BRENDA RICHARDS

TESTIMONY IN OVERSIGHT HEARING ON
"Threats, Intimidation and Bullying by Federal Land Management Agencies"

BEFORE THE

SUBCOMMITTEE ON PUBLIC LANDS AND EVIRONMENTAL REGULATION
NATURAL RESOURCES COMMITTEE
U.S. HOUSE OF REPRESENTATIVES

WASHINGTON, DC

OCTOBER 29, 2013

Chairman Bishop and Members of the Subcommittee.

I am Brenda Richards, and I am here today in my capacity as the Owyhee County Treasurer, representing Owyhee County, Idaho. I have served in this elected position for the past 8 ½ years. In addition to serving as the the Owyhee County Treasurer, my husband, Tony and I ranch in Owyhee County. My extensive experience in natural resource issues, along with my accounting background lend well to my position as treasurer in a county that largely depends on the ranching community for its economic backbone.

Owyhee County is Idaho's oldest county and was established and settled, as many places in the western United States were, around its natural resources. In our county those two draws were mining of gold and silver and grass for cattle and sheep grazing. The gold and silver are not nearly as abundant as they once were; the renewable natural resource of grass continues to help sustain the county. Owyhee County Idaho's oldest county and is the second largest county in the state of Idaho covering 7,639 square miles – or 4.9 million acres. Yet the population of approximately 11,000 in the entire county averages out to 1.2 people per square mile. Owyhee County is 77% public lands; 6% State land; leaving a mere 17% privately owned land. That 17% is the tax base of the entire county. Owyhee County does receive PILT (Payment in Lieu of Taxes) for the public lands in our county, but every year the county has to wait and see what will actually be allowed for that payment though we certainly feel this is the Federal Government's duty of paying the property tax owed to the county as those acres cannot be developed or taxed in any other way.

Of the 4.9 million acres in the county, approximately 191,700, or about 4%, are agriculture with just a bit over 4.5 million acres in rangeland, and of that approximately 3.7 million of those rangeland acres are federal lands. With the numbers just given, you can see that a very small amount of the land in our vast county serves as the private, taxable base, yet this privately owned tax base is largely dependent upon the federal lands for rangeland grazing accompanying their private lands through their BLM permits. In addition, the communities in this county are rural and small, and whatever decisions are made for the public lands have effects on those communities.

Over the past 20 years in this county there is one thing that has become very apparent. Threats, bullying, and intimidation do not always present themselves in obvious ways or methods, but that does not make them any less damaging, any less wrong, nor does it have any less impact. As a matter of fact, these quieter, "behind the scenes" forms of threatening, bullying or intimidating often have huge impacts and significant damages over a longer period of time. I would like to share with you a few examples of the Bureau of Land Management actions that can certainly be seen as threats and intimidation to Owyhee County and the residents that live here.

No matter that the tax base in the county may only be 17%, those tax payers and the county are responsible for providing services within the county, some are mandated by either federal or state laws, and some are elected county services. Many of those services, such as roads maintenance, law enforcement, safety matters, and search and rescue are provided to all – whether you live in the county, visiting the county's vast area, just passing through. With Owyhee County's close proximity of

being not much more than an hour away from the Treasure Valley with its larger urban population, there are many visitors each day that come across the Snake River to enjoy its vast expanses that surround our rural, and some very remote, communities. Owyhee County offers diverse recreational experiences both motorized to non-motorized, hunting, fishing, and sight -seeing, wilderness experiences, white water rafting at the right time of the year, and a host of other activities. Many of these activities are on the public lands, but much of it is either accessed by going through, around, or across the small amounts of private ground. Almost any BLM decision that is made has an effect in some fashion on the county's well-being and that of its rural communities due to the large amount of federal land around each of these communities. Often the costs of these decisions, both financially, and also to the health of the natural resource are not fully vetted, leaving that expense on the local tax payer's budget.

One such decision we have recently been dealing with in Owyhee County in the Gateway West transmission line. The county residents, and those of us serving as their elected officials have attended hundreds of hours of public meetings, written pages and pages of comments, and found ways we thought could be used to compromise to and solution. The player in this game that we have found to be playing by their own set of rules – and truly that is a form of bullying when you are aware you can get away with it –is the Bureau of Land Management. Early on in this process the lines were to come across the public land, leaving as much private ground as possible (remember the ratio of private acres to public in Owyhee County) alone as the necessary power lines were to be brought in. This was agreed to by the power company, the diverse interest groups attending these meetings such as conservation and recreational groups, the county elected officials, and the residents. After all this was agreed to over months and months of meetings – some of them even held in Ontario, Oregon that people attended – and all of them documented with minutes, the Washington BLM office, in one person's decision, negated all that time, money, and effort by putting it right across much of the limited private ground in our county. This is one example of costs to the county in attending and participating in the government's dog and pony shows of public meetings for months and months; resources and time spent to have maps made of the outcome of those meetings proposed routes; legal advice on the matter; time invested, only to have that thrown back in the face and put where they wanted it any way. This cost comes down to the county and the tax payers here in more than one way. The initial investments of time, money, and sincere participation in a process to come up with a viable solution with the other "players" in this process, most who do not even live in the county, but have conservation, recreational, or special interests in the area is the first cost; the second is the cost to the county and the land owners as their property is devalued due to huge transmission lines being placed across their land; and lastly, this cost goes out to those land owners who have not had the decision directly affect them, but will feel the indirect impact of tax increases as the same services are still required to be met within the county, but the tax base of some property has decreased leaving that hole to be filled by those properties whose value held to absorb the increase that will be required in the county tax levy rate. Does this not pose a direct threat to the county, through a process that surely can be viewed as intimidating?

Ranching has long played a role in Owyhee County and continues to do so today. Since the early 1990's, the challenges from the Bureau of Land Management and their decisions, or lack thereof have had significant impact on the county government and the residents within the county. These impacts have been financially, emotionally, and on the ground. Probably the longest running threat and intimidation within Owyhee County has been that that has come from the BLM neglecting to fulfill their obligations of renewing permits; neglecting to gather necessary information in a consistent, accurate, timely manner lined out in their own guides; not involving the permittees as is required by those same rules and regulations; and the results of all of this is the permittees and the county then end up in court battling on the same side as the BLM to defend their rights, permits, and livelihood. This is at the expense of the county and the permittee as the BLM has the Federal Government to cover their attorney costs and time, which means it costs all tax payers and those in our county twice.

Prior to 1997 the BLM failed to complete the permit renewal work that necessary to keep 10 year grazing permits current, and as stated before, public lands ranching is the backbone of this vast county that is 77% federal land. Grazing continued for over half the permits by annual authorizations since the permits had been allowed to expire by the BLM. The 1995 changes to the BLM grazing regulations required a valid grazing permit in lack of action by the agency have direct effects on the economic base and also on costs of litigation to challenge these decisions order to graze on public lands, so this immediately put the permittees out of compliance due to BLM lack of doing their job, and brought radical environmental groups to file suit. The lack of action by the agency had, and is still having direct effects on the economic base of the county and the land owners here as the costs of litigation to challenge these decisions continue to be paid. The threat to the economic viability of the county, and the threat to the land owner and permit owner cannot be ignored as this is the backbone of the county. Legal counsel and consulting to protect themselves and their interests can cost an individual hundreds of thousands of dollars, but the cost of losing that is even higher to them and the county, not to mention it is a property right . Costs to defend several of these cases already have come in, with $100,000 for one allotment to reach a permit renewal; and two others at $55,000 currently where they are not even half way through defending themselves to get to the end result of the permit being renewed.

As I have mentioned several times, the economic back bone of Owyhee County and the rural communities is largely dependent on the ranching industry and grazing on public lands. The beef industry in Owyhee County accounts for approximately 19,760,000 pounds of edible meat per year – which is enough to feed 300,000 people or the entire population of our county plus the population in the state capitol city of Boise. The total number of acres these ranches occupy is at just over 435,000, and the approximate assessed value for the county is $28,815,299. Please realize this is the assessed value for county tax purposes, not what the land could be sold for if it was to be parceled out and developed, yet much of this private land is remote, and assures unfragemented habitat and water sources for many forms of wildlife. Many of these ranches are located in small, very rural communities throughout the county that have schools and smaller businesses depending on their success to keep those communities healthy and vibrant. Because of that, and because of the continued unpredictability and up and down relationship the county has had with the Bureau of Land

Management, the county developed a county land use plan in the early 1990's in an effort to address matters relating to state and federal lands and to help protect their interests and assure input in decisions. The plan is reviewed regularly and updated, with most recent update to this plan being 2009, and reviews are more regular.

The county also has a signed Coordination Agreement with the Bureau of Land Management that dates back more than 15 years. This agreement was also established to help assure the county – which in turn represents the residents – is included and involved in decisions the agency makes. As the largest land owner in Owyhee County, these decisions often have significant impacts or effects on or within the county, which in turn can also affect the economic stability and well-being of the county, and have effect on the livelihood of the residents. Over the years the Coordination Agreement has been in effect, the Owyhee County Commissioners spend a tremendous amount of time reminding the BLM of their obligation to coordinate; reinforced by the signed coordination agreement. In the past three years over 25 letters have been addressed to the BLM by the commissioners on matters and decisions that have direct effect on the county. Many of letters have been written when the BLM either intentionally, or due to lack of management's attention or new management, ignores the coordination process. The number of times this happens could certainly be seen, not only as a veiled threat to the county in that the BLM does not feel they have to comply, but it also comes across as a form of intimidation trying to get the county to back off of expecting them to follow the law and requirements of including them in decisions and planning processes.

Both of these have taken much time, resource and dedication by the elected officials, those participating in the public meetings to develop these and then keep them updated and reviewed, and the different groups, agencies, and others that use these in their decision making process within Owyhee County. The one agency that has given the county the most problem with these aspects is again, the BLM.

Everyone on of these examples given have either direct or indirect impact to the county financially. The cost to our county residents on grazing decisions is astronomical, and the county has often weighed in over the years with their own financial contribution to the litigation because it is a vital component of the economic stability within the county. The economic stability of the county is first and foremost in my mind and duty as county treasurer, as it is with the commissioners. The costs to both the individuals and the county have effects on those communities as to dollars that could be spent in schools, business, or other areas having to go to threats and litigation caused by BLM decisions or lack thereof. The permit renewal process continues here in the county under a court ordered mandate now. That mandate came down in 2008, yet the BLM did not start on the 125 out of 150 permits included in that order until 2012 and the deadline is December 31, 2013. If that deadline is not met, the court stated the BLM will be held in contempt. Even though the process was not started in a timely matter, the ones paying the ultimate price, both financially and in emotional duress are the tax payers. The documents the BLM is putting out to be reviewed and commented on, and ultimately end up having to be challenged are over 500 pages long, and some of them are over 1,000. If that is not intimidating to a common person, I do not know what is. Yet, the county and our land owners will not take it lying down. We will stand up to intimidation and threats and bullying because we believe in our property rights, in doing what is right, and have hope that justice for what is right will prevail. The cost

to the county in tax dollars, time, and stress in substantial, but the people of Owyhee County prove to be resourceful, resilient, and show the American grit that settled the west in the first place and continues to capture the trust and wonder of many people not only in the United States but across the world. We only hope that by presenting some of these aspects we have had to fight for years to continue to remain viable, productive and responsible citizens in our county that we love, that the very laws and federal agencies threatening our existence may be changed to protect those rights and to not allow things to be done in bullying or threatening or intimidating ways, but in ways that you can hold your head up and be proud and successful in supporting.

Thank you for the opportunity to share this testimony with your subcommittee, and I would stand for any questions.

Ranch Level Economic Impacts of Public Land Grazing Policy Alternatives in the Bruneau Resource Area of Owyhee County, Idaho

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BACKGROUND

A socio-economic study of Owyhee County was completed in 1998-1999 (Rimbey, et al. 1999; Harp and Rimbey 1999; Darden, et al. 1999), and information derived in that analysis was used in the Owyhee Resource Area Draft Resource Management Plan (ORMP). The ranch-level analysis of the earlier study answered many questions about the economic structure of Owyhee County ranches, potential short-run adjustments resulting from changing public land forage allocations and linkages to rural communities and the regional economy.

Ranchers who were surveyed in the prior study provided information on adjustments they would make if forage allocations on Bureau of Land Management (BLM) rangelands were reduced. They indicated that their planning horizon for these adjustments was short-term in nature and that they would do everything they could to maintain their existing herd. Depending upon when the reductions occurred during the year, the ranchers identified alternatives for maintaining herd size and remaining in business: purchase (or not sell) additional hay (to replace forage in winter, early spring or late fall), and look for private pasture and rangeland leases (summer forage). The last alternative mentioned by ranchers was the reduction in the number of cattle they would run on their ranches. This was primarily due to leveraged ownership of Owyhee County ranches. Most ranches cannot operate without loans from financial institutions for variable expenses. In addition, the cyclic nature of cattle prices implies ties to financial institutions for equipment and land loans.

The purpose of this study was to build on the earlier report and provide a long-

term economic analysis of ranch-level impacts of alternative public land forage allocations. In addition, the economic models used in this analysis update the 1998 study and provide a method of removing the potential bias of relying on ranchers to divulge ranch management adjustments that may or may not be economically motivated. This segment should also provide a "check" against what ranchers said they would do in terms of adjustments from the earlier study.

Ranch budgets presented in the earlier study were updated and used to develop the economic models presented here. Researchers from western land grant universities and Western Regional Research Project W192 (Rural Communities and Public Lands in the West: Impacts and Alternatives) cooperatively developed the ranch-level economic models used in this assessment. Earlier versions of these economic models were used to assess the economic impact of sage grouse management alternatives (Torell, et al. 2002).

METHODS AND PROCEDURES

The economic situation, typical resource base, production rates and practices were defined for two model ranches in Owyhee County, Idaho. The data was used to build multi-period linear programming (LP) models to evaluate how optimal (profit maximizing) production strategies would change as permitted grazing use on public lands changed. The specific ranches considered included a medium-size ranch (528 Animal Units, AU) in the Marsing area and a larger ranch (735 AU) in the Bruneau area. These representative ranches were selected because livestock cost and return estimates and policy impact models were developed for these areas through the regional research project W192. Since the purpose of this project was to specify the economic impacts of policy changes in the Bruneau Resource Area, we used the Marsing and Bruneau ranch

models in estimating the impacts. Models are also available for the Three Creek and Jordan Valley area. The Jordan Valley model was used to estimate the economic impacts of alternative sage grouse management strategies (Torell, et al. 2002).

The economic analysis was completed in four steps. First, ranch-level data defining typical production practices, rates and costs were gathered from group interviews with area ranchers (Rimbey, et al. 1999). Second, multi-period linear programming models were developed to depict the production processes of each ranch. Published cost and return studies that provided baseline cost data were for the 1998 production years (Rimbey, et al. 1998; Rimbey, et al. 2000). All prices were adjusted to real 1997 levels, although cyclic variation in cattle prices was allowed in the model. Third, an initial baseline optimization was estimated for each model ranch. The final step was to estimate additional optimizations that evaluated profit maximizing production strategies under different public land policy scenarios (25, 50 and 100% reduction in BLM forage). The impact of changes in land use policies was estimated to be the difference in optimal herd size, forage use and economic returns from the baseline solution to the impact solutions.

Each representative ranch had different amounts and types of resources available for grazing, and different options for replacing public land forage. Substitute forages and strategies considered to be available as BLM allotment grazing capacity was reduced included leasing outside private forage, converting native meadow hayland to irrigated pasture, extending the hay feeding period, purchasing additional hay and reducing the size of the cow herd. Alternative sources of forage were considered to be available during selected seasons for both the base run and for additional policy impact runs.

Reductions to the BLM allotment were phased in over five years in equal

increments. The first 20 percent of the reduction was considered to occur during the second year, with the remainder taking place in years three through six. Results reported for the optimal number of BLM AUMs started with the sixth year when the full reduction had been implemented.

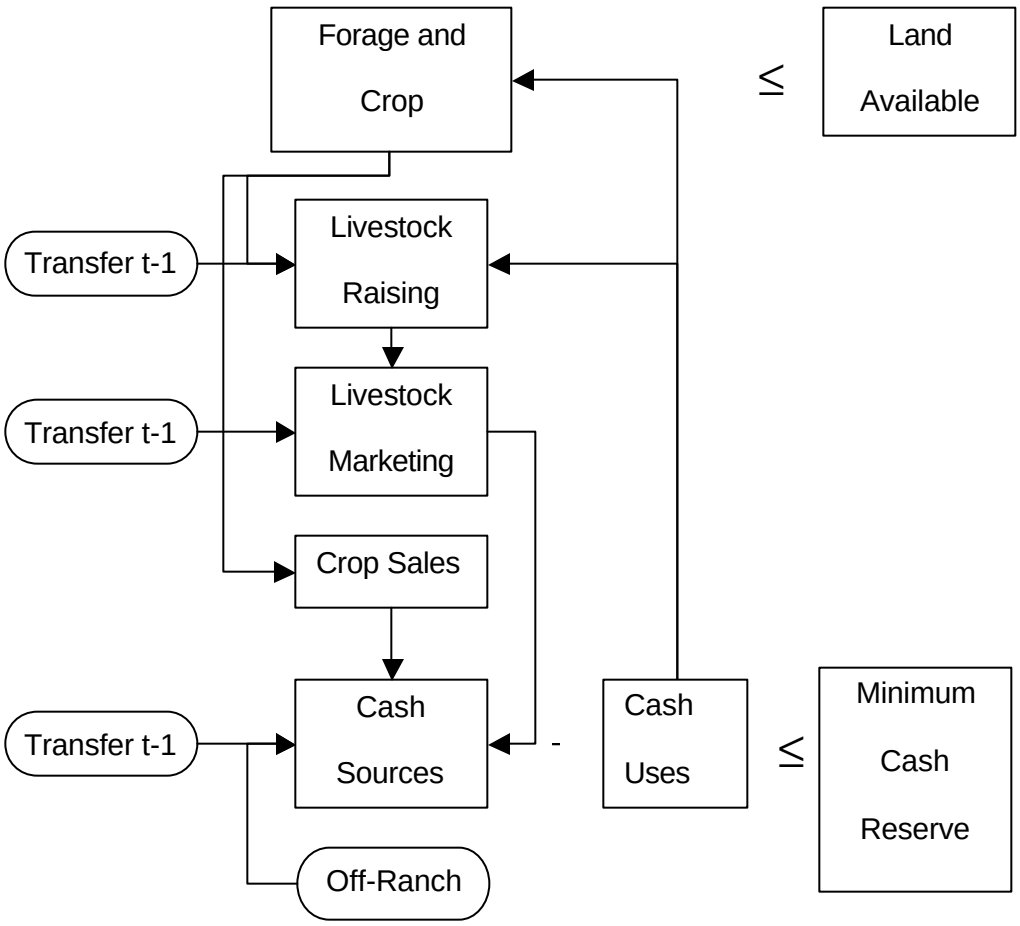
Linear Programming Model Description

The policy impact models used in this analysis were developed by researchers in five states and were structured for western livestock ranches that rely on both private and public lands for grazing capacity. Crop raising alternatives were included in the models, but only as these crops provided forage, crop residue and feed for livestock production.

The net present value (NPV) of discounted net annual returns (profit or gross margin) was maximized over the T-year planning horizon subject to linear constraints that define resource limitations and resource transfers between years. Seasonal forage supply and demand was explicitly considered through six distinct seasons, which varied by the ranch considered.

Figure 1 illustrates the general structure of the constraint set for the LP model during a given year t. The equations are discussed working from top to bottom in the figure:

A ranch has a given set of cropland and rangeland available for harvest and grazing. Each type of land is restricted at a level at or below some available upper limit, and that is the first block of equations in the model. Also considered in this block is recognition that certain forages will be restricted in use to only selected seasons, because of regulation, physical availability or production limitations.



The next block of equations is included to transfer forage and crop production to livestock raising activities and crop selling activities. Within the livestock raising block are equations that define the required ratio between different animal classes. As two examples, the number of bulls on each ranch is based on a specified bull-to-cow ratio, and the specified calf crop defines the number of young animals available for sale and herd replacement.

Seasonal forage requirements for each animal class were calculated based on defined animal unit equivalencies (Table 1) and the length of each grazing season. Equations are also included that transfer brood animals from the previous year. Typical

animal death loss and the relative number of different animal classes are considered at the time of the transfer.

The livestock-marketing block includes equations to transfer between livestock raising and livestock selling activities. Yearling animals are carried over from year t-1 to year t and this is another inter-year linkage in the model.

Table 1. Animal unit equivalences used to calculate seasonal forage requirements.

Animal Class	Animal Unit Equivalency (AUE)
Brood Cows	1.00
Bulls	1.25
Horses	1.25
Weaned calves	0.50
Yearlings	0.75

The next equations define the cash flow constraint. Crop and livestock sales generate income and are a source of cash. Livestock, crop and forage raising activities use cash. The cash constraint requires that a cash reserve be maintained to cover variable production expenses, fixed ranch expenses, family living expenses, loan obligations and an annual cash residual. Excess cash at year t-1 can be transferred to year t, and it is implicitly assumed that any excess cash from a "good" year will be transferred to cover expenses and cash shortfalls in future years. Other sources of cash include off-ranch income and annual borrowing. Any funds borrowed must be repaid during the next year. Borrowing is not allowed during the last year and all debt obligations must be paid in full by the end of the T-year planning horizon. While numerous equations are included to define the production and economic processes of the representative ranch, forage resources and available cash ultimately determine the level of production possibilities.

Torell, et al. (2001), and numerous other studies reviewed in that paper,

highlighted that western ranchers do not have profit maximization as their primary goal; rather, they ranch for the way of life and the desirable attributes of rural living. As noted by Van Tassell and Richardson (1998), western public land ranchers will, for the most part, continue to ranch until forced to do something else. How, then, is using profit maximization as our model objective justified? First, the utility maximization model subscribed to by ranchers is impossible to measure and quantify. Individual ranchers and families have differing levels of commitment to the ranching lifestyle, and decreasing annual ranch income through altered land use policies can be expected to dampen enthusiasm for ranching to varying degrees. It is not possible to accurately predict the number of ranchers a particular policy will force out of business (Torell, et al. 2001).

