THE SCHELL RESOURCE AREA

PLANNING AREA ANALYSIS

U.S. DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

ELY, NEVADA

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INTRODUCTION

The Schell Resource Area Planning Area Analysis is one of several planning documents which have been prepared to assist in the development of the Schell Management Framework Plan (M F P). The M F P outlines how the Schell Resource Area (SRA) will be managed for the next ten years. The Planning Area Analysis (P A A) discusses the social and economic contribution of the BLM Managed lands to the economy of the region which contains the resource area. Factors discussed include the relationship of the Ely District BLM to the local infrastructure and the attitudes and social values of the people who live near the public lands. The P A A also discusses some of the other elements that need to be taken into account when planning for management of the public land resources, such as watershed, fire management and cultural resources. The P A A provides background information for sound decision making and conflict resolution during the Management Framework Planning process.

BACKGROUND

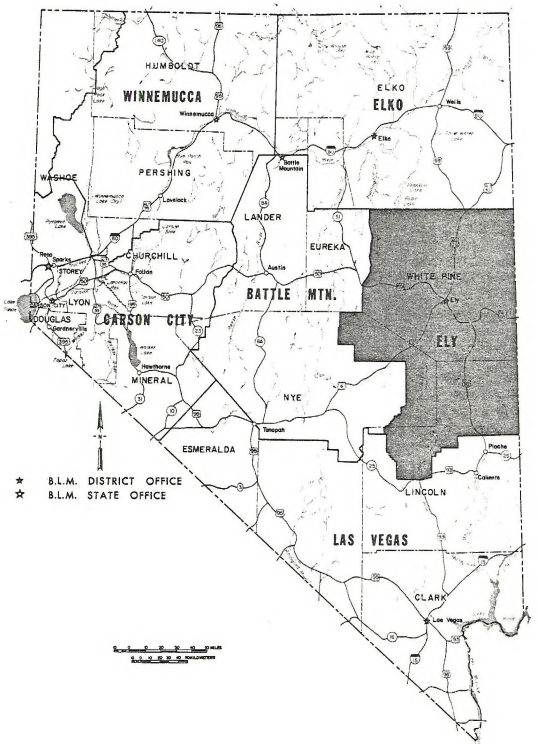
The Schell Resource Area consists of 5,064,614 acres of basin and range geography in Eastern Nevada. It contains portions of Nye, Lincoln and White Pine Counties within its boundaries. It is very sparsely populated, with most of its inhabitants being involved in either the ranching industry or the mining industry. The early history of the region reflects the importance of both these pursuits, as does the recent history of the region. White Pine County experienced a marked decrease in its population when Kennecott Copper Corporation closed their mine at Ruth in 1978 and substantially reduced the staff at their smelter in McGill. Tonopah, in Nye County, is currently experiencing a boom, due to a molybdenum mine opening near there.

Towns in the region started as service centers for miners or ranches or both. Vast areas of the region are virtually unpopulated. Those people who do live in the region are clustered in towns, hamlets and at mines and ranches. The Schell Resource Area (SRA) does not contain any incorporated towns. It does contain three hamlets and one industrial community. The hamlets are Hiko and Ursine, both in Lincoln County, and Baker, in White Pine County. The industrial community is located at Atlanta Mine, in Lincoln County. There are few people located at Sunnyside, most of them employed by the Nevada Department of Wildlife to manage Wayne Kirsch Management area in Nye County. In addition, there is a part-time recreation community composed mainly of summer houses.

Hiko is a ranch hamlet in the north end of Pahranagat Valley west of the Hiko Range. Hiko was settled in 1853 by miners and was the Lincoln County seat until 1871. It was the site of an ore processing mill, serving mines to the west. The mill was moved by the owners when more productive mines opened in Pioche. Hiko is 60 miles west of Caliente and is located on State Route 318. Hiko is a Southern Pah Ute word meaning "white people". (Kroeber, 1957 ; Carlson, 1974; NV State Writers Project, 1941; Leighe, 1964).

Ursine is a farming community, thirteen miles northeast of Pioche, settled by a small colony of Mormons in 1863 in the section of Ursine Valley known as Eagle Valley. Early settlers wanted the post office (established April 17, 1985) to be named Eagle Valley, but to avoid confusion with Eagle Valley in Ormsby (Carson City) County, Eagle Salt Works and Eagleville in Churchill County, postal officials chose the name Ursine, for reasons unknown (JWH; RC, p. 82, Carlson, 1974).

Baker is a ranch community centered around a post office. The post office was first established on February 18, 1895, discontinued on September 14, 1901 and then re-established on November 1, 1901, (NHS, 1924, p. 363; FIM, p. 2). Baker is situated on the eastern slope of Mount Wheeler in the Snake Range. The town is near the ranch of George W. Baker, one of the earliest settlers in Snake Valley, and was named for this early rancher (Carlson, 1974).



NEVADA DISTRICTS

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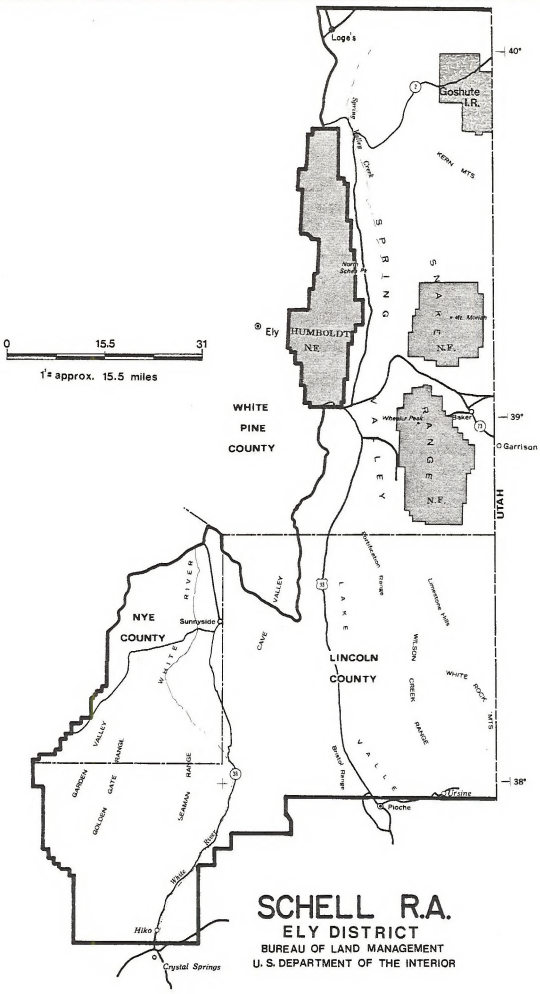

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SOCIAL VALUES ANALYSIS

Public Attitudes

Attitudes and values relating to public land use in general are discussed in the following section. Those pertaining to particular resources are discussed in the individual resource sections of the PAA.

People in widely separated rural areas often have the same concerns, attitudes and values. Twenty-three personal interviews conducted with residents of the Schell Resource Area indicated that their cnncerns are similar to those expressed by people in the Paradise-Denio P.A.A. These concerns are listed below, and are taken directly from the 1979 Paradise-Denio Planning Area Analysis (Winnemucca, 1979).

Lack of Responsiveness to the Needs of the Local Public

Generally, it was felt that the District Office has been making a concerted effort to gather public opinion on land use decisions. However, this was perceived to be a more or less wasted effort as the real decisions are thought to be made in Washington, D.C.

Local residents feel that they should have more say in the decisions concerning the local area. In their view, most of the major policies affecting their area are made by people in the East who are neither acquainted with the local area and problems nor concerned with the social and economic eelfare of local people. The decisions are considered to be made on a political basis or in response to groups who have more time and money than local people to promote their causes.

It is felt that more authority should be delegated to the state and district levels of the BLM. People commented that frequently local personnel seemed sympathetic with their problems only to have the decision overturned by someone higher up.

Environmentalists Have a Disproportionate Say in Land Use Decisions

The predominant opinion is that when the BLM makes land use decisions the environmental aspects of a situation are given more serious consideration than are the socio-economic effects which a proposed action might have on the local area. It is thought that there is a need for environmental protection but that the present onslaught of environmental regulations are stifling private enterprise. Some sort of economic base, it is felt, must be maintained.

There is quite a lot of concern about environmental laws threatening the stability of the national, as well as the local, economy. Correlations were drawn with the present energy crisis suggesting that we would be in the same situation with minerals and other resources in a few years as we are presently with oil. The feeling is that the lands are here to be used but a few areas should be set aside for preservation and recreation.

Excessive-Regulation

Most people seem to feel that there are simply too many controls, that they have multiplied incredibly in the past several years, and that they will continue to increase to the point where the regulations "throttle the industries they are supposed to help." It is not just the BLM

regulations, but all the federal, state, and local regulations combined that make it difficult to accomplish anything until after time-consuming and expensive studies are completed.

High Degree of Turnover Among BLM Personnel

BLM employees are viewed as outsiders who are unfamiliar with the local area, unacquainted with its particular problems, and uncommitted to its welfare. It is believed that many of the field personnel are young, inexperienced, and trained in lusher environments than the arid lands of the Resource Area. Consequently, the local populace is skeptical of any advice these newcomers have to offer and indignant that these BLM employees are in a position of dictating to them the proper management of lands that they and their forefathers have worked for generations.

Rural Atmosphere

A high value was placed on the rural atmosphere of this area. For most people this is a major attraction; some people had moved here, or knew people who had moved here, leaving better jobs to live in a smaller, less densely populated, and friendlier rural area.

The BLM Spends Too Much Time Doing Studies and Not Enough Time Putting These Studies Into Action

It was felt that more time and money should be spent on utilizing the data already collected and taking positive action to enhance the public lands, rather than doing new studies. It was also felt that the public should get more feedback from the studies which have been done.

Public Relations

With a few exceptions those persons interviewed stated that BLM personnel had been cooperative in their dealings. It was also indicated that BLM seemed to be making more of an effort in recent months to keep the local public informed.

However, it was felt that public relations could be improved by publicizing more information on the why and the wherewithal of BLM policies. This need was made evident by the numerous misconceptions revealed during the course of interviews with local people. More public education efforts and publication of positive accomplishments of the BLM, rather than strictly those of a regulatory nature, might do much to enhance public relations (Paradise-Denio PAA, Winnemucca, BLM 1979).

Values such as rurality, independence and self-determination are held strongly by many of the people in the Schell Resource Area. Individuality and the freedom to do what one pleases, when and where one pleases, is highly prized. This view is tied to the feelings about excessive government regulation, which is seen as limiting personal freedom. It should be noted that the interviewees who live within the population centers are slightly more concerned with growth in their community than the people who live outside the population centers.

Information gathered thruough personal interviews for the Schell Resource Area PAA is further supported by the results of a survey by the Governor's Commission on the Future of Nevada. Some of the results of the survey are presented in Appendix 2, with notes on how to read the tables of survey results and respondent demogaphic data. The information presented is segregated by county, so that comparsions can

be made between the counties in the region as well as between the region and the state.

Overall, the same general opinions are held throughout the region, with some concerns felt more strongly in one area than in another. The Governor's Survey and the PAA interviews indicate that the people of the region want their rural lifestyle to continue. They like the wide open spaces, the sparse population and the slower pace of life. They're looking for moderate-to-slow growth in their community, while recognizing that growth is beneficial to the community. They also like the relatively unpolluted quality of their environment and their freedom to enjoy the environment.

All three counties ranked the response category "Open Space/Sparse Population/Peace and Quiet/Uncongested" first when asked, "What is it that you like about living in Nevada?".[1] White Pine and Nye Counties ranked "Relaxed Lifestyle/Freedom/Individuality" and "Clean Air/Lack of Pollution" second and third, respectively, while Lincoln County ranked those categories third and second respectively. Respondents were also queried about what changes in their lifestyle they would be willing to accept. In all three counties most of the respondents stated they would not accept increased Federal regulations or an increased scarcity of water. Over three-fourths of the Lincoln and Nye County respondents stated they could not accept a deterioration of air quality, while only slightly over half of the White Pine County respondents answered so. Three-fourths of Lincoln County respondents do not want reduced access of the out-of-doors, while over ninety percent of White Pine and Nye County respondents do not want reduced access. However, if access to hunting and fishing areas is reduced, 7 percent of Lincoln County respondents, 92% of White Pine County respondents and 68% of Nye County respondents would be willing to accept the situation. The difference in the percentages of people willing to accept reduced access to the great out-doors vs. reduced access to hunting and fishing areas indicates that residents are also using the area for recreation purposes other than hunting and fishing. Just over half of Lincoln County respondents and almost two-thirds of Nye County respondents are unwilling to accept increased traffic congestion. However, slightly over half of the White Pine County respondents whould be willing to accept it. The majority of White Pine respondents would accept increased population, although only about two-thirds of Lincoln and Nye County respondents would. Approximately one-third of White Pine and Nye County respondents will accept a reduction in the quality of public services, but less than one-fourth of Lincoln County respondents would be willing to do so.

The survey also questioned people about the problems facing their area. Respondents were given seventeen possible problems, which were then ranked in order of importance. White Pine County respondents ranked "Unemployment-Economic Depression" first, and "Federal Government Regulation" second. Lincoln County respondents ranked these problems categories second and first respectively. Nye County respondents had two problem sets ranked first: "Water-Sewer; water supply and quality and sewer capacity" and "Housing-cost of, lack of, quality." Nye County ranked "Roads-Transportation-Traffic" second and "Public Services-fire services, community programs, other" third. Third ranked by White Pine County respondents was "Economic Diversification-Lack of Industry" and Lincoln County respondents ranked the "MX Missile" third.

1/ Information in this paragraph and the following 4 paragraphs is from the statewide survey conducted in 1979 by the Governor's Commission on the Future of Nevada. This information is presented in Appendix 2 in tabular form. The survey results were published March, 1980.

When queried about growth in their area, each county had differing responses. Most of the White Pine County respondents felt that growth is beneficial to the community; nearly three-fourths of the Lincoln County respondents felt that way, while only half of the Nye County respondents felt growth was beneficial to their community. Accordingly Nye County had the largest percentage and White Pine County the smallest percentage of respondents favoring slow growth. Lincoln County was between White Pine and Nye Counties in the percentage of respondents favoring slow growth. Nearly three-fourths of the White Pine County respondents favored moderate growth. Slightly over half of the Lincoln County respondents wanted moderate growth and about one-third of the Nye County respondents would like to see moderate growth. When asked if they were pleased with the growth in their community just over half of Lincoln and nearly half of Nye County respondents said yes, while under one-fourth of White Pine County respondents were pleased. In general, White Pine County residents are more concerned about their community growth in the past few years than residents of Lincoln or Nye County. More White Pine County residents want moderate growth than do residents in either of the other two counties. Nye County respondents were evenly split, with about as many people pleased with the growth of their community in the recent past as were not pleased. Nearly an equal number of respondents feel that growth is good for their community as do not feel so and about as many want slow growth as want moderate growth. Nye County respondents have mixed feelings about growth in their area, with some favoring moderate growth and others wanting no changes in the area. Lincoln County respondents were not as concerned about the growth in their communities as White Pine County respondents, nor as resistant to change as Nye County respondents.

Overall, White Pine County residents are more concerned about unemployment and are more willing to accept a reduction in the quality of their environment in order to increase employment in their community than are Lincoln or Nye County respondents. Nye County respondents are less willing to accept a reduction in the quality of their environment, do not feel that their economy is a problem and would like to improve the quality of their urban environment. Lincoln County respondents are concerned about their economy but are just as concerned about the actions of the Federal Government. This is chiefly so because of the effects Federal regulations have had on their lives and the expected affects of the MX Missile.

Tables 1a through 1c show the significance of social well being factors for the three counties in the region. The variation between the counties in the region and the state is caused by the difference between urban and rural areas. Which area is a better place to live is determined by an individual's point of view. Characteristics common to all three counties in the region are lower population, lower per capita income, fewer job openings and less buying power as compared to the state averages. Individual county statistics do not accurately reflect state wide figures for a given characteristic. For example, Lincoln and Nye Counties have more than the statewide average number of families below the poverty level while White Pine County has fewer families below poverty level than the state average.

SIGNIFICANCE OF SOCIAL WELL-BEING, LINCOLN COUNTY

Table 1a

Well-Being Factor	State (a)	County (b)		Percent*
1) Population Change[1,3] 1960-1970	5.5	.58	$\frac{(b-a)}{a}$	- 89.5%
1970-1978	3.8	.96	$\frac{(b-a)}{a}$	- 74.7%
2) Per Capita Income[2] 1977	$7,980	$ 5,843	$\frac{(b-a)}{a}$	- 27%
3) Migration Pattern as an Indication of Employment Opportunity[3] 1960-1970	50.4%	- 0.6	$\frac{(b-a)}{a}$	- 101%
1970-1977	22.9	7.9	$\frac{(b-a)}{a}$	- 65%
4) Unemployment Rate First Quarter[4] 1980	5.6%	4.1%	$\frac{(b-a)}{a}$	+ 27%
5) Median Effective Buying Income[5] 1978	$ 18,017	$ 11,429	$\frac{(b-a)}{a}$	- 36.6%
6) Families Below Poverty level[6] (%) 1979	7.3%	12.5%	$\frac{(b-a)}{a}$	- 71%
7) Housing Units Lacking Some Plumbing Facilities[7] (%) 1970	7.2%	7.1%	$\frac{(b-a)}{a}$	- 1%
8) Housing Unit % Over-crowding (more than 1.01 persons per room)[7] 1970	9.7%	9.9%	$\frac{(b-a)}{a}$	- 2%
9) Infant Deaths per 1,000 Live Births 1975[8]	16.6%	41.7%	$\frac{(b-a)}{a}$	- 151%

* If a county well-being factor deviates from that of the state by 20% or more, the difference is considered significant. Negative factors are seen as reducing social well-being and positive factors are seen as enhancing social well-being.

SIGNIFICANCE OF SOCIAL WELL-BEING, WHITE PINE COUNTY

Table 1b

Well-Being Factor	State (a)	County (b)		Percent*
1) Population Change[1,3] 1960-1970	5.5	4.44	(b-a)/a	- 19.3%
1970-1978	3.8	-2.6	(b-a)/a	- 168.4%
2) Per Capita Income[2] 1977	$ 7,980	$ 6,608	(b-a)/a	17%
3) Migration Patterns as an Indication of Employment Opportunity[3] 1960-1970	50.4	-8.1	(b-a)/a	- 116%
1970-1977	22.9	-20.1	(b-a)/a	- 188%
4) Unemployment Rate First Quarter[4] 1980	5.6%	7.1%	(b-a)/a	- 28.6%
5) Median Effective Buying Income[5] 1978	$ 18,017	$ 17,235	(b-a)/a	- 4.3%
6) Families Below Poverty Level (%) 1979[6]	7.3%	6.7%	(b-a)/a	+ 8%
7) Housing Units Lacking Some Plumbing Facilities[7] (%) 1970	7.2%	4.4%	(b-a)/a	39%
8) Housing Unit % Overcrowding (more than 1.01 persons per room) 1970[7]	9.7%	12%	(b-a)/a	- 24%
9) Infant Deaths Per 1,000 Live Births 1975[8]	16.6	11:8	(b-a)/a	29%

* If a county well-being factor deviates from that of the state by 20% or more, the difference is considered significant. Negative factors are seen as reducing social well-being while positive factors are seen as enhancing social well-being.

SIGNIFICANCE OF SOCIAL WELL-BEING, NYE COUNTY

Table 1c

Well-Being Factor	State (a)	County (b)		Percent*
1) Population Change[1,3] 1960-1970	5.5%	2.5	$\frac{(b-a)}{a}$	- 54.5%
1970-1978	3.8	.9	$\frac{(b-a)}{a}$	- 76.3%
2) Per Capita Income[2] 1977	$ 7,980	$ 5,801	$\frac{(b-a)}{a}$	- 27%
3) Migration Patterns as an Indication of Employment Opportunity[3] 1960-1970	50.4%	19.9%	$\frac{(b-a)}{a}$	- 61%
1970-1977	22.9	6.3	$\frac{(b-a)}{a}$	- 72
4) Unemployment Rate First Quarter[4] 1980	5.6%	3.2%	$\frac{(b-a)}{a}$	+ 43%
5) Median Effective Buying Income[5] 1978	$ 18,017	$ 14,000	$\frac{(b-a)}{a}$	- 22.3%
6) Families Below Poverty Level %[6] 1979	7.3%	8.7%	$\frac{(b-a)}{a}$	- 19%
7) Housing Units Lacking Some plumbing Facilities %[7] 1970	7.2%	14.6%	$\frac{(b-a)}{a}$	- 102%
8) Housing Units % Overcrowding (more than 1.01 persons per room)[7] 1970	9.7%	9.6%	$\frac{(b-a)}{a}$	1%
9) Infant Deaths per 1,000 Live Births[8] 1975	16.6%	22.7%	$\frac{(b-a)}{a}$	- 37%

* If a county well being factor deviates from that of the State by 20% or more, the difference is considered significant. Negative factors are seen as reducing social well-being while positive factors are seen as enhancing social well-being.

Footnotes for Table 1a-1c

1) "Population Projections to the Year 2000 for the State and its Counties" April, 1979 (Governor's Office of Planning Coordination, State of Nevada).

2) "Personal Income by Major Sources 1972-77," (Regional Economic Information System, Bureau of Economic Analysis).

3) Nevada Statistical Abstract 1979, (Governor's Office of Planning Coordination, State of Nevada).

4) Nevada Review of Business and Economics (Reno, NV.: Bureau of Business and Economic Research, College of Business Administration, University of Nevada, Reno, Summer 1980).

5) Sales and Marketing Management Magazine, July 23, 1979.

6) Nevada Area Labor Review, Balance of State, 1979 (Nevada Employment Security Department).

7) Rural County Resources (Reno, NV.: Cooperative Extension Service, Max C. Fleischmann College of Agriculture, University of Nevada, Reno, in cooperation with Water Nevada Health Systems Agency, May 1978).

8) "Selected Vital Statistics by County-Race, Nevada-1976", (Vital Statistics Nevada: State Health Division, Selection of Vital Statistics, 1976).

Table 2 shows the annual rate of change of population by county from 1970 to 1977. The rapid fluctuations in rate of change indicate an unstable economy, causing people to enter and exit the area suddenly. Although residents find this normal, since it has been the pattern for decades, some residents have indicated a desire for a more stable economic base. Much of the variation can be attributed to fluctuations in the mining industry.

TABLE 2.
Rate of Change of population

Year	Lincoln	White Pine	Nye
70-71	-10.05%	- 1.48%	- 12.48%
71-72	- 4.35	3.00	- 4.08
72-73	6.27	- 2.90	9.38
73-74	6.93	- 0.01	3.09
74-75	8.00	1.00	5.66
75-76	3.81	- 3.01	6.30
76-77	- 2.46	-13.81	.17

Source: "Population projections to the year 2000 for the state and its counties" April 1979, State of Nevada, Governor's Office of Planning Coordination.

TABLE 3.
Total Population in the Counties, Selected Years, 1920-1980

	Lincoln	White pine	Nye
1920 1/	2,287	8,935	6,504
1930	3,601	11,771	3,989
1940	4,130	12,377	3,606
1950	3,837	9,424	3,101
1960	2,431	9,808	4,374
1970	2,557	10,150	5,599
1980 2/	3,677	8,184	9,096

1/ NV Statistical Abstract 1979, Governor's Office of Planning Coordination.

2/ Census information, Ely Daily Times, 31 Oct. 1980.

LANDS

Quantifiable Land Use Classes

The Schell Resource Area consists of 5,074,760 acres of land in White Pine, Lincoln and Nye Counties.

Eighty-four percent or 4,288,401 acres is managed by the Ely District BLM. Lincoln County has the largest amount of BLM managed land, followed by White Pine and Nye Counties respectively. Table 4 details the acreages for the various land ownership classes found in the Schell Resource Area.

Urban - Suburban

In the region, Ely, Pioche and Caliente are the only urban areas. There are no urban areas within the Schell Resource Area. Small population centers such as Hiko, Baker, Ursine, and the Sunnyside subdivision are not incorporated but are areas of small population concentrations.

Agriculture

Information gathered from county tax records, air photos and topographic maps identified 32,142.369 acres of agricultural land in the Schell Resource Area.

IRRIGATED ACREAGE WITHIN THE SCHELL RESOURCE AREA BOUNDARIES

TABLE 4

LAND USE (acres)	WHITE PINE COUNTY	LINCOLN COUNTY	NYE COUNTY	TOTAL
CULTIVATED	3,542.74	2,535.276	438	6,516.016
PASTURE	14,937.11	7,598.243	560	23,095.353
D.L.E.	2,531	-0-	-0-	2,531
TOTAL BY COUNTY	21,010.85	10,133.519	998	32,142.369

Source: 1980 County Tax Assessors records and BLM map records.

The short growing season severely limits the kinds of crops that can be grown in the resource area. Alfalfa is the only commercial crop produced in the area. The alfalfa grown is an important feed source for ranch operators' livestock and a small amount is exported to Japan. 1/

Utility System

There are approximately 370 miles of electric power transmission lines and 198 miles of telephone lines in the Schell Resource Area. Only one 230 KV line exists at present with a number of 69 KV lines supplying power to agriculture areas. Less than 1% of these utility lines are on lands other than public lands. 2/

1/ Personel interview, rancher, July 1980.

2/ Unit Resource Analysis Step 3 Bureau of Land Management Ely Office.

SCHELL RESOURCE AREA LAND ACREAGE
LAND TYPES WITHIN THE SCHELL RESOURCE AREA BY COUNTY[1/]
TABLE 5

	BLM Managed[2] Land	Forest Service[3] Land	National Park[2] Lands	Private[2,4] Lands	Indian Reservation[2] Land	State[5] Land	With-[2] Drawn	*FAA-BLM Agreement[2]	*Public Water[2] Reserves	TOTAL	County as a % of Resource Area
White Pine County	1,479,594	575,000	640	86,274	66,296	-0-	166	-0-	801	2,207,970	43.6%
Lincoln County	2,246,200	-0-	-0-	34,635	-0-	1,177	-0-	80	430	2,282,012	45.1%
Nye County	550,296	-0-	-0-	8,852	-0-	9,942	5,542	-0-	40	574,632	11.3%
TOTAL	4,276,090	575,000	640	129,761	66,296	11,119	5,708	80	1,271	5,064,614	
Type of Ownership as a % of Resource Area	84.4%	11.4%	.01%	2.6%	1.3%	.2%	.1%	.002%	.03%		

* columns marked with an asterisk are included in the BLM Land totals.

Footnotes Table 5.

1/ Acreages on this table were computed digitally and may not correspond to the master plats.

2/ Bureau of Land Management Master Title Platts and U.S. Geological Service 7½' Quadrangle Maps for the S.R.A., various years.

3/ Forest Service Acreage and Private land acreage within Forest Service administrative boundaries was obtained from the Humboldt National Forest Service.

4/ Private land can be broken into three types: private land within BLM land (115,943 acres), private land within Forest Service land (9,781 acres) and private land within Indian Reservation land (4,037 acres).

5/ Acreages obtained from information provided by the Nevada State Parks Division and from the W.E. Kirch Wildlife Management Plan, Resource Inventory and Long Range Plan Summary by Larry Barngrover, State of Nevada State Board of Fish and Game Commissioners and Department of Fish and Game (Carson City: 1974).

Other Land Uses

Six communication sites totaling about 20 acres are currently under lease from the Bureau of Land Management. Under the Recreation and Public Purpose Act (R&PP) there are a number of areas: Lehman Caves occupies 640 acres of land; the Snake Creek Fish Hatchery managed by the Nevada State Fish and Game Department contains 200 acres; south of Baker is a 20 acre parcel used for a sanitary landfill; the White Pine School District has 10 acres east of Major's Place; in Eagle Valley, the Nevada State Division of Parks manages about 350 acres; and the town of Pioche was issued a patent for 380 acres of land for a golf course, rodeo grounds and a camp ground. The Wayne Kirch Wildlife Management Areas has 200 acres of public land acquired under the Recreation and Public Purpose Act and an additional 5,593 acres of public land reserved through a BLM protective withdrawal. The Pioche Rod and Gun Club has two parcels of land which they obaained under the R&PP Act. One 5-acre parcel has cabins on it; on the other 10 acres a picnic area has been established.

Nonquantifuable Land Uses

The lands within the Schell Resource Area, except for some small scattered parcels, are classified under the Classification and Multiple Use Act. The Bureau of Land Management also cooperated with the State of Nevada in the closing of federal lands to the filing of petitions for classification, and applications for entry, under the Homestead Desert Land, and Pittman Laws (43 USC Chapters 7, 9, and 10) for public lands in Nevada. The cooperative agreement was in effect from 1964 to 1978.

The Federal Land Policy and Management Act of 1976 (Public Law 94-579), also known as the Organic Act, repealed certain statues and parts of statutes listed under the homestead laws, laws related to disposal, and various other settlements laws. This act was promulgated for the retention of federal lands unless, as a result of land use planning as provided for in the act, it is determined that disposal of a particular parcel will serve the national interest.

The Desert Land Entry Act and statutes were not repealed by the Organic Act. The State of Nevada, wanting to see more land in the hands of the public, asked the BLM to reopen the Desert Land Entry Program. On January 1, 1979, the BLM opened the public lands in Nevada to applications under the Desert Land Entry Act. Some of the land applied for under the Desert Land Entry Act will in time be patented to applicants who have used the land for agricultural purposes.

Regional Trends

There are three factors that will influence the trends of this region. First is the location of an electronic firm in the City of Ely. The firm was given $5 million by the State of Nevada to move its factory and operations to the Ely area. Second is the proposed coal fired electric generating plant which will be located north of Ely. News releases indicate that plans for the location and construction of the plant are moving along smoothly.

The largest trend setting project is the proposed MX Missile system. The system, as

The largest trend setting project is the proposed MX Missile system. The system, as

now proposed by the Air Force, will cover half of the Ely District along with parts of the Battle Mountain and Las Vegas Districts. Only half of the system will be in Nevada - the other half will be located in Utah. The MX project will bring in large numbers of people during construction and afterwards there will be an increase in the population due to those people needed to operate the system.

These three factors will change the current trend in White Pine County. Currently the economy has been readjusting to the sudden withdrawal of a major employer in the county, Kennecott Copper Corp. Both employment and population have been declining since the 1978 mine closure. Whether they will continue to decline or have reached an equilibrium point is uncertain at this time. The county is actively trying to attract industry to reverse the downward trend of the economy. Any one of the three possibilities will attract people into the region. This increased population will lead to increased use of public lands.

Significance

Tables 6 through 9 illustrate the significance of different categories of land use in providing for income and employment in the region and in the individual counties in 1978. The urban and suburban land use category contributes to the majority of the income and employment in the region. Each county in the region is shown in a separate table, so that the economies of the counties can be examined, as well as the economy of the region. The county economies differ from the regional economy in their dependence on certain sectors of the economy for income and employment. Industries can be grouped together by type, to produce sectors, which make up an economy. The income and employment generated by the industries that fall within a sector are said to be generated by that sector. Thus, the impacts of industries on an economy can be measured by examining the sector the industry is in, without trying to examine each industry separately. The following paragraphs relating to significance are based on the information in Tables 6, 7, 8 and 9.

The service sector is the major employer and income generator in the region, in the state and in Nye County. However, this sector ranks third in providing income to the economy in Lincoln County and ranks third in providing employment in White Pine County. The service sector is not one of the four largest employment categories in Lincoln County or the four largest income generating categories in White Pine.

The importance of the service sector as an income and employment generator in the region has declined slightly from 1972 to 1978. In 1972, the services sector provided 44% of the employment and 54% of the income, compared to 40% of the employment and 47% of the income in 1978. The decline in the service sector in the region is caused mainly by the decline of the importance of the service sector in the Nye County economy.

There, the service sector has dropped, from providing 80% of the income to providing 68% of the income and from contributing 71% of the county employment to contributing 60% of the county employment. Conversely, in White Pine County the service sector is increasing in importance as an employer, reflecting that county's readjustment to a reduction in mining.

The governmental sector makes the second largest contribution to employment in the region and the third largest contribution to income. State and local government makes up the majority of the government sector in the region, although in Nye County the civilian and military Federal Government employment and income is equivalent to the state and local government employment and income. State and local government is the majority of the government sector in the state also. The government sector has maintained its ranking in the four largest income and employment sectors in the regional economy from 1972 to 1978, however, the percentage contribution to regional income has increased from 12% in 1972 to 15% in 1978.

TABLE 6.

TOTAL REGIONAL LAND USE RELATED INCOME AND EMPLOYMENT IN 1978

	EMPLOYMENT		INCOME 2/	
	PERSONS 1/	PERCENT	$1000	PERCENT
URBAN AND SUB-URBAN LANDS:				
CONSTRUCTION	139 3/	1.4%	4,161 3/	2.4%
MANUFACTURING	429 3/	4.4%	8,659 3/	4.9%
TRADE	1,150	11.7%	11,178 3/	6.3%
F.I.R.E. 4/	209 3/	2.1%	3,065 3/	1.7%
SERVICES	3,900	40%	83,700	47.4%
GOVERNMENT	1,810	18.4%	26,608	15.1%
OTHER	34 3/	0.3%	563 3/	3%
SUB TOTAL	7,671	78%	137,934	78.2%
AGRICULTURAL LANDS:				
AGRICULTURE	430	4.4%	3,327	1.9%
UTILITY:				
TRANSPORTATION AND PUBLIC UTILITIES	300	3.1%	7,159	4.1%
MINERALS:				
MINING	1,430	14.5%	27,991	15.9%
TOTAL	9,831	100%	176,411	100%

1/ Nevada Employment Security Department, Balance of State Area Labor Review, Fall 1979.

