL
 Existing Facilities and Services: Repairs, fuel, sales, charter, rental
 Flight Instruction: _____
 Master Plan: NONE, Airport Layout Plan 1/56, update in process.

Classification: 1975 - 2000 CU
 Mean Maximum Temperature - Hottest Month: 86°
 Existing Landing Aids: Beacon (c & r), UNICOM, MIB.

Nearest Flight Service Station: Warland
 Weather Availability: NONE
 General Information: _____

	1975	1980	1990	2000
Population Served (Estimated)	9,100	11,400	13,100	14,300
Based Aircraft (Total)	13	16	24	31
Single Engine	13	15	22	27
Multi Engine	0	1	2	3
Turbo Jet	0	0	0	1
Annual Operations (Total)	5,148	6,516	10,360	14,553
Local	2,317	2,946	4,662	6,549
Itinerant	2,831	3,600	5,698	8,004
Air Carrier Operations	0	0	0	0
Air Carrier Enplanements	0	0	0	0
Military Operations	0	0	0	0

PROPOSED IMPROVEMENT SCHEDULE

Year	Improvement	Estimated Cost	
		1975	Adjusted ^a
1976-1980	No development	-0-	-0-
1991-1990	Install VASI-2, segmented circle	\$ 44,200	\$ 44,200
	Pave auto parking	2,200	2,900
	Build hangars	72,000	86,000
	Subtotal	118,400	133,100
1991-2000	Tiedowns	200	300
	Extend hangars	180,000	256,800
	Build General Aviation terminal	9,000	12,800
	Subtotal	189,200	269,900
	TOTAL	\$307,600	\$403,000

^aBased on long term growth trend

Source: [37].

Table II-44. Data summary - Worland Municipal Airport.



Airport Name: WORLAND MUNICIPAL
 Associated Community: WORLAND
 County: WASHAKIE
 FAA Site Number: 27905
 Location: Three Miles South of Worland
 Elevation: 4245 ft.
 Operator: Airport Board (City)

Owner: CITY OF WORLAND

Existing Facilities and Services: Fixed base operator, repair, fuel, charter, rental, flight instruction, oxygen.

Master Plan: Underway, Airport Layout Plan 3/71, update in progress.

Classification: Class B, 1400 ft. x 300 ft., 1980-2000, 4-7/71.

Mean Maximum Temperature - Hottest Month: 90°

Existing Landing Aids: MIRL, Beacon (c. & o.), VOR, UNICOM

Nearest Flight Service Station: On Airport

Weather Availability: National Weather Service and Flight Service Station.

General Information:

	1975	1980	1990	2000
Population Served (Estimated)	7,800	9,300	10,300	11,300
Based Aircraft (Total)	18	23	39	48
Single Engine	18	22	35	41
Multi Engine	0	1	2	5
Turbo Jet	0	0	1	2
Annual Operations (Total)	7,128	9,395	17,480	22,819
Local	3,208	4,228	7,866	10,269
Itinerant	3,920	5,167	9,614	12,550
Air Carrier Operations	-	1,798	2,820	4,378
Air Carrier Explanations	-	6,739	10,572	16,419
Military Operations	0	0	0	0

Source: [37].



PROPOSED IMPROVEMENT SCHEDULE

Year	Improvement	1975 Estimated Cost \$	Adjusted
1976-1980	Buy land and fence property	153,500	154,900
	Install VASI, REIL	79,700	79,700
	Pave auto parking	6,300	6,700
	Subtotal	239,500	241,300
1981-1990	Pave runway 10,000' x 150', 805, 100lb.	3,457,900	4,555,100
	155 DT strength		
	Install MIRL, 36" beacon, windcone, ILS w/MALS, move VASI, REIL	570,600	570,600
	Extend apron overlay taxiway	1,110,600	1,443,700
	Extend auto parking	2,800	3,700
	Build hangar	36,000	43,000
	Subtotal	5,177,900	6,616,100
1991-2000	Install DME	35,000	35,000
	Extend apron	34,600	58,800
	Extend auto parking	7,200	12,500
	Expand hangar facilities	228,000	325,300
	Subtotal	304,800	431,600
	TOTAL	\$5,722,200	\$7,289,000

*Based on long term growth trend

Table II-45. Number of pilots and registered aircraft.

	Est. Population July 1, 1974*	Number of Licensed Pilots**	Number of Pilots per 1,000 People	Number of Registered Aircraft***	Number of Registered Aircraft per 1,000 People	Ratio of Pilots to Aircraft
State Total	359,000	1,989	6	842	2.3	2.4
Big Horn Basin	51,700	279	5	145	2.8	1.9
Big Horn County	10,800	55	5	58	5.4	0.9
Hot Springs County	4,200	34	7	19	4.0	1.8
Park County	18,100	141	8	47	2.6	3.0
Washakie County	7,800	49	6	21	2.7	2.3

*U.S. Department of Commerce, Bureau of the Census, "Population Estimates" issued April 1975, Series P-26, No. 100.

**F.A.A., Computer listing of airmen in Wyoming, received by Wyoming Aeronautic Commission, July 29, 1974.

***F.A.A., Computer listing of aircraft registrants in Wyoming, as of December 1975.

Source: [37].

Table II-46. Number of pilots forecasted.

	1975	1980	1990	2000
State Totals	2,151	2,664	4,282	5,348
Big Horn Basin	282	349	523	670
Big Horn County	59	74	108	140
Hot Springs County	35	48	71	92
Park County	138	161	240	307
Washakie County	50	66	104	131

Source: [35].

Table II-47. Number of based aircraft forecasted.

	Total			Single Engine			Multi-Engine			Turbine Engine						
	1975	1980	1990	2000	1975	1980	1990	2000	1975	1980	1990	2000				
	1975	1980	1990	2000	1975	1980	1990	2000	1975	1980	1990	2000				
State Total	890	1088	1660	1963	762	900	1335	1507	112	161	275	367	5	14	35	71
Big Horn Basin	154	178	251	304	110	124	169	192	33	42	65	89	2	2	6	11
Big Horn County ¹	63	73	101	123	32	36	48	54	22	27	41	55	0	0	1	2
Greybull	44	55	86	108	13	18	33	40	22	27	41	54	0	0	1	2
Lovell	2	3	5	7	2	3	5	6	0	0	0	1	0	0	0	0
Hot Springs County	21	25	35	43	14	16	21	23	7	9	13	18	0	0	1	2
Thermopolis	17	22	33	41	10	13	19	21	7	9	13	18	0	0	1	2
Park County	45	51	72	87	39	44	61	71	4	5	8	11	2	2	3	5
Cody	26	30	44	53	20	24	35	41	4	4	6	8	2	2	3	4
Powell	13	16	24	31	13	15	22	27	0	1	2	3	0	0	0	1
Washakie County	25	29	43	51	25	28	39	44	0	1	3	5	0	0	1	2
Worland	18	23	39	48	18	22	35	41	0	1	3	5	0	0	1	2

¹Total includes helicopters: 1975 9 1980 10 1990 11 2000 12

Source: [35].

Table II-48. Number of airline departures forecasted.

STATE	Enplanements*	Enplanements Per Airline Departure	Airline Departures	
			Annual	Daily
1980	313,712	16	19,062	51
1990	484,312	20	24,104	65
2000	751,284	24	31,048	86
<u>CODY</u>				
1980	7,086	7.5	945	2
1990	11,249	7.5	1,500	4
2000	17,469	7.5	2,329	6
<u>WORLAND</u>				
1980	6,739	7.5	899	2
1990	10,572	7.5	1,410	4
2000	16,419	7.5	2,189	6

*Enplanement numbers reflect not only those passengers who begin or end an airline trip at an airport, but also those transferring or connecting at that point.

Source: [35].

Pipelines. Because pipelines move raw materials and finished products between points, the pipeline system is considered part of the transportation system, and one which is gaining in significance. At the national level, between 1961 and 1971 the cargo ton miles of goods carried by pipelines experienced a 90% growth -- the greatest increase shown by any of the major carrier modes [42].

Pipelines in the Big Horn Basin are concentrated primarily in the central corridor of the region. Figure II-5 indicates the location of the gas transmission and gathering lines in operation in the Basin. A line from Cody transmits finished products north.

Figure II-6 portrays the Basin's oil pipeline system and the sites of the three oil refineries located there.

LEGEND
Major Gas Transmission Lines
Major Products Transmission Line

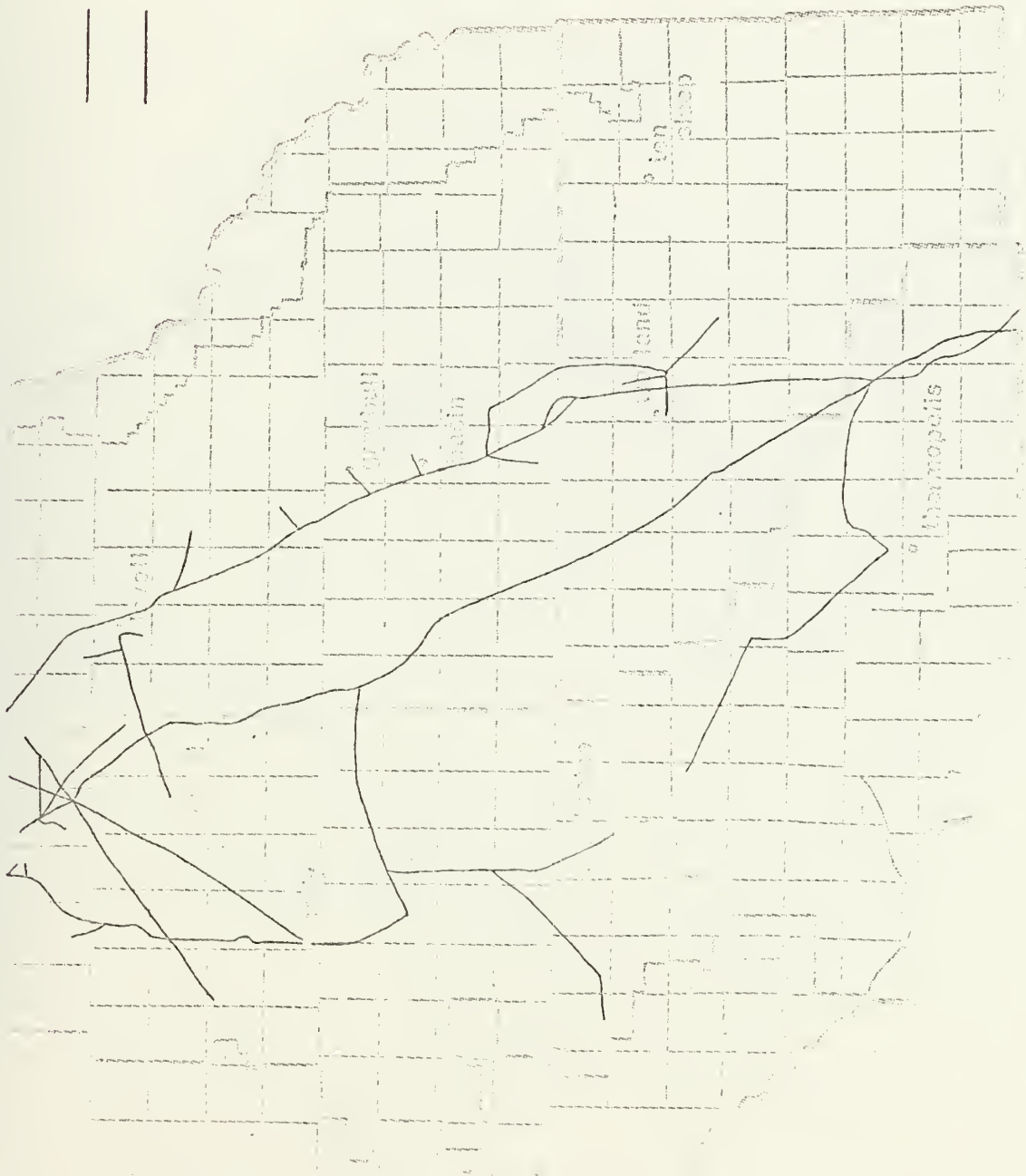
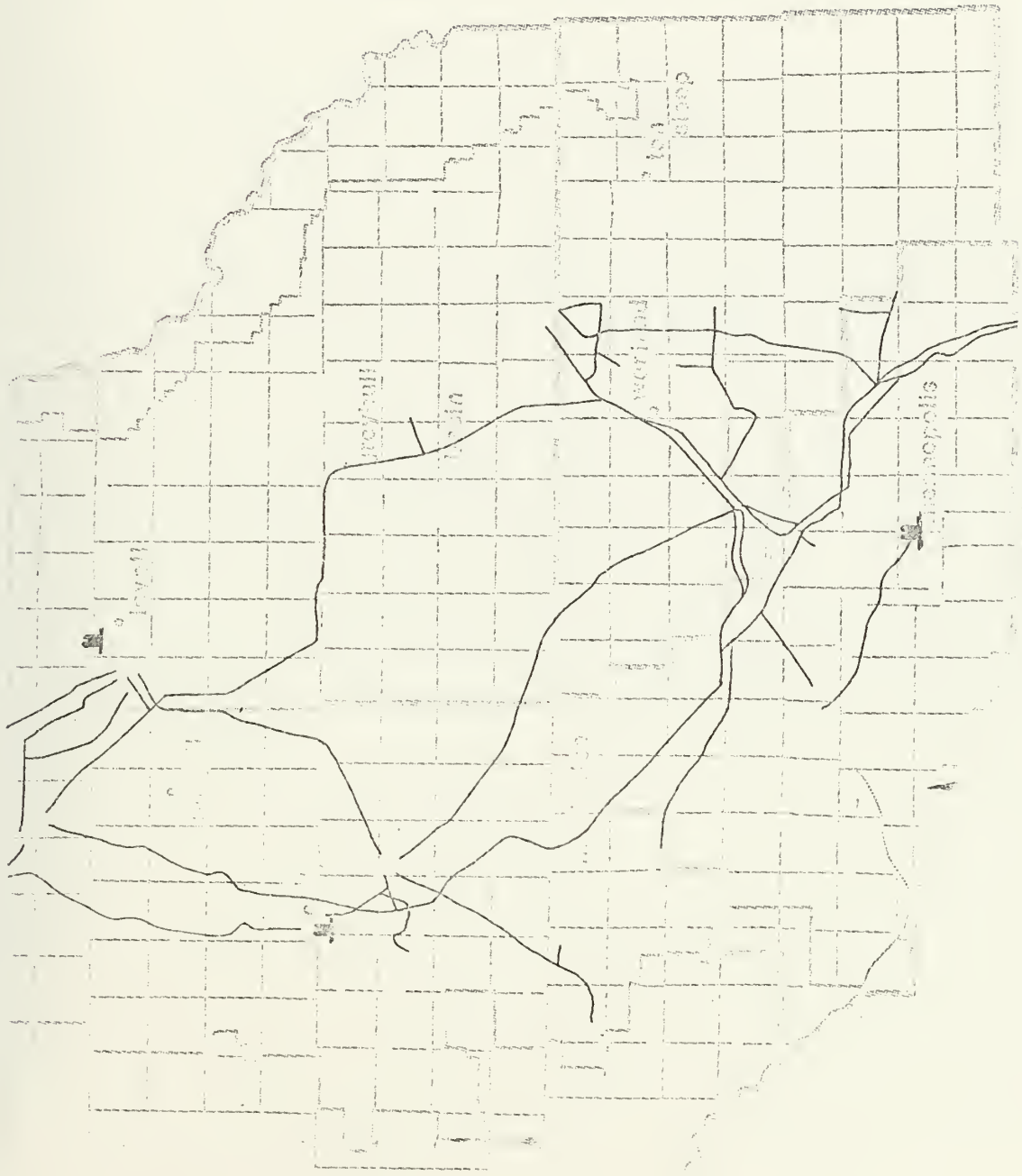


FIGURE II - 5.

MAJOR NATURAL GAS AND PRODUCTS PIPELINE SYSTEM

Sources: [41 & 49]

LEGEND
Major Transmission Lines
Refinery



Sources: [41 & 49]

FIGURE II - 6.
MAJOR OIL PIPELINE SYSTEM

III. UTILITIES

Utilities

Telephone

Mountain States Telephone and Telegraph Company (Mt. Bell) is the largest telephone company in the Big Horn Basin, as it is in the rest of Wyoming. Figure III-1 shows that all major Basin communities are served by Mt. Bell, and that that company is certified to serve all the areas shown in red. Those red areas outside of the actual exchanges presently operating are areas where Mt. Bell is certified to establish service when the demand warrants it (for more detail see Figures III-2-10).

The Tri-County Telephone Association is a small, independent, telephone company operating in the more isolated areas of the Big Horn Basin. However, Tri-County uses Mt. Bell's transmission facilities, and so can be considered to be served by the larger company.

Treasure State Telephone Company, Inc. serves a very small area in northcentral Park County near the Montana border. It is a part of a mobile radio operation.

Essentially, therefore, Mt. Bell provides coverage for the entire Basin. All of this telephone service to the respective exchanges is provided through microwave (electronic) transmission, although there is one traditional open line running near the highway between Meeteetse and Cody. Location of microwave towers and facilities is unpublished.*

Within Mt. Bell's exchange areas the largest number of main stations** are in the Cody exchange (4343), followed by the Powell (3265) and Worland (3093) exchanges. The smallest number of main stations is in the Frannie exchange (180). Table III-1 provides information on the main stations for both Mt. Bell and Tri-County.

*Microwave tower information is unavailable to the general public for security reasons. Specific questions from BLM personnel should be directed to Mr. Loren Hardy at the Mt. Bell office in Cheyenne (634-2792/Ext. 2257).

**Main stations are those service connection lines serving both residential and commercial operations. For example, a residential unit having three phones, i.e. main phone plus two bedroom extensions, would be identified as having one main station by Mt. Bell. Main stations for commercial establishments are also figured on the number of service connections not number of phones.

LEGEND

- Mountain States Tel. & Tel. (Mtn. Bell)
- Tri-County Tel. Ass'n.
- Treasure State Tel. Co., Inc.

Exchange Areas (Mtn. Bell)

1. Basin
2. Cody
3. Frannie
4. Greybull
5. Lovell
6. Meeteetse
7. Powell
8. Thermopolis
9. Worland

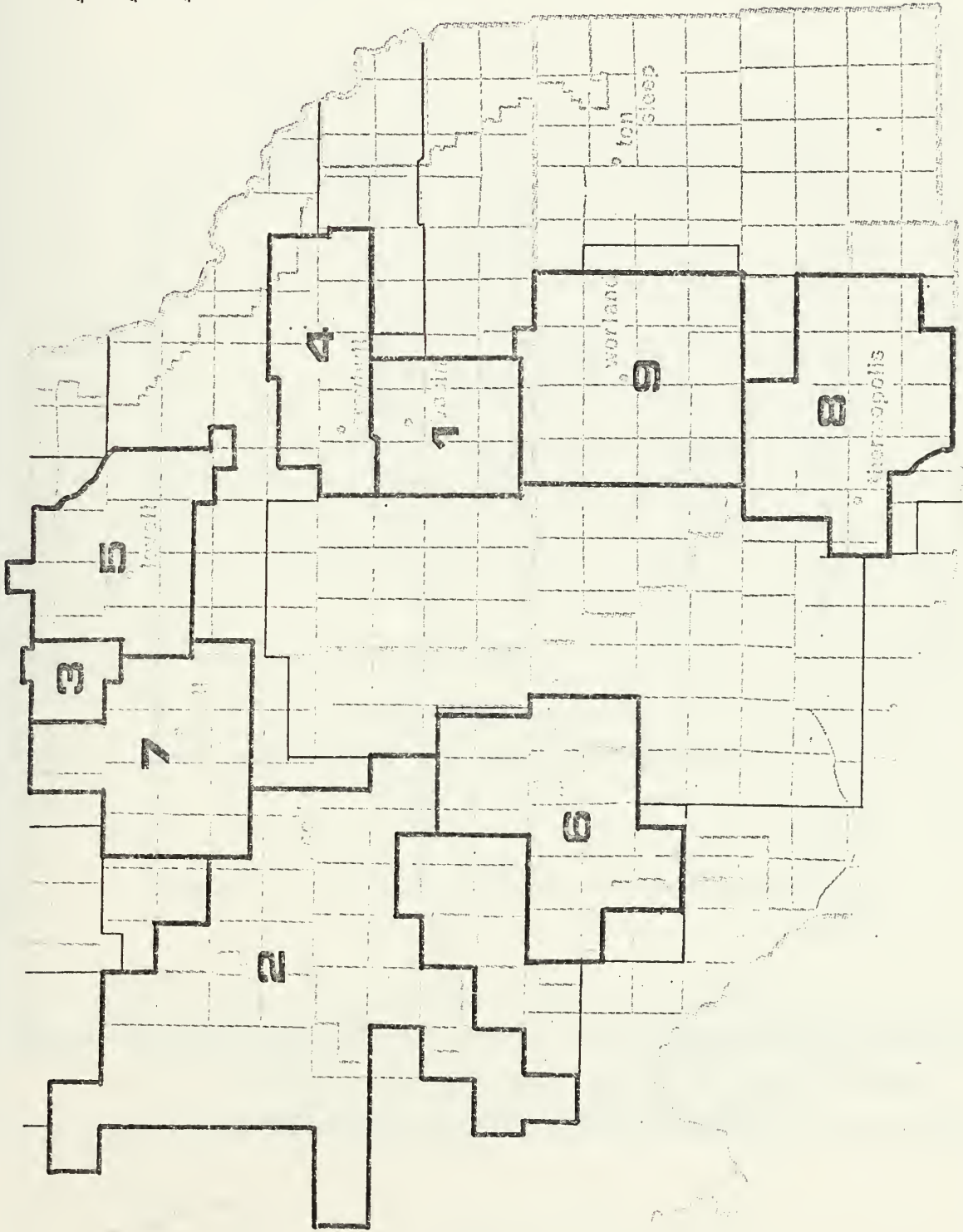
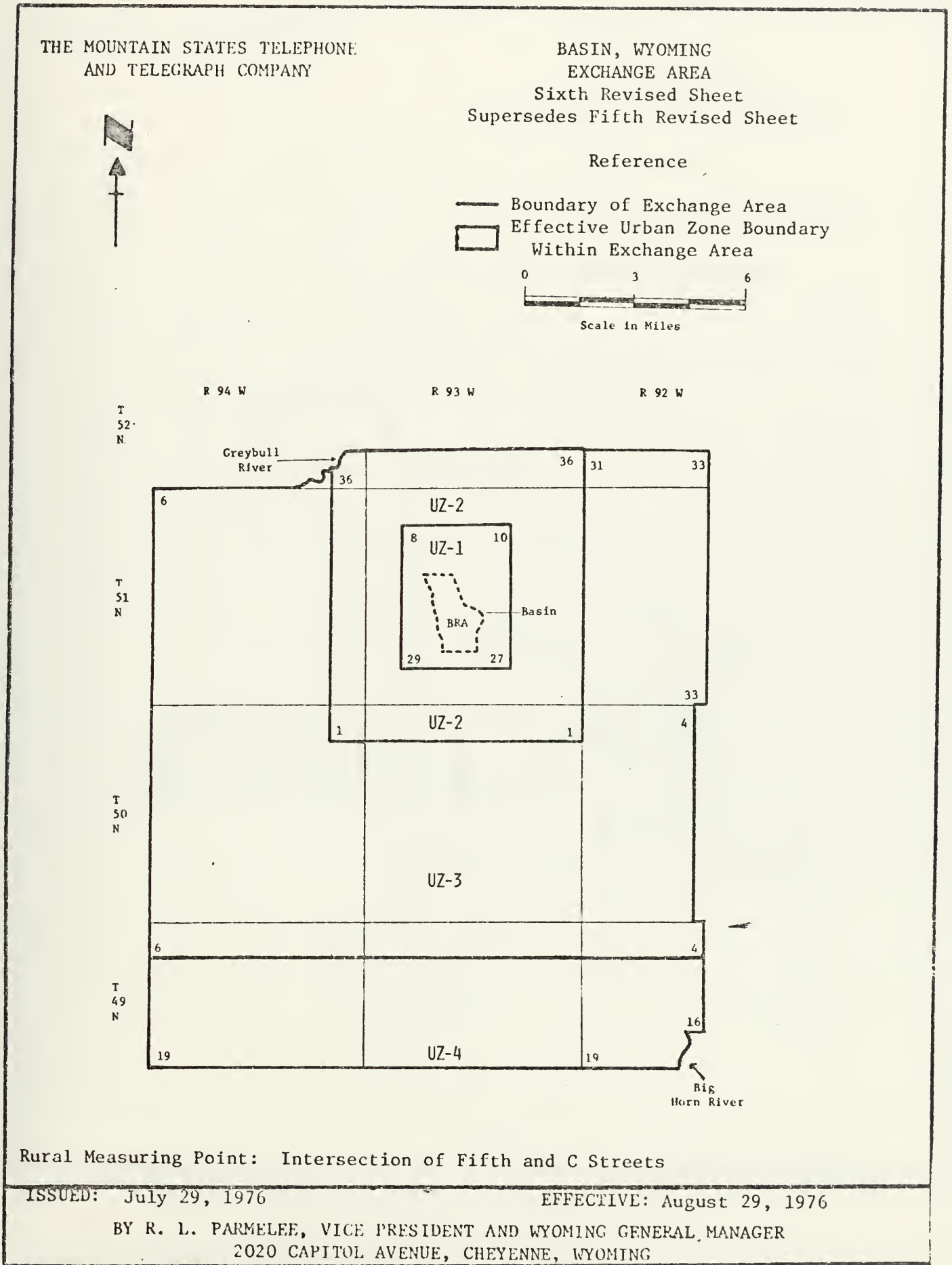


FIGURE III - 1.

TELEPHONE UTILITIES: CERTIFICATED AND EXCHANGE AREAS

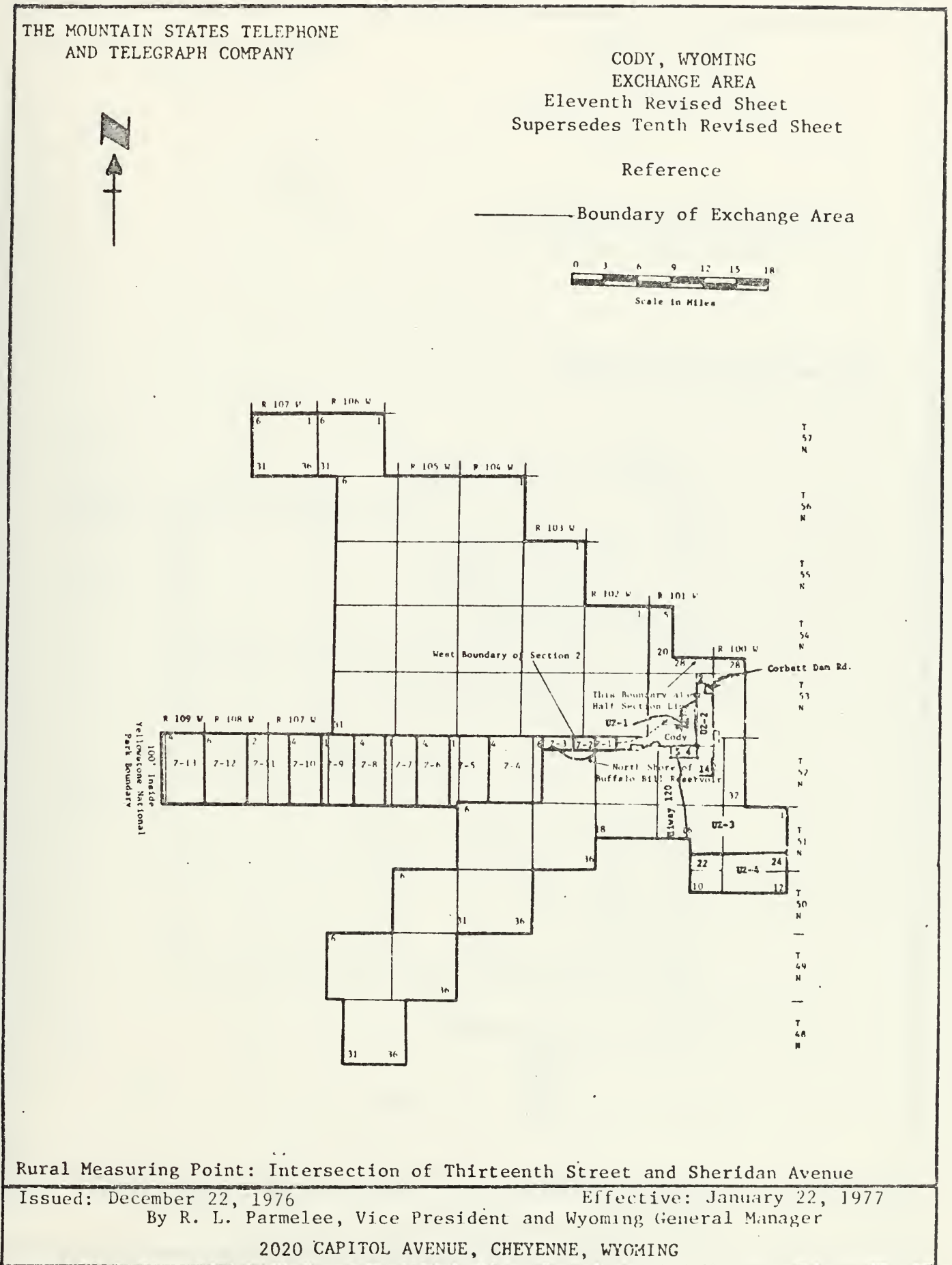
Sources: [46 & 50]

Figure III-2. Telephone exchange area: Basin.