The profit-maximizing objective provides a measurable criterion against which to judge policy changes. It is tempered by considering only investment alternatives related to ranching and livestock production, and by including cash flow restrictions. The LP model determines the optimal production strategy with the current policy prescription and how optimal production changes with a new land use policy. The implicit assumption is that ranch families will continue to consider only the limited investment opportunities associated with the ranch property, they prefer more money to less, and they will continue to ranch until cash flow restrictions can no longer be met and they are forced from the business.

Representative Ranches

Table 2 summarizes characteristics and resources for each of the representative ranches.

Table 2. Characteristics and resources of the representative ranches.

	Number of Units		Objective Function Cost ($/unit)	
	Marsing	Bruneau	Marsing	Bruneau
Land resources owned				
Alfalfa hayland, acres				
Native meadow hayland, acres	340	240	50.00	50.00
Convert meadowland to pasture, acres[a]	340	240	13.75	13.75
Deeded rangeland, AUMs	1,406	720	3.25	3.25
Land resources leased or purchased[b]				
State trust land, AUMs	379	400	10.64	10.64
BLM, AUMs	2,965	4,977	7.19	7.19
USFS, AUMs				
Private leased land, AUMs	500	500	13.25	13.25
Purchase alfalfa hay, tons		Unlimited	100.00	85.00
Purchase meadow hay, tons		Unlimited	70.00	70.00
Sell alfalfa hay, tons		All available		
Sell meadow hay, tons		All available	55.00	55.00
Livestock resources[c]				
Animal units yearlong, AUY	528	735		
Brood cows, head	325	422	48.79	16.08
Replacement heifers, head	106	120	48.79	16.08
Bulls, head	24	22		
Horses, head	12	12		
Miscellaneous income/expenses				
Fixed ranch expenses, $			35,126	29,227
Family living allowance, $			24,000	24,000
Off-ranch annual income, $			10,000	10,000
Required minimum cash reserve, $			500	500
Efficiency measures[d]				
Calf Crop				
(Calves born as % of Jan. 1 cow inventory), %	88	86		
Calf death loss, %	4	3		
Cow death loss, %	2	2		
Bull death loss, %	1	1		
Steer calf sale weight, lb	475	485		
Heifer calf sale weight, lb	425	445		
Heifer yearling sale weight, lb	850	850		
Cull cow sale weight, lb	1,100	1,050		
Cull bull sale weight, lb	1,800	1,800		

[a]/Converting hayland to grazable pasture is not generally practiced but is a possible source of forage if public land AUMs are removed. This conversion would use some of the available hayland and thus would reduce the land available for crop production. The cost of the conversion was estimated by Van Tassell and Richardson (1998).

[b]/In addition to the $1.35/AUM grazing fee that has been paid for public land grazing in recent years, grazing costs shown include estimates of non-fee grazing costs (e.g. herding, checking, moving). These estimates were made by Van Tassell and Richardson (1998) using rancher producer panel data and grazing cost data reported by Van Tassell, et al. (1997).

[c]/Animal numbers reported are from the published cost and return publications. Optimal animal numbers in the LP model will vary by year as beef prices vary. Animal costs exclude the cost of feed stuffs and non-fee grazing costs which are separate activities in the LP model. Animal costs include expenses for other classes of animals like bulls and horses.

[d]/Other production parameters used to develop the LP models are defined in the cost and return series publications (Rimbey, et al. 1998; Rimbey, et al. 2000).

Notice that the cost per unit of harvesting both federal and private forage includes both fee and non-fee grazing costs (e.g. herding cattle, checking cattle, improvement maintenance) as estimated by Van Tassell, et al. (1997), and Van Tassell and Richardson (1998). Non-fee costs of harvesting BLM forage were estimated at $5.84/AUM. The cost of leasing private rangeland was set at $13.25/AUM to reflect the lease rate and non-fee costs.

The grazing seasons and the seasons when alternative forages were considered to be available for grazing are defined in Table 3. Grazing seasons were defined based on typical turn-out dates and livestock marketing dates.

Table 3. Seasonal availability (*) of hay and forage for representative ranches.

	Season					
Bruneau	15-Mar 15-Apr	15-Apr 15-May	15-May 15-Sep	15-Sep 1-Nov	1-Nov 1-Jan	1-Jan 15-Mar
State trust land	*	*	*	*	*	
BLM	*	*	*	*	*	
Private lease	*	*	*	*	*	
Deeded range	*	*	*	*	*	*
Aftermath grazing				*	*	*
Convert meadow to pasture	*	*	*	*	*	
Feed raised/purchased hay	*	*				*
	Season					
Marsing	1-Mar 15-Apr	15-Apr 15-May	15-May 1-Sep	1-Sep 1-Nov	1-Nov 1-Jan	1-Jan 1-Mar
State trust land		*	*	*	*	
BLM		*	*	*	*	
Private lease		*	*	*	*	
Deeded range	*				*	*
Aftermath grazing	*				*	*
Convert meadow to pasture	*	*	*	*	*	
Feed raised/purchased hay	*	*			*	*

Table 4 presents the assumed productivity of rangeland and pasture resources for both representative ranches. These rates were defined in the cost and return publications (Rimbey, et al. 1998; Rimbey, et al. 2000).

Table 4. Productivity measures for harvested and grazed forages.

	Unit	Idaho
Hay conversion to AUMs	AUMs/ton	2.42
Raised native hay	tons/acre	1.5
aftermath	AUM/acre	2.3
Deeded range	AUMs/acre	0.1875
Pasture native hayland	AUMs/acre	5.5

Linear Programming Analysis

Optimal production and economic returns for the representative ranches was simulated over a 40-year planning horizon with 100 different iterations (beef price situations). The ranch started the process in year 1 with an inventory of breeding animals (Table 2). From this point, during years 2 through 40, the model was free to adjust herd size (purchase or sell) to profit maximizing levels subject to forage and cash limitations. Forage and pasture could be grazed or not grazed depending on its potential contribution to profit. An exception to this was state trust land. Because the Idaho Department of Lands requires fees be paid whether the land is grazed or not, the restriction was included that state land AUMs had to be used.

Output Prices

Annual ranch income and optimal production strategies are greatly influenced by crop and livestock prices. To minimize the effect of beef prices on the results of the policy assessment, a Monte Carlo analysis was used (Hillier and Leiberman, 1986). Real (constant 1997) livestock prices were stochastic variables in the LP analysis. Monthly average livestock prices were used from Idaho markets for January 1, 1980 to August 24, 2000 (unpublished data supplied by David Weaber, Cattle-Fax, Inc., Centennial, CO, Sept. 8, 2000) to estimate a time series price-forecasting model. The beef price model considered and estimated an approximate 12-year cycle of beef prices. It considered the relative price spread between different classes of livestock and the interdependence of beef prices for different animal classes at any point in time. In other words, the cyclic variation in cattle prices was simulated over the course of the 40-year planning horizon.

The starting point of the beef price cycle was randomly assigned for each iteration of the model. Running the model with numerous alternative beef price scenarios and reporting averages and standard deviations across all iterations minimized the effect of beef prices in the policy impact assessment. Figure 2 plots simulated prices for 400-500 pound steer calves for four randomly selected price iterations. Prices for other livestock classes follow a similar trend for the same iteration, but shift up or down to conform to the price differentials between animal classes observed in the market.

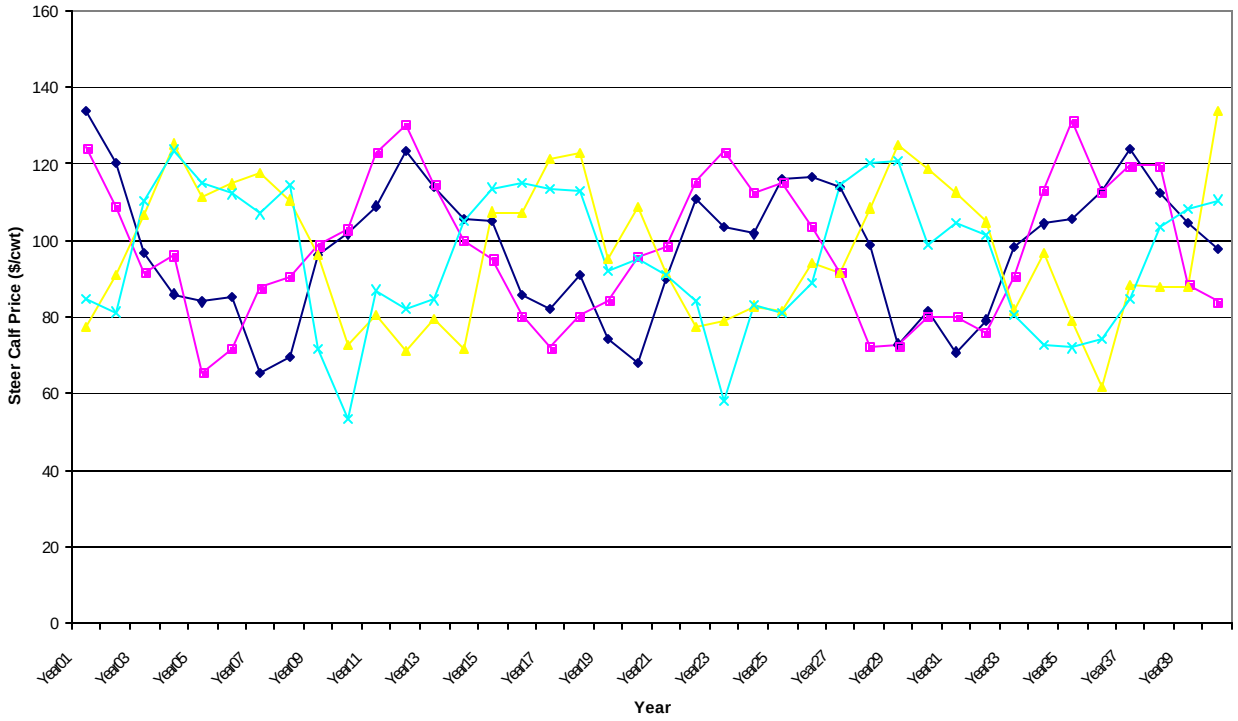


Figure 2. Simulated steer calf prices (constant real 1997) for four randomly selected iterations.

The cost of purchasing young bulls was not reported in the Cattle-Fax data. Data from the Tucumcari, NM bull sale was used to estimate that the sale price of bulls (constant 1997) was about twice that of bred cow prices.[1]

Hay prices were not varied by iteration because a long-term data series was not available to estimate annual price variability and relationships. The assumed real purchase and sale price of hay (Table 2) was considered to be the same during each year of the analysis.

Debt obligations were not considered as an expense category in the initial analysis

[1]/The regression equation estimated was Bull Price = 154 + 2.0549×Bred Cow Price, R^2 = 73%. Annual average prices from 1975 through 2001 were used to estimate the regression equation.

presented below. This was because cost and return data used to define typical production practices and costs and returns of the representative ranches did not include information about "typical" debt obligations of area ranchers. This personal data is generally not available and is known to vary widely from ranch to ranch. Gentner and Tanaka (2002) reported relatively low average debt loads for different classifications of public land ranchers responding to a west-wide survey.

The amount of off-ranch income and wealth available to ranch families was also variable. Recent studies found new ranch buyers are not the traditional ranch family that depends exclusively on the ranch for disposable income (Gentner and Tanaka, 2002; Torell, et al. 2001). An increasing number of western ranches are purchased by those with wealth or outside income. As an overall weighted average, Gentner and Tanaka (2002) found large, full-time ranchers have about $6,500 in annual off-ranch, retirement, and/or investment income. Small, part-time ranchers had $42,000 in off-ranch and other income, and depended on the ranch for less than 30% of annual disposable income. By comparison, full-time ranchers depended on the ranch for over 80% of disposable income.

While debt loads, wealth, and off-ranch income are highly variable between ranches, the commitment of western ranchers remains constant (Torell, et al. 2001; Gentner and Tanaka, 2002). Given this commitment and the variability in financial resources across ranches, two modeling procedures were followed. First, investment opportunities like land development or the stock market as alternative investment options were not included. The LP model maximized net discounted returns given the economic opportunity of raising cows or selling hay. Second, it was assumed that the representative

ranch would have at its disposal average levels of off-ranch income near that found by Gentner and Tanaka (2002). It was assumed both model ranches had $10,000 in off-ranch income. No initial wealth was assumed, other than the initial inventory value of breeding animals and the ranch investment. For the base run and impact assessment, there were no debt obligations against the cow herd or the land. The cash flow constraints of the LP model were of key importance for this assessment in that they required all variable, fixed and family living expenses to be covered each year, given calculated annual ranch returns and alternative assumptions about off-ranch income.

Annual borrowing was allowed (10% annual interest rate), with the full amount repaid the following year. The model allowed repeated borrowing from year-to-year across a 40-year planning horizon, but debt had to be repaid by the end of the T period planning horizon. Incurring an annual land payment or intermediate loan payment was equivalent to having an additional fixed expense obligation. If fixed expense obligations were too high, the cash flow constraint could not be met and an "infeasible solution" was obtained. Fixed obligations of the ranch, including depreciation and replacement of vehicles, equipment and improvements, electricity, telephone, and insurance, were subtracted as an annual expense (Table 2).

RESULTS

Marsing, Idaho Model

Table 5 presents the average and standard deviation (computed over 100 iterations and 40 years) of key production, economic and resource variables for the Marsing model under different levels of BLM AUM availability.

Table 5. Adjustments to reductions in Bureau of Land Management AUMs, Marsing Ranch Model.

	Percent reduction in BLM AUMs							
Adjustments in optimal use levels	0%		25%		50%		100%	
BLM available (AUMs)	3,000		2,250		1,500		0	
Optimal average BLM used (AUMs)[b]	2,965	(68)[a]	2,250	(201)	1,500	(64)	0	(0)
Percent of AUMs from BLM land	47%		25%		29%		0%	
Average number of brood cows (head)	325	(21)	292	(27)	262	(30)	199	(46)
Average number of AUY	528	(35)	476	(41)	428	(44)	326	(73)
Percent reduction in AUY (%)	--		-9.8%		-18.9%		-38.3%	
Average annual variable production costs ($)	89,804	(6,996)	78,746	(5,061)	67,441	(4,965)	55,767	(61,674)
Average annual variable production costs ($/AUY)	170		165		158		171	
Average annual net cash income ($)	21,234	(32,925)	15,671	(28,956)	9,729	(26,896)	-13,958	(68,515)
Average annual net cash income ($/AUY)	40.22		32.92		22.73		-42.82	
Average change in net cash income ($/BLM AUM removed)	--		-7.42		-7.67		-11.73	
Capitalized livestock value ($/BLM AUM)								
@ 3% capitalization rate			247.24		255.67		391.02	
@ 7% capitalization rate			105.96		109.57		167.58	
Deeded range (AUMs)	1,405	(12)	1,392	(18)	1389	(49)	1,335	(279)
Private lease (AUMs)	0	(0)	0	(0)	0	(0)	0	(0)
Meadow hayland acres hayed/grazed (acres)	223	(87)	193	(95)	135	(72)	32	(53)
Meadow acres converted to pasture (acres)	117	(87)	147	(95)	205	(72)	308	(53)
Raised meadow hay fed (tons)	0	(0)	0	(0)	0	(0)	0.16	(10)
Raised meadow hay sold (tons)	300	(155)	259	(159)	185	(118)	51	(85)
Purchased alfalfa hay fed (tons)	147	(43)	132	(35)	118	(32)	84	(50)
Average amount borrowed annually ($)	3	(189)	3	(172)	3	(164)	11,652	(59,362)

[a]/Number in parenthesis is the standard deviation measured over the 100 iterations and 40 years.

[b]/The assumption was made that the reduction in allowed grazing capacity would be incrementally phased in over 5 years. Thus, the computed average is for years 6 through 40 after the reduction is fully implemented.

The Marsing model relied upon BLM forage for about half of the ranch forage base (47%). State trust lands were used in conjunction with BLM forage and provided 379 AUMs of use during the 5½-month public land grazing season. In addition, the ranch had a considerable resource of deeded rangeland that was fully utilized, particularly in the face of reduced grazing capacity on BLM lands. The ranch fed hay from November through mid-April. Annual net cash income[2] was estimated to be $21,234 with a great deal of variability (standard deviation of $32,925). Periods of negative income occurred in low beef price years or when herd expansion was economically optimal.

With off-ranch income and assumed frugal behavior and saving, the Marsing model was always able to find a feasible solution, i.e., cash flow requirements could always be met, except with total removal of BLM forage. At the current situation and lower levels of reductions in permitted livestock use, a minimal amount of annual borrowing was required.

As BLM grazing was reduced, net annual ranch returns decreased. A 25% reduction of BLM grazing had an economic impact of reducing net returns by $5,563 ($7.42/BLM AUM removed). As BLM AUMs were reduced by 50% and 100%, increasing economic loss occurred (varying from $7.67/AUM removed with a 50% cut to $11.73/AUM for complete removal of BLM grazing). Annual net cash income decreased from $21,234/year under the current situation to -$13,958/year with a 100% BLM grazing reduction. With the total removal of BLM forage, the ranch was no longer a

[2]/Net cash income was defined to be gross crop and livestock sales + off-ranch income – variable production expenses – annual loan costs – fixed ranch expenses - family living expenses. It is the residual return to the investment in land, cattle and risk.

viable operation. Variable production costs declined as herd size was reduced to adjust to lower levels of BLM forage use (from the current level of $89,804 to $55,767 with complete removal of BLM forage). Short-term borrowing to pay operating expenses generally did not occur until the ranch faced total removal of BLM forage and slipped into a negative cash flow situation.

Eliminating BLM grazing reduced annual returns by $11.73 per BLM AUM removed. Capitalizing this value at 3% and 7% resulted in an estimated permit value of $391 and $168/AUM, respectively. By comparison, the market value of BLM permits in Nevada, Idaho and Oregon generally ranges from $35 to $75/AUM (USDI/USDA, 1992; Bartlett, et al. 2002). This capitalized value was the amount one would expect ranch to decline in market value if BLM grazing were removed. It is the estimated livestock production value of the BLM permit. The ranch model is based upon underlying resource linkages between land, labor and capital and the impacts of these linkages on profitability. In the face of BLM grazing reductions, the model generally adjusted these resource mixes (eg. grazed meadows rather than producing hay, more intensive use of deeded rangeland, etc.) before herd size reductions came into play.

Herd size declined as BLM forage was incrementally removed. The current situation involved the ranch operating 325 brood cows and 528 Animal Units, Yearlong (AUYs). Brood cow numbers declined to 199 head (326 AUYs) with total removal of BLM forage. In addition to herd size reductions, other optimal adjustments to reduced BLM AUMs included conversion of hayland to pasture and grazing and extensive use of deeded range. Hay sales from the ranch declined from 300 tons to 50 tons as meadowland was converted to pasture and intensive grazing. Private leased land was not

profitable to graze at the assumed $13.25/AUM cost.

Bruneau, Idaho Model

The Bruneau model (Table 6) was a larger ranch than the Marsing operation and was more dependent upon public land forage, due primarily to a larger herd size and longer grazing season. The ranch was permitted to utilize 5,000 AUMs of BLM forage and this forage source provided 56% of the forage base on the ranch. State trust lands were used in conjunction with the BLM permits and provided 400 AUMs of forage. Public land grazing was permitted during the 8½-month grazing season (March 15-January 1). Deeded rangeland and the haystack provided feed for the remaining 3½ months of the year. Net income was estimated to be $67,881 with a great deal of variability (standard deviation of $50,404).

As permitted BLM grazing declined, net annual ranch returns decreased. A 25% reduction of BLM grazing had an economic impact of reducing net returns by $15,624 ($12.50/BLM AUM removed). As BLM AUMs were reduced by 50% and 100%, economic losses ranged from $12.72/AUM removed with a 50% cut to $12.88/AUM for complete removal of BLM grazing. Annual net cash income decreased from $67,881 under the current situation to $3,480 with a 100% BLM grazing cut. Herd size was optimally reduced and variable production costs declined from the current level of $108,092 to $34,112 with complete removal of BLM forage. Short-term borrowing to pay operating expenses generally did not occur until the ranch faced total removal of BLM forage and slipped into a negative cash flow situation.

Table 6. Adjustments to reductions in Bureau of Land Management AUMs, Bruneau Ranch Model.

	Percent reduction in BLM AUMs							
Adjustments in optimal use levels (%)	0%		25%		50%		100%	
BLM available (AUMs)	5,000		3,750		2,500		0	
Optimal average BLM used (AUMs)[b]	4,977	(80)[a]	3,734	(61)	2,487	(47)	0	(0)
Percent of AUMs from BLM land	56%		50%		41%		0%	
Average number of brood cows (head)	422	(10)	357	(20)	290	(36)	155	(66)
Average number of AUY	735	(22)	620	(23)	505	(46)	275	(99)
Percent reduction in AUY (%)	--		-15.6%		-31.3%		-62.6%	
Average annual variable production costs ($)	108,092	(8,452)	89,386	(6,653)	70,918	(7,584)	34,112	(13,967)
Average annual variable production costs ($/AUY)	147		144		140		124	
Average annual net cash income ($)	67,881	(50,404)	52,257	(42,111)	36,091	(36,010)	3,480	(29,510)
Average annual net cash income ($/AUY)	92.36		84.29		71.47		12.65	
Average change in net cash income ($/BLM AUM removed)	--		-12.50		-12.72		-12.88	
Capitalized livestock value ($/BLM AUM)								
@ 3% capitalization rate			416.64		423.87		429.34	
@ 7% capitalization rate			178.56		181.66		184.00	
Deeded range (AUMs)	720	(0)	720	(0)	720	(0)	720	(0)
Private lease (AUMs)	0	(0)	0	(0)	0	(0)	0	(0)
Meadow hayland acres hayed/grazed (acres)	1	(2)	0	(0)	0	(0)	0	(0)
Meadow acres converted to pasture (acres)	239	(2)	240	(0)	240	(0)	240	(0)
Raised meadow hay fed (tons)	0	(2)	0	(0)	0	(0)	0	(0)
Raised meadow hay sold (tons)	0	(3)	0	(0)	0	(0)	0	(0)
Purchased alfalfa hay fed (tons)	593	(48)	498	(43)	403	(50)	213	(84)
Purchased meadow hay fed (tons)	0	(0)	0	(0)	0	(0)	0	(0)
Average amount borrowed annually ($)	0	(0)	0	(0)	0	(0)	0	(0)

[a]/Number in parenthesis is the standard deviation measured over the 100 iterations and 40 years..