2/ Regional Economics Information System, Bureau of Economic Analysis, 1979.

3/ Estimates calculated by BLM, Ely; acutal figures withheld to avoid disclosure of confidental data.

4/ Finance, Insurance and Real Estate.

TABLE 7.

WHITE PINE COUNTY LAND USE RELATED INCOME AND EMPLOYMENT IN 1978

	EMPLOYMENT		INCOME 2/	
	PERSONS 1/	PERCENT	$1000	PERCENT
URBAN AND SUB-URBAN LANDS:				
CONSTRUCTION	110	3.4%	1,762 3/	3.9%
MANUFACTURING	340	10.4%	7,391	16.4%
TRADE	700	21.4%	6,888	15.2%
F.I.R.E. 4/	80	2.5%	1,017	2.3%
SERVICES	460	14.1%	4,460	9.9%
GOVERNMENT	830	25.4%	9,835	21.8%
OTHER	14 3/	.4%	233 3/	.5%
SUB TOTAL	2,534	77.6%	31,576	69.9%
AGRICULTURAL LANDS:				
AGRICULTURAL	160	4.9%	3,399	7.5%
UTILITY:				
TRANSPORTATION AND PUBLIC UTILITIES	160	4.9%	1,301	2.9%
MINERALS:				
MINING	410	12.6%	8,897	19.7%
TOTAL	3,264	100%	45,173	100%

1/ Nevada Employment Security Department, Balance of State Area Labor Review, Fall, 1979.

2/ Regional Economics Information System, Bureau of Economic Analysis, 1979.

3/ Estimates calculated by BLM, Ely; actual figures withheld to avoid disclosure of confidential data.

4/ Finance, Insurance and Real Estate.

TABLE 8.

LINCOLN COUNTY LAND USE RELATED INCOME AND EMPLOYMENT IN 1978

	EMPLOYMENT 1/		INCOME 2/	
	PERSON	PERCENT	$1000	PERCENT
URBAN AND SUB-URBAN LANDS:				
CONSTRUCTION	9 3/	.8%	105 3/	.6%
MANUFACTURING	9 3/	.8%	105 3/	.6%
TRADE	150	13.3%	1,479	8.5%
F.I.R.E. 4/	9 3/	.8%	105 3/	.6%
SERVICES	80	7.1%	1,744	10%
GOVERNMENT	400	35.6%	5,248	30.2%
OTHER	18 3/	1.6%	8,998	51.8%
AGRICULTURAL LANDS:				
AGRICULTURAL	100	8.0%	916	5.3%
UTILITY:				
TRANSPORAATION AND PUBLIC UTILITIES	50	4.4%	1,454	8.4%
MINERALS:				
MINING	300	26.7%	6,001	34.6%
TOTAL	1,125	100%	17,369	100%

1/ Nevada Employment Security Department, Balance of State Area Labor Review, Fall 1979.

2/ Regional Economics Information System, Bureau of Economic Analysis, 1979.

3/ Estimates calculated BLM, Ely; actual figures withheld to avoid disclosure of confidential data.

4/ Finance, Insurance and Real Estate.

TABLE 9.

NYE COUNTY LAND USE RELATED INCOME AND EMPLOYMENT IN 1978

	EMPLOYMENT 1/		INCOME 2/	
	PERSONS	PERCENT	$1000	PERCENT
URBAN AND SUB-URBAN LANDS:				
CONSTRUCTION	120	2.2%	294	2%
MANUFACTURING	80	1.4%	1,163	1%
TRADE	300	5.4%	2,811 3/	2.5%
F.I.R.E. 4/	120	2.2%	1,943	1.7%
SERVICES	3,360	60.6%	77,496	68.1%
GOVERNMENT	580	10.5%	11,525	10.1%
OTHER	2 3/	.03%	128	.1%
SUBTOTAL	4,562	82.3%	97,360	85.5%
AGRICULTURAL:				
AGRICULTURAL	170	3.1%	1,110	1%
UTILITY:				
TRANSPORTATION AND PUBLIC UTILITIES	90	1.6%	2,306	2%
MINERALS:				
MINING	720	13%	13,093	11.5%
TOTAL	5,542	100%	113,869	100%

1/ Nevada Employment Security Department, Balance of State Area Labor Review, Fall 1979.

2/ Regional Economics Information System, Bureau of Economic Analysis, 1979.

3/ Estimates calculated by BLM, Ely; actual figures withheld to avoid disclosure of confidential data.

4/ Finance, Insurance and Real Estate.

In White Pine County, the government sector provides 22% of the county income and 25% of the county employment, making it the largest contributor to income and employment. This contrasts with 1972, when government ranked second to mining. In Lincoln County, the government sector ranks second, with 30% of county income, but ranks first in employment, contributing 35% of the county's employment. This differs from 1972, when government ranked first in providing income and employment to the county economy. However, the mining sector has increased substantially since 1972. In Nye County, the government sector ranks third in income and employment contributed to the economy, with 10% of both. The government sector has increased the percentage it contributes to county income since 1972, but has decreased its ranking because of an increase in mining's contribution to income. The government sector's ranking in employment has decreased from 1970 to 1978, as has its percentage contribution. Again, the government sector was 'bumped' out of its ranking by an increase in the mineral sector's employment.

The minerals sector contributes the second largest share of income to the region (16%) and the third largest share of employment (14%). This compares to 1972, when the rankings were the same, although the percentage contributions have increased slightly over that time. The minerals sector is much more important to the regional economy than it is to the state economy, where it contributed only 1% of employment and 1.5% of income.

The minerals sector varies in importance in the county economies. In Lincoln County, it ranks first in providing income, contributing 34% of county income. The minerals sector provides 26% of county employment, ranking it second in the percentage of employment provided by each sector to the economy. This is a marked contrast to 1972, when the minerals sector contributed only 3.6% of employment and .8% of income. Obviously, mining activity has increased in Lincoln County. Conversely, mining activity has decreased in White Pine County. In 1972, the minerals sector had the largest proportion of both county income and employment (30% and 25% respectively). In 1978, the minerals sector dropped to the second largest provider of income (19%) and the fourth largest contributor of employment (12%). This has resulted mainly from Kennecott Copper Corporation's closure of their mine in Ruth and reduction in staff of their smelter in McGill. In Nye County, the minerals section contributes 11% of the county income and 13% of the county employment. The minerals sector ranks second in the percentage of county income and employment it generated in 1978. In 1972, the minerals sector ranked third, contributing 4% of income and 5% of employment. The 1978 figures show part of a continuing upswing in mining activity in the county.

The fourth largest contributor to income and employment in the region is the trade sector. Twelve percent of the employment and six percent of the income in the region is in this sector. The trade sector has held steady in its ranking from 1972, when it was also fourth in rank. State wide, the trade sector is more important to the economy, contributing 18.7% of state employment and 15% of state income in 1978.

The trade sector also ranks fourth in Nye County, where it contributes 2% of the income and 5% of the employment. In 1972, the trade sector also ranked fourth, although it contributed only 4% of county employment. In White Pine County, the trade sector contributes 15% of county income, ranking it the fourth largest contributor to income. The trade sector provides 21% of county employment, ranking it second in employment. It increased in ranking in employment from 1972, from third largest to second largest. The trade sector in Lincoln County contributes 8% of county income and 13% of county employment. This sector ranks fourth in providing county income and third in providing county employment. This contrasts with the situation in 1972, when the trade sector

ranked second in providing income and employment (15% and 19% respectively).

To recap the situation, within the region, the major provider of employment is the service sector (40%), followed by the government sector (18%), the minerals sector (14%) and the trade sector (12%). This ranking order was the same in 1978 as it was in 1972, although the services sector was contributing 4% less employment in 1978 than it was in 1972. The minerals sector and the trade sector are contributing 1% more to regional employment than previously. The ranking order for income within the region shows the service sector first with 47% of the total regional income, the minerals sector second with 16%, the government sector third with 15% and the trade sector fourth with 6%. This order also agrees with the 1972 ranking order for the regional economy. However, at that time, the services sector provided 54% of the regional income and the minerals and government sectors provided 12% each. The region is exhibiting a decreased reliance on the service sector for income and employment and an increased reliance on other sectors.

The agricultural sector, although not a major sector of the regional economy, has increased its percentage of employment in the region since 1972. Agricultural sector employment has gone from 2.2% of the regional total in 1972 to 4.4% in 1978. This trend toward increased agricultural sector employment is also apparent in White Pine and Nye Counties, but not in Lincoln County. In Lincoln County, the percentage contribution of both employment and income in the agricultural sector has decreased from 1972 to 1978. The percentage contribution to total income has decreased in Lincoln and White Pine Counties and in the region from 1972 to 1978. The percentage in Nye County has remained stable.

In the Lincoln County economy, the government sector is the major employer (35% of total) and the minerals sector is the major contributor to income (34%). The government sector is the second largest generator of income coming from this sector, and the minerals sector is the second largest generator of employment, with 26%. The third largest income generator is the service sector, with 10% of the county total and the fourth largest sector is the trade sector, with 8% of total county income. Returning to employment, the third largest sector in this category is the trade sector (13%), followed by the agricultural sector (9%). Lincoln County has experienced a vast increase in the minerals sector since 1972. At that time, the four major sectors in the economy were the government, the trade, the service and the agricultural sectors. This indicates that in 1972 Lincoln County was in the downswing of the minerals industry cycle and that it is currently in the upswing part of the cycle.

In the White Pine County economy, the government sector is the major sector, with 22% of the income and 25% of the employment. The minerals sector is the second largest contributor to income in the county (19%), the manufacturing sector is the third largest (16%) and the trade sector is the fourth largest income generating sector (15%) in White Pine County. The trade sector is the second largest provider of employment in the sounty, generating 21% of total county employment. The service sector is third with 14% and the minerals sector is fourth with 12% of county employment. The minerals sector's place in the county economy has changed substantially in the last six years. It was the major sector of the economy in 1972. Between 1972 and 1978 a major employer in the minerals sector substantially reduced operations in the county, forcing the economy to adjust to the loss. The 1978 economy reflected this readjustment. The county is attempting to bring new industry, principally in the manufacturing sector, into the county.

In Nye County, the service sector generates the majority of the income (68%) and the employment (60%). The minerals sector is second, contributing 11% of the income and 13% of the employment. The government sector is third with 10% of income and employment and the trade sector is fourth. Since 1972, the service sector has decreased in

importance and mining has increased in importance. The military base in Nye County contributes to both the government and the service sectors.

Within the Schell Resource Area, the agriculture and the minerals sectors generate the majority of the income and the employment. The majority of the income leaves the resource area, because most goods and services must be procured from outside the resource area. The Schell Resource Area contributes to the economy of the region by providing jobs in the minerals, agricultural and government sectors. The resource area's chief contributions is as a resource base for basic economic activities to take place - for the production or growth of raw materials to be exported and/or manufactured.

Additional Analysis

The population density in the region is 1146.7 acres per person, based on 1980 Census estimates received from the State Planning Office. Population density in Lincoln County is 1342.2 acres per person, 2.88 square miles per person or .3 persons per square mile. Population density in Lincoln County has fluctuated from .2 to .4 persons/square mile since 1920.[1/] It has been .2 persons/square mile since 1950. White Pine County's population density is 695 acres per person, 1.09 square miles per person or .9 percent persons per square mile. This figure is the lowest population density since 1920 and is the first drop in a population density that has been steady since 1950. The majority of the drop can be attributed to Kennecott Copper Corporation's shut down of most operations in White Pine County. Population density in Nye County is 1271 acres per person, 1.99 square miles per person or .5 persons per square mile. Nye's population density is the highest ever since 1920. The population density within the boundaries of the Schell Resource Area is 10,089 acres/person, 15.8 square miles/person or .063 persons/square mile. In other words, each person living in the SRA has approximately one half of a township to live in, if the people were evenly spaced over the resource area. There are 282 farms with irrigated land in the region, (1978 Census of Agriculture). With an average of 2.93 persons per household and 84,204 acres of irrigated land in the region, population density is 6 people per square mile.

The population/employment ratio for the region, based on a 1978 regional population of 19,100 persons, is 3.08 people per employed individual.[2/] The employment figure used for this ratio reflects employees by county of residence, not county of work. This distinction is important, because Nye County has a large work force that is employed in Nye but resides in other counties.

Local Demand Analysis

There has been an interest expressed by various parties in approximately 10,000 acres of BLM managed public lands in the Schell Resource Area (SRA Realty Specialist, 1980). Purposes for the land range from buying a gravesite to building a gas station, and include expanding ranch base properties and building a subdivision near Baker. Several people have inquired about lots for summer and retirement homes in the Snake Valley, including the individual who would like to build a subdivision. This 10,000 acres is only one fourth of one percent of the resource area. The realty specialist feels that,

1/ Calculated from information in the 1979 Nevada Statistical Abstract Governor's Office of Planning Coordination, State of Nevada and from the SRA's Realty Specialist

2/ Calculated from information in the Nevada Area Labor Review, Balance of State, Fall 1979, Nevada Employment Security Department and the 1979 Nevada Statistical Abstract, Governor's Office of Planning Coordination.

if the land were more easily available, there would be a greater demand than presently exists. The major sources of demand are people wishing to expand their property or trying to buy land for summer or retirement homes.

Often, population growth is used as an indicator for (expected) future demands. Current projections from the State Planning Coordinator's Office predict a 5% rate of growth to 1990 in the region and the resource area. Given the small current population, the low projected growth rate and the current amount of private land in the SRA, local demand for the public lands should remain low.

Public Purposes

"The overwhelming quantity of public land in the planning unit creates situations that elude rigid analysis, but still bear heavily on proper planning. One concern of the planning unit residents is the land area subject to property tax. Their basic goal is to maximize this acreage. Since the acquisition of public land by individuals is difficult, the primary means of maximizing the taxable property base is to utilize public land for all public projects to avoid reducing the acreage of privately-owned land. Public purpose projects are normally exempt from property taxes; therefore, it would not serve the County's purposes to allow private land to be dedicated to any use that can be accommodated by the Recreation and Public Purpose Act on public land. This is especially true since public land is readily available for public projects.

Consequently, demand for land for public purposes has been almost constant. Although this demand will be influenced by population increases in the planning unit, it is not necessarily a direct relationship. For instance, the number of sanitary landfill sites (in Lincoln County) could conceivably decrease since growth could make it economically feasible to operate one or two regional sites rather than four or five local dumps." (Caliente P.A.A. BLM, Las Vegas District, 1978).

Agricultural Lands

In both Linoln and Nye Counties, the acreage in agricultural land has decreased from 1974 to 1978. In White Pine County it has increased from 231,248 acres to 248,732 acres. If the trend increases, in 1990 there will be a demand for 61,130 additional acres for farms in White Pine County. If this is prorated to reflect the 43.4% of the county that is in the resource area, then 26,530 acres will be demanded from the resource area in White Pine County. How much of this demand will materialize will depend on the amount of water available. Water withdrawals must be cleared through the state and several valleys in the resource area have been designated closed to surface drainage. Drilling and pumping wells is an expensive undertaking. Expansion of agricultural lands in the Schell Resource Area will thus be limited by both the faltering demand in Lincoln and Nye Counties and the availability of water in the area.

Public Attitudes and Social Values

Residents of the area expressed concern and respect for the land.[1/] They do not want to see the land degraded. They also wanted to see the area remain as it is. Slow to moderate growth of the towns was expressed as desirable time and time again. Several people mentioned that one of the things that could drive them out of the area would be a large increase in population.[2/] This attitude is also expressed in results of a statewide survey conducted by the Governor's Commission of the Future of Nevada.

Some concern with the feasibility of the Desert Land Entry (DLE) Program was indicated in the P.A.A. interviews. One rancher pointed out that parts of the SRA do not have long enough growing season for DLEs to be successful. Another rancher felt that since the availability of water is so critical to a successful DLE, only those people who have the capital to drill a well and pump water should be given DLEs.

A major concern with some people is the length of time it takes for people or towns to acquire public land. One individual pointed out that it takes about four years for the town to acquire title to public lands for growth purposes. He was concerned that if the town experienced a sudden boom, it would be land-locked by the public lands and be unable to acquire any public lands to relieve the population pressure. He would like to find some way to speed up the process of transferring public land to private individuals and to towns.

1/ 23 interviews conducted for PAA in the summer and fall of 1980.

2/ A large increase constituted anywhere from several thousand more people to 10,000 or more people

WILDERNESS

Background

The Wilderness Act of 1964 mandated a review of all Forest Service, Fish and Wildlife Service, and Park Service lands for wilderness characteristics and possible wilderness designation. The physical characteristics which an area must have to be called wilderness are outlined by the Wilderness Act:

1) An area must have at least 5,000 roadless, contiguous acres of land. (Exceptions may be made when (a) an area is contiguous with lands administered by another agency which have been determined to possess real or potential wilderness characteristics; or (b) strong public support exists for study of an area that is less than 5,000 acres in size; or (c) an area is contiguous to another area less than 5,000 acres in size administered by another agency, and the combined size of the two is greater than 5,000 acres).

2) An area must be in a generally natural condition, that is, it must appear "to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable."1/

3) An area must have an outstanding opportunity for either solitude or a primitive and unconfined type of recreation.

4) An area "may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value."1/

In 1976 the Federal Land Policy and Management Act (FLPMA) made the Wilderness Act applicable to the Bureau of Land Management and the 450 million acres of public land which it administers, with a few exceptions. (See the Wilderness Inventory Handbook, September 27, 1978, p. 4, Department of Interior publication). FLPMA instructs that the BLM complete a wilderness review by 1991 of all unappropriated lands under its administration. The Secretary has shortened this time frame by setting a deadline of 1987 instead of 1991. FLPMA also instructs that a review be made of all previously designated Natural Areas and Primitive Areas by July 1, 1980.

An initial and an intensive wilderness inventory have been conducted in the Ely BLM District. The result of this inventory phase and the public comment period which followed is that 8 units containing 328,000 acres have been designated as wilderness study areas. Each wilderness study area has been protested as have several areas dropped from further consideration, so the number of units and the acreage to undergo wilderness study are not final and will not be final until all protests and appeals have been answered. An additional five units containing 306,700 acres were designated as wilderness study areas as the result of a special accelerated inventory conducted for the Intermountain Power Project. All wilderness study areas and areas under protest are subject to management guidelines and restrictions as outlined by the Interim Management Policy and Guidelines for Lands Under Wilderness Review.

1/ Wilderness Act.

Public Attitudes

The Ely District Office and its wilderness staff have made efforts to inform and involve the public throughout the wilderness review process. Public meetings and workshops as well as less formal briefings with county commissioners, civic groups, and permittees have been held during all phases of the review. Many of the people interviewed (Planning Area Analysis Interviews, summer 1980) felt that wilderness is a worthwhile concept, but did not agree with the manner in which the Bureau of Land Management is carrying out the program. Suggestions for improvement of the Wilderness Program varied. Most suggestions dealt with loosening some of the restrictions imposed by the Interim Management Policy and Guidelines for Lands Under Wilderness Review. Trappers, hikers, and prospectors were all concerned with access, specifically with vehicular use in lands under wilderness review. Concern over erosion control was also mentioned. Several people felt that the interim management policy should not infringe on grazing rights or future mining activities. Other individuals felt that only very remote, rocky areas should be wilderness areas. Another concern was the changeable nature of the wilderness program policies and procedures. They felt that a great deal of confusion could have been avoided if the inventory procedures had been in a final form before the field work was performed. During the initial phases, especially during the initial inventory, wilderness meetings drew many interested individuals, some of whom vociferously opposed the concept of designated wilderness. As the review process proceeded, as the number of acres under wilderness review grew fewer and fewer, the opposition to and interest in the wilderness program grew correspondingly weaker.

A public workshop held in Ely on January 14, 1980 to inform the public of the results of an inventory conducted on five Instant Study Areas drew no attendance. A very key public workshop held in Ely on April 17, 1980 to discuss the results of the intensive inventory drew six persons. A possible explanation of this downward trend in public interest is that, as the wilderness review has progressed, more and more of the usable land -- especially grazable land -- has been eliminated from consideration. In meetings with permittees in Lincoln County, the wilderness staff encountered an unconcerned, even apathetic attitude toward WSA recommendations because these recommendations involve mainly high, rugged country in which the permittees have no interest.

Another factor which may help account for decreased public interest in the wilderness program is the appearance of what is perceived as a much greater issue on the horizon -- the MX missile. The changes to the eastern Nevadan way of life that would result from MX deployment cause the inconveniences of wilderness to dwindle in comparison. The resources of the critical public have thus been diverted from wilderness to MX.

A third possible cause of decreased criticism of the wilderness program is that the public is gradually coming to understand the program and its impacts. The rancher especially realizes that the wilderness program will have little effect on his allotments. This realization comes as a result of constant consultation between the BLM and affected ranchers.

Publics Affected

a. Ranchers, as mentioned above, have come to better understand the wilderness program and therefore are less opposed to the idea of wilderness. This is not to say that there is no opposition from ranching interests. A letter from the Nevada Cattlemen's Association dated November 28, 1980 objects to every WSA designation made by the State Director.

b. Mining concerns are still generally opposed to the concept of wilderness. They would prefer that all lands be free of restrictions imposed by the wilderness program. Most in-office dealings with mining concerns have been amicable, due in part to a willingness on both sides to work around obstacles and in part to the fact that the lands found by the BLM to possess wilderness characteristics are so rugged that even mining use is often too difficult or is economically unfeasible.

c. Conservationists are few and far between in the Ely District and carry a very faint voice. Much more vocal conservationist groups outside of the district have concerned themselves with the wilderness program in Ely. Almost every comment from members of these groups has identified areas which were found to lack wilderness characteristics by the wilderness staff but which the conservationists believe do possess wilderness characteristics. Some conservationists have accused the BLM of siding with mining interests, others have alleged that the BLM has allowed the development of MX to affect its wilderness recommendations.

d. Hunters are little concerned with the wilderness program at this stage of the review since the interim management policy for lands under wilderness review allows hunting and permits vehicular travel over existing ways and trails in lands still under wilderness review.

e. A large number of unaffected individuals know little or nothing about the BLM's wilderness program. These persons have no direct stake in the process and have not become involved.

MINERALS

The Ely District is an area of alternating mining boom and bust cycles. The White Pine County portion of the area has been experiencing a bust period. With the reopening of some old mines and the starting of several new ones, a transition to a boom period is indicated. Responsible in large part for this are the high prices for gold and silver, one or both of which will be mined at the newly opened or reopened mines.

The Lincoln County portion of the Schell Resource Area has experienced relatively stable mining activity in the last few years, with an upswing likely. Operations have begun at one mine, and several other companies may locate in the area. Numerous small claims have been filed in that area recently. It has been rumored that Kerr-McGee may reopen the mill at Pioche, permitting the smaller miners to use it for ore processing. This would most likely increase the number of small operators working claims in the area, because presently only the Atlanta Mine and Kennecott Smelter are available for processing small operators' ore. The high cost of transporting small amounts of ore out of the area prohibits many miners from working their claims.

Leasable Minerals

Leasable minerals in the resource area are oil and gas, geothermal steam, sodium and potassium. Commercial quantities of sodium and potassium have not yet been found in the resource area although the geology of the area indicates their probable presence. None of the many oil and gas leases in the Schell Resource Area have resulted in production; neither is there presently any geothermal steam production. None of the seventeen oil and gas wells drilled have recovered economic quantities although some shows have been reported. Potential reserves in the resource area cannot be estimated because of this.

There exists a slight possibility for production of geothermal steam in the resource area although no Known Geothermal Resource Areas (KGRA) have been identified at this time. Because no geothermal steam leases have been issued and no explorations have been conducted, potential reserves cannot be estimated. The Schell Resource Area has four areas classified prospectively valuable for geothermal, and thirteen known warm water springs. But no geothermal steam development is expected to begin until more favorable areas in the state have been evaluated and the geothermal technology has been improved. At present, it appears that geothermal use will be slight, with most use being for private home heating and the heating of greenhouses. 1/

Geophysical and other forms of exploration, as well as exploratory drilling for oil, gas and geothermal steam, can be expected in the near future. (Oil and gas exploration is now being conducted heavily in the area.)

1/ Source: Geothermal overlay, Unit Resource Analysis, Steps 3 and 4 and the Minerals Inventory by Terra Data, which can be found in the BLM files.

TABLE NO. 10

SUMMARY OF REPORTED OIL AND GAS WELLS

Location[1] (Section-Township-Range)			Name[1]	Date[2] Drilled	Depth[2] Drilled	Remarks[1]
20	26 N.	70 E.	Dennision Fed. No. 1	1954	4,702 Ft.	Dry
24	15 N.	66 E.	Boston Creek No. 1	1978	4,761	Dry
20	12 N.	67 E.	Fed. No. 1-20	1979	5,957	Dry
33	8 N.	61 E.	Federal No. 1	1968	4,350	Dry
17	8 N.	62 E.	Gose "DL"	1968	7,067	Dry
5	8 N.	60 E.	GB Core No. 10A	1970	800	Dry
4	8 N.	61 E.	Shingle Pass No. 1	1971	6,333	Dry
28	8 N.	61 E.	Supron Energy Corp.	1980	4,225	Dry
33	6 N.	61 E.	Gose "EU"	1968	5,690	Dry
7	6 N.	62 E.	Gose "FQ"	1968	3,980	Dry
2	7 N.	61 E.	White River No. 1	1976	10,473	Some shows
4	7 N.	62 E.	Gose "BZ"	1968	7,000	Dry
19	2 N.,	60 E.	American Quasar	1979	7,706	Some shows
29	7 N.	63 E.	G.B. Core No. 13	1970	488	Dry
19	7 N.	64 E.	Cave Valley No. 1	1966	7,024	Dry
17	1 S.	60 E.	Nevada Federal CM	1966	2,434	Dry

1) Information contained in Ely BLM files.

2) Information from the Nevada Bureau of Mines, Reports 18 and 19, and List L 4.

BLM's role in the administration and development of leasable minerals within the Schell Resource Area is the timely issuance of leases, rights-of-way, and permits, and the monitoring of the exploration activities for compliance with the stipulations for environmental protection. A further role is to ensure that any closure of lands to mineral exploration and development be kept to a minimum, and that when lands are withdrawn, such action be thoroughly documented and justified.

Locatable Minerals

Locatable minerals are those minerals not considered leasable or salable. An accurate listing of locatable minerals is not possible, since some locatable minerals are determined through court action or by date of location. Gold, silver, tungsten, lead, zinc, and copper (i.e. hard metal minerals) are all locatable minerals that have been produced in the resource area. Perlite is a locatable mineral that has also been produced in the resource area in the past. There has been some production of copper in the past, but there is no current production in the resource area. Lead and zinc have also been produced in the resource area; future production is possible. Silver and gold deposits are sometimes associated with those of lead and zinc. Such deposits are presently inactive. Perlite is used for insulation and building material, and was at one time produced in the resource area, north of Pioche. Future production may occur if market conditions again become favorable. Gold, silver and tungsten are the only locatable minerals currently being produced in the resource area.

Most of the known reserves of locatable minerals in the area are on patented claims. Since so little of the Schell Resource Area is private land, the majority of future mineral exploration will be on public lands. Although most, if not all, of the current mineral production is on private land, future expansion will be onto public lands; there is simply nowhere else to go. Under present mining laws, BLM has little or no control over the location of mining claims. The BLM takes no active role in encouraging exploration for or development of locatable mineral resources. The BLM is charged with the responsibility for determining the validity of mining claims, for evaluating mining plans, for approving mining patents and for prosecuting cases of suspected mineral trespass when and where such cases and actions involve public lands under its jurisdiction.

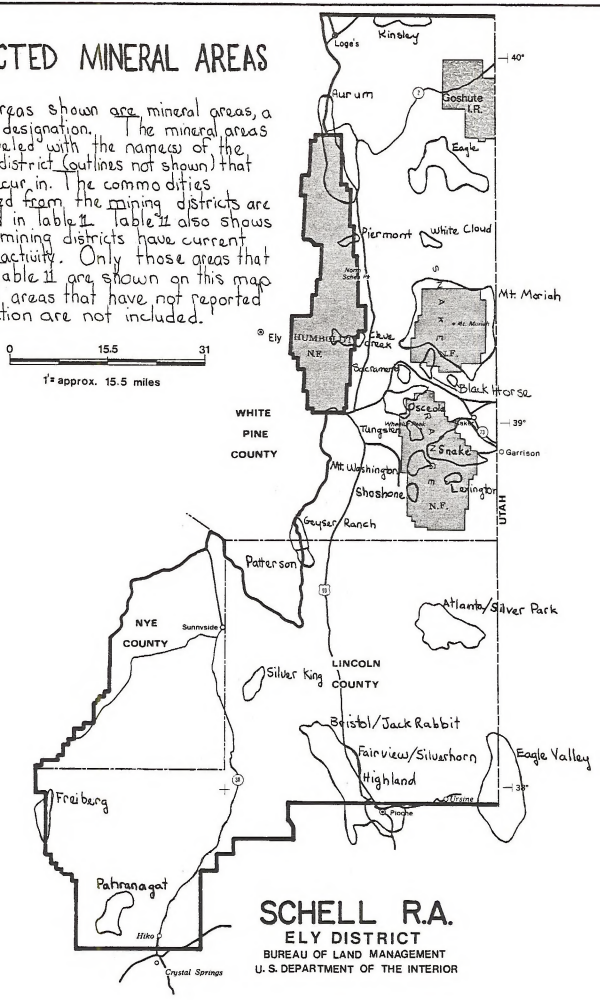
Tables 2 and 3 summarize the past production and use consumption of mineral commodities available within the Schell Resource Area. Most of the gold and silver production is through open pit mining. Tungsten is produced by mining lode veins underground.

With the recent rise in gold and silver prices, gold and silver production is expected to greatly increase in the Schell Resource Area. Currently, most of the gold silver production in the resource area is from the Atlanta Mine. 1/ Indications are that the Freiberg, Silver Park, Silverhorn, Osceola, Aurum, Taylor and Cleve Creek Districts will soon be reporting production. 1/ No reserve figures have been made

1/ Robert Woods, Geologist, BLM, Ely District.

SELECTED MINERAL AREAS

The areas shown are mineral areas, a BLM designation. The mineral areas are labeled with the name(s) of the mining district (outlines not shown) that they occur in. The commodities produced from the mining districts are detailed in table I. Table II also shows which mining districts have current mining activity. Only those areas that are in table II are shown on this map. Mineral areas that have not reported production are not included.



SCHELL R.A.
ELY DISTRICT
BUREAU OF LAND MANAGEMENT
U. S. DEPARTMENT OF THE INTERIOR

available for any of these districts. A crude estimate of 300,000 oz. of gold reserves was obtained from seven claims studied in the Osceola District. There is good potential for discovery and development of additional gold and silver deposits within the unit as long as market conditions remain at their present level.

Atlanta Mine is the only gold and silver mine currently in production in the Schell Resource Area. It is an open pit mine located just south of the Lincoln County line. Their rate of production is 150,000 tons/year of gold and silver ore. Mine officials estimate 10 to 14 more years of production from this mine. The ore obtained from the mine is concentrated at Atlanta's mill and the concentrate is sent to Los Angeles to be smelted. Security reasons were cited for not smelting the concentrate in Nevada. Atlanta employs about 55 people at the mine. Their annual payroll was about $811,000 last year and is expected to be about $900,000 this year (telephone interview, September, 1980, John Harmon, Standard Slag Company, Reno, Nevada).

Silver Park has recently completed a mill and a cyanide processing plant. They are expected to begin mining operations soon. Silver Park is another open pit mine, located within a few miles of the Atlanta Mine. They will be producing principally silver and gold. However, if copper prices rise high enough, the copper associated with the gold and silver ore might also be recovered, and the tailings pond may be reworked to extract the copper there. The mine is on private land which the company is leasing from the owner. Silver Park has a seven-year lease, and indicated that they expect the mine to be operable at least that long. No specific production information is available. However, selected samples of ore ran to 100 ounces of silver per ton, and indications were that either the silver or the gold extracted from the mine could easily pay mine operating costs. Silver Park is planning to smelt their concentrate in Canada and to employ from 20 to 25 people at the mine (September, 1980, interview at Silver Park Mine).

Several mining companies are interested in beginning mining operations in the Osceola Mining District. Information is available for two of these companies, Civic Royalty Corp., who utilize placer mining, and Myriad Minerals Resources, who utilize underground mining. Civic Royalty Corporation is planning 15 to 20 years of mining activity on this property and expects to process 1,550,000 yards/year of gold-bearing gravel. Osceola is believed to have "30 million yards of potentially gold bearing gravels*" with "gold finds averaging 0.01 oz. per cubic yard.*" (* The mineral Industry in Nevada Osceola - 1 mining file, Ely BLM Office report from Civic Royalty Corporation, Englewood, Colorado). Myriad Mineral Resources anticipates production of 1,000 tons/month of mainly gold bearing ore. They project an estimate of 15 to 20 employees with an annual payroll of $400,000 (telephone interview, October, 1980, Dave Howell, Myriad Mineral Resources, Ely, Nevada.)