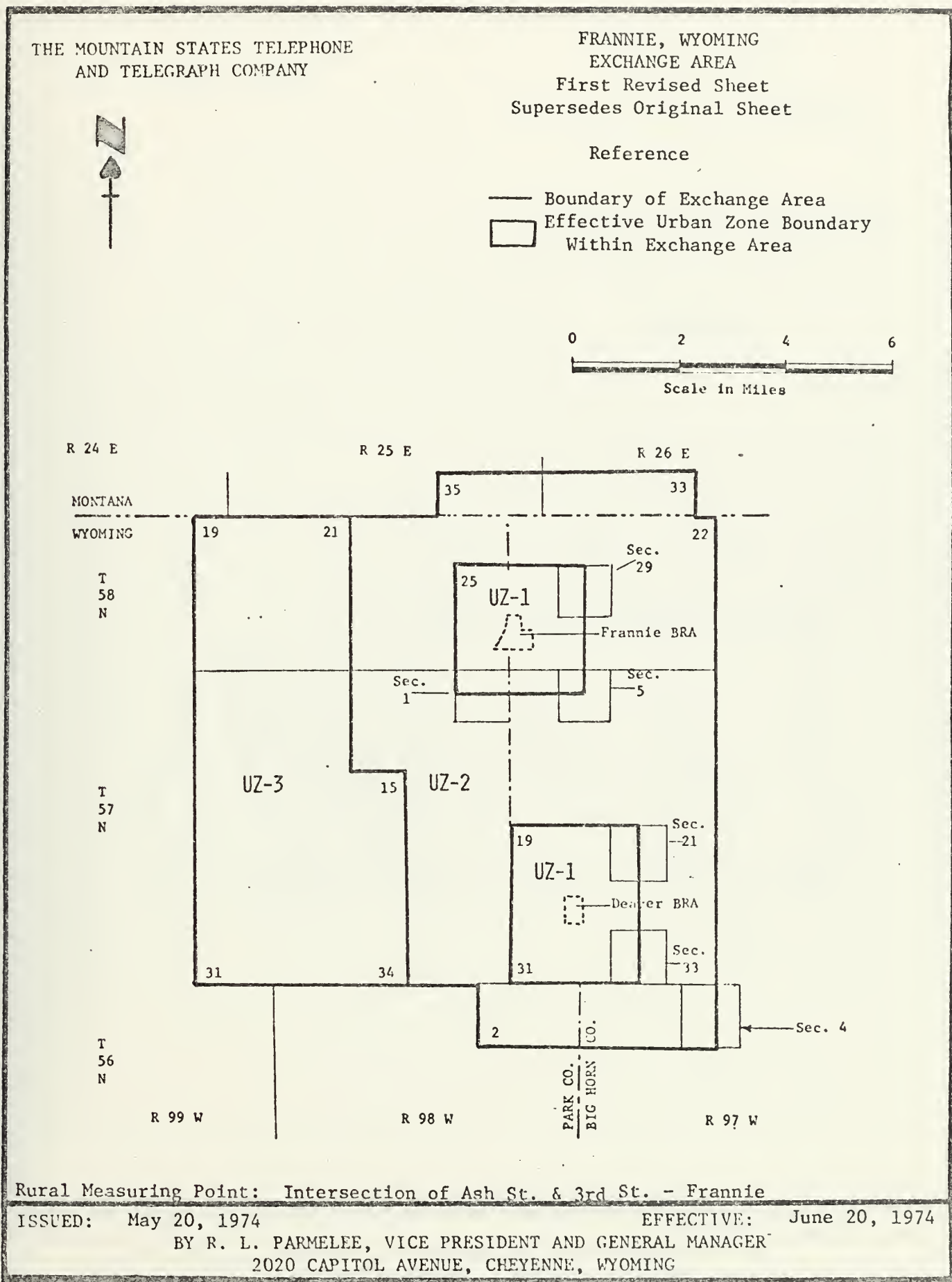
Source: [69].

Figure III-3. Telephone exchange area: Cody.



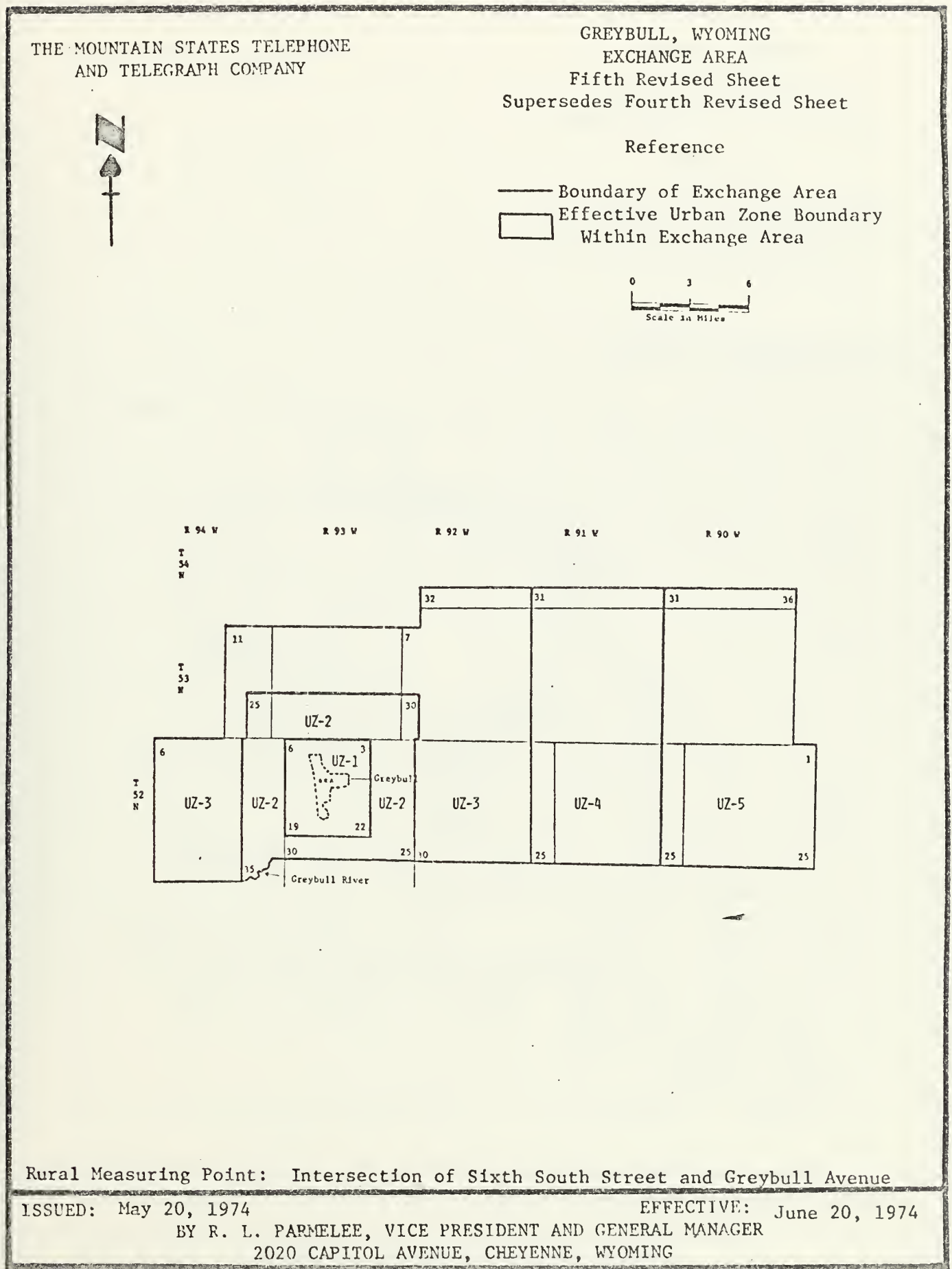
Source: [69].

Figure III-4. Telephone exchange area: Frannie.



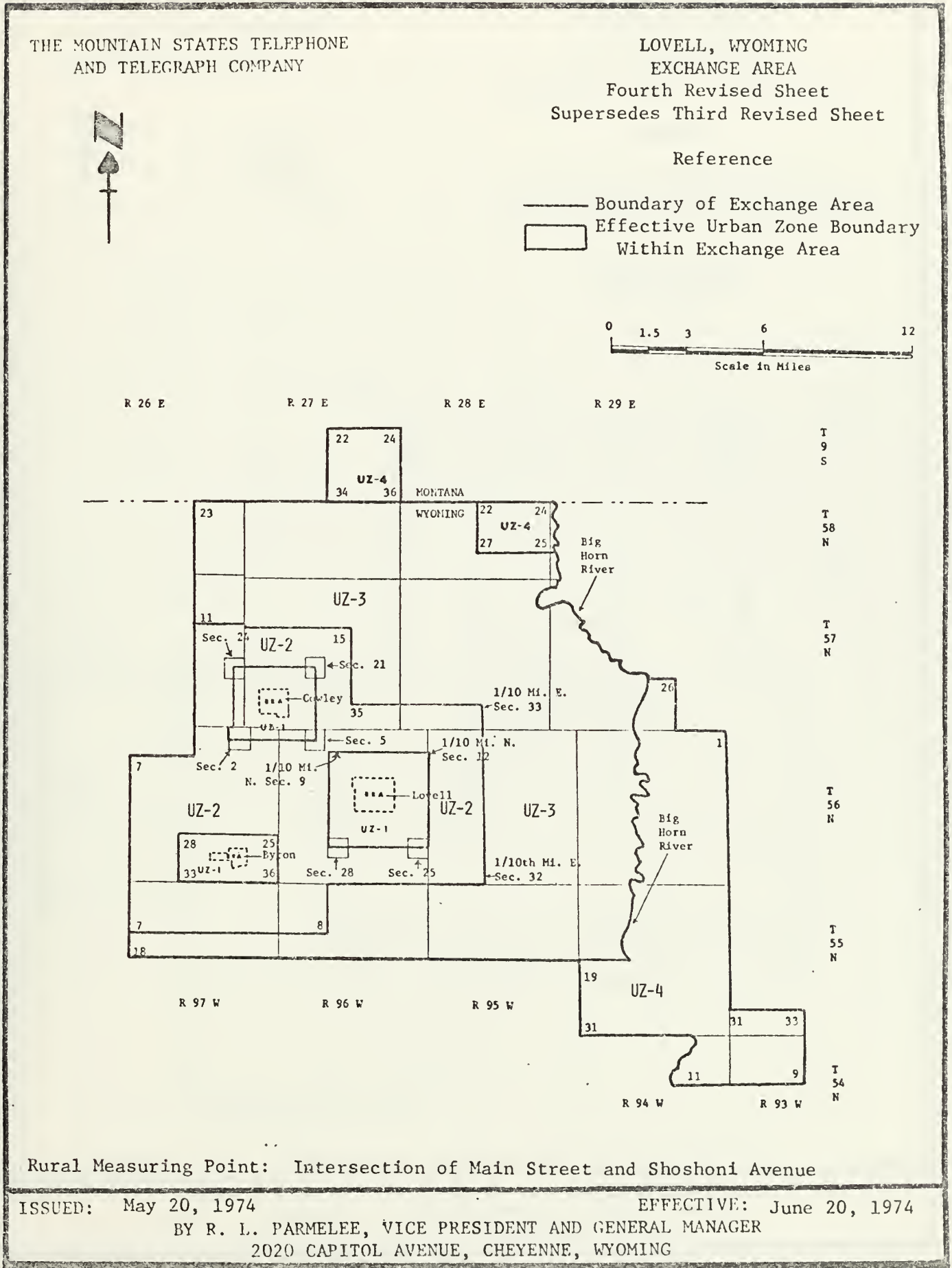
Source: [69].

Figure III-5. Telephone exchange area: Greybull.



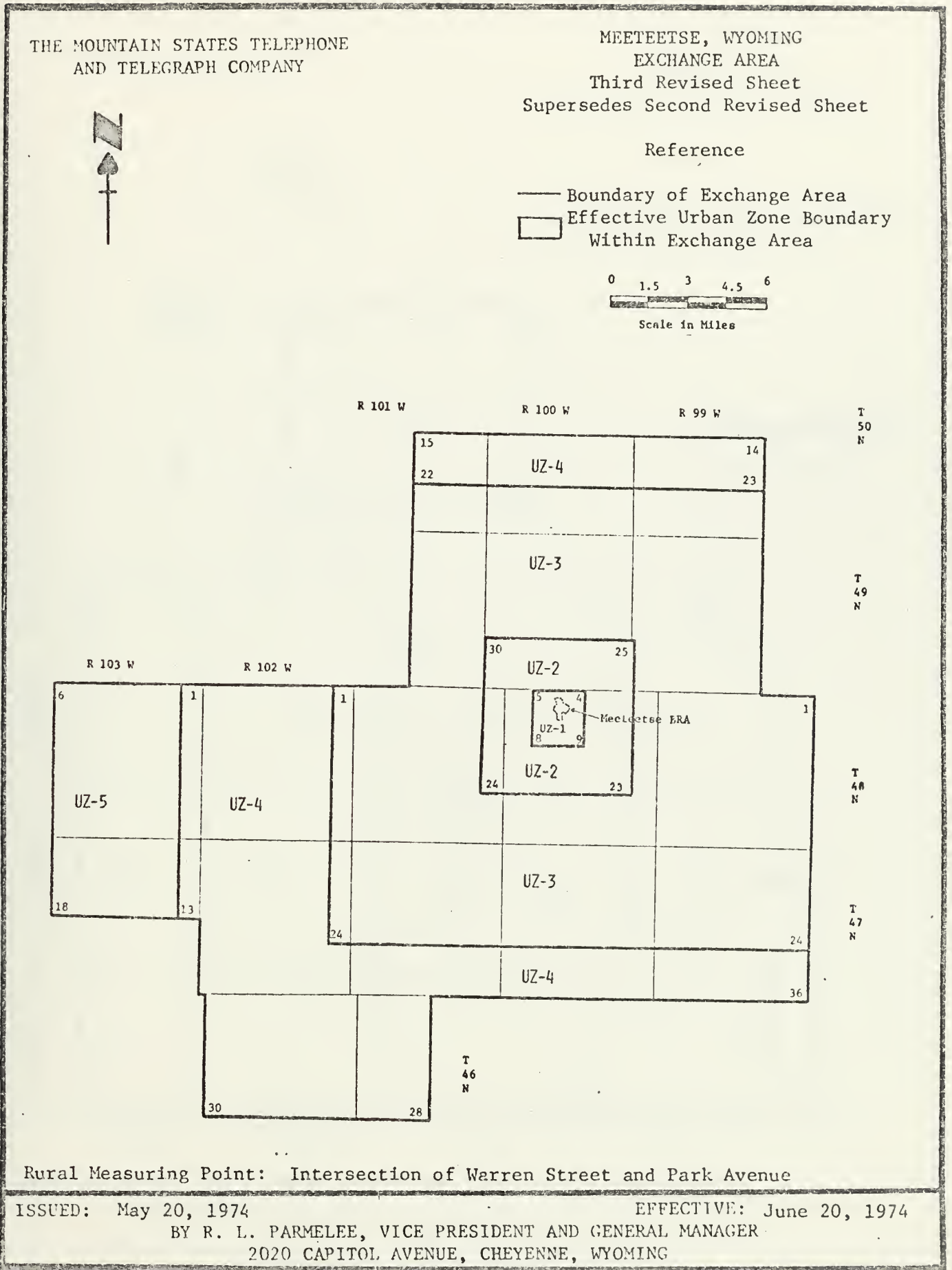
Source: [69].

Figure III-6. Telephone exchange area: Lovell.



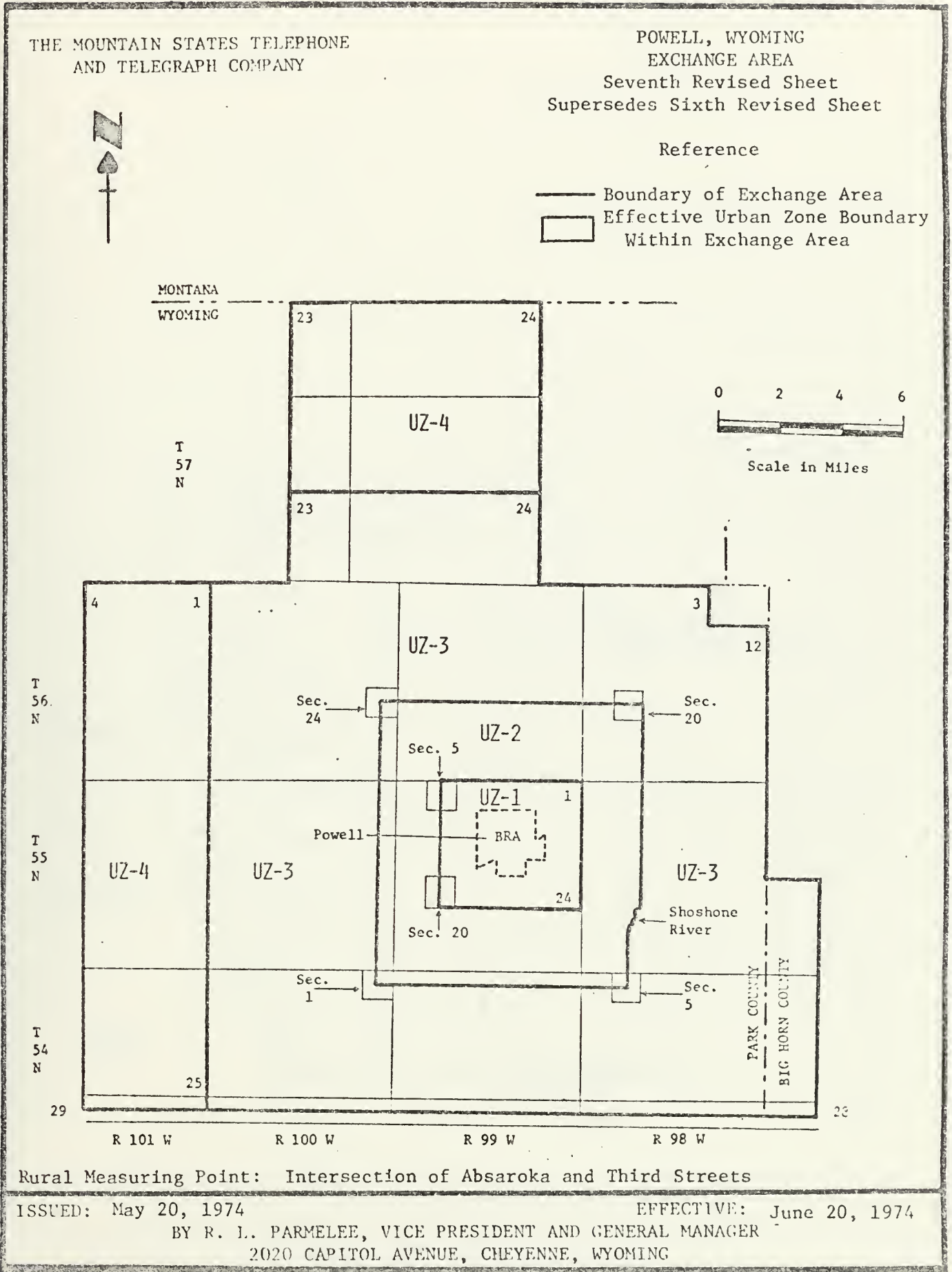
Source: [69].

Figure III-7. Telephone exchange area: Meeteetse.



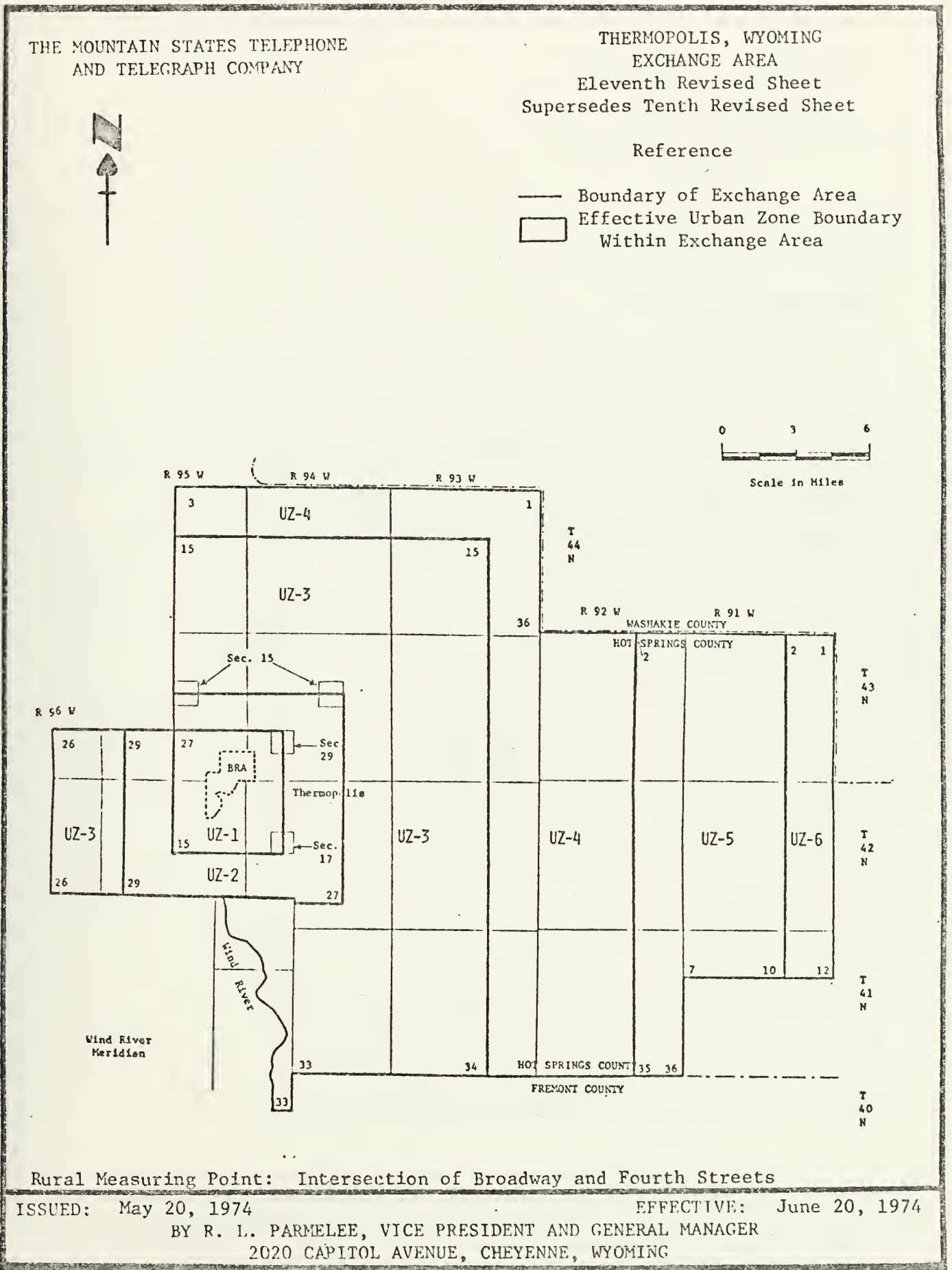
Source: [69].

Figure III-8. Telephone exchange area: Powell.



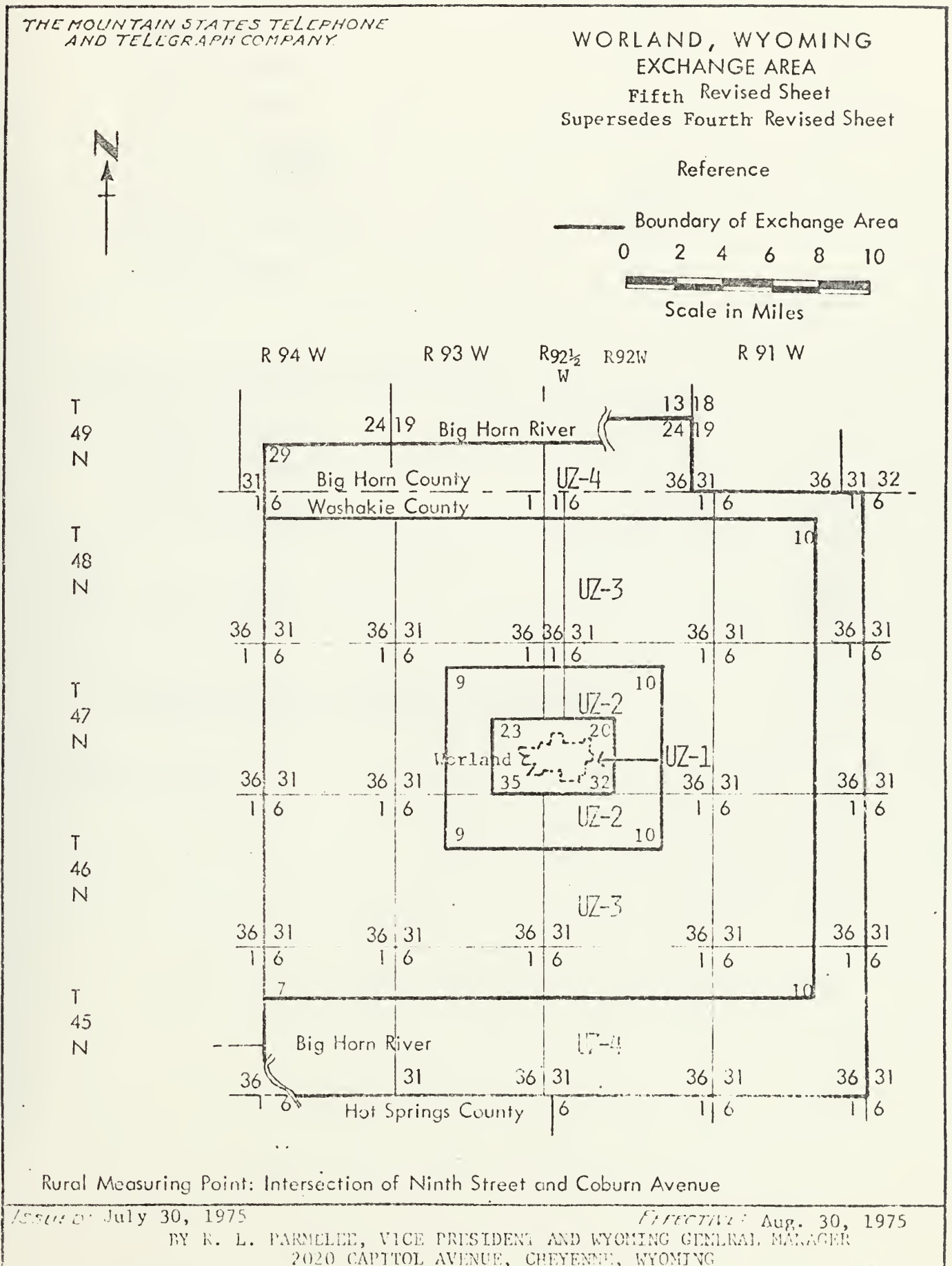
Source: [69].