[b]/The assumption was made that the reduction in allowed grazing capacity would be incrementally phased in over 5 years. Thus, the computed average is for years 6 through 40 after the reduction is fully implemented.

Eliminating BLM grazing reduced annual returns by $12.88 per BLM AUM removed. Capitalizing this value at 3% and 7% resulted in an estimated permit value of $429.34 and $184/AUM, respectively. This capitalized value was the amount one would expect the ranch to decline in market value if BLM grazing were removed. It is the estimated livestock production value of the BLM permit.

Herd size declined as BLM forage was incrementally removed. In the current situation the ranch operated 422 brood cows and 735 AUYs. Brood cow numbers declined to 155 head (275 AUYs) with total removal of BLM forage. Private leased land was not profitable to graze at the assumed $13.25/AUM cost.

Off-Ranch Income and Long-Term Debt

As shown by Gentner and Tanaka (2002), many public land ranchers have annual off-ranch income and wealth far in excess of the $10,000 assumed here. Whether ranchers will remain in business as federal AUMs are removed will depend on their willingness to incur reduced ranch income, and their commitment to the ranching lifestyle. The cash flow restriction does not limit production opportunities for those subsidizing the ranch enterprise with large amounts of off-ranch income and wealth.

It should also be noted that the ranch models used in this analysis included two critical assumptions related to long-term debt and family spending patterns. We assumed that the ranches had no long-term debt obligation to purchase the land, livestock, equipment and other resources. This information was not gathered as part of this project. The models were also based upon an assumption that ranchers are somewhat frugal and will not spend from ranch resources on items for personal consumption and use. In other

words, the ranch family spending for clothing, recreation and other personal aspects must be done within the financial resources available through family living expenses and off-ranch income. We hypothesize that the results presented would change significantly if a long-term debt load and more liberal family spending patterns were ascribed to the ranches.

Summary and Conclusions

Public land forage is an important resource utilized by western ranches. This resource provides the ranch with flexibility to produce hay, pasture and other feed resources on deeded lands to sustain the animals while they are not grazing public lands. The information presented provides a picture of how important these public forage resources are to ranchers within the Bruneau Resource Area in Owyhee County, Idaho. Rowe and Bartlett (2001) concluded that once hay was needed to compensate for public forage losses, reducing herd size would be the most cost effective adjustment. Our results generally support this conclusion. To some extent, the results presented here also validate the estimates of ranchers to public land forage losses presented in the earlier study of the Owyhee Resource Area (Rimbey, et al. 1999). The profit maximizing ranch will convert hayland to pasture, purchase feed, reduce hay sales, increase borrowing of operating funds and other actions in efforts to maintain the cow herd. Herd size was increasingly reduced at the higher levels of public land forage reductions. In many cases, high levels of reductions may move the size of the operation below the level required to be economically viable.

The economic impacts of reducing BLM grazing were found to vary widely

depending on several key factors. First, individual ranches are able to substitute alternative forages to varying degrees as federal AUMs are eliminated. Substituting grazed forages always minimizes economic losses relative to the option of feeding hay and reducing cow herd size. Ranches with restricted seasons of forage availability will have less ability to substitute alternative forages if BLM grazing is removed.

Economic losses from removing AUMs ranged from $11.73/AUM for the Marsing model, to nearly $13/AUM for the Bruneau model. Similar studies in the literature report even wider ranges. For example, Torell et al. (2002) presented economic losses ranging from $2.50/AUM to nearly $20/AUM resulting from public land adjustments in 3 states and cited other studies with even wider ranges in losses. The contributory value of the permit for livestock production varies widely depending on the seasonal complement of forage and pasture resources ranches have available, and the level of dependency on federal lands.

In both of the ranch models reported here, the capitalized livestock value of the BLM grazing permit was found to exceed the average market value of the permit. They also exceed the value being "offered" ($175/AUM) in a grazing permit buyout scheme designed by a coalition of environmental groups to end public land grazing. Seasonal forage limitations, the degree to which public land forages meet seasonal forage demands and the availability of substitute forages largely determine the economic value of the grazing permit. It is widely believed that the complement between public and private lands contributes greatly to the economics of western ranching. Our analysis clearly shows that to be the case.

For ranches with limited off-ranch wealth and income, reducing public land

grazing capacity by even marginal amounts was found to greatly impact the ability of ranchers to meet annual financial obligations and to repay debt. How many ranchers would potentially be forced from the business cannot be determined because debt loads are highly variable and unknown. Further, the level of commitment to remain on the ranch is also variable and unknown.

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Social and Community Impacts of Public Land Grazing Policy Alternatives in the Bruneau Resource Area of Owyhee County, Idaho

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BACKGROUND

> *The Owyhee has never been an easy land. With searing heat, Artic cold, rattlesnakes, and the distinct possibility of getting truly lost, the Owyhee does not give of itself easily. But when it reveals itself in a sudden waterfall or cougar tracks circling your camp, or a 1,000-foot chasm appearing out of nowhere, you realize that its beauty is unsurpassed. To come to accept the Owyhee on its own terms is to learn something infinitely valuable about yourself.* — Brad Purdy[1]

In August 2002, the University of Idaho began social assessments of Owyhee County and the four southwestern Idaho counties to gather information to be used in the preparation of a Bruneau Resource Area Draft Resource Management Plan (BRMP) and a management plan for the Snake River Birds of Prey (BOP) National Conservation Area. This effort will update social and economic information relative to Owyhee County (Harp and Rimbey 1999) and provide new information on the users of public lands in southwestern Idaho as well as their perceptions towards natural resource management. The scope and focus of this analysis includes the following: 1) natural resources management throughout Owyhee County; 2) recreational use and impacts related to the Birds of Prey National Conservation Area and Bruneau areas; and 3) changing patterns of urban-user impacts to adjacent rural public lands in Owyhee County. Because of the interrelated and complex nature of these issues, the areas of focus are also compounded by other social structures and resource management policies.

The vast Owyhee region has a rugged appeal. Much like the landscape, many of the region's residents have an independent and likeable character. Local actions and attitudes demonstrate the strong interest to persevere in this place because of the desire and commitment to experience this place as home. The quality and character of the

[1] Quoted in Nokkentved (2001).

Owyhee region is continually renewed by strong family and community ties, as well as strong attachments to the natural resources that make this place attractive.

On a broad scale, Owyhee County has recently undergone, and will continue to experience, rapid social change. Although many traditional cultural patterns persist in the communities of Owyhee County—ranching, farming, and a rural lifestyle—external forces related to population growth and shifts in regional economic bases have brought new and rapid changes to the county in the past decade. The high sage deserts, mountain peaks, and remote rivers attract many others besides the families who settled and have stayed in the region as farmers and ranchers since the mid-1800s. These changes continue to force local residents and officials to address local resource management and community sustainability issues, often in the context of federal and state policies due to the significant proportions of public lands within the region.

Previous research has found that although rapid social change may significantly affect well-being and quality of life, small rural western communities like those found in Owyhee County often do not experience lasting social disruption (Smith *et al*. 2001; Hunter *et al*. 2002). Nonetheless, one of the key outcomes of this assessment documents substantive sociocultural impact to the ways of life, livelihood, and perceived independence many residents of Owyhee County wish to maintain. For many local people in Owyhee County, things such as neighbors, land-use policy, and sources of environmental impact are not the same as in recent memory.

Following a section on *Methodological Procedures*, the remainder of this report is the *Analytical Results*, organized into three thematic sections—*Public Land Management*, *Community Involvement in Resource Management & Planning*, and

Changing Perceptions in the Local Community and Landscape—with an attempt to integrate qualitative and quantitative data collected as a part of this assessment. Rather than including a separate background section on history and culture of the region, those points are included within the analysis in order to emphasize the relationships between local heritage and contemporary life that characterize many local residents and their views on life on this land.

METHODS AND PROCEDURES

We used complimentary qualitative and quantitative research methods to gather data for this analysis and report. Collection of background information and research design for both of these components began in late summer of 2002 and was completed in late summer of 2003.

Qualitative Assessment

In addition to ongoing ethnographic fieldwork, a total of 30 key-informant interviews were conducted during the winter and spring of 2003 with elected officials, community leaders, agency representatives, and interest group representatives. Most interviewees are also residents of Owyhee County, but several live in counties bordering Owyhee County and have either work or recreational interests that bring them to the county.

Interviews ranged from one-to-four hours and were conducted primarily at the homes or business offices of local residents, or at public restaurants nearby. Those interviewed were selected via a snowball sampling method using a cross-section of

repeatedly noted potential interviewees derived from suggestions made by a variety of constituents solicited for input. Position, knowledge, and local relationship/interest to the issues of focus were also used as secondary criteria for respondent selection. The goal of this methodology is to maximize what can be learned from a particular case or set of circumstances while remaining sensitive to various forms of respondent bias (Stake 1995).

Each interview session was conducted via a semi-structured format (Denzin 1989). The interview protocol for these sessions included the questions listed below in Table 1.

Table 1. Protocol for Semi-Structured Interview Sessions.

- Please describe life in Owyhee County with respect to social, economic, and political contexts.
- What are the predominant land-management practices and values in this region? Are there alternative or competing local perspectives?
- To what extent do you find social cohesion in Owyhee County communities? Why or why not?
- What factors, in your view, most affect the levels of social cohesion for people living in Owyhee County?
- What social conflicts and/or cooperation do you observe with respect to public lands management on open range, but also specifically in relation to the Snake River Birds of Prey National Conservation Area & Bruneau Resource Area?
- Thinking about multiple recreation interests, how does the Bureau of Land Management balance and prioritize uses within the Birds of Prey and Bruneau Resource Areas?

Quantitative Assessment

We also applied a quantitative research design within this study to develop statistically representative results to a variety of measures across a broader four-county (Owyhee, Elmore, Ada, and Canyon) region affecting land management and policy

within the Owyhee area. The overall objective of the quantitative assessment was to ask individuals their opinions and attitudes regarding their community, usage of the Snake River Birds of Prey (BOP) National Conservation Area, and other natural resource management factors.

A set of 75 attitudinal and demographic measures were established for three randomly selected stratified samples purchased from a commercial sampling firm and were administered by the Social Science Research Unit (SSRU) at the University of Idaho in the spring of 2003. We designed a total sample of 2,400 names divided into three stratified samples with the following designations: Owyhee, Urban, and Rural. Table 2 displays the number of responses and response rates for each of these subgroups.

Table 2. Completed Responses, Non-Responses, Refusals, Ineligibles and Rates by Sample Area.

Sample	# Completed	# Refusals	# Non-responses & Ineligibles	% Response Rate
Owyhee	385	134	81/200	64%
Urban	356	178	116/150	55%
Rural	368	148	116/168	58%

Sample Frames:

Owyhee: Population in Owyhee County, ID proper as well as Jordan Valley, OR.

Urban: Urban and suburban areas of Elmore, Ada, and Canyon Counties, ID (including Mountain Home, Boise, Caldwell, Eagle, Kuna, Meridian, and Star.

Rural: Rural areas of Elmore, Ada, and Canyon Counties, ID (including Atlanta, Boise River, Glenns Ferry, Melba, Middleton, Parma, Prairie, Tipanuk, Wilder, and unincorporated areas).

As noted in Table 2, the sampling frames for the three subgroups comprised a four-county area. The Owyhee sampling frame included all residents of the County as well as the adjacent community of Jordan Valley, OR. The Urban sampling frame included the

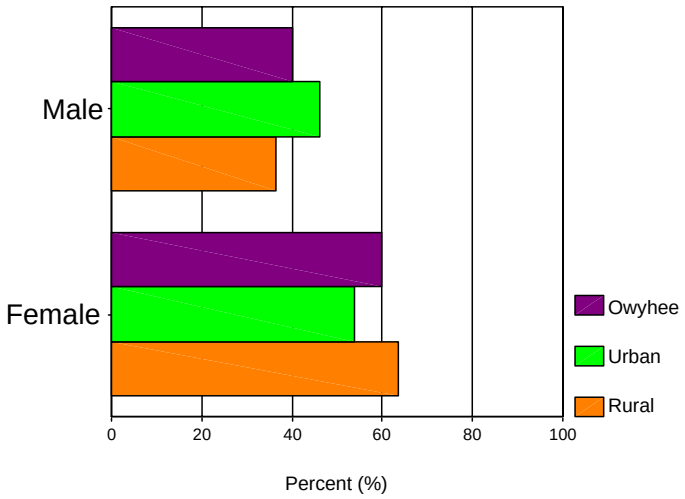
metropolitan areas within Elmore, Ada, and Canyon counties only; and the Rural sampling frame included all non-metropolitan and unincorporated areas within the same non-Owyhee three-county area. Some of the charts presented below include all of the respondents from the three areas combined, while others report results broken out by each of the three areas.

To increase the response rate, a pre-calling postcard was sent to all potential respondents. Using trained interview staff, the SSRU administered the questions via fifteen Computer Assisted Telephone Interviewing (CATI) stations. Interviewers recorded those who completed the questions, asked to be called back, were no longer eligible to participate, and refusals. Interviewers were monitored during each calling session by a trained supervisor. The SSRU staff included two interviewers, fluent in Spanish, who secured responses from a total of 47 Spanish-speaking individuals included in the data. Additionally, a total of 35 soft-refusals were converted to completed responses. Data were collected into a SPSS data entry program for verification and analyses.

Demographic Profile

This section briefly outlines the demographic profile for respondents in the quantitative assessment. Women constituted a majority of the overall sample (59%), and an even greater majority of the sample were married (72%). With regard to racial and ethnic makeup, the sample is relatively homogeneous with 90% of respondents indicating they are White/Caucasian and 6% indicating a Hispanic/Latino background. Figure 1 illustrates the percentage male and female response by sample group. The median

Figure 1. Sex



age of the respondents was 53 years. The education level of respondents is a relatively normal distribution ranging from 'less than a high school degree'(10%) to 'graduate education' (9%) with over one third of respondents, as well as the mean value, falling within the 'some college or vocational training' category (34%). Figures 2 - 3 display the distributions of respondents' education levels for the entire sample as well as sample

Figure 2. What is the highest level of education you have completed?

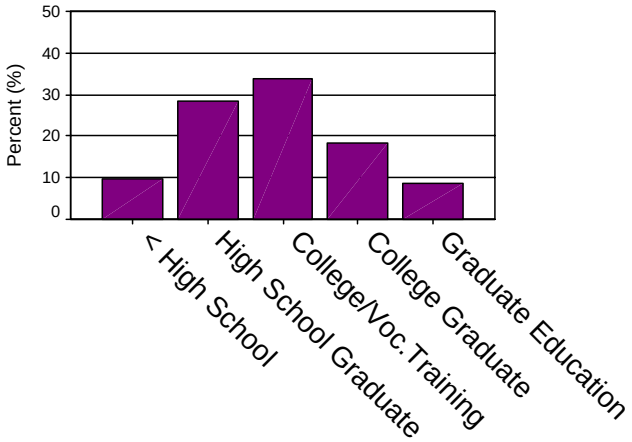
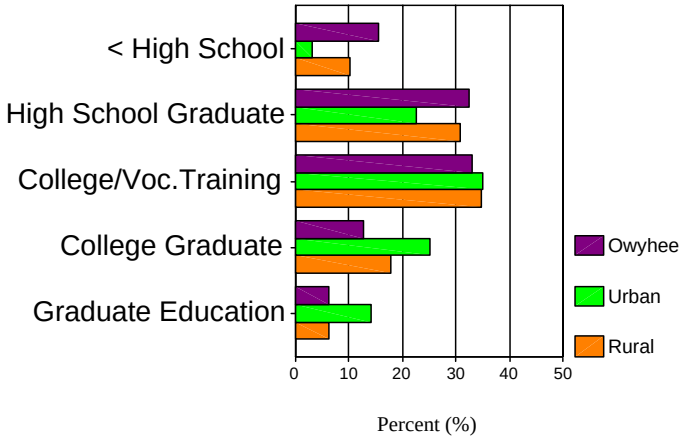
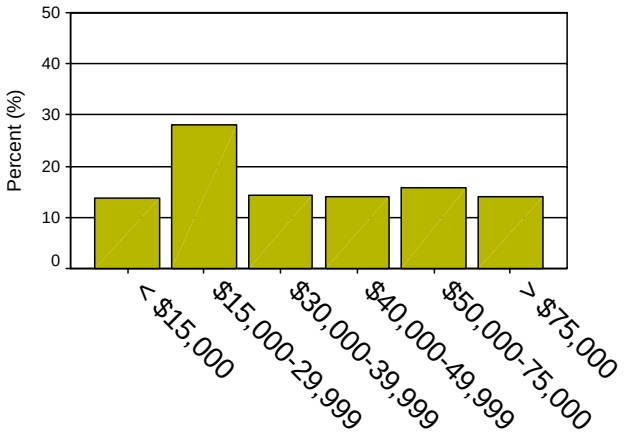


Figure 3. What is the highest level of education you have completed?



groups, respectively. As shown in Figure 4, the median annual household income in 2002 for all respondents was between $30,000 – 39,999, although the most frequent

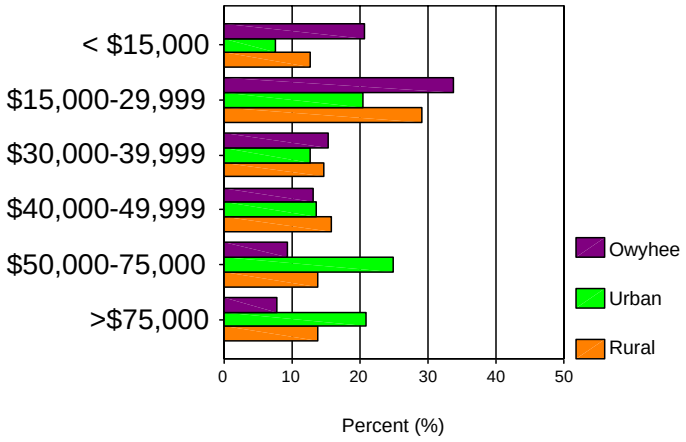
Figure 4. What was your total household income before taxes in 2002?



response across the entire sample was between $15,000 – 29,999. Figure 5 illustrates the variability of income levels between the three subgroups, with the Owyhee and Rural samples skewed toward the lower income range categories, and the Urban sample

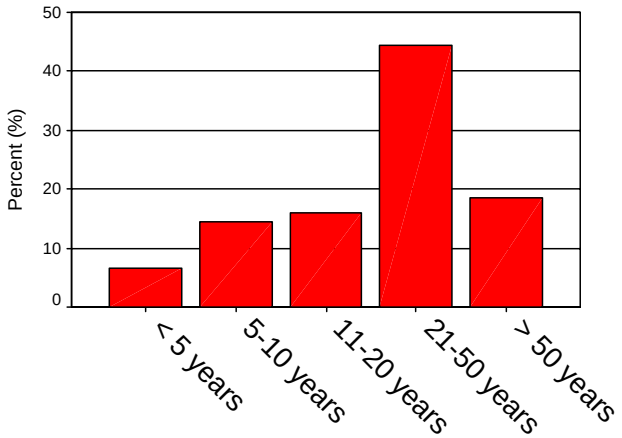
showing a slightly bi-modal response toward either end of the continuum, but skewed more heavily toward the higher income categories.

Figure 5. What was your total household income before taxes in 2002?



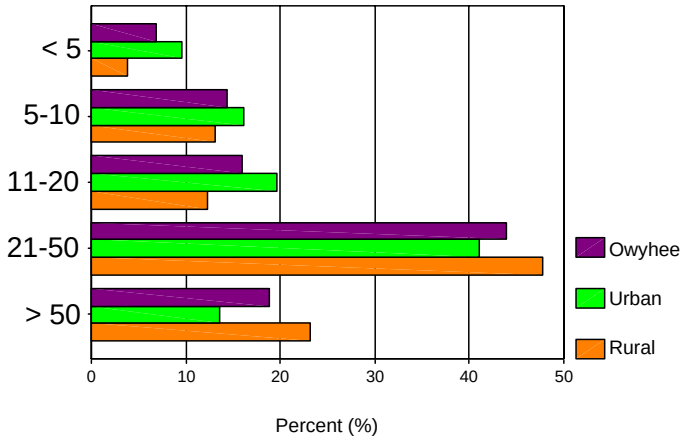
We also asked respondents about their length of residence in southwestern Idaho. Figures 6 – 7 show that nearly half of all respondents have lived in this four-county region for between 21 and 50 years. While nearly 20% of the sample has lived in the

Figure 6. How many years have you lived in southwestern Idaho?



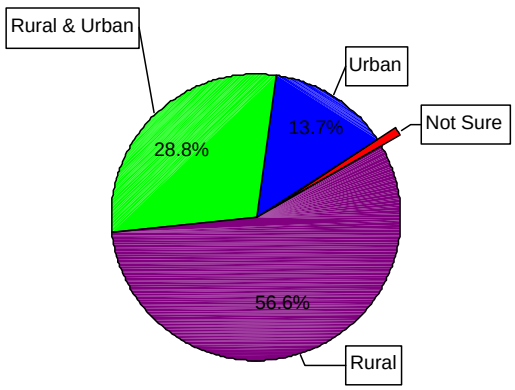
region for over 50 years, less than 10% has lived in the region for less than five years. While these trends generally hold true for each of the sub groups, the Rural group tends

Figure 7. How many years have you lived in southwestern Idaho?



to have a longer length of residence, and the Urban group tends to have a relatively shorter length of residence compared to the other two groups. On another measure, respondent's selected from three categories 'Rural,' 'Urban,' or 'Rural & Urban' to identify a perceived description of their community. Figure 8 indicates that the majority of respondents consider themselves rural residents across the overall sample.