Past production of tungsten within the area was directly related to times of war. Tungsten demand has increased slightly within the last few years and may be high enough to encourage more mining, but tungsten

TABLE 12 TOTAL REPORTED PRODUCTION THROUGH 1968 FOR MINING DISTRICTS IN THE SCHELL RESOURCE AREA [1,2,3,4]

MINING DISTRICT	GOLD ounces	SILVER ounces	COPPER pounds	LEAD pounds	ZINC pounds	TUNGSTEN short tons	MANGANESE short tons	APPROXIMATE VALUE dollars	REPORTED LAST OPERATION	CURRENT STATUS
White Pine County										
Aurum (3)	678	702,069	1,768,197	1,574,254	5,379,853	0	0	$ 1,500,000	1962	some activity
Black Horse (2)	4,655	4,535	179	38,948	44	337	0	110,000	1954	
Cleve Creek (3)	86	363	0	0	0	101	0	5,000	1953	active
Eagle	391	62,711	8,632	1,197,151	1,400	0	0	125,000	active	not active
Geyser Ranch	0	0	0	0	0	47	0	2,500	1956	
Kinsley (3)	102	14,051	65,603	145,204	0	few	0	11,000	1945	
Lexington (2)	0	0	0	0	0	3,500	0	100,000	1942	
Mount Moriah (2)	0	447	6,245	57,429	5,362	0	0	10,000	1963	some activity
Mt. Washington (2)	0	915	16	56,836	0	793	0	25,000	1962	
Osceola	133,665	129,651	1,344	112,422	11,832	550	0	3,340,000	active[7]	active
Piermont (3)	698	350,262	691	2,754	0	0	0	165,000	1953	
Sacramento	6	1	0	0	0	1,436	0	75,000	active[7]	not active
Shoshone (2)	3	1,658	0	56,906	0	93,537	0	1,800,000	1962	
Snake (2)	0	73	148	6,119	0	0	0	500	1943	
Tungston (2)	0	0	0	0	0	14,000	0	700,000	1953	some activity
White Cloud	0	747	225	304,690	1,553	0	0	25,000	1952	
TOTAL	140,284	1,267,483	1,851,280	3,552,713	5,400,044	114,301	0	7,994,000		
Lincoln County										
Atlanta/Silver Pk.	2,501	14,181	0	0	0	0	0	301,800	active[7]	active
Bristol/Jack Rab.	3,586	4,433,800	23,734,900	35,943,800	3,986,800	0	48,682	17,210,000	active	
Eagle Valley (3)	4,778	53,416	0	0	0	0	0	425,000	1951	6
Fairview/Silverhorn	0	0	0	0	0	0	0	0	active	6
Freiberg	274	2,359	0	12,600	7,600	0	0	18,000	active	active
Highland (3)	824	31,679	2,141	813,331	0	0	0	2,000,000	active	
Pahranagat	25	34,526	18,800	111,200	0	0	10,409	800,000	active	
Patterson	40	26,732	590	5,499	0	750	0	75,000	1952	
Silverking	0	0	0	0	0	0	0	0	1939	
TOTAL	12,028	4,596,693	23,756,431	36,886,430	3,994,400	750	59,091	20,829,800		
Total: Schell Resource Area:	152,312	5,864,176	25,607,711	40,439,143	9,394,444	115,051	59,091	28,823,800		

1 Total production probably exceeds total reported production. Many of the mining districts listed are only partially within the Schell Resource Area as indicated by Footnotes 2 & 3.

2 Mining Districts that are partially within the Goshute Indian Reservation or the two portions of Humboldt National Forest within the SRA.

Footnotes for Table No. 11 (Continued)

3) Mining districts that are partially outside the Schell Resource Area not included in 2 above.

4) Approximately 255,000 tons of perlite are reported to have been produced from the Schell Resource Area; reserves of perlite in the Schell Resource Area are estimated at 18,175,000 tons, located at the Fairview/Silverhorn, Hollinger, Free and Leech deposits (64). Dimension Stone has also been produced (marble from the Marble Canyon area and the Mt. Moriah and Kinsley Mining Districts in excess of 150 short tons).

5) Information from BLM geologist, Robert Woods, on current activity of mines. Updated production information is not available.

6) Anticipate activity in the near future.

7) Active as of 1968.

Source: Schell Unit Resource Analysis Step 4, Minerals, Table 7, 1980.

prices are still below wartime levels. During the mineral inventory accomplished by Terra Data for the SRA tungsten was only being produced in the Eagle Mining Districts and quantities produced were very small.

The Freiberg and the Osceola Districts are two of the many mining districts that border wilderness intensive inventory units. If the areas adjacent to these two mining districts are made a wilderness study area, it may limit mining activity. If mining interests can prove valid existing rights, no restrictions are placed on claim development short of forbidding undue and unnecessary degredation of the land. In some cases mining plans must be submitted to BLM and the vein being mined cannot be followed from the claim into the wilderness study area. However, if the miner has grandfathered rights, he can follow the vein and conduct work in the same manner and degree at a logical pace and progression into the wilderness study area. (For more complete in formation, see the Interim Management Policy and Guidelines for Lands Under Wilderness Review and the 3800 Federal Register Vol. 45, No. 43.) There are very few restrictions on the mining activities--the state doesn't even require a mining plan. Consequently, this great latitude in mining activity draws miners into the area for mineral prospecting.

Income, Employment and Population Dependence

At this time, the only active locatable mining in the Schell Resource Area occurs in Lincoln County. For this reason, this discussion will concentrate on the Lincoln County economy. Although there is some mining activity in the White Pine County portion of the Schell Resource Area, it is on a very small scale, with sporadic mining activity and part-time employment. This activity is not documented, due in part to the miners' secretive nature, so there is no income or employment information available for use in an analysis. Lincoln County also has small, undocumented mining operators. The employment multiplier* for Lincoln County, from Water for Nevada, Special Report, Input-Output Economic Models, is 1.2683. Sixty-two persons are employed in the Schell Resource Area's locatable minerals sector, which is 4.2% of the total employed persons in Lincoln County. Indirect employment generated by the mining industry as calculated from the multiplier is 17 persons. Thus, employment dependence on the extraction of locatable minerals is 79 persons, 5.3% of Lincoln County employment. The population - employment ratio of 2.21 indicates that a total of 175 people within the county are dependent on the locatable minerals sector for their livelihood. (* A multiplier is an indicator of the impact of a specific sector upon a region's economy as a whole. An employment multiplier of 1.26 means that for every 1 full-time job in the mining sector, there is .26 full-time jobs in the rest of the economy. An income multiplier of 1.28 means that for every $1.00 of income the mining sector adds to the economy, $1.28 enters the economy. Also, if $1.00 of mining income were to be taken away from the economy an additional 28¢ over and above the initial $1.00 would also be lost to the economy.)

Employment figures do not differentiate between private and public land. Therefore, it is difficult to gauge what percentage of employment will be derived from future mineral extraction on public land. At

present a large percentage of the mining and milling of locatable minerals occur on private lands. The degree to which these activities will be diverted to public lands in the future is unknown. However, it can be assumed that by the year 2000 mineral commodities, currently extracted from private lands, will be greatly depleted. As a consequence, similar resources, some already known and others yet to be discovered on public lands, will play an even more important role in terms of employment.

Income from the mining industry in Lincoln County is 6 million dollars, and income from the mining industry in the Schell Resource Area is 1.24 million dollars (7.1% of Lincoln County income). The income multiplier for Lincoln County is 1.288. Direct and indirect income derived from this multiplier is 1.6 million dollars, 9.2% of county income.

Salable Minerals

Sand, gravel, topsoil and building material (rip-rap) are salable minerals found in the Schell Resource Area. Mineral material sales are made and Free-Use Permits issued at the discretion of the Bureau of Land Management. The Bureau controls surface use and the mitigation of environmental impacts through the use of these instruments. Salable minerals are obtained under Free-Use Permits by government agencies and non-profit organizations. Other entities must buy these commodities.

Sand and gravel are the dominant salable minerals in the Schell Resource Area. The main use of sand and gravel is for road building by the State Highway Department and the County Road Departments. The second largest use of sand and gravel is for access roads and drill pads for oil wells. There is presently little use made of sand and gravel for building construction.

The major cost of procuring sand and gravel is for transportation. In fiscal year 1979, 65,845 cubic yards were sold or given in Free-Use Permits; in 1980, 50,600 cubic yards of sand and gravel were sold or given in Free-Use Permits. No use figures are available for the state and county highway departments' rights-of-way sand and gravel pits which are used for road maintenance. Reserves are adequate to meet projected consumption, most of which will be from national resource lands.

Topsoil is not being sold at present; however, plans are for some topsoil pits near community sites for garden soil or other uses as they arise.

Rip-rap is very coarse gravel used for initial highway work, solar heating units and septic systems. The Nevada Department of Wildlife has a free-use rip-rap permit for the earth fill dam at Sunnyside. No production figures are available for rip-rap or building stone. Most of the building stone in the Schell Resource Area has been located under the 1872 mining law. If the stone has "unique or unusual characteristics" it is a locatable mineral; otherwise, the building stone is a salable mineral.

TABLE 12

Mineral Supply and Consumption of 1980 [9]

Quantities of these minerals are found in the Schell Resource Area [1]

Commodity	Units	U.S. Production [5] (Units)	Apparent U.S. Consumption [5] (Units)	Average Price [2] ($/Unit)	Nevada Production [6] (Units)	Percent Nevada Production of Apparent U.S. Consumption	Projected U.S. Demand [7] (Year 2000)
Gold	Troy ounces	930,000	3,000,000	613.28	250,618	26.9	8,500,000
Silver	Troy ounces	32,000,000	99,000,000	21.50	167,000	.5	230,000,000
Tungsten	Pounds	7,000,000 [4]	24,000,000	8.19	W	W	58,000,000
Lead	Metric tons [8]	575,000 [4]	1,040,000	946.00	None	0.0	2,118,182
Zinc	Metric tons	320,000	920,000	822.80	None	0.0	1,818,182
Manganese [2]	Short tons	None	1,170,000	139.73	None	0.0	2,130,000
Copper	Metric tons	1,175,000 [4]	2,032,000	2,226.40	W	W	4,636,364
Uranium [3] (depleted)	pounds (recoverable content U_3O_8)	36,000,000 [4]	7,000,000	4.50	None	0.0	45,100,000
Perlite	Short tons	635,000	635,000	26.08	5,000	.8	1,200,000
Crushed Stone	Short tons	978,000,000	978,000,000	3.17	W	W	1,700,000
Sand and Gravel	Short tons	816,000,000	814,200,000	2.18	7,000,000	.9	1,150,000,000

1/ Mineral commodities produced or reported to be evident in reasonable supply.
2/ Ore over 35% manganese. Price for 46-48% manganese.
3/ Projected demand is for 1990.
4/ Estimate by Bureau of Mines.
5/ Mineral Commodity Summaries 1981, Bureau of Mines, U.S. Department of the Interior.
6/ Mineral Industry Survey, 1980, Bureau of Mines, U.S. Department of the Interior
7/ Information from Ely BLM District files.
8/ A metric ton is 2,200 pounds, a short ton is 2,000 pounds.
9/ From Terra Data Mineral Inventory for SRA, found in the BLM files. Information has been updated as indicated.

Salable Minerals - Income/Employment

Within the Schell Resource Area, employment related to salable minerals is negligible; in Lincoln County it accounts for only .3% of the total employment figure, and in White Pine County only .1%. The reason for these low figures is that only a small portion of road construction and maintenance personnel's time is spent extracting and hauling sand and gravel, and the major portion of employment generated by the sand and gravel industry is in road construction.

Total - Income/Employment

Total employment by the minerals sector is 71 persons. Employment dependency derived from the multipliers indicates that 89 people are directly or indirectly dependent on the mining industry for employment. Population dependence in the Schell Resource Area is 201 persons. Population dependence includes anyone who receives direct or indirect income, earned or unearned income from the Schell Resource Area.

Income in Lincoln County from the minerals sector of Schell Resource Area is 7.4% of the County income ($1,347,624). Minerals sector income in White Pine County attributable to the Schell Resource Area is negligible at this time, as the only mineral activity in this area is with sand and gravel extraction and oil and gas exploration.

Public Attitudes and Social Values

The mining industry has been important both historically and economically in both Lincoln and White Pine Counties. Local residents, recognizing this importance as well as the transitory nature of mining activities, would like other more diversified and stable activities included in the economic makeup of their communities. Obliteration of the mining industry is not a goal, but an economic base not totally dependent on that one activity is desirable. Kennecott Copper Corporation substantially reduced their mining operations several years ago, and the economy of White Pine County is still recovering from the effects of the loss of revenue.

Conversely, residents of both counties indicated a desire for more mining activity. At the 1980 Town Hall Meeting conducted by the Commission on the Future of Nevada, 40% of Lincoln County residents and 58.8% of the White Pine County residents attending the meetings rated mineral resource exploration and development "very important." Sixty percent of the Lincoln County respondents and 29.4% of the White Pine County respondents rated mineral resource exploration and development "somewhat important." In a statewide survey, the Governor's Commission on the Future of Nevada found that 71% of the respondents in Lincoln and White Pine Counties would like state assistance in expanding mining activity. In the same survey, both Lincoln and White Pine County residents ranked mining second in the list of economic activities they would like to see expanded; Nye County residents ranked a desire for mining expansion third.

Some of the P.A.A. interview responses indicated that miners had a great deal of freedom in mining activities and that such latitudes

in both prospecting and mining should be continued. Many felt restrictive mining regulations were unacceptable and feared miners being regulated out of business as well as being generally opposed to any increase in government regulations. One response indicated a concern that the miners' incentive to prospect and to produce minerals would be destroyed through increased regulation was the mining industry.

Although many of the people interviewed felt miners should be allowed to prospect where they wanted to, a concern for the preservation of historical and archaeological sites were expressed. In conjunction with this, many people indicated a desire to see mining areas restored to the original conditions. One organization stated that although the miner does have a right to mine, he does not have the right to destroy the environmental quality of an area (habitat, watershed and scenic value of the area for range, wildlife, and vegetation) for his own profit; he also has a responsibility to reclaim the area, within reason, after completing his mining. (New White Pine Sportsmen's Club. Interviews, William E. Rice and Jacob Rajala, October, 1980.)

Overall, the people interviewed felt that mining is important to the area, and that continued mining activities are desirable. However, feelings about where miners should be allowed to prospect and what restrictions should be placed on mining operations were mixed.

FORESTRY

Analysis

Timber Production

No commercial timber production occurs in the Schell Resource Area and present information (URA Step 3) indicates that the forested land in this area would be in the non-commercial forest land category. Of the woodland species, Pinyon-Juniper (P-J) mixtures are considered to be non-commercial species whose chief value lies in other vegetative products, i.e., Christmas trees, posts, poles, and firewood.

Other Vegetative Products

The BLM is a significant (on a percentage basis) supplier of other vegetative products in the Schell Resource Area, in White Pine County, and to a lesser extent Lincoln and Nye Counties. The other major supplier is the U.S. Forest Service. Private landowners supply only a small quantity of forest related products.

Aside from a few White Fir Christmas trees and a limited amount of dead and down Aspen, the majority of sales and free use of forest related products involve the Pinyon-Juniper type only. Products obtained from this forest type at present are firewood, posts, Christmas trees and pinenuts. The volume of products harvested in FY 73-79 is shown in Table No. 13. Since 1975, the demand for firewood has shifted dramatically from BLM to Forest Service land. This occurred because in 1975 BLM increased the price of firewood from $.50 to $2.00 per cord. The Forest Service maintains a free use policy for dead or down material anywhere and for greenwood on specified areas. The amount of firewood cut on the S.R.A. is only a small proportion of the total harvest in the region. Indications are that most residents of Ely, McGill and Ruth (the major population center of the planning area) are obtaining most of their firewood from the Schell Creek Division of the White Pine Forest Service District and the Ward Division of the Ely Forest Service District. The residents of Pioche appear to cut trees in the Caliente Resource Area of the Las Vegas BLM District, with few exceptions.

Actual permit sales give some indication of demand, but part of the demand is satisfied by trespass. Field inspections have shown a marked increase in this direction.

Another indicator of demand is the sale of related products. While specific numbers are not available, interviews with local store managers revealed a sharp increase in the sale of wood stoves, fireplace equipment and chain saws. A similar increase occurred in 1973-74, during the oil embargo.

The sale of Christmas trees on and around the resource area has become "big business." However, most of the commercial cutters are from out of state, primarily from Utah. The main markets are in Salt Lake City and Las Vegas. Until recently the Forest Service and private

TABLE NO. 13

WOODLAND PRODUCTS HARVESTED IN THE PLANNING AREA OR ADJACENT AREAS
FY 1973-1979

	Source of Product					
	BLM		USFS 1/			
	Amount	Percent	Amount	Percent	Private 2/	Total
Fuelwood (Cords)	3,734	16%	19,089	84%	Unknown but probably small	22,823 100%
Posts (Each)	39,326	90%	4,567	10%	Unknown but probably small	43,893 100%
Christmas trees 3/ (Each) (Commercial sales)	7,671	17%	21,000	49%	15,348 34%	44,019 100%
Pinenuts (Pounds) (Commercial sale)	35,000		3,200		Unknown	N/A N/A

1/ Forest Service data supplied by Ely and White Pine districts.

2/ Data from Division of Forestry and prorated for resource area.

3/ Data on district wide basis prorated for resource area.

landowners have provided the vast majority of trees for commercial cutters. However, the Forest Service is hard-pressed to meet this demand. The BLM had 14 sales in 1978, all on negotiated contracts, for a total of 6,375 trees. This level of harvest is not excessive and can be maintained until allowable harvest can be calculated.

The cutting of Christmas trees by individual families has remained fairly constant over a number of years. This is primarily due to the constancy of the population level. It is a tradition in this area to cut the family Christmas tree.

TABLE NO. 14

Individual Christmas Trees Sold

Fiscal Year	Bureau of Land Management[1/]	Forest Service[2/]
1973	475	725
1974	497	725
1975	474	725
1976	382	1000
1977	424	1100
1978	433	1000
1979	400	1100

1/ Calculated from BLM sale files.

2/ Personal communication by BLM Forester with the Humboldt Forest Service.

Only small amounts of pinyon pine nuts were sold commercially during FY 73-75. In 1976, pine nuts from three areas were sold on a bid basis. The price per pound was fixed at 10¢, so awards were made based on the highest poundage bid. The same system was used in 1978. The data in Table 13, therefore, indicates an inflated poundage bid to elevate the effective bid price. For example in 1976, 57,610 pounds were "sold", of which about 10,000 were harvested. Therefore, the true bid price was about $.58 per pound. Most of the commercial operators live in Utah and their interest has been concentrated in the eastern part of the resource area.

Regional Trend

Any estimates of future demand can only be based on the projected population increases. These figures are very tentative, depending as they do on the results of several proposals for large construction projects (White Pine Power Project, Intermountain Power Project and the Rocky Mountain Pipeline Project).

TABLE NO. 15
Regional Demand (All Lands)

Present Demand (1979)				Future Demand (1990)
Fuelwood	2,578 cords	X 1.11*	=	2,862 cords
Christmas trees	11,865	X 1.11*	=	13,170 trees
Pinenuts	variable, highly unpredictable			
Posts	3,380	X 1.11*	=	3,752 posts

* Population increase factor to 1990 calculated by Ely BLM from information provided by the Nevada State Planning Coordination Office.

Source: BLM sale files.

Whether the BLM can meet its proportionate share of demand or not is a question which cannot be answered at this time and depends on growth data and allowable cut calculations yet to be determined.

The potential exists for the use of wood chips in the manufacture of cement fiberboard at a mill that may be located near Caliente. 1/ A pelletized form of fuel made of wood fiber may be used for the White Pine Power Project. Pulp, particleboard, animal feed supplements, oils, and resins are all feasible wood products. However, the best potential for increased use appears to be home fuelwood consumption and as a supplement for coal users, including Kennecott Copper or the future power plant.

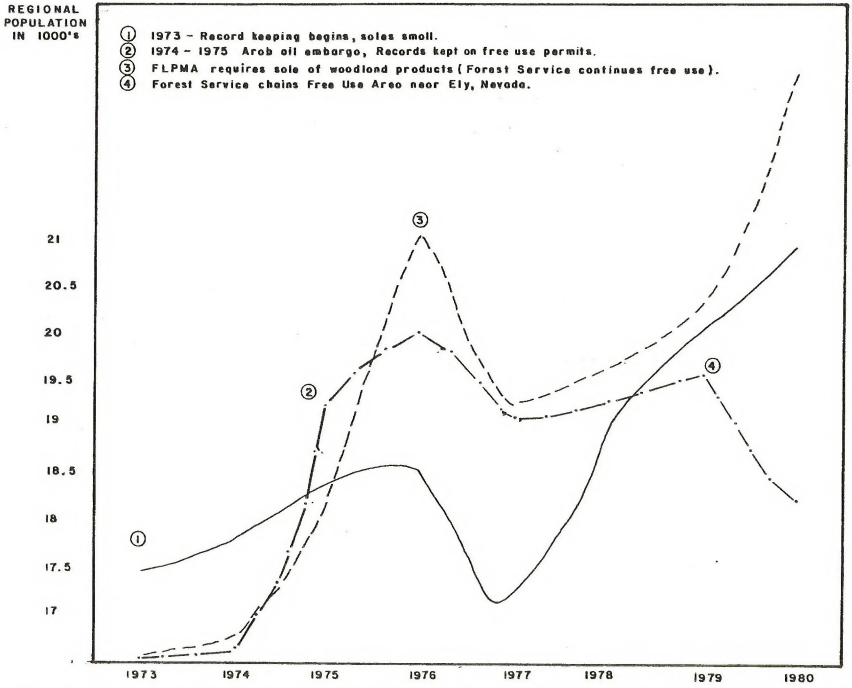
There has been much study in recent years of the utilization of Pinyon-Juniper products; but how much this resource could add to the local economy will best be determined after some estimate of growth and reproduction within the woodland can be made. There is little employment in the wood products market in the resource area. Most of the commercial operators are from out of state and what labor they employ is brought in with them. The population of the resource area is not dependent on the industry, but derives value from this resource by individual use.

The high price of fossil fuels has caused many people to turn to wood as a secondary or even primary source of home heating. In addition to providing a recreational opportunity, the savings derived from gathering wood could add up to a considerable economic benefit for local residents.

The Native American population has used pine nuts as a staple in their diet for many generations, and their interest in this custom remains high. There are no figures on the quantity used by this group, and policy is to allow unlimited harvest for personal use (although not for resale). This differs from the general policy of 25 pounds of nuts per family on a free use basis.

1/ Personal communication, Rick Jones, Nevada Division of Forestry, April, 1980.

CHART I
DEMAND FOR WOOD 1973 - 1980



Demand Projections

Estimates of future demand are difficult at best. The projections made here are simple proportional expansions based on the expected population changes, expressed as a percent of present population. The formula used for these computations is: Approximate demand multiplied by percent of increase in population equals future demand. (See Tables 15 and 16).

TABLE NO. 16

Expected Demand for Wood Products in 1990 from BLM Managed Lands

FY 1979 Demand X Population Expansion = 1990 Expected Demand

Fuelwood cords	611	X	1.11	=	678
Christmas trees	6,765	X	1.11	=	7,509 trees
Posts	2,755	X	1.11	=	3,058 posts
Pinenuts*	1,867	X	1.11	=	2,072 pounds

* Based on commercial demand in last good crop year (FY 1978). by year and poundage bid. Could go as high as 15,000 pounds.

The demand projections used for fuelwood do not take into consideration rises in the price of conventional fuels.

Chart 1 indicates that while demand increases or decreases with population, the magnitude of such a change is not accounted for with simple population figures. However, the factors and quantification for this increased demand per 1,000 population cannot be accurately gauged at this time. Therefore, predictions of demand in 1990 are conservative estimates based solely on population increases.

Public Attitudes and Social Values

Public attitudes toward some of the forest resources are divided. The majority of the people interviewed for PAA do not have a strong opinion on the management or use of the forestry resources. The major controversy is over the Pinon-Juniper trees. Many people, especially ranchers, would like to see the lower elevation P-J stands eliminated or reduced. Stands of P-J on the benchlands and in the valleys are thought to be of low value. They would like to see such areas chained or burned and reseeded with more palatable forage species.

Other people feel that availbility of P-J products should be maintained at current levels or increased. Some P-J products are pinenuts, firewood, fence posts and poles, mine props, Christmas trees and charcoal. Several people have expressed a desire for more green wood (standing trees) cutting areas. Another important aspect to conserving forested areas is their importance as wildlife habitat. Plentiful hunting opportunities provided by plentiful game species, are important to many area residents. Forest habitat provides both forage and cover for both game and nongame wildlife species. Some species depend solely on forest habitat. Others depend heavily on forest habitat for their winter range.

Generally, people felt that White Fir, Ponderosa and Bristlecone Pine areas should be maintained or protected, and that they should have easy access to firewood, pinenuts and Christmas trees. Several people have expressed the view that the forestry resources should be exploited for human benefit.

RANGE MANAGEMENT

Analysis

Livestock production is a major industry within the boundaries of the Schell Resource Area. The livestock industry is a major contributor to income and employment within the Schell Resource Area, although it is not a significant contributor to income and employment within the three-county region (1.9% and 4.4% respectively). A large portion of the population within the SRA is involved in the livestock industry. The SRA is composed of portions of Lincoln, White Pine and Nye Counties. To determine total AUMs consumed, the "1978 Nevada Agricultural Statistics was used and each county total was prorated in relation to the portion that was within the SRA boundary.[1/]

It was determined that public lands furnished 54% of the total forage consumed by domestic livestock within the SRA boundary during 1978. The three year average (1977, 1978 and 1979) of forage consumed on public lands within the SRA is 15% of the total consumed in the three county region.

No seasons of use have been established in the SRA except on allotments having approved Allotment Management Plans (AMPs). Allotments receiving year long use (except those with AMPs) tend to exhibit a downward trend in areas receiving the heaviest use. Setting seasons of use that allow sufficient rest during the critical growing periods will enable the plants to store the necessary carbohydrates to maintain adequate vigor for seed production and proper growth.

The White River and Wilson Creek areas were mentioned by several ranchers as being good winter range.

Significance

The 54% forage consumed on BLM managed lands needs some qualification. In the three year span of 1977, 1978 and 1979, the year of 1978 had the lowest turnover of active AUMs. Active AUMs for 1978 were 108,111, whereas the mean for the years mentioned was 125,911. If the mean were used, the percent of forage consumed on BLM managed lands would be 63% which is probably a more realistic figure. The low amount of active AUMs in 1978 occurred, in part, because of the large turnover in the number of permittees. This led to more non-use of the range, due to the attempt by some permittees to sell their operations and the time lag caused by the new permittees gearing up their operations.

The sheep industry is an important part of the livestock industry in the area. The breakdown in active AUMs for 1978 was 20,789 for sheep and 87,322 for cattle.

Table 17 shows the importance of regional and county livestock production as a component of the agricultural industry from 1973 to 1978. Livestock importance in the economy declined from 1973 to 1977 due to a reduction of livestock

1/ 1978 Nevada Agricultural Statistics, by the Nevada Crop and Livestock Service, U.S. Dept. of Agriculture, the Nevada State Department of Agriculture and the Division of Agriculture and Resource Economics, Univ. of Nevada.

TABLE 17

IMPORTANCE OF REGIONAL LIVESTOCK INDUSTRY 1973-1978

3 County Region	1973	1974	1975	1976	1977	1978
Crop Receipts (1,000)	$ 1,623	$ 1,669	$ 1,937	$ 2,212	$ 2,231	$ 1,908
Livestock Receipts (1,000)	10,667	8,120	7,976	8,746	7,948	10,150
Total Receipts (1,000)	12,290	9,789	9,913	10,958	10,179	12,058
Livestock as a % of Total	87%	83%	80%	80%	78%	84%
Lincoln County						
Crop Receipts (1,000)	$ 231	$ 303	$ 344	$ 375	$ 386	$ 339
Livestock Receipts (1,000)	2,639	2,016	1,980	2,107	1,940	2,558
Total Receipts (1,000)	2,870	2,319	2,324	2,482	2,326	2,897
Livestock as a % of Total	92%	87%	85%	85%	83%	88%
White Pine County						
Crop Receipts (1,000)	$ 245	$ 328	$ 366	$ 402	$ 409	$ 352
Livestock Receipts (1,000)	4,894	3,719	3,653	4,142	3,711	4,568
Total Receipts (1,000)	5,139	4,047	4,019	4,544	4,120	4,920
Livestock as a % of Total	95%	92%	91%	92%	90%	93%
Nye County						
Crop Receipts (1,000)	$ 1,147	$ 1,038	$ 1,227	$ 1,435	$ 1,436	$ 1,217
Livestock Receipts (1,000)	3,134	2,385	2,343	2,497	2,297	3,024
Total Receipts (1,000)	4,281	3,423	3,570	3,932	3,733	4,241
Livestock as a % of Total	73%	70%	66%	64%	62%	71%

Source: U.S. Dept. of Commerce Bureau of Economic Analysis, 1980.

receipts and an increase in crop production. In 1978 this reversed as livestock production again increased. Continuation of this trend is questionable. The regional livestock industry accounts for 7.9% of the $128,905,000 livestock receipts in Nevada.

Income and employment contributed to the region by the livestock industry is detailed in Table 18. Impacts of the livestock industry on individual counties as well as on two and three county regions is indicated.

Over the three-county region comprising Lincoln, White Pine and Nye Counties, the livestock industry is directly responsible for 1.3% of the income and 4.9% of the employment. By using the multipliers from the 1974 Nevada State Engineer's Office publication Water for Nevada, it can be determined that total direct and indirect income from the livestock industry in this region is 2.5% and total related employment is 8.2%.

On an individual county basis, direct income contributed by the livestock industry is 2.3% in White Pine County, 3.7% in Lincoln County, and .6% in Nye County. Direct employment attributed to the livestock industry is 1.7% in White Pine County (48 people), 4.7% in Lincoln County (70 people) and 5.5% in Nye County (103 people). Nye County has a commuting work force of 3,490 people residing outside the county. These people make a massive contribution to the county income but not to county employment.

In the same three-county region, 1,561 people are directly or indirectly dependent on the livestock industry; of this total, 932 are directly dependent. These figures are based on a population/employment ratio of the number of persons supported by the industry. Persons either directly or indirectly dependent upon public lands number 238 in this region, with 142 of them being directly dependent.

Ranchers utilizing the Schell Resource Area indicated that Ely, Caliente and Pioche, Nevada and Cedar City, Utah are the regional trade centers for the livestock industry. Cattle are auctioned at Cedar City and Delta, Utah and farm equipment and supplies are purchased at the regional trade centers.

Additional Analysis

Fifty-eight ranch operators utilize public lands in the Schell Resource Area for forage. Seven of the 58 operators have taken non-use on their allotments for the last two or three years, bringing the number of active operators to a total of 51. In the following analysis, taken from a 1972 study by Garrett and Mitchell (1978), the following terms apply:

Small ranch:	less than or equal to 350 animal units (AU).
Medium ranch:	greater than 350 but less than 800 AUs.
Large ranch:	greater than 800 AUs.
Cow-Calf operation:	average number of yearlings is less than one-fourth the average number of calves.
Cow-yearling operation:	average number of yearlings is greater than one-fourth the average number of calves.
Animal Unit:	one cow or five sheep.

1/ in personal and telephone interview, summer and fall, 1980.

Sifnificance of the Livestock Industry in 1978

Table 18

	3-County[1] Region	BLM Land 3-County Region	Lincoln	BLM Land in Lincoln	White Pine	BLM Land in White Pine	Nye	BLM Land in Nye
Forage Consumption[2] (AUMs)	835,920	125,911 (3years)	193,200	65,726	309,600	43,313	333,120	16,872
Direct Income[3]	$ 2,338,782	$ 352,281	$ 637,933	$ 217,023	$ 1,026,419	$ 143,596	$ 674,430	$ 34,159
% of County Income	1.3%	.2%	3.7%	1.2%	2.3%	.3%	.6%	.03%
Total Income	$ 4,470,114	$ 673,315	$ 1,219,281	$ 414,796	$ 1,961,795	$ 274,455	$ 1,289,038	$ 65,288
% of Total Income to County Income	2.5%	.4%	7%	2.4%	4.3%	.6%	1.1%	.06%
Direct Employment[4]	302	46	70	24	48	7	103	5
% of County Employment[5]	4.9%	.7%	4.7%	1.6%	1.7%	.2%	5.5%	.3%
Total Employment	506	77	117	40	81	12	173	8
% of Total Employment to County Employment[5]	8.2%	1.2%	7.9%	2.7%	2.9%	.4%	9.2%	.4%
Population Dependence (Direct)[6]	932	142	155	53	158	23	356	17
Population Dependence (Total)	1,561	238	259	89	267	40	598	28

1/ 3-County Region: Lincoln, White Pine and Nye County Region.

2/ 1978 Forage Consuption, from 1978 Nevada Agricultural Statistics by the Nevada Crop and Livestock Service, U.S. Department of Agriculture, the Nevada State Department of Agriculture and the Division of Agri. and Resource Economics, Univ. of Nevada.

3/ From B.E.A. Farm Income and Expenditures, April 1980. Figures for 1978. Calculated by use of livestock receipts to total agricultural receipts ratio.

4/ Determined by dividing livestock industry income by average income per employee in the agricultural sector.