Figure III-9. Telephone exchange area: Thermopolis.



Source: [69].

Figure III-10. Telephone exchange area: Worland.



Source: [69].

Table III-1. Number of telephone main stations

Mountain States Telephone and Telegraph Company		
Basin Exchange	795	
Cody Exchange	4343	
Frammie Exchange	180	
Greybull Exchange	1251	
Lovell Exchange	1632	
Meeteetse Exchange	318	
Powell Exchange	3265	
Thermopolis Exchange	1991	
Worland Exchange	<u>3093</u>	<u>16,868</u>
Tri-County Telephone Association, Inc.*		
Burlington Exchange	278	
Hamilton Exchange	104	
Hyattville Exchange	83	
Ten Sleep Exchange	<u>287</u>	<u>752</u>
Total - Big Horn Basin		<u>17,620</u>

*Independent company served by Mountain Bell.

Source: [62].

Electric and Gas Services

Electricity and natural gas services are provided to the residents of the Big Horn Basin by some 19 certified utility companies. The following maps and descriptions summarize these utility services.

Electric. There are 14 electric utilities operating in the four-county Basin area. This total includes the four municipal services at Deaver, Powell, Cody, and Basin. The largest certificated utility in the Basin, in terms of area, is the Pacific Power and Light Company, which is also the only privately owned utility in the region. Also large in terms of areas served are the Big Horn Rural Electric Company and the Shoshone River Power, Inc. utilities. The service areas of these and the other Basin utilities are provided in Figure III-11. It can be observed that most of the Big Horn Basin is covered by certificated electric utilities. Also indicated in Figure III-11 are the 115-230KV power transmission lines through the central portion of the Basin.

Park County is the location of two hydroelectric generating plants located slightly west of Cody. The Shoshone plant is a 5.6 megawatt plant, and the Heart Mountain facility is a 5.0 megawatt plant.

Gas. There are five certificated gas utilities which operate in the Big Horn Basin. They are Montana-Dakota Utilities, Byron Gas Service, Frannie-Deaver Utilities, Cody Gas, and Wyoming Gas Company. Figure III-12 portrays the areas served by each of these companies. It can be observed that the geographic distribution of these services parallels the location of the Basin's populated areas.

Supply and Demand. The two major electrical power companies in the SEPA (Pacific Power and Light Company and Tri State Generation and Transmission Association) are presently able to generate enough electricity to supply all residential, commercial, and industrial users in the SEPA. Also, neither company foresees problems in generating an adequate supply of electrical power to serve future growth [76, 77 & 79]. The problem the power companies are now facing and expect to continue to have difficulty with is the local distribution facilities. These facilities are frequently inadequate to handle new hook-ups, thereby causing a bottleneck even though there is adequate power available from the generating plants. These distribution facilities are generally owned and operated by municipalities and other organizations, not the power companies themselves. For example, there is generating capacity now available to handle a large development such as the proposed Westside Irrigation Project in Washakie County [76], but the local distribution facilities could not handle the added load. This is a problem of economic feasibility rather than an energy bottleneck (from the perspective of the power company). The power can be supplied if the financial returns to the agricultural firms operating on the proposed site could pay for the cost of updating the distribution facilities and then pay for the electricity itself.

Natural gas suppliers are not nearly as optimistic as electrical power companies in terms of successfully meeting future growth and the resultant increase in the demand for natural gas [75 & 78]. Currently, Montana Dakota Utilities (MDU), the single largest supplier of natural gas in the SEPA, is attempting to curtail large industrial users* in favor of residential and commercial customers. In 1977, 67 new natural gas hook-ups were allowed by MDU. Another 67 new hook-ups will be allowed in 1978 if an additional 30 billion cubic feet of natural gas reserves can be obtained by that time. If these new reserves cannot be found, new hook-ups will not be allowed. However, the MDU officials are "very optimistic" that the additional 30 billion cubic feet will be available [78].

*This issue is before a Federal Power Commission judge and will not be resolved for probably two years. The industrial users are claiming that curtailment amounts to illegal discrimination.

The natural gas companies are hesitant to predict supplies very far in the future; finding new reserves has become virtually a year-by-year process. There are no plans at this time to cut back existing use, although the natural gas companies are encouraging existing industrial users and new industries to look at alternative power sources. In this context, BLM policies fostering industrial growth might cause a shortage in industrial natural gas supplies, although the associated increase in residential or commercial expansion would probably not be affected.

LEGEND

Privately Owned Electric Utilities

▭ Pacific Power & Light Co.

Rural Electric Associations

▭ Beartooth Electric Coop. Inc.

▭ Big Horn Rural Electric Co.

▭ Garland Light & Power Co.

▭ Hot Springs County R.E.A. Inc.

▭ Shoshone River Power Inc.

Certificated Cooperatives

▭ Consumers Lite & Power Assn.

▭ Willwood Light & Power Co.

Dual Territory

▭ Pacific Power & Light Co. &

Garland Light & Power Co.

▭ Big Horn Rural Electric Co. &

Garland Light & Power Co.

Municipal Electric Utilities

● Town

— Electric Transmission Line

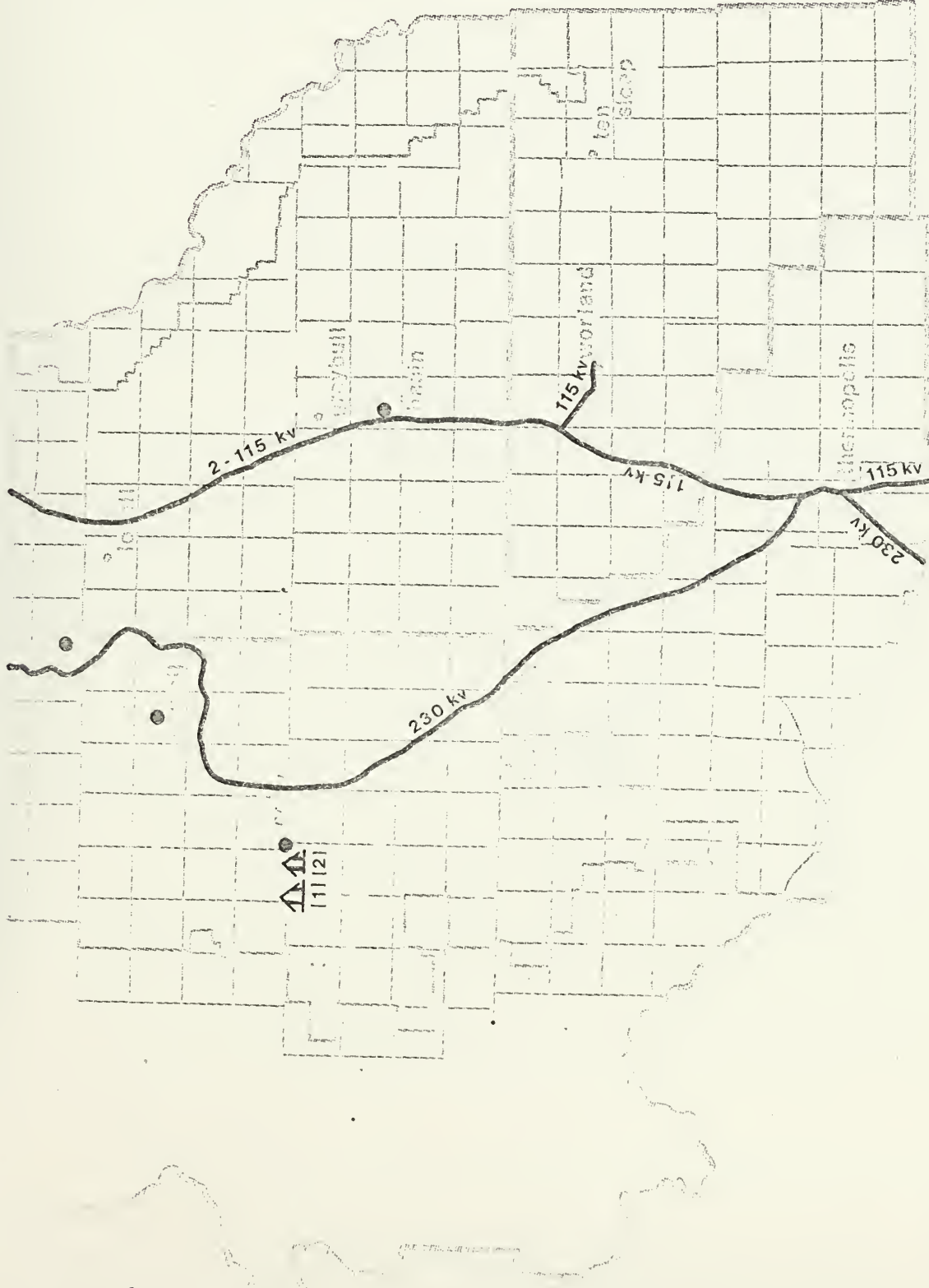
(kilovoltage)

⚡ Hydroelectric Generating Plant

(Capacity in Megawatts)

(1) Shoshone (5.6 MW)

(2) Heart Mountain (5.0 MW)



Sources: [48 & 49]

FIGURE III - 11.
ELECTRIC UTILITIES: CERTIFICATED AREAS, TRANSMISSION LINES,
AND HYDROELECTRIC GENERATING PLANTS

LEGEND

- ▧ Cody Gas
- ▧ Wyoming Gas Co.
- ▧ Montana-Dakota Utilities
- ▧ Frannie-Deaver Utilities
- ▧ Byron Gas Service

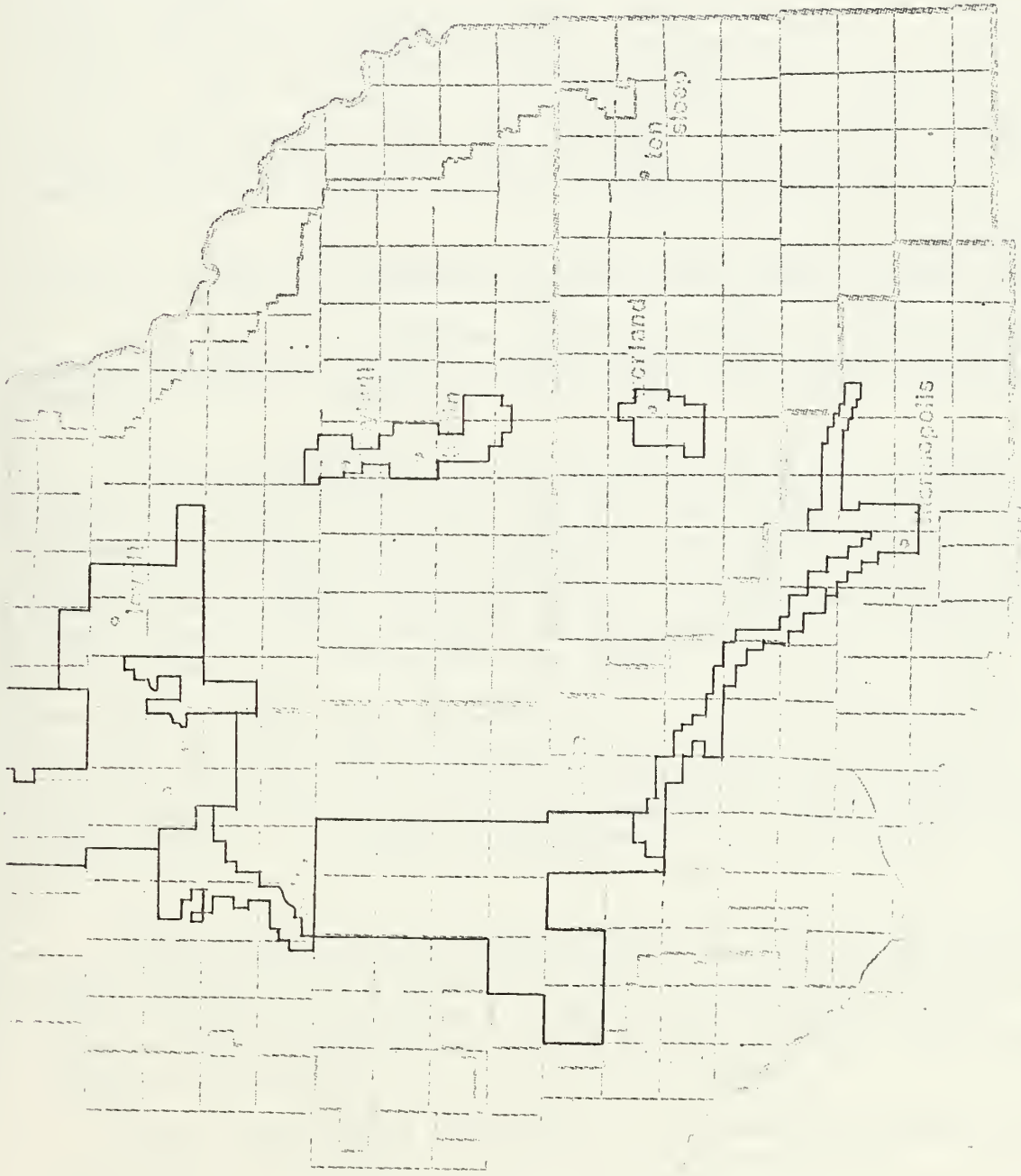


FIGURE III - 12.

GAS UTILITIES: CERTIFICATED AREAS

Sources: [41 & 47]

Water and Sewer Services

Municipalities provide water and sewer services to residents living inside the limits of their jurisdiction. Those residences and businesses which are located outside a municipality's service area obtain water from private wells and use septic tanks or cesspools for sewage disposal. The ability of municipal systems to handle growth are based on the assumption that present use rates per hook-up reflect future use patterns. Many of the smaller towns do not have metered water systems, making it difficult to estimate present use as well as future capacity.

Water. Cody has two municipal water systems. One system treats water for domestic use, while the other, which is chlorinated but unfiltered, is intended for irrigation. The domestic water system is metered, while the irrigation water system is unmetered. At this time neither water system is operating at capacity. In fact, current output could be doubled thereby accommodating a large increase in demand [80].

The city of Powell is currently adding to its water system a 500,000 gallon storage facility for fire protection purposes and three pumphouses that are capable of injecting another 1,000 gallons per minute into the water system. These additions will be completed by 1978 and will adequately support a population of about 7,500 people [81]. Powell's source of water is ground water. If irrigated agriculture continues to expand in the Powell area, another source of water will be needed. Also, population expansion much above the 7,500 level in the Powell water service area would require another source of water to replace or augment the ground water.

The town of Meeteetse currently has an adequate water supply which could handle an increase of approximately 1,000 people before reaching capacity [82].

Tensleep's water system has adequate gallonage to support current use and can accommodate "limited"* growth [64]. There are some water distribution problems in Tensleep due to lines which are broken or too small.

The Worland water system is currently operating above capacity [64]. The system is still able to supply water to users, but in the summer months, the pumps sometimes run 24 hours per day. The system is encountering distribution problems due to overcapacity; recent hydrant flow tests conducted by Insurance Services Office showed that discharges were adequate at only one of seven locations. The Town Council of Worland has submitted loan applications to the Farmers Home Administration in order to upgrade the water system and is now awaiting the outcome of the applications.

Kirby's water supply is sufficient to service approximately two and one-half times the current population [64]. However, there are serious problems with water distribution, caused primarily by deteriorating pipes. Also, the water is of poor quality and should be further treated before distribution. At this time, chlorination is the only treatment given the water.

Thermopolis's (including East Thermopolis) water treatment capacity and pumps could accommodate a 25-30% growth, or a population level of about 7,000 people [64]. The water system has a storage deficit of one million gallons which is necessary to meet peak usage and fire protection. Also, there are only four inch mains in East Thermopolis which create distribution problems, particularly for fire protection purposes.

Basin's water system could handle a 10% increase in demand, but above that level, new treatment facilities would be needed [64].

*These types of hedging terms are the best estimates available.

Cowley's water system is presently operating near capacity but could accommodate an increase of about 10-15% [64].

Frannie has adequate water supply and treatment facilities for twice the current population, although additional booster pumps would be required as that level is approached [64].

The Greybull system generally has enough capacity to serve about 3,400 people (2,150 are currently served), although additional storage capacity would be needed during peak summer use periods [64].

The Regional Planning Office in Basin, Wyoming is currently working on a plan to upgrade Lovell's water system. At this time, the treatment facilities are outmoded and are operating above capacity. Additional storage capacity is also needed [64].

The Manderson water system can accommodate approximately at 25% increase in demand, although, at that level, peak summer usage (watering lawns, gardens, etc.) could cause problems [64].

Sewer. Cody is currently planning additional settling ponds to be build in the next two-three years in order to increase the capacity of its sewer system. The current system has sufficient capacity to handle a moderate population growth until the new ponds are complete [80].

Powell's current sewer system can handle up to about 7,800 people, above that number would necessitate a new system [81]. The city is currently working to obtain grant funds from EPA to further purify the sewage water and build another lagoon.

Meeteetse's sewage treatment plant is operating at capacity, but can accommodate a minimal amount of growth [82]. The town intends to add a new treatment plant through federal funding which is expected during the next two-three years.

Kirby's sewer system presently consists of individual septic tanks. The area can accommodate about twice the current population if housing density is kept to less than approximately three residences per block [64].

Thermopolis's sewer system can accommodate about 6,000 people or a 25-30% increase above the current demand. However, the system may not meet 1983 EPA standards at these increased levels of usage [64].

Tensleep's lagoon sewer system is adequate at present but is operating near capacity [64].

Worland's water and sewer systems are inadequate to serve the current population. A lagoon sewer system requires one acre of land per 100 people. Worland's lagoon covers 44 acres and, consequently is adequate to handle 4,400 people; far below its estimated 6,200 population. Changes to upgrade the system are not planned until EPA funds are made available [64].

Basin's sewage treatment system could accommodate 10% growth in demand. An improved collection system is needed at current use rates and would be more necessary at higher usage rates [64].

Cowley's sewage system can accommodate moderate growth. The system is designed to serve a maximum of 450 people (current estimates place the population at 400) [64].

Deaver's sewage system is operating above capacity and the treatment of sewage is very poor at this time [64].

Frannie has a lagoon system which can accommodate a limited (15%) increase in demand, beyond which "moderate" modification to the lagoon would be necessary [64].

Greybull's sewer system is also of the lagoon type. It was designed to accommodate 4,000 persons, so there currently is excess capacity. The lagoon could be doubled to handle a population of 6,000-7,000 [64].

Lovell's sewage treatment system is operating at or above the capacity allowed by EPA secondary treatment standards. When the ponds were designed, the EPA regulations required one acre of pond per 100 people, now that acreage requirement has been doubled and Lovell's ponds are adequate for only 1,450 people rather than 2,900 as originally planned. A new treatment system will be put in when EPA grant funds become available [64].

Manderson's sewer system is composed of individual septic tanks. The currently allowed density is about one septic tank per acre. Any growth potential is questionable because Manderson is located in a partial flood plain precluding much development, and groundwater is high in other areas, rendering septic tanks unworkable [64].

IV. INFRASTRUCTURE

Infrastructure

Public Finance and Tax Base

The SEPA has no apparent problems, at either the municipal or county level, in obtaining adequate financing to provide the necessary governmental services. The assessed valuations and property taxes levied have increased in all four SEPA Counties yearly since 1973, Tables IV: 1-4. Big Horn and Park Counties have increased in both categories by enormous amounts, while Hot Springs and Washakie Counties are somewhat below the state average. The patterns are mirror reflections of the distribution of mineral development in the SEPA.

Tables IV: 5-6 show total tax collections and levies by each district, i.e., school, library, fair, etc. The SEPA follows the state pattern, with schools receiving the greatest amount of dollars, followed by the general fund, hospital district, and so on. There was no significant change in tax assessment patterns between 1975 and 1976; although more dollars are being collected and allocated to each district, the percentage distribution remains nearly the same.

Table IV-7 illustrates how the SEPA Counties, individually and collectively, spent their budgets in fiscal year 1971-72; revenues are also presented. Park County had the largest budget at \$1,680,000, followed by Big Horn, Washakie, and Hot Springs (this relationship has held through 1974 [65]). The expenditures were similar for the counties. This is to be expected because most allocation schemes are based on population, and population is normally the decisive factor in assessing the need for police, fire protection, welfare, hospitals, and so on. It is notable that Big Horn is the only county in the SEPA which had any outstanding debt at the end of fiscal year 1971-72. Further, the average outstanding debt for county governments equaled about one third of their total budget; while Big Horn County's outstanding debt was only about 5% of the county budget. Similarly, municipalities in the SEPA have very little indebtedness, and receive high bond ratings when they do apply for a loan.

The overall public finance outlook for the SEPA is favorable. Hot Springs County and Thermopolis could possibly experience some difficulty because of the aged population now residing there, the trend toward more retired people to move in, and decreasing mineral production. These circumstances reduce tax collections, and older populations require greater tax outlays in some program areas; thus leading to an unfavorable balance between tax collections and the provision of governmental services.

Table IV-1. Assessed valuations and percentage change, 1974-75.

	Assessed Valuation <u>1975</u>	Assessed Valuation <u>1974</u>	<u>% Incr.</u>
State	\$2,168,456,373	\$1,708,945,746	26.9 %
Big Horn	58,797,792	45,223,426	30.02
Hot Springs	68,489,053	45,871,842	49.31
Park	188,623,087	136,179,788	36.51
Washakie	31,717,935	28,385,935	11.74

Sources: [20 & 21].

Table IV-2. Assessed valuations and percentage change, 1975-76.

	Assessed Valuation <u>1976</u>	Assessed Valuation <u>1975</u>	<u>% Incr.</u>
State	\$2,489,382,482	\$2,168,456,373	14.80%
Big Horn	79,533,156	58,797,792	35.30
Hot Springs	74,133,471	68,489,053	8.24
Park	220,124,305	188,623,087	16.70
Washakie	33,834,244	31,717,935	6.67

Sources: [20 & 21].

Table IV-3. Total property taxes levied and percentage change, 1974-75.

	Property Tax <u>Levied 1975</u>	Property Tax <u>Levied 1974</u>	<u>% Incr.</u>
State	\$131,082,888	\$106,938,428	22.6 %
Big Horn	3,727,580	3,049,007	22.26
Hot Springs	3,282,618	2,321,246	41.42
Park	10,504,124	8,199,165	28.11
Washakie	1,941,640	1,711,002	13.48

Sources: [20 & 21].

Table IV-4. Total property taxes levied and percentage change, 1975-76.

	Property Tax <u>Levied 1976</u>	Property Tax <u>Levied 1975</u>	<u>% Incr.</u>
State	\$156,646,855	\$131,082,888	19.50%
Big Horn	5,007,902	3,727,580	34.35
Hot Springs	3,526,375	3,282,618	7.42
Park	13,061,309	10,504,124	24.34
Washakie	2,058,829	1,941,640	6.30

Sources: [20 & 21].

Table IV-5. Distribution (mills) and collection (dollars) of county taxes for 1975 and total county tax collections for 1974.

	Gen. County		Gen. School		Library		Hospital		Fair		Welfare		Health	
	Levy	Am't	Levy	Am't	Levy	Am't	Levy	Am't	Levy	Am't	Levy	Am't	Levy	Am't
Big Horn	8.170	480,378	1.350	79,377	.900	52,918	-0-	-0-	.560	32,927	1.000	58,798		
Hot Springs	6.821	467,164	.452	30,957	.678	46,436	1.528	104,651	.484	33,149	1.000	68,489		
Park	2.760	520,600	.562	106,006	.944	178,060	-0-	-0-	.310	58,473	1.000	188,623		
Washakie	6.368	201,980	1.371	43,485	.993	31,496	1.009	32,004	.660	20,934	1.000	31,718		
State		10,601,543		2,006,794		2,100,407		3,577,185		1,249,450		1,958,962		

	Weed & Pest		Recreation/Parks		12 Mill		Bonds & Interest		1975 Total		1974 Total	
	Levy	Am't	Levy	Am't	Levy	Am't	Levy	Am't	Levy	Am't	Levy	Am't
Big Horn	.540	31,751	.020	1,176		705,574	-0-	-0-	24.540	1,442,899		1,129,680
Hot Springs	.829	56,777	-0-	-0-		821,869	-0-	-0-	23.792	1,629,492		1,111,154
Park	.305	57,530	-0-	-0-		2,263,477	-0-	-0-	18.131	3,372,769		2,612,611
Washakie	.397	12,592	-0-	-0-		380,615	-0-	-0-	23.798	754,824		663,607
State		1,158,249		659,189		26,021,474		2,847,635		52,180,888		41,845,992

Source: [20].

Table IV-6. Distribution (mills) and collection (dollars) of county taxes, 1976.

	Gen. County Levy	Gen. County Am't	Gen. School Levy	Gen. School Am't	Library Levy	Library Am't	Hospital Levy	Hospital Am't	Fair Levy	Fair Am't	Welfare Levy	Health Am't
Big Horn	8.170	649,949	1.000	79,553	.940	74,780	-0-	-0-	.600	47,731	1.000	79,553
Hot Springs	6.128	454,290	.429	31,803	.580	42,997	2.833	210,020	.345	25,576	1.000	74,133
Park	4.226	930,245	.498	109,622	.943	207,577	-0-	-0-	.531	116,886	1.000	220,124
Washakie	6.678	225,945	1.268	42,902	1.011	34,206	1.031	34,833	.771	26,086	1.000	33,834
State		13,362,408		2,078,395		2,672,974		3,708,061		1,259,448		2,356,514

	Need & Pest Levy	Need & Pest Am't	Recreation/Parks Museums/Airports/N.H. Levy	Recreation/Parks Museums/Airports/N.H. Am't	12 Mill County School Levy	12 Mill County School Am't	Bonds & Interest Levy	Bonds & Interest Am't	1976 Total Levy	1976 Total Am't	1975 Total Levy	1975 Total Am't
Big Horn	1.000	79,553	.190	15,115		954,637	-0-	-0-	24.900	1,980,871		1,442,899
Hot Springs	.408	30,246	-0-	-0-		889,602	-0-	-0-	23.723	1,758,667		1,629,492
Park	.200	44,025	.458	100,817		2,641,491	-0-	-0-	19.856	4,370,787		3,372,769
Washakie	.503	17,018	-0-	-0-		406,011	-0-	-0-	24.262	820,885		754,824
State		1,292,278		1,265,861		29,872,591		2,916,721		60,785,251		52,180,888

Source: [21].

Table IV-7. Financial expenditure statistics of county budgets, 1971.

(Dollar Am'ts in Thous.)

	<u>Big Horn</u>	<u>Hot Spgs.</u>	<u>Park</u>	<u>Washakie</u>	<u>State (23 Co.)</u>
Pop. 1970	10,202	4,952	17,752	7,569	332,416
Date of End of Fiscal Yr.	June 30	June 30	June 30	June 30	
General Revenue	987	741	1,632	517	43,676
Intergov't Rev.	279	169	564	144	8,287
Tax Rev.	622	531	946	327	17,846
Charges & Misc.	86	40	121	46	17,542
Gen. Expenditures, All Functions	912	643	1,680	494	43,415
Capital Outlay	122	23	228	38	3,861
Other	790	621	1,452	456	39,553
Education	94	33	143	50	2,475
Capital Outlay	-	-	-	-	-
Other	94	33	143	50	2,475
Highways	131	90	432	75	5,292
Public Welfare	159	121	356	113	4,544
Hospitals	-	66	-	15	17,663
Health	43	29	85	10	712
Police Protection	57	27	93	31	1,465
Parks & Recreation	-	12	-	-	351
Natural Resources	56	56	52	22	1,088
Correction	5	8	17	1	390
Fin. Administration	65	37	88	35	1,596
Gen. Control	90	56	127	53	2,577
Gen. Public Bldgs.	14	17	97	22	947
Interest on Gen. Debt	2	2	-	-	688
Other & Unallocable	197	91	191	67	3,627
Total Debt Outstanding at End of Fiscal Yr.	41	-	-	-	12,080

Source: [23].

Table IV-8. County government cash and security holdings, 1971.