Figure 8. Respondents' self-description of their community



Given the average response rates and that the demographic profile matches comparable Census data measures with relative approximation,[2] the quantitative assessment sample appears to constitute a representative cross-section of the four-county population.[3]

County-Level Demographic Changes

Tables 3 and 4 below compile data from the most recent U.S. Census (2000) to present population, employment, and income figures across the four-county region. The most notable changes include:

- A substantial overall increase in employment for Ada (50%) and Canyon (52%) Counties especially, but for Owyhee (22%) and Elmore (29%) Counties as well;
- A high rate of growth in nonfarm employment in Owyhee County (90%) from 1990 to 2000, in part due to the manufacturing plants recently sited and expanded in the County;
- substantial increase—ranging from 48-56%—in income for each of the four counties; and
- Similar to many other ex-urban areas around the West, parts of each of these counties had unprecedented residential population growth rates, ranging from a low of 27% in Owyhee County to a high of 46% in Ada and Canyon Counties (see Field 2002).

While these demographic trends are important, they do not tell a full story or provide much in the way of explanation as to why phenomenon emerge as they do. The

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[2] The median age of respondents was higher than the median age of the population in the four-county region. However, the distribution and age range of respondents reflected a normal distribution pattern.

[3] One probable limitation within the overall sample that continues to present a contemporary challenge to this methodology is the increase in cell phone users (numbers for whom are not included in most sampling databases) that also choose to abandon their landline. Such a shift—now with cell phones comprising up to 43% of all U.S. phones—may systematically exclude an expanding segment of the population (Carroll 2003).

Table 3. Southwest Idaho Population Change in Four Counties (1990 - 2000).

COUNTY	1990				2000				% Change 1990 to 2000			
	Popul.	Sex (M/F)	Age ≤ 18	Age ≥ 65	Popul.	Sex (M/F)	Age ≤ 18	Age ≥ 65	Popul.	Sex (M/F)	Age ≤ 18	Age ≥ 65
Ada	205,775	101,227 104,548	58,243	21,451	300,904	150,893 150,011	82,045	27,301	46%	49% 43%	41%	27%
Canyon	90,076	44,374 45,702	27,712	12,344	131,441	65,299 66,142	40,679	14,461	46%	47% 45%	47%	17%
Elmore	21,205	11,070 10,135	6,679	1,594	29,130	16,077 13,053	8,142	2,079	37%	45% 29%	22%	30%
Owyhee	8,392	4,384 4,008	2,775	1,073	10,644	5,551 5,093	3,703	1,293	27%	27% 27%	33%	21%

Source: U.S. Census (2000)

Table 4. Southwest Idaho Income and Employment Change in Four Counties (1990 - 2000).

COUNTY	1990			2000			% Change 1990 to 2000		
	Household Income ($)	Nonfarm Employment[a]	Total Employment	Household Income ($)	Nonfarm Employment	Total Employment	Household Income ($)	Nonfarm Employment	Total Employment
Ada	30,246	91,797	104,423	46,140	145,958	156,634	53%	59%	50%
Canyon	22,979	23,462	39,181	35,884	37,305	59,634	56%	59%	52%
Elmore	23,750	3,041	7,373	35,256	3,741	9,492	48%	23%	29%
Owyhee	18,595	773	3,602	28,339	1,468	4,389	52%	90%	22%

[a] Calculated from Census 2000 figures.

Source: U.S. Census (2000)

following analytical section offers a variety of local perspectives gathered from within the four-county region in an effort to describe many of the consequences and effects of the changes in relation to resource management and community in the Owyhee region.

ANALYTICAL RESULTS

This section of the report provides analytical results in three broad topic areas: 1) public lands management; 2) community involvement in resource management and planning; and 3) changing perceptions in the local community and landscape. The first section focuses on several dimensions of public land management in the Owyhee region including Bureau of Land Management (BLM) policies (pertaining to livestock grazing as well as recreation), military land use in this region, as well as the County's land-use planning related to residential growth and resource-management. The second section, although still focused on the context of public lands, emphasizes local perspectives about publicly-owned spaces *as local resources*. The third and final section of the analysis concentrates on the change this region will likely continue to experience, largely associated with the influx of permanent residents and non-resident recreational users.

Public Lands Management

Like the state of Idaho, and much of the western U.S., a substantial proportion of the 4.9 million acres that make up Owyhee County, have a designation as public lands—nearly 83% including federal- and state-owned lands.[4] Many private landowners adjacent to the public lands in Owyhee County lease and depend on those lands, primarily for

[4] The County publishes this figure, but it includes 76% federal land and 6.7% state-owned land, leaving just over 17% of lands in Owyhee County as privately owned (Owyhee County 2003).

livestock grazing. Recreational uses also occur, with increasing frequency, on the same lands. While it is *not* common practice to blatantly defy the County or the BLM policies, many local residents and ranchers approach the lands—public or private—with a mix of genuine consideration, care, and independence that is often found among those who *do* own something privately, in the form of material property. Access to public lands has become more complicated in recent years with regard to logistical, social, and ecological concerns. Some of this is due to the increase in recreational users, while others have emerged from changing BLM policy.

The first analytical section, on *Public Lands Management*, is divided into several key sub-section themes. The first of these is 'Rangeland Changes,' incorporating general aspects about the BLM and its local influences to the community. The second section, focusing on 'Recreation Impacts, Property Rights, and Access' examines attitudes toward the burgeoning level of outdoor recreation and related issues occurring in the Owyhee region. The third section on 'Environmental Impacts' emphasizes local definitions and meanings about what is happening to the land and who is responsible.

Rangeland Changes—Policy, Personnel, and Peril

Many of those interviewed who live and work the land in the Owyhee region, in some form reflected negatively on the broad change in orientation they perceive has occurred in the BLM during the past three decades, whether intentional or not. Originally established in 1934 as The U.S. Grazing Service via the Taylor Grazing Act, the BLM emerged as the federal entity assigned to manage the non-US Forest Service (est. 1906) lands following the "race for grass" in the mid-1800s and subsequent droughts in the

1920s and 1930s (Gorte and Baldwin 1999).

The crux of the change many described is an inversely correlated pattern between the loss of range scientists and the addition of recreation-oriented staff. The implications of this pattern perceived by ranchers in the Owyhee region are that the change in personnel both *reflected and caused* a political and environmental reprioritization of rangeland uses and impacts to de-emphasize livestock grazing and favor recreation interests and uses. One local individual who works on the land described the trend this way:

> When we had Range Cons out here, they had a broad perspective. Now with all these wildlife biologists running around, they're all too narrow. When all the Range folks were taken out of management in the '80s and '90s, THAT's when the range deteriorated!

Another respondent offered a similar perspective, but in the specific context of how the change has affected the Birds of Prey (BOP) National Conservation Area:

> Our regional district is corrupt. That happened when they changed the BOP to single-use. With this, they needed lots of [recreation] hires to run this—not the range. They think they're making good decisions for the raptors, but their management has let 70% of the BOP burn in the last 20 years with the multi-use designation. Before this, the nests were full. Now they're not because of the loss in the vegetation base.

This passage represents commonly held viewpoints and relates to the contemporary views on increased levels of recreation and related impacts described in a later section of this analysis (see pp. 22 - 44).

The perspective about a re-orientation toward recreation dates back to the early- and mid-1970s[5] when the BLM began attempting to implement required Environmental Impact Statements (EIS) as a part of the National Environmental Policy Act (NEPA)

[5] Foss alluded to the growth of the concept of multiple-use at least a decade earlier in the classic *Politics and Grass* (1960).

passed by Congress in 1969. The federal court case, *Natural Resources Defense Council v. Morton* ended in an out-of-court settlement in 1974, requiring the BLM to conduct 212 site-specific grazing Environmental Impact Statements—with little in the way of "planning" expertise—rather than a single impact statement covering its entire grazing program in the West (Davis 1993).[6] Several areas in Idaho were targeted as high priorities on the required EIS list, including the Owyhee area (Hanley 2002).

In the fall of 1979, a group of Owyhee cattleman organized to stimulate a county-level response to the Owyhee Grazing EIS and other grazing reform measures (Hanley 2001). Establishment of this group, originally coined as "The Can Do Cowboys" and more formally known since as the Owyhee Action Committee, followed some of the initial disagreements between the BLM and local cattleman in the 1940s and 1950s over disputed appropriate levels of livestock grazing (Hanley and Lucia 1999). The Owyhee Action Committee catalyzed at roughly the same time as other pockets of resistance to federal land control around the West, commonly known as the "Sagebrush Rebellion" (Cawley 1993; Yandle 1995). The movement emerged as "a protest against the growth of environmental regulations throughout the 1960s and 1970s" (Cawley 1993, p. ix) and in response to the Department of Interior's "moratorium on claiming desert land for farming purposes" (Marzulla 1996, p. 39).

In Idaho, and specifically within the Lower Snake District of the BLM, Owyhee respondents decried the changes in the agency during the 1980s and 1990s that reflected the national-level reorientation and corresponding policy reform. A ranching couple we

[6] The Federal Land Policy and Management Act of 1976 (FLPMA) and Public Range Improvement Act of 1978 (PRIA) were two additional pieces of legislation that increased the recognition given to ecological criteria in public land decision-making amidst the range policy reform era (Davis 1993).

interviewed described their views of some of these effects:

> The latest round of BLM changes that hurt us was in the Clinton era. Seemed like the whole Lower Snake District office changed then. They took on this notion that the 'interested public' has as much say as anyone. Well, I know it's public land and all, but it affects whether we can make a living. And just a few people up there can change it all. The District Manager shouldn't have the authority to just change the whole RMP…One of them just clearly didn't want the cows out here and said they're the cause of all the damage.

Related to this perspective, much of the blame for current problems and conflicts over public lands management in the Owyhee region is placed on the loss of longstanding relationships local cattleman shared with BLM personnel. One respondent expressed his views with the following:

> Way back in 1968, we had a controversial decision on some allotments over in the Vale [southeastern Oregon] area. The BLM had set up some pilot projects to make improvements, but then just ended up cutting the permits. Lots of these cases happened when the BLM changed its administration—that really hurt us. They just come in, have never seen the country, and they have to say 'it's bad off' so it appears better when they leave and get moved around the agency.

Hess (1992) used this same case to describe what he termed "welfare ranchers," or those who receive federal subsidies to the point that they become a disincentive to implement range improvements in a multiple-use market situation. In theory, the competition for such a market would lead to greater conservation efforts on the range, but Hess (1992, p. 166) argues that with subsidies, ranchers ignore the increasing disfavor of livestock grazing on public lands among the public. This debate raged again recently with the claim that "welfare ranchers" continue to come under fire from the small, but fierce "cattle-free movement" (Horning 2002; Lanner 2003; Marston 2002; Wuerthner and Matteson 2002).

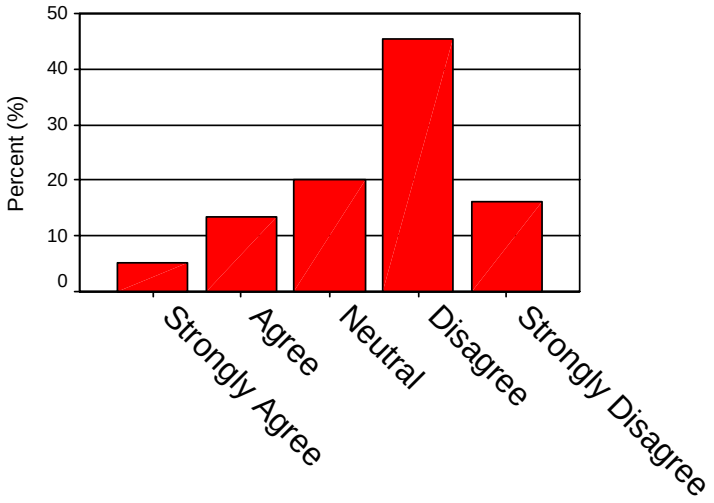
Similarly, a longtime resident of the Owyhee region noted how local ranchers

often characterize this pattern as related to the way they perceive the BLM uses scientific evidence:

> Some of us signed cooperative agreements, and they were working, but once we started making progress and seeing the land improve, the permits began to go by the wayside. I've got pictures I can show you how the deferred and rest-rotation systems was working. There's been times when the BLM says they're making scientific decisions, but they just haven't had the science to back it up.

These passages, combined with portrayals of the modern state of "welfare ranching" call into question the level of support for grazing on federal public lands. Results from the quantitative measure used to assess that issue is displayed below in Figure 9. Clearly, the

Figure 9. We need less livestock grazing on public lands



distribution of results indicates much stronger levels of disagreement than agreement with the statement "We need less livestock grazing on public lands." In fact, all three subgroups indicate disagreement with the statement across the four-county region, and not just within Owyhee County, where one might presume these results to be even more extreme. Even if a regional perspective to support livestock grazing in southwestern Idaho remains an anomaly among the changing tides of federal resource policy and

public attitudes, the cowboy ironically remains an American icon and idol associated with heroism, endurance, and independence (Starrs 1998).

Changes in policy and personnel also highlights the levels of distrust many ranchers espouse and have become accustomed to when asked about the BLM and the agency's basis for sound decision-making. A longtime rancher who moved to Owyhee County to ranch added this perspective:

> It's all relative; this District [Lower Snake] is way better than the one I dealt with before. But getting the BLM to be honest? They're just predisposed in the people they hire; before they even get their first paycheck, you know what their Science is going to be. Some of them are good people, and they try hard, but they just don't want thinkers working there. They just want tape recorders—people that will follow the rules and spit it back out.

Nelson (1995) concluded that much of what led public land permittees to develop attitudes like the above description stemmed from awkward and sometimes inconsistent juggling of both biological and now economic criteria for rangeland decision-making in the 1970s. Many of those interviewed made it clear they felt the agency had shifted too far in the direction of newer ecological and recreation-based emphases at the expense of common sense economic decisions to guide rangeland management of the federal lands they lease.

Recreation Impacts, Property Rights, and the Politics of Access

A number of distributional issues surround recreational use in Owyhee County. The major population center of Idaho lies in the Treasure Valley, north of Owyhee County. Ada and Canyon counties experienced over a 45 percent growth rate in population between 1990 and 2000 and currently account for a third of Idaho's total

population (432,345 residents in Canyon and Ada counties and 1,293,953 residents in the state). On a broad scale, recreational patterns of these residents have changed with this population growth. Individuals interviewed during the Social Assessment revealed a pattern of attempting to "escape" the sometimes over-crowded conditions in the "traditional" recreation areas to the north of Boise.

General Recreation Issues and Impacts. Many interviewees indicated a popular trend toward "desert" recreational activities and away from the forested mountains with lakes and streams. Horse enthusiasts, snowmobilers, ATV users and others expressed enthusiasm for recreational opportunities in Owyhee County. In addition to the spectacular aesthetics of the Owyhee landscapes, reasons cited included an escape from people and overcrowding, closer distances to their residences, open rangelands with numerous trails and seasonal differences which allowed use earlier in the spring and later in the fall and winter for the non-snow related activities. Snowmobile use is usually centered in the months of January through March, but is highly dependent upon the amount of snowfall in the peak use areas of Cow Creek, Silver City and others. Regardless of the season, however, such a notable increase in recreational usage across all respondents symbolized a widely held perception of the Owyhee region having "been discovered" by a multitude of outsiders.

As a result of this increased use of Owyhee County for recreational opportunities, the local government units face some distributional issues in terms of real and potential impacts on the land, the citizens of Owyhee County, and its increasing numbers of visitors. Interviews with elected officials of Owyhee County revealed that the 10,000+ residents of the county cannot afford to provide recreational related services to the

visitors without help from outside sources. Representatives from the Owyhee County Sheriff's office explained the constraints related to a relatively small population and tax base trying to support policing and search and rescue activities for a much larger populace. A law enforcement representative estimated that there were 4,000 out-of-county visitors to C.J. Strike Reservoir and 2,500 visitors to Silver City on Memorial Day of 2003. The sheriff's office emphasized concerns of being able to police these areas with a limited staff of approximately 13 FTE's (including the sheriff), especially considering the 7,643 square miles that constitute the county. Normal staffing for a rural police force of this kind is about 1.5 FTE's per 1,000 population.

Issues of backcountry (southern Owyhee County, away from the Snake River corridor) recreational use raised a number of other issues among county personnel. To help address issues of vandalism, trespass and lost or injured travelers, the sheriff's department has hired a back country patrol agent. Seasonal help is also hired in the peak recreational use seasons of Spring-Fall. One interviewee who has worked for over two decades in Owyhee County noted that there have been a total of less than 5 search and rescue efforts of Owyhee County residents during that period. The Owyhee backcountry is no less dangerous or treacherous for local residents, and perhaps even more so, for those who work on the land. However, the county estimates a ten-fold increase in recreational visitors in the last five years and an exponential increase in required search and rescue efforts. Thus, the bulk of the search and rescue efforts have been devoted to finding out-of-county residents that are lost, having mechanical problems and/or injured.

The scope of search and rescue usually varies with the recreational activity. For example, search and rescue for motorcycle and ATV users usually involve injuries; out-

of-county “tourists” or sightseers are usually stuck or having mechanical problems; those that frequently become lost are from the whole spectrum of recreational users. Increasing incidence of trespass and vandalism is also occurring in the backcountry areas of the county. Cow camps that were usually stocked and left open for travelers are now being locked and checked more frequently.

Search and rescue activities are conducted through the Patrol component of the Sheriff’s budget, which amounted to $13,600 in FY 2003. By comparison, the total operating budget for the Owyhee County Sheriff’s Department was about $900,000 in FY 2003. Search and Rescue supplies amounted to $1,000 of the $13,600 total. Quite obviously, one major search and rescue operation can consume the total search and rescue allotment for patrols. Traditionally, Owyhee County forms a posse to assist with search and rescue efforts. There are rational as well as cultural reasons behind that tradition. The following extensive passage illustrates a common local perspective on the interrelationships of these types of impacts, as well as the “local knowledge” tied to the landscape and more traditional lifestyles in the region:

> The conservationist groups tell us to get the cows off the land. Way I see it though, is that we’re the caretakers of the land. I’m constantly picking up trash in the canyon. BLM or the County can’t provide the manpower to do all I do. When those folks come down here and get lost, law enforcement comes to us. The community forms a posse, and by necessity, we become the search & rescue. Ranchers are the ones who know the backcountry. It’ll bite you if you’re not too careful. Those kids from Boise just swarm up here now, but if they want to protect the land they should keep the people out of here. It’s people doing the damage, not the cows. The 150 years of ranching we’ve done here has made all these people want to save it as wilderness.

More recently, the county has begun attempts to address the financial shortfalls of these situations by billing those that have been searched for or rescued over the past few

years. Not unexpectedly, the problem has been actually collecting these nominal fees (approximately $500 per person), as only about half of those rescued have paid. One individual sensitive to these impacts summarized their point of view succinctly:

> It's not fair or reasonable to ask taxpayers to subsidize these mishaps. You can't expect little old ladies living on a limited income to be paying for these idiots to wreck their ATVs.

The state of Idaho does provide some financial assistance for rural counties to reimburse for volunteer related expenses. There is a program that allows for reimbursement (from state gas tax and vehicle registration sources) for expenses related to search and rescue up to a maximum of $4,000 per incident. The Sheriff has billed the Bureau of Land Management for backcountry patrols but there was no indication that funds had actually been transferred to the county. The County also recognizes its cooperative agreement with the BLM on patrols and procedures within the vast landscape. Recent attempts have also been made to start a process to deputize the BLM ranger, but to date, nothing has officially been finalized in this regard.

Many respondents also expressed concern with the effects of publicity about Owyhee County recreational opportunities on increasing use in the area. Both the contingent promoting recreation as well as those disgruntled with the trends in the Owyhee region, cited articles in local, regional and national media about Owyhee County. Those unhappy with the change described a lagged effect of increased recreational use and associated issues related to public safety and community impacts that usually followed. One individual even knew about an article, featuring the Owyhee Canyonlands, that recently appeared in a southern California newspaper. Local officials have also noticed correlations between that sort of high-profile publicity and visitors from

particular places (including the Boise metropolitan area) that require assistance over the course of the 6 weeks to 3 months following.

General Trends in Recreational Activities. As part of the quantitative assessment, respondents were asked whether they had participated in a variety of recreational activities within the past year in the four southwestern Idaho counties. Table 5 shows the results of these data. The table illustrates the data by subgroups in order to discern differences within the populations of the four-county area. Generally, the most frequent activities across the population included Fishing, Bird Watching, Hiking, and

Table 5. Recreational participation in southwestern Idaho in the past year.

Have you done the following recreational activity in the past year?	% YES		
	Owyhee	**Urban**	**Rural**
Fishing	60	63	52
Birding	58	51	47
Hiking	50	50	59
Other Types of Boating	43	50	48
Off-Road Vehicle Use	40	38	30
Big-Game Hunting	30	26	14
Ride Horses for Pleasure	30	34	17
Biking	26	34	51
Birdhunting	23	21	13
White-Water Rafting	9	16	21

Sample Frames:
Owyhee: Population in Owyhee County, ID proper as well as Jordan Valley, OR.
Urban: Urban and suburban areas of Elmore, Ada, and Canyon Counties, ID (including Mountain Home, Boise, Caldwell, Eagle, Kuna, Meridian, and Star.
Rural: Rural areas of Elmore, Ada, and Canyon Counties, ID (including Atlanta, Boise River, Glenns Ferry, Melba, Middleton, Parma, Prairie, Tipanuk, Wilder, and unincorporated areas).