5/ Percentages calculated using employment by place of residence, not place of work. Employment totals in table 1 are by place of work.

6/ Calculated by BLM using a population/employment ratio from information in the 1979 Nevada Statistical Abstract (Governor's Office of Planning Coordination, State of Nevada) and Area Labor Review, Balance of State, Fall 1979 (Nevada Employment Security Department).

The small ranch is most prevalent among operators in the Schell Resource Area who have grazing preferences. There are 30 ranches in the SRA which have 350 animal units or less, (small ranch class), 11 ranches that have between 350 and 800 animal units (medium ranch class) and 10 ranches which have over 800 animal units (large ranch class). In the small ranch class, 27 of the 30 small ranches are exclusively cattle operations, 1 is a sheep only operation and 2 are combined cattle and sheep operations. There are 6 cattle only operations in the medium ranch size class, 3 sheep only operations and 2 combined cattle and sheep operations. There are no sheep only operations in the large ranch size class, however, 5 cattle only and 5 combined cattle and sheep operations fall into this size category.

The Garrett and Mitchell Study divided Nevada into several regions. The Schell Resource Area is in two of these regions: the Southern Nevada region and the Northeastern Nevada region. White Pine County is included in the Northeastern Nevada region. The Southern Nevada region includes Lincoln and Nye Counties. Twenty-three operators have grazing permits in the Northeastern region of the Schell Resource Area and twenty-one in the Southern region. Of these operators the number having additional privileges in other resource areas is unknown. Seven additional operators run livestock in both regions. The twenty-three operators in the Northeastern region are composed of 12 small cattle only, 2 medium cattle only and 2 large cattle only operations; 1 small and 1 medium sheep operation; and 2 small, 1 medium and 1 large combined cattle/sheep operations. The twenty-one operators in the Southern region are comprised of 14 small cattle only and 5 medium sized cattle only operations; 2 medium sized sheep only operations; and 1 medium sized combined cattle/sheep operation. The operators who run livestock in both regions are comprised of 1 small and 2 large cattle only operations and 4 large cattle/sheep operations.

Dependency on public lands for forage by size of ranch operation varies only slightly. Small and medium cattle-only ranches have a wide dependency range, varying from a low of 3% to a high of 72% (information is for a sample size of 38 operators, from Resource Concepts Inc., 25 cattle only, 5 sheep only and 8 combined cattle/sheep operators). Large cattle-only operations have a smaller (dependency) range, but a larger dependency on public lands forage varying from 51% to 94% dependency. Sheep-only operators have a range of 8% to 50% dependency, while sheep forage dependency for combined cattle/sheep operations have a lower dependency on the public range than the majority of the medium to large combined operations.

Tables 19 through 21 and appendix 3, all taken from the 1972 Garrett-Mitchell Study, give an idea of ranch operations in the Schell Resource Area. The Garrett-Mitchell Study is the most recent available study of the range cattle industry. Tables 20 and 21 show that Southern and Northeastern region ranches had major differences in income amounts in 1972. Both regions showed large ranches as having the most income, followed by medium ranches with less income and small ranches with the least income. However, there was a greater range between small ranch income and large ranch income in Southern Nevada region ranches than in Northeastern Nevada region ranches. Further, Southern region small ranches averaged about a $3,000 loss while profits for Northeatern small ranches averaged $8,000.

Medium sized Southern ranchers made about $4,000 in 1972 while Northeastern ranches in the same size category made $32,000. Large sized Southern ranches made about $91,000, while large sized Northeastern ranches only made $59,000 in 1972. (Figures do not take into account a charge for operators' labor and management). Income per animal unit increased porportionatly as ranch size increased for Southern Nevada ranches, and for Northeastern Nevada ranches, income per animal unit decreased as ranch size increased. However, (percent) return on total assets increased as ranch size increased for both regions, and total expenses per animal unit decreased as ranch size increased in both regions.

Value of Assets in Buildings and Equipment
On Northeastern & Southern Nevada Ranches, 1972

Value of Assets Per Animal Unit

Size and cattle system of ranch	Number of Ranches		Buildings		Machinery & Equipment		Total[a/]		Average investment per ranch	
	NE	S	NE	S	NE	S	NE	S	NE	S
Small	14	7	$90	$48	$81	$70	$167	$118	$ 37,993	$ 19,856
Medium	15	4	46	64	44	60	88	124	46,107	67,425
Large	27	4	26	11	27	23	53	34	119,430	88,800
Cow-calf	43	14	35	22	31	29	65	51	72,414	47,586
Cow-yearling	13	--	33	--	25	--	56	---	102,638	------

a/ May not sum due to rounding

For both regions, total assets per animal unit are greatest for small ranches, although total assets per ranch are largest for large ranches. Northeastern Nevada ranches had larger assets, per ranch, per animal and by ranch category, than Southern Nevada ranches. Northeastern region ranch operations also had a larger percentage of their total assets in land than Southern region operations did. Both regions had the largest share of their assets in land. One asset that is not shown in appendix 3 table B is the ranch operators' Federal AUMs. AUMs are used as a ranch asset when an operator either borrows capital or sells or buys a ranch operation. Reducing an operator's AUMs will reduce his ability to borrow capital, and also reduce the value of his ranch should he attempt to sell it.

Labor and depreciation were two of the main expenses for all size ranches in both regions. Gas and lubricants were also a major expense for small and medium operations in the Southern region and livestock purchases were a major expense for medium and large operations in the same region. Federal grazing fees were a important expense item for both small and large ranch operations, and feed purchases were also an important expense item for large ranches in 1972.

Ranchers indicated that they either sell their cattle at auction in Cedar City, Utah or through private transactions at their ranches. No single method was preferred by ranchers in the region; different methods were used in different years.

TABLE 20

Average Receipts and Income Measures for Small, Medium, and Large Ranches in Northeastern Nevada, 1972

Receipt or Income Measure	Small Ranch	Small Per AU	Medium Ranch	Medium Per AU	Large Ranch	Large Per AU
Livestock Receipts						
Cows @ 245	$ 8,955		$ 10,121		$ 30,698	
Yearlings	1,689		35,110		56,171	
Calves	23,671		21,661		107,287	
Sheep & Wool	0		206		4,111	
Total Livestock Receipts	34,315	$ 151	67,098	$ 128	198,267	$ 88
Other Ranch Receipts						
Crop Sales	0		1,200		602	
Custom Work	515		3,700		1,033	
Misc. Receipts	0		0		1,259	
Total Other Ranch Receipts	515	2	4,900	9	2,894	1
Total Ranch Receipts	34,830	153	71,998	137	201,161	89
Receipts Less Expenses	8,260		31,917		59,308	
Change in Inventories	288		8,184		12,452	
Net Ranch Income (less $7,000 charge for operator's labor & management)	972	4	16,733	32	39,856	
Return on Total Assets (percent)	.23		2.91		1.69	

TABLE 21

Average Receipts and Income Measures for Small, Medium and Large Ranches in Southern Nevada, 1972

Receipt or Income Measure	Small		Medium		Normalized Returns for A/ Large	
	Ranch	Per AU	Ranch	Per AU	Ranch	Per AU
Livestock Receipts						
Cows	$ 1,977		$ 2,835		$ 42,600	
Yearlings	4,886		12,000		163,624	
Calves	5,554		22,769		42,266	
Total Livestock Receipts	$12,417	$ 74	$37,602	$ 69	$248,490	$ 95
Other Ranch Receipts						
Crop Sales	0		2,050		0	
Custom Work	0		712		0	
Miscellaneous	0		100		0	
Total Other Ranch Receipts	0		$ 2,862	5	0	
Total Ranch Receipts	12,417	74	40,466	74	248,490	95
Receipts Less Expenses	-2,859		3,788		91,351	
Change in Inventories	-978		2,440		0	
Net Ranch Income (less $7,000 charge for operator's labor and management)	-10,837	-64	-722		84,351	32
Return on Total Assets (percent)	-6.2		-0.2		4.1	

A/ Returns for this ranch category were normalized to reflect the abnormally low livestock sales for 1972. Large ranches were building up herds in response to higher prices.

Current Trends and Demand Projections

"The cattle industry is characterized by cyclical trends in cattle numbers (see chart 2). These cycles occur in response to beef prices (see chart 3). The two factors, cattle numbers and beef prices, are intricately related; as prices increase, so do cattle numbers. Eventually the supply of beef is greater than the demand for beef, causing prices to decline; cattle numbers fall in a corresponding fashion. At the point where demand again exceeds supply, prices climb and a new cycle begins.

The charts on page 68 indicated that there is generally a lag of about a year in the response of cattle numbers to beef prices. The figures for 1973, however, represent a special case. In 1973 President Nixon clamped a price freeze on beef in response to growing consumer protests to high beef prices. During this same time period the United States begun selling grain to the Soviet Union, resulting in higher domestic grain prices and causing many feed lots to fold. The cattle industry responded to the President's price freeze by withholding their cattle from the market. The closure of many feedlots meant that fewer cattle were being purchased from the range cattle industry for finishing in the lots. The result was record cattle numbers in 1974.

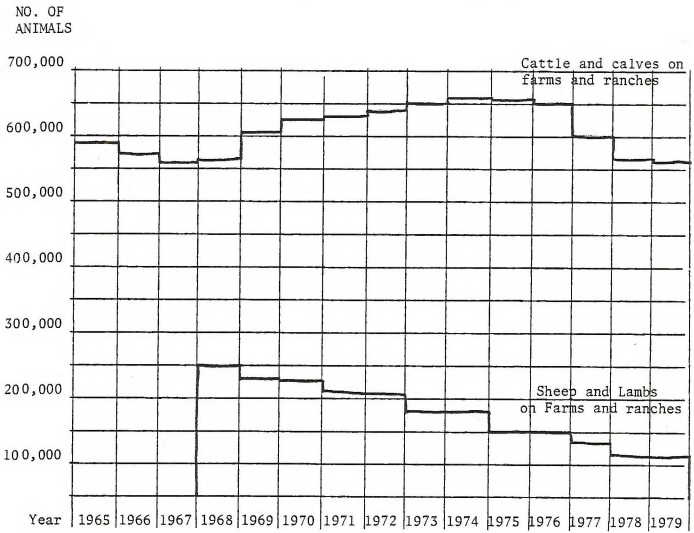
Eventually the cattle industry could no longer afford to hold cattle off the market; this forced selling resulted in a glut of beef on the market that exceeded the demand and drove beef prices down to mid-1960 levels. These low prices remained through 1977, but then began to climb and currently exceed the high prices of 1973. Indications from the U.S. Department of Agriculture are that cattle numbers are responding to the climb in prices and should be significantly higher in 1980." (Sonoma-Gerlatch P.A.A., Winnemucca District BLM, 1980).

Local Demand

The Schell Resource Area provided 5.7% of the forage consumed in Nevada in 1978 and 6.8% of the total forage consumed in 1977 in the State from BLM managed lands. The SRA provided 51.2% of the forage consumed on BLM managed lands in the Ely District in 1977 and 42.6% in 1978. As mentioned earlier, 1978 was the lowest year for AUMs in a three year average of AUMs consumed in the Schell Resource Area. Cattle and sheep numbers follow the state trends, as can be seen by charts 2 and 4.

Active grazing preference in the Schell Resource Area is 263,135 cattle and sheep AUMs. Average actual use (3 year average) is 125,911 AUMs. Actual use is less than active preference in part because the permittees realize that the range cannot support the full active preference. Many of the permittees have been grazing cattle or sheep on the same area for 50 or more years-before there was a Bureau of Land Management in Nevada--either because they themselves have been ranching that long or because they took over the allotment from their parents. Because they care about the land they do not graze up to their full active preference and thus keep the range from being over grazed. When forage was allocated from the 1946 range survey, it was allocated only to cattle and sheep and not to wildlife and wild horses. This led to an over allocation of forage among the competing uses, with some range deterioration as a result. A 17½% cut in the AUMs allocated to permittees in Wilson Creek in 1967, based on a 1960s range survey, has helped alleviate this problem in the Wilson Creek allotment. Some forage was allocated to wildlife in that allotment at that

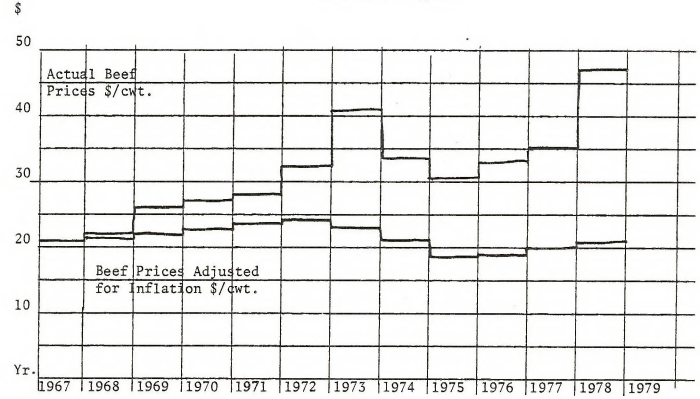
CHART 2
LIVESTOCK ON NEVADA FARMS AND RANCHES



Source: USDA, Nevada Agricultural Statistics, 1969 and 1978.

from pg. 68. Sonoma-Gerlach PAA, BLM Winnemucca District Office, 1980

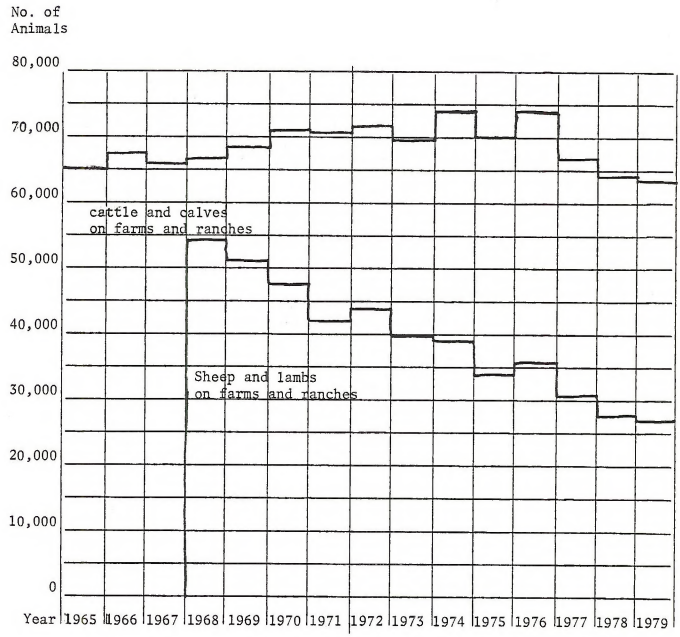
CHART 3
BEEF PRICES $/cwt



Sources: USDA, Nevada Agricultural Statistics, 1969 and 1978.
Adjustments for inflation by Grant Loomis, Economist, BLM Winnemucca District Office, 1980

From pg. 68, Sonoma-Gerlach P.A.A., BLM Winnemucca District Office, 1980.

Chart 4
Livestock on Lincoln, White Pine and
Nye County Farms and Ranches



USDA NV Agricultural Statistics 1969 to 1978

time. Another major factor in the actual use being lower than active preference is the non-use taken by some permittees. When non-use of grazing privileges is excerised, those AUMs are counted as part of the active preference but are not counted in the actual use, thus making active preference larger than the actual use.

The future demand for public land forage can be estimated, if we assume that the 15 year average cattle population in the region will resemble the cattle population in the future, taking into account the fluctuations resulting from the cattle industry's cyclical nature. If the 11% dependency level on public lands by the cattle industry is maintained with a 15 year average cattle population of 68,433 head then the long term average cattle forage needs on the BLM managed lands in the Schell Resource Area will be 106,765 AUMs. Cattle forage requirements for the entire three county region will be 821,196 AUMs, by the same reasoning.

"The sheep industry has been in a long period of decline dating back to the 1920s. The record high for sheep numbers was set in 1920 at 1,340,000 head. The record low of 114,000 set in 1978, was matched in 1979. The decline of sheep industry is due to several factors: predation, high overhead costs, and poor public relations (Vaught, 1980). Predation by coyotes in particular is a serious problem to sheep ranchers. The industry feels that the prohibition of the chemical poison 1080, by the Department of Interior, only compounds this problem. High overhead costs are mostly attributed to a shortage of skilled herders. Government red tape involved in recruiting Basque herders from Spain has been cited as an element that adds to this shortage (Vaught, 1980). PAA charts 2 and 4 illustrate the decline in the sheep industry for the state and for the region." (Sonoma-Gerlatch PAA, Winnemucca BLM, 1980).

The region's sheep population has been 22% to 31% of the state's total sheep population over the last six years. In 1979, the region's sheep population represented 22% of the state's population. Recent developments in the sheep industry have made it difficult to assess its future public land forage requirements.

"The national sheep population as recorded in January 1980, indicated a five percent increase, the first in a long, steady period of decline. Lamb prices are up significantly, and a trend toward natural fibers has begun as a result of oil price increases. These developments may indicate the beginning of a turnaround in the industry's long decline. However, the developments are too recent to make any definitive judgements on changes in industry trends. Forage requirement projections, therefore, should be understood as rough approximations only.

If it is assumed that recent developments represent the beginning of a new growth period for the industry, then current sheep populations can be used as an estimate of minimum forage requirements." (Sonoma-Gerlatch PAA, Winnemucca BLM, 1980).

Current sheep populations in the region are 27,600 head. Schell Resource Area public lands contributed 34% of the forage required by these animals. If the two percent growth of January 1, 1980, is a sustained annual growth rate for the future, then sheep forage requirements from the BLM managed lands in 1990 will be 11,439 AUMs. Combining the sheep forage needs with the cattle forage requirements leads to a total of 101,771 AUMs for livestock

from the Schell R.A.'s public lands in 1990. Sheep forage requirements for the three county region in 1990 are estimated to be 80,764 AUMs.

A variety of factors could contribute to the possibility of diminishing demand for grazing use in the public land. Principal factors will be the market prices ranchers will receive for products such as beef, lamb and wool; and the cost relationship between the price of private feed and the price of forage obtained from the public lands. Other factors are the lower forage productivity of the public lands than can be obtained from private land; the problem of access to water on the public lands; and the reluctance of some ranchers to utilize the public lands.

Two of the factors need to be explained in greater depth. First, the BLM is supposed to charge full market value for products derived from Federally administered lands, including forage. At present, this has not been acheived with AUMs due to political constraints. Should the cost per AUM on the public lands be increased substantially the demand for them may decrease as ranchers utilize private forage sources. Second, some ranchers have been reluctant to utilize the public lands due to impatience with the Bureau's rules and regulations and the uncertainty experienced by some ranchers in their operations because of changes in Bureau policies. This has been caused by previous range surveys that have resulted in available AUM reduction; BLM policy changes which now allocate forage for wildlife and wild horses further reducing available AUMs; and the recently completed range survey (1980) which can be expected to result in additional AUM allocation changes (not necessarily AUM cuts).

The factors listed above may all, to a varying degree contribute to a decreased demand for public forage. The availability of private forage; however, should prove to be the factor which dictates limits for the decrease in demand for public forage.

Public Attitudes and Social Values

Many people in the region have a fondness for the ranching industry and respect for the ranchers. Ranching is a portion of the agricultural industry. Lincoln, White Pine and Nye County residents who responded to a state wide survey by the Governor's Commission on the Future of Nevada indicated a desire for agricultural activity expansion. Seventy percent or more of the respondents in these counties felt that state regulated conservation of agricultural land should be increased or maintained at the same level. Thirty-four percent of Lincoln County respondents ranked agriculture as the economic activity they would most like to see expanded; 63% of these people would like to see state government assistance to expand the activity. Twenty-three percent of the respondents ranked agricultural activity second, with 57% of these respondents supporting state government assistance in expansion of agricultural activity.

Twenty percent of White Pine County respondents ranked agriculture as the economic activity they would like to see expanded. Fifty-six percent of these respondents would like to see state government assistance to expand agricultural activity. Of the 12% who ranked agriculture second, 64% would like to see state assistance for agricultural activity. Expansion of agricultural activity was ranked first by 39% of the Nye County respondents and was ranked second by 18% of them. Fifty percent of those who ranked it first and 33% who ranked it second would like to see state assistance with agricultural expansion.

At the 1980 Lincoln County Townhall Meeting conducted by the Commission on the Future of Nevada, 100% of the respondents listed preservation of agricultural lands as very important. Grazing and ranching were ranked very important by 60% and somewhat important by 40% of the participants.

The Future of Nevada Commission also conducted a Townhall Meeting in White Pine County. At this session, preservation of agricultural lands was ranked very important by 70.6% of the respondents and somewhat important by 23.5%. Grazing and ranching were ranked very important by 64.7% and somewhat important by 35.5% of the participants completing questionnaires.

In response to the question "What is it that you like about living in Nevada?" participants in all three counties ranked OPEN SPACE/SPARSE POPULATION/PEACE AND QUIET/UNCONGESTED as the number one reason. White Pine and Nye County respondents ranked RELAXED LIFESTYLE/FREEDOM/INDIVIDUALITY second, and Lincoln County participants ranked these values third. Ranchers interviewed indicated that these values contributed greatly to their decision to be in the livestock industry, were consistent with and perpetuated by the ranching industry lifestyle, and resulted in ranching involvement as a family tradition. This locality is viewed by permittees as a good place to raise children and instill the aforementioned values to perpetuate the lifestyle.

Both ranchers and non-ranchers interviewed for PAA were concerned that the BLM would regulate the ranchers out of business. In addition to fearing excess government regulation, persons interviewed expressed their feelings that ranchers would not abuse allotments but would adequately care for the land; that regulations attributed to the eastern states population block (felt to be uninformed about the conditions here) are unnecessary and sometimes senseless; and that BLM personnel at the local level should have more authority because of their firsthand knowledge of local people and situations.

All of the ranchers interviewed indicated a desire for more range improvements, but expressed a general dissatisfaction with the length of time it takes to get such improvements completed. Improvements mentiond most were burnings and seedings, and fences to separate allotments of cattle and sheep grazing. If such actions were permitted by BLM, several ranchers indicated a willingness to make these improvements themselves.

Ranchers indicated they are impatient with the budget and authorization processes necessary for project completion, and felt BLM staff size was disproportionate to the amount of work being done. Several people suggested a return to days when three people administered eight million acres from the Ely BLM office.

Area residents have mixed feelings about the Sagebrush Rebellion. Some felt they would have more influence with state officials in Carson City than with Federal officials in Washington, resulting in more attention being given to concerns and feelings of people in Nevada. Other people worried that the state would be more corrupt, more interested in urban than rural needs, and would be less concerned about the future of the land, possibly selling it to speculators for high prices without considering the effects this would have on rural counties. Proponents of both views, however, felt the Sagebrush Rebellion has resulted in a greater importance being given to the comments and recommendations addressed to various agencies of the Federal Government.

The perceptual importance of the ranching industry in the area cannot be denied. General public comments indicate that in addition to the right of the ranchers to use the range, co-existence with other interests involving land use is vital.

Wild Horses

Analysis

The Wild Horse Management Program is an integral part of the overall range management program. To varying degrees there is direct competition among wildlife, wild horses and domestic livestock for the available forage. As a result, cooperation among the respective BLM resource programs is essential. Past allocations of vegetation have largely ignored horses and under allocated to wildlife, with domestic livestock allocations artifically high as a result.

In the past, wild horses were gathered and sold for slaughter or private use. This practice was essentially halted with the passage of PL 86-234, the Wild Horse Annie Act of 1959. With the passage of PL-92-195, the Wild and Free-Roaming Horse and Burro Act, there was a change in the value of wild horses from an economic value to an esthetic and social - cultural value. "The esthetic and social-cultural values of wild horses are generally expressed in terms of the value of recreational viewing and the values gained through the enjoyment of others or through the knowledge that wild horses exist on the range whether the individual ever sees them or not (the vicarious value). Due to the absence of data regarding the number of visitor days of recreational viewing and other nonconsumptive uses it is not possible to derive an estimate for the esthetic and social-cultural value of wild horses on public rangelands. Generally it is felt that much of the value of wild horses lies in their perceived scarcity. As their numbers increase and sightings become more common the value of the individual experiences decreases. At some point the aggregate value of increased sighting peaks, and then begins to decline as the value of each individual sighting decreases." (Paradise-Denio PAA Winnemucca BLM, 1979.)

Wild horses not only have a value, they also generate costs which the public must bear. Although all of the costs generated by wild horses are not measureable, one is measureable. The value of the forage that wild horses consume can be estimated. The fair market value of an AUM in terms of its rental or lease was $8.00 in 1980. (Rental or lease rate for private land, either wet meadowland or aftermath grazing on irrigated land in Lincoln and White Pine Counties. Rental/lease figures from the Lincoln and White Pine County Extension Agents, September, 1980). The estimated 1980 wild horse population of the Schell Resource Area is about 583 animals, assuming 80% sightings in the 1979 inventory which counted 466 horses. At a value of $8.00 per AUM they consumed about $55,968.00 (583 animals X 12 AUMs per animal per year X $8.00 per AUM) worth of forage in 1980.

Total costs of the annual gathering necessary to maintain a stable wild horse population will not be known until the numbers that will be maintained in the Schell Resource Area are determined. However, the BLM Nevada State Office Wild Horse Specialist, Milt Frei, has indicated that gathering costs range from $60 to $100 per animal. The numbers of wild horses that will be maintained in the SRA will be determined in MFP 3, which will be completed in the summer of 1983.

In summary, the value of wild horses has changed from an economic to an esthetic and social-cultural value. It is not possible to measure this value due to the absence of data. The negative impacts of wild horses result from the forage they consume and the watershed damage they cause. The only impact which can be measured is that of forage consumption; this amounts to about $55,968 worth of forage, when valued at $8.00 an AUM. The cost of annual gatherings, in order to maintain a stable population, is an additional factor affecting the economics of wild horses.

Public Attitudes and Social Values

A relatively small sample of local ranchers (11) and businessmen (7) were interviewed as to their attitudes toward wild horses. This sample was sufficient to demonstrate that the attitudinal findings contained in the Paradise-Denio Planning Area Analysis, produced in 1979, are applicable to the Schell Resource Area. In addition, it is noted that one interviewee stated that the Wild Horses look best when viewed from a distance, but that the closer one gets to them, the worse they look (Marcia D. Hayes, PAA Interviews, September, 1980). While references to burros do not apply to the Schell Resource Area, the findings are quoted directly from the Paradise Denio PAA.

> The national attitude toward preservation of wild horses is favorable, as evidenced by the passage of the Wild Horse and Burro Act. Most people in the United States have never actually observed a wild horse firsthand and for them there is a somewhat mystical feeling attached to knowing that one day they might see one running free in its natural environment.
>
> Several groups are devoted to the protection and preservation of wild horses and burros. Generally, the position of these organizations is that minimal control of wild horse numbers is desirable. These groups exert strong influence over the general public and are looked upon as the watchdogs of the wild horse and burro populations. Because of this image most people not closely involved with wild horses and burros adopt the standards of these organizations. This is a large part of the reason why the national attitude is slanted the way it is. The social values of the general public would probably be less emotional if the exact number of wild horses and burros were known. If it was general knowledge that the wild horse is in no danger of becoming extinct and that there are areas where the populations are dangerously high, proper management might be allowed (Paul Jancar, Wild Horse and Burro Specialist, Winnemucca District, July 1979).
>
> Wild horse protection societies vary in their approaches to management of wild horse populations. Wild Horse Organized Assistance (WHOA) supports multiple use of habitat management

while American Horse Protection Association (AHPA) holds the attitude that horses should be left alone for nature to take care of. A number of specific recommendations and positions have been expressed by these groups concerning management of wild horses. Some of these are as follows:

1. There should be more range riders.

2. More consideration of the foaling season should be given when roundups are planned.

3. Horses should be temporarily sterilized to control population growth.

4. Allotment Management Plans (AMPs) are opposed if fences are involved.

5. They are unenthusiastic about wild horse sanctuaries because they fear that the least desirable areas with the most rugged terrain will be allotted for this purpose (Bert Bresch, Sociologist, NSO--from interviews with wild horse groups).

Local attitudes differ radically from national attitudes. The ranching community is valued highly socially, culturally and economically by local residents. Wild horse protection policies are viewed as a threat to the continuing existence of the rancher. Most people who live in this area feel that the passage of the Wild Horse and Burro Act was a highly emotional action which totally lacked economic and scientific basis. It is believed that a much more perfect balance was maintained between cattle and horses before the enactment of this law when the mustanger harvested the horses. Most people feel that a return to this sort of arrangement, with some controls being instituted to prevent abuse of the horses, would be the best system. As this would require changing the present law, most favor cutting the herds back to reasonable numbers and maintaining these numbers. The ranchers in particular favor harvesting the horses on a profitable basis and utilizing the earnings on such things as range improvements. (They point out that U.S. Fish and Wildlife Service successfully manages the wild horses under its jurisdiction in this manner.) Ranchers generally place little social value on wild horses beyond the pleasure they used to derive from running them and rounding them up occasionally. Many ranchers equate wild horses with cattle as far as socio-economic values. They feel the horses should be considered for their meat value rather than esthetic qualities. Most ranchers do not object to preservation of wild horses for those people who do place a high value on them as long as grazing rights are not cut back as a result.

Even those persons in the area who feel that the wild horse has socio-cultural "and esthetic value"...and in terms of its being part of our national heritage appear to generally hold the opinion that wild horse protection should not jeopardize the ranching industry. Sanctuaries are seen to be a viable solution by this segment of the local population.

Area residents were critical of the expense of the wild horse program which they feel is unjustifiable. They believe that the current problems with wild horses were created by the Wild Horse and Burro law. It was pointed out that before the enactment of this law the herds did not require a lot of taxpayer dollars to maintain. There was no danger of wild horses becoming extinct, they feel. Also, then they were utilized while now they are not. Considerable doubt was expressed about the Adopt-A-Horse program as well. Interviewees felt that many of the people adopting horses have little knowledge of proper equine care. Examples of cramped, unsheltered pens, and inadequate feeding were quoted as having been observed.

It is felt that people who do not live in the vicinity of wild horse populations have a romanticized vision of the wild horse derived from watching noble palominos with flowing manes lope in slow motion across the silver screen and from reading elegant descriptions of them in western novels. Several local people expressed the opinion that the majority of the planning areas's free-roaming horses are rough-looking range horses which they don't find to be particularly stirring to look at. They also emphasized that the notion of the horses being wild mustangs was incorrect as they are actually decendants of horses which escaped from ranchers. As such, local people consider the horses in actuality to belong more to Nevadans than to the national public. (Peggy McCuckian Jones, Winnemucca, PAA Interviews, August 1979).

CLIMATOLOGICAL SUMMARY

The climate of the Schell Resource Area ranges from arid to semi-arid to sub-alpine. (Sub-alpine is that zone between the high alpine meadows and the drier, more arid-type vegetation, characterized by higher rainfall than the lower elevations and interspersed with conifers). The valley floors as a whole are semi-arid, whereas the highest parts of the mountain areas in the northern part of the Resource Area are humid to sub-alpine.

Precipitation varies from 5-6 inches in the valley floors in the southern part of the area to 20-30 inches in the higher mountain elevations in the northern part of the area. Precipitation in the high mountains consists of considerable amounts of snow that produce spring runoff and of rain from local summer storms. In the lowlands, about 50% of the precipitation is from summer thunderstorms.

The daily and seasonal range in temperature is large, and the growing season is relatively short. The average annual low and high temperatures for the area can be expected to range from -10^{o} to -30^{o} F in the winter to high 90's and low 100's in the summer. The growing season averages about 100-130 days in the north to greater than 150 days in the south.

Water is one of the basic needs for life. Water in the Schell Resource Area, as in much of Nevada, is not an overly abundant resource. Partly because of this, much of Nevada is sparsely populated, with semi-desert vegetation covering much of the area. Water availability will be an important factor in future growth, as it has been in the past.

Both mining and agriculture, two of the resource area's principal occupations, depend on water for their operation. Mining utilizes water in its concentrating process. Agriculture needs water for both livestock use and crop irrigation. Water is also necessary for towns. Increases in population mean increases in water use for culinary and sewage purposes. Increased demands for water could result in more demand for water than there is water available to meet the demand. This could lead to a situation where growth or expansion of an activity could be limited by water supply. Thus, it is important to the activities and the animal life within the Schell Resource Area to protect and preserve the watershed.

WATER RESOURCES

Analysis

Nevada has been divided into 14 hydrographic regions and basins (Rush et. al., 1968), which are now used to compile information pertaining to water resources and water use in studies made by the Nevada Division of Water Resources--Department of Conservation and Natural Resources and the U.S. Geological Survey.

The largest of the 14 regions is the Central Region which is made up of parts of Elko, White Pine, Lincoln, Eureka, Lander, Clark, Pershing, Humboldt, Churchill, Nye, Mineral, Esmeralda and Lyon Counties; it contains 78 hydrographic areas.

The Schell Resource Area is located mainly within the Central Region, the western part of the Great Salt Lake Basin, and the northern part of the Lower Colorado River Basin.

Following is a summary of the estimated annual discharge, recharge, estimated perennial yield, and estimated storage for the hydrographic areas in the Schell Resource Area for which such data are available: (numbers in acre/feet)

	Discharge[1]	Recharge	Estimated perennial yield	Estimated Storage
Snake Valley	90,000	105,000	80,000	12,000,000
Spring Valley	75,000	75,000	70,000	---
Cave Valley	14,000	14,000	--	1,000,000
Lake Valley	12,000	13,000	12,000	1,000,000
Garden & Coal Valleys	12,000	12,000	--	---
	203,000	219,000	162,000	14,000,000

Source: U.S. Geological Survey, "Ground-water Resources-Reconnaissance Series" Reports # 13, 18, 24, 33, and 34.
It should be noted that these figures are only estimates made by the U.S. Geological Survey.