	<u>(Thous. of \$)</u>
Total	16,801
By Purpose of Holding:	
Employee Retirement	-
Offsets to Debt	4,896
Bond Funds	61
Other & Unallocable	11,754
Other Than Empl. Retirement	
By Type of Holding:	
Total	16,801
Cash & Deposits	11,424
Securities:	
Total	5,377
Federal	5,377
St. & Local Gov'ts.	-
Other	-

Source: [23].

Table IV-9. County government indebtedness and debt transactions, 1971.

Debt Outstanding at End of Fiscal Year	
Total	12,080
Long-Term Debt	
Total	12,080
Full Faith & Credit	12,080
Non-Guaranteed	-
Short-Term Debt	-
Long-Term Debt by Purpose of Issue	
Local Schools	-
Other	12,080
Net Long-Term Debt Outstanding	7,094
Long-Term Debt Issued	1,828
Long-Term Debt Retired	2,078
Increase or Decrease (-) in Total Debt During Year	
Amount	-249
%	-2.0

Source: [23].

Fire Control

Little information exists on the number and equipment of fire service personnel in the State. In 1976, the Wyoming Department of Fire Prevention and Electrical Safety (also referred to as the State Fire Marshal's Office), under a federal grant, initiated a Fire Data Inventory in an attempt to collect primary data on the nature and status of personnel, facilities, and equipment in Wyoming's fire departments. Since only one-fourth of the departments were surveyed, collection efforts are continuing at the present time.

Because of the incomplete returns of the data survey, description of fire services in the Big Horn Basin is difficult. Table IV-10 lists the fire stations and respective fire chiefs in the Basin communities. All Basin fire departments are volunteer operations. Summaries of fire data inventories for the Basin departments which were surveyed have been included as Tables IV-11 and IV-14. Figure IV-i indicates the service areas of those fire departments surveyed.

Relationship to Public Lands. Fire control on the vast BLM lands is a problem that local fire departments in the SEPA are incapable of handling. As indicated, many of these departments are manned by volunteers whose training is quite limited. Also, these departments are small and insufficiently equipped to deal with other than small residential or commercial building fires. In spite of these limitations, all of the fire departments interviewed, except Manderson,* indicated that they would deal with fires on public lands if requested or if the fire could potentially endanger property in their district [83-89].**

*The Manderson Fire Department is constrained by an insurance policy limiting its jurisdiction to a five mile radius around Manderson.

**At this time there are no cooperative agreements between the various fire districts and the BLM for fire control on BLM administered lands.

Table IV-10. Fire stations and chiefs - Big Horn Basin Area

STATION	NAME	ADDRESS	ZIP CODE
BIG HORN COUNTY			
Basin	Hank Batenhorst	Basin	82410
Deaver	Dewight DeSpain	Deaver	82421
Greybull	Bill Murdock	319 6th Ave., N.	82426
	T. S. "Scotty" Hinman, Sec'y.	509 2nd Ave., S.	82426
Lovell	Thayer Haskell	Lovell	82431
	Chester Stevens, Sec'y.	Lovell	82431
Manderson-Hyattville	Leland Morris	Manderson	82432
Frannie	Lewis Phillips	P. O. Box 81	82423
HOT SPRINGS COUNTY			
Kirby	John Klos	Kirby	82430
Thermopolis	Vince Hanson	P. O. Box 629	82443
	H. C. Downs, Sec'y.	734 Broadway	82443
PARK COUNTY			
Cody-City	Greg Kinchelowe	2532 Beartooth	82414
	Paul C. Smith, Sec'y.	P. O. Box 527	82414
-Rural	Gary Smith	2555 Newton Ave.	82414
Meeteetse	Jake Weber	2110 Warren	82433
	Bryan B. Bennett, Sec'y.	P. O. Box 274	82433
Powell	Dexter Dearcorn	211 East Coulter	82435
WASHAKIE COUNTY			
Ten Sleep	Eldon Wells	Ten Sleep	82442
Worland	Bob Taylor	804 Obie Sue	82401

Source: [93].

Table IV-11.

FIRE DATA INVENTORY
STATE OF WYOMINGHot Springs CountyFIRE FIGHTING UNIT Thermopolis Volunteer Fire Department

Organizational status of unit	City-County Incorporated Vol. Dept.
Current fire chief	Vincent L. Hansen
Present service area	Thermopolis & County
Total manpower of fire unit	30
# paid	0
# volunteer	30
Number of fire stations in service area	1
Fire fighting units used for multiple fire alarm	Worland Vol. Fire Dept.
Estimated population served	
Department's annual budget	\$24,500
Number of operations in 1975	--
Total responses	85
Fires	71
Emergency medical calls	11
False alarms	4
Arson calls	1
Stand by's	0
Estimated property loss in 1975	\$612,000
Lives lost in 1975	0
Number injured by fire in 1975	5
Number of vehicles and other equipment	--
Fire chief vehicles	0
Total pumpers	3
Tankers	
Combination tanker-pumper	3 (3,300 gal.)
Pumper-aerial combination	
Straight aerial	1
Pumper-aerial "quint"	
Squad and rescue trucks	
Community forest fire trucks	5
Airport crash trucks	
Total hose (ft.) (Threads)	5900
ft. of 3/4" dia.	1800
ft. of 1" dia.	
ft. of 1 1/2" dia.	1200 (NST)
ft. of 2 1/2" dia.	2800 (NST & Iron pipe)
ft. of 3 1/2" dia.	
ft. of 4" dia.	
ft. of 3 dia.	150 (NST)
Portable generators	2
Portable pumps	3
Resuscitators	1
Life nets	0

Source: [67].

Table IV-12.

FIRE DATA INVENTORY
STATE OF WYOMING

Park

County

FIRE FIGHTING UNIT Cody Volunteer Fire Department

Organizational status of unit	Fire District
Current fire chief	Greg Kinchelowe
Present service area	Fire District #2
Total manpower of fire unit	27
# paid	0
# volunteer	-27
Number of fire stations in service area	2
Fire fighting units used for multiple fire alarm	Powell Vol. Fire. Dept.
Estimated population served	10,000
Department's annual budget	\$85,000 est.
Number of operations in 1975	--
Total responses	140
Fires	115
Emergency medical calls	10
False alarms	10
Arson calls	5
Stand by's	4
Estimated property loss in 1975	\$500,000
Lives lost in 1975	--
Number injured by fire in 1975	10
Number of vehicles and other equipment	
Fire chief vehicles	
Total pumpers	6
Tankers	3 (4,500 gals.)
Combination tanker-pumper	6
Pumper-aerial combination	
Straight aerial	
Pumper-aerial "quint"	
Squad and rescue trucks	1 (medical equipped)
Community forest fire trucks	
Airport crash trucks	1
Total hose (ft.) (Threads)	14,000 approx.
ft. 1f 3/4" dia.	
ft. of 1" dia.	
ft. of 1 1/2" dia.	2,000 (NST)
ft. of 2 1/2" dia.	10,000 (NST)
ft. of 3.1/2" dia.	
ft. of 4" dia.	1,000 (NST)
ft. of dia.	
Portable generators	2
Portable pumps	4
Resuscitators	3
Life nets	

Source: [67].

Table IV-12.

FIRE DATA INVENTORY
STATE OF WYOMING

Park _____ County

FIRE FIGHTING UNIT Cody Volunteer Fire Department

Organizational status of unit	Fire District
Current fire chief	Greg Kinchelowe
Present service area	Fire District #2
Total manpower of fire unit	27
# paid	0
# volunteer	27
Number of fire stations in service area	2
Fire fighting units used for multiple fire alarm	Powell Vol. Fire. Dept.
Estimated population served	10,000
Department's annual budget	\$85,000 est.
Number of operations in 1975	--
Total responses	140
Fires	115
Emergency medical calls	10
False alarms	10
Arson calls	5
Stand by's	4
Estimated property loss in 1975	\$500,000
Lives lost in 1975	--
Number injured by fire in 1975	10
Number of vehicles and other equipment	
Fire chief vehicles	
Total pumpers	6
Tankers	3 (4,500 gals.)
Combination tanker-pumper	6
Pumper-aerial combination	
Straight aerial	
Pumper-aerial "quint"	
Squad and rescue trucks	1 (medical equipped)
Community forest fire trucks	
Airport crash trucks	1
Total hose (ft.) (Threads)	14,000 approx.
ft. 1 3/4" dia.	
ft. of 1" dia.	
ft. of 1 1/2" dia.	2,000 (NST)
ft. of 2 1/2" dia.	10,000 (NST)
ft. of 3 1/2" dia.	
ft. of 4" dia.	1,000 (NST)
ft. of dia.	
Portable generators	2
Portable pumps	4
Resuscitators	3
Life nets	

Source: [67].

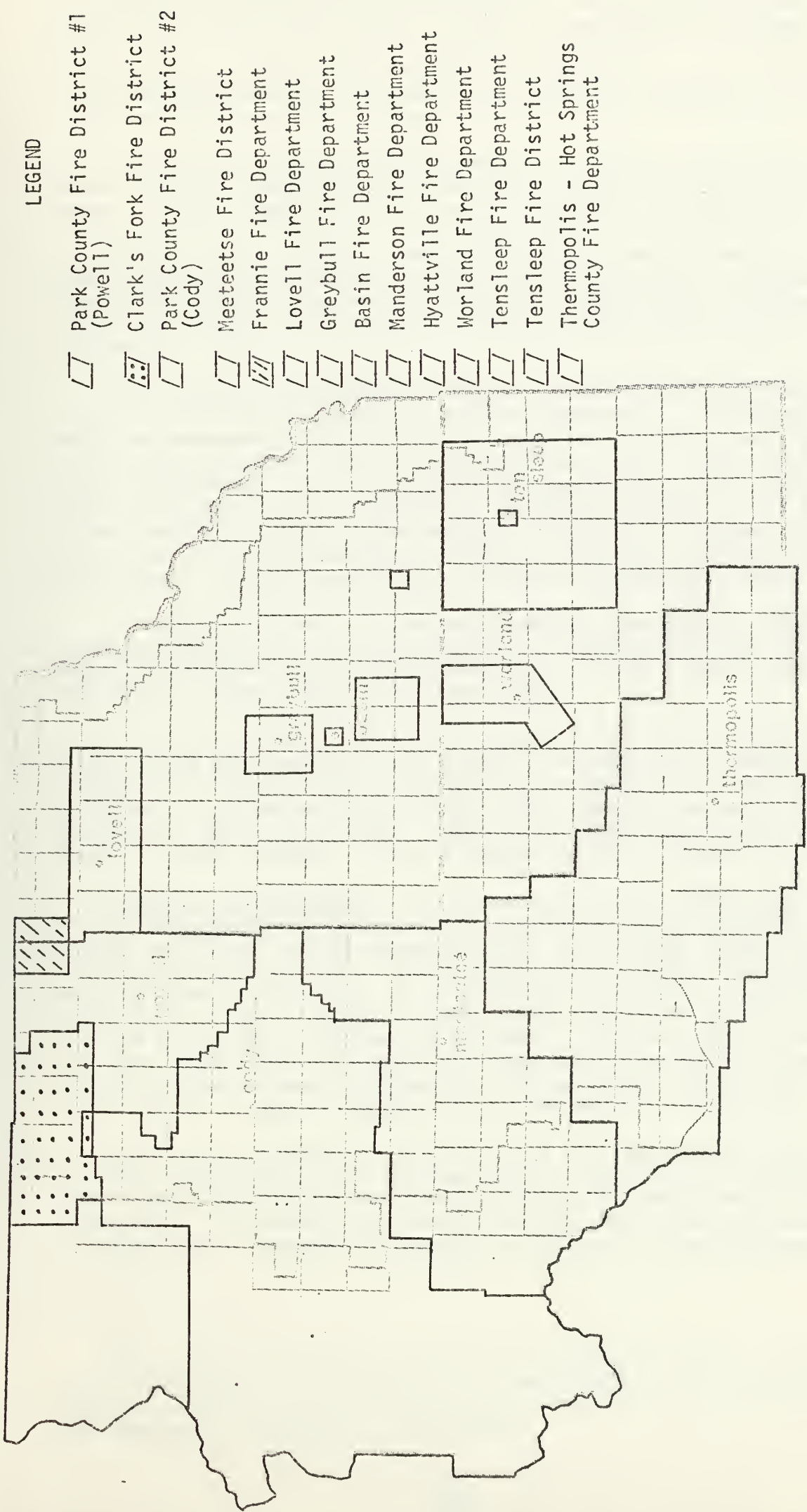


FIGURE IV - 1.
FIRE CONTROL SERVICE AREAS

Sources: [67, 83, 85, 86, 87, 88, 89, & 93].

Law Enforcement

Personnel, Expenditures, and Equipment. The principal law enforcement jurisdictions in the Big Horn Basin are county sheriffs' departments and municipal police departments. County law enforcement personnel, based on 1975-76 statistics, are listed in Table IV-15. Park and Big Horn Counties have the largest sheriff's departments, but it should be noted that more than twice as many of Park County's personnel are full-time sworn employees than are Big Horn's.

Municipal police personnel and numbers are given in Table IV-16. Based on average guidelines, an adequate level of service for small towns (10,000 or less) would be 1.4-2 policemen/1000 population [40].

It would appear that the seven largest Basin communities all have adequate levels of police protection. While Greybull has the largest total number of police personnel, Cody has the most sworn full-time policemen. Basin, with a total of 3, has the Basin's smallest police department.

The cost of law enforcement to Basin residents can be assessed in terms of the cost of the Criminal Justice System (CJS). On the county level the components of CJS include expenses for sheriffs, county attorneys, district courts, justice of the peace and jails. Table IV-17 gives a breakdown of such expenses for the Basin and its counties and compares CJS costs to total budget and assessed evaluation. Park County spends the greatest total dollar amount on its CJS, in accordance with its greater population numbers and a higher crime rate. However, such costs occupy a larger proportion of the budget in Washakie County.

In municipal terms, the elements comprising the Criminal Justice System are similar to those of the county as indicated in Table IV-18. Worland expends the largest dollar amount on CJS, but Powell's expenses constitute a larger share of its total budget.

The amount of law enforcement equipment in the Basin is small when compared with total equipment in the State, as indicated in Table IV-19. The greatest concentration of equipment in the Basin is in Park County, which has the largest numbers of police cars, weapons, gas masks, riot-helmets, and bullet-proof vests. Again there is a greater need in Park County for such equipment, due to a greater incidence of major crimes.

Offenses and Clearances. It is common practice to divide the seven major crimes into two categories, the first four being considered "crimes against the person" and the remaining three constituting "crimes against property" (see Table IV-20). In the State, the Big Horn Basin and in each individual Basin County, the overwhelming proportion of offenses reported are property crimes. Larceny is the number one crime in actual offenses in the State, followed by burglary. This same pattern holds true when considering crime in the Big Horn Basin; however, the number of actual offenses there constitutes a very small proportion of the States' total. Crimes of violence are of extremely low occurrence.

Table IV-20 represents a summary report of offenses and clearances* in 1975. The figures reveal that Park County leads the Basin counties in terms of numbers of offenses and arrests, while Big Horn County had the lowest rate. All counties, except Hot Springs, had fairly high numbers of persons under 18 arrested. Larceny led the list of major crimes in all counties.

*The term "clearances" may be a bit confusing to laymen, who tend to think of "clearing" in the same vein as "acquitting". For law enforcement personnel the "clearing" comes when the case is no longer open, i.e. when someone is arrested for the offence.

Four court systems have jurisdictions in the Big Horn Basin -- district courts, justice courts, municipal courts, and juvenile courts. Tables IV-21 through IV-24 provide information on the caseloads in each jurisdiction. Typical of most areas the court loads are heavy. As might be expected from the preceeding section, Park County leads in case loads in all courts and most categories for 1975.

Relationship to BLM Lands. BLM administered lands in each of the four SEPA Counties are under the jurisdiction of the corresponding sheriff's office for law enforcement purposes. Each of the sheriff's offices patrols all incorporated and unincorporated areas of its respective county, including public lands. There are no special agreements with the BLM; the patrols are routine [90-92]. None of the county sheriffs felt that BLM lands represented a law enforcement problem at this time. However, in Park County, the sheriff's office has a contract with the Shoshone National Forest to patrol U.S. Forest Service lands. This arrangement was necessary because of the increasingly large number of people using the national forests, necessitating more law enforcement work. If the BLM develops part of its land into a heavily used recreation area, a similar contractual agreement with the appropriate county may be needed.

Table IV-15. Personnel: Sheriff's Department, by region and county, 1975-76.

	Big Horn Basin	Big Horn County	Hot Springs County	Park County	Washakie County
Sheriff's personnel:					
Full-time sworn					
Sheriff	4	1	1	1	1
Under-sheriff	3	1	0	1	1
Deputies	16	3	2	9	2
Other	0	0	0	0	0
Full-time civilian					
Jailors, matrons, cooks	5	5	0	0	0
Clerks, radio operators	8	0	1	6	1
Other	5	5	0	0	0
Part-time					
Deputies	0	0	0	0	0
Jailors, matrons, cooks	0	0	0	0	0
Clerks, radio operators	0	0	0	0	0
Other	0	0	0	0	0
TOTALS	41	15	4	17	5

Source: [61].

Table IV-16. Personnel: Police Departments, by region and city, 1975-76.

	Big Horn Basin	Big Horn County	1,350	Greybull	2,205	Lovell	2,371	Hot Springs County	3,067	Park County	6,500	Cody	5,000	Powell	5,000	Washakie County	5,133	Worland
Police Personnel:																		
Sworn full-time																		
Chief	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Assistant Chief	4	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0
Captain	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lieutenants	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Detectives	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sergeants	4	0	0	0	0	0	1	1	0	0	0	0	0	0	0	3	0	0
Patrolmen	27	2	3	3	0	2	4	4	0	9	0	0	5	0	4	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Full-time civilian																		
Jailor, matron, cook	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clerk, radio operator	9	0	0	0	0	0	4	4	0	0	0	1	1	0	4	1	0	0
Other (metermaid)	3	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0
Part-time																		
Patrolmen	6	0	5	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Jailor, matron, cook	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clerk, radio operator	4	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0
Other	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
TOTALS	72	3	15	5	12	5	12	12	12	12	12	12	12	12	13	13	13	13

Source: [61].

Table IV-17. Wyoming county expenditures - Criminal Justice System - 1975-76.

	Sheriff	County Attorney	District Court	Justice of the Peace	Jails	Criminal Justice System Total	Criminal Justice System % of Total	1976 Assessed Valuation	1975 Assessed Valuation
State	2,969,578	843,672	1,163,847	510,350	708,350	6,195,800	19.2	2,499,382,482	2,168,455,993
Big Horn Basin	429,545	106,688	137,997	57,444	75,117	806,781	18.1	407,645,176	347,627,867
Big Horn County	102,101	27,381	36,093	15,980	6,794	188,349	16.6	79,553,156	58,797,792
Hot Springs County	90,360	21,250	26,960	8,789	22,656	170,015	18.5	74,133,471	68,489,053
Park County	183,309	41,334	56,937	23,080	43,188	347,838	18.3	220,124,305	188,623,087
Washakie County	53,775	16,723	18,007	9,595	2,479	100,579	20.6	33,834,244	31,717,935

Source: [61].

Table IV-18. Expenditures for Wyoming first-class and other cities of a population over 3,000 Criminal Justice System: 1975-76.

	City Attorney	Police Dept.	Municipal Court	Total CJS	Total Budget	% of Total on CJS
State	236,543	5,853,816	142,444	6,233,803	40,303,727	15.5
Big Horn Basin	26,373	465,882	0*	492,255	3,919,553	12.6
Cody	8,270	157,036	0*	165,306	1,501,553	11.0
Powell	9,898	150,008	0*	159,906	930,446	17.2
Worland	8,205	158,838	0*	167,043	1,487,554	11.2

*Included in City Attorney or Police Department figures.

Source: [61].

Table IV-19. Law enforcement equipment, by state, region, and county, 1975-76.

	State totals*	Big Horn Basin	Big Horn County	Hot Springs County	Park County	Washakie County
Number of items in jurisdiction:						
Police cars	418	29	7	4	15	3
Trucks	27	1	0	0	1	0
Ambulances	1	0	0	0	0	0
Snowmobiles	5	0	0	0	0	0
Four-wheel drive vehicles	36	4	1	1	1	1
Motorcycles	10	0	0	0	0	0
Cameras	368	34	6	7	16	5
Photo labs	22	4	0	1	2	1
Chemical labs	8	2	1	0	1	0
Polygraph	10	1	0	1	0	0
Latent fingerprint kits	136	14	4	5	2	3
Video-tape recorders	33	5	0	0	2	3
Tape recorders	181	16	3	4	5	4
Shot guns	407	28	7	7	11	3
Rifles	94	19	2	1	16	0
Trained police dogs	3	1	0	0	1	0
Target ranges	41	5	1	0	3	1
Gas masks	594	31	7	0	23	1
Gas guns	49	4	2	0	1	1
Riot helmets	645	36	7	6	23	0
Bullet-proof vests	195	29	0	6	19	4
Loudspeakers	250	14	1	3	6	4
Boats	2	0	0	0	0	0
Aircraft	2	0	0	0	0	0

*State totals include Wyoming Highway Patrol and Wyoming Division of Criminal Investigation.

Source: [61].

Table 1V-20. Number of offenses and clearances - 1975.

<u>State</u>	Offenses reported or known	Unfounded complaints	Actual offenses	Cleared by Total cleared	Arrest of pers. under 18
Criminal homicide	56	4	52	55	2
Forcible rape	81	23	65	52	9
Robbery	223	12	211	126	32
Aggravated assault	797	59	738	603	56
Burglary	3595	223	3372	739	242
Larceny	10197	331	9866	1863	544
Auto theft	1145	135	1030	417	169
Totals	16114	780	15334	3855	1054
<u>Big Horn Basin</u>					
Criminal homicide	2	0	2	2	0
Forcible rape	5	0	5	5	2
Robbery	8	0	8	6	0
Aggravated assault	62	2	60	42	15
Burglary	226	10	216	88	50
Larceny	695	33	662	205	71
Auto theft	86	10	76	60	28
Totals	1080	55	1025	404	166
<u>Big Horn County</u>					
Criminal homicide	0	0	0	0	0
Forcible rape	2	0	2	2	0
Robbery	0	0	0	0	0
Aggravated assault	4	0	4	3	3
Burglary	28	4	24	20	15
Larceny	51	18	33	15	3
Auto theft	6	0	6	6	5
Totals	91	22	69	46	26
<u>Hot Springs County</u>					
Criminal homicide	0	0	0	0	0
Forcible rape	1	0	1	1	0
Robbery	1	0	1	1	0
Aggravated assault	17	0	17	17	6
Burglary	13	0	13	13	1
Larceny	60	0	60	14	8
Auto theft	2	0	2	2	1
Totals	94	0	94	48	16
<u>Park County</u>					
Criminal homicide	2	0	2	2	0
Forcible rape	2	0	2	2	2
Robbery	3	0	3	1	0
Aggravated assault	37	2	35	18	6
Burglary	138	5	133	41	23
Larceny	382	15	367	99	32
Auto theft	51	10	41	30	12
Totals	615	32	583	193	75
<u>Washakie County</u>					
Criminal homicide	0	0	0	0	0
Forcible rape	0	0	0	0	0
Robbery	0	0	0	0	0
Aggravated assault	4	0	4	4	0
Burglary	47	1	46	14	11
Larceny	202	0	202	77	28
Auto theft	27	0	27	22	10
Totals	280	1	279	117	49

Source: [61].

Table IV-21. District Court caseload statistics by region and county, twelve month period 1975.

	Total		Cases During Term				Felony	
	Filed	Disposed	Civil Filed	Civil Disposed	Misdemeanor Filed	Misdemeanor Disposed	Filed	Disposed
Big Horn Basin	974	963	894	865	26	36	54	62
Big Horn Co.	251	250	226	221	4	4	21	25
Hot Springs Co.	208	210	173	166	15	16	20	28
Park Co.	334	327	334	318	0	9	0	0
Washakie Co.	181	176	161	160	7	7	13	9

Source: [61].

Table IV-22. Justice Court caseload statistics by region and county, twelve month period 1975.

	Total Filed	Total Disposed	Cases During Term				Traffic		Felony/Misdemeanor	
			Civil Filed	Civil Disposed	Misdemeanor Filed	Misdemeanor Disposed	Filed	Disposed	Filed	Disposed
Big Horn Basin	2540	2539	382	372	602	611	1340	1341	216	215
Big Horn Co.	798	801	176	166	203	213	378	379	41	43
Hot Springs Co.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Park Co.	1318	1313	180	180	357	356	625	625	156	152
Washakie Co.	424	425	26	26	42	42	337	337	19	20

Source: [61].

Table IV-23. Municipal court caseloads, by region and county, 1975-76.

	Big Horn Basin	Big Horn County	Hot Springs County	Park County	Washakie County
Number of courts	8	3	1	3	1
Caseloads:					
Misdemeanor	548	6	64	195	283
Traffic	1759	214	152	893	500
Total	2307	220	216	1088	783

Source: [61].

Table IV-24. Juvenile Court caseload statistics, twelve month period 1975.

	Big Horn County	Hot Springs County	Park County	Washakie County
Total cases under Juvenile Court jurisdiction at beginning of term	2	0	0	2
Petitions filed during term	20	24	68	25
Petitions disposed of during term	17	20	39	22
Jury trials held	0	0	0	0
Total petitions disposed of	17	20	39	22
Total petitions under Juvenile Court jurisdiction at the end of term	5	4	29	5
Petitions not accounted for	0	0	0	2
Disposition before final action	20	25	66	25

*Pending includes 27 cases where the subject was advised that the matter would be left open for a certain period of time -- in effect, probation -- but not in name.

**One transferred to another, one authorization for juvenile marriage.

Source: [61].

Search and Rescue

Most search and rescue operations in the Big Horn Basin counties fall under the authority of the Sheriff's Departments. In some instances private search and rescue clubs exist and are utilized, as are fire departments. The following paragraphs summarize the search and rescue situation in each of the four counties.

Big Horn County. Two search and rescue groups operate in Big Horn County. Neither operate without the approval of the Sheriff's office. The North Big Horn County group has 30 members plus two honorary members and two Sheriff's Department members. The area of their jurisdiction extends from approximately halfway between Lovell and Greybull north. The South Big Horn Search and Rescue club consists of 21 members at present. Maximum club membership is 30, plus a reserve list of exactives and interested future members. The club is headquartered in Basin, and Sheriff George Warfel is its unofficial head. The club's jurisdiction is from halfway between Lovell and Greybull southward.

Hot Springs County. No search and rescue group exists in Hot Springs County, but there is hope of starting a group there soon. At present the Thermopolis volunteer fire department, with 30 members, is utilized for search and rescue work. The Sheriff also has an unofficial group of 4-5 individuals who can be called upon.

Park County. Park County has two search and rescue groups, one based in Powell and the other in Cody. The Powell group consists of 15 members and can be called into action by the Sheriff's Department, the Police Department, or the Fire Department. Its jurisdiction covers all of the County, but it operates most frequently in the eastern half.

The Cody group has 20 members and their headquarters are in the Sheriff's office. Their jurisdiction lies essentially in the western half of Park County; however, they do operate in other parts of the County depending on who's in the area and what the particular needs of the situation are.

Washakie County. The search and rescue group operating in Washakie County has been organized through the Sheriff's Department and consists of 20 members plus four Sheriff's Department personnel. They serve the entire County.

Relationship to Public Lands. Search and rescue units are administered by the respective sheriff's office in each of the four SEPA Counties and, as such, follow the same jurisdictional pattern with respect to BLM lands as do the sheriff's departments [90-92]. The search and rescue units handle emergency situations on BLM lands routinely and/or at the request of BLM officials. Although special permission is needed to enter or fly over Forest Service Wilderness Areas [92], none of the sheriffs interviewed were aware of having dealt with a situation which required such special arrangements to be made.

Education

Student enrollments for Wyoming as a whole are up 5.6% over the last ten years, while three of the four SEPA Counties have experienced drops in enrollment, Table IV-25. Hot Springs County is down 25% from 1967-1976, with 22% of the decline coming since 1970. Park County is down 4.0% since 1970, in spite of a 4.6% increase in population. Washakie County had 5.6% more students in 1976 than 1967, which was nearly equal to the state increase.