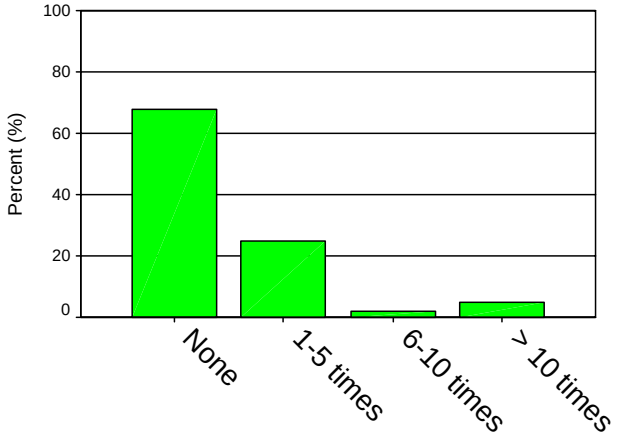
types of Boating other than white-water rafting. Comparatively, the Urban group tended to recreate more as bicyclists and white-water rafters than the Owyhee or Rural groups,

but did not participate much in Horseback Riding for pleasure, Bird Hunting, or Big Game Hunting as much. About 40% of Owyhee County residents used Off-Road Vehicles in the past year, a slightly higher average than among the Rural user group. The same pattern holds true for the measures on Bird Watching, Bird Hunting, and Big-Game Hunting.

Recreation and Access in The Snake River BOP Area. Recreation at the BOP National Conservation Area offers a case of significant recreational use of public land designated for special or particular use and access in the Owyhee region. The BOP—home to the densest concentration of nesting birds of prey in North America—is designated as a multiple use area with recreational activities ranging from camping, boating, and hiking, to wildlife viewing and horseback riding. In addition to recreation and wildlife management, the BOP also provides forage resources for livestock grazing in portions of the BOP as well a training area for use by the Idaho National Guard which conducts military exercises in the region (Bureau of Land Management 2003).

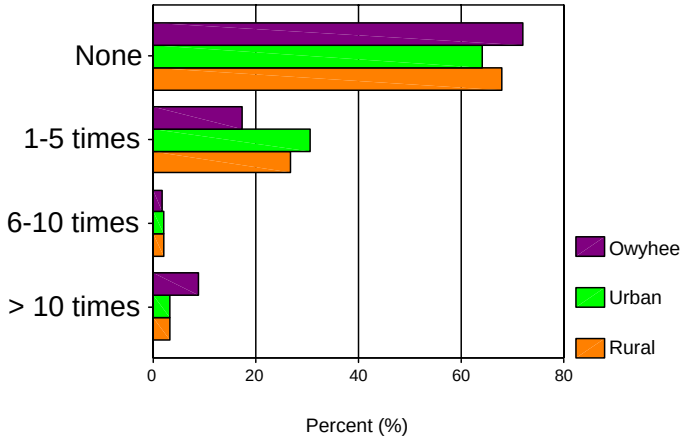
As a part of the quantitative assessment, we asked individuals about their usage patterns related to the BOP. Figures 10 - 11 display the number of times respondents visited the BOP Area last year for both the sample as a whole, as well as by subgroups. Among the overall sample (Figure 10), nearly three-quarters of all respondents did not visit the BOP last year, but over 20% of respondents did visit the BOP between one and five times, and less than 5% of respondents visited the BOP for each of the more frequent categories of six-to-ten times or more than ten times. Figure 11 displays the comparison between subgroups for visits to the BOP, and indicates a greater average frequency of visitation among the Urban group more than the Rural or Owyhee groups. For the range

Figure 10. How many times did you visit the Snake River Birds of Prey Area last year?



of visits between one and five, the Owyhee group ranked lowest of the three groups, but highest among the three groups for those having visited more than ten times in the last

Figure 11. In the past year, how many times did you visit the Birds of Prey Area?



year. This pattern indicates a more frequent average use among Owyhee region residents than Urban area residents *for those that do go to the BOP*.

Similarly, Figures 12 - 13 display whether any of the respondents' recreational activities were done in the BOP. For the sample as a whole shown in Figure 12, slightly under half (44%) of all respondents participated in recreational activities inside the BOP

Area. A few respondents indicated that they did not know whether their recreational activities were in the BOP Area or not. Figure 13 clearly shows that from this sample, Owyhee residents have a higher rate of recreational use of the BOP area than either the Urban or Rural groups.

Figure 12. Were any of your recreational activities done in the Birds of Prey Area?

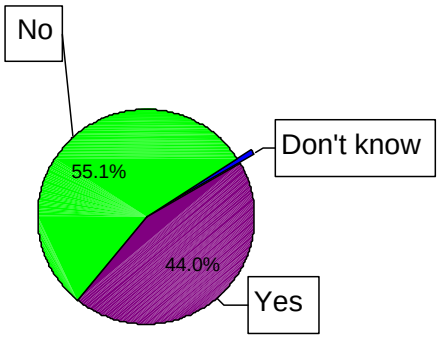
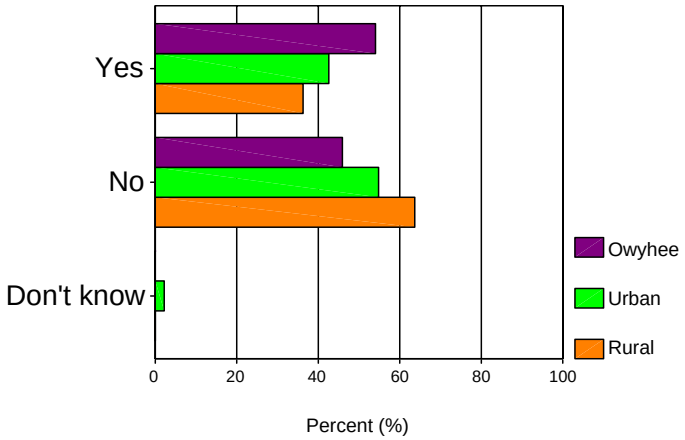


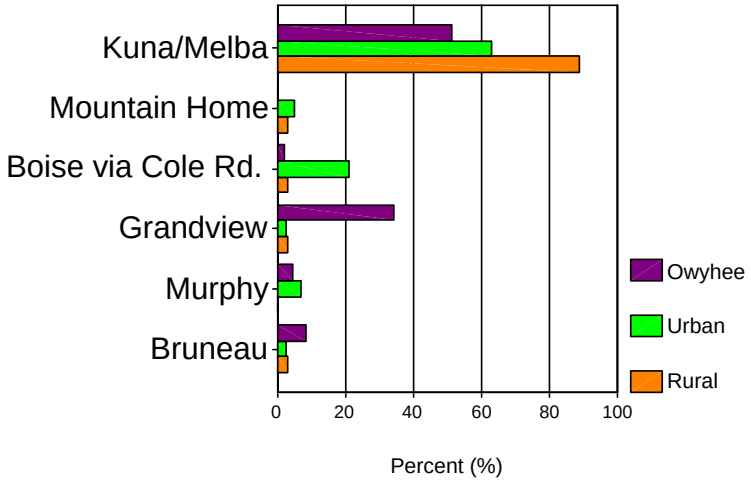
Figure 13. Were any of your recreational activities done in the Birds of Prey Area?



With regard to access of BOP Area entry and exit, the Kuna/Melba access route is far and away the preferred choice among all three of the groups. Figures 14 - 15 display

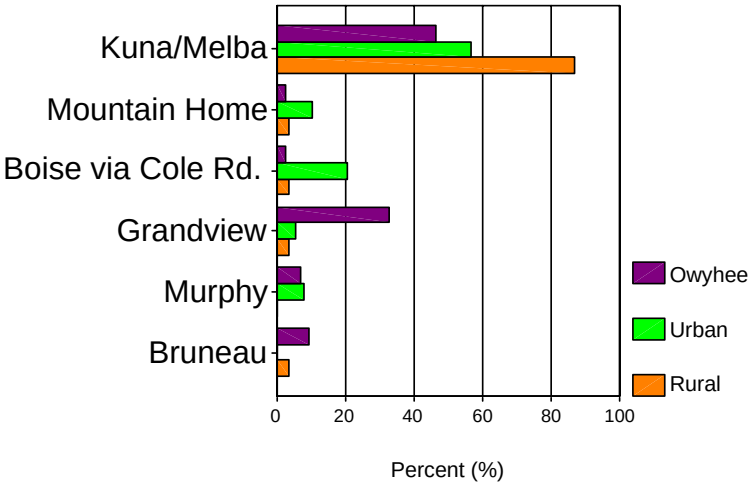
results for the BOP entry and exit patterns for the sample by comparisons of subgroups. In the case of Owyhee residents, the Grandview access route is also heavily used with

Figure 14. Where did you most often enter the Birds of Prey Area?



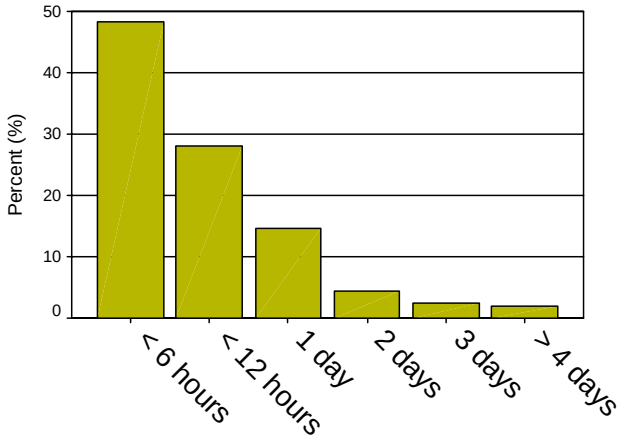
over one-third of respondents from that group indicating where they most often enter and exit the BOP. For the Urban group, about one-fifth of respondents also indicate they most often enter and exit from the Cole Rd. route to and from Boise.

Figure 15. Where did you most often exit the Birds of Prey Area?



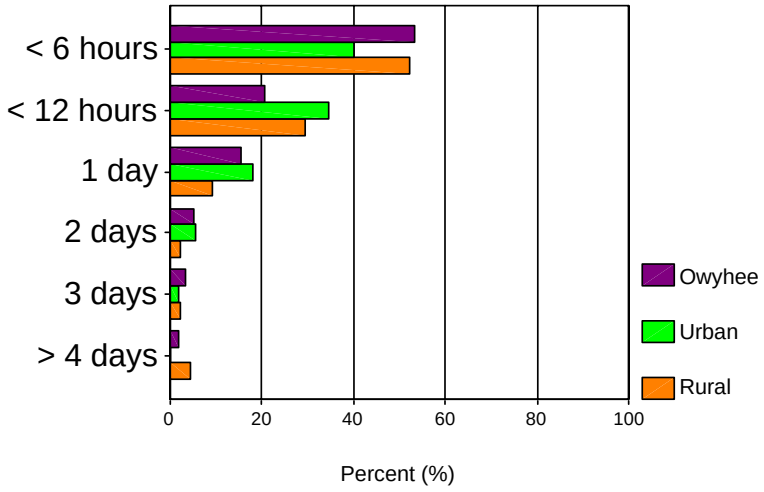
Related, we also asked respondents how long they spent on their last trip to the BOP Area. Figures 16 - 17 display an interesting pattern between the overall sample results and the subgroup results for duration of their visits. For the sample as a whole,

Figure 16. How long was your last trip to the Birds of Prey Area?



nearly half of all respondents indicated their last visit to the BOP area was for less than six hours. The subgroup comparisons show that only 40% of Urban visitors stayed for

Figure 17. How long was your last trip to the Birds of Prey Area?



this short of a time, while over 50% of both the Owyhee and Rural visitor groups stayed for less than six hours. The Urban group ranked highest among the three groups for the 'more than 12 hours' and '1 day' categories, as shown in Figure 17. The heavily skewed data charts indicate recreation use in the BOP is much more oriented to day-use than multi-day use across each of the three groups.

The next series of Figures below represents results from several measures used in the quantitative assessment related to perceptions of the military use in the BOP. The Idaho Army National Guard currently conducts some military training within the BOP Area, and the Mountain Home Air Force Base is a substantial military operation located just north of the C.J. Strike Reservoir toward the southeastern end of the BOP Area. Nokkentved (2001) also provided an account of the Air Force's controversial proposals to expand the Saylor Creek Bombing Range by up to almost 1.4 million acres almost completely overlapping a large portion of Owyhee County.[7]

The first question asked respondents how many times they saw the military in the BOP in the past year. Figures 18 - 19 display the results for the overall sample and comparisons of the three groups in response to this question. Nearly three-quarters of all respondents did not see the military at all in the BOP, nearly 20% saw the military between one and five times, and less than 10% saw the military more than ten times in the past year. Within the subgroup comparisons, the Urban visitors to the BOP ranked highest for the category of having seen the military one-to-five times in the BOP during the past year, while the Owyhee group ranked highest for the category of having seen the military more than ten times in the past year in the BOP Area.

[7] The current Saylor Creek Bombing Range lies approximately 25 miles southeast of the C.J. Strike Reservoir (Nokkentved 2001).

Figure 18. In the past year, how many times did you see the military in the Birds of Prey Area?

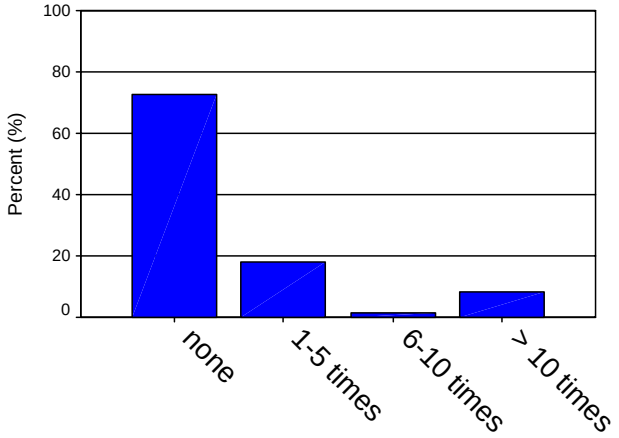
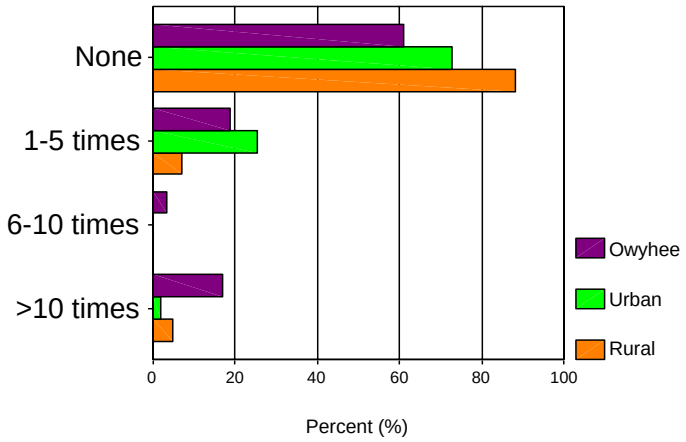


Figure 19. In the past year, how many times did you see the military in the Birds of Prey Area?



Figures 20 - 21 show a consistent pattern of results that respondents overall, as well as within each of the three subgroups, indicate more agreement than disagreement with the military using the BOP Area. This overall pattern is slightly different when we distinguish the three subgroups, with the Urban group having a more normally distributed response (showing less agreement with the military presence) distribution than either the Owyhee or Rural groups; the latter two groups indicated stronger agreement with the military presence in the BOP Area.

Figure 20. Do you agree or disagree with the military using the Birds of Prey Area?

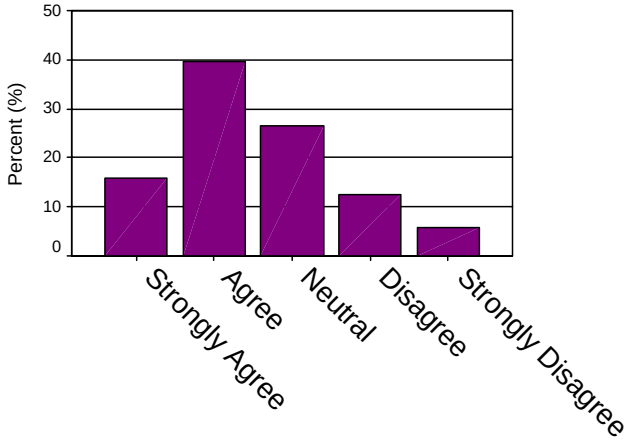
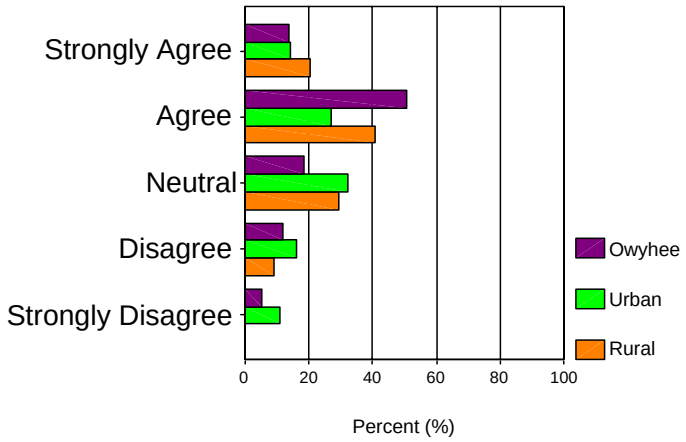


Figure 21. Do you agree with the military using the Birds of Prey Area?



Finally, we asked respondents whether they agreed or disagreed with both military *and* recreational use in the BOP Area. Figures 22 - 23 display results for these responses. The overall pattern is similar to the previous question, with a tendency among the general population to agree with both military and recreational use in the BOP Area. Within the 'Strongly Agree' category, the Rural group ranked highest in the frequency distribution, and the Owyhee group had the highest frequency within the 'Agree' category.

Figure 22. Do you agree with military and recreational usage in the Birds of Prey Area?

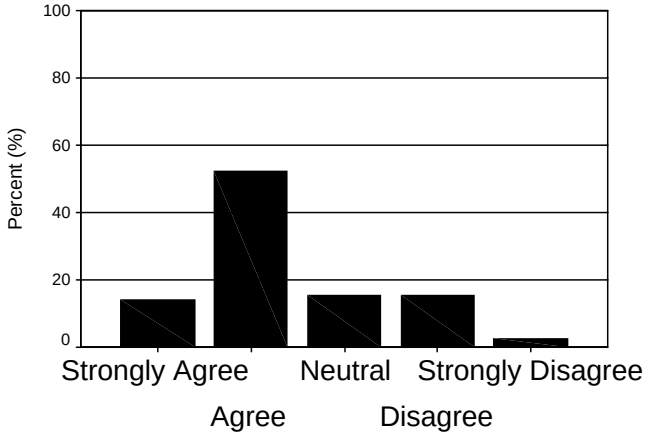
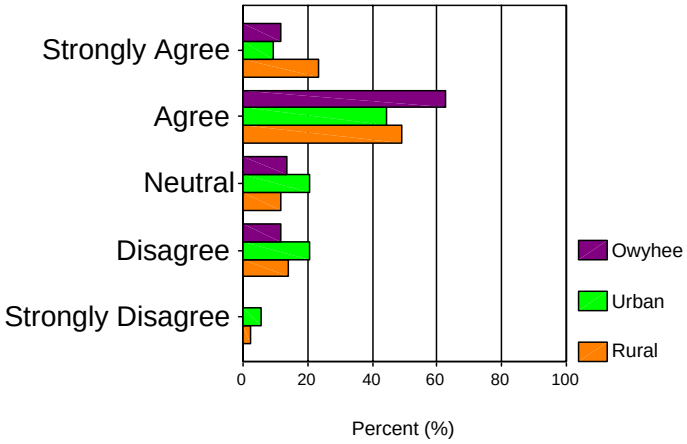


Figure 23. Do you agree with military & recreation use in the Birds of Prey Area?



In general, the patterns of these results reflect that the Snake River Birds of Prey National Conservation Area receives a wide mix of visitors from this four-county region. However, visitors from the metropolitan area north of the site constitute a significant percentage of all visitors and are likely to increase as the urban population continues to grow. Most of these visitors tend to use the BOP Area for day-use once or twice a year

and overwhelmingly take the entry and exit route via Kuna/Melba. Results from the same population appear to show substantial support for continuation of livestock grazing and military use in this region.

Environmental Impacts

Stewardship and Perception. One of the more poignant subjects for respondents to reflect on during interviews centered on the topic of environmental impact. Long criticized as those responsible for rangeland degradation, ranchers interviewed for this project as well as many others in the region we spoke with feel such a view mischaracterizes their identity, behavior, and livelihood. Many in this region, as explained by this individual, conceive of themselves as the stewards of the land:

> This isn't really an easy life you know? Sometimes we struggle with it, but we like the life. Mostly, we just do our best to try to take care of the resource. Those environmentalists say they have to 'protect' this from us! But we're the ones that have used it all these years and they don't give us any credit for it being the 'pristine' place they want to lock away. They just look at this as an all or nothing thing, but we're doing what's right for the land.

Others who had similar perspectives explained their points in a way that they felt the constraint to fit within regulatory frameworks that change with science and policy. Numerous informants emphasized the economic relationship of range stewardship and their own lives to illustrate:

> Well, on the BLM permits, of course we're limited to their regulations, but if you're in this for the long haul—and I don't know any ranchers who aren't working on this as *at least* a 2nd generation outfit—you're not going to treat it bad anyway. Why would we do that? It's our own livelihood. We know we can't survive if we try to run on too little grass because the cows can't survive on that. Their argument that way just doesn't make any sense.

Another county resident whose friend's ranch put it more bluntly:

> Most of 'em are lifers, these guys. We're all environmentalists when you get down to it even though they wouldn't want me to say that. Hell, it's a renewable resource. It's grass. It'll come back, if you eat it. There's times you regulate being out there, and times you have to get off the range. We know that. That's who we are and what we do.