The State of Nevada Water Engineer's Office, Division of Water Resources, has identified certain hydrographic basins as being designated. A designated basin is a indication that the current water consumption is approaching the maximum water use (estimated perennial yield) for that basin. Future permits will be permitted for preferential uses, such as domestic use. Irrigation is not a preferential use. Also, in some designated basins, no further permits will be issued. Listed below is that basin in the Schell Resource Area that has currently been designated by the Water Engineer's Office.

[1]Definitions:

Discharge: The volume of water that passes a given point within a given period of time.

Recharge: The amount of water that percolates into the ground.

Annual Discharge: The amount of water in a given area that is lost by underground flow to another area or over-land flow to another area, is evaporated or consumed.

Storage: The estimated volume of recoverable water stored in the ground water reservoirs.

Perennial Yield: The maximum amount of water of usable chemical quality that can be withdrawn economically each year for an indefinite period of years.

182 - Lake Valley

This is a hydrologic basin and may not correspond totally to the geographic valleys.

There are no hydrologically closed basins in the Schell Resource Area; however, there are several basins closed to surface drainage. They are listed below:

171 - Coal Valley
180 - Coal Valley
181 - Dry Lake Valley
183 - Lake Valley
184 - Spring Valley
185 - Tippett Valley
186 - Antelope Valley

These basins refer to the State of Nevada's Hydrologic Map. They are hydrologic basins, and may not encompass the entire valley with that name.

Consumptive Water Uses on the Schell Resource Area

Estimates of consumptive water uses show that the largest user of water on the public lands is the livestock industry. There are approximately 125,911 AUMs of livestock on the Schell Resource Area which consume approximately 231 acre/feet (A/F) of water annually.

Large mammals and other wildlife on the Schell Resource Area consume an estimated 22.3 A/F of water annually. Water used for fire protection and supression on the Schell Resource Area amounts to approximately 1/10 A/F annually; however, this figure may change drastically depending on the number and size of fires in any given year.

Construction and maintenance of roads and trails on the Schell Resource Area accounts for about 1 A/F of water annually. Information for the consumptive water use of lands, minerals, and forestry is lacking.

Projected water requirements for the Schell Resource Area can be found in the Unit Resource Analysis, Step II, Water Resources section on Form 1600-19 (Figure #9), currently on file in the Ely District, Bureau of Land Management Office. These figures, however, do not take into consideration the MX project. If this project materializes, the water requirements in the future will be far greater than now anticipated.

Information concerning non-consumptive water uses on the Schell Resource Area is, at present, lacking. The Nevada Department of Wildlife is, however, presently contracting with the U.S. Fish and Wildlife Service to conduct streamflow studies to determine mean minimum flows of streams and the flow requirements needed to sustain quality fisheries. Once the study is completed, it should provide a better pecture of non-consumptive water uses and requirements within the Schell Resource Area.

Water Rights

The following is an excerpt from the June 18, 1979, Solicitor's opinion on water rights:

> "To the extent that Congress has not clearly granted authority to the States over waters appurtenant to public domain lands, the Federal Government retains the right to use such water not theretofore appropriated. The United States should, however, follow State substantine law to the greatest extent practicable. Without such compliance the nonreserved water rights of the United States may be subject to defeasance by subsequent appropriators.

Nevada's Sagebrush Rebellion movement indicates the resentment many people feel towards BLM and Federal Government control of public lands. Individuals fear an undue amount of control over their lives if all waters on public lands are Federally controlled.

Watershed

Only a small percentage of land in the Schell Resource Area is in a critical state of erosion; the major portion of land is in the stable to moderate erosion class.

Improved maintenance of County and BLM roads would reduce one of the most significant causes of accelerated erosion within the Schell Resource Area. Closure and reseeding of roads and trails not receiving much use would also assist in erosion control. Many local persons, however, feel all roads should be kept open for better public land access for hunting, prospecting and other recreational activities.

Air Quality

Air quality in the Schell Resource Area is generally good throughout, with the exception of some samll pockets where mining activity is occurring.

At present, the major contributor to air pollution is the Kennecott Copper smelter in McGill. Most local residents feel that the pollution emitted by the smelter is a small price to pay for job opportunities provided by the company when the smelter is in operation.

WILDLIFE

Analysis

Hunting

Table 23 details the information required for species or groups of animals which significantly contribute to the hunting opportunities in the Schell Resource Area (SRA). Figures on populations, harvest and hunter days come from 1979 information supplied by the Nevada Department of Wildlife. Habitat acreages are taken from the Schell Unit Resource Analysis (URA) Step 3.

Public lands within the Schell Resource Area represent 5.9% of the total state acreage. The 1974 Social Economic Profile estimates 42% of all hunting in the Ely BLM District occurs on BLM lands.[1] From this it can be estimated that 4.1 million acres of public lands in the SRA support approximately 1.7% of Nevada's hunting opportunities.

Mule deer hunting accounts for 75% of the consumptive use of wildlife in the Ely BLM District.[1] The remaining 25% is distributed mainly between antelope, grouse, chukar partridge, mountain lion and waterfowl. Quail, rabbit, dove and pheasant are not analyzed here because they are incidentally hunted while in search of other species.

Fishing

Table 24 details a summary of information available for coldwater trout fishing on streams on BLM lands within the SRA. Fisherman day figures represent averages of information gathered by Nevada Department of Wildlife (NDOW) between 1977 and 1979. Survey results are incomplete and used only as the best available data. At least 8 other streams (14 miles of which are on BLM lands) are fishable, but no recent fishing use information is available.

There is no significant acreage of reservoir or lake fishing on BLM lands. Considerable reservoir fishing use (not included here) occurs within the SRA on private or state waters at Silver Creek Reservoir, Eagle Valley Reservoir, Wayne Kirch and Key Pittman Wildlife Management Areas.

Habitat information taken from the Schell URA-Step 3 Aquatics was gathered during a 1976 BLM stream survey. Due to the drought conditions existing in 1976, some streams, which had no miles on BLM land in 1976, may now continue onto BLM lands. Out of a total of 38 streams within the SRA, 9 did not extend onto BLM land in 1976. Of those streams with any mileage on BLM land, five (17.8 miles) were judged as not fishable by combined BLM and NDOW information or are closed to all fishing.

[1] U.S. Department of the Interior, Economic Profile Supplement, Ely District, Nevada, Covering White Pine County, 1974 , Bureau of Land Management.

TABLE 23

Significance of BLM Lands to Wildlife Habitat
1979
Schell Resource Area

Species	Current Population[1]	Hunter Days[1]	Harvest[1]	Total Habitat Acres[2]	BLM Habitat Acres[2]	% BLM Land[2]	Comments
Mule Deer	4,535	7,568	583	2,412,507	1,883,176	78	
Antelope	900	176	34	1,483,531	1,390,670	94	
Sage Grouse	12,693	717	952	828,315	762,826	92	Harvest est. at 7.5% of pop.
Blue Grouse	9,760	521	488	423,142	132,595	31	Harvest est. at 5% of pop.
Chukar Partridge	18,280	362	914	43,647	38,640	88	Harvest est. at 5% of pop.
Mountain Lion	125	354	20	2,412,507	1,883,176	78	Harvest does not include animals taken for depredation.
Waterfowl	18,800	2,292	1,121	40,308	17,316	43	Population est. by % of habitat on BLM lands.
Total		11,990					

[1] Mule Deer Investigations and Hunting Season Recommendations, April 1980; Trophy Big Game Investigations and Hunting Season Recommendations 1980, March 1980; and Upland Game, Migratory Game Birds, Fur Investigations and Hunting Season Recommendations, August 1980; all by the Nevada Department of Wildlife.

[2] Schell Resource Area Unit Resource Analysis, Bureau of Land Management, Ely District Staff.

TABLE 24

Schell Resource Area

Cold Water Fishing Stream Habitat and Angler Use

Category	Number of Streams[1]	1976 Total Length[1] (miles)	1976 Miles on BLM[1]	Percent on BLM[1]	1977-79 Ave. Angler Days[2]	Comments
1. Fishable At least one year angler use available from 77-79	15	106.75	27.25	26	2,468	Angler days were taken as average annual use 1977 and 1979.
2. Fishable No data on angling use between 1977-79	8	37.95	14.00	37	1,260 (est.)	Angler days projected using ave. of 90 Angler days/BLM mile from category - 1.
3. Non-Fishable -No legal species on BLM Land						-9 Streams: dry on BLM in 1976
-Closed to fishing	15	83.45	14.30	17		-1 Stream: closed to all fishing
-No water on BLM						-5 Streams: no known fishable waters on BLM
TOTAL	38	228.15	55.55	24	3,729	

[1] Schell Resource Area Unit Resource Analysis, Bureau of Land Management, Ely District Staff.

[2] Information from Leroy McClelland, District Fisheries Biologist, Nevada Department of Wildlife, Ely Office.

Regional Perspective

Hunting

Wildlife consumptive use on BLM lands in the SRA has been compared with the total use within the State of Nevada (Table 25). As mentioned earlier, BLM lands within the SRA make up approximately 5.9% of lands within the State of Nevada. By comparison, public lands within the SRA support 4% of the state's Mule Deer population, 8% of the deer hunter days and 5% of the deer harvest. The 1979 Blue Grouse figures presented in Table 23 are unusually high in relation to statewide figures and do not represent the "norm". Upland game species populations often vary widely by year and area.

Although 42% of all hunting within the district occurs on BLM lands, much of the best habitat and therefore much of the hunting for Mule Deer and Blue Grouse occurs on adjacent Forest Service lands.[1] Most of the best habitat and hunting for waterfowl within the area occurs on the Wayne Kirch and Key-Pittman Wildlife Management Areas managed by the NDOW. Some habitat for Rocky Mountain Elk and Rocky Bighorn Sheep occurs on BLM managed lands within the SRA; however, those species are not hunted on BLM managed lands. Antelope and Sage Grouse hunting and habitat occurs mainly on valley and bench areas of BLM managed lands. Populations vary with forage and water availability. Mountain lion hunting and habitat coincide closely with that of mule deer, mainly on BLM and Forest Service administered lands.

Forest Service lands in the Schell Creek and Snake Ranges make up much of the prime habitat for many wildlife species within the Schell Resource Area. Riparian habitats around streams and springs are a critical factor in supporting most wildlife species. Heavy competition among wildlife, livestock and wild horses has been detrimental to many riparian areas on BLM managed lands. Proper management of lands administered by BLM is vital in maintaining or expanding hunting opportunities in the Schell Resource Area.

Fishing

Using a computed average of 93 angler days per mile of the 40 miles of fishable stream on BLM managed lands (Table 24) gives an average use of 3,729 angler days/year in the SRA. This amounts to 0.2% of the lower portions of most streams. However, some angling does occur on many higher quality upper portions of streams managed by the U.S. Forest Service or on private land. Improved riparian habitat will enhance fishing quantity and quality on the SRA streams.

Wildlife

Income-Employment

The income and employment from wildlife in the three county region is detailed in Table 26. This table shows the income and employment for hunting, fishing and trapping within the region and attributable to public lands.

[1] U.S. Department of the Interior, Economic Profile Supplement, Ely District, Nevada, Covering White Pine County, 1974, Bureau of Land Management.

TABLE 25

Schell Resource Area - 1979

Comparison of Wildlife on BLM Lands to Nevada State Total

Species	% Current Population	% Hunter Days	% Harvest	Comments
Mule Deer	4	8	5	
Antelope	10	11	9	
Sage Grouse	7	4	3	Based on a statewide average of 15% of population.
Blue Grouse	31	13	16	These figures are higher than normal due to unusually good condition in White Pine County in 1979.
Chukar Partridge	1	0.5	0.6	Based on a statewide average harvest of 10% of population. (same for Blue Grouse)
Mountain Lion	25	22	50	Does not include 20 lions taken for depredation on a statewide basis.
Waterfowl	5	3	1	Assumes population of SRA is 43% of population total of White Pine, Nye and Lincoln County waterfowl.

Source: Mule Deer Investigations and Hunting Season Recommendations, April 1980; Trophy Big Game Investigations and Hunting Season Recommendations 1980, March 1980; and Upland Game, Migratory Game Birds, Fur Investigations and Hunting Season Recommendations, August 1980; all by the Nevada Department of Wildlife.

"Expenditure figures are based on data accumulated in a study done by Garrett of the University of Nevada, Reno, in 1969. This study applied to big game hunting in Nevada, but the findings in other studies (Oliver, 1977; Hansen, 1977) showed relatively small differences in hunter day expenditures between big and upland game hunting. Therefore it was felt that the figures derived by Garrett would approximate hunter day expenditures for all game species. Direct income is personal income derived per dollar of expediture (Malone and Detering, 1969). Total income is then determined by the use of a multiplier derived by the Nevada State Engineers Office in its Water for Nevada series of reports (Nevada State Engineer Office 1974). Employment figures are then estimated by dividing total national income ($176,411,000) by average income in the trade sector ($9,720) of the regional economy (see Table 26) and multiplying by the employment multiplier for the trade sector from the Nevada State Engineer's Office. The trade sector was chosen because it is the sector in which the majority of expenditures for hunting purposes are made" (Sonoma-Gerlatch, PAA, 1980).

Hunting directly contributed $577,807 to the regional income (.33%) and 29 jobs to the region's employment (.47%). Bureau of Land Management managed lands contributed $182,848 in direct income to the region (.1%) and direct employment for 9 persons in the region (.15%). Total direct and indirect income from hunting on BLM managed lands was $191,654, (.11% of the regional income). Total employment from BLM managed lands is 29 persons (.47%). Eighty-nine persons are dependent upon hunting activities in the region and 28 people are dependent upon hunting on BLM managed lands in the SRA.

Direct income to the region from fishing is $546,867, .31% of the regional income. Direct income generated from BLM managed lands is $14,921 (.01% of regional income) and total income is $15,639 (.01%). Direct employment in the region is 28 persons, .45% of the regional employment. Direct employment generated by BLM managed lands is 1 person, and total employment is also 1 person, .02% of regional employment. Total population dependence from fishing activity is 86 persons, three of whom are dependent on fishing activity on BLM managed lands. Population dependence is derived by multiplying employment by a population-employment ratio of 3.08.

Furbearing species trapped in the Schell Resource Area are Coyote, Bobcat, Beaver, Muskrat, Gray Fox, Kit Fox, Badgers, Skunk and Ring-tail cat. Of these, Coyotes and Bobcats are the most trapped species and the most profitable species in the market place. Furs are sold either to a traveling buyer, at auctions in Fallon, Winnemucca and Elko, or sent directly to the Seattle Fur Exchange.

Trapping pressure is assumed to be equally distributed throughout the three county region, with 5% of Nye County harvest, 33% of Lincoln County harvest and 30% of White Pine County harvest derived from the public lands. Twenty-one percent of the total value of furbearers harvested in the region is contributed by the public lands. Public lands in the Schell Resource Area contributed 6.8% of the total value from furbearers harvested statewide. Income derived from trapping furbearers in the region is $371,895 (.21% of total regional income), with $75,130 (.04%) of this income from BLM managed lands. Total income is $389,784 in the region (.22%) and $78,744 of this amount is from BLM managed lands (.04%). Direct employment from the trapping industry is 18 persons, .29% of regional employment.Direct employment attributable to BLM managed lands is 4 persons, .06% of regional employment.

TABLE 26

Wildlife Created Income and Employment

Hunting	Hunter days		Expenditures[1/]		Direct Income[2/]		% of Regional Income
	Three County Region	BLM	Three County Region	BLM	Three County Region	BLM	
Mule Deer	18,411	7,568	$ 1,113,047	458,622	289,392	119,242	.07
Antelope	187	176	$ 11,425	10,640	2,970	2,776	.01
Sage Grouse	3,568	717	$ 102,383	21,222	26,620	5,518	.01
Blue Grouse	1,451	521	$ 43,103	15,652	11,207	4,070	.01
Chukar Partridge	10,635	362	$ 312,381	10,546	81,219	2,742	.01
Mountain Lion	399	354	$ 26,254	23,389	6,823	6,081	.01
Water Fowl	8,620	2,292[6/]	$ 613,744	163,190	159,573	42,429	.02
Total Hunting	43,271	11,990	$ 2,222,335	703,262	577,807	182,848	.10
Fishing	136,669	3,729	$ 2,103,336[7/]	57,389	546,867	14,921	.01
Furbearers	120	40	$ 615,682[8/]	128,747	371,895[9/]	75,130	.04
Total Wildlife	180,060	15,759	$ 4,941,353	889,398	1,476,569	272,899	.15

Hunting	Total Income[3/] Three County Region	BLM	% of Regional Income	Direct Employment[4,5/] Three County Region	BLM	Total Employment Three County Region	BLM	% Regional Employment From BLM Managed Lands
Mule Deer	303,312	124,978	.07	14	6	14	6	.1
Antelope	3,113	2,910	.01	0	0	0	0	0
Sage Grouse	27,900	5,783	.01	1	0	1	0	0
Blue Grouse	11,746	4,266	.01	1	0	1	0	0
Chukar Partridge	85,126	2,874	.01	4	0	4	0	0
Mountain Lion	7,154	6,373	.01	0	0	0	0	0
Water Fowl	167,248	44,470	.03	8	2	8	2	.03
Total Hunting	605,549	191,654	.11	29	9	29	9	.15
Fishing	573,171	15,639	.01	28	1	28	1	.02
Furbearers	389,784	78,744	.04	18	4	18	4	.06
Total Wildlife	1,568,554	286,037	.16	72	13	73	13	.21

TABLE 26

1. Hunter day expenditures based on information from "Characteristics of Nevada Hunters" by Garrett (1970) and adjusted for inflation. Includes costs for licenses and toys but does not include other fixed costs for equipment.

2. Expenditures multiplied by 0.26 equals Income (multiplier for Income from "An Interindustry Analysis of the Elko County, Nevada" Malone and Detering 1969).

3. Multiplier for Income is 1.0481, from "Water for Nevada, Special Report Input Output Economic Model 1979" State Engineers Office. Multipliers show the total effect of an activity on the economy. Income from an activity is respent and becomes income for other people. With a multiplier of 1.0481, for every dollar of direct income, .0481 dollars is also added to the economy as secondary effects.

4. Employment calculated from an Income/Employment ratio for the Trade and Service Sector of the regional economy ($20,608) calculated by BLM, Ely.

5. Direct Employment x 1.0133, the Employment multiplier for the Trade Sector of the Tonopah Derset Regional Model, "Water of Nevada Special Report Input Output Economic Models" 1974.

6. Hunter days for waterfowl is for Wayne Kirsch Wildlife Management Area only. Most waterfowl hunting in other parts of the resource area are on private land and there is very little hunter day information available for the area.

7. Based on $15.39 expenditure per angler day in the region, derived from "A Report on the Value of Wildlife (Wildlife Economics), prepared for the Intermountain Region Forest Service" by Christopher S. Hansen, Dec. 1977.

8. Expenditures represents value of furs; income is derived by multiplying the number of licensed trappers (198) times the average income per trapper ($1,878); Furbearer Investigations 1980.

9. Percentage value of fur derived from BLM managed land is the percentage of income assumed to be derived from BLM managed lands. Percentages were derived for each county and then aggregated. Percentage is 5% in Nye County, 33% in Lincoln County and 30% in White Pine County.

Source: Nevada Department of Wildlife: Upland Game, Migratory Game Birds, Fur Bearer Investigations and Hunting Season Recommendations 1980; Mule Deer Investigations and Hunting Season Recommendations 1980; and Trophy Big Game Investigations and Hunting Season Recommendations 1980.

Total employment is the same as direct employment. Population dependance on fur trapping industry in the region is 55 persons, population dependance from BLM managed lands is 12 persons.

Income in the region derived from wildlife is $1,476,569, which is .84% of the total regional income. An additional $91,985 income is indirectly derived from wildlife. Of the total regional income, .15% is contributed by the public lands ($272,899). Total income derived from wildlife from the public lands to the region is $286,037.[1] Direct employment in the region from wildlife related activities is 72 persons, with 13 persons (.21%) contributed by BLM managed lands. Total employment in the region from this activity is 73 persons, 1.2% of the region's employment. (Employment figures are tabulated by county of residence, not county of work). Direct population in the region dependent on wildlife is 222 persons. Forty persons are dependent on BLM managed lands. Total population dependence is 225 persons in the region and 40 persons from BLM managed lands.

Demand Projection

Tables 28 and 29 give information on projected demands/needs for habitat increases or improvements and/or increases in species numbers. These are based on a 5% projected population growth in the region by 1990.[2]

Present hunter demand for Mule Deer and Antelope hunting within the herd management units in and around the Schell Resource Area far exceeds the animal supply. In 1979, 18,715 Nevadans applied for 3,321 general rifle deer tags, which represents 18% of the demand. The deer tags must increase 464 percent to meet this demand. The existing population of 4,535 animals needs to be expanded 132 percent to achieve reasonable numbers, which are based upon historical population records.[3] Also in 1979, 396 Nevadans applied for 40 general rifle antelope tags, which represents 10 percent of the demand. Antelope tags must increase 890 percent to meet this demand. The existing population of 1,156 animals needs to be expanded 26 percent to achieve reasonable numbers.[4] Not only will expected increases in big game populations fail to meet future hunter demand, they can not even meet the present demand.

[1] It should be noted that the income and employment figures for the Wildlife section are related to the number of days animals are hunted, and thus do not include any income or employment generated by people enjoying wildlife in a non-hunting manner. There are no expenditure figures for such activities as bird, deer or antleope watching.

[2] From information provided by the Nevada State Planning Coordinator's Office.

[3] While the deer tags represent all of MA #11, 13, 22 and 23 (includes more than the SRA), the population represents just the SRA. Antelope tags and population represented only public land within the SRA.

[4] Information from Terry Retterer, Nevada Department of Wildlife, Telephone Conservation, March 1981.

Demands for most wildlife could best be met by improving the quality of present habitat.[5] This includes proper forage allocation and increasing proper cover and food distribution. Water quantity and distribution also play a key role in providing for increased wildlife numbers.

Fishing demand by 1990 is calculated at 3,915 angler days with an increase of 2.8 miles of stream needed to meet the projected 5% increase in population. The best method of providing for this increase would be to improve habitat by fencing appropriate riparian zones, placing barriers to increase the number of pools and possibly by increasing the stocking of improved habitat.

Bighorn Sheep has potential to become a trophy hunted species. The Humboldt National Forest currently has three populations within the Schell Resource Area boundary. One of the herds ventures onto BLM administered land in the winter season. The Nevada Department of Wildlife has identified other habitat on BLM administered land for future reintroductions. With time, these future populations could become huntable. Until that time, however, the bighorns will hold a very high level of aesthetic values.

[5]Information on how to improve the quality of the habitat is contained in URA Step 4. Where habitat can be improved is shown on MFP Step 1 Overlay #2.

TABLE 27

Schell Resource Area - 1979

Hunter Day Co-efficients

Species	Hunter Days[1]	Hunter Days/ Acre of BLM Habitat[2]	Hunter Days/ Species Population[2]
Mule Deer	7568	.004	1.669
Antelope	176	.0001	.195
Sage Grouse	717	.0009	.058
Blue Grouse	521	.004	.053
Chukar Partridge	362	.009	.020
Mountain Lion	354	.00019	2.83
Waterfowl	2292	.132	.122

[1] Mule Deer Investigations and Hunting Season Recommendations, April 1980; Trophy Big Game Investigations and Hunting Season Recommendations 1980, March 1980; and Upland Game, Migratory Game Birds, Fur Investigations and Hunting Season Recommendations, August 1980; all by the Nevada Department of Wildlife.

[2] Calculated by the Ely, Bureau of Land Management Office.

TABLE 28

Wildlife Habitat Demand

Species	1979 Hunter Days[1]	1990 Hunter Days Demand[2]	Hunter Days per BLM Acre Habitat[2]	Present Habitat Acres on BLM[3]	1990 BLM Habitat Acre Demand[2]	Increase in BLM Habitat Acres Required to meet 1990 Demand[2]	1990 Acres/Animal[2]
Mule Deer	7,568	7,946	.004	1,883,176	1,986,500	103,324	417 Acres/Deer
Antelope	176	185	.0001	1,390,670	1,850,000	459,330	1.949 Acres/Antelope
Sage Grouse	717	753	.0009	762,826	836,667	73,841	64 Acres/Sage Grouse
Blue Grouse	521	547	.004	132,595	136,750	4,155	13 Acres/Blue Grouse inc
Chukar Partridge	362	380	.009	38,640	42,222	3,582	2.2 Acres/Chukar Partridge
Mountain Lion	354	372	.00019	1,883,176	1,957,895	74,719	14,946 Acres/Mt. Lion
Waterfowl	2,292	2,407	.132	17,316	18,235	929	0.92 Acres/Bird
TOTAL	11,990	12,590					

[1] Mule Deer Investigations and Hunting Season Recommendations, April 1980; Trophy Big Game Investigations and Hunting Season Recommendations 1980, March 1980; and Upland Game, Migratory Game Birds, Fur Investigations and Hunting Season Recommendations, August 1980; all by the Nevada Department of Wildlife.

[2] Calculated by the Ely Bureau of Land Management Office.

[3] Schell Resource Area URA Step 3, on file at the Ely Bureau of Land Management Office.

TABLE 29

Wildlife Population

Species	1979 Hunter Days[1]	1990 Hunter Day Demand[2]	Hunter Day Per Species Population[2]	Present Species Population BLM Land[2]	1990 BLM Species Demand on BLM Land[2]	Increase in Population Needed to Meet 1990 Demand[2]
Mule Deer*	7,568	7,946	1.669	4,535	4,760	225
Antelope*	176	185	0.195	900	949	49
Sage Grouse	717	753	0.058	12,693	12,983	290
Blue Grouse	521	547	0.053	9,760	10,321	561
Chukar Partridge	362	380	0.02	18,280	19,000	720
Mountain Lion*	354	372	2.83	125	131	6
Waterfowl	2,292	2,407	.122	18,800	19,729	929

* Demand is higher than supply now; distribution of permits is by tag drawing system.

[1] Mule Deer Investigations and Hunting Season Recommendations, April 1980; Trophy Big Game Investigations and Hunting Season Recommendations 1980, March 1980; and Upland Game, Migratory Game Birds, Fur Investigations and Hunting Season Recommendations, August 1980; all by the Nevada Department of Wildlife.

[2] Calculated by the Ely Bureau of Land Management Office.

Public Attitudes and Social Values

The people in the region feel that wildlife has a place on the land, that they belong out in the range land. Many, though not all, of the people interviewed for Planning Area Analysis were hunters. Yet both groups, hunters and non-hunters, felt that wildlife should be preserved in their natural environment. One individual stated he would like to see wildlife preserved so that his children and grandchildren would be able to view and appreciate them in their natural setting.

At the Town Hall Meetings, sponsored by the Commission on the Future of Nevada, all of the participants felt that Nevada's wildlife and wildlife management were very important. Participants in White Pine County expressed more varied responses. Seventy percent thought Nevada's wildlife was very important and twenty-nine percent thought it was somewhat important. Feelings on wildlife management were even more divided, with 41.2% rating it very important; 47.1% rating wildlife management somewhat important, and 5.9% indicating it was of little importance.[1]

In a statewide survey, the Governor's Commission on the Future of Nevada asked if state government regulation over the next twenty years should be greater, equal to, or less than the current efforts in wildlife management. Twenty-eight percent of Lincoln county respondents felt that state regulation should be greater, forty-three percent felt it should remain the same and twenty-nine percent felt it should be less. In White Pine County, 28% felt that state government regulation in wildlife management should be greater, 34% felt it should be the same and 38% felt it should be less over the next twenty years. Of the Nye county respondents, 42% felt state government regulation should be greater, 43% felt that it should remain the same and 16% felt it should be less.[2] The overall feeling in the region appears to be that state management of wildlife, through regulation, needs to be maintained or increased.

The general feeling in the region seems to be that wildlife should be perpetuated on the range and mountain lands. Multiple-use management was cited many times as an excellent management plan. No one interviewed for PAA indicated a desire to substantially reduce or eradicate wildlife from the region. Overall, wildlife numbers, most especially big game and waterfowl, were thought to be currently at acceptable levels, with interviewees expressing a desire to see increased wildlife numbers. A few people felt that predators, especially coyotes and mountain lions, should be reduced. They felt that depredation of domestic livestock, especially sheep, was at an unreasonably high level.

[1] Sample size for these meetings was very small. In White Pine County, 17 people responded and 5 people responded in Lincoln County. The meetings had an attendance of 18 people in White Pine County and 11 people in Lincoln County.

[2] White Pine County returned 362 of the surveys, Lincoln County returned 69 of the surveys and Nye County returned 195 of the surveys. The total number of surveys returned was 18,671. More detailed respondant demographic data can be found in Appendix 2.

General satisfaction with the Bureau's current wildlife program was expressed in the PAA interviews. One person did feel that wildlife management should be solely the responsibility of the state. Another individual was concerned that projects were being stopped in mid-construction to save some obscure subspecies of animal or insect. He felt that studies should be made before construction, to determine what animals utilized the project area and what modifications could be made in the project prior to construction to mitigate any destructive impacts, but once that construction was begun, the project should not be abandoned because a rare or endangered subspecies was discovered in the area. One rancher believes that there needs to be more information on the conflicts between the different lifestock and wildlife species for forage before we can adequately plan for forage use and allocate forage consumption.

The ranching community as a group generally felt that wildlife had a right to exist; however, they did not feel that wildlife forage needs should be put before cattle or sheep forage needs. They did not want to see their AUM's reduced so that wildlife numbers could be increased. Several ranchers felt that there was not much conflict between wildlife and livestock for forage, that wildlife utilize either forage areas or forage types that cattle do not utilize. One rancher did not believe that cattle grazing on stream banks was detrimental to fish habitat, and saw no reason to restrict cattle from grazing on stream banks as a means of improving fish habitat. Another rancher pointed out that wildlife feed on private ranching property, without the rancher being reimbursed for the AUMs wildlife consume.

Rancher and non-rancher interviewees had various suggestions for increasing wildlife numbers. Chaining or burning and then reseeding to bring in more palatable forage was the most often mintioned method of improving the habitat. Closures of roads to preserve habitat, control of predators, restrictions on ORV use and increased water developments were alternative methods mentioned. It was felt that the tag system was a good method of protecting and preserving wildlife, while still harvesting wildlife as one of the products from the land. Several of the people interviewed were enthusiastic about the idea of improving fish habitat. Fishing appeared to be an activity that appealed to a wide range of individuals, and had fewer endurance limitations than some outdoor activities, such as wilderness hiking or hunting.

Overall, residents felt that wildlife should be maintained on the range, and that the best method of increasing wildlife numbers is through improving wildlife habitat.

RECREATION PROGRAMS

Analysis

Hunting - Hunting is the most important recreation pursued in the resource area both in terms of recreation days and expenditures. About 16,582 hunter days accounted for $475,392.94 in expenditures.[1/] Almost half of the occasions and well over half of the expenditures are for hunting mule deer. Rabbit and mule deer account for over 83% of the hunting expenditures.

Other species hunted in the Schell Resource Area include sage grouse, blue grouse, chukar partridge, quail, waterfowl, dove, mountain lion and antelope.

Estimated 1980 State hunting totals indicate hunters spent $17,911,551.50 during 605,230 hunter days. Therefore, the Schell Resourse Area contributes something less than 5% of the hunting in the State.

Fishing - About $57,327.75 is spent during the 3,725 fisherman days on public lands in the Schell Resource Area.[2/] This represents a very small portion (0.15%) of the estimated 2,461,523 fisherman days and expenditures of $37,882,838.97 expected in Nevada in 1980.

General Visitor Use:

Winter Sports - Resource specialists in the Ely district estimate that about 600 visits (four hour duration) in 1980 will account for about $4,614 in expenditures. This is insignificant (0.34%) when compared with state totals of 1,773,732 occasions and expenditures of $13,639,999.08 estimated for 1980.[3/]

1/ Hunter days are derived from information in the 1980 Nevada Department of Wildlife publications: Upland Game, Migratory Game Birds, Fur Bearers Investigations and Hunting Season Recommendations; Mule Deer Investigations and Hunting Season Recommendations; and Trophy Big Game Investigations and Hunting Season Recommendations. Hunter day expenditures based on information from "Characteristics of Nevada Hunters" by Garrett (1970) and adjusted for inflation. Includes costs for licenses and tags but does not include other fixed costs for equipment.

2/ Angler days obtained from Nevada Department of Wildlife Records, through William L. McLelland, personal communication, Ely Office. Expenditures for angler days derived from "a Report on the Value of Wildlife (Wildlife Economics), prepared for the Intermountain Region Forest Service" by Christopher S. Hansen (1977).

3/ Information for this section obtained from the 1977 Statewide Comprehensive Outdoor Recreation Plan (SCORP), by the Nevada State Parks System.