The number of classrooms, Table IV-26, and teachers [26 & 27] has remained relatively stable during the last ten years, and this has contributed, given reductions in student numbers, to increasing cost per Average Daily Membership in the SEPA,* Table IV-29.

Tables IV: 30-31 present the revenue sources for the state average and SEPA school districts. The notable statistic is that most SEPA school districts receive more \$/ADM from their county than the state average, and (excepting Thermopolis and Lovell) far fewer federal \$/ADM. As in the general Public Finance section, this reflects the taxable value of mineral deposits in the SEPA.

The capital outlook for all school districts in the SEPA, possibly excepting Thermopolis, is sound. There are some facilities which are aging and require replacement or remodeling, but this is due to the passage of time and not growth pressure on the school system.** Generally, the schools have excess capacity sufficient to cope with an increase in student enrollment to the levels of eight to ten years ago.

*Inflation has also been a large contributing factor.

**These types of structural problems are natural occurrences in the context of depreciating facilities.

Table IV-25. Student enrollment, 1967-70 and 1974-76.

	1967	1968	1969	1970	1974	1975	1976	% change 1967-76
State	85,566	86,013	86,440	86,886	86,584	88,184	90,587	5.5
Big Horn Co.	3,016	2,882	2,875	2,864	2,758	2,783	2,868	-5.2
Hot Springs Co.	1,325	1,382	1,307	1,290	1,099	1,123	1,060	-25.0
Park Co.	4,759	4,741	4,786	4,727	4,610	4,604	4,546	-4.7
Washakie Co.	1,971	1,974	1,871	2,005	2,010	1,994	2,089	5.6

Sources: [24 & 25].

Table IV-26. Classroom units, 1974-75.

	1974-75	1975-76
State	4368.417	4425.985
Big Horn: Byron	13.518	50.352
Lovell	41.412	40.504
Greybull	37.818	43.016
Basin	24.961	34.074
Hot Springs: Thermopolis	55.414	54.976
Park: Powell	96.550	92.842
Cody	106.742	103.120
Meeteetse	16.857	17.103
Washakie: Worland	89.994	93.754
Tensleep	11.858	12.529

Sources: [26 & 27].

Table IV-27. Distribution of property valuation (PV) in dollars per average daily attendance (ADA), 1974-75.

	1974		1975	
	PV	ADA	PV	ADA
State	1708945746	80669.519		
Big Horn:				
Byron	(2912431)	183.681	20075195	694
Lovell	8973906	758.634	20854262	764
Greybull	(585385)	675.221	17363751	689
Basin	5120002	371.728	25729189	501
Hot Springs:				
Thermopolis	45871842	1011.819	68489053	1040
Park:				
Powell	50427457	1904.510	62975411	1823
Cody	55602959	2144.125	71637574	2097
Meeteetse	18099912	216.484	28785497	217
Washakie:				
Worland	23151043	1724.043	25425219	1747
Tensleep	5234892	166.702	6292716	168

Sources: [26 & 27].

Table IV-28. Assessed property valuation and percentage change, 1970 and 1974.

	1970	1974	% change
State	1317876063	1708945746	29.67
Big Horn	39696022	45223426	13.92
Hot Springs	43150866	45871842	6.31
Park	129135092	136179788	5.46
Washakie	26069371	28385935	8.86

Source: [28].

Table IV-29. Average daily membership (ADM) and cost per ADM by district, 1974-75.

1974-75	District ADM	Total general fund expenditures	Total cost per ADM
State	85995.630	112896813	1312.82
Big Horn:			
Byron	190.155	529731	6289.97
Lovell	802.691	899933	1121.22
Greybull	708.277	866443	2661.77
Basin	397.650	577161	1451.43
Hot Springs:			
Thermopolis	1091.981	1734106	1588.04
Park:			
Powell	1989.499	2476994	1245.03
Cody	2253.636	2751295	1220.82
Meeteetse	235.10	467700	1988.94
Washakie:			
Worland	1825.689	2013901	1103.09
Tensleep	174.228	286284	1643.16
1975-76			
State	87659	136560048	1558
Big Horn:			
Byron	734	1489777	2029
Lovell	811	1090566	1345
Greybull	729	1087766	1491
Basin	543	993390	1830
Hot Springs:			
Thermopolis	1108	2051952	1852
Park:			
Powell	1933	2924039	1513
Cody	2234	3479020	1557
Meeteetse	229	598281	2608
Washakie:			
Worland	1845	2470413	1339
Tensleep	177	335807	1893

Sources: [26 & 27].

Table IV-30. General operating fund revenues, 1974.

	Local revenue	Local \$/ADM	County revenue	County \$/ADM	State revenue	State \$/ADM	Federal revenue	Federal \$/ADM	Total revenue	Total \$/ADM
State	45580563.44	530.06	25597718.13	297.67	38572153.05	448.54	3496011.40	40.65	113246446.02	1316.92
Big Horn										
Eyrone	388267.32	4445.21	56884.31	506.07	62809.37	994.80	3577.86	31.01	511898.86	6177.09
Lovell	259027.36	322.70	169098.90	210.66	496400.58	618.42	2344.86	133.85	926871.70	1154.70
Greybull	186903.14	578.81	148586.53	463.52	523325.37	1544.57	2637.60	10.42	861442.64	2637.22
Basin	137404.40	345.54	101670.33	255.68	315719.71	793.96	6310.35	15.87	561104.79	1411.05
Hot Springs										
Thermopolis	996429.29	912.50	619862.72	567.65	104225.91	95.45	128039.19	117.25	1848577.11	1692.85
Park										
Powell	1423129.71	715.32	821274.58	412.80	292555.47	147.05	6083.44	3.06	2543043.20	1278.23
Cody	1530099.17	678.95	898155.78	398.54	323814.84	143.69			2752069.79	1221.18
Meeteetse	374821.20	1593.97	110019.75	311.84	203589.99	577.06	520.00	1.47	507215.97	1437.66
Washakie										
Worland	647837.29	354.85	392181.89	214.81	971787.92	532.29	2528.00	1.38	2014335.10	1103.33
Tensleep	145259.46	833.73	51270.04	294.27	101438.13	582.21			297967.63	1710.21

Source: [26].

Table IV-32. Student drop-out rate and county rank, grades 7-12, 1970 and 1972.

	<u>Rate</u>		<u>Rank</u>	
	<u>1970</u>	<u>1972</u>	<u>1970</u>	<u>1972</u>
Big Horn	2.5	3.20	14	11
Hot Springs	2.0	2.70	19.5	14.5
Park	2.6	3.30	13	9
Washakie	4.8	3.20	1.5	11

Source: [19].

Media

The Big Horn Basin is served by eight newspapers published within the area -- one daily, six weeklies, and one semi-monthly (see Table IV-33). Three of the weeklies originate in Big Horn County, two in Park County, and one in Hot Springs County. Other papers with state and regional coverage are circulated in the Basin, these include the Casper Star Tribune, Cheyenne's Tribune and Eagle, and the Gazette out of Billings, Montana. Both major wire services, AP and UPI (offices in Cheyenne), provide service to the Basin.

Radio and television station locations are provided by Figure IV-2. It will be noted that only Big Horn County does not have its own radio or television station, perhaps because of the small size of communities within that county. However, the proximity of other Basin stations would assure Big Horn County residents of access to these means of communication. In addition to the television station in Thermopolis, television programs are received from stations in Casper, Billings, and Salt Lake City.

Table IV-33. Newspaper, radio and television information, Big Horn Basin Area.

Newspaper & Zip Code	(County seat newspapers indicated by asterisk)	Town & County	Town Population	County Population	Circulation	Publisher	Phone Number	National Col. Inch Rate	National Line Rate	Pica Width of Col.	Cols. Wide	Col. Depth in Inches	Sub. Rate	Display class rate	Color Ads.	Pub. Days	Insert Rate	0 (off:sec) 1 (letter:press)	Market Data
DAILY																			
*Nor.Wyo.Daily News Norland (Washakie) (ABC) 82401			5008	7800	4200	Hugh Knoefel	347-3241	1.82	.13	10 1/2	6	16	26.00	2.00	1/3 xtra	T. thru Sat.	\$65 per 1000	0	AODMR
WEEKLY																			
*Republican Ruster Basin (Big Horn) 82410		Box 500	1200	15000	1020	H.S.Balison	568-2321	1.68	.12	10	8	21	6.00	1.68	Double 1/2 pg. min.	Ths.	50% B-W	0	OAS
*Enterprise 82426		Cody (Park)	5161	20000	5200	James T. Miller	587-2231	2.38	.17	10	8	21 1/2	8.50	2.25	\$45	Wed.	On request	0	AOR
*Standard Tribune 82426		Greybull (Big Horn) 614 Greybull Ave.	2200	12000	2262	Paul & Sally Massey	765-2041	1.68	.12	10	8	21	7.00	1.68	\$47.50	Ths.	50% B-W	0	ASO
Chronicle 82431		Lovell (Big Horn)	2371	10000	1825	Patrick H. Schmidt	548-2217	2.10	.15	10	8	21	8.50	1.60	\$50	Ths.	50% B-W	0	AODMR
Tribune 82435		Powell (Park)	4807	19650	3700	Dave Bonner	754-2221	2.10	.15	10	8	21	9.00	2.10	\$50 xtra 1/2 pg. min.	T. & Ths.	50% B-W	0	AOK
*Independent Record 82443		Record Thermopolis (Hot Springs)	3063	4952	2123	Henry Teutwein & Ivan Million	864-2329	1.50	.107	10 1/2	6	17	7.00	1.35	40%	Ths.	50% B-W	0	OAR

MARKET DATA: A (Agriculture), O (Oil or Gas), S (Suburban), M (Mining), I (Industry), R (Recreation)

SEMI-MONTHLY

Wyoming News (Cody)

587-5987

Station-Address

Frequency

Telephone

Manager

WIRE SERVICES

Tom Slaughter
Associated Press
P. O. Box 1323
Cheyenne, WY 82001
Tel: 632-9351

Pat Lamb
United Press International
P. O. Box 728
Cheyenne, WY 82001
Tel: 634-2850

KODI, Cody
Box 1222

1400 Khz

5872211

Dorse Miller

TELEVISION STATIONS

Station-Address

Channel

Telephone

Area Code

Manager

KRRP-TV Thermopolis
500 Arapahoe

10

864-2351

Mildred Ernst

307

Ken Brown

Bruce Long

347-3231

864-2119

1340 Khz

Box 409

Box 591

KRRR, Thermopolis

500 Arapahoe

864-2351

Mildred Ernst

1490 Khz

Box 968

KPOW, Powell

754-2251

Bill Mack

1260 Khz

Box 409

KRRR, Thermopolis

864-2351

Mildred Ernst

1240 Khz

Box 591

KRRR, Thermopolis

864-2119

Bruce Long

1340 Khz

Box 409

KRRR, Thermopolis

347-3231

Ken Brown

864-2351

Mildred Ernst

864-2351

Mildred Ernst

Sources: [38 & 66].

V. ECONOMY

LEGEND

- Radio Station
- TV Station

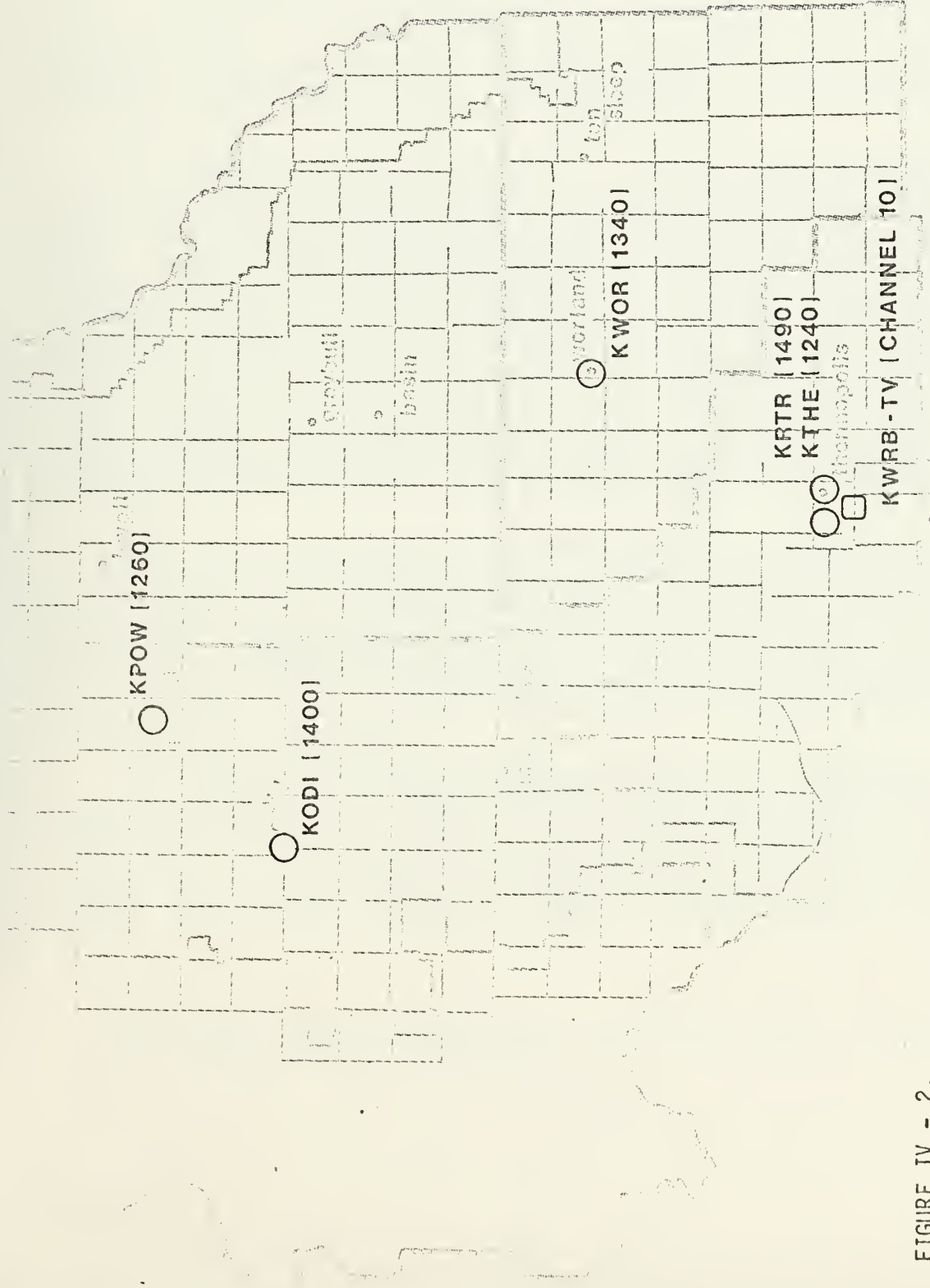


FIGURE IV - 2.

RADIO AND TV STATIONS

Source: [38]

Economy

Income

The personal income situation for Wyoming has improved considerably during the past few years. The state as a whole has gained in personal income relative to the U.S. total since 1969, whereas previously, Wyoming had gone steadily downward in relative income growth, Table V-1. These gains have resulted directly from energy development and other increased mineral-related activity, along with a steady growth in industrialization. Park and Big Horn Counties have also shown increased personal income relative to the U.S., but the upturn has been slower, not beginning until 1972-73, and the gains have been much smaller. Hot Springs County lost ground in comparison to the U.S., and Washakie County stayed the same.

Median and mean income in the four counties comprising the SEPA were below the corresponding figures for Wyoming and other Western states, except New Mexico, Tables V: 2 & 4. Park County had the highest median and mean incomes of the SEPA Counties. This is due to the wide diversity of employment in Park County, which has numerous jobs in the oil and gas industry and manufacturing (see the employment section), occupations which traditionally pay higher than do agriculture or service jobs. It is agriculture and service sectors which provide nearly all employment and thus, wage and salary payments in Hot Springs, Big Horn, and Washakie Counties. This accounts in a large part for the lower mean and median incomes in these counties.

Per capita income data, Table V-3, follows the already mentioned trends up to 1969 as have been apparent in the other income statistics. After 1969, however, Wyoming began to gain ground relative to the other Western states, although the SEPA Counties have continued to lag behind. Big Horn County experienced the largest gain of the four SEPA Counties in per capita income between 1969-73 of 6.6%, far below the 7.6% state average. Park had the highest per capita income of the SEPA Counties at \$3,763, only about \$50 below the state average. Although Park County also had the lowest percentage increase in per capita income, 5.4%, this is to be expected due to the stability of the Park County economy. The energy industry as well as other exporting sectors of the economy are well established and exhibit patterns of steady growth, but no county in the SEPA, including Park, can be considered a "boom" area.

The income distributions of the SEPA Counties, except Park, are skewed toward the lower income levels, Table V-4. Park County's income distribution is more favorable (uniform) than that of the U.S.: only 20.1% of all families and unrelated individuals in Park are below the \$5,000 level, corresponding to 20.3% for the U.S. as a whole. The low income levels in the other SEPA Counties are due to the older populations residing in those areas and the scarcity of managerial, technical, and skilled jobs available.

The income data from the input/output analysis of the SEPA are presented in Table V-5.* Total household income, excluding federal and state wage and salary and transfer payments, for the SEPA in 1974 was \$118,297,000. The five major income sources in 1974 were: agriculture (20.1%), trade (12.2%), government (11.9%), oil and gas extraction and related field services (14.6%), and finance, insurance, and real estate (8.2%).

*See Table V-19 for definitions of the sectors which are listed along the left hand side of Table V-5.

The income source distribution for Big Horn County greatly differs from the overall SEPA: 26.6% of household income is generated by agriculture in Big Horn County, compared to 20.1% for the total SEPA. Also, the trade sector in Big Horn County provides only 8.4% of household income, while trade is a much more important source for the SEPA as a whole, accounting for 12.2% of total household income payments. This results from the lack of retail services available in the small towns in Big Horn County, the relative proximity of southern Big Horn County to the Worland trade center, and the tendency of northern Big Horn County residents to shop in Cody-Powell. The small amount of income from the other services sector (0.9%) further highlights the lack of retail services available in Big Horn County.

In previously mentioned personal income data, Park County residents have stood out as being relatively more wealthy than the rest of the SEPA. The input/output data further reinforces this observation. Park County has the greatest amount of household income of any county in the SEPA, \$54,044,000,** but it is the distribution of the household dollars which makes Park unusual. Oil and gas extraction and related services comprise 19.7% of all household income payments, compared to 14.6% for the total SEPA. Park is the only county in the SEPA where agriculture is not the leading sector in terms of payments to households. This statistic underscores the primary difference between Park and the other SEPA Counties and is the leading explanation for the economic and hence social differences between the areas.

**Park also has the largest population of the SEPA Counties. Still, Park has 44% of the population, but 46% of the household income, which further indicates higher incomes in Park relative to the other three SEPA Counties.

Table V-1. Total personal income relatives¹ in SMSA's, counties & independent cities in selected years, 1966-74.

	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
	\$	\$	\$	\$	\$	\$	\$	\$	\$
Wyoming	2,793	2,930	3,114	3,419	3,815	3,868	4,278	4,892	5,403
SMSA's									
Cheyenne	2,891	3,357	3,429	3,698	4,039	4,215	4,587	5,231	5,527
Big Horn	2,261	2,474	2,820	2,973	3,462	3,324	3,753	4,400	4,927
Hot Springs	2,506	2,919	2,994	3,272	3,521	3,187	3,908	4,587	5,048
Park*	2,925	3,166	3,206	3,398	3,630	3,821	4,552	5,126	5,917
Washakie	2,508	2,792	2,926	3,196	3,463	3,579	3,783	4,360	4,834

* (Including Yellowstone National Park 65F)

Source: [29].

Table V-2. Median income for families, 1970.

<u>Western States:</u>	<u>Amount</u>
	\$
Montana	8,512
Wyoming	8,943
Big Horn County	8,056
Hot Springs County	8,362
Park County	8,878
Washakie County	8,354
Colorado	9,555
New Mexico	7,849
Nevada	10,692
Utah	9,320
Arizona	9,187
California	10,732
Oregon	9,489
Washington	10,407
Idaho	N.A.
Alaska	12,443

Source: [32].

Table V-3. Per capita income for selected years, 1959-74.

By Regions & States	Average Annual Growth						
	1959 \$	1969 \$	1972 \$	1973 \$	1974 ¹ \$	1959- 1973 %	1973- 1974 ¹ %
United States	1,906	3,162	3,867	4,323	4,629	5.2	7.1
Rocky Mountain Region	1,821	2,795	3,576	3,986	4,274	4.4	7.2
Colorado	1,925	2,984	3,894	4,240	4,516	4.5	6.5
Idaho	1,669	2,677	3,264	3,897	4,389	4.8	12.6
Montana	1,769	2,705	3,504	4,023	4,093	4.3	1.7
Utah	1,719	2,530	3,208	3,530	3,824	3.9	8.3
Wyoming	1,966	2,847	3,439	3,816	4,172	3.8	9.3
Far West	2,237	3,531	4,234	4,657	5,067	4.7	8.8
California	2,310	3,614	4,334	4,736	5,158	4.6	8.9
Nevada	2,359	3,474	4,380	4,854	5,144	3.9	6.0
Oregon	1,868	2,949	3,667	4,128	4,462	4.7	8.1
Washington	2,050	3,412	3,976	4,489	4,899	5.2	9.1
Alaska	*	3,501	4,346	5,020	5,913	*	17.8
<u>Wyoming Counties</u>							<u>Rank in State, 1973</u>
Big Horn		2,567	3,111	3,412			19
Hot Springs		2,770	3,196	3,635			14
Park		2,953	3,485	3,763			12
Washakie		2,673	3,025	3,416			18

¹Preliminary

* Estimates for Alaska were not made for 1959.

Source: [30].

Table V-4. Income distribution for families and unrelated individuals, 1970.

	Big Horn County		Hot Springs County		Park County		Washakie County		Wyoming		the United States	
	#	%	#	%	#	%	#	%	#	%	#	%
Less than \$1,000	43	1.56	63	4.84	71	1.55	39	1.99	1,797	2.12	1,277,006	2.50
\$1,000 to \$1,999	72	2.60	45	3.46	98	2.14	57	2.91	2,362	2.79	1,733,205	3.39
\$2,000 to \$2,999	234	8.48	75	5.76	202	4.41	109	5.56	3,844	4.54	2,260,578	4.42
\$3,000 to \$3,999	233	8.44	67	5.15	210	4.59	128	6.52	4,325	5.11	2,499,946	4.89
\$4,000 to \$4,999	184	6.66	65	5.00	337	7.36	132	6.73	4,826	5.70	2,601,863	5.08
\$5,000 to \$5,999	212	7.68	58	4.46	337	7.36	143	7.29	5,570	6.58	2,934,453	5.73
\$6,000 to \$6,999	202	7.32	105	8.07	371	8.11	146	7.44	6,080	7.18	3,146,245	6.15
\$7,000 to \$7,999	183	6.63	133	10.22	315	6.88	170	8.66	6,612	7.81	3,451,531	6.75
\$8,000 to \$8,999	313	11.34	109	8.38	396	8.65	161	8.21	7,351	8.68	3,640,466	7.11
\$9,000 to \$9,999	216	7.82	74	5.69	369	8.06	182	9.28	6,115	7.22	3,457,835	6.76
\$10,000 to \$11,999	286	10.36	173	13.30	570	12.45	305	15.55	11,448	13.52	6,585,510	12.87
\$12,000 to \$14,999	255	9.24	193	14.83	616	13.46	191	9.73	11,115	13.12	7,031,917	13.74
\$15,000 to \$24,999	265	9.60	106	8.15	521	11.38	144	7.34	10,505	12.40	8,176,995	15.98
\$25,000 to \$49,999	34	1.23	30	2.31	142	3.10	55	2.79	2,292	2.71	1,972,996	3.86
\$50,000 or more	29	1.04	5	0.38	22	0.50	-	-	461	0.52	398,053	0.77
TOTAL	2,761	100.00	1,301	100.00	4,577	100.00	1,962	100.00	84,703	100.00	51,168,599	100.00
Median Income	\$8,056		\$8,362		\$8,878		\$8,354		\$8,943		\$9,590	
Mean Income	\$9,105		\$9,189		\$10,025		\$8,940		\$10,127		\$10,999	

Sources: [8 & 32].

Table V-5. Sources of household income by Input/Output sector, 1974.

	Big Horn County		Hot Springs County		Park County		Washakie County		Big Horn Basin Region	
	House Inc.* \$***	Per. Dist.** %	House Inc.* \$***	Per. Dist.** %	House Inc.* \$***	Per. Dist.** %	House Inc.* \$***	Per. Dist.** %	House Inc.* \$***	Per. Dist.** %
1. Agriculture	7,812	26.62	1,073	8.89	9,426	17.44	5,419	23.73	23,730	20.06
2. Oil & Gas Extraction & Mining	3,249	11.07	1,067	8.84	7,663	14.18	706	3.09	12,685	10.72
3. Construction	841	2.87	491	4.07	2,124	3.93	1,125	4.93	4,581	3.87
4. Manufacturing	1,808	6.16	630	5.22	2,584	4.78	2,771	12.13	7,793	6.59
5. Transportation	2,711	9.24	489	4.05	1,798	3.33	1,018	4.46	6,016	5.09
6. Communications	176	.60	261	2.16	594	1.10	562	2.46	1,593	1.35
7. Utilities	777	2.65	361	2.99	851	1.57	526	2.30	2,515	2.13
8. Automotive Dealers	477	1.63	122	1.01	1,478	2.74	672	2.94	2,749	2.32
9. Trade	2,465	8.40	1,551	12.85	7,346	13.59	3,048	13.34	14,410	12.18
10. F.I.R.E.	2,060	7.02	1,367	11.32	4,547	8.41	1,679	7.35	9,653	8.16
11. Personal & Business Services	394	1.34	124	1.03	1,100	2.04	306	1.34	1,924	1.63
12. Oil & Gas Extraction Field Services	965	3.29	322	2.67	2,963	5.48	347	1.52	4,597	3.89
13. Eat, Drink, & Lodging	779	2.65	799	6.62	2,015	3.73	833	3.65	4,426	3.74
14. Other Services	266	.91	540	4.47	1,041	1.93	579	2.54	2,426	2.05
15. Health Services	427	1.46	755	6.25	1,260	2.33	439	1.92	2,881	2.43
16. Education	2,775	9.46	1,247	10.33	5,475	10.13	1,588	6.95	11,085	9.37
17. Local Government	868	2.96	569	4.71	975	1.80	582	2.55	2,994	2.53
18. Households	491	1.67	304	2.52	804	1.49	640	2.80	2,239	1.89
TOTAL	29,341	100.00	12,072	100.00	54,044	100.00	22,840	100.00	118,297	100.00

* Household Income

** Percentage Distribution

*** (000)

Sources: [51, 52, 53, 54 & 65].

Employment

The employment data in Tables V: 6-12 reveal the same trends as the income data in the previous section. The SEPA is lagging behind the nation and the state in terms of job growth, although the number of jobs in each of the SEPA Counties has been increasing. Park County has more jobs than any other SEPA County and also a faster, more stable growth rate in employment. Again, this can largely be explained by the broader economic base of Park County, which includes large, well-established oil and gas and tourism industries in addition to agriculture.

Two types of employment data are presented: 1) the number of jobs, and 2) the number of Full Time Equivalent (FTEs). The job and FTE data are defined differently, and so they are not comparable. The job data provide time series data for trend analysis, and the FTE data serve as benchmarks for the derivation of employment multipliers for the input/output analysis.

The total number of jobs in the state increased by 16.0% between 1970 and 1974, Table V-6. The growth has occurred primarily in governmental employment and some private sectors, such as mining, construction, trade, and services. The number of agricultural jobs has remained stable, with only about 7.6% of total state jobs directly attributable to agriculture.

The SEPA has experienced growth of approximately 10% in jobs between 1970 and 1974. This is much lower than the state average because there has not been the growth in mineral development in the SEPA as there has been in some areas of the state, and agricultural jobs comprise 24.0% of the total number of jobs in the SEPA, compared to 7.6% for the state average. Agricultural jobs in Park County make up only about 12% of the total, about one half of the total SEPA statistics.*

The unemployment rates for the SEPA Counties and the state have been dropping since 1972, Table V-12. This may indicate that workers are migrating from the SEPA to the energy development areas of the state where jobs appear to be more plentiful and wages are higher. The rates are generally influenced by the same primary factor throughout Wyoming: the seasonal nature of the three largest employment sectors in the economy (agriculture, oil and gas extraction, and recreation-tourism).