And still others found the need to illustrate this perspective using examples of previous rangeland improvement efforts that obviously vary with interpretation of costs and benefits:

> We initiated one of the first coordinated range plans down here. There was all this emphasis in the new policy, but nothing had been studied for long enough yet to know whether it was working or not, according to the plans on their books. But we didn't try to tell 'em how to fix their experiments. We knew what would work and what wouldn't with those fences because we've had four generations learning about this, and we may not have it all written down in a science book, but I can tell what's going to happen just as good as they can, or better.

Connected vs. Disconnected Interests. On a general level, those interviewed for this project who were not affiliated with the ranching sector of the local communities can be subdivided into two analytical groups: *connected interests* and *disconnected interests*. The former of these—connected interests—are generally Owyhee County residents and either haves ties to the people and places of this region and/or take a particular interest to use the Owyhee resources for recreational interests, including motorized and non-motorized uses. The latter group—disconnected interests—consist of individuals and organizations based outside the County but acting with the intent to influence land use and policy at the local level.

A significant split generally exists between these two types of interests with regard to perspectives on responsibility for environmental impacts. A pattern exists among the connected interests to focus on attempts to cooperate and negotiate workable

agreements with private landowners such as ranchers. The connected interests, by and large, do not emphasize perceived problems with the landscape, but alternatively, attempt to suggest ways that multiple uses could and should still function. In contrast, the disconnected interests tend to present more polarized and oppositionist viewpoints, resulting in less cooperative outlooks about whether ranching and recreation can coexist. The disconnected interests often place categorical and direct blame on ranchers and their livestock for problems of resource health.

First, to convey the compiled perspective of the connected interests, several passages exemplify how these groups and individuals aim to remain connected to the communities potentially impacted by their recreation:

> I've recreated in the Owyhees all my life. That's where I went on my first hunt. We try to work with the ranchers on agreements about where we can go and where we shouldn't. Take Upper Reynolds Creek for instance. We had a protocol agreement with the ranchers there that may still work out, but now other things are affecting this. The last BLM draft told people it'd be against the law to go off road with the ATVs now. But lots of people don't know that, or don't respect it and have jeopardized our relationship to the landowners.

And the following passage comes from a group of representatives interviewed from an Urban/Suburban-based non-motorized recreational interest group:

> The terrain in the Owyhees is spectacular. It's unmatched for being close to here. It's very accessible and isn't overcrowded yet because it's never been publicized much. The ranchers are few and far between. They'd prefer to just have responsible people out on the land. They're a conduit for communication and helping create an atmosphere for responsible recreation. They shouldn't have to put up with the bad apples and the renegades, but there are always a few of those that spoil it for everyone. It's just a few people that leave all the trash.

From the disconnected interests, views focusing primarily on the resources rather than human-landscape relationships dominate their perspectives. As a moderate example,

The Nature Conservancy (TNC) is undertaking an Owyhee Weed Project as a rangeland conservation effort (The Nature Conservancy 2002). Although not comprehensive or representative of the entire plan, the following offers some perspective on this organizational point of view regarding their weed management objectives:

> *Do we have strong views on the issues*? Yes, though others will have to help validate the urgency and scale of the threat;…*Do we want to persuade others*? Yes! This is the number one threat to this landscape and we believe the issue is urgent. Without TNC's advocacy, we will likely lose this battle…*Do our constituents see us as a legitimate advocate*? More so all the time. TNC is perhaps the lone conservation group that has pushed weeds to the front of our agenda, given it more media attention than any other issue for the chapter over the last year (TNC 2002, p.6).

An often more radical point of view comes forth from other disconnected interests with strong preservation agendas less community-oriented than TNC. For instance, The Committee for the Idaho High Desert (CIHD) webpage suggests that grazing and corporate grazing:

> Causes pernicious slow, steady harm to land and water; Results in weeds, polluted water, soil erosion. End result is long-term loss of native plants and wildlife, loss of biodiversity (CIHD 2003).

The well-known activist John Marvel holds special irreverent status for many in Owyhee County because of their perception of his personal attack on the state of the land and lifestyles in the Owyhee region, especially with respect to grazing livestock on public lands. Precisely because the lawsuits and actions Marvel has brought to bear on the Owyhee communities are legal, the local residents perceive and feel the impacts directly and substantively. While CIHD aims to hold local people accountable for perceived degradation of a public resource, local residents are affronted at the thought of being the perpetrators of environmental impact to resources they view as their own homes and businesses.

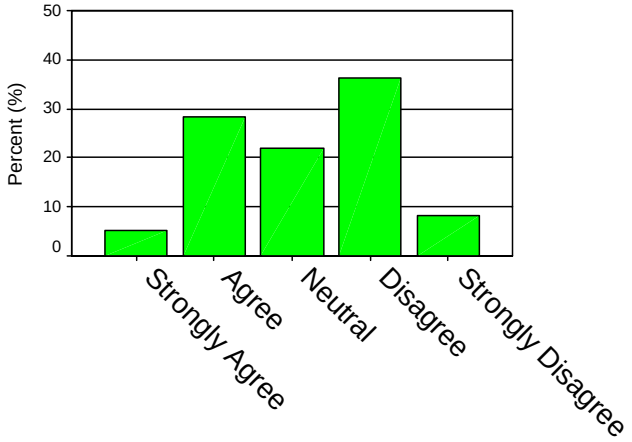
The Increase & Impact of Motorized Recreation. A number of others interviewed consistently emphasized recreational impacts from ATV (all-terrain vehicles) and OHV (off-highway vehicles) as the greatest potential impact and area of concern facing the Owyhee region and landscape. This point of view was nearly universal across all informants. Many respondents also included snowmobiles in this category as the winter-season equivalent, however, snowmobile advocates and enthusiasts argued their environmental impacts were not the same or of the magnitude as with ATVs and motocross bikes because the snowpack buffers the contact with the resources.

While observations in the communities and remote areas of the county provided evidence that a wide spectrum of residents and types of users ride ATVs—including rural and urban, young and old,—a significant contrast exists among local residents' impressions of which ATV users are the culprits for damage on the landscape that has escalated dramatically over the past five years: *the outsiders*. Implicit in many respondents' remarks were the assumptions or characterizations that outsiders were urbanites from north of the river, as if to indicate the river demarcated a symbolic point of intrusion on the landscape that is home for Owyhee residents. These notions are summarized in the following individual's description of the problem:

> We have too many ATVs coming out here from the city. These types of users are the ones damaging the resources. For instance, out at C.J. Strike [Reservoir], I've seen them just go down the hills all over; if the agency or county can't enforce the regulations, they just go anywhere. There's lots of abuses all over the county with circles and hill-climbing. Some organized events have good cooperation to reduce the impact, but as soon as no one's looking, they ride the range just like the cattle.

Interestingly, the quantitative assessment measure used to gauge public levels of interest in this activity yielded mixed results. As shown in Figure 24 a slightly higher proportion

Figure 24. We need more off-road vehicle recreation opportunities on public lands



of respondents indicated at least some level of disagreement with the statement 'We need more off-road vehicle recreation opportunities on public lands' which may indicate the pervasive point of view about the increased impact to the landscape from ATV use. While a full third of respondents did indicate agreement with the notion of more recreational opportunities, this distribution is more evenly distributed than a number of other measures in the assessment, showing greater variation within the overall sample.

Interestingly, data gathered by the Idaho Department of Parks and Recreation (IDPR) on ATV and Snowmobile registration confirms a substantial increase in the number of units, which likely implies increased recreational use. Tables 6 and 7 below document the numbers and percent-change of registrations for Motorbike/ATV and snowmobiles in this region from 1998-2002. The IDPR requires registration of these vehicles. Although IDPR reports these numbers are not absolute, they also estimate a 50% compliance rate for Motorbike/ATV registration (Cook 2003), and much higher for snowmobiles. In essence, these data indicate that the *percentage growth* registration of motorized recreational vehicles in each of these four counties has increased dramatically,

Table 6. Southwest Idaho Motorbike/ATV Registrations By County, 1998-2002.

COUNTY	1998 Registrations	1999 Registrations	2000 Registrations	2001 Registrations	2002 Registrations	1998-2002 % Change
Ada	7,701	9,093	10,397	11,889	13,646	77.20%
Canyon	3,225	3,799	4,473	5,499	6,651	106.20%
Elmore	585	749	872	1,024	1,216	107.90%
Owyhee	241	282	338	393	513	112.90%
Total	**11,752**	**13,923**	**16,080**	**18,805**	**22,026**	**87.40%**

Source: **Cook (2003).**

Table 7. Southwest Idaho Snowmobile Registration By County, 1998-2002.

COUNTY	1998 Registrations	1999 Registrations	2000 Registrations	2001 Registrations	2002 Registrations	1998-2002 % Change
Ada	5,167	5,488	5,690	6,013	6,141	18.90%
Canyon	1,618	1,761	1,814	1,842	2,125	31.30%
Elmore	411	432	480	509	525	27.70%
Owyhee	84	93	102	127	140	66.70%
Total	**7,280**	**7,774**	**8,086**	**8,491**	**8,931**	**22.70%**

Source: **Cook (2003).**

but that the actual numbers of increase within Ada County especially, but also Canyon County, are staggering to consider in such a short time frame. One can only assume that there is a correlated increase in the amount of use of these machines on public lands in southwestern Idaho, but there are no use-data to support this assumption except anecdotal observations.

The above results related to ATV use from the quantitative assessment, combined with the Idaho Department of Parks and Recreation data on ATV registration, suggest that the emphases and multiple viewpoints expressed by many of those interviewed are grounded empirically. However, when we consider data from Figure 9 (p. 21) and Figure 24 (p. 42), we observe somewhat divergent trends that many local residents of this

four-county region perceive less impact from livestock grazing than from ATV/OHV use on public lands. The vast increase in registration and use of the latter confirms this perspective.

Community Involvement with Resource Planning

Many who live in the Owyhee County area share a strong sense of independence and attachment related to the remote and often unforgiving landscape. Given that previous research has documented the strong sense of place often articulated by rural community residents in a variety of settings throughout the West (see Keiter 1998), as well as other locales (see Vitek and Jackson 1996), this raises the question of whether the Owyhee sense of independence and attachment is unique? If not, is it part of a significant pattern reflecting community-level impacts and change within the region? Although answers to these questions could vary according to one's theoretical perspective, this analytical section provides evidence to suggest that, *at least with respect to resource management and planning*, several conditions and characteristics of the Owyhee communities and residents co-exist to create *the perception of a unique landscape and community situation*.

From local perspectives, the important question and essential threat to social structures in the Owyhee region is the control over resource-planning and decision-making. This sense of control appears to manifest itself in at least two primary ways—both of which affect the opportunities and quality of life of local people in this region. First, the negotiation of federal decisions and policy of public land-use remains a set of contested issues often on the minds and part of the daily activities of local people.

Second, in addition to the long-term and more familiar context of the first point (federal land-use policy), many perceive the intrusion of special interests, newcomers, and non-local user groups as the futuristic picture of resource control and planning. Coupled with this is the strong sense of community and attachment associated with most Owyhee County communities, as documented by Harp and Rimbey (1999)

No History, No Future?

The open space and range resources so plentiful in the Owyhee region have always served as a natural asset. The grass, soil, water, and wildlife have enabled life and livelihood in this landscape, in spite of the often harsh level of conditions. For settlers as well as current residents, the historical characterization of the Owyhee landscape as foreboding mistakenly defines life as unmanageable or a struggle with questionable return value. During the recent 125th Anniversary meeting of the Owyhee Cattleman's Association held annually in Silver City, a commemorative oral history presentation emphasized the local perspective of life in the Owyhee region:

> People often say we live without a history and we have no future here. The first cattle migration opened up this country in 1843. The legacy of the Owyhees is continued by everyone here today. In the early days, they used to say you had to have enough cattle to be respectable, and enough sheep to make a living after the hard winter of [18]'88 when we lost a lot of cattle and the Irish, Scottish, and Basque migrated here with all the sheep. Generations later, we really came of age—after the railroad, the [Taylor] Grazing Act, and the age of the acronym[8]—to help get the Sagebrush Rebellion started. When the newspapers used to report about that, they'd list those represented or in attendance as New Mexico, Wyoming, Nevada, and Owyhee County! Some things haven't changed out here much: what affects one of us affects us all, and we're all just trying to make a living around here (Hanley 2003).

[8] By the "age of the acronym", the presenter referred to the era of change in the BLM and federal land management during the 1970s and 1980s discussed above on pp. 17 - 22.

This passage illustrates much about the color and character of life in the Owyhee region by illustrating a will to battle the odds, confront setback, and persevere. These qualities, more than most, define the sense of community commonly described in the area.

The above description also highlights the importance of how integral the resource planning process is to the very nature and essence of community in this place. Resource management decisions regardless of who makes them, affect local patterns and ways of doing things. This direct significance, however, is precisely why it matters a great deal to local people who makes resource management decisions. In many cases, it makes sense to people in local communities to have the chance to make the decisions of local relevance (Snow 1997). In other words, those policies, regulations, or management schemes applicable to a region or locality arguably affect that regional or local population more, as well as more directly, than others not local to the place. This is the reason and basis for local people in rural communities surrounded by public lands often asserting their claims to management, "ownership," and/or rights to the resources. Because it affects them substantively, is part of the local landscape, and requires management, it logically follows those who live there could provide the most relevant knowledge for decision capacities. The Experimental Stewardship Program, mandated under Section 12 of the Public Rangeland Improvement Act (PRIA, 43 USC 1901, PL 95-514) is an example of an attempt from a previous era to involve local people in federal land planning at the local level (U.S. Congress 1978).

The perspective described here, is not an academic argument for or against the idea of local control (Krannich and Smith 1998). Our point is merely to stress the source of such perspectives is not wholly political, nor is it a bias. Ironically in fact, the

perspective of local control should seem quite familiar, albeit a different structure and context, to many who do not live proximate to large tracts of public land. For those who live in and around primarily privately owned resources, their existence and regulatory structure is quite locally-controlled relative to communities surrounded by public lands. With some comparative perspective in mind then, it might seem quite normal for those in the Owyhee region, as well as many western community settings, to define the needs and wants of their community in the context of control of their own surroundings. The idea of local control, in other words, is not an aberration among remote rural westerners, often labeled as radical for those positions.

Many who live and work in the Owyhee region see their existence there not so much of a struggle as a delicate balance between political decision-making, the weather, economic markets at multiple levels, and increasingly, the whims of the recreationists and other non-local visitors who "leave the occasional gate open, or vandalize remote cow camps." One individual made it known during his interview that he'd lost 6 head of cattle that spring as a result a single gate left open by an unknown, but likely visitor. Who can replace those animals as an investment? Who is responsible for the loss? What is a land-owner to do given appropriate fencing, etc., but one's crop walks off due to carelessness from what, in some instances at least, amounts to an absentee owner dropping by for a visit.

Most individuals we talked with who owned or worked the land were particularly careful to *not overgeneralize* with respect to impacts from visitors. Despite the fact that these impacts produce anxiety and a significant feeling of lost control among the local population, almost universally the "problem" visitors are considered the minority, "a few

bad apples," or described as the ones "you know you'll always have a few of them in any crowd." Impacts attributed to these types of individuals range from open gates, to vandalism, to garbage left behind. One interviewee relayed this story:

> Well, we always used to leave the cow camps open you know. They'd just be unlocked in case someone was up there in a snowstorm or had some emergency—you know the weather that happens in this kind of country out here. The honest folks would just get in there and leave it that way. Then last winter, we never were up there because that year we didn't have any need to and found out this spring they'd taken the whole kitchen. People come out here and just have this perception that it's ALL public land, which it's not, and that they can do whatever they want on public land. So, they do whatever they want, wherever they want.

This type of impact, small as it may seem in isolation of its context and other related incidents, characterizes much of how local people in the Owyhee region feel a loss of control manifests within their communities and their own lives. They work within a system of federal, state, and local laws, not all of which are clear to all the passersby that seek freedom and a lack of constraint to explore the wild. Another individual put all these issues in the context of his relationship with the BLM in order to provide an illustration of how the effects translate into practical impacts:

> There's a tremendous increase in how many people are coming out here. I'd say it's doubled in the past couple years. Most of them are pleasant people and get along well with others. Some of them even understand this concept that we're trying to make a living off this land. Usually, they shut the gates and contact you if they find one of your animals with a broken leg. But twice, just this year, I've had gates left open, and cows get out. I could be just sittin' here doing nothing and not even know, just depending on whether they understand how the ranch works or not. But how could they? The BLM is understanding about the impacts from open-gates, but no one can change the impacts once the damage is done or our cows are gone.

Many of the private landowners in Owyhee County that lease public land also consider the resource "theirs" with respect to stewardship as well as 'rights' to decision-

making and management. This perspective has several important aspects. First, local concepts of stewardship about the land and surrounding environment are both individualized and collective. By this, we mean land owners and operators, or lessees as the case may be, approach the land around them that they use with experiential and local knowledge about how to take care of it. In the Owyhee region, however, group work—for branding, rounding up livestock, search & rescue, etc.—still dominates the minds of many people such that they perceive a level of local oversight and 'peer review' helps ensure good practices on the land.

A related second point is that fending for oneself and for family is not only accepted and taken-for-granted within Owyhee County's local culture, but also remains a source of significant pride and respect. Those interviewed often emphasized tradition and heritage to make the point of how this relates to autonomy, free-will, and decision-making:

> If you choose this life, it's obviously not to make a lot of money. And you kind of know it, that except some help from your neighbors, you're pretty much on your own out here. Three generations before us in my family have run cattle here. They did a decent job and we're just trying to keep that up.

This point relates to control and involvement with resource planning because, here, the land is part of the community in a way that local people understand how land-management decisions affect their long-term viability. In some respects, the communities of this region existed before the regulatory structure that now governs their lives. They are a proud people to transcend the latter by virtue of their history.

The third and final point with regard to stewardship, "rights" to the land, and the relationship with involvement in resource planning results from the ambiguity of

language and law that changes and gets continually reinterpreted over time. Several ranchers noted their 'preference rights' on certain public lands established in the 1950s from which the concept of split estates developed. This in turn led to a local understanding that the federal government owns what is below ground and the operator owns what is above ground. Similarly, the recent *Hage v. United States* legal battle has been used to bring attention to contested questions of ownership and property rights related to some public lands in Owyhee County. The Hage case put the question of 'what property rights do ranchers own on their grazing allotments?' before the US Court of Federal Claims. The following excerpt from the ruling judge's opinion described this issue of 'takings' with the following:

> 'The Government cannot deny citizens access to their vested water rights without providing a way for them to divert that water to another beneficial purpose if one exists. The Government cannot cancel a grazing permit and then prohibit the plaintiffs from accessing the water to redirect it to another place of valid beneficial use. The plaintiffs have a right to go onto the land and divert the water.' (Bedford, 2002, p. 7).

Although this case is no doubt significant with regard to 'takings', the court also ruled against Hage's surface claims.[9]

A relatively recent debate about public lands within Owyhee County coalesced local efforts in a contemporary case of maintaining or losing control over rights and uses associated with public land status. In November 2000, on the heels of President Clinton's twelve-fold expansion of the acreage of Idaho's only National Monument—Craters of the Moon—a coalition of conservation groups from southern Idaho made a final push to lobby the President for an additional national monument designation (*Capital Press*

[9] The County also references another legal case of Cliff Gardner in Nye County in which the Ninth Circuit Court of Appeals ruled that the United States does own the land (Owyhee County 2003, p. 1).

2000). One report (conducted by the Owyhee-Bruneau Canyonlands Coalition who supported the designation) cited 80% of Idahoans supported the monument (Nokkentved 2000).

Had the Order gone forward, up to 2.7 million acres, all within and constituting over one-half of Owyhee County in the Owyhee-Bruneau canyonlands area, could have been designated as a national monument with restrictive uses similar to the Grand Staircase-Escalante National Monument that still catalyzes criticism and resentment among local communities in southern Utah (Nijhuis 2003). This case, often cited as a high point in public involvement and activism among people from and within Owyhee County, catalyzed the largely motorized-vehicle use special interest group known as 'People for the Owyhees'. The debate also sparked the Owyhee County Commission to formulate "the Owyhee Initiative" detailed in the next section due to the current, innovative, and substantive expression of public lands policy and management it seeks to pioneer.

The Owyhee Initiative

The Frontier of Collaboration? Two years ago, the Owyhee County Commission brought a vision of change into action for how a local collaborative working group could implement decision-making regarding federal lands surrounding their communities. That effort is the Owyhee Initiative (OI), currently peaking in its effort to find balance and compromise among a set of diverse constituent representatives. Although the OI has its naysayers, hardly anyone could disagree that it has offered a new model and forum in hope of resolving long-term conflict over public lands management.

In a similar vein to collaborative groups forming in different regions of the West to address natural resources management conflicts (Wondolleck and Yaffee 2000), the Owyhee County Commission proactively convened the OI to:

> Develop and implement a landscape-scale program in Owyhee County that preserves the natural processes that create and maintain a functioning, unfragmented landscape supporting and sustaining a flourishing community of human, plant, and animal life, that provides for economic stability by preserving livestock grazing as an economically viable use, and that provides for the protection of cultural resources.

The working group now includes representatives from the following entities and organizations: the US Air Force; The Nature Conservancy; Idaho Conservation League; Sierra Club; The Wilderness Society; Owyhee Borderlands Trust; Owyhee Cattleman's Association; People for the Owyhees; Idaho Outfitters and Guides Association; Owyhee County Commissioners; Owyhee Soil Conservation District; staff from Senator Mike Crapo's office (ID) and the BLM offices; and chairperson, Fred Grant (Beeson 2003).

Much of the actual substantive work of the Initiative has revolved around a proposal to accomplish two interlinked and complimentary objectives:

1) to negotiate a fixed number of acres and particular areas, long under restriction as Wilderness Study Areas (WSAs) within the BLM management, that would be promptly and permanently designated as wilderness with standard restrictions; and

2) to 'release' the remaining WSAs as such and allow multiple use in these areas while protecting ranching interests from repeated lawsuits and arbitrary grazing restrictions they currently feel threatened by within the current management system.