TABLE NO. 30

Economic Significance of Recreation Activities - Three County Region

ACTIVITY	VISITOR DAYS[1]		EXPENDITURE/ VISITOR DAY	EXPENDITURES[2]		DIRECT INCOME[3]		TOTAL INCOME[4]		% INCOME FROM BLM LANDS TO TOTAL INCOME
	REGIONAL	SRA BLM LANDS		REGIONAL	SRA BLM LANDS	REGIONAL	SRA BLM LANDS	REGIONAL	SRA BLM LANDS	
HUNTING	43,271	11,990	$58.65	$2,222,355	$703,262	$577,807	$182,848	$605,599	$191,654	.11
FISHING	136,669	3,729	15.39	2,103,336	57,389	546,867	14,921	573,171	15,639	.01
GENERAL RECREATION										
WINTER SPORTS	25,155	300	7.69	193,412	4,614	50,287	1,199	52,706	1,257	.01
PICKNICKING	33,905	4,756	2.08	70,522	9,892	18,336	2,572	19,218	2,695	.01
CAMPING	26,577	3,728	4.36	115,876	16,254	30,128	4,226	31,577	4,429	.01
GENERAL RECREATION TOTAL	85,637	9,084		379,810	30,760	98,751	7,997	103,501	8,381	.01
RECREATION TOTAL	265,577	24,803		4,705,481	791,411	1,223,425	205,767	1,282,271	215,664	.12

Table continued on next page -

TABLE NO. 30 (Cont.)

ACTIVITY	EMPLOYMENT[5/] DIRECT REGIONAL	DIRECT SRA BLM LANDS	TOTAL REGIONAL	TOTAL SRA BLM LANDS	% REGIONAL EMPLOYMENT FROM BLM LANDS	POPULATION DEPENDENCE[5/] DIRECT REGIONAL	DIRECT SRA BLM LANDS	TOTAL REGIONAL	TOTAL SRA BLM LANDS
HUNTING	29	9	29	9	.15	89	28	89	28
FISHING	28	1	28	1	.02	86	3	86	3
GENERAL RECREATION									
WINTER SPORTS	3	0	3	0	0	9	0	9	0
PICKNICKING	1	0	1	0	0	3	0	3	0
CAMPING	1	0	1	0	0	3	0	3	0
GENERAL RECREATION TOTAL	5	0	5	0	0	15	0	15	0
RECREATION TOTAL	62	10	63	10	.16	191	31	194	31

Table 30 - Footnotes

1/ A visitor day for hunters and anglers is defined by the Nevada Department of Wildlife as a person hunting or fishing for any part of one day.

A visitor day for winter sports is 4 hours, for picnicking it is 1.6 hours, and for camping it is 14 hours. The length of time for a visitor day is from BLM Manual 6112 Visitor Use Analysis, Form 6110-11 general visitor use estimates, Illustration 1 page 2 Length of Individual Participation in Various Activities Estimates (Per Day Basis).

2/ Expenditures for hunters are such things as licenses and tags, vehicle repairs, gas and oil, meals and food, lodging and entertainment, ammunition, rentals and carcass processing. Expenditures for hunters and anglers are in 1978 constant dollars. Expenditures for general recreation are from Recreation in Nevada, Part II, published 1967 by the Department of Conservation and Natural Resources, State of Nevada. These figures have not been adjusted to 1978 constant dollars.

3/ Direct income is personal income derived per dollar of expenditure.

4/ Direct income from an activity is respent and becomes income for other people. This "respent" income is known as indirect income, and needs to be taken into account in judging impacts to an economy from changes in the direct income source. Direct and indirect income are total income.

5/ Units are people.

Water Sports - Public lands in the Schell Resource Area do not provide conventional water sports opportunities. Swimming in hot springs is pursued by some local residents.

Collecting - Collecting of Christmas trees, pine nuts, rocks and both prehistoric and historic artifacts takes place in the Schell Resource Area. No use or expenditure information is available.

Specific Sightseeing - Specific sightseeing opportunities are available in the resource area for geological, botanical and zoological features including wild horses. No reliable visitor use information is available.

Specialized Activities - Off-Road Vehicle Recreation (ORV) in the SRA is often pursued in conjunction with other recreation activities, such as camping, hunting or fishing. There are no known major concentrations of ORV use, although ORV use does occur near Ely, Pioche and Baker. Most ORV-ing is confined to back-country roads and trails. One or two competitive ORV events are organized in the SRA each year. Off-road vehicles included motorcycles, snowmobiles and four-wheel drive vehicles. ORV use can conflict with other recreational activities, and can cause increased noise and vandalism, reduction of wildlife habitat and vegetation, and increased soil erosion and compaction. Some of these problems can be controlled by designating specific ORV use areas; others will be harder to solve. Although no specific use information is available for the Schell Resource Area, ORV use can be expected to increase as the population in the counties increases.

Spelunking - There are an estimated 200+ caves within the Resource Area. Many of these caves are known locally and receive limited visitation. Two of the caves, Whipple and Leviathan, are well-known and each receive 150-200 visitors per year. Expenditure figures are not available, making analysis impossible.

General Pleasure[1/]

Camping - About $16,254.08 are expended by campers during their 3,728 camper days (14 hour duration). This represents 0.12% of the camping in the state.

Picnicking - About $9,892 are spent by picnickers during their 4,756 visits (1.6 hours duration). This is less than 1% of the state's picnicking.

Income-Employment

Estimates[2/] of the income and employment generated by the recreation industry in the three county region are presented in Table 30. Only those activities currently pursued on the Schell Resource Area are presented; other recreation activities practiced in the region are not discussed.

1/ Camper days and picnicker visits obtained from Jim Najima, Nevada State Parks Department, Planning and Development. These figures represent visitor use during the highest season of use, not annual visitor use.

2/ Sources for the estimates are presented in Table 30.

TABLE NO. 31

Recreation Participation by Location of Participation
Region IV

Activity	Region I[1] %	Region II[2] %	Region III[3] %	Region IV[4] %	Region V[5] %	Region VI[6] %	Lake Tahoe %	Idaho %	Calif %	Utah %	Arizona %	Oregon %	All Other States %
Driving for Pleasure	8.9	0.9	8.8	65.9	6.0				1.3	4.5		1.5	2.2
Swimming		1.9	2.4	72.9	6.1		0.9		2.4				13.3
Waterskiing			10.0	35.0	17.5		20.0					17.5	
Skin & Scuba Diving				100									
Fishing	9.0	12.8	3.1	44.9	20.8	2.5	0.9	0.6		5.3			
Motor Boating		18.5	12.6	44.9	17.2		3.8					2.9	
Nonmotor Boating			6.2	93.7									
Big Game Hunting			5.0	83.3	11.7								
Small Game Hunting			10.0	75.0	10.0	5.0							
Picnicking	0.7	2.2		59.9	1.8		0.7			9.9			24.7
Tent Camping		4.3	21.7	73.9									
Trailer Camping	22.3	7.9		11.9	30.7					4.9		22.3	
Bicycling				100									
Horseback Riding				97.1	2.9								
Hiking & Walking				100									
Backpacking				100									
Mountain Climbing													
Relaxing Outdoors													
Nature Study				100									
Golf	8.9			91.0									
Snow Skiing										100			
Ice Skating													
Snowplay				100									
Playing Games	2.8	1.2	86.1		6.2								3.7
Tennis**													
Baseball**													
Viewing Outdoor Sports	21.2	0.3		77.8	0.6								
Drama and Concerts			55.5	44.4									
Motorcycle Riding													
Racing													
Gardening**				100									
Visiting Historical Sites													
Other													

Source: 1977 SCORP, Nevada State Park System.
**Information incomplete at this time.

1/ Region I is Washoe, Churchill, Lyon, Storey, Douglas Counties and Carson City.

2/ Region II is Mineral, Esmeralda and Nye Counties.

3/ Region III is Clark County.

4/ Region IV is Lincoln, White Pine and Eureka Counties.

5/ Region V is Elko County.

6/ Region VI is Humboldt, Pershing and Lander Counties.

This table shows the percentage of participants by area of residence (Region I, Idaho, ect.) who engage in each activity within the boundaries of Region IV. This table does not show the percentage of participants who reside in Region IV but recreate in other areas.

Direct regional income from recreation activity is 1.3% of the combined trade and service sector income and .7% of total regional income. Direct regional employment from recreation activity is 1.2% of the combined trade and service sector employment (employment by place of work) and is 1% of total regional employment (employment by place of residence).

Within the region, 14% of the picnicking and camping activity occurs on public lands in the Schell Resource Area. Winter sports in the SRA are 2.4% of the regional total. The public lands contribute 28% of the hunter days in the region and 2.7% of the angler days.

Table 33 shows the current visitor use by activity and the projected 1990 visitor use. Projections are from the State Parks Department, Planning and Development Division and are based on projected population in the region.[1/] Changes in either the population of the region or the types of recreation people wish to participate in will alter the visitor use figures.

1/ Personal communications, Jim Najima, Fall 1980.

TABLE NO. 32

PARTICIPATION RATES* - REGION IV 1/

ACTIVITY	AGE GROUP 1	2	3	4	5	POP. WEIGHTED AVERAGE OF ALL AGE GROUPS
PLEASURE DR	8.54	6.68	7.38	5.44	4.00	6.79
SWIMMING	9.58	12.78	5.57	.48	.66	6.45
WATERSKIING	.09	.95	.37	0.00	0.00	.33
SKIN DIVING	0.00	0.00	.03	.31	0.00	.05
FISHING	4.82	2.95	4.00	3.31	2.58	3.69
MOTORBOATING	1.73	1.05	1.52	.96	0.00	1.22
BIGGAME HUNT	0.00	4.81	4.81	5.72	1.17	3.71
SMALL GAME	.78	3.77	.78	1.69	0.00	1.52
PICNICKING	2.40	3.84	2.69	1.58	1.75	2.57
TENT CAMPING	1.33	1.47	1.60	1.31	1.41	1.44
VEHICLE CAMP	1.36	.95	1.20	.34	0.00	.91
BICYCLING	8.18	20.37	3.52	3.10	0.00	7.61
HORSE BACK R	0.00	5.53	4.62	.13	0.00	2.57
HIKING	.64	2.74	1.59	1.03	.50	1.43
BACKPACKING	0.00	0.00	.03	0.00	0.00	.01
MTN CLIMBING	0.00	0.00	1.00	.50	0.00	.40
RELAX OUTDOORS	9.91	12.05	14.30	5.72	0.00	9.99
NATURE STUDY	.54	0.00	.27	1.37	.41	.50
GOLF	0.00	.94	.35	2.06	0.00	.72
PLAY GAMES	3.45	2.63	3.20	.31	.83	2.35
VIEW SPORTS	1.27	1.00	1.17	.10	.91	.92
DRAMA	0.00	.21	0.00	0.00	0.00	.04
MOTORCYCLE R	0.00	3.84	2.57	0.00	0.00	1.58
RACING	0.00	0.00	.26	0.00	0.00	.08
HIST SITES	0.00	1.04	.39	.65	0.00	.47
OFF-RD VEHICLE	1.04	1.04	.26	0.00	0.00	.51
ANIMAL EVENT	0.00	.52	.26	0.00	0.00	.19
GARDENING	1.86	4.33	6.24	4.11	8.00	4.67
SNOWSKI	.49	.52	.52	.06	0.00	.38
ICE SKATING	0.00	0.00	0.00	0.00	0.00	0.00
SNOW PLAY	1.56	1.56	.39	.20	0.00	.80
TENNIS	1.24	.73	1.39	0.00	0.00	.82
BASEBALL	8.05	3.61	.35	0.00	0.00	2.50

ge
roup 1 =<10; 2 = 10-19; 3 = 20-44; 4 = 45-64; 5 = 65+

*Participation Rate - indicates average frequency of participation per capita in an outdoor recreation activity during one season.

1/ Region IV consists of Lincoln, White Pine and Eureka Counties.

Source: 1977 SCORP, Nevada Department of Parks.

TABLE NO. 33

REGIONAL VISITOR USE DATA
AND DEMAND PROJECTIONS [1]

	1980 VISITOR USE [2]		1990 VISITOR USE	
	REGION	BLM - MANAGED LANDS	REGION	BLM - MANAGED LANDS
HUNTING: [3]	43,271	11,990	43,799	12,590
FISHING:	136,669	3,729	136,363	3,804
GENERAL RECREATION: [4]				
WINTER SPORTS:	25,155	600	27,696	661
PICKNICKING:	33,905	4,756	37,128	5,208
CAMPING:	26,577	3,728	28,722	4,029
GENERAL RECREATION:				
SUBTOTAL:	86,637	9,084	93,546	9,898
RECREATION				
TOTAL:	265,577	24,803	273,708	26,292

1/ Region consists of White Pine, Lincoln and Nye Counties.

2/ Units are visitor days, as defined in Table 38.

3/ Hunting and fishing data from Wildlife section of PAA.

4/ General recreation projections from Nevada State Parks Department, Planning and Development, Jim Najima, personal communications, Fall 1980. These figures represent visitor use during the highest season of use, not annual visitor use.

TABLE NO. 34

GROWTH IN ACTIVITY OCCASIONS 1/
BASE: CURRENT PERIOD - REGION OF LOCATION IV
% Increases in Recreation Activity
DESIGN YEAR

ACTIVITY	1976	1980	1985	1990	1995
LAKE FISHING		6.36	17.68	27.37	36.23
STREAM FISHING		-2.62	.93	3.03	5.51
MOTORBOATING		-5.07	-3.55	-3.54	-2.85
NONMOTORBOAT		-4.90	-3.34	-3.37	-2.68
WATERSKIING		-5.39	-4.40	-4.33	-4.21
ICE SKATING		.00	.00	.00	.00
SNOW PLAY		-5.32	-4.08	-4.42	-4.01
SNOWSKI ADV.		.00	.00	.00	.00
SNOWSKI INT.		.00	.00	.00	.00
SNOWSKI BEG.		.00	.00	.00	.00
GOLF		-4.89	-3.43	-3.42	-2.70
TENNIS		-5.45	-4.21	-4.48	-4.15
URBAN BICYCLE		.00	.00	.00	.00
RURAL BICYCLE		-5.33	-4.36	-4.42	-4.18
URBAN PICNIC		.00	.00	.00	.00
RURAL PICNIC		8.26	20.76	31.87	41.80
TENT CAMPING		2.86	10.01	16.13	21.74
VEHICLE CAMP		18.96	40.60	61.00	78.49
BACKPACKING		-.01	5.84	10.56	15.72
URBAN HIKE		.00	.00	.00	.00
RURAL HIKE		-1.93	1.71	4.41	6.97
HORSEBACK RIDING		-6.08	-5.03	-5.02	-4.88

Source: 1977 SCORP, Nevada Department of Parks.

1/ Activity Occasions: Participation by an individual in a specific outdoor recreation activity during any part of a day.

Public Attitudes and Social Values

Studies by the Commission for the Future of Nevada in 1980 and the PAA interviews (also 1980) both show that recreation is considered important by Nevadans. Most recreation activity in the Schell Resource Area is of the outdoor type. Interviewers mentioned hunting, fishing, camping, and picnicking, ORV-ing and caving as recreational pursuits they enjoy. Table 35 shows the results of recreation activity questions from the statewide survey by the Governor's Commission on the Future of Nevada. The results indicate that, although most residents of the region do not perceive problems associated with recreation use in their area, they could object strongly to reduced access to the out-of-doors.

All of Lincoln County respondents at the 1980 Townhall Meeting sponsored by the Commission for the Future of Nevada felt that access to hunting and fishing areas, access to the out-of-doors and parks and recreation in the community were very important.1/

At the 1980 White Pine Townhall Meeting, 47.1% indicated that parks and recreation in their community are very important and 52.9% categorized them as somewhat important. Access to the out-of-doors was thought to be very important by 76.5% and to be somewhat important by 17.6% of the questionnaire respondents. Access to hunting and fishing areas is very important to 70.6% of the respondents and somewhat important to 29.4%.

When questioned about the future of the Bureau's recreation program, residents expressed some concern and mixed feelings. No one voiced complaints with the program as it now is, but there is some concern as to the direction the program should take. Some people want more campsites built and more information on recreation opportunities made available. Highway signs indicating scenic areas and caves, roads or trails to those areas and District maps of recreational opportunitiies are possibilities for better informing the general public. Other people were concerned that, given the general public's past record with recreation in the area, it might be wiser to leave the scenic areas alone. They felt that the only way to keep these areas scenic was to release very little information about them. Local people know where the recreational areas are and they share their information with others, but strangers are perceived to be destructive to the recreational areas. Examples of trash and garbage scattered about scenic areas, and of campsites that were shot up and vandalized, the equipment literally destroyed, were cited as reasons for leaving the recreational areas unmarked by signs.

The area is seen to have many recreational opportunities. One individual expressed the belief that there are different types of recreational opportunities, different types of camping, and that the different agencies have facilities available for each type. He felt that the Forest Service provided areas for one type of recreational opportunity, the Park Service provided for another type and the Bureau of Land Management provided for yet a third type. Thus, he felt the direction of the Ely Districts' recreation program should remain substantially unchanged.

Another individual felt that the BLM, after working with the local people, should come up with a Recreation Master Plan with options, so it would be flexible. This person was concerned that the main benefit of the recreation programs be for the local people, not people from other places. He did not want another Eagle Valley Reservoir to occur, where the area people paid for the project, but the main use is by non-area people. He wants the main benefit of any programs to go to the local people.

1/ Townhall Meetings were held in Caliente and Ely. Communities represented at the meetings are Caliente, Ely, Lund, East Ely and White Pine County.

TABLE NO. 35

Public Attitudes Towards Recreation in Nevada

Source: 1980
STATEWIDE SURVEY BY THE GOVERNOR'S COMMISSION ON THE FUTURE OF NEVADA

	LINCOLN	NYE	WHITE PINE	NEVADA
Below are those people who ranked recreation in the first third of those economic activities in Nevada that they would like to see expanded (in %). Yes and No indicates the percentage of respondents in each ranking level who think state government should assist in expanding recreation.				
YES	80%	100%	80%	82%
1st (this % of respondents ranked recreation first activity to expand)	7	12	5	20
NO	20%	20%	20%	18%
YES	71	69	100	74
2nd	10	26	8	17
NO	29	31	0	26
YES	73	67	71	71
3rd	17	18	15	13
NO	27	33	29	29
The percentage of respondents who ranked recreation as one of the three most important problems facing their area.	3	5	1	2
X percent of all responses given were in this category: "What is it that you like about living in Nevada" : RECREATION	1	6	3	9
WHAT CHANGES IN YOUR LIFE-STYLE WOULD YOU ACCEPT?				
Reduced access to the out-of-doors:				
Would Accept	25%	6%	4%	12%
Would Not Accept	75%	94%	96%	88%
Reduced access to hunting & fishing areas:				
Would Accept	30	32	8	29
Would Not Accept	70	68	92	71
Should state and local government spending over the next 20 years for parks and recreation be:				
Greater	24	43	45	48
The Same	50	43	42	43
Less	27	11	23	9
In a ranking of 10 economic activities that could be expanded in Nevada, in overall ranking by county, recreation was ranked:	5	2	5	2

ORV use also elicited diverse comments. Trappers do not want ORV use restricted on any of the roads, because they use off-road vehicles to check their trap lines. Several individuals thought that ORV use in big game wintering areas should be restricted. One rancher mentioned problems experienced with people "playing cowboy" by herding his cattle with fourwheel drive vehicles. Another individual was concerned with the ORV's impact on the land and suggested that ORV organized events should be held in places where the impact to the land would not be significant. The White Pine County Sportsmen Club feels that critical watershed and wildlife wintering areas should be closed to ORV use and that general ORV use areas and campsites should be monitored to ensure they are not being abused. If an area is abused, the Club feels it should be closed to use. No one interviewed felt all areas should be closed to ORV use.

In general, feeling in the area is that the public lands should be used for recreation, but the users should respect the other land users and the land itself. Local people are distrustful of strangers' willingness to be responsible recreationists, and so are wary of exposing scenic areas to possible ruin. Several people were willing to risk sharing the recreational opportunities, but monitoring the areas to ensure their safety was mentioned by few. Overall, there is a genuine concern about maintaining the quality of recreational opportunities at a high level for those who want to enjoy and appreciate the area.

VISUAL RESOURCE MANAGEMENT

The objectives of the visual resource inventory and evaluation are 1) To meet the requirements of FLPMA by preparing and maintaining an inventory of the visual resource values, and 2) To identify scenic quality and set minimum quality standards for management of the visual resource values on public lands.

These are accomplished through a process which classifies public lands in the Schell Resource Area into one of five Visual Resource Management (VRM) classes. Each of these classes contains a specific management objective for maintaining or enhancing visual resource values. The visual management class assigned to a given land area depends upon three factors: 1) The inherent quality of the scenery, 2) The visual sensitivity, and 3) The distance zones from primary travel routes and use areas.

Visual sensitivity levels and distance zones were evaluated for the planning area analysis in 1980. Visual sensitivity indicates the relative degree of user interest in visual resources and concern for changes in the existing landscape character. Visual sensitivity is determined through a combined analysis of user volume and user attitudes toward change. User volume was measured through recreation use area statistics and state of Nevada Highway Department traffic counts. User attitudes toward change in the existing landscape character were determined through an extensive (low level) survey. This survey involved an interdisciplinary team from the Ely District Office which represented engineering, wilderness, outdoor recreation, reality, environmental, and range diciplines. Based upon a familiarity with the SRA, team members made intuitive documented judgements concerning levels of sensitivity. Analysis forms and sensitivity ratings are on file in the Ely District office, as well as the Sensitivity Land Overlay.

Distance zones were evaluated as the areas seen from the primary recreation use areas and the primary travel routes. The SRA was delineated according to Foreground, Middleground, background and seldom seen area. Distance zone overlays for the SRA are available in the Ely District Office.

The two PAA inventories (Distance Zones and Sensitivity) will be combined for MFP-1 with the U.R.A. Scenic Quality Analysis to determine the proposed visual resource management classes.

PAA interviews revealed that the local residents are extremely interested in protecting the rural character and scenic charm of the SRA. This is the goal of the VRM program.

FIRE MANAGEMENT

Analysis

Fire is a resource. It is not an ever present resource like soil, water, air, etc., but it is certainly a resource that has played a part in the development of the ecosystem as we know it today. In order to manage this resource, many questions need to be answered:

1. Can fire be used to meet resource management objectives?
2. How does fire behave under different weather, fuel and topographical conditions?
3. What effect does fire have on soil, air, and vegetation?
4. Does fire damage or benefit other resources?
5. What kind of history did fire have in developing a particular area?

These are just a few of the questions to be answered before fire management can be defined.

In the Ely District, the present fire management practice is to put all the fires out. This practice came about as a result of public demand for safer environments. General fire history shows what wildfires claimed hundreds of lives before fire control was instituted nationwide.

Organized fire suppression was instituted in the early 1900's and is still in effect today. However, people have changed their attitude about wildfire management. They still want dangerous fires suppressed, but at the same time want fire to return to its natural role in the environment. This adds a new dimension to the old fire control program. It is becoming more apparent that fire control must give way to a fire management program.

The fire management organization on the Ely District is basically a very simple one. At the present time, a full time Fire Management Officer is employed with duties in Fire Management, Fire Control and Aviation. His staff consists of an Assistant Fire Management Officer, three five-month temporary dispatchers and twelve five-month temporary fire fighters. The program provides summer employment to principally local people. About half of the temporary fire employees return to school after fire season. The impact on the economy of this employment is not significant, being less than 1% of county income. The fire program does provide a source of employment for an age group that may have limited employment opportunities in their home area.

However, if it were necessary for the counties to provide fire protection to the resource area, the costs to the county would be significant. The county fire departments would need to purchase additional equipment.

White Pine County would probably need at least two more pumper trucks and Lincoln County would need at least one additional pumper truck. A small pumper truck costs 17,000 to 20,000 dollars, carries 200 gallons of water, and needs skilled personnel to operate it. The counties can handle these financial costs if they were called upon to do so.

Further, the counties would need to re-think and probably modify their approach to fire fighting. Wildfires are not the same as structural fires. Different types of equipment and fire fighting techniques are used in containing wildfires than in containing structural fires. County fire fighting personnel would need new training to be able to safely and efficiently fight wildfires. With structural fires, volunteer fire fighters are close at hand. Wildfires do not always occur near populated areas, so personnel (firemen) would have to be sent to the fire. If a large wildfire occurred, necessitating a large fire fighting force, fire protection resources in town could be severely strained, possibly to the point of being unable to cope. If the counties took the option of fighting only those fires that were obviously threatening to life and property, they face the prospect of having a wildfire become threatening after it has been allowed to burn for a time, and become large enough to cause problems in containing the wildfire.

BLM Fire Management practices that are in effect today are:

Action Modification

This is a modified fire suppression plan. Even though the fire is still suppressed, the method used is determined by the resource at risk. Areas without modified action plans are suppressed the fastest, most effective and most economic way possible, without regard to the resource. This may incorporate heavy equipment, aerial retardent, ground retardant, hard line construction, etc. This method may damage the resource that is being protected, i.e., the cure may be worse than the disease. Most of the areas defined for modified suppression are sensitive resources (watersheds, archaeological areas, wilderness study areas) and require care in the way the fire is suppressed. Other areas are restricted in the type of equipment that can be used and still other areas are identified as valuable and more aggressive suppression action can be taken in that area.

Rate-of-Spread Fire Study

The purpose of this ongoing BLM study is to obtain data about the speed at which fire spreads under different vegetative, climatic and topographical conditions.

Rate-of-spread information is necessary in all aspects of fire management. In fire control, this information is needed in the planning process and in estimating wildfire behavior for control

plans. In prescribed fire, this information is needed for development of burning prescriptions, fire behavior predictions and planning.

This is an experimental controlled burn (consisting of four treatments) on a plot approximately 35 acres in size. The four treatments consist of a spring burn (scheduled for April or May 1981), a summer burn (done August 11, 1980), a fall burn (done October 9, 1980), and an unburned control area.

The plot has been fenced to keep livestock off the area to give the vegetation a chance to respond after the fire. Fire lines have been constructed to keep treatments separated from each other. A solar powered weather station has been in operation on the site to provide information including wind speed and direction, relative humidity and air temperature to use in relation to fire behavior.

The area has been inventoried for vegetation, wildlife and soils. After the burn these resources will be monitored to document changes which occur. This information will be extremely valuable in determining natural history of fire and in developing criteria for identifying natural burn areas.

Bureau Land Use Plan

The Land Use Plan, of which this report is a part, will greatly affect the fire management program. All activities are dealing with fire as a part of their resource and must make specific recommendations for it. When the plan is finished, policy concerning the use of fire on the public lands will be determined. Prescribed fire areas, natural fire areas and no fire areas will be outlined. Fire management plans, prescribed fire plans and fire control plans will be developed for these areas. It is conceivable that at that time there will be areas where fire will have to be totally and quickly suppressed and still other areas where fire will need to be induced for vegetative manipulation.

Information and education programs are being developed to make the public aware of the change from fire control to fire management. "Fire in Land Management" and a-30 minute multi-image slidetape program has been developed for just this purpose. It has been shown throughout Nevada and other western states.

There will be some concern about smoke management and visual resource management when fires are allowed to burn. The public does not like smoke filled valleys and fire scarred areas, but these things will occur as a result of allowing fire to burn. Education on these subjects will be a "must".

Public Attitudes and Social Values

Many of the local ranchers interviewed (for the PAA) indicated approval of increased fire management. They would like to see some of the encroaching pinyon-juniper stands burned and replaced with more palatable forage. Nine of the twelve ranchers interviewed would like to see increased vegetative manipulation in the Schell Resource Area.

The majority of the comments about fire were concerned with using fire as a tool to improve the habitat, for both livestock and wildlife. No real discussions of people's attitudes toward fire management or control were entered into.

The Governor's Commission on the Future of Nevada conducted a state wide survey in early 1980. In the table below, the numbers should be read as "X percent of all responses given were in this category". The table shows the completions to the statement: "State and local government spending for fire protection over the next twenty years should be _____?"

TABLE 36

PUBLIC ATTITUDES TO LEVELS OF SPENDING

FOR COUNTY FIRE PROTECTION, BY COUNTY

	LINCOLN	WHITE PINE	NYE
Greater	49%	32%	42%
The same	46	61	58
Less	4	7	0

In response to the question "What are the three most important problems facing your area?", the rank order of the problem set "Public Services - Fire Services/Community programs/other" in Lincoln County was seventh out of seventeen choices (however, three other problem sets were ranked seventh, but no other problem sets had the same ranking.)* White Pine County ranked it eleventh (three other problem sets were ranked eleventh, two problem sets were ranked ninth), Nye County ranked it third, with two problem sets ranked first out of the seventeen choices. Nye County sees public services, including fire services, as a major problem, while Lincoln County sees it as an important problem and White Pine County sees it as less of a problem.

*Fire services in this survey refers to structural fire fighting provided by the counties.

CULTURAL RESOURCES AND NATURAL HISTORY

Cultural Resources

Those known or active cultural resource values which impart a sense of individual and group orientation, identity, security, continuity, self worth, and past accomplishment are considered to have socio-cultural significance. Such values are grouped into the following categories: Sacred/Religious (e.g., sacred mountains, shrines); Heritage (e.g., event sites, historic structures, traditional hunting or collecting grounds, etc.); Commemorative (e.g., designated, marked sites/resources and trails); and Informational/Educational (e.g., sites of interest for educational uses and for historic and scientific data use).

Many groups within and outside the state of Nevada have an active concern for specific and representative socio-cultural values and their associated cultural resource uses. Examples of categories of groups include: statutory representatives of the public (State Historic Preservation officers, etc.); educational and research institutions; professional and amateur cultural resource organizations (Society of Professional Archaeologists, White Pine County Historical Society, Nevada Archaeological Association); and socio-ethnic groups (Ely Indian Colony, Goshute Tribal Council, Duckwater Tribal Council). See table 37 for current listing of concerned groups and organizations.

Cultural resources with socio-economic values are identified in the table by common site name and not legal description. Value categories are those which are most often associated with those sites. The list of groups and organizations contains presently recognized entities which have socio-cultural value interests. An assessment of value intensity has been assigned to the specific cultural resource. These resources may hold more than one value for a given interest group.

The number of resource sites which hold socio-cultural values is limited to the amount of cultural resource inventory data available. Many Nevada Native American groups exhibit a degree of reluctance to divulge locations of some sacred-religious sites. The fact that many such sites exist remains as an intangible, but must be considered as a socio-cultural value within the context of cultural resources.

The most frequent socio-economic use involving cultural resources is related to energy exploration. Contracting cultural resource specialists are involved on a regular basis with the assessment of cultural resource values within energy exploration corridors. Various museums, universities and researchers are involved in these projects. Historic societies make up a small but important group interested in many of the historic properties and events in the area.

In the future there may be additional groups with a socio-cultural interest in the cultural resources of this area. As these groups are formed or

CULTURAL RESOURCE VALUE IDENTIFICATION

TABLE 37

Cultural Resource Identification	VALUES: Sacred - Religious	VALUES: Heritage	VALUES: Commemorative	VALUES: Information Education	Groups Holding Socio-Cultural Values Related to Cultural Resources	Assessment of Value Intensity * - Lowest **** - Highest	COMMENTS (Documentation, Use(s) Etc.
Pony XP Route & Associated Stations		X	X	X	Historic Societies Historic Sightseers	* *	Interpretive Signing Across Route at Various Points and Stations
FT Pearce Cemetary	X	X			Historic Societies Historic Sightseers	* *	Interpretive Signing at Sight
Rice Family Cemetary	X	X			Historic Societies State Park Service Historic Sightseers	* *	Interpretive Signing at Sight
Baker, Baker Creek, Garrison Pueblo Sites		X		X	Universities, Museums Antiquities Permit Holders Archaeological Sightseers	* * *	Northern most Recorded Pueblo Sites in U.S.A. to date
White River Narrows		X		X	Universities, Museums Antiquities Permit Holders Archaeological Sightseers	* * * *	National Register of Historic Places Entry
Mt. Irish		X		X	Universities, Museums Antiquities Permit Holders Archaeological Sightseers	* * * *	Nominated to National Register
Spring Valley Slough		X		X	Universities, Museums Antiquities Permit Holders	* * *	Potential National Register Nomination

identified they should be included in a working table of groups interested in socio-cultural values related to cultural resources. For more detailed information on socio-cultural resources in the Schell Resource Area, see the Archaeological Unit Resource Analysis.

Natural History[1/]

The Natural History Program identifies unique natural areas or phenomenon. This includes historic information on caves, geology, paleontology, hot springs, earthquake faults, past climate, wildlife, and vegetation.

The Great Basin, of which Nevada is a part, has had only one known recent study completed dealing with its unique natural history. This document entitled Inventory of Natural Landmarks of the Great Basin, was compiled for the National Park Service by the University of Nevada, in 1975.

The Natural History Program is new to the Bureau, at least from a planned systematic inventory standpoint. The Ely District BLM has not had funding to conduct an inventory nor initiate a Natural History Program to date. The Natural History Program deserves future attention to protect unique natural areas and to establish a data base for adjusting current land use with future potential short and long term environmental conditions.

Formal recognition of specific unique natural areas or phenomenon is carried out through the Natural Landmarks Program by the National Park Service.

1/ SRA URA Step 3

CRITICAL ENVIRONMENTAL AREA ANALYSIS

Critical Environmental Areas are those areas of special management concern because of their natural, scenic, cultural, or historical significance. These areas are officially identified or designated by Federal agencies (such as BLM) and usually segregated from certain land uses that would be incompatible with the intent and purpose of the designation. Designated areas are most frequently segregated from oil and gas leasing, leasing under mineral leasing laws, and surface occupancy. The term "withdrawn", as opposed to "segregated", applies to those designated areas which are withdrawn from all activities for one specific purpose.