There were approximately 14,500 FTEs in the SEPA in 1974, Table V-13 (less state and federal government employees). The FTEs were distributed over the sectors of the economy similarly to the job data from Tables V: 7-11. There are some deletions in the FTE data because of legal problems with the disclosure of confidential information.

*The fact that agriculture does not dominate the Park County economy has been discussed at length previously in this report.

Table V-6. Total jobs including full and part time jobs, 1970-74.

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	$\frac{\Delta}{\%}$ <u>1970-74</u>
Wyoming	148,815	152,577	157,908	168,146	177,081	16.0
BHB	17,954	18,687	19,138	19,568	19,964	10.1
Big Horn	4,221	4,245	4,366	4,625	4,686	9.9
Hot Springs	2,105	2,198	2,264	2,408	2,397	12.2
Park	8,465	9,007	9,229	9,280	9,560	11.5
Washakie	3,163	3,237	3,279	3,255	3,321	4.8

Source: [29].

Table V-7. Full and part time jobs by type of employment, Wyoming, 1970-74.

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
Total Employment	148,815	152,577	157,908	168,146	177,081
# of Proprietors	23,904	24,245	24,791	24,649	24,694
Farm Proprietors	8,995	8,795	8,696	8,596	8,594
Non-Farm Propr.	14,909	15,450	16,095	16,053	16,100
Wages & Salary	124,911	128,332	133,117	143,497	152,387
Farm	4,956	4,939	4,958	4,951	4,957
Non-Farm	119,955	123,393	128,159	138,546	147,430
Gov't.	34,146	35,454	35,763	39,411	38,595
Total Federal	9,585	9,693	9,875	10,083	10,460
Fed. Civilian	6,151	6,134	6,113	6,008	6,540
Military	3,434	3,559	3,762	4,075	3,920
State & Local	24,561	25,761	25,888	29,328	28,135
Private Non-Farm	85,809	87,939	92,396	99,135	108,835
Mfgr.	7,373	7,460	7,864	8,470	8,300
Mining	11,628	11,015	12,002	13,040	15,764
Construction	7,141	8,069	9,269	11,731	14,374
Transportation, etc.*	10,726	10,657	10,687	11,275	11,830
Trade	24,420	25,387	26,309	27,468	29,440
Finance, etc.**	3,724	3,782	3,887	4,065	4,392
Services	20,517	21,267	21,917	22,545	24,175
Other	280	302	461	541	560

* Transportation, Communications, Public Utilities

** Finance, Insurance, Real Estate

Source: [29].

Table V-8. Full and part time jobs by type of employment, Big Horn County, 1970-74.

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
Total Employment	4,221	4,245	4,366	4,625	4,686
# of Proprietors	1,143	1,148	1,166	1,159	1,161
Farm Proprietors	571	558	552	546	546
Non-Farm Propr.	572	590	614	613	615
Wage & Salary	3,078	3,097	3,200	3,466	3,525
Farm	287	285	287	286	286
Non-Farm	2,791	2,812	2,913	3,180	3,239
Gov't.	903	926	902	1,039	998
Total Federal	78	81	75	72	76
Fed. Civilian	75	78	73	70	74
Military	3	3	2	2	2
State & Local	825	845	827	967	922
Private Non-Farm	1,888	1,886	2,011	2,141	2,241
Mfgr.	403	382	388	444	447
Mining	277	270	283	321	425
Construction	128	113	167	156	155
Transportation, etc.*	278	272	262	224	235
Trade	440	465	515	549	527
Finance, etc.**	61	69	66	72	77
Services	(D)	(D)	(D)	312	307
Others	(D)	(D)	(D)	63	68

*Transportation, Communications, Public Utilities

**Finance, Insurance, Real Estate

(D): Not shown to avoid disclosure of confidential information.

Source: [29].

Table V-9. Full and part time jobs by type of employment, Hot Springs County, 1970-74.

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
Total Employment	2,105	2,198	2,264	2,408	2,397
# of Proprietors	386	391	402	400	401
Farm Proprietors	128	125	124	123	123
Non-Farm Propr.	258	266	278	277	278
Wage & Salary	1,719	1,807	1,862	2,008	1,996
Farm	95	94	95	94	94
Non-Farm	1,624	1,713	1,767	1,914	1,902
Gov't.	405	416	405	462	441
Total Federal	28	29	28	27	28
Fed. Civilian	28	29	28	27	28
Military	-	-	-	-	-
State & Local	377	387	377	435	413
Private Non-Farm	1,219	1,297	1,362	1,452	1,461
Mfgr.	32	25	16	15	(D)
Mining	(D)	(D)	(D)	(D)	165
Construction	81	96	105	166	151
Transportation, etc.*	111	119	124	134	125
Trade	282	300	312	357	311
Finance, etc.**	52	53	50	49	55
Services	(D)	(D)	(D)	(D)	641
Other	(D)	(D)	(D)	(D)	(D)

* Transportation, Communications, Public Utilities

** Finance, Insurance, Real Estate

(D): Not shown to avoid disclosure of confidential information.

Source: [29].

Table V-10. Full and part time jobs by type of employment, Park County, 1970-74.

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
Total Employment	8,465	9,007	9,229	9,280	9,560
# of Proprietors	1,544	1,572	1,602	1,593	1,596
Farm Proprietors	650	636	628	621	621
Non-Farm	896	936	974	972	975
Wage & Salary	6,919	7,435	7,627	7,687	7,694
Farm	441	442	442	444	446
Non-Farm	6,478	6,993	7,185	7,243	7,518
Gov't.	1,652	1,741	1,760	1,969	1,935
Total Federal	543	540	527	516	559
Fed. Civilian	540	537	525	514	557
Military	3	3	2	2	2
State & Local	1,109	1,201	1,233	1,453	1,376
Private Non-Farm	4,826	5,252	5,425	5,274	5,583
Mfgr.	627	648	711	726	739
Mining	502	535	584	(D)	704
Construction	315	504	478	449	543
Transportation, etc.*	331	327	365	377	396
Trade	1,412	1,449	1,538	1,543	1,516
Finance, etc.**	151	157	154	166	169
Services	1,484	1,628	1,588	(D)	1,483
Other	4	4	7	29	33

* Transportation, Communications, Public Utilities

** Finance, Insurance; Real Estate

(D): Not shown to avoid disclosure of confidential information.

Source: [29].

Table V-11. Full and part time jobs by type of employment, Washakie County, 1970-74.

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
Total Employment	3,163	3,237	3,279	3,255	3,321
# of Proprietors	621	632	647	644	645
Farm Proprietors	199	195	192	190	190
Non-Farm Propr.	422	437	455	454	455
Wage & Salary	2,542	2,605	2,632	2,611	2,676
Farm	200	199	200	200	200
Non-Farm	2,342	2,406	2,432	2,411	2,476
Gov't.	597	612	614	663	646
Total Federal	115	110	113	107	113
Fed. Civilian	115	110	113	107	113
Military	-	-	-	-	-
State & Local	482	502	501	556	533
Private Non-Farm	1,745	1,794	1,818	1,748	1,830
Mfgr.	351	358	387	336	365
Mining	(D)	(D)	(D)	(D)	(D)
Construction	119	157	183	185	203
Transportation, etc.*	205	216	213	196	183
Trade	524	513	511	527	532
Finance, etc.**	62	67	62	65	68
Services	350	367	312	290	315
Other	(D)	(D)	(D)	(D)	(D)

*Transportation, Communications, Public Utilities

**Finance, Insurance, Real Estate

(D): Not shown to avoid disclosure of confidential information.

Source: [29].

Table V-12. Percent unemployed, 1972-76.

	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
	%	%	%	%	%
Wyoming	4.5	4.1	3.7	4.2	3.6
Big Horn County	5.1	3.9	3.8	4.8	4.5
Hot Springs County	3.4	2.4	2.4	2.9	3.1
Park County	3.9	3.3	3.3	4.0	3.9
Washakie County	4.5	4.1	3.7	4.2	3.6

Source: [73].

Table V-13. Input/Output sector employment in Full Time Equivalents (FTEs), 1974.

Sector	Big Horn County	Hot Springs County	Park County	Washakie County	Big Horn Basin Region
1. Alfalfa & Other Hay	63		69	41	213
2. Row Crops	415		496	270	881
3. Small Grains	285		346	186	817
4. Livestock	347	241	244	225	1,017
5. Mining	DE*				
6. Oil & Gas Extraction	267	132	DE*	83	1,425
7. Construction	155	152	419	202	928
8. Printing & Publishing	24		46	40	
9. Manufacturing	389	56	289	427	1,271
10. Trucking	29				
11. Other Transportation	198	44	210	79	560
12. Communications	18	25	61	56	160
13. Utilities	71	34	78	48	231
14. Auto & Implement Dealers	42	16	135	59	252
15. Trade	342	194	868	348	1,752
16. F.I.R.E.	77	54	164	67	362
17. Personal & Business Services	39	17	94	36	186
18. Oil & Gas Extraction Field Services	99	48	296	30	473
19. Eating, Drinking & Lodging	175	179	535	189	1,078
20. Other Services	45	140	234	82	501
21. Health Services	30	140	195	55	420
22. Education	355	155	511	218	1,239
23. Local Government	135	84	213	92	524
TOTAL	3,600	1,711	5,503	2,833	14,290

*Deleted to avoid disclosure.

Sources: [51, 52, 53, 54 & 65].

Investment

Bank deposits have increased from 1973 to 1974 in every community in the SEPA for which there is data, Table V-14. Cody, Powell, and Worland banks are the largest in the SEPA. This is logical because these towns are the main population and trade centers in the SEPA.

Although bank deposits have increased in the SEPA, in 1972 the area's banks still ranked quite low in per capita deposits relative to other Wyoming banks, Table V-15. Washakie County ranked 11th in bank deposits per capita, which placed it at the median for the state. Big Horn and Hot Springs Counties ranked 19th and 20th, respectively.

There is no other secondary private investment data available (at least that this study found). This is not a major data gap for BLM decisions at this time. However, in the future, more investment data might be required to determine if a financial bottleneck might eventuate, particularly in Big Horn and Hot Springs Counties, as a result of a major development on BLM administered lands.

Table V-14. Bank deposits and assets, 1973-74.

Big Horn County

Basin		<u>1973</u>	<u>1974</u>
1 bank	Bank Deposits	10,000,000	11,013,159
	Capital	25,000,000	
	Surplus	475,000,000	
	Total Assets	11,340,081.23	

Greybull

1 bank	Bank Deposits	9,258,177	10,152,766
	Funds on Res.	1,083,340	
	Loans	6,363,734	
	Total Assets	11,264,712	

Lovell

2 banks	Bank Deposits	14,204,753	15,955,594
	Capital	1,421,343	
	Surplus	810,000	
	Total Assets	16,587,525	

Hot Springs County

Thermopolis

1 bank	Bank Deposits	15,034,519.86	
	Capital		
	Surplus		
	Total Assets	16,686,958.28	

Park County

Cody

2 banks	Bank Deposits	39,950,000	
	Capital	3,603,000	
	Surplus	-	
	Total Assets	45,065,119	

Powell

2 banks	Bank Deposits		37,245,000
	Capital		158,000
	Surplus		2,938,000
	Total Assets		41,233,000

Washakie County

Worland

2 banks	Bank Deposits	31,754,177	35,805,910
	Capital	235,000	
	Surplus	1,615,000	
	Total Assets	35,986,659	

Table V-15. Per capita bank deposits and county rank, 1972.

	<u>Per Capita</u> \$	<u>Rank</u>
Big Horn County	2695.70	19.0
Hot Springs County	2545.00	20.0
Park County	2857.35	15.0
Washakie County	3452.60	11.0

Source: [19].

Consumption

Consumption patterns (functions) are very similar for the residents of all four SEPA Counties. The consumers in the SEPA tend to purchase a great deal locally, spending approximately 70% of each dollar within the BHB Region, Table V-16. This reflects the closure of the region as an economic unit: trade patterns are long-established and deeply ingrained in the consumers.

There are some household trade flows between the SEPA Counties, although much less than is generally assumed. Hot Springs and southern Big Horn County residents shop a significant amount in Worland. In 1974, Worland's retail trade sectors did about \$5,000,000 in business with household consumers from these areas: 16% of the total sales of the retail trade sectors came from consumers who resided in Hot Springs or southern Big Horn Counties. Cody-Powell is the major trade center for northern Big Horn County household consumers. Residents of Greybull, Lovell, and the numerous other small towns in the northern portion of Big Horn County spent about 5.5 million dollars for retail goods in the Cody-Powell trade center in 1974. Park and Washakie County residents tend to shop in their local trade centers.

There exists a myth that great numbers of SEPA residents' household dollars flow to Casper and Billings, Montana. The trips by BHB residents to these trade centers are more for recreation than consumption of goods and services. The travel and shopping involved in a trip to one of these cities are the motivating purposes for the journey rather than to purchase goods; the purchasing of specific products is secondary to the recreational enjoyment involved in the trip itself.

BHB residents import health services even though there are adequate facilities locally. This is a continuation of patterns established when there were virtually no health care facilities in the SEPA, and people, particularly agricultural people, had to travel to doctors and hospitals in order to get medical attention. Consumers in the BHB, and those in other rural areas as well, adjust slowly to the growing services base of their local trade centers.

The average propensity to save (APS), Table V-17, is that portion of each dollar that people save or invest. The average propensity to consume (APC) equals one minus the APS. The APS for the four SEPA Counties follows the trends already discussed in the income section. Park County residents save the most, in terms of dollars and percentages, because they have the highest incomes, hence a lower percentage of their incomes must be spent to maintain their standard of living. Hot Springs County consumers have the lowest APS. This reflects the fact that a large segment of the Hot Springs County population is living on retirement incomes and consequently spend the bulk of their incomes to maintain their standard of living (this segment of the population is generally beyond saving for the future).

Households generate an economic multiplier effect through the spending of their incomes for locally marketed goods and services. The two types of multipliers that have been defined for the household sector are the output and final demand multipliers, Table V-18.* The household output multiplier is not normally used for predictive purposes** but rather to describe the household sector's relative interdependence with the rest of the economy. The interpretation of the multiplier is straightforward. The household output multiplier for the BHB equals 1.56, which means that for every dollar spent by households in the SEPA, another \$.56 is created in the local economy through the multiplier effect.

The household final demand multiplier is numerically interpreted analogously to the household output multiplier. The household final demand multiplier is used to estimate the impact of "new" household dollars flowing into the local economy. "New" dollars are those which are not generated locally but are spent locally, such as wage and salary payments to federal employees residing in the local economy (i.e., the employees of the Worland BLM office), and transfer payments from outside sources (i.e., social security and railroad retirement). The household output multiplier applies to all household dollars that are spent in the local economy regardless of origin, whereas the household final demand multiplier applies only to "new" dollars, i.e., those dollars which originate outside the local economy.

*Household income and employment multipliers are meaningless for the household sector and as such are not presented.

**An exception to this rule is when household income diminishes without any other change in the local economy. Increased grazing fees for public lands AUMs to 1976 levels provides an example of this circumstance: ranchers kept their operation at the same number of animals and took less income. To estimate the impact of the fee increase, the household output multiplier was used [74].

Table V-16. Percentage distribution of household sector consumption functions for Input/Output sectors, 1974.

Sector	Big Horn County %	Hot Springs County %	Park County %	Washakie County %	Big Horn Basin Region %
1. Agriculture	.881	.286	.188	.184	.387
2. Oil & Gas Extraction & Mining	-	.0	-	-	-
3. Construction	6.856	.815	6.111	1.031	6.041
4. Manufacturing	.219	.189	.041	.296	.241
5. Transportation	.095	.282	.635	.463	.320
6. Communications	.702	2.235	1.776	1.939	2.278
7. Utilities	3.870	3.540	3.581	3.105	3.597
8. Automotive Dealers	1.768	5.392	4.942	6.453	4.807
9. Trade	32.680	36.861	33.279	32.252	37.262
10. F.I.R.E.	5.050	7.136	7.657	7.726	7.129
11. Personal & Business Services	.917	.266	.958	.671	.774
12. Oil & Gas Extraction Field Services	-	.0	-	-	-
13. Eating, Drinking & Lodging	2.451	2.187	1.828	1.577	2.075
14. Other Services	1.096	3.496	3.149	3.834	1.624
15. Health Services	1.831	3.140	2.554	3.417	2.252
16. Education	.020	.032	.403	.360	.285
17. Local Government	1.591	1.640	2.438	1.539	1.640
18. Households	1.554	1.600	1.427	2.576	1.781
Percentage Local Purchases	61.581	69.097	70.967	67.423	72.493
Imports	21.734	19.851	14.254	17.772	11.462
Other	16.685	11.052	14.779	14.805	16.045
TOTAL	100.000	100.000	100.000	100.000	100.000

Sources: [51, 52, 53, 54 & 65].

Table V-17. Average propensities to save (APS) and consume (APC), 1974.

	<u>Big Horn</u> <u>County</u> %	<u>Hot Springs</u> <u>County</u> %	<u>Park</u> <u>County</u> %	<u>Washakie</u> <u>County</u> %	<u>Big Horn</u> <u>Basin Region</u> %
APS	8.6	7.5	10.4	9.3	9.2
APC	91.4	92.5	89.6	90.7	90.2

Sources: [51, 52, 53, 54 & 65].

Table V-18. Household output and final demand multipliers, 1974.

	<u>Big Horn</u> <u>County</u>	<u>Hot Springs</u> <u>County</u>	<u>Park</u> <u>County</u>	<u>Washakie</u> <u>County</u>	<u>Big Horn</u> <u>Basin Region</u>
Output Multiplier	1.44	1.43	1.54	1.44	1.56
Final Demand Multiplier	1.69	1.71	1.87	1.73	1.88

Sources: [51, 52, 53, 54 & 65].

Input/Output Analysis

Input/output analysis is a well-developed empirical technique for describing the dollar flow patterns in a given economy. The model is constructed by aggregating all businesses in the study area into sectors. A sector is a group of firms which produce similar products or services by using a similar process or by combining approximately the same inputs. The sectors for the Big Horn Basin Region, Park, Washakie, Big Horn, and Hot Springs Counties are presented in Table V-19. Data are gathered on purchases and sales patterns for each sector and are then combined into a single table or matrix, thereby presenting a numerical picture of the economic interrelationships between all sectors in the economy. These numerical interrelationships for the Big Horn Basin model are presented in Table V-21, while the same information for Big Horn, Hot Springs, Park, and Washakie Counties are presented in Tables V: 22-25, respectively. These tables show the origin and destination of dollar transactions according to business type. They are read by columns, and the total of each column equals 100%, or one dollar. For example, from Table II-21, firms in the livestock sector spent about 13¢ of every dollar for alfalfa and other hay, about 2¢ for row crops, about 0.8¢ for small grains, 11¢ for trade items, and so on down the column. The other columns and tables are read analogously. These matrices, the percentage distribution of local purchases matrices, are then mathematically specified under the constraint of several explicit assumptions, thereby yielding systems of equations which can be used to predict the total and distributed economic outcome of alternative autonomous disturbances that affect the local economy.

Static input/output models are based on several explicit assumptions which allow the model to be simplified, thus rendering it empirically implementable. The primary assumptions are: 1) The output of each sector is a linear function of its inputs; technology and trade patterns are fixed or do not significantly change. 2) There are no joint products; each commodity or product mix is produced by a single sector. 3) There are no external economies or diseconomies; the total effect of carrying on several types of production is the sum of the separate effects. 4) Supply is infinitely elastic, i.e., the models are demand pull; the local economy is driven by exogenous demands for products of its various sectors.

It is extremely important that users of input/output models keep these assumptions in the foreground. By remembering and understanding these assumptions, decision-makers and researchers may avoid misusing the results from the input/output models.

The bottom line for input/output analysis is the multiplier. An input/output multiplier is an approximate gauge or measurement of the effect of change in a specific sector on the total economy. The numeric value of a given sector's multipliers depends chiefly upon the rate of leakage from the local economy for dollars spent by that sector. The rate of leakage is dependent on the sector's specific purchase patterns as outlined in Tables V: 21-25. Further determinants of multiplier size are the purchase patterns of the sectors which do business with the given sector. If the "second round" recipients of the direct dollar spending purchase relatively more locally than they import, then the multiplier of the given sector will be correspondingly larger. So it goes through all rounds of spending until the initial dollar has leaked entirely.

In economic base theory there are two categories of sectors: basic and non-basic. A basic sector is one which brings "new" dollars into the economy by exporting goods and/or services. An example of this is the livestock sector, which exports cattle to markets outside of the Big Horn Basin Region. Sectors which do not export, non-basic sectors, provide local support and services to the basic sectors and the population. Classically, these are the retail services such as trade, personal and business services, etc. Multipliers make sense only for basic sectors. A multiplier for a non-basic sector cannot be used in a predictive sense but instead serves as a single number measure of that non-basic sector's relative interdependence with the rest of the economy.

Input/output models generate four types of multipliers: final demand multipliers, output multipliers, household income multipliers, and employment multipliers. A final demand multiplier measures the amount of business activity generated by a one dollar change in export sales or deliveries to final demand. For example, the final demand multiplier for the livestock sector of the Big Horn Basin regional economy equals 2.05. This means that a one dollar change in livestock production delivered to final demand will result in a \$2.05 change in total output for Big Horn County. Note that the \$2.05 includes the initial dollar of increased export activity by the livestock sector, with \$1.05 of additional business generated throughout the economy. Final demand multipliers are calculated from the direct, indirect, and induced requirements matrix by summing each column.

Output multipliers are defined analogously to final demand multipliers, except that output multipliers are applied to changes in total output rather than exports alone. Therefore, the output multiplier will always be somewhat smaller than its corresponding final demand multiplier. For example, the output multiplier for the livestock sector in the Big Horn Basin regional economy is 2.03. This is .02 smaller than the corresponding final demand multiplier. This indicates a minimal degree of interdependence between livestock firms in the Big Horn Basin Region.

Household income multipliers measure the total change in household income throughout the economy resulting from a one dollar change in household income payments made by a particular sector. For example, from Table V-33, the household income multiplier for the livestock industry of the Big Horn Basin regional economy is 2.58. This means that a one dollar change in payments made to households by livestock firms will cause a \$2.58 change in total household income for the Big Horn Basin Region. Included in the \$2.58 are the initial one dollar change in livestock household payments plus \$1.58 of increased household income generated throughout the local economy.

An employment multiplier reflects the change in Full Time Equivalents in the economy, given a change of one FTE in a particular sector. For example, from Table V-34, the employment multiplier for the livestock industry of the Big Horn Basin regional economy is 1.64. This means that for every additional FTE in livestock, another .64 FTE will be created in the Big Horn Basin regional economy. Note, these are Full Time Equivalents, not jobs. One FTE can be a full time job, or it can be two or three part time positions, with total hours worked equaling one man year.

Multipliers give the total direct, indirect, and induced effects of a change in a local economy. It is also possible through input/output analysis to show how that total effect is distributed across the sectors of the economy. Tables V: 26-30 illustrate how the total final demand multiplier effect can be distributed to show the impact on each sector of the economy of a \$100,000* change in several of the basic sectors. The ability of input/output analysis to show the distributed as well as total effect on output is one of the outstanding features of the technique. Being able to view the distribution of an impact assists decision-makers in identifying those sectors which would be most affected by a change in the economic base in an area. It also points out that the distribution of the same total impact may be, and probably is, different for different basic sectors; such that what appear to be similar circumstances, because of similar total impacts, may in fact, be significantly different in their effects on the economic structure of the local area.**

*\$100,000 is used for convenience and to make interpretation and comparison between sectors and economies possible.

**This is a terse overview of the input/output technique. If more detail is desired, see [56 & 57].

Table V-19. Input/Output model sector definitions.

<u>Sector</u>	<u>Definition</u>
1. Alfalfa & Other Hay	Production of alfalfa and other hay; includes irrigated pasture lands.
2. Row Crops	Production of sugar beets, beans, corn, vegetables, and other row crops.
3. Small Grains	Production of malting barley, feed barley, wheat, oats, and other small grains.
4. Livestock	Production of cattle, hogs, sheep, chickens, dairy, and other livestock.
5. Mining	The extraction and processing of all minerals occurring naturally, including ores, coal, trona, bentonite, etc. (Oil and natural gas are excluded.)
6. Oil & Gas Extraction	The extraction and processing of crude petroleum and natural gas.
7. Construction	Businesses primarily engaged in any type of heavy or general building construction including new work, additions, alterations, and repairs.
8. Printing & Publishing	Businesses primarily engaged in printing by one or more of the common processes. Also included are newspapers and establishments performing services for the printing trade.
9. Manufacturing	Businesses engaged in mechanical or chemical transformation of materials or substances into new products.
10. Trucking	Businesses furnishing local or long distance trucking and the associated warehousing services.
11. Other Transportation	The transportation of goods or persons for a fee by any means other than truck. Included are rail, air, local transit, etc.
12. Communications	Telephone, telegraph, radio, and television.
13. Utilities	Gas and electric utilities.
14. Automotive & Implement Dealers	Retail businesses primarily engaged in selling new and used general automotive equipment and dealers of farm and construction machinery.
15. Trade	Wholesale and retail trade not elsewhere classified.
16. F.I.R.E.	Finance, Insurance, and Real Estate.
17. Personal & Business Services	Businesses primarily engaged in providing services generally involving the care of the person or his apparel such as laundries and beauty and barber shops. Also included are establishments rendering services (not elsewhere classified) to business establishments on a fee or contract basis. Attorneys and accountants are included here.
18. Oil & Gas Extraction Field Services	Businesses primarily engaged in performing services such as drilling, exploration and seismograph, acidizing, and mud services on a contract or fee basis.
19. Eating, Drinking, & Lodging	Restaurants, drive-ins, bars, taverns, motels, and hotels and combinations of the above.
20. Other Services	Repair services, social services, recreation and amusement, agricultural services, and any other services not elsewhere classified.
21. Health Services	Physicians, dentists, nursing facilities, hospitals, and other facilities furnishing health services to persons.
22. Education	Private and public educational institutions.
23. Local Government	County and city government including special districts, e.g. weed and pest, fire, irrigation.
24. Households (row)	Labor payments, transfer payments, interest and dividends.
Households (columns)	Expenditures by individuals and families for personal (non-business) uses. Savings are also included.
25. Imports	All purchases of goods and services from outside Big Horn County.
26. Other	State and federal taxes, depreciation, retained earnings and savings.

Sources: [51, 52, 53, 54 & 65].

Table V-20. Output totals, 1974.*

Sector	Big Horn County \$	Hot Springs County \$	Park County \$	Washakie County \$	Big Horn Basin Region \$
1. Alfalfa & Other Hay	2,078		2,473	1,352	5,903
2. Row Crops	13,461		16,564	8,767	38,792
3. Small Grains	9,419		11,564	6,146	27,129
4. Livestock	10,716	7,700	8,209	6,961	33,586
5. Mining	5,307				
6. Oil & Gas Extraction	18,054	8,890	56,145	5,632	94,028
7. Construction	5,033	4,239	10,943	5,635	25,850
8. Printing & Publishing	547		1,046	915	
9. Manufacturing	30,630	2,574	11,196	42,407	89,315
10. Trucking	1,116				
11. Other Transportation	4,671	1,366	8,083	2,843	18,079
12. Communications	820	1,186	2,835	2,618	7,459
13. Utilities	6,883	3,296	7,568	4,663	22,410
14. Auto & Implement Dealers	3,971	1,774	12,447	5,588	23,780
15. Trade	23,662	14,580	66,973	26,139	131,354
16. F.I.R.E.	3,987	2,789	8,499	3,444	18,719
17. Personal & Business Services	634	247	1,933	524	3,338
18. Oil & Gas Extraction Field Services	5,055	1,420	16,189	1,525	24,189
19. Eating, Drinking & Lodging	2,278	2,335	6,990	2,461	14,064
20. Other Services	1,646	2,643	8,548	2,992	15,829
21. Health Services	1,427	1,894	7,053	1,256	11,630
22. Education	4,224	1,848	5,844	2,312	14,228
23. Local Government	1,975	2,996	4,852	2,628	12,451
24. Households	31,620	19,000	56,286	24,844	131,750
TOTAL (Less Households)	157,594	61,777	275,954	136,808	632,133

*(000)

Sources: [51, 52, 53, 54 & 65].