The final number of acres decided upon as wilderness is not yet set; however, the total could range up to 450,000 (Grant 2003).

In addition to the initial resolve of the contested wilderness lands in Owyhee County, the OI would also establish a Scientific Review Team whereby the collaborative

process could provide objective, independent scientific review of proposed BLM decisions under guidelines set by representatives from the Initiative. If the BLM chooses not to follow the advisory decision of the scientific review panel, the agency must explain why (Grant 2003). Additionally, the OI would also establish more managed control of public lands uses via the following: a research center; enforced management of OHV/ATVs; additional funding for local law enforcement; funding for search and rescue; an ongoing Work Group as a Board of Directors for the OI; and protection of grazing in designated wilderness.

The list of "improvements" noted above would substantially address many of the issues already outlined in this report as concerns among the elected officials, residents, and special interests of the Owyhee region. Based on that accomplishment alone, the OI is a concerted effort that deserves reckoning. Whether or not we label the OI as unique, innovative, or successful pales in comparison to the energy and symbolic interaction it has created for, within, and about the Owyhee region. The collaboration and compromise, albeit not perfect, static, or finally resolved in full, indicates the magnitude of cooperation that this landscape commands. The remainder of this section details different interpretations and descriptions of the opportunities and costs associated with the OI from local perspectives.

Staying in Business, or Selling Out? Many of those still ranching or working on the land in Owyhee County have worried a great deal about the OI. Some long-time residents of the County that have lived through different management regimes within the BLM and seen changes come and go are not yet sold on the idea that the collaboration will hold together long-term:

> Well, that Owyhee Initiative…..Seems like some good things could come of it. They're saying to turn several hundred thousand acres to wilderness. But these collaborations have never worked here in the past. Whenever we compromise, it's always *our* compromise in *our* territory. In some ways, this puts all the Ag industry secondary to people's other interests. Who's going to grow their food?

Others emphasize the pattern many who work with livestock on public lands feel continues to plague them from conservation or environmental interests. Describing the Initiative, one who stands to be directly affected had this to say:

> It is better than what we were going to get, but I still feel it is leaning toward the left wingers. They are trying too hard to appease them I think. They are still going to make it tough for the cattleman to operate with full numbers it looks to me. It is going to be too easy for someone to holler and get the rights cut down some more, which in order to get everything set up, that is what they do (Beeson, 2003, p.8).

On the other end of the spectrum, some landowners and livestock operators are more optimistic. If implemented, the Initiative would free ranchers' abilities to make range improvements many believe are essential to a healthy range ecosystem. At a recent address to a group of cattleman, the chair of the OI emphasized this point:

> The Board of Commissioners presented testimony in Congress within the past year pointing out how the 'no-action agreement' of wilderness study areas crippled the ranchers plagued with them in their allotments. The draft proposal now would free those study areas for proper grazing management and for multiple use (Grant 2003).

Similarly, many OI representatives have found each other not to be the enemies they thought they were:

> When we started meeting, there was a lot of tension—and there still is some times because we just don't agree on everything. But now, we've gotten to know one another a bit more, and in a lot of cases, we realize that what we want is a lot of the same things. Basically, we all want to take care of the land.

Others have been highly critical of some of the process and results of the OI. For

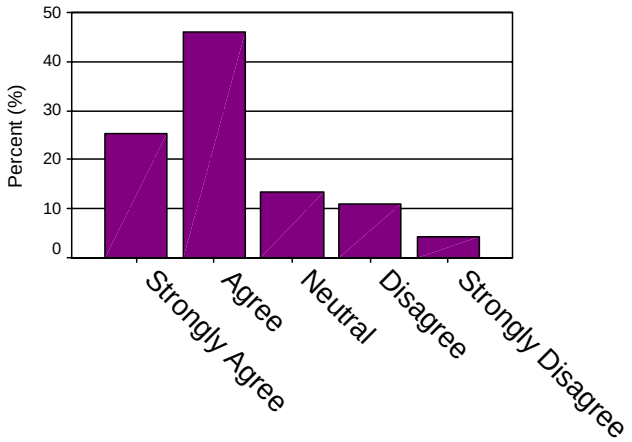
instance, this excerpt from a recent letter to the editor in the local newspaper emphasizes the complex social and community issues associated with collaborative working groups:

> It concerns me that decisions about the future of the Owyhees will be made without the knowledge and consent of the majority of the residents of this county and the state. Yes, the Owyhee Initiative Workgroup meetings are public….but has anyone ever seen a public notice for the meetings? A process that is going to dictate use in the Owyhees should invite public comment. I fear that many users are going to wake up one day to find locked gates and 'keep out' signs on public land they they have responsibly used for generations, and wonder how this could have happened without their knowledge.

This passage raises an interesting set of questions about representation and decision-making. Assuming "consensus" as he has noted before, Senator Mike Crapo (ID) intends to sponsor Congressional legislation that would implement the Owyhee Initiative, with that process beginning as early as this fall. However, some we interviewed said it remains unclear whether 'consensus' will be considered full-consensus only, or if 'most' representatives and broad support will suffice.

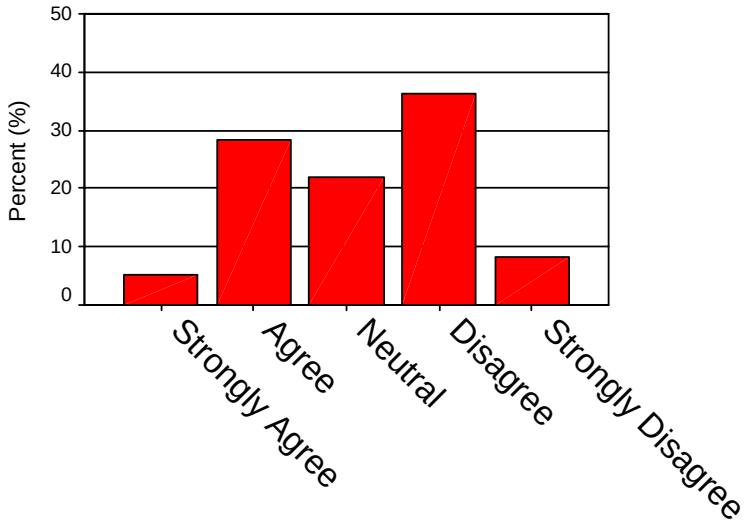
Figure 25 illustrates results from another measure asked of respondents in the quantitative assessment about whether Idaho already has enough legally-designated

Figure 25. We have enough legally-designated wilderness areas in Idaho



wilderness areas. By the distribution of response in Figure 25, a substantial proportion of respondents indicated at least some level of agreement, implying reservation about additional designation. This result suggests support for wilderness among the population in the southwestern corner of Idaho is mixed at best. In a related measure, Figure 26 shows a similar pattern, although not quite as strong, with respect to levels of agreement about wildlife protection in Idaho.

Figure 26. We have enough wildlife protection in Idaho



Symbolically, the OI has promoted the standard to full-consensus. However, recent indicators suggest one group in particular—motorized recreation (represented by the People for the Owyhees)—is not in agreement with the current form of the proposal. The representative for that coalition organization (originally formed to oppose Clinton's proposal for a national monument in Owyhee County) has been the solitary 'no vote' on recent opinions taken from the Workgroup which intended to produce a final proposal during the late summer this year. Several people we interviewed indicated they feel

members of the community have been betrayed because they were led to think the process would only operate on full-consensus, but now appears to still be moving forward despite the lack of alliance between all the represented groups. One individual, who is not an OI representative, but sympathizes with the dissenting vote, argued that local constituents are giving too much to the other interests represented on the Committee:

> The Initiative is rubbing some people the wrong way. It's becoming a big problem. The Enviro's are just getting their way, but we're getting blamed for 'not cooperating'. We just don't believe in Wilderness, but it looks like people are going to just take that, which is disappointing.

In contrast, others have publicly stated the amount of effort and cooperation exemplified by how well the process *has held together* for two years now is indicative of substantial and unprecedented progress, translating to less conflict and better policy and management by asserting local control. Most agree that in the end, the success of the Owyhee Initiative will rest on the ability of the County Commission and involved constituents to follow through, as they perceive this phase is when other similar efforts have fallen apart.

Changing Perceptions of Community and the Landscape

Although the Owyhee Initiative highlights a high-profile example of an era of change from "how things have always been," the Initiative is also a symptom of a larger pattern of change occurring on an everyday level within the region. The collaborative Initiative effort symbolizes the rise and fall of new and old social relationships. Simultaneously, the effort has catalyzed the need for new and ongoing discussion about the future and sustainability of community for this region as the numbers of in-migrants continue to increase.

Ranch Consolidation, Community Subdivision

Within discussions about changes happening within the region regarding both the surrounding natural environment as well as the communities, interviewees described two divergent yet related patterns. The first trend focused on changes within ranching communities and families, and largely emphasized the pattern of consolidation some see occurring, but many more fear is on the horizon at a new level. The second trend focused on the combination of changes associated with land development, residential growth, and affects to the longstanding social structures many find so familiar.

For most interviewed in the Owyhee region, describing changes to ranches, farms, or other similar uses of the land did not come easy. In fact, such change often stimulated emotions of sadness, despair, and/or frustration. Many face the difficult question of how to reconcile the expectations that honest hard work should be sufficient to make a living with many of the external forces such as outside interest groups and federal land management policies perceived to directly or indirectly constrain their opportunities.

Along these lines, the emotions associated with a threat to the loss of one's livelihood induce social-psychological impacts. For some these transitions may occur in a manner that evolves into positive opportunities. One former farmer described his personal change in the context of the trend happening within the community area:

> Farming is going corporate—just getting bigger and bigger. You have to get huge or get out. Staying in farming, if you can, is just survival and I didn't want to do that. I want a return on my investment so I don't have to be frustrated with my quality of life. Some people love farming so much they don't want to do anything else, no matter how bad it pays. Some are also scared because they don't think they *could* do anything else. To those kinds of farmers, the land is not just dirt—it's alive; the farm is their friend. When I sold my farm, I wanted people to know I was just making

> a change and accepting a new challenge. Even though we have all this growth in the County, our main economic base is still agriculture here. Times are tough with the prices where they are, so I'm not sure it could get any worse.

Equally true, however, seems to be the case where change may not be welcome or desired. For a number of ranchers in particular, changes in the land available for them to use has manifested itself in at least two distinct ways. Some interviewed referred to the first of these as a change or "loss" of permits they or their families have traditionally held on BLM lands. By change or "loss" here, we mean either non-renewal of a grazing permit once held, or in many cases, a new restriction to an old permit that has a significant effect on the local operator and how livestock are managed in a given area. A few cases of this type of loss are well-known in this community area and are the source of worry and concern at a collective level because of how many perceive the pattern to illustrate a changing orientation within the BLM as the primary management agency.

The second distinct way ranchers have experienced change is via land consolidation. While it may not suit this phenomenon to call it a trend or pattern pervasive in the local area, many fear it could become so as evidenced by the decline of numbers of farms and ranches as well as increases in the average size of farms and ranches in recent decades. Many in the communities in Owyhee County discussed several cases of ranch consolidation they had experienced or perhaps heard about from neighbors, friends, and family. One rancher put his observations bluntly:

> We keep just having to buy more and more as we go. We can't keep doing that forever. We've got to be able to still pay the bills on our debt load, so we need to get more land, so we can run more cows. It's simple—you have to have 'X' amount of cows to pay your bills, and you know what that number is. With the changes the BLM has been making on us, we have to get more land to stay at that same number of head of cattle. They also change the grazing periods on us by makin' 'em shorter,

> so that can mean you have to get even more land still to keep the same AUM level you're at with your ranch. Then, once we get all this land, we can't keep it all up, and it's getting harder and harder to find decent help for that. So it just keeps getting bigger and bigger, and it feels like it's going to reach a point where we can't manage it anymore. Then what do we do?

This passage represents a sentiment of confusion and frustration about the future of the ranching industry. Many local operators perceive the potential need for consolidation as unsustainable and ultimately, a threat to their livelihood. Meanwhile, individuals in the Owyhee region continue to adapt in order to maintain their operations, but often describe the collective plight of the industry in negative and pessimistic, if not bitter, terms.

It should be noted that the trend to fewer ranches and running more livestock on more land, is not something that is specific to only Owyhee County, Idaho. USDA figures reveal the trend is true in Idaho, other western states, as well as the nation overall. The number of people involved in agriculture is shrinking and the number of livestock and, and the amount of land per farm is increasing. Precisely because many are aware of these consolidation trends in other regions that have large allotments of public lands, the anxiety from anticipation of whether they have to follow the same path becomes a measurable impact in the present.

Perhaps unrelated to the consolidation of large landholdings described above, an equally notable trend occurring across the region is ex-urban development. Compared with the likes of Las Vegas, NV, Denver, CO, or Phoenix, AZ (Howe et al. 1997; Jenkins 2003; Vesbach 2003), one hesitates to label the Boise metropolitan area and its outstretched ex-urban fingers now surfacing on the northern rim of Owyhee County as sprawl (Knight et al. 2002; Rome 2001). However, growth and development are relative to time, space, and context, such that the *rate of change* may make as much impact as the

material changes occurring on a landscape (Krannich and Greider 1984; Wilkinson et al. 1982). And by all accounts, the rate of change in northern Owyhee County has escalated dramatically in the past five years.

Although different interviewees described the pattern in different ways, a constant message within all the interviews emphasized the perceived impacts associated with residential growth to the communities. In addition, many described this pattern in conjunction with and related to the widespread increase of those coming to the Owyhee region to recreate. The perception exists within the Owyhee region, that with the increase in recreation on the part of urban outsiders, those outsiders adopt the notion to relocate to the area in order to benefit from the quality of life in a rural or ex-urban environment. One local elected official expounded upon this point of view:

> This rapid growth has become a huge issue for our County. We're starting to see subdivisions in our communities that were once considered rural and far away from the city. Some are coming out here to get out of the city, but there's lots of newcomers that locate here because it's less expensive and more affordable as an all-around cost-of-living. We have all kinds of opportunities for people to volunteer and get involved in things, but many of them seem to have individualistic patterns, and because so many of them commute to work in Boise, lots of them *don't have time to get involved* in the community they now live in.

Long-term residents of the region that were interviewed often stressed how these immigration patterns continue to affect social structures in the local communities:

> This growth hasn't even gotten out of control yet, but the County is already having trouble meeting all the demands for services like garbage pickup, resources at the schools, and emergency needs. You see the change too, because you used to know all the kids at the school, and their families. But now, there are more and more people in town, at the schools, the grocery, the post office and other places—just folks that I've never even seen before. It's hard for some of them to integrate here. Without roots here, it can be hard to become part of the social fabric.

Local officials, such as the County Commission, have begun addressing this rapid change

with Planning & Zoning efforts, which many accept as needed, but others resist in principle. One long-term resident of Owyhee County explained how this effort has caused some local friction:

> I'd say 80% of the people around here don't even want planning and zoning because they think it's going to infringe on their personal property rights. Maybe they'll change their minds when all of a sudden they're surrounded by an unplanned subdivision that doesn't have any regulations. We can't afford that kind of thing anyway. We've got to protect our land base because a third of our tax base is from ranching here. We can't just ignore that or let it wither away. But the people are just going to keep moving out here too. We can't stop that train, so we've got to figure out a way to control it.

By focusing on the dilemmas of controlling rapid residential in-migration, local interviewees also emphasized the expectation that their surrounding environment would suffer as a result of the combined increase in development and recreation (Theobald et al. 1997). Huntsinger (2002, p 84) summarized well the situation many perceive as Owyhee County's present and future:

> As a landscape becomes more residential and less rural, conflicts with neighbors may add to the costs and frustrations with ranching. Trespass by people and pets, complaints about agricultural activities, negative car/animal interactions—all can impinge on the rancher's livelihood. Urbanization makes ranching more difficult, and it also affects the outlook of ranchers (*footnoting Ellickson 1991 in original*).

Social Impacts to Family, Community, and Identity

The changes and difficult situations discussed above cumulatively add to significant effects to family, community, and identity. While some ecocentric groups outwardly define their primary interests and goals as the natural non-human world, ignoring our own role(s), need(s), and place on the landscapes seems misguided if not naïve. Arguments aside about whether we have to choose between cows or condominiums, the

human race continues to do its share of damage to our own nest (Knight 2002). Ironically, in the Owyhee region, extreme traditional and conservative values coexist with the action and intent to set aside, in designated Wilderness, segments of resources that intuitively impact who they are and what makes up their daily lives. Regardless of the motivations, something undeniably personal is at stake and under negotiation in the Owyhees. This final section of the report outlines a set of impacts to the human communities and well-being in the Owyhee region deserving consideration from all.

Family is an entity amidst all the change in the Owyhee region that has not escaped impact. As in many rural areas, tensions exist in these communities between grandparents, parents, and *their* children about whether the latter can and will take over the family ranch or farm. At one community celebration, our interview questions sparked a significant, and apparently ongoing, debate between these three generations of one family, with the eldest scolding the two younger generations for not having changed careers and lifestyles *away from* ranching because of how tough it has become to start or maintain a ranch within the regulations and boundaries of the law. The younger generations' decisions to continue ranching, however, occurs in the context of the strength of those values within the local community to preserve this way of life as a healthy pattern for humans and the range. This local community intuitively understands the limits in the economics of ranching.

Another family situation exposed during the interviews illustrated how the chronic negative stress suffered by the parents from changes in public land grazing permits, litigation, and the looming threat that the economic tide may turn on their operation has negatively affected their children's outlook on the ranch as an option for

their future. One of the parents expressed these points:

> Our ranch and this place you see here is not just our business—it's our home and our collective heart too. But our kids grew up in this house, and even though they've helped us everyday, they had to grow up listening to all this anger and frustration about who we are and what we do—sometimes it was us being upset with one another, which was not good for them to see, you know, as their own parents, but usually it was both of us just being so strung out by the agency [BLM] for the past fifteen years. I mean, THAT has been their life—almost the entirety of it—seeing us fighting with the BLM and almost always losing. What would you think if that's all you saw and heard everyday? You wouldn't want to take over the family ranch either. Even though they have some of their own cows, it's just for cash; they don't want to do this for a living. They want out of here. It hurts us, but we can't hardly blame them.

Emotionally, this type of effect within the family and community was often difficult for interviewees to explain because it causes embarrassment and shame for many to highlight the negativity, fatalism, and feeling of defeat. The seriousness and magnitude of the feelings, however, helped some individuals overcome the reservation to disclose these impacts.

Another level of impact related to the stress of these changes occurs when individuals or families have to confront the bottom line of their operation's economics. But true to what seems to matter most in the Owyhee region, this rancher explained to me that it's not really a question of money, even when things have become unsustaining:

> I remember in '94 when we went up to Babbitt's land management hearings in Boise. They held that meeting on the 50th anniversary of the invasion of Normandy, which some of our community's ancestors here died in that battle. They died in vain so that we could have our freedom here. Have a chance to make something of our lives, even though it's kind of tough in Owyhee County. But this isn't really about dollars and cents anymore. We've gone past the point of good business practice and knowing when to quit. Our cause and reason to be here is much greater than the business end of our operation. I have an obligation to my children and grandkids to leave them something good, to leave them the land in better shape, *so that I can pass it on*. It seems odd that I know now I'll go broke doing this because I've worked hard all my life out here,

> trying to make an honest living. I may go broke. But that doesn't upset me—it's about exposing my kids to a set of values that go beyond their needs and wants.

As this account illustrates, the ties and challenges between the social community and the landscape run deep. In that way, which extends beyond economic rationality perhaps, local attitudes and behavior illustrate a pattern some outsiders seem to mischaracterize as a lack of stewardship and a lack of willingness to change. The change that would be required would be to leave behind one's culture, one's livelihood, and one's identity.

Others we interviewed alluded to some of these same types of effects, but explained them more in the context of community morale and a loss of cohesion. This individual despairingly offered the following:

> This community continues to get more and more alienated. If the ranchers here aren't making any money—and they're not—then no one is. The grocery store, gas station, and restaurant here—they're all hurting. Cows are our main crop, and prices have been down. I've seen some have to get out of the business and I don't like what I see that it's doing to them. They've turned angry and don't know how to deal with it. Ranch communities are at risk for becoming dysfunctional places now where we turn on our own just like in the ghettos. I see more abuse, more alcoholism—all those same things that happened to the forest-dependent communities. We're not the healthy community we were 20 years ago. You can't see a future for children here. We're hanging on now, but our industry is hurting and some don't even see how they'll be able to retire after a full life of hard work.

As a final illustration, we return to the Owyhee Initiative as a symbol of the crossroads facing the communities and natural resources in the Owyhee region. Much of the time and energy of the community, as a whole, has gone into this effort, and to date not every individual is yet satisfied. In fact, in the middle of this past summer, our observations indicate an increase of private and informal discussions to negotiate the home stretch of the proposal occurred and increased the anxiety of some anticipating its resolution and

how that may or may not carve out the next chapter of effects in local lives as described above. At the recent Owyhee Cattleman's Association meeting in Silver City, one longtime rancher in Owyhee County summarized his thoughts while the community listened:

> I've heard two of my friends, who have long opposed Wilderness, stand here today and support what's going on around us [the Owyhee Initiative]. If those two guys even support *one acre* of Wilderness, there's got to be something right going on with that Owyhee Initiative. Maybe all those people we're fighting aren't the same enemies we thought they were. We're still not going to agree on *everything;* but if *not* the Initiative, then *WHAT*? We're changing fast. We can't sustain this fight for another 11 years. Our community needs this now. It's strange for me to say that, but maybe this is what we ought to do.

Even though the Initiative symbolizes substantial change that makes many uncomfortable —even some of its supporters—it appears to be a forward-looking community-based solution and a marked improvement over the conflict so many long to get away from.