The Bureau of Land Management designates Critical Environmental Areas as scenic areas, natural areas, geological areas, research natural areas, historic sites, or archaeological sites. (These designations are defined in 43 CFR 1727.1 (b) (iii), (iv), (v), (vi).) The following is a list of critical areas in the Schell Resource Area that the Bureau has officially designated and segregated:

Blue Mass Canyon Scenic Area
Kious Spring Scenic Area
Weaver Creek Scenic Area
Mount Grafton Scenic Area
North Creek Scenic Area
Swamp Cedar Natural Area
Shoshone Ponds Natural Area
Shoshone Pygmy Sage Research Natural Area
Whipple Cave Geologic Area
Leviathan Cave Geologic Area
Bat Cave and Guano Mine Historic Area
Snake Creek Indian Burial Cave Archaeological Site
Mount Irish Archaeological Site
Rock Animal Corral Archaeological Site
Baker Archaeological Site
Garrison Archaeological Site
Baker Creek Archaeological Site
White River Petroglyphs Archaeological Site

Residents of the area have expressed the belief that archaeological sites (especially petroglyphs) should be protected. Many of the people interviewed felt that only the actual site location should be protected, and that massive amounts of land surrounding the site do not also need to be protected.

Areas that have been identified but not designated as Critical Environmental Areas by the BLM are as follows:

Mt. Wilson Archaeological District
Cresent Mill Site
Bristol Well Townsite

Spring Valley Dunes Archaeological Site
Rice Family Cemetery
Pony Express Trail

Of all the designated or undesignated sites above, it will be a VRM MFP 1 recommendation that the Weaver Creek Scenic Area be dropped from any further consideration as a critical area. Leviathan Cave Geologic Area and the Shoshone Pygmy Sage Natural Area are withdrawn areas. Of the listed archaeological sites, the White River Petroglyphs and the Bristol Well Townsite are currently on the National Register of Historic Places. The Mount Irish Archaeological Site and the Cresent Mill Site have been nominated to the National Register, and the Mount Wilson Archaeological District has National Register potential. These sites have additional protection under the 1966 National Historic Preservation Act.

Other agencies have identified and designated Critical Environmental Areas in the Schell Resource Area. The Nevada Department of Wildlife owns and manages the Key Pittman Wildlife Management Area and the Wayne Kirch Wildlife Management Area. The latter has been withdrawn for the single purpose of wildlife, fish, and waterfowl production. The Division of State Parks owns and manages the Eagle Valley Creek and Reservoir Recreation Area under the Recreation and Public Purpose Act. The only designated Critical Environmental Area on Forest Service land is Lehman Caves National Monument, which is managed by the National Park Service. Wheeler Peak, Mount Moriah, and Lexington Arch occur on Forest Service land. These sites are not designated but are to be evaluated by the National Park Service (NPS) for suitability as National Landmarks.

At this time the NPS has one registered National Landmark in the Schell area. This is the Hot Creek Springs and Marsh, which is inside the Wayne Kirch Wildlife Management Area. The entire management area is being considered for National Landmark status. The following areas are also being considered by NPS as potential National Landmarks:

White Sage Flat Natural Area
Shoshone Pygmy Sage Natural Area
Mount Grafton Scenic Area
Leviathan Cave
Swamp Cedar Natural Area
Whipple Cave

The area that encompasses Mt. Wheeler and a large portion of Spring Valley is currently being studied as representative of the Great Basin for a proposed Great Basin National Park. The park would include the Shoshone Pond, Shoshone Pygmy Sage, and Swamp Cedar Natural Areas.

Traditional Indian pine nut collecting areas have been identified as significant areas in Nevada even though they do not have a specific designation. The pine nut collecting areas in the SRA that have been identified in the 1976 Moriah MFP are as follows:

Mount Irish
Wilson Range
Schell Creek Range
White Rock Peak
Bristol Range
Grant Range

The Inter-Tribal Council of Nevada considers all pinyon/juniper areas as pine nut collecting areas. Therefore, these areas, although they are important, may not be considered critical.

Area residents interviewed for the PAA indicated a deep respect for the area and expressed the desire to have it remain substantially unchanged. The only sociological or cultural concern identified was the preservation of archaeological sites.

INFRASTRUCTURE AND BUREAU RELATIONSHIPS

INTRODUCTION

An area's social and economic structure is supported by various systems such as transportation, health services, law enforcement, and utilities. These supportive systems are classed as infrastructure; they serve and strengthen the populace.

The purpose of the Infrastructure and Bureau Relationships portion of the Planning Area Analysis is to describe the community within the Schell Resource Area as well as those areas outside the Resource Area having significant economic and/or social impact. The Schell Resource Area, which encompasses portions of Lincoln, White Pine and Nye Counties, has no major city within its boundaries. Residents of the Schell Resource Area are primarily dependent upon facilities and services located in the towns of Ely and Pioche, both located just outside the resource area's boundary. For this reason, the infrastructure will include a discussion of Ely and Pioche when addressing community organization within the Schell Resource Area. BLM's formal and informal agreements with State, Federal and local agencies will also be presented to indicate the Bureau's relationship with the community structure.

TAX BASE AND PUBLIC FINANCE CAPABILITY

The tax base for both White Pine County and Lincoln County is supported by locally generated revenues, state tax transfers, and federal monetary distributions. Locally generated revenues are derived from permits, fees, real estate taxes, personal property taxes, and taxes on the net proceeds from oil, gas and mining operations.

State tax rebates for the counties are derived from taxes on motor vehicles, cigarettes, liquor, retail sales, and gaming tables.

Federal monies received include in lieu of tax payments from the Departments of the Interior and Agriculture (Tables 38 and 42). Other Federal monies are Revenue Sharing, Comphrehensive Educational Training Act (CETA), and grants.

The public spending capability for White Pine County, Lincoln County, and Nye county has been limited by the Nevada State Legislature. The legislature established a total maximum tax mill levy of 3.7322 which the counties can not exceed (Tables 38 and 42). The legislature has further established under SB204 a formula for deriving spending caps for all counties and cities. These spending caps are based on preceeding expenditures, changes in population, and changes in the Cost of Living Index. Because of the spending caps it is possible that counties or cities would not be able to spend money that they have.

Proposition #6 provided for reducing real property taxes to the assessed valuation for the year 1975. Yearly increases would also have been severly limited, thus significantly reducing the ability of the counties and cities to raise money. This proposition was defeated on the Nov. 4, 1980, General Election. Even though it was defeated it could still affect county and city taxing practices.

The maximum bond indebtedness that either White Pine County or Lincoln County can incur is based on ten percent of the total real property evaluation. Present

uncommitted bonding capacity is high as the counties are not heavily in debt.[1/] This will allow the counties to raise money for capital improvements. Both the existing bond indebtedness and the available bonding capability for Lincoln County and White Pine County are shown on Table 41.

1/ Uncommitted bonding capacity is 93.4% of the total bonding capability in White Pine County and is 41.5% of the total bonding capability in Lincoln County.

WHITE PINE COUNTY
LOCAL GOVERNMENT TAXING UNITS ASSESSED VALUATION
1970-1980
ASSESSED VALUATION (DOLLARS)1/
TABLE 38

LOCAL GOVERNMENT TAXING UNIT	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	LOCAL GOVT UNIT RATE 80-81
WHITE PINE COUNTY	48,806,529	40,395,097	39,745,361	49,366,136	50,731,307	42,870,060	45,850,230	50,354,479	53,147,724	42,703,872	49,227,651	2.3322
ELY	5,970,520	6,151,280	6,169,147	6,761,802	10,312,195	11,375,370	11,927,476	16,577,068	17,794,228	16,779,393	17,508,813	3.7322
EAST ELY TOWN	2,414,510	2,747,231	2,885,058	3,246,032	East Ely combined with Ely	N/A	N/A	N/A	N/A	N/A	N/A	N/A
McGILL TOWN	1,568,382	1,586,855	1,593,509	1,762,917	1,705,762	1,707,753	1,647,925	2,809,575	2,891,885	2,505,787	2,543,737	3.7332
RUTH TOWN	459,913	466,269	469,945	502,264	497,261	499,745	493,711	684,635	705,975	587,240	598,749	3.7322
LUND TOWN	109,725	110,660	123,075	133,345	155,400	177,101	182,242	461,263	475,583	440,735	453,235	3.7322
EAST ELY SANITATION DIST.	24,605.85	20,992.61	N/A	21,268.46	N/A	N/A	24,604.85	23,548.93	N/A	25,198.35	N/A	N/A
LUND IRRIGATION DIST.	N/A	1,690.55	2,824.72	6,644.89	N/A	N/A	N/A	5,713.97	6,588.61	N/A	N/A	N/A
WHITE PINE COUNTY SCHOOLS	48,806,529	40,395,097	39,745,097	49,366,136	50,731,317	42,870,060	45,850,230	50,354,479	53,147,724	42,703,872	49,227,651	.5782

1/ Nevada Tax Commission: Local Government Red Book; Ad Valorem Tax Rates, Budget Summaries for Nevada Local Governments.
Nevada Tax Commission, Carson City, 1970-80.

SOURCES OF LOCAL REVENUE (1979-1980)
WHITE PINE COUNTY
TABLE 39

SOURCE OF INCOME		AMOUNT
General Fund		
Real Property Taxes		$ 1,310,831
Personnel Property Taxes		283,660
Net Proceeds		0
License and Permits		19,046
Fines and Fees		149,187
Other Local Sources of Revenues		215,561
County Investments		764,678
	TOTAL	$ 2,742,963
Special Funds		
White Pine T.V. District		47,876
Baker T.V. District		1,230
East Ely Sanitation District		25,198
Lund Irrigation District		5,299
	TOTAL	79,603
	GRAND TOTAL	$ 2,822,566

Source: Bessie Llewellyn, White Pine County Treasurer, August 19, 1980.

TABLE 40
FEDERAL AND STATE PAYMENTS TO WHITE PINE COUNTY GOVERNMENT
FISCAL YEAR 1979-1980

FEDERAL	AMOUNT
Dept. of Interior	
in Lieu of Taxes	$ 299,853.00
Dept. of Agriculture	
Forest Service Fees	18,205.40
Office of Revenue Sharing	
Revenue Sharing	87,281.00
Abuse Neglect Course Grant	
CETA	26,806.23
Federal TOTAL	$ 432,145.63
STATE	
Motor Vehicle Privilege Tax	123,821.93
Cigarette Tax	96,412.23
State Liquor Tax	17,289.39
County/City Relief Tax	98.01
State Gaming License Tax	127,203.96
Private Car Line Tax	2.44
State TOTAL	$ 364,827.96
GRAND TOTAL	$ 796,973.59

Source: Bessie Llewellyn, White Pine County Treasurer, August 19, 1980.

TABLE 41
1980 BONDING CAPACITY, LINCOLN AND WHITE PINE COUNTIES

WHITE PINE COUNTY	
Bonding Capability	$ 4,922,765
Current Bond Indebtedness	255,000
Current Bonding Capability	4,662,765
LINCOLN COUNTY	
Bonding Capability	3,065,612
Current Bond Indebtedness	1,792,000
Current Bonding Capability	$ 1,273,612

Source: For White Pine County, Bessie Llewellyn, White Pine County Treasurer; for Lincoln County, Ruby Lister, Lincoln County Treasurer.

LINCOLN COUNTY
LOCAL GOVERNMENT TAXING UNITS ASSESSED VALUATION
1970-1980
ASSESSED VALUATION (DOLLARS) 1/
TABLE 42

LOCAL GOVERNMENT TAXING UNIT	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	LOCAL GOVT UNIT RATE 80-81
LINCOLN COUNTY	10,136,611	N/A	10,505,176	12,305,824	13,422,571	16,343.660	19,266,431	21,769,153	25,320,122	30,656,128		2.382
CALIENTE	935,110	N/A	967,584	1,021,121	1,334,426	1,446,078	1,299,043	1,363,151	1,422,651	2,515,100		3.68
ALAMO TOWN	134,508	N/A	192,267	199,045	222,146	336,484	440,900	505,255	830,064	990,684		3.71
PANACA TOWN	333,997	N/A	371,020	450,064	507,144	557,319	564,001	1,271,399	1,374,911	1,335,773		3.44
PIOCHE TOWN	586,077	N/A	616,601	633,347	661,283	955,739	956,356	926,067	1,034,514	1,012,202		3.65
PAHRANAGAT VALLEY FIRE PROTECTION DIST.	581,687	N/A	694,876	705,170	769,416	944,158	1,196,758	1,538,995	2,048,858	2,312,865		3.13
PIOCHE FIRE PROTECTION DISTRICT	1,260,894	N/A	1,380,696	1,279,719	1,413,967	1,706,384	1,956,407	1,879,134	2,090,459	2,600,518		2.79
LINCOLN COUNTY SCHOOLS	10,136,611	N/A	10,505,176	12,305,824	13,422,571	16,343,660	19,266,431	21,769,153	25,320,122	30,656,128		.530

1/ Nevada Tax Commission: Local Government Red Book; Ad Valorem Tax Rates, Budget Summaries for Nevada Local Governments.
Nevada Tax Commission, Carson City 1970-1980.

SOURCES OF LOCAL REVENUE (1979-1980)
LINCOLN COUNTY
TABLE 43

SOURCE OF INCOME		AMOUNT
General Fund		
Real Property Taxes		$ 714,895
Personnel Property Taxes		77,804
Net Proceeds		9,894
Licenses and Fees		13,570
Fines and Fees		83,537
County Investments		78,134
	TOTAL	$ 977,834
Special Funds		
Pahranagat Fire District		47,787
Pioche Fire District		42,803
	TOTAL	90,590
	GRAND TOTAL	$1,068,424

Source: Lincoln County Amended Budget 1979-1980

FEDERAL AND STATE PAYMENTS
TO LINCOLN COUNTY GOVERNMENT
FISCAL YEAR 1970-1980
TABLE 44

FEDERAL	AMOUNT
Dept. of Interior in Lieu of Taxes	$ 125,246.00
Dept. of Agriculture Forest Service Fees	1,196.05
Office of Revenue Sharing Revenue Sharing	42,766.00
CETA	14,054.70
Federal TOTAL	183,262.75

STATE	
Motor Vehicle Privilege Tax	$ 63,046.26
Cigarette Tax	39,062.09
State Liquor Tax	6,663.20
County/City Relief Tax	38,262.99
State Gaming License Tax	128,448.08
Private Car Line Tax	2,151.89
State TOTAL	$277,634.51
GRAND TOTAL	$460,897.26

Source: Lincoln County Amended Final Budget 1979-1980

COMMUNITY FACILITIES

Baker

Baker is an unincorporated community in the mid-eastern section of the Schell Resource Area, eight miles from the Utah border. Businesses located within the community include a service station/grocery store, two bars, and an eight unit motel. Other facilities include a U.S. Post Office and a U.S. Forest Service Office. Other businesses in the Baker area include Moriah's, a two unit motel at the junction of U.S. Highways 93, 6 and 70 and the Border Inn located on U.S. Highway 6/50. (Coffman, Mt. Wheeler Power, Personal Communication, 1980.)

Recreational facilities include a tennis court, the Lehman Caves located five miles from Baker, and various camping and picnicking spots in the area. A town hall is available for meetings. A TV translator service is available to 50 or 60 families in the area, and reception of the radio station in Cedar City, Utah is satisfactory. An annual fall festival, the Snake Valley Reunion, draws many area and non-area residents to Baker.

Residents travel to Milford and Delta, Utah as well as to Ely, Nevada, for medical facilities and major shopping. The community has approximately 70 permanent residents. (Roberts, Personal Communication, 1980.)

Pioche

The city of Pioche has available to community residents the use of meeting facilities at the County Court House and the grade school. Additional community meetings are held at the Lincoln County High School located in Panaca, five miles south of Pioche. One night each week the grade school gymnasium is used for public roller skating. A theater in Pioche schedules movies three nights a week, and bowling facilities are available in the summer months. A museum and a small library are located on the main street. The local "swimming hole" and parks are well used during the summer and fall months. Spring Valley State Park, located to the north of Pioche and just inside the Schell Resource Area, is also a favorite spot for local residents. Several years ago an attempt was made to establish a golf course, but plans faltered, and at the present time there appears to be no progress in this direction. (Simpkins, Lincoln County Record, Personal Interview, 1980.) Pioche township has approximately 789 residents. Ely township has 7,617 people and Ely city has 4,897. Ely township contains Ely, East Ely, Ruth and McGill. (1980 Census of Population and Housing Preliminary Reports, P HC80-P-30, Nevada, U.S. Department of Commerce, Bureau of the Census.)

Ely

Recreational facilities in the city of Ely include a museum organized in 1959 which is funded by membership fees, donations and contributions by the White Pine Fair and Recreation Board. In addition to the building housing a variety of displays, two locomotives and a log cabin are located on the premises.

White Pine County has a 25,000 volume library located in Ely, and residents have access to inter-library loan service of books in public libraries throughout the state of Nevada.

The Bristlecone Convention Center, the White Pine County Library and various school buildings are available for public meetings.

Located just north of Ely is a nine hole golf course and tennis courts. A county park in downtown Ely is the site of an indoor swimming pool open year-round, a duck pond, and grassy area for picnicking. The old Ely train depot has been remodeled into a Senior Citizen Center.

Additional recreational facilities in the area include:

- High School athletic field
- Lighted baseball field
- City-owned stable rental
- Five elementary school playgrounds
- Six neighborhood parks
- One movie theater and one drive-in theater

White Pine County has many natural and cultural facilities for camping, hunting, fishing, picnicking and sightseeing, including:

- Wheeler Peak Scenic area
- Humboldt National Forest
- Ghost towns
- Cave Lake State Park

Hiko

Hiko, a Lincoln County community located in the southwestern corner of the Schell Resource Area, is bordered on two sides by the Key Pittman Wildlife Preserve which is operated by the Nevada Department of Wildlife. This used to be the site of an old stamp mill, but presently the community consists of four or five family dwellings and a post office. Residents travel to Pioche and Caliente for necessities.

Ursine

Ursine is located in the southeastern corner of the Schell Resource Area approximately eight miles from Spring Valley State Park (Eagle Valley Reservoir). A general store, bar, trailer park and four unit motel comprise the list of facilities available for the residents and tourists. Neither a post office nor fire equipment is located in the community. Approximately 20 dwellings house the year-round residents. (Alden Kerr, Ely District BLM, Personal Communication, 1980).

Sunnyside

Sunnyside, located north of Hiko in the southwestern portion of the Schell Resource Area, is the site of Nevada Wildlife Department's Wayne E. Kirsch Wildlife Preserve. Access is provided to the area from Highway 38, and a dirt and gravel landing strip is also located at this site. Three families live at a farm owned and operated by the Wildlife Department.

Health Services

The two principal medical facilities available to the residents of the Schell Resource Area are in the towns of Ely and Pioche, both located outside the Schell Resource Area boundaries. The impact of these services must be considered when assessing the facilities available to the residents of the Schell Area.

The William Bee Ririe Hospital, built in 1969, is White Pine County's principal health care facility. The hospital has 43 beds, ten nursing beds, and two operating rooms. The White Pine Care Center has a 99 bed skill nursing group

care unit. Public health and home health facilities are also available in White Pine County. The Eastern Nevada Medical Center houses the out-patient facilities for the county's five physicians. Nineteen registered nurses, three dentists, a chiropractor, and six mental health professionals are employed at the facilities available in Ely. (Socio Economic Analysis of the White Pine Power Project, University of Nevada, Reno, July 1979.)

The Community Counseling Center in Ely offers services to residents of White Pine and Lincoln Counties. In Lincoln County, appointments can be made through the medical clinic in Caliente for counseling, testing and psychotherapy services administered by personnel from the Ely office one day each week. Home services can be arranged if necessary; fees for all services are based on income and the family size. White Pine County residents can also receive outpatient services including individual, family or group consultation, and testing services. The Counseling Center is funded with State and Federal monies and provides 24 hour coverage with personnel on call outside the regular weekday office hours. In-patient needs can be met through the Center's cooperative agreement with the William Bee Ririe Hospital. The Community Counseling Center also administers a transitional care program at privately contracted facilities. Residents of both counties must come to Ely to utilize in-patient services.

The second principal medical facility available to residents of the Schell Resource Area is located in Pioche. The 20 bed hospital has a nursing staff and one full time resident physician assisted by state supplied doctors on two-week rotating schedules.[1/] Capabilities of the facility are such that routine and most emergency situations can be handled, but anticipated surgery is usually scheduled for major medical centers in Reno or Salt Lake.

A variety of health services are available to residents of White Pine County through the facilities to the Community Health Nurse located in Ely. These services are funded by the state and county, resulting in little or no charge for them. Immunization, family planning, well-baby and blood pressure clinics, pre-natal and nutrition counseling as well as TB skin tests are available at the offices, and arrangements can be made for home visits for many of these services. In Lincoln County similar services are available through the Public Health Nurse who also administers posture, vision and hearing tests to the school children in the district. (Personal Communication, Virginia Ruddy, Nevada State Welfare Department, Ely, Nevada, September 15, 1980).

No health services are available in the Baker community, and residents travel to Milford and Delta, Utah as well as to Ely, Nevada, for medical facilities. Public Health and Community Counseling Center services are available upon request.

Residents in the Hiko and Ursine area utilize the Pioche-Caliente health services previously listed.

SOCIAL PROGRAMS AND WELFARE

The Nevada State Welfare Offices in Ely provide Aid to Dependent Children (ADC), Food Stamps, Child Welfare and State Aid to Medically Indigent (SAMI) assistance programs to the entire Schell Resource Area. The staff of one office manager, two social workers and one eligibility worker also provide 20 social services including adoption, foster care, and protective services for both adults and

1/ Personal Communication, Connie Simpkins, Lincoln County Record, Caliente, Nevada, August 21, 1980.

children; although most are income related, three of these services are offered to all residents without regard to income. The Ely District office also supplies a social worker to outlying areas. This itinerant schedule is posted in the communities in advance, and residents may also call the Ely office for assistance. (Ruddy, Nevada State Welfare Department, Personal Communication, 1980).

The White Pine County Welfare and Social Services Department provides general assistance, emergency aid and consultation services to White Pine County residents. (Knous, White Pine County Welfare, Personal Communication, 1980).

A Senior Citizens Center located on Campton Street in Ely near the County Court House and City Park serves lunch to approximately 130 persons Monday through Friday; this figure includes those served in McGill and the homebound meals. There is no charge for meals served to persons over 60, but a charge is made to those under this age. Federal funding through the Division for Aging Services provides for a staff of four persons in Ely, and for site managers in Eureka and McGill. Other services for senior citizens include an information referral service, assistance with SSI and housing applications, and monthly blood pressure and yearly innoculation clinics. Opportunities are available for senior citizens to participate in arts, crafts, and games, and transportation for shopping, medical and post office visists is offered. (Taylor, Senior Citizen Center, Ely, Nevada, Personal Communication, 1980).

EDUCATION

Per pupil educational costs in Lincoln County are approximately $2,400, about 32% higher than the average per pupil cost for the state of Nevada. Two one-room schools operate to serve outlying communities. Rachel has a one teacher, 13 pupil school and Camp Valley's similarly staffed school has an enrollment of three students. In the town of Pioche, a grade school for Kindergarten and grades 1, 2, 6, 7 and 8 has an enrollment of 127. Another grade school in neighboring Panaca has 132 students enrolled in grades 3, 4, 5 and 6. The Lincoln County High School and the administrative offices are located in Panaca. Grades 9 through 12 have an enrollment of 156 students. For efficiency and convenience, Lincoln County Schools have some cooperating bussing and tuition agreements with neighboring counties. (Matthew, Lincoln County Schools, Personal Communication, 1980). The Pahranagat Valley High Shhool is located in Alamo.

Per pupil cost of education in White Pine County is $2,005.47, ranking number 7 in the state of Nevada. Enrollments, teacher numbers and school locations are:

School Location	Students	Teachers
McGill	182	7.5
Ely Grade	446	17
East Ely	102	3
Baker	23	2
Ruth	66	3.5
Lund Elementary	45	3
Lane City	9	1
Lund High	48	5.4
Ely High	521	28

Schools are presently at 68% capacity county-wide. White Pine County School District cooperates in bussing and tuition agreements with neighboring counties. No new educational facilities are being considered at this time; local funding is unavailable, and revenue sources are limited to federal or other impacted funds. Adequate land is available. (McOmber, White Pine County Schools, Personal Communication, 1980).

UTILITIES

No municipal water and sewage facilities are available to the residents of the Schell Resource Area. All such facilities provided by counties or municipalities are available in both Ely and Pioche, located just outside the western and southern borders of the Resource Area respectively. Residents within the Schell Resource Area, however, must rely on wells or springs for their source of water, and septic tanks are necessary because of the absence of any sewage facilities. There are some small areas within the Resource Area where electric power has not been utilized because it is economically unfeasible. But the White Pine County portion of the Schell Resource Area is provided with electric power through the services of Mt. Wheeler Power Company, and the Lincoln County portion is served by Lincoln County Power District #1. (Personal Communication, Bill Coffman, Mt. Wheeler Power Company, Ely, Nevada, August 21, 1980).

LAW ENFORCEMENT

The Lincoln County portion of the Schell Resource Area is serviced by a Sheriff and 10 police officers whose office is located in the Lincoln County Court House in Pioche. Eleven vehicles are available to these law enforcement personnel. Further law enforcement resources include a 40 member volunteer search and rescue team for the northern half of Lincoln County and an ambulance and Emergency Medical Technican (EMT) squad based in Pioche. The law enforcement offices in Pioche dispatch for this ambulance unit and two others located in Alamo and Caliente. In addition, Lincoln County Police assist the Nevada State Highway Patrol, coordinate civil defense and safety programs, and enforce county ordinances in the 10,600 square mile area. (Wilkinson, Lincoln County Sheriff, Personal Communication, 1980).

The White Pine County Sheriff's Department, which serves the northern portion of the Schell Resource Area, has 18 full time and 4 part time deputies. Eight vehicles are available to this staff. A volunteer Search and Rescue Team works in conjunction with the Sheriff's Department, and the Ely-based Emergency Medical Technician (EMT) squad is dispatched through this office. The community of Baker has its own ambulance, and Lund area residents anticipate a community based ambulance in 1981.

TRANSPORTATION AND COMMUNICATION

Roads - Major highways in the Schell Resource area include U.S. 93, the north-south route entering the resource area at its southern boundary north of Pioche continuing northward until it branches in the north-east portion of the resource area to become U.S. 93 and Alternate 50. Entering the resource area north of Baker is U.S. 6/50. Highway 38 connects U.S. 6 with U.S. 93 and is located in the Lund, Sunnyside and Hiko areas in the southwestern portion of the Schell Resource Area.

Railroads - Weekly freight service to Ely is provided by the Nevada Northern Railway Company. The Union Pacific Railway Company enters the southeastern portion of the Schell Resource area to provide service to Pioche. No rail passenger service is offered in the resource area.

Bus Lines - Bus service between Ely and Las Vegas was instituted during the summer of 1980, operating on U.S. 93 in the Schell Resource Area.

Air Lines - Yelland Field, the Ely Airport, is operated by White Pine County. The airport is currently served by United Airlines with two 737 jet flights daily, one east to Salt Lake City and one west to Reno with one stop in Elko.

A local flying service provides chartered flights from Ely to anywhere within the local area.

No commercial airlines serve the Pioche area, although an airport used by private aircraft is located about five miles southwest of the community.

Telephones - Telephone service is available to all small towns and most of the outlying ranches in the Schell Resource Area. Nevada Bell serves White Pine County, and privately owned Lincoln County Telephone Company provides service to approximately 1800 subscribers in Lincoln County. (Christian, Lincoln County Telephone Company, Personal Communication, 1980).

Television - Television reception is available in most of the White Pine County portion of the Schell Resource Area because of a translator which brings in Salt Lake City and Las Vegas stations. In Pioche and some of Lincoln County television reception is made available through the use of a translator located near Pioche.

Radio - There is one AM radio station, KELY, in Ely. This station can be received to the southern border of the Schell Resource Area. The Cedar City, Utah, AM station can also be received in the southern portion of the resource area. Citizens band, or CB radios, are heavily used throughout the resource area by private individuals and business. A Salt Lake FM station, KSLI, is also received in Ely throughout most of the Schell Resource Area.

Newspapers - The Ely Daily Times is a daily newpaper published in Ely. The Lincoln County Record is published weekly on Thursday; offices for this publication are located on U.S. 93 one mile south of Panaca.

FIRE CONTROL

This section deals with fire suppresion capabilities and responsibilities in the SRA. The fire management section dealt with fires as a resource management tool. In other words, the fire management section discussed why BLM would set fires or allow natural fires to burn, while this section deals with who has the responsibility to put fires out and what their resources are to do so.

Responsibility for initial fire suppression on public lands in the Schell Resource Area is divided between the U.S. Forest Service and the BLM fighting forces. Located just outside of, but serving the Resource Area, are two other fire control organizations: the Ely Fire Department and the Pioche Fire Department. Pumpers located at volunteer fire fighting sites in or near the Resource Area include Alamo, Pahranagat, Baker and the Lehman Caves.

The Ely District BLM has a permanent fire crew of two, with qualified personnel from other divisions of the district available throughout the year. Fifteen seasonal firefighters and dispatchers employed between May and September are stationed at the Ely District Office. An additional seven firefighters seasonally employed are stationed at Caliente, a fire station staffed and equiped by both Ely and Las Vegas Districts. This station provides initial fire suppression for the southern portion of the Schell Resource Area. (King, BLM Personal Communication, 1980).

The district is planning to construct a fire substation near Pony Springs. This installation would provide improved wildland fire control in the southern portion of the resource area. Two fire trucks and seven fire crew personnel would be stationed here during the fire season.

The U.S. Forest Service has a year round crew of four and a slip-on pump unit based in Ely for providing initial fire suppression on public lands in the Schell Resource Area. (Wilcox, USFS, Personal Communication, 1980).

The unincorporated community of Baker has one outdated but functional fire truck housed in a recently built county structure. (Coffman, Mt. Wheeler Power Co., Personal Communication, 1980).

Through agreements, additional fire fighting resources are available outside the Schell Resource Area. A twenty member volunteer fire department in Pioche has available to them three pumper trucks. Sixteen members of the State Honor Farm supervised by the Nevada Division of Forestry and residing near Pioche also assist in fire fighting operations when needed. Pioche presently has fire fighting cooperative agreements with Lincoln County Government and the Bureau of Land Management as well as the U.S. Forest Service. (Wilkinson, Lincoln County Sheriff, Personal Communication, 1980).

The Ely Fire Department has five full time paid firemen and 40 volunteers. Equipment includes one pickup truck that pumps water, two rescue vehicles (1 ambulance and a four wheel drive capable of pumping water), and five pumper engines. Two White Pine County trucks capable of pumping foam and water are permanently stationed at the airport. Ruth and McGill each have one pumper truck. (McIntosh, Ely City Fire Department, Personal Communication, 1980).

FIGURE 1

ELY DISTRICT
FIRE SUPPRESSION ORGANIZATION

CALENDAR YEAR 1980

District Manager

Chief Division of Resources | Chief Division of Administration | Chief Division of Operations | Area Manager | Area Manager

Fire Management Officer (1) PFT
½ T. Ford Courier (2x4) I-131438

Fire Control Officer (1) WAE
3/4 T. 1975 Dodge (4x4) I-114024
3/4 T. 1978 (4x4) 6 Passenger
I-125713

Fire Prevention Technician (1) Temporary — Dispatcher (3) Temporary

Engine I-125869	Pumper I-125790	Pumper I-125874	Pumper I-131382
Unimog (1978)	Dodge 4x4 (1979)	Dodge 4x4 (1978)	Chevy 4x4 (1977)
420 Gallons	200 Gallons	200 Gallons	200 Gallons
Fire Engine Operator (1) Temp.	Fire Apparatus Engineer (1) Temp.	Fire Apparatus Engineer (1) Temp.	Fire Apparatus Engineer
Fireman (1) Temp.	Fireman (2) Temp.	Fireman (2) Temp.	Fireman (2) Temp.

Caliente Station Manager (1) WAE

Pumper (supplied by Las Vegas)	Engine I-116936
(200 Gallons)	Ford 4x4 (1976)
Fire Apparatus Engineer (1) Temp.	(600 Gallons)
Fireman (2) Temp.	Fire Engine Operator (1) Temp.
	Fireman (2) Temp.

Additional Manpower and Equipment

1. Reserve Pumper I-121634, 125 Gallons, Dodge 4x4 (1977)
2. Slip on unit, 100 gallons, 1 each
3. Portable pump, Gorman Rupp backpack (1) each.
4. Cat, D-4 Force Account (2) each.
5. Transport, Mack Tractor, Force Account (1) each.