Table V-23. Percentage distribution of purchases by economic sectors, Hot Springs County, 1974.

Sales sector	Agric. & Mining		O & G Extr		Constr.	Mgf.	Transp.	Comm.	Utilities	Auto. Dir.	Trade	F.I.R.E.	Per. & Bus. Serv.	Fld. Serv.	Extr. Fat. & Lodg.	Other Services	Health Services	Edu.	Local Govt.	Households
	1	2	3	4																
1. Agriculture	10.766	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.022	0.	0.	0.	0.	0.286
2. Oil & Gas Extr. & Mining	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.090	0.	0.	0.	0.	0.	0.
3. Construction	0.	0.	3.555	0.	0.	0.513	0.	0.	0.	0.	0.	0.012	0.	0.160	0.050	0.229	0.068	0.543	0.717	0.815
4. Manufacturing	0.	5.411	0.071	0.084	0.012	0.042	0.143	0.063	0.540	0.303	0.136	0.303	0.136	1.200	1.100	0.361	0.	0.123	0.026	0.189
5. Transportation	3.076	0.910	0.046	0.062	0.048	0.791	0.050	0.084	0.192	0.010	0.011	0.045	0.045	0.064	0.064	0.007	0.067	0.013	0.	0.282
6. Communications	0.418	0.263	0.215	0.438	1.445	0.	0.200	0.453	0.649	0.800	2.365	0.400	0.400	1.638	0.603	0.603	0.557	0.303	0.319	2.235
7. Utilities	1.694	3.990	0.201	0.614	0.546	0.591	0.009	0.289	0.469	0.350	1.722	0.200	0.200	2.200	1.800	0.751	0.751	2.342	2.005	3.540
8. Automotive Dealers	0.009	0.499	0.444	0.019	0.072	0.044	0.017	0.065	0.	0.058	0.	0.051	0.	0.	0.022	0.	0.	0.902	0.867	5.392
9. Trade	9.175	1.200	4.986	3.266	6.752	0.875	0.246	2.601	2.774	0.065	3.121	5.000	3.121	7.500	5.374	1.182	0.639	0.639	1.636	36.861
10. F.I.R.E.	2.579	0.002	2.851	0.657	2.154	0.400	0.335	0.454	1.002	3.000	1.076	0.099	1.076	4.375	2.176	2.675	0.544	0.544	0.012	7.136
11. Personal & Business Serv.	0.199	0.213	0.566	0.066	1.464	0.069	0.099	0.071	0.137	0.975	9.685	0.200	0.200	0.400	0.208	0.621	0.039	0.039	0.083	0.266
12. Oil & Gas Extr. Fld. Serv.	0.	12.001	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
13. Eat, Drink, & Lodging	0.	0.078	0.004	0.	0.	0.	0.	0.	0.	0.050	0.190	0.	0.	0.150	0.047	0.	0.	0.	0.016	7.187
14. Other Services	0.048	0.009	0.937	0.139	0.152	0.225	0.111	0.139	0.452	0.360	1.459	2.500	1.459	1.800	0.198	0.259	0.116	0.116	0.139	3.496
15. Health Services	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.158	0.700	3.140
16. Education	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	53.940	0.032
17. Local Government	4.099	6.000	1.049	0.352	3.461	3.018	3.152	2.874	1.456	3.060	3.441	2.985	3.441	3.768	3.102	0.004	0.	0.	0.019	1.640
18. Households	13.924	12.008	11.589	24.489	35.781	22.000	10.961	6.876	10.636	49.000	54.402	22.700	54.402	34.201	32.414	55.834	67.499	18.990	18.990	1.600
Percentage Local Purchases	45.987	42.584	26.514	30.186	51.887	28.568	15.333	13.969	18.307	58.043	77.608	35.630	77.608	57.268	46.541	62.018	73.221	79.469	79.469	68.097
19. Imports	30.815	52.200	63.989	30.724	38.770	28.100	36.020	76.364	74.346	16.357	9.000	53.484	9.000	35.182	45.823	31.176	16.095	15.326	15.326	19.851
20. Other Exogenous	23.198	5.216	9.497	39.090	9.343	43.332	48.647	9.667	7.347	25.600	13.392	10.886	13.392	7.550	7.636	6.806	10.684	5.205	5.205	11.052

¹Estimates reported in this table are frequently referred to as trade or direct coefficients.

Source: [52].

Table V-25. Percentage distribution of purchases by economic sectors, Washakie County, 1974.

Sales sector	Alfalfa & Other Hay		Row Crops	Small Grains	Live stock & Mining		Constr.	Print & Pub		Mfg.	Transp.	Comm.	Auto & Utilities Impl Dtrs		Trade	F.I.R.E.		Serv.	Per. & Bus. O&G Extr. Est. Drk. Serv. & Lodge		Health Services		Educ.	Local Govt.		Households
	1	2			3	4		5	6				7	8		9	10		11	12	13	14		15	16	
Alfalfa & Other Hay	0.767	0.	0.	0.	13.178	0.	0.	0.	0.	0.	0.	0.	0.	0.750	0.	0.	0.	0.	0.	2.040	0.	0.	0.	0.	0.	0.164
Row Crops	0.	0.	0.	0.	1.706	0.	0.	0.	0.	17.976	0.	0.	0.	0.792	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
Small Grains	0.	0.	0.	0.	0.865	0.	0.	0.	0.	0.	0.	0.	0.484	0.	0.	0.	0.	0.	0.	0.020	0.	0.	0.	0.	0.	0.
Livestock	0.	0.	0.	0.	0.978	0.	0.	0.	0.	4.578	0.	0.	0.700	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.020
Oil & Gas Extraction & Mining	0.	0.	0.	0.	0.	0.874	0.	0.	0.	1.179	0.	0.	0.	0.	0.	0.	0.	0.088	0.	0.	0.	0.	0.	0.	0.	0.
Construction	0.354	0.	0.139	0.	0.	1.426	0.	0.	0.004	0.004	0.	0.583	0.	0.136	0.	0.286	0.012	0.	0.160	0.035	1.040	0.434	0.507	0.593	1.031	
Printing & Publishing	0.	0.	0.	0.037	0.	0.102	0.647	0.034	0.034	0.045	0.045	0.040	0.058	0.301	0.518	0.303	0.443	0.	1.298	0.482	0.043	0.043	0.110	0.011	0.223	
Manufacturing	0.474	0.382	0.206	0.096	0.434	0.274	0.402	1.244	0.092	0.705	2.455	0.002	0.104	0.	4.775	0.110	0.	5.551	0.	0.553	0.	0.553	0.	0.	0.073	
Transportation	0.769	0.034	0.158	0.158	3.464	1.710	0.259	1.048	0.353	0.830	0.691	0.072	0.190	0.190	0.285	0.097	0.195	0.043	0.063	0.174	0.283	0.014	0.014	0.034	0.463	
Communications	0.081	0.084	0.096	0.434	0.274	0.402	1.244	0.092	0.705	2.455	0.002	0.104	0.	0.402	0.587	0.794	2.267	0.392	1.523	0.702	0.696	0.290	0.290	0.334	1.939	
Utilities	0.630	0.400	0.452	1.151	4.348	0.237	0.661	1.016	0.385	1.016	0.602	0.	1.868	1.426	1.426	0.350	1.195	0.193	2.326	0.834	1.933	2.353	2.353	0.631	3.105	
Auto. & Impl. Dealers	14.326	8.870	12.469	7.883	1.538	2.100	0.303	0.303	0.111	0.368	0.365	0.275	0.023	0.023	0.027	0.058	0.	1.685	0.	0.684	0.131	0.903	0.903	0.700	6.453	
Trade	14.961	26.058	21.700	11.218	1.199	11.286	1.674	1.827	1.827	3.646	1.001	0.393	2.049	6.397	6.397	0.646	2.194	5.168	6.885	2.363	1.145	0.640	0.640	0.450	32.252	
F.I.R.E.	4.353	2.398	3.891	3.583	0.	2.137	3.084	0.375	1.103	1.103	0.390	0.305	0.605	0.522	0.522	3.397	1.941	0.100	2.060	1.032	0.546	0.356	0.356	0.133	7.726	
Personal & Business Services	0.298	0.129	0.155	0.202	0.223	0.692	0.801	0.064	0.030	0.030	0.090	0.199	0.234	0.083	0.083	1.338	2.847	0.241	3.360	0.214	1.271	0.022	0.022	0.011	0.671	
Oil & Gas Extr. Fld. Serv.	0.	0.	0.	0.	11.203	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.283	0.	0.	0.	0.	0.	0.	0.	0.	
Est. Drink & Lodging	0.	0.	0.	0.	0.087	0.211	0.071	0.031	0.484	0.484	0.026	0.022	0.020	0.	0.	0.003	0.466	0.	0.134	0.123	0.	0.120	0.	0.	1.577	
Other Services	9.457	0.570	1.743	4.520	0.015	1.266	1.000	0.202	3.037	3.037	0.277	0.120	0.468	0.451	0.451	0.358	1.427	2.556	2.086	0.158	0.324	0.159	0.159	0.521	3.834	
Health Services	0.	0.	0.	0.	0.021	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.465	3.417	
Education	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.047	0.	0.	0.045	0.	0.	0.	47.032	0.360	
Local Government	5.758	2.080	2.566	3.301	5.580	1.114	0.606	0.212	3.030	3.030	2.915	2.346	0.286	0.485	0.485	3.062	0.904	0.870	1.106	0.620	0.087	0.	0.	0.079	1.539	
Households	16.919	28.727	29.498	12.277	12.540	19.959	31.060	5.863	35.800	21.468	11.282	12.018	11.661	48.765	58.333	22.780	33.835	19.345	34.938	68.675	22.146	22.146	22.146	2.576		
Percentage Local Purchases	69.167	69.732	73.073	66.398	38.950	42.111	42.199	38.786	52.118	28.455	15.378	21.326	27.503	59.293	72.259	34.559	60.262	29.876	42.384	74.149	74.149	74.149	74.149	67.423		
Imports	9.775	10.676	8.365	10.840	54.694	47.595	28.737	49.955	36.941	22.824	34.446	74.903	65.742	14.225	14.263	51.797	26.697	54.903	47.582	19.190	21.754	17.772	17.772	17.772		
Other Exogenous	21.078	19.592	18.562	22.762	6.356	10.294	29.064	11.259	10.941	48.721	50.176	3.771	6.755	26.482	13.478	13.644	13.041	15.221	10.034	6.661	4.096	14.805	14.805	14.805		

¹ Estimates reported in this table are frequently referred to as trade or direct coefficients.

Table V-26. Total and distributed effect of a \$100,000 change in expenditures by some basic or exporting sectors of the Big Horn Basin Regional economy, 1974.

Sector	Row Crops \$	Small Grains \$	Live- stock \$	Mining \$	Oil & Gas Extraction \$	Mfgr. \$	Eat, Drink & Lodging \$
1. Alfalfa & Other Hay	273	356	13,967	287	195	533	374
2. Row Crops	100,916	810	2,963	539	754	43,500	2,403
3. Small Grains	13	100,019	892	5	5	29	7
4. Livestock	83	84	101,088	52	61	2,616	195
5. Mining	49	49	36	100,055	1,798	53	42
6. Oil & Gas Extraction	3,048	2,930	2,170	2,637	128,457	3,489	2,446
7. Construction	3,011	3,359	2,353	3,520	2,497	2,022	3,511
8. Printing & Publishing	411	433	387	372	266	282	1,360
9. Manufacturing (Mfgr.)	2,150	1,877	2,919	1,277	1,788	103,991	5,735
10. Trucking	898	867	3,943	955	2,643	985	732
11. Other Transportation	355	489	629	32,729	1,834	284	329
12. Communications	1,565	1,676	1,661	2,295	2,473	1,127	3,237
13. Utilities	2,857	3,063	3,304	15,314	7,690	5,524	4,812
14. Auto & Implement Dealers	2,048	3,010	2,249	567	744	1,043	496
15. Trade	13,046	12,147	8,428	6,915	6,716	7,628	8,845
16. F.I.R.E.	6,410	8,205	7,594	5,681	3,212	4,175	8,945
17. Personal & Business Services	841	921	863	1,013	910	611	1,876
18. Oil & Gas Extraction Field Services	342	329	244	296	14,426	392	275
19. Eating, Drinking & Lodging	927	994	714	1,521	939	656	101,258
20. Other Services	1,776	3,052	7,965	1,721	1,087	1,430	3,154
21. Health Services	1,047	1,125	846	1,252	1,003	712	1,207
22. Education	1,875	2,174	2,781	1,899	4,152	1,371	1,615
23. Local Government	3,649	4,254	5,605	3,589	8,465	2,667	2,954
24. Households	42,450	45,255	31,681	51,500	34,563	28,643	50,149
TOTAL	190,040	197,478	205,282	235,991	226,678	213,763	205,957

Source: [65].

Table V-27. Total and distributed effect of a \$100,000 change in expenditures by some basic or exporting sectors of the Big Horn County economy, 1974.

Sector	Row Crops	Small Grains	Livestock	Mining	Oil & Gas	Manufacturing	Eat, Drink,
	\$	\$	\$	\$	Extraction	\$	& Lodging
1. Alfalfa & Other Hay	223	241	13,586	255	153	75	261
2. Row Crops	100,090	70	2,018	28	126	15,563	218
3. Small Grains	13	100,017	889	4	6	3	4
4. Livestock	170	184	101,122	193	116	57	226
5. Mining	14	15	12	100,024	1,558	8	17
6. Oil & Gas Extraction	432	474	392	1,094	111,351	392	586
7. Construction	3,304	3,668	2,588	3,920	2,392	1,142	4,020
8. Printing & Publishing	349	364	323	377	194	115	1,278
9. Manufacturing	464	298	1,766	136	757	100,093	1,366
10. Trucking	593	585	3,664	779	148	488	438
11. Other Transportation	189	319	499	32,534	1,488	72	138
12. Communications	642	696	948	1,255	742	228	2,243
13. Utilities	2,746	2,943	3,193	15,188	6,602	2,089	4,547
14. Automotive & Implement Dealers	1,182	1,538	1,365	236	409	216	177
15. Trade	10,546	10,151	7,100	5,276	3,662	2,859	5,901
16. F.I.R.E.	4,407	5,797	5,641	4,302	1,935	1,264	7,578
17. Personal & Business Services	649	723	707	802	656	201	1,572
18. Oil & Gas Extraction Field Services	48	53	44	123	12,492	44	66
19. Eat, Drink, & Lodging	968	1,029	739	1,537	822	441	101,359
20. Other Services	1,318	2,129	3,211	1,013	617	342	1,693
21. Health Services	777	833	648	930	675	274	926
22. Education	1,746	2,062	2,830	1,635	3,833	667	1,433
23. Local Government	3,226	3,812	5,248	3,016	7,123	1,234	2,555
24. Households	38,239	40,549	28,773	46,747	27,189	13,339	47,106
TOTAL	172,335	178,550	187,306	221,404	186,439	141,206	185,708

Source: [51].

Table V-28. Total and distributed effect of a \$100,000 change in expenditures by some basic or exporting sectors of the Hot Springs County economy, 1974.

	Agriculture	Oil & Gas	Manufacturing	Health Services	Eat, Drk. & Lodge
	\$	\$	\$	\$	\$
1. Agriculture	112,154	83	100	227	187
2. Oil & Gas Extraction & Mining	0	100,010	0	0	0
3. Construction	310	327	291	720	568
4. Manufacturing	212	5,713	100,256	355	1,416
5. Transportation	3,590	1,035	198	359	300
6. Communications	1,408	1,118	1,316	2,518	3,146
7. Utilities	3,291	5,347	1,920	3,664	4,499
8. Automotive Dealers	276	345	298	664	483
9. Trade	6,093	3,451	4,330	8,012	7,704
10. F.I.R.E.	5,478	2,261	3,265	8,542	8,794
11. Personal & Business Services	508	435	249	1,085	781
12. Oil & Gas Extraction Field Services	0	12,003	0	0	0
13. Eat, Drink & Lodging	617	649	686	1,555	101,263
14. Other Services	1,202	1,339	1,347	2,971	3,799
15. Health Services	923	871	991	102,238	1,629
16. Education	3,229	4,035	799	1,515	3,176
17. Local Government	5,970	7,465	1,463	2,766	5,859
18. Households	27,898	25,848	31,187	70,572	50,382
TOTAL	173,159	172,335	148,696	207,763	193,986

Source: [52].

Table V-29. Total and distributed effect of a \$100,000 change in expenditures by some basic or exporting sectors of the Park County economy, 1974.

Sector	Row Crops \$	Small Grains \$	Livestock \$	Oil & Gas Ext. & Mining \$	Manufacturing \$	Eat, Drink, & Lodging \$
1. Alfalfa & Other Hay	281	384	13,980	258	201	458
2. Row Crops	100,014	21	1,636	4	2	3
3. Small Grains	13	100,019	883	5	3	7
4. Livestock	18	23	100,933	11	6	9
5. Oil & Gas Extraction & Mining	3,303	3,145	2,124	162,375	1,648	1,821
6. Construction	3,590	3,963	2,651	3,972	2,324	3,524
7. Printing & Publishing	263	279	242	193	150	1,143
8. Manufacturing	420	280	1,173	66	101,749	51
9. Transportation	1,384	1,482	4,471	16,598	969	918
10. Communications	1,306	1,394	1,397	2,951	841	2,673
11. Utilities	3,013	3,227	3,322	8,144	9,180	3,836
12. Automotive & Implement Dealers	1,863	2,726	2,142	540	257	390
13. Trade	11,699	11,013	7,010	5,808	3,819	5,843
14. F.I.R.E.	6,539	8,240	7,352	4,595	4,140	11,118
15. Personal & Business Services	766	846	786	780	918	1,012
16. Oil & Gas Extraction Field Services	680	648	437	33,437	339	375
17. Eat, Drink, & Lodging	828	880	603	1,066	587	100,832
18. Other Services	2,357	3,500	7,734	2,091	1,823	4,648
19. Health Services	1,163	1,235	863	1,381	759	1,147
20. Education	3,149	3,547	4,354	8,335	1,395	2,322
21. Local Government	4,088	4,619	5,824	11,237	1,732	2,929
22. Households	43,685	46,300	31,220	47,802	28,905	43,595
TOTAL	190,422	197,771	201,137	311,649	161,747	188,654

Source: [53].

Table V-30. Total and distributed effect of a \$100,000 change in expenditures by some basic or exporting sectors of the Washakie County economy, 1974.

	Row Crops	Small Grains	Livestock	Oil & Gas Ext. & Mining	Manufacturing	Eat, Drink, & Lodging
	\$	\$	\$	\$	\$	\$
1. Alfalfa & Other Hay	154	185	13,652	80	730	221
2. Row Crops	100,473	398	2,309	152	19,130	1,289
3. Small Grains	9	100,011	885	3	46	6
4. Livestock	140	123	101,155	47	5,011	350
5. Oil & Gas Extraction & Mining	36	32	43	100,023	1,251	90
6. Construction	654	827	605	387	281	719
7. Printing & Publishing	387	387	344	146	185	1,627
8. Manufacturing	2,550	2,117	3,175	821	105,921	7,120
9. Transportation	421	551	3,935	1,908	736	479
10. Communications	1,335	1,401	1,460	975	663	2,887
11. Utilities	2,694	2,821	3,068	5,518	2,178	4,571
12. Automotive & Implement Dealers	1,941	2,557	2,044	568	590	573
13. Trade	11,810	10,315	7,053	2,808	3,950	6,657
14. F.I.R.E.	6,359	8,090	7,405	2,171	2,756	6,577
15. Personal & Business Services	644	719	692	524	330	4,021
16. Oil & Gas Extraction Field Services	4	4	5	11,238	141	10
17. Eat, Drink, & Lodging	696	734	539	495	338	100,951
18. Other Services	2,584	3,852	7,499	1,453	1,479	4,340
19. Health Services	1,521	1,603	1,158	952	658	1,728
20. Education	1,733	2,012	2,644	3,115	756	1,387
21. Local Government	3,351	3,926	5,371	6,434	1,463	2,561
22. Households	43,061	45,235	31,590	24,491	18,617	49,458
TOTAL	182,557	187,900	196,631	164,309	167,210	197,622

Source: [54].

Table V-31. Output multipliers, 1974.

Sector	Big Horn County	Hot Springs County	Park County	Washakie County	Big Horn Basin Region
1. Alfalfa & Other Hay	1.77		1.91	1.86	2.02
2. Row Crops	1.72		1.88	1.82	1.88
3. Small Grains	1.78		1.95	1.88	1.97
4. Livestock	1.85	1.54	1.98	1.94	2.03
5. Mining	2.21				2.36
6. Oil & Gas Extraction	1.67	1.72	1.91	1.64	1.76
7. Construction	1.59	1.35	1.55	1.56	1.76
8. Printing & Publishing	1.71		1.77	1.70	1.78
9. Manufacturing	1.41	1.48	1.58	1.58	2.06
10. Trucking	1.66				1.74
11. Other Transportation	2.05	1.84	1.57	1.85	2.38
12. Communications	1.50	1.49	1.53	1.49	1.54
13. Utilities	1.37	1.28	1.39	1.27	1.40
14. Auto & Implement Dealers	2.22	2.16	2.36	2.32	2.39
15. Trade	1.92	1.88	2.26	2.05	2.24
16. F.I.R.E.	1.95	1.87	2.06	1.88	2.06
17. Personal & Business Services	2.20	2.07	2.22	2.16	2.32
18. Oil & Gas Extraction Field Services	1.50	1.57	1.49	1.51	1.58
19. Eating, Drinking & Lodging	1.83	1.90	1.86	1.96	2.03
20. Other Services	1.53	1.48	1.45	1.46	1.54
21. Health Services	1.57	1.76	1.38	1.59	1.63
22. Education	2.16	2.19	2.27	2.22	2.32
23. Local Government	2.58	2.53	2.88	2.47	2.62
24. Households	1.44	1.43	1.54	1.44	1.56

Sources: [51, 52, 53, 54 & 65].

Table V-32. Final demand multipliers, 1974.

Sector	Big Horn County	Hot Springs County	Park County	Washakie County	Big Horn Basin Region
1. Alfalfa & Other Hay	1.79		1.95	1.88	2.06
2. Row Crops	1.72		1.88	1.82	1.90
3. Small Grains	1.78		1.96	1.88	1.97
4. Livestock	1.87	1.72	2.00	1.97	2.05
5. Mining	2.21				2.36
6. Oil & Gas Extraction	1.86	1.72	2.63	1.64	2.27
7. Construction	1.81	1.40	1.74	1.59	1.94
8. Printing & Publishing	1.71		1.82	1.72	1.83
9. Manufacturing	1.41	1.48	1.60	1.67	2.14
10. Trucking	1.67				1.77
11. Other Transportation	2.06	1.85	1.58	1.87	2.39
12. Communications	1.50	1.50	1.54	1.50	1.56
13. Utilities	1.38	1.28	1.40	1.28	1.41
14. Auto & Implement Dealers	2.22	2.17	2.37	2.34	2.40
15. Trade	2.09	2.05	2.52	2.30	2.54
16. F.I.R.E.	2.08	2.03	2.24	2.05	2.24
17. Personal & Business Services	2.33	2.30	2.35	2.24	2.46
18. Oil & Gas Extraction Field Services	1.51	1.57	1.50	1.51	1.59
19. Eating, Drinking & Lodging	1.85	1.92	1.87	1.97	2.06
20. Other Services	1.56	1.50	1.49	1.49	1.57
21. Health Services	1.59	1.80	1.38	1.61	1.66
22. Education	2.19	2.22	2.32	2.25	2.36
23. Local Government	2.63	2.59	2.96	2.51	2.67
24. Households	1.69	1.71	1.87	1.73	1.88

Sources: [51, 52, 53, 54 & 65].

Table V-33. Household income multipliers, 1974.

Sector	Big Horn County	Hot Springs County	Park County	Washakie County	Big Horn Basin Region
1. Alfalfa & Other Hay	1.92		2.06	2.06	2.15
2. Row Crops	1.44		1.51	1.50	1.48
3. Small Grains	1.48		1.55	1.53	1.53
4. Livestock	2.34	1.97	2.54	2.57	2.58
5. Mining	2.51				2.77
6. Oil & Gas Extraction	2.17	2.12	2.96	1.95	2.53
7. Construction	1.77	1.61	1.62	1.50	1.81
8. Printing & Publishing	1.34		1.39	1.36	1.41
9. Manufacturing	2.49	1.26	1.42	3.17	4.76
10. Trucking	1.37				1.44
11. Other Transportation	1.28	1.37	1.40	1.36	1.32
12. Communications	1.34	1.34	1.37	1.35	1.38
13. Utilities	1.54	1.43	1.56	1.40	1.57
14. Auto & Implement Dealers	1.58	1.71	1.46	1.39	1.50
15. Trade	1.46	1.46	1.75	1.55	2.36
16. F.I.R.E.	1.28	1.30	1.33	1.33	1.31
17. Personal & Business Services	1.30	1.43	1.34	1.31	1.33
18. Oil & Gas Extraction Field Services	1.40	1.38	1.38	1.33	1.47
19. Eating, Drinking & Lodging	1.37	1.44	1.50	1.46	1.47
20. Other Services	1.64	1.38	1.63	1.38	1.53
21. Health Services	1.24	1.27	1.27	1.24	1.28
22. Education	1.20	1.21	1.22	1.22	1.23
23. Local Government	3.37	3.59	7.01	3.05	3.32
24. Households	N.A. ¹	N.A. ¹	N.A. ¹	N.A. ¹	N.A. ¹

¹Not applicable.

Table V-34. Employment multipliers, 1974.

Sector	Big Horn County	Hot Springs County	Park County	Washakie County	Big Horr. Basin Region
1. Alfalfa & Other Hay	1.48		1.65	1.58	1.66
2. Row Crops	1.32		1.44	1.38	1.41
3. Small Grains	1.37		1.50	1.43	1.47
4. Livestock	1.54	1.47	1.67	1.63	1.64
5. Mining	2.25			2.37	
6. Oil & Gas Extraction	2.07	2.05	3.12	1.92	2.50
7. Construction	1.46	1.20	1.37	1.25	1.51
8. Printing & Publishing	1.21		1.29	1.23	1.28
9. Manufacturing	1.66	1.26	1.33	2.36	2.88
10. Trucking	1.37				1.45
11. Other Transportation	1.32	1.40	1.34	1.48	1.44
12. Communications	1.36	1.36	1.44	1.38	1.40
13. Utilities	1.61	1.50	1.75	1.50	1.68
14. Auto & Implement Dealers	2.78	2.03	2.94	2.78	3.02
15. Trade	2.10	2.25	2.93	2.28	2.82
16. F.I.R.E.	1.74	1.73	1.97	1.79	1.88
17. Personal & Business Services	1.29	1.26	1.41	1.25	1.30
18. Oil & Gas Extraction Field Services	1.37	1.20	1.40	1.36	1.46
19. Eating, Drinking & Lodging	1.14	1.19	1.17	1.20	1.20
20. Other Services	1.30	1.28	1.33	1.26	1.34
21. Health Services	1.32	1.13	1.18	1.18	1.20
22. Education	1.15	1.16	1.18	1.14	1.18
23. Local Government	2.83	3.07	2.80	2.06	3.06
24. Households	N.A. ¹	N.A. ¹	N.A. ¹	N.A. ¹	N.A. ¹

¹Not applicable.

Sources: [51, 52, 53, 54 & 65].

VI. PUBLIC ATTITUDES AND VALUES

Public Attitudes and Values

The SEPA is a large area with diverse economies, lifestyles, and mores. However, there are some common threads which tie the area together on issues such as land use and comprehensive planning. These general attitudes and feelings toward land use, specifically public land use, are outlined in this section.*

The most striking features of the SEPA's people are their independence and self-reliance. They enjoy doing things for themselves and generally are suspicious and distrustful of government programs, viewing them as interference. They want grass roots control of decisions which will affect their lives. These attitudes are reflections of the historical relative geographic isolation of the SEPA and its deeply rooted agricultural background. The people are friendly and like to assume that others are trustworthy and honest. The family and church are the cornerstones of community activities.

The reasons given by people for liking or disliking the area in which they live provide some insights into their cultural values. The residents of the Big Horn Basin enjoy living in the SEPA for many reasons, including the mild climate, the people, the absence of pollution, the sparse population and ruralness of the area, and the recreational opportunities (many of which are due to the availability of large amounts of public lands). Dislikes are few. The two most often voiced complaints are the lack of some of the amenities which accompany living in a metropolitan area (shopping, entertainment, cultural activities, etc.) and inadequate public transportation.

Given these positions, it is not surprising that the SEPA's residents' initial reaction to land use planning and requirements is to interpret them as outside interference and infringements on personal and/or property rights. However, once the concept of planning was passed into law by the state legislature, the Big Horn Basin residents, through their elected officials and direct participation in public meetings, entered the planning process with the intent to preserve the things they like about the SEPA, exclude those land uses which are not in accord with the dominant lifestyle, maintain local control of land use decisions by participation in the planning process, and do these things with the minimum possible amount of infringement on personal rights and freedoms.

Land use goals. The Governor's Land Use Commission held meetings throughout Wyoming in 1975-76. The meeting for BHB-SEPA residents was held in Powell in December of 1975 and was attended by 210 people [96]. The meeting was designed to acquire maximum citizen input through small group discussions, with the results from each discussion group being reported to the entire meeting and recorded and summarized by the Land Use Commission staff. The main planning priorities which surfaced in the Powell meeting were: 1) maintaining lands in agricultural production rather than allowing them to be developed for other uses, 2) protection of aesthetic values and provision for recreation and wildlife, 3) the need for "good" land use planning, 4) regulation of subdivisions, 5) water planning, 6) concerns related to federal land use policies, 7) protection of individual rights, and 8) sewage disposal problems. There was general agreement among meeting participants that these were the major problems. However, at that time, no consensus was reached concerning the appropriate methods of resolving the problems.

*Where comments and/or generalizations are not specifically referenced, they may be taken to be the perceptions and observations of the authors based on three years of research activity and residence in the Big Horn Basin Region. The trends detailed are majority patterns and obviously do not reflect the thinking of every resident of the SEPA.

The resolution of planning problems and disagreements comes through the political process; specifically the drafting of Land Use Plans and the adoption of the plans by a majority of the residents involved.*

There are numerous land use plans presently in effect or being considered in the SEPA [95, 97, 98 & 99]. Each plan is somewhat different as it must account for unique features of specific areas, but some general areas of agreement have been listed below:

1. The primary goal of all the land use plans is to ensure the maintenance and viability of agriculture, both farming and livestock operations. One way the plans achieve this goal is through the protection of existing agricultural water rights. Transfers of water from agricultural use are discouraged, and unallocated water is reserved for future use in the area (inter-basin water transfers are not popular). It is felt that agricultural lands, particularly irrigable lands, are irreplaceable and hence should be protected from being developed for other uses.
2. While industrial and commercial development are not discouraged, the residents want such developments to be closely scrutinized so that local environmental quality can be maintained. New industrial and commercial developments are not to lower existing air and water quality levels or create offensive or unhealthful levels of noise or odor. They shall not be unsightly or interfere with the existing pastoral landscape (Shell Valley residents are particularly adamant on these points [97]). Further, according to the plans, industrial and commercial developments are not to be located on irrigated farm land or compete for agricultural water supplies.
3. Residential developments are to be located near already existing services and facilities. Irrigated agricultural lands are not to be used for residential development nor are flood plains or areas of extreme slope or unstable soil conditions. High density developments should provide for adequate water and sewage facilities and conform to state and federal health and environmental quality standards. Also, new developments should not interfere with wildlife habitats or migration routes.
4. The interrelationship between the private and public lands in the SEPA and the impact of public land use decisions on the local areas are recognized in all the land use plans. First, the residents of the SEPA want the federal agencies (BLM and Forest Service) to consider the local land use goals and plans before making land use decisions. The residents also want public hearings held before the federal agencies make any changes from existing uses of public lands. The land use plans call for the disposition of irrigable public lands to private ownership under the provision of Public Law 94-579 (the BLM "Organic Act") to strengthen the areas' agricultural economy and to provide for community growth [97]. The Big Horn County plan specifically wants federal lands now used for livestock grazing to be maintained in that use. Transfers of private land to public ownership are discouraged. Such transfer proposals should be aired in public hearings, and the loss in local taxes should be considered. Two other sentiments expressed in hearings [95 & 96]

*This presumes that the plans do not illegally deprive any minority of its rights, in which case the courts would be the final step in the planning process.

but not in the plans are 1) that federal lands should be deeded over to the state government (a manifestation of the fact that people feel ignored and helpless before a bureaucracy such as the BLM), and 2) that federal lands should be used for residential subdivisions and community growth. Overall, the SEPA residents want the federal land agencies to be aware and considerate of the economic and social consequences of their decisions on areas adjacent to public lands.

Primary Survey Results. A mail survey of several identified community influentials and leaders was carried out in Washakie County in April 1977 to test if these people's views corresponded to those put forth in the land use plans and meeting transcripts already discussed. Questionnaires were mailed to 38 individuals and 24 completed forms were returned.

The responses to the questionnaires generally support the previous documentation: there were no surprises. The respondents wanted to maintain local control over planning decisions and exclude or minimize outside influences. They like the Big Horn Basin as it is, and do not want to see changes or excessive growth which may damage the current quality of life (all the respondents were resigned to some growth and accompanying change). They felt the credibility of the federal government (BLM included)* was questionable, and that Wyoming's voice is small when weighted against eastern interests. Also, "Easterners" do not understand Wyoming problems and frequently seem to be insensitive to the needs of rural western states.

The feelings of the respondents toward the public lands administrative agencies in the BHB were specifically elicited in the questionnaire. The unedited responses and the exact question posed are presented in Table VI-1. The responses are succinct and serve as an apt conclusion to this section of the Worland District-SEP.

*Some of the respondents felt that a communications gap between people and government is the real problem and that groups such as BLM's Multiple-Use Advisory Committee, was a step in the right direction.

Question: Nearly 70% of the land in the BHB is federally owned. Do you feel that decisions regarding the use of these lands have been responsive to the needs of the people?

Responses:

No (59%)

Many BLM people forget they're working for the American public; they act as though federal lands were their own "little empire." Land best suited for agriculture so agriculture should be given top priority when planning public land use.

Wyoming has such small percentage of total population there is no local control; Congress and the bureaucracy control public lands from back East.

Need to improve communications between the people and agencies involved.

Too much red tape; too many do's and don'ts; too much paper work; takes forever to get anything done; too much emphasis nationally on ecology, recreation and tax revenues for federal programs; land can be managed better at the local level.

Vehicle travel shouldn't be off limits; because of physical handicaps, etc. quite a few people can't utilize these areas.

Why do grazing fees have to be increased when livestock producers are going broke due to low returns and higher costs?

BLM should turn loose of some land near towns for housing or industrial development rather than converting prime farm land to these uses.

Responsive only to the environmentalists. Response to the average landowner has not been the best. Decisions have been at the extremes.

Decisions made just for the sake of decisions so they can warrant their many, many jobs.

Not responsive to Wyoming people, bow to pressure from Eastern interest or environmental oriented clubs or associations.

Yes (18%)

Feel public lands are in the hands of competent people and are being carefully administered for peoples' needs and protected from exploitation.

Managed acceptably so far; purposes of grazing, mineral development, and recreation are areas of public desirability.

Needs and desires of local people have been outweighed by Eastern interests; sometimes decisions are made that primarily benefit people who live out of this area.

Other (23%)

Responsive in the past, but recently too much credence has been given to input from groups who do not live here and often have never been here.

Not responsive in past - improvement lately; BLM multi-use advisory committee a good step in the right direction; no way everyone can be satisfied.

World BLM office staffed with a lot of bright and nice people concerned with doing the right thing by the lands they manage. But BLM hierarchy moves them around so frequently that they never become a part of the community.

So there are invariably instances in which these outsiders make decisions which don't seem to consider the attitudes of the local people.

Peoples' apathy as much to blame as the government agencies.

List of Key Individuals

Listed below are individuals who would be interested in public lands decisions, and who may be able to provide helpful input to the BLM. This list is not meant to be all-encompassing, but rather is intended to compliment contacts with individuals in formal positions such as planning commissioners, city councils, county commissioners, legislators, etc. Several of the suggested names were provided by County Extension Offices and the Regional Planning Office.

Big Horn County

Dave Flitner, Shell	Emil Doerr, Lovell
Jim Whaley, Shell	Milton Hyatt, Hyattville
Jim Kelso, Emblem	Dave Greer, Hyattville
Royce Tillit, Lovell	Bob Rea, Hyattville
Jack Clucas, Shell	Bob Cullison, Manderson
Hy Bischoff, Lovell	Claude Craft, Manderson
Rodney Crosby, Cowley	Bob Redland, Manderson
Walter Mayland, Emblem	Ken Bullinger, Otto
Robert Zwemer, Frannie	Joe Yorgason, Otto
John Abraham, Byron	Doris Gernant, Emblem
Dick Winterholler, Lovell	Vern Gernant, Emblem
Tim Britt, Lovell	Howard Gernant, Emblem
Roger Williams, Lovell	Jim Cook, Burlington
Jerry Kurtz, Greybull	Scott Smith, Shell
Curt Bates, Greybull	Dennis Hubbs, Frannie

Hot Springs County

Norman Sanford, Thermopolis	Phil Dieleman, Thermopolis
Carl Schweighart, Worland	Hugh Graham, Thermopolis
Frank Rhodes, Hamilton Dome	Lefty Graham, Thermopolis
Matt Brown, Thermopolis	Ernest Keene Bard, Thermopolis
Joe Campbell, Thermopolis	Harry Schneider, Thermopolis
Stan Smith, Thermopolis	Alden Ingraham, Thermopolis
Landis Webber, Thermopolis	Don Miller, Thermopolis
John Rankin, Worland	Ruth C. Yonkee, Thermopolis
Buster Hayes, Thermopolis	Rita Payne, Thermopolis
Keith Becker, Thermopolis	Dorothy Milek, Thermopolis
Bill Flinn, Thermopolis	John Herrin, Thermopolis
Rameul Dvarshkis, Hamilton Dome	Les Feddersen, Thermopolis
Karl Allen, Thermopolis	

Park County

Russ Wiedekamp, Powell	Jim Yorgason, Cody
Anne Hinckley, Powell	Lloyd Snider, Powell
Lloyd Barling, Meeteetse	Mic Fraker, Belfry, Montana
Jack Winner, Meeteetse	George Brown, Cody
Wally Riley, Cody	Lynn Bama, Wapiti
Duane Wiltse, Cody	Anne Model, Cody
Jim Cooper, Cody	Jerry Housel, Cody
Dan Webster, Meeteetse	Charlie Webster, Meeteetse
Joe Reed, Cody	Fred Moller, Jr., Cody
Willard Rhoads, Cody	DeWitt Dominick, Cody
Mic McCarty, Cody	Dan Haley, Worland
Jack Turnell, Meeteetse	Larry Earhart, Powell
Don Northrup, Powell	Stan Siggins, Cody
Bob Wilkins, Powell	

Washakie County

Dee Benson, Worland
Bob Orchard, Tensleep
Howard Carver, Worland
Jim Davenport, Worland
Steve Cranfill, Worland
Florence Shriver, Tensleep
Don Fausset, Worland
John Melin, Worland
Rich Leavitt, Worland
Bob Lass
Dub Maxwell, Worland
Lloyd Nielson, Worland
Carl Reynolds, Worland
Leo Scheureman, Worland
Lillian Hampton, Worland
George Bower, Worland
Marion Barngrover, Worland

Ray Rice, Tensleep
Kaz Uriu, Worland
Ben Clark, Worland
Jerry Geis, Worland
Beryl Lyman, Tensleep
Hattie Burnstad, Worland
Bob Fausset, Tensleep
Roger Bower, Worland
Bill Thoren, Worland
Jack Lowry, Worland
Don McCormac, Worland
Lowell Peterson, Worland
Joe Salzman, Worland
Jim Gilman, Worland
Owen Everett, Worland
Mrs. John Davis, Worland

VII. SUMMARY AND CONCLUSIONS

Summary and Conclusions

The SEPA is characterized by a stable economy, moderate population growth, and communities which, for the most part, are able to provide the necessary governmental services at levels commensurate with the size of the populations they serve (Worland's sewer and water problems are notable exceptions to this generalization).

The trends revealed in the data comparing the four SEPA Counties (see the section narratives) are tied directly to the economies of the respective counties. Each of the counties derive its economic base from land and natural resource related industries such as mining, oil and gas extraction, agriculture, and recreation-tourism. Big Horn, Hot Springs, and Washakie Counties are dominated by agriculture, and their social-economic structures reflect this situation. Washakie County is different from the other two largely because of the vitality of Worland as a regional trade center, and Hot Springs is unique due to the age distribution of its population. Park County stands apart from the three other counties because of the diversity of its economic base and the fact that agriculture is blended into the total economic structure as one of three primary components, rather than being dominant.

The SEPA has not been impacted by rapid or massive mineral development as has much of Wyoming, and consequently is not considered an "impact" area in the common sense of the word. However, there is impact potential in mineral development and agriculture. The BLM, by virtue of its sizable land and resource holdings, can influence growth and decline, or even precipitate sudden impact circumstances through policies which affect the size of the "basic" employment force in the SEPA.

Change in the number of employees in basic sectors is the driving force behind total employment, hence population. The population density of an area is generally the cause of social-economic problems and impacts.* Because of this, it is extremely important for BLM policy-makers to assess the effect of their decisions on the basic economic activities of the SEPA. The input/output data presented in this report provide an excellent tool for analyzing the economic effects of alternative policies.

Timber Harvest. The harvesting of logs and production of lumber is a basic industry because most of the finished product (lumber) is exported from the county where it is manufactured, and from the SEPA as well. Saw-mills, logging, and other timber related industries have been included in the manufacturing sector of the input/output models. There are establishments involved in the timber industry in Park, Hot Springs, and Big Horn Counties. The appropriate multipliers for these counties and the SEPA are presented below (from Tables V: 31-34):

<u>Manufacturing Multipliers</u>	<u>Area</u>			
	<u>Big Horn</u>	<u>Hot Springs</u>	<u>Park</u>	<u>BHB-SEPA</u>
Output	1.41	1.48	1.58	2.06
Final Demand	1.41	1.48	1.60	2.14
Household Income	2.49	1.26	1.42	4.76
Employment	1.66	1.26	1.33	2.88

The manufacturing sectors in Big Horn County and the overall SEPA are almost totally dominated by sugar beet processing and, as such, are not truly representative of the timber industry. If these multipliers are used for assessing the impact of changes in timber activity, then the confidence interval surrounding the estimate will be quite large.

*It is crucial to note that the impact road runs both ways: impacts can result from a sudden large increase or decrease in population. The events are different but of possible equal severity.

The Park and Hot Springs County manufacturing sectors are reflective of the timber industries, and the multipliers are therefore appropriate. Note that the multipliers are quite small (relative to the other multipliers from Tables V: 31-34). This is because manufacturing concerns, lumber included, purchase very few of their primary inputs locally, with the exception of labor. In the case of lumber mills, their primary input is logs which, although harvested locally, are purchased mainly from the federal government. Also, most of the equipment used in sawmills and logging are purchased outside of the local economy. Because of these purchase patterns, a great number of the direct dollars spent by sawmills leave the area without ever contributing to the multiplier effect. In fact, 54¢ of every dollar spent by manufacturers in Park County were for direct imports, Table V-24.

Timber is harvested on BLM lands in the SEPA. Past average harvests and future projections by area are presented below (in thousands of board feet):

Past and projected timber harvest on BLM lands by area.

<u>Years</u>	<u>Big Horn</u>	<u>Hot Springs</u>	<u>Park</u>	<u>Washakie</u>	<u>BHB</u>
1966-71	137	577	1,024	318	2,056
1972-76	96	25	201	33	355
Future Estimate	100	50	150	200	500

As the data illustrate, logging on BLM lands has substantially decreased over the past 11 years, but is expected to continue at about the same level as the average over the past four years.* Given the size of the multipliers involved, the size of the timbering activity relative to the total economy; the small number of board feet harvested annually from BLM lands, and the future allowable cut projections, it does not appear that future BLM policies regarding timber harvesting in the SEPA will have a major economic impact in the Big Horn Basin Region.

Recreation-Tourism. Although the BLM lands in the SEPA are not in themselves a tourist attraction, they are used for recreation by hunters, fishermen, snowmobilers, and others. The recreational uses of BLM lands constitute a basic industry to the extent that users of the public lands resource are not residents of the area of use. For example, deer and elk hunters from Casper who use SEPA-BLM lands supposedly spend "new" dollars in the communities adjacent to these lands. The effect of new dollars from non-resident recreationists is analogous to the effect resulting from the export of lumber or beef.

Recreationists generally spend money in 1) the trade sector for gasoline, groceries, and similar items, 2) the eat, drink, and lodging sector, and in 3) the other services sector for recreation and repair services. As such, the multipliers from all these sectors must be used collectively to determine the impact of recreation spending on the SEPA. This can be done by weighting the sector multipliers according to the expenditures in the respective sectors and then aggregating the results into a "recreation" multiplier. For example, if non-residents who are hunting in Big Horn County spend their money in the following pattern:

Trade	= 55%
Eat, drink, lodging	= 25%
Other services	= 20%
	<u>100%</u>

*It should be emphasized that these figures are only estimates.

then the weighted average final demand multiplier will be 1.92, Table V-32. This multiplier can then be used to estimate the total dollar impact of visiting hunters' direct expenditures on the Big Horn County economy. The same type of computation could also be carried out for the other counties and the total SEPA using the appropriate input/output multipliers.

There are several problems in estimating recreation impacts and linking these impacts to BLM policy alternatives. First, the expenditures pattern for hunters presented in the previous paragraph is hypothetical; there are no good primary hunter expenditure pattern data currently available. Second, the weighted average multiplier for different recreation activities may be different. This is because the weighted average calculation is derived from the expenditure patterns of participants in a given activity, and these patterns are possibly different for different activities. Third, linking recreation expenditures directly to BLM lands is difficult because of the interrelationship between BLM and Forest Service, state, private, and other lands. This interrelationship makes it very difficult to specify what portion of the direct spending by non-resident recreationists accrues directly to BLM lands.

The decision by the BLM to use lands for recreation, in itself, will not cause a major economic impact in the Big Horn Basin Region. As mentioned before, it is changes in basic employment which lead to impacts, and recreation type businesses employ few FTEs relative to their dollar volume. Also, many of the basic jobs generated by recreation based business and seasonal, part-time, unskilled, and are frequently absorbed by the existing population. The resident populations of large destination tourism-recreation areas (i.e., Jackson Hole, Vale, etc.) are consequently small relative to the size of their clientele. Growth or decline in the number of recreation dollars flowing into the SEPA due to a BLM decision would have a minimal effect on the population size and hence most of the infrastructure and services provided by the local governments would be largely unaffected. However, if the decision to allow recreation excludes an existing use, such as agriculture or mining, the impact could be substantial.

Mining. BLM policies regarding timber harvesting and recreation, while certainly not negligible, are not economically crucial to the SEPA as a whole. This is due primarily to the fact that these two activities are not leading uses of BLM lands, in terms of dollars, and are not of overriding importance to the local economies.* This is definitely not the situation with mining activity in the SEPA (including oil and natural gas production and processing).

*It is necessary to draw the distinction between tourists and recreationists. Tourism is quite important to the area. The Big Horn Basin is in the path of visitors entering and leaving Yellowstone National Park and these tourists do spend significant amounts of money as they pass through the area. Also, Cody is a destination tourist area whose local economy is tied closely to the tourist trade. But these are tourists not recreationists (who are drawn to the SEPA by the availability of BLM lands). The tourists are simply passing through and they do so without regard to the existence of the BLM lands. BLM decisions (at least that I am aware of) will neither increase nor decrease this tourist flow.

Mining* is second only to agriculture among the basic industries in the SEPA in employment, having almost 10% of the total FTEs, Table V-13. The total value of this sector's production in 1974 was \$94,028,000, or 15% of the total output of the Big Horn Basin Region, Table V-20. Also, approximately 11% of all direct household income generated in the SEPA comes from some form of mining. Directly related to the mining sector, there is a large oil and gas field services sector which also employs many people (about 500 in the SEPA). These two sectors taken together constitute one of the two main productive activities in the Big Horn Basin Region (agriculture is the other). In this context, it is evident that any policy or circumstance which might alter this industry will have serious social-economic implications for the SEPA and its many communities.

The economic relationship between public lands and the mining industry is a close one. Significant amounts of almost every mineral produced in the BHB come from BLM lands including oil, natural gas, coal, bentonite, gypsum, sand and gravel, and building stone. Also, the primary transportation systems (pipelines) for oil and natural gas pass directly through the BLM domain. This close relationship increases the importance to the BHB and the separate communities of BLM policies related to mineral production.

The multipliers for the mining activities in the SEPA are presented below (from Tables V: 31-34):

Mining Multiplier	Area				
	Big Horn	Hot Springs	Park	Washakie	BHB
Output	2.21	#	#	#	2.36
Final Demand	2.21	#	#	#	2.36
Household Income	2.51	#	#	#	2.77
Employment	2.25	#	#	#	2.37

#Combined with oil and gas.

Oil & Gas Multiplier	Area				
	Big Horn	Hot Springs	Park	Washakie	BHB
Output	1.67	1.72	1.91	1.64	1.76
Final Demand	1.86	1.72	2.63	1.64	2.27
Household Income	2.17	2.12	2.96	1.95	2.53
Employment	2.07	2.05	3.12	1.92	2.50

The multipliers for these activities are large compared to other sectorial multipliers in the various counties and the BHB. This is because of 1) the sheer scale of the activity, 2) the fact that there exists a service sector (oil and gas extraction field services) which is tied exclusively to mineral production, 3) the minerals are both produced and processed locally, and 4) the mining and oil and gas extraction sectors purchase a great deal of their inputs locally importing only 25% and 29%, of their inputs from areas outside of the BHB, Table V-21. The employment multipliers are particularly large: for every FTE in oil and gas extraction in the BHB, there is a corresponding 1.50 FTE in other sectors. This highlights the close linkage between the oil and gas extraction sector and the local economy. If 100 FTEs were removed from the oil and gas extraction sector, 250 FTEs would be lost overall, or about 800 people for the

*There are some instances where mining and oil and gas extraction are presented in separate sectors. In these cases, the two sectors need to be aggregated in order to examine the total effect of all mining. The oil and gas extraction and mining sectors were not divided in some counties due to legal disclosure.

SEPA as a whole.* The impact would be reversed if the 100 FTEs were added rather than lost. The impacts can be localized to the county level by using the appropriate county employment multiplier for oil and gas extraction (or mining, if the two activities are combined into one sector). For example, if the change occurred in Big Horn County, where the multiplier is 2.07, then 207 FTEs would be added or lost resulting in about 662 people (the other 43 FTEs and 138 people impact would occur in Park, Hot Springs, and Washakie Counties). Obviously, this kind of change would constitute a major impact for any or all of the three small population centers in Big Horn County. Given the mass of land and resources at its disposal, the BLM could conceivably effectuate these kinds of far reaching changes in the SEPA's economic base and, hence, the societies and infrastructures of the local communities.

Agriculture. Agricultural production including hay, row crops, small grains, and livestock, is the single largest business activity in the SEPA in terms of output, employment, and income. It is also the dominant economic activity in Washakie, Big Horn, and Hot Springs Counties, and the second largest activity in Park County, behind mining and oil and gas extraction. The agricultural activities are presented on an enterprise basis for each county except Hot Springs (which is primarily limited to livestock production) in order to facilitate impact estimation. The alfalfa and other hay sector is not a basic sector since most if not all of its production is sold locally, but it has been separated from the other activities in order to maintain the highest degree of homogeneity among the separate production functions.

The livestock industry comprises about one fourth of all agricultural activity in the SEPA and is particularly important in Hot Springs and Big Horn Counties. BLM lands provide 344,573 Animal Unit Months (AUMs) of the total forage in the SEPA, or enough forage to run 28,700 Animal Units (AUs)** for one year, hence the range livestock industry in the SEPA is highly dependent on public lands for grazing.

The BLM can impact the range livestock industry by increasing the fees charged for grazing or by removing lands from grazing use. These policies will reduce the ranchers' income and, at certain levels, require a cutback in AUs. Both of these results have negative impacts on the economies of the SEPA and, because of the wide distribution of the range livestock industry, virtually no community would be left unaffected. For example, the total impact of a fee increase for public lands AUMs (both Forest Service and BLM) from the 1974 level to the present levels resulted in a loss of approximately \$85,000 in the Big Horn County economy alone [94].*** Further impacts of fee increases and grazing allotment reductions are covered in detail in reference [94].

Another BLM policy which would affect the range livestock industry is range improvement. Increased carrying capacity for existing grazing allotments would be beneficial to public land dependent livestock operations.**** The input/output multipliers and distribution data provide the necessary tool to estimate the total benefit to the local communities in the SEPA resulting from range improvement programs.

*Using a conversion factor of 3.2 persons per FTE.

**Assuming that an Animal Unit equals the nutritional requirement of a 1,000 lb. animal for one year.

***Total output for the Big Horn County economy in 1974 was approximately 157.5 million dollars; so the \$85,000 impact represents a 0.05% reduction in total economic activity for the county economy.

****Given favorable livestock prices.

The BLM can have some effect on the small grains and row crops sectors, and hence the overall SEPA economy, through implementing policies, such as desert land entries, which bring public lands into agricultural production (usually through an irrigation project). The production of crops, as with livestock, injects a great number of dollars into the local economies of the SEPA communities. The production of sugar beets is doubly important because they are not only grown, but are also processed, manufactured into a soft drink syrup, and marketed in the SEPA. This kind of "vertical" integration is the major factor underlying large economic multiplier effects (as is also evident for the minerals sectors). When analyzing the row crops sector, it is important to note that sugar beet production is not a basic industry for northern Big Horn and Washakie Counties because the raw beets are not exported. However, it is a basic industry for Park County and for southern Big Horn County as the beets are shipped to Worland or Lovell for processing. Also, raw sugar beet production is not a basic industry for the SEPA as a whole because it is the processed sugar rather than the beets which is exported; manufacturing is the basic activity in this case. Note that the BHB employment and income multipliers for manufacturing are the largest of any basic sector in the SEPA. This indicates the close interrelationship between agriculture and the SEPA economy.

BLM policies which increase irrigated agricultural crop production would probably not precipitate a major impact or strain on the infrastructure of the SEPA communities so long as the parcels did not exceed about 25,000 acres per county every several years.* For example, the proposed 20,000 - 25,000 acre West Side Irrigation Project would bring 78 new FTEs into Washakie and Big Horn Counties, assuming 25,000 acres were settled at the rate of one FTE per 360 acres. These workers and their families probably would not settle in Worland but at the site of their farm. Hence Worland's already strained water and sewer systems would be unaffected by the direct employment increase. However, there would be an increase in indirect employment via the multiplier effect associated with the West Side Project. If the farms produced malt barley and sugar beets in equal acreages, the employment multiplier would be 1.44 and the increased indirect employment resulting from an increase of 78 FTEs in irrigated agriculture would equal approximately 34 FTEs in other sectors. This does not necessarily mean that 34 new wage earners and their families (averaging 3.2 persons per FTE) would move into Worland. There may be excess capacity in some already existing business such as elevators or implement dealers, which would reduce the population effect. Also, many of the jobs created might be filled by underemployed or unemployed persons already residing in Washakie County. These are some of the many facets to be considered in estimating the the impact of a major irrigation project in the SEPA. The important point is that economic multipliers must be applied with sound judgment, not mechanically as is so often the case.

The social and economic structures of the SEPA's communities and rural areas are intertwined with past and present BLM land use policies. The usage of BLM administered lands for mining and agricultural production are particularly salient examples of this interrelationship. The data and narratives presented in this report provide much of the necessary information needed by BLM policy-makers as they attempt to estimate the inherent trade-offs (costs and benefits) underlying the multiple use concept.

*The impact of such policies may well be a moot question due to water ownership and other water problems in the SEPA. Also, "homesteading" may not be economically feasible for the agricultural firms themselves, given the relationship between costs and returns in agriculture.

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