TABLE 45

SRA FIRE OCCURENCE AND ACRES BURNED

YEAR	FIRE SEASON	PUBLIC LANDS		OTHER OWNERSHIP		TOTALS	
		FIRES	ACRES	FIRES	ACRES	FIRES	ACRES
1970	5/14-10/12	26	254	0	0	26	254
1971	7/7 - 9/27	16	40	0	0	12	40
1972	7/19-8/25	20	396	1	31	20	427
1973	6/27-10/14	59	1,560	1	6	60	1,566
1974	3/14-10/22	39	10,996	1	100	39	11,096
1975	6/9-11/1	36	81	0	0	36	81
1976	4/7-9/25	36	322	2	11	38	333
1977	4/21-9/29	38	192	1	60	38	252
1978	6/6-10/9	23	340	0	0	23	340
1979	4/3-11/3	12	93	2	7	14	100

TABLE 46

ESTIMATED FIRE SUPPRESSION COSTS BLM MANAGED LANDS IN SRA

YEAR	FIRES	FALSE ALARM	RESOURCE DAMAGE
1970	$ 8,933	$ 200	710
1971	4,471	300	1,239
1972	5,200	200	26,538
1973	53,300	1,200	67,322
1974	127,640	1,200	1,162,208
1975	8,350	100	147
1976	40,228	200	11,706
1977	10,451	700	7,255
1978	19,185	300	8,589
1979	9,900	300	4,631
TOTAL	$ 287,658	$ 4,700	$ 1,290,345

Source: both tables: DI-1201 Individual Fire Reports on file in Ely District Office. Compiled in Winter 1979.

TABLE 47

FIRE DATA
SCHELL RESOURCE AREA
FIRE OCCURRENCE

TIME OF YEAR

Year	Jan-March	Apr	May	June	July	Aug	Sept	Oct	Nov-Dec	TOTAL
1970	0	0	2	0	20	1	3	1	0	27
1971	0	0	0	3	9	3	1	0	0	16
1972	0	0	0	0	8	12	0	0	0	20
1973	0	0	0	3	22	22	11	3	0	51
1974	2	1	0	6	14	8	8	1	0	40
1975	0	0	0	1	19	7	7	1	1	36
1976	0	2	1	0	23	3	9	0	0	38
1977	0	1	1	10	11	13	2	0	0	38
1978	0	0	0	1	7	13	0	2	0	23
1979	0	1	2	0	3	1	4	1	1	13
TOTAL	2	5	6	24	136	85	45	9	2	312

Source: DI-1201 Individual Fire Reports on file in Ely District Office. Compiled in Winter 1979.

TABLE 48

FIRE DATA
SCHELL RESOURCE AREA
FIRE OCCURRENCE

SIZE CLASS

YEAR	A	B	C	D	E	F	G	FA
1970	20	5	1	1	0	0	0	1
1971	11	4	1	0	0	0	0	3
1972	15	2	2	1	0	0	0	2
1973	39	13	6	2	0	1	0	13
1974	21	8	6	3	1	0	1	8
1975	34	1	1	0	0	0	0	1
1976	20	10	6	2	0	0	0	2
1977	29	7	1	1	0	0	0	7
1978	18	0	4	1	0	0	0	3
1979	6	5	2	0	0	0	0	3
Total	213	55	30	11	1	1	1	43

Key: Size Class

A 0 - .25 acres
B .26 - 9 acres
C 10 - 99 acres
D 100 - 299 acres
E 300 - 999 acres
F 1000-4999 acres
G 5000 - acres and over
FA False Alarm

Source: DI-1201 Individual Fire Report on file in Ely District Office. Compiled in Winter 1979.

TABLE 49

FIRE DATA
SCHELL RESOURCE AREA
FIRE OCCURENCE

Year	1 Light	2 Cf	3 Sm	4 DB	5 Inc.	CAUSE 6 Equip	7 RR	8 Child	9 Misc	10 FA
1970	21	0	0	1	0	0	0	0	5	1
1971	13	0	0	0	1	1	0	0	1	3
1972	17	0	0	1	0	0	0	0	2	2
1973	34	0	6	0	8	1	0	0	12	13
1974	23	1	0	2	2	0	0	0	12	8
1975	32	1	0	0	0	0	0	0	3	1
1976	17	0	0	0	16	2	0	1	2	2
1977	31	1	0	0	2	0	0	0	4	7
1978	15	0	1	2	4	0	0	0	1	3
1979	6	0	0	2	2	2	0	0	1	3
Total	209	3	7	8	35	6	0	1	43	43

Key: Cause

1 Lightning
2 Campfire
3 Smoking
4 Debris Burning
5 Incendiary
6 Equipment Use
7 Railroad
8 Children
9 Miscellaneous
10 False Alarm

Source: DI-1201 Individual Fire Reports on file in Ely District Office. Compiled in Winter 1979.

TABLE 50

FIRE DATA
SCHELL RESOURCE AREA
FIRE OCCURRENCE

SIZE CLASS VS. TIME OF YEAR

	A	B	C	D	E	F	G	FA
Jan-March	1	2	1	1	0	0	0	0
April	1	4	1	1	0	0	0	4
May	4	1	1	0	0	0	0	2
June	15	8	0	0	0	0	1	7
July	106	11	11	4	2	1	1	17
August	64	11	5	1	1	1	0	7
September	15	21	8	1	0	0	0	2
October	3	3	3	0	0	0	0	3
Nov-Dec	1	1	0	0	0	0	0	1

Key: Size Class

A	0-.25 acres
B	.26-9 acres
C	10-99 acres
D	100-299 acres
E	200-999 acres
F	1000-4999 acres
G	5000 acres and over
FA	False Alarm

Source: DI-1201 Individual Fire Reports on File in Ely District Office. Compiled in Winter 1979. Information covers fire years 1970 to 1979.

BUREAU AGREEMENTS

Following is a listing of cooperative agreements presently affecting the Ely District. These agreemnnts have been entered into with individuals and agencies at the local, state and national levels. A comprehensive file of cooperative agreements is located in the Library at the Ely District Office.

NAME OF AGENCY	TITLE OF AGREEMENT	RESOURCES	ROLE OF BLM	ROLE OF OTHER AGENCY
Nev. National Guard Region 4 Forest Service, and Nev. Div. of Forestry	Cooperative Fire Agreement	Fire	May request additional service from the other agencies.	May be required to supply additional services to Ely District
State of Nevada and Nevada Division of Forestry	Cooperative Fire Agreement	Fire	Authority to enter operating Agreements with necessary agencies for adjacent lands	
Phoenix Area Office BIA	Cooperative Agreement	Fire	Authority to enter into agreements with BIA. Detection, prevention, pre-suppression, control, reports, and mutual aid.	Cooperation in areas of fire detection, prevention, pre-suppression, control, report and mutual aid.
Eastern Nevada Agency BIA	Fire Plan	Fire	Operating Agreement regarding provisions for detection, and initial attack on designated BIA lands.	Prevention, training, and fire fighting.
City of Ely, White Pine County, Kennecott Copper Corp., Silver King Mines, USFS	Memorandum of Understanding Protection of Murry Canyon Watershed	Water	All agencies involved cooperate in protection of water resources in Murry Canyon.	All agencies the same.
NA)/USO/Ely District, Richfield District	Range Inventory and Interim Forage Allocation Agreement	Range	Cooperative Survey and Inventory	Same for all agencies.
NSO/USFS Intermountain Reg./White Pine Ranger District	Memorandum of Understanding	Range	Range Management Cooperation	Same as BLM
National Wildlife Federation	Mid-winter Bald Eagle Survey Coordination	Wildlife	Provide information/insight on wintering populations of bald eagles in the continental U.S.	
Department of Fish & Game	Wild Animal Trapping or Collection	Wildlife	To inform Department of Fish & Game of all collections or trapping of wild animals.	

NAME OF AGENCY	TITLE OF AGREEMENT	RESOURCES	ROLE OF BLM	ROLE OF OTHER AGENCY
State Oil, Gas & Mining Advisory Board	Working Relationships	Minerals	To establish and maintain working relationships.	To establish and maintain working relationships.
U. S. Forest Service	Coordination of Agencies Resources		Coordinate citizen involvement, inventory assessments, field level operations, boundary adjustments, pooling of facilities and personnel, and joint research study of policy issues and natural resource problems.	Same as role of BLM
Air Force Weapons Laboratory, Kirtland AFB, New Mexico	Geotechnical Investigations	All	Define procedures for geotechnical studies on selected areas of public lands. Develop geologic and hydrologic information of interest to Air Force.	Provide BLM with drilling logs upon request; statement of archaeological values; geologic, hydrologic and soil data; water and soil samples for salinity and alkalinity. CO will also provide approved Environmental Assessment before conducting studies.
B.I.A., I.T.C. and Indian Tribes	General Cooperation	Pine Nuts, Water, Wildlife	General cooperation for Wild Horse Management, Pine Nut gathering, flood control, and other matters as they arise.	Same as role of BLM
White Pine County Regional Planning Commission	Land Use Planning and Programs	All	Coordinate land use planning and programs with County Regional Planning Commission.	Same as role of BLM
Nevada State Highway Department	Material Sites	Lands Minerals	Monitor existing sites for unauthorized dumping. Work with local Highway Department Office to review need for existing sites. Review new requests for material sites in context of existing situation. Make technical examination and formulate requirements for State Highway Department.	Review sites, relinquishing any that are no longer needed. Take necessary steps to stop unauthorized dumping on existing required sites.

NAME OF AGENCY	TITLE OF AGREEMENT	RESOURCES	ROLE OF BLM	ROLE OF OTHER AGENCY
U. S. Forest Service	Road Agreement	Lands	General road usage and maintenance agreement. Each instance requires agreement of both parties.	Same as for BLM
U. S. Forest Service	Cooperative Agreement	Lands	BLM may withdraw land for Forest Service for rights-of-way for road development.	FS will return such land to BLM when further use is no longer required.
U. S. Forest Service Humboldt Nat'l Forest	Lower Kinsey Canyon Water Development & Water Transmission Line.	Water Lands	Obtain prior approval from the FS for location and construction method of improvements on site. Fence spring area and maintain improvements to the standard of the Forest Service. Prevent soil erosion on site and adjacent areas. Memorandum confers no right to use of water involved. Mutual agreement can terminate with removal of improvements responsibility of BLM.	Grant permission to BLM to construct and maintain water supply and line on site. Maintain administrative control over site by District Forest Ranger. Mutual agreement can terminate.
White Pine County Commissioners	Memorandum of Understanding	All	Cooperate in land use decision making; assist in development and implementation of specific agreements; solicit County participation in public land management; assist the county with personnel and data when practical; cooperate in the identification of social and economic impacts of land use activities and the development of mitigating measures.	Solicit BLM participation in development of master plans for County land use; make available social and economic information; assist in development and implementation of specific agreements; make available County personnel for data gathering land use planning and environmental studies.
U. S. Fish and Wildlife	Preservation, Use and Management of Fish and Wildlife Resources	Wildlife & Vegetation	Cooperate in areas of vegetal control, wildlife habitats and resources, and seed bank	Same as for BLM

NAME OF AGENCY	TITLE OF AGREEMENT	RESOURCES	ROLE OF BLM	ROLE OF OTHER AGENCY
Environmental Protection Agency and State and Areawide Water Quality Management Planning Agencies	Water quality Management Planning	Water	Exchange of necessary information in advisory capacity and assistance in providing technical information to agencies.	Water quality management planning, identification of complex water quality problem areas. Exchange of necessary information.
U. S. Department of Agriculture, Soil Conservation Service	Memorandum of Understanding	Lands	Cooperate and integrate certain technical phases of soil survey work for purpose of gathering information regarding multiple use land planning.	Will cooperate in soil survey information for the purpose of determining potential suitabilities and limitations for multiple uses and activities.
Las Vegas Fire District	Interdistrict Fire Organization	Fire	Agree to station men and equipment in Caliente. Initial attack, detection, prevention, suppression, dispatching, and training.	Same as for Ely BLM
Ely Ranger District Humboldt Nat'l Forest	Annual Operating Plan	Fire	Prevention, suppression, air operations, dispatching, critiques, weather, closures, controlled burning, training, and law enforcement.	Same as for Ely BLM
Humboldt National Forest, White Pine Ranger District	Annual Operating Plan	Fire	Prevention, suppression, air operations, dispatching, critiques, weather, closures, controlled burning, training and law enforcement.	Same as for Ely BLM

PROBLEMS AND ISSUES

LANDS

1. With the potential of the White Pine Power Project and MX bringing in large numbers of people, there will be a need to provide land to the counties for expansion. There will also be a need for land for rights of way and possible withdrawal sites.

2. There is a concern that if these projects take place that the BLM cannot react in a timely manner to transfer the needed land.

3. Similarly, most people feel that BLM acts too slowly on land transfer applications, i.e., DLEs, Carney Act, exchanges, etc.

4. More land should be made available for transfer to help strengthen the tax base.

MINERALS

1. There is a feeling that too much land is being removed from potential mining. Keep the land open to exploration and development.

2. With the implementation of the 3802 and 3809 regulations there is a concern that some of the resulting requirements may be too stringent, preventing mining.

3. There was some concern noted over the potential for mining to destroy historic and archeologic areas and the concerned group felt that this needs to be prevented.

4. Conversely, others felt that the mining industry needs more latitude in their activity.

WILDERNESS

1. There is a feeling that there will not be an adequate mineral inventory on the WSAs and that valuable minerals will be locked up if an area becomes a wilderness area.

2. There is a feeling that wilderness is only for the young and healthy and that the old or infirm would not be able to enjoy it.

FORESTRY

1. There is an increasing demand for firewood, especially green wood, since deadwood is becoming quite scarce.

RANGE

1. There is a fear that the rancher would be regulated out of business.

2. There is a desire for more range improvements and a reduction in the time to implement the improvements.

3. There is concern over Pinyon-Juniper encroachment on allotments.

4. Ranchers are concerned over the potential for reduction in their AUMs and that Wilderness and Wildlife will be given more than their share.

5. There is a desire for more predator control. The feeling is that this is a contributor to the declining sheep industry.

WILD HORSES

1. There is the feeling that horses, in reasonable numbers, are all right as long as they don't result in a reduction of livestock.

2. The value given to wild horses under the law and by horse groups is greatly different than the value placed upon the wild horse by the residents of the area.

WILDLIFE

1. There is a concern that the protection of an obscure specie may prevent the development of a resource.

2. There is a concensus that there should be no decrease in wildlife numbers and an increase is desirable.

3. There is a need for more opportunities for hunting and fishing, either different species or more of what is here.

RECREATION

1. A general feeling about Off Road Vehicles (ORVs) is that the only areas that should be closed to them are those required to protect a valuable resource.

CULTURAL RESOURCES

1. Areas can be withdrawn from multiple use for protection of sites, but they should only be large enough to protect the specific site and no larger.

WATER

1. There is a concern that if the BLM obtains water rights that it will have too much control over the public lands.

APPENDIX 1

INFRASTRUCTURE REFERENCES

CHRISTIAN, Mary Louise
Lincoln County Telephone Company, Pioche, Nevada. Personal Communication. August 21, 1980.

COFFMAN, Bill
Mt. Wheeler Power Company, Ely Nevada. Personal Communication August 21, 1980

KERR, Alden
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KING, Danny
Bureau of Land Management, Ely, Nevada. Personal Communication. September 5, 1980.

KNOUS, Margaret
White Pine County Welfare Department, Ely, Nevada. Personal Communication. September 15, 1980.

MATTHEWS, Dr. Neldon
Lincoln County Schools, Panaca, Nevada. Personal Communication. August 21, 1980.

McINTOSH, Don
Ely Fire Department, Ely, Nevada. Personal Communication. September 4, 1980.

McOMBER, Russell
White Pine County Schools, Ely, Nevada. Personal Communication. September 5, 1980.

ROBERTS, Terry
Baker Resident, Baker, Nevada. Personal Communication. August 27, 1980.

RUDDY, Virginia
Nevada State Welfare Dept., Ely, Nevada. Personal Communication. September 15, 1980.

SIMPKINS, Connie
Lincoln County Record, Caliente, Nevada. Personal Communication. August 21, 1980.

TAYLOR, Nancy
Senior Citizen Center, Ely, Nevada. Personal Communication. September 15, 1980.

WILCOX, Jack
USFS, Ely, Nevada. Personal Communication, September 5, 1980

WILKINSON, Larry
Lincoln County Sheriff, Pioche, Nevada. Personal Communication, August 21, 1980.

THE GOVERNOR'S COMMISSION ON THE FUTURE OF NEVADA SURVEY RESULTS, 1980

Notes on Reading the Tables of Survey Results

"These notes should be read before reading the tables as they will aid in your interpretation of the results.

On Interpreting the Results

It was the decision of the Commission, in the first of two surveys, that it should be distributed so that every Nevadan would have the opportunity to fill one out. This precluded the possibility of a systematic distribution, which means that the results of the survey cannot be interpreted in the same manner as the public opinion polls with which most people are familiar.

As an example, 60% of the people responding to our survey were not pleased with the growth (or lack of growth) in their community in the last few years. It would not be appropriate to say that "60% of all Nevadans were displeased with the growth (or lack of growth) of their community in recent years." It would be appropriate to say that "most Nevadans were displeased with the growth (or lack or growth) in their community in recent years." In general, any difference between responses of less than 5% is probably not significant.

Number of Surveys Returned

The first column (Number of Surveys Returned) shows the total number of surveys received from each county. The "Percentage of Total Number of Surveys Returned" column indicates each county's percentage of the total number of surveys returned.

The "Percentage of County Households Returning Surveys" is our estimate of the number of households in each county that mailed in the survey. Because some households sent in more than one survey, i.e., husband and wife each sent one, we assumed, for purposes of estimation, that one out of every ten households sent in two surveys; therefore, the figures in this column are 10% lower than if one assumed that only one survey was from each household.

The "Percentage of State Population in County" column is included so that each county's population can be compared to the percentage of surveys returned from each county.

In general, the number of surveys is proportional to the population of each county." (From the Survey, published March 1980.)

TABLE A
Responses to the Survey, Selected Questions

		LINCOLN	WHITE PINE	NYE	STATE
Is growth (more people) beneficial to your community? A/	yes	70%	86%	51%	41%
	no	27	13	45	54
	no opinion	3	1	4	5
I would like the area in which I live to grow: A/	not at all	15%	10%	21%	22%
	slowly	26	18	38	38
	moderately	56	71	34	37
	rapidly	3	1	8	3
	no opinion	0	0	0	0
Are you pleased with the growth (or lack of growth) in your community in the last few years? A/	yes	51%	20%	44%	33%
	no	42	73	46	60
	no opinion	7	7	10	7
What is it that you like about living in Nevada? B/					
A. Open Space/Sparse population/ Peace & Quiet/Uncongested		1	1	1	1
B. Relaxed Life Style/Freedom/ Individuality		3	2	2	3
C. Clean Air/ Lack of Pollution		2	3	3	5
D. Climate		5	8	5	2
E. Friendly People		3	5	6	7
F. Tax Structure/Low Taxes		6	4	5	6
G. Scenery/Beauty of Area		4	6	7	8
H. Recreation		7	7	4	4
What changes in your lifestyle would you accept? A/					
A. Deterioration of Air Quality	would accept	21%	44%	14%	12%
	would not accept	79	56	86	88
B. Increased Scarcity of Water	would accept	20	17	20	16
	would not accept	80	84	80	84
C. Increased Federal Regulations	would accept	11	8	18	21
	would not accept	89	92	82	79
D. Reduced Access to the Out-of-doors	would accept	25	4	6	12
	would not accept	75	96	94	88

TABLE A
Responses to the Survey, Selected Questions (con't)

	LINCOLN	WHITE PINE	NYE	STATE
E. Riding a Bus to Work				
would accept	81	83	83	81
would not accept	19	17	17	19
F. Increased Traffic Congestion				
would accept	46	57	35	22
would not accept	54	43	65	78
G. Increased Population				
would accept	68	81	65	51
would not accept	32	19	35	49
H. Reduced Quality of Public Services				
would accept	24	31	33	28
would not accept	76	69	67	72
I. Reduced Access to Hunting & Fishing Areas				
would accept	30	8	32	29
would not accept	70	92	68	71
What are the three most important problems facing your area? (ranked order-1 most preferred)[B/]				
A. Too Rapid/Unregulated Growth/ Over Population	8	9	5	3
B. Water/Sewer-water supply & quality/ sewer capacity.	4	11	1	2
C. Government (State, Local) lack of responsivesness/non-representation	6	4	5	7
D. Roads/Transportation/Traffic	7	7	2	1
E. Housing-cost of/lack of/quality	7	6	1	6
F. Lack of Planning/Zoning	12	12	8	11
G. Crime/Police	14	11	8	4
H. Education-crowded schools/quality of education/lack of facilities	5	8	4	12
I. Environmental Concerns-destruction/ loss of scenery/pollution/general	13	10	6	5
J. Federal Government Regulation-BLM/ U.S. Forest Service/etc.	1	2	4	9
K. Unemployment/Economic Depression	2	1	9	10
L. Energy-cost/electricity/power plants/ fuels	11	9	10	8
M. Public Services-fire services/ community programs/other	7	11	3	15
N. Economic Diversification/Lack of Industry	9	3	7	13
O. Health/Medical/Emergency Services	7	13	8	16

TABLE A (con't)
Responses to the Survey, Selected Question

	LINCOLN	WHITE PINE	NYE	STATE
P. Recreation	10	11	5	14
Q. MX Missile	3	5	5	17

A's/ The percentages given can be read as follows: "X percent of all people answering this question gave this answer".

B's/ The responses to these questions selected are ranked in order of preference: "1" being the most prefered, "2" being second preference, etc.

TABLE B
Survey Respondant Data

	LINCOLN	WHITE PINE	NYE	STATE
# surveys returned	69	362	195	18,671
% of total surveys returned	0.4	1.9	1.0	100.0
% of county households returning surveys	4.6	10.2	6.2	6.3
% of state population in county	0.5	1.2	1.1	100.0
SEX Male	57%	65%	69%	59%
Female	43%	35%	41%	41%
AGE 18 & under	32%	1%	0%	8%
19 - 24	3	4	8	5
25 - 40	15	31	45	36
41 - 64	36	53	37	41
65 & over	15	11	10	11
YEARS LIVED IN NV.				
0 - 5	19%	16%	21%	25%
6 - 10	10	7	21	17
11 - 25	26	17	36	32
26 & over	44	80	23	26
HIGHEST LEVEL OF EDUCATION COMPLETED				
Primary	3%	4%	0%	4%
High School	73	52	51	49
College Graduate	13	28	26	30
Post Graduate	11	15	23	17
Annual Gross Income (before taxes) of my household is between				
$ 0 - 4,999	5%	2%	0%	5%
$ 5,000 - 9,999	15	16	8	9
$10,000 - 14,999	18	19	22	16
$15,000 - 24,999	32	36	28	32
$25,000 & Over	30	27	41	38
I AM PRESENTLY EMPLOYED				
YES	54%	74%	87%	71%
NO	46	26	14	29

WHO RESPONDED TO THE SURVEY

AGE	% SURVEY POPULATION	% STATE POPULATION
15 - 18	8	12
19 - 24	5	13
25 - 40	36	30
41 - 64	41	35
65 & Over	11	10

TABLE B
Survey Respondant Data
(con't)

MY PRIMARY OCCUPATION IS:	LINCOLN	WHITE PINE	NYE	STATE
Professional - Technical, Managerial (includes: engineers, dental hygenists, purchasing agents)	17%	39%	49%	39%
Construction & Trades - (includes: carpenters, machinists, tailors)	7	12	10	7
Manufacturing & Transport - (includes: machine operators, meat cutters, truck drivers)	3	7	8	3
Service Workers - (includes: firefighters, bartenders, warehouse laborers, dealers)	10	1	10	9
Clerical - (includes: secretaries, bank tellers, dispatchers)	10	12	8	9
Sales - (includes: insurance agents advertising agents, sales workers)	4	4	2	5
Farming & Ranching - (includes: ranch owners, farm managers, farm workers)	9	4	4	2
Military	0	0	0	1
Student	16	0	2	6
Retired	15	16	0	12
Homemaker	9	3	6	7

APPENDIX 3 RANCH OPERATION INFORMATION

All of the tables in this appendix are taken from "Characteristics of the Range Cattle Industry, 1972, Region 1 Southern Nevada," published January 1978 and "Characteristics of the Range Cattle Industry, 1972, Region III Northeastern Nevada," published April 1977, by Burke Mitchell and James R. Garrett, Agricultural Experiment Station, Max C. Fleischmann College of Agriculture, University of Nevada, Reno.

TABLE A1

Average Operating Expenses Per Ranch by Size of Ranch
In Northeastern Nevada, 1972

	Size of Ranch					
	Small		Medium		Large	
Expense Item	Amount	Percent	Amount	Percent	Amount	Percent
Labor	$2,989	11.3	$11,147	26.8	$26,995	19.0
Livestock purchases	8,667	32.6	2,097	5.8	22,485	16.0
Repairs & maintainance	2,019	7.6	3,727	9.4	12,441	8.8
Depreciation	2,701	10.2	4,656	12.0	21,066	14.8
Interest	836	3.1	1,262	3.1	4,465	3.1
Gas & Lubricants	1,823	6.9	2,687	6.7	5,870	4.1
Feed purchases	2,089	7.9	2,480	6.1	16,162	11.4
Taxes	1,779	6.7	2,073	5.3	7,418	5.2
Custom work	0	0.0	1,311	3.4	327	0.2
Insurance	865	3.3	1,209	3.1	5,367	3.8
Federal grazing fees	666	2.5	2,573	6.3	11,032	7.8
Utilities	793	3.0	1,604	3.9	3,164	2.2
Hay & crop exp.	481	1.8	1,277	3.1	1,616	1.1
Misc. expense	853	3.2	1,978	5.0	3,445	2.4

TABLE A2

Average Operating Expenses Per Ranch by Size of Ranch in Southern Nevada, 1972

Expense Item	Small		Medium		Large	
	Amount	Percent	Amount	Percent	Amount	Percent
Labor	$ 2,250	14.7	$ 4,975	10.8	$ 19,825	12.6
Livestock Purchases	999	6.5	5,275	15.8	26,475	16.8
Repairs & Maintenance	1,400	9.2	2,950	8.6	7,625	4.9
Depreciation	2,010	13.2	5,440	15.0	24,091	15.3
Interest	482	3.1	1,155	3.1	4,946	3.1
Gas & Lubricants	1,683	11.0	3,600	10.3	10,300	6.6
Feed Purchases	718	4.7	2,453	6.9	2,083	1.3
Taxes	733	4.8	3,000	8.4	7,925	5.0
Custom Work	0	0.0	16	.1	0	0.0
Insurance	903	5.9	1,485	4.1	8,450	5.4
Federal Grazing Fees	1,195	7.8	2,487	7.6	34,624	22.0
Utilities	1,114	7.3	2,300	5.0	6,575	4.2
Hay & Crop Expenses	97	.6	0	0.0	0	0.0
Miscellaneous Expenses	1,692	11.1	1,542	4.2	4,220	2.7

NE	Total Expenses	Small	Medium	Large
	Per animal	26,570	40,081	141,853
	Per animal unit	117	76	63
S	Per ranch	15,276	36,678	157,139
	Per animal unit	91	67	60
NE	Total expenses (less breeding stock purchases)			
	Per ranch	17,903	38,144	123,607
	Per animal unit	79	73	55
S	Per ranch	14,277	31,403	130,664
	Per animal unit	85	58	50

TABLE B1

Summary of Total Ranch Assets on
Northeastern Nevada Cattle Ranches, 1972

Investment Item	Small	Medium	Large	Livestock System Cow-Calf	Livestock System Cow-Yearling
Buildings & Equipment					
Per ranch	$ 37,993	$ 46,107	$ 119,430	$ 72,414	$ 102,638
Per animal unit	167	88	53	65	56
Land					
Per Ranch	306,314	354,655	1,516,383	927,337	922,467
Per animal unit	1,349	677	671	829	503
Livestock					
Per ranch	76,370	174,803	728,853	373,162	563,408
Per animal unit	336	334	322	333	307
Total					
Per ranch	420,677	575,565	2,364,666	1,372,913	1,588,513
Per animal unit	1,853	1,098	1,047	1,227	866

TABLE B2

Summary of Total Ranch Assets on Southern Nevada Cattle Ranches, 1972

Investment Item	Ranch Size Small	Medium	Large	Cow-Calf Livestock System
Buildings and Equipment				
Per ranch	$ 19,857	$ 67,425	$ 88,800	$ 47,586
Per animal unit	118	124	34	51
Land				
Per ranch	110,375	267,462[a]	1,234,950	672,662
Per animal unit	655	490[a]	473	721
Livestock				
Per ranch	46,976	148,206	731,091	260,066
Per animal unit	273	271	280	276
Total Assets				
Per ranch	176,208	483,057[a]	2,054,841	980,315
Per animal unit	1,045	886[a]	787	1,051

a - Land assets for medium ranches were approximated by averaging large and small ranches. This was necessary because of insufficient data for medium ranches.

TABLE C

Land Use and Value of Land Assets on
Northeastern & Southern Nevada Cattle Ranches, 1972

Item	Ranch Size			Livestock System	
	Small	Medium	Large	Cow-Calf	Cow-yearling
NE Alfalfa (acres)					
Per ranch	8.2	77.7	217.8	115.5	168.9
Range/ranch	0-100	0-500	0-1,500	0-1,500	0-400
Per animal unit	.04	.15	.10	.10	.09
S Alfalfa (acres)					
Per ranch	58.9	115.00	312.50	132.93	
Range per ranch	0-200	0-260	0-650	0-650	
Per animal unit	.35	.21	.12	.14	
NE Meadow hayland (acres)[a/]					
Per ranch	280	250.3	2,114.5	1,2370.0	888.6
Range/ranch	0-800	0-650	0-28,800	0-28,800	0-3,000
Per animal unit	1.23	.48	.94	1.11	.48
S Meadow hayland (acres)[a/]					
Per ranch	67.85	105.00	375.00	171.07	
Range/ranch	0-500	0-350	0-1500	0-1500	
Per animal unit	.40	.19	.14	.18	
NE Irrigated pasture (acres)					
Per ranch	203.6	207.0	715.9	354.3	773.1
Range/ranch	0-1300	0-1000	0-6600	0-6600	0-5000
Per animal unit	.90	.40	.32	.32	.42
S Irrigated Pasture (acres)					
Per ranch	75.71	60.00	1,300.00	423.57	
Range per ranch	0-250	20-120	0-3000	0-3000	
Per animal unit	.45	.11	.50	.45	
NE Range (acres)					
Per ranch	2121.4	1597.3	19,920.3	10,100.2	12,092.1
Range/ranch	0-6400	0-4000	219-225,740	0-225,740	219-65,000
Per animal unit	9.35	3.05	8.82	9.03	6.59
S Range (acres)					
Per ranch	246.43	254.50	1344	579.36	
Range per ranch	0-675	0-530	520-2856	0-2856	
Per animal unit	1.46	.46	.51	.62	
NE Total (acres)					
per ranch	2613.2	2122.3	22,901.4	11,762.0	13,922.6
Range/ranch	0-7040	0-5050	006-253,940	0-253,940	1,006-73,000
Per animal unit	11.51	4.05	10.14	10.51	7.59
S Total land (acres)					
Per ranch	448.71	523.5	3321.50	1306.93	
Range per ranch	64-700	170-940	520-5756	64-5756	
Per animal unit	2.66	.98	1.28	1.40	
NE Value of land assets					
Per ranch	306,314	354,655	1516,383	927,337	922,466
Range/ranch	70,600-744,200	68,800-536,400	193,000-11,923,300	68,800-11,923,300	193,000-2,221,700
Per animal unit	1349	677	671	829	502.71
S Value of land assets					
Per ranch	110,375	b	1,234,950	672,662.50	
Range per ranch	1,600-207,200	b	193,700-2,005,000	1,600-2,005,000	
Per animal unit	654.66	b	473.20	721.20	

a-Includes small amounts of other hayland, (wet, etc).
b Data for investment in land not available for medium size ranches.

TABLE D

Average Pounds of Hay and Concentrates Fed Per Animal Unit
By Size of Ranch and Livestock System, 1972

Ranch size and type of feed	Pounds	
	N.E.	S.
Hay		
Small	2,590	1,764
Medium	2,235	1,648
Large	2,156	688
Cow-calf	2,277	1,446
Cow-yearling	2,315	-----
Concentrates		
Small	58	84
Medium	49	88
Large	68	6
Cow-calf	59	62
Cow-yearling	65	--

TABLE E

Breeding Practices and Performance Measures on
Northeastern Nevada Cattle Ranches, 1972

Breeding Practices, Performance Measures, and Ranch Size	Units	
	N.E.	S.
Calving Precentage		
Small	79	60
Medium	69	59
Large	70	59
Cow-calf	73	60
Cow-yearling	69	--
Cow-Bull Ratio		
Small	19	26
Medium	23	27
Large	19	16
Cow-calf	21	22
Cow-yearling	19	--
Replacement Percentage[a/]		
Small	11	15
Medium	15	12
Large	16	9
Cow-calf	14	13
Cow-yearling	15	--

Breeding Practices, Performance Measures, and Ranch Size	Units	
	N.E.	S.
Weaning Weight		
Small	404	368
Medium	373	366
Large	374	346
Cow-calf	385	362
Cow-yearling	372	---
Cow-Bull Age		
Small	12	10
Medium	9	9
Large	9	11
Cow-calf	10	10
Cow-yearling	9	--
Years Bulls Kept		
Small	4	4
Medium	5	4
Large	4	6
Cow-calf	4	4
Cow-yearling	4	-

a/ The percentage of cows replaced from the herd of adult cows. Cows are removed from the herd because of age or sterility and replaced with younger, more fertile animals.

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