SUMMARY AND CONCLUSION

The Land-use and Management Plan (Owyhee County 2003, p. 1) published by the County summarizes the essence of what the place and people of the Owyhee region are about:

> The custom and culture of the County includes the determination of its people. Life was never easy for the settlers of the County. This is a land in which nature plays the upper hand. Water is scarce and access is difficult. The settling developers of this land worked hard to establish their livelihood, and today's residents work hard to maintain their livelihood. The settling developers were diligent in pursuing legal protection of their property rights. Today's residents continue with that diligence.

Owyhee's roots that helped seed the Sagebrush Rebellion are alive, well, and responsive to the actions of 'outsiders' perceived to threaten the local patterns and ways of life.

Long-term Owyhee residents aim to be involved and will likely be creative to ensure that possibility.

New recreational scars on the landscape from a largely affluent and predominantly in-migrating urban population have begun to change the social structure of Owyhee County. Clashes over the old and the new will remain, but high levels of visitation have already motivated changes in local perceptions in everything from planning and zoning, to the local economic base, to how well you can depend on your neighbors. This worries long-term residents because they know those patterns can often make the difference for people in a constrained rural environment.

Owyhee residents should not be categorically characterized as resistant to change. Rather, they will stand up and assert their rights, values, and beliefs no matter who they perceive as the foe. One interviewee highlighted the paradoxical irony that much of the recent conflict faced in this region has had for the community:

> Our young people have a center, a resourcefulness, and a perseverance you don't see in every community. Producing food is a fundamentally good thing to do. It used to pull us together and add to our cohesion. This fight—some days I don't know who we're fighting: Marvel, the BLM, or each other—but this fight has also helped unify this community against who or whatever it is. And that's a good thing, because without it, we never would have been unified. We just needed a common enemy. And to be truthful, in each person's plight in dealing with this, there's worry about whether it'll all go bad, but we've got to try do something. Ranch people believe that the future will work out ok. We've been at this a long time.

As evidenced here, change rarely comes easy. But as the Owyhee region continues to experience change at a rapid rate, even it's vast landscape may begin to feel constrained to those who like to wander or work within it. It's people, no doubt, will find a way to carry on.

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Regional Economic Impact Model of Owyhee County, Idaho and the Four County Area Including Ada, Canyon, Elmore, and Owyhee Counties

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Background

A socio-economic study of Owyhee County was completed in 1998-1999 (Rimbey, et al. 1999; Harp and Rimbey 1999; Darden, et al. 1999), and information derived in that analysis was used in the Owyhee Resource Area Draft Resource Management Plan (ORMP). The county level economic impact analysis of the earlier study answered many questions about the economic structure of Owyhee County and potential economic impacts resulting from changing public land forage allocations. Owyhee County is located in the Southwestern corner of the state, bordering Elko County, Nevada and Malheur County, Oregon. The county spans over 4.9 million acres with approximately 83% managed by federal or state government agencies and 17% private and tribal owned lands.

The population of the county has grown approximately 2.6% per year from 1991 to 2000 while the state of Idaho's population grew at 2.5% per year over the same time period. Both the state and Owyhee County's population grew approximately 25% between 1991 to 2000. Due to this growth in population and various other factors, much has changed in Owyhee County since the first study was completed and is reflected in the new economic impact model of the county. The biggest change in the economy came in 1999. In the wake of a decline in gold prices Kinross Gold Corporation closed its DeLamar and Stone Creek Mines. Following the closure, the mining industry in Owyhee County lost approximately 180 jobs (150 from DeLamar itself) and over $17 million in output. Although only 6% of the total employment and output in the county, the mining industry at one time had also provided a fiscal boost to the state and county coffers

garnering a 2% mining license tax on the value of ores extracted as well as Ad Valorem taxes and royalties from payments to the federal government. Other changes to the economy included a boom in the dairy industry resulting in a doubling of output from that sector and an increase in the manufacturing production in the county.

Methods and Procedures

Model Construction

Input-output models for Owyhee County and the four county region, including Ada, Canyon, Elmore, and Owyhee counties, were developed using the microcomputer IMPLAN model. The Micro IMPLAN model was developed by the U.S. Forest Service to estimate sectoral and regional impacts of alternative forest management scenarios (Alward et al. 1989). The update and further development of Micro IMPLAN has been conducted by the Minnesota IMPLAN Group, Inc (1997) and is now available as desktop software. However, before using the IMPLAN software and models, data and matrices should be tested for validity and consistency. In a publication by Holland et al. (1997) several steps are provided that can be used to validate the model and linearly adjust sectoral output and income based upon introduced employment figures.

An input-output model is a mathematical representation of the purchase and sales patterns within a given economy at a point in time. The model estimates total regional economic impacts of exogenous "shocks" to an economy in terms of output, personal income (wages and salaries plus proprietor income), and employment (jobs). Figure 1 shows the basic concepts behind the functioning of a regional economy.

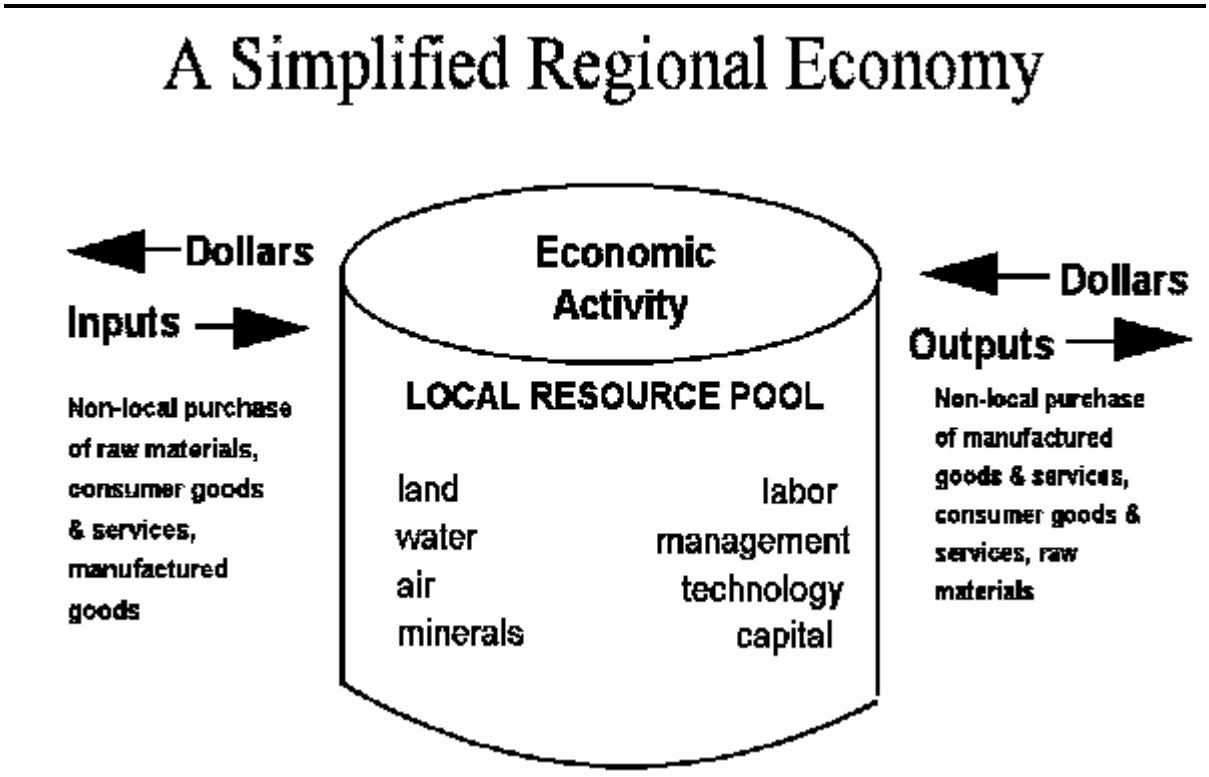

Figure 1. A Simplified Illustration of Flows In and Out of an Economy.

The basic components that make up the input-output model are the employment, output and income generated from each economic sector in the economy. The total employment figures are based on Regional Economic Information System (REIS) data (U.S. Department of Commerce, 2001) and are full or part-time employees of a given sector. The employment values are for jobs not full time equivalents. Sectoral income is derived by the summation of wages and salaries paid to employees plus the proprietors' income, which is also based upon the REIS data. Output is simply the gross sales for non-agricultural industries and gross value of production for agricultural products. The agricultural values of production are based upon a 5-year (1996-2000) average for Owyhee County and each of the four county region's agricultural production from the Idaho Agricultural Statistics Service (IASS, 1993-1997). All output values for non-

agricultural sectors are based upon IMPLAN data adjusted using methods described previously. Tables 1 and 2 list each economic sector of the Owyhee County and 4 County input-output models along with the corresponding employment, output, and income values.

Table 1. Output, Employment and Personal Income, Owyhee County Model 2000.

Sector	Employment	Output	Personal Income
1 Dairy Farm Products	76	$23,194,383	$4,010,796
2 Misc. Livestock	28	$2,784,633	$458,498
3 Range Cattle	235	$23,308,481	$5,429,547
4 Cattle Feedlots	20	$7,715,005	$2,210,728
5 Grains	51	$5,964,599	$984,891
6 Forage Crops	494	$26,895,789	$4,572,562
7 Misc. Crops	151	$17,511,735	$5,250,088
8 Sugar Beets	63	$7,167,485	$1,250,225
9 Ag Services	227	$6,501,637	$2,836,301
10 Mining	4	$479,972	$82,029
11 Construction	251	$28,547,230	$12,293,300
12 Manufacturing	156	$45,730,615	$6,626,364
13 Transportation and Communication	120	$12,261,124	$2,277,678
14 Gas and Electric Services	15	$10,485,643	$1,381,683
15 Irrigation, Sanitation, and Water Serv.	72	$18,896,515	$3,466,995
16 Wholesale Trade	48	$3,080,621	$1,257,856
17 Retail Trade	76	$1,667,722	$741,160
18 Food Stores	156	$7,324,724	$3,937,894
19 Automotive Dealers & Service Stations	69	$2,877,000	$1,160,671
20 Eating & Drinking	157	$4,741,152	$1,429,231
21 F.I.R.E.	20	$19,461,151	$204,198
22 Hotels and Lodging Places	4	$97,096	$33,902
23 Health Care	320	$12,854,758	$6,736,506
24 Services	392	$19,464,840	$9,737,970
Totals	3,205	$309,013,654	$78,371,072

Table 2. Output, Employment, and Income, 4 County Model 2000.

Sector	Employment	Output	Personal Income
1 Dairy Farm Products	558	$118,022,481	$48,029,970
2 Misc. Livestock	316	$12,643,561	$3,148,653
3 Range Cattle	639	$53,315,925	$13,126,974
4 Cattle Feedlots	232	$65,655,011	$20,266,075
5 Grains	622	$40,383,168	$9,368,667
6 Forage Crops	3,098	$94,443,911	$24,701,930
7 Misc. Crops	2,868	$185,071,655	$68,466,910
8 Sugar Beets	516	$42,743,144	$8,931,441
9 Ag Services	4,625	$120,619,740	$50,877,700
10 Mining	191	$18,609,041	$8,004,885
11 Construction	23,482	$3,987,598,539	$1,247,946,500
12 Manufacturing	39,154	$9,405,260,245	$2,569,763,900
13 Transportation and Communication	13,326	$1,453,129,735	$481,456,850
14 Gas and Electric Services	1,182	$684,569,317	$122,387,610
15 Irrigation, Sanitation, and Water Serv.	299	$60,750,437	$17,020,505
16 Wholesale Trade	15,120	$1,601,741,641	$667,822,410
17 Retail Trade	22,658	$790,623,082	$389,517,690
18 Food Stores	9,585	$543,728,595	$323,306,060
19 Automotive Dealers & Service Stations	4,703	$353,404,768	$157,700,231
20 Eating & Drinking	16,663	$558,178,895	$198,838,400
21 F.I.R.E.	24,138	$3,164,523,827	$518,125,200
22 Hotels and Lodging Places	2,637	$124,743,200	$46,956,984
23 Health Care	20,002	$1,525,650,193	$893,373,200
24 Services	64,825	$ 3,217,042,063	$1,520,746,600
Totals	271,439	$25,024,874,951	$9,409,885,345

Using published cost and return studies for agricultural production practices (Rimbey, et al. 1999) and procedures developed by Darden et al. (1999), agricultural budgets were bridged into input-output sectors for this analysis. The purpose of input-output modeling is to capture impacts to regional economies. With that in mind, the substitution of localized production functions and purging of imports, through margining retail purchases, allows for the true regional interaction of those augmented sectors with

other sectors in the economy as explained by Coupal and Holland (1995) and Willis and Holland (1997).

Finally, models were constructed using general econometric practices to create a Leontief input-output model as explained in Miller and Blair (1985). One subtle difference between this model and the previous model built for Owyhee County is that the adjustment for in-commuter income, done in the previous model, was not attempted in this model. In the previous model, Journey to Work data were available for the counties through the Bureau of Economic Analysis (BEA) (U.S. Dept. of Commerce, 2002) by economic sector. In the earlier study, interviews were conducted with local businesses throughout Owyhee County to arrive at estimates of personal income earned in the county along with that flowing out to another county or even state. However, the 2002 BEA data only reports the number of in-commuters and where they are commuting from. Therefore, to keep the two models consistent we did not make adjustments for this outflow of income. There should not be a problem with overestimation of local household spending due to the fact that the basis for IMPLAN's wage and salary income and proprietor's income are derived from BEA income figures which are adjusted for both in-commuters and out-commuters.

Final Demand and Output Requirements

The final demand and output requirements are the basis for the Input-Output model framework. These figures make up the multipliers used to estimate impacts in the models. Appendix B shows the final demand requirements (final demand multipliers) and output requirements (output multipliers) used for the Owyhee County Economic Impact Model while Appendix C shows the requirements for the 4 County Economic

Impact Model. Great care must be taken when using and interpreting the multipliers generated from this type of analysis. To decide which type of multiplier to use, ask the question of whether the impact causes an export sale, sale to final demand, or causes a change in output from the affected sector. For instance if drought reduces the amount of water available for irrigation and therefore reduces hay production by one ton per acre an output multiplier would be used to calculate impacts. However, the construction of a new golf course would warrant the use of final demand multipliers. The main difference between final demand and output multipliers is that the final demand multipliers let the impacted sectors interact with themselves as well as the other sectors in the economy.

Multipliers are the main force behind input-output modeling and become the mechanism from which all impacts are generated. To better explain multipliers, Figure 2 shows the lifespan of a dollar in the economy. When a dollar enters the economy, part of that dollar stays in the economy and part leaves in the form of savings or as payment for imported goods. By dividing the $1 worth of output by the output multiplier, in this case 1.42, the first transaction yields $0.30 staying in the economy and $0.70 leaving the economy. Dividing the remainder of the dollar in the economy by the same 1.42 gives a value of $0.09 leaving the economy ($0.30 /1.42 = $0.21) and $0.09 ($0.42 - $0.24 = $0.18) staying within the economy. Repeat these steps until the amounts staying within the economy have all disappeared. Adding all of the amounts calculated as staying in the economy plus the original dollar yields the multiplier of 1.42.

To use the multipliers without the use of the actual I-O model, find the sector you would like to show the output impacts to and read down the list to find the number in the column total for that sector. This is the output multiplier, for instance the range cattle

sector has an output multiplier of 1.79. This means that for every $1 of livestock production output there is another $0.79 in output and income generated throughout the economy in indirect and induced effects. Likewise, for income impacts, use the number in the column corresponding to the household sector only and multiply by the $1.00 output impact. This yields $0.35 in household income for every dollar worth of output.

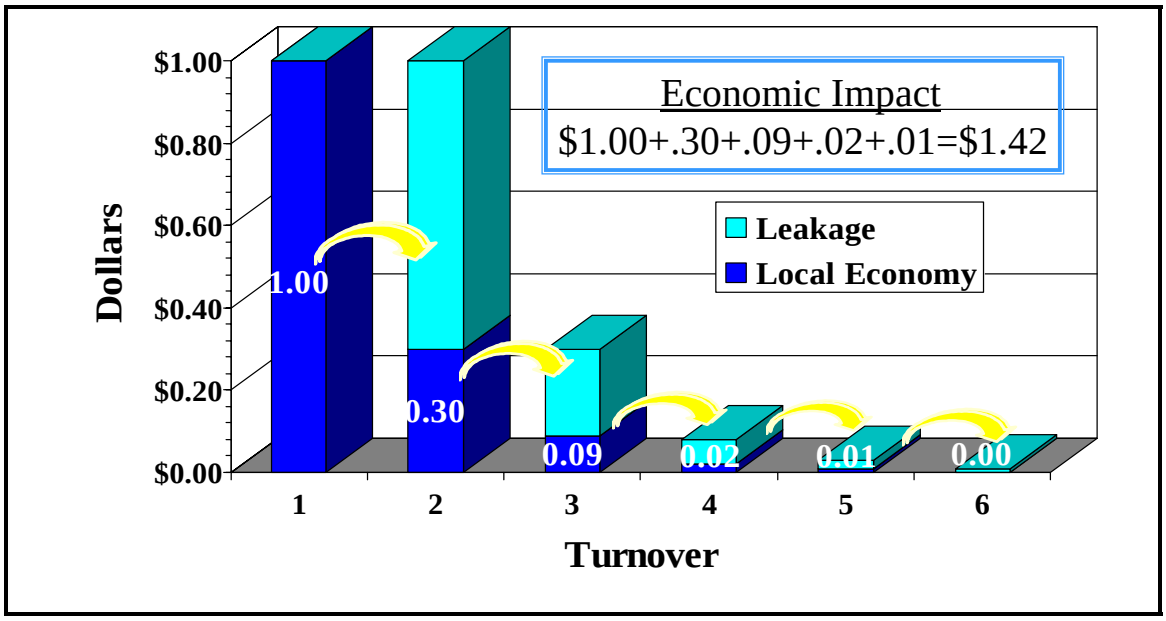

Figure 2. An Example of a Multiplier.

Results

Owyhee County Economic Impact Model

The Owyhee County Economic Impact Model was built specifically for the Bureau of Land Management (BLM) with the analysis of grazing management change impacts specifically in mind. The following are examples of the use of the Owyhee County model for economic impact analysis: 1) Changes in permitted BLM grazing, and 2) Impacts of the dairy industry.

Grazing Impacts

To calculate the direct impacts of public forage losses, a total value of output lost or value of output lost per animal unit month (AUM) must be calculated. Total value of production for the range cattle sector in Owyhee County was based on a five-year average derived from Idaho Agricultural Statistics Service (IASS 1997-2001) estimates for beef cows that have calved from 1996 through 2000. The five-year average value of production was estimated to be $23,308,634. The second step was to find how many AUMs there are in the county regardless of source. The total number of AUMs in the county was estimated to be 602,640 (including private land). This value was based on Workman's (1986) evaluation that for a 300-cow operation, 4,464 total AUMs are required for all classes of cattle for the year. This results in a factor of 14.88 AUMs for every cow animal unit (AU) ((4464 ¸ 300) = 14.88). Multiplying the 14.88 AUMs/cow by NASS' estimate of 40,500 cows yields approximately 602,640 AUMs in Owyhee County. By dividing the value of production by the total estimated AUMs, a value of output of $38.68 was estimated for each AUM.

Using ranch budgets and linear programming models, Rimbey et al. (2003) were able to determine the loss of AUYs a Bruneau, Idaho ranch might suffer given different reductions in BLM AUMs. Using results from these models an estimate of the economic impacts those grazing losses will have on the Owyhee County economy can be made. For instance, Rimbey et al. (2003) report that their Bruneau Ranch Model suffers an average loss of 230 AUY with a 50% reduction in cattle numbers from the representative ranch. By multiplying 230 AUY by 12 months, a total of 2,760 AUMs are lost to the ranch due to the reduction in BLM AUMs over a five-year period. Table 3 shows the

economic impacts if 10 ranches similar to the Bruneau Ranch Model were cut by 50% of their BLM AUMs.

The direct impacts result in an industry output reduction of $1,067,500 (26,700 X $38.68 = $1,067,500). The total industry impacts or output impacts to Owyhee County's economy from the loss of 27,600 AUMs of grazing is a total loss of $1,534,711 with indirect and induced impacts being $467,211 ($1,067,500 - $1,534,711 = $467,211). The indirect and induced impacts are the impacts to the different sectors in the economy that occur because of the range livestock sector interactions with them and induced impacts of the spending of personal income by households. The impacts to personal income, which include wages and salaries of workers and proprietor's income, amount to a loss of $380,413. The policy causing the 50% reduction in BLM AUMs also causes a loss of 17 jobs in the economy with 11 of those jobs coming from the range cattle industry.

Table 3. Economic Impacts of a 26,700 Reduction in AUMs Due to 50% BLM Reduction.

Sector		Direct Output Impacts	Indirect/Induced Output Impacts	Total Output Impacts	Total Employment Impacts
Dairy	1	$0	($270)	($270)	0
Misc. Livestock	2	$0	($1,200)	($1,200)	0
Range Cattle	3	($1,067,500)	$0	($1,067,500)	-11
Feedlots	4	$0	($47,967)	($47,967)	0
Grains	5	$0	($26,010)	($26,010)	0
Forage Crops	6	$0	($30,367)	($30,367)	-1
Misc. Crops	7	$0	($5,281)	($5,281)	0
Sugar Beets	8	$0	($88)	($88)	0
Ag Services	9	$0	($40,854)	($40,854)	-1
Mining	10	$0	($1,495)	($1,495)	0
Construction	11	$0	($37,121)	($37,121)	0
Manufacturing	12	$0	($58,927)	($58,927)	0
Transportation and Communication	13	$0	($31,104)	($31,104)	0
Gas and Electric Services	14	$0	($6,420)	($6,420)	0
Irrigation and Water Serv.	15	$0	($17,780)	($17,780)	0
Wholesale Trade	16	$0	($10,675)	($10,675)	0
Retail Trade	17	$0	($5,044)	($5,044)	0
Food Stores	18	$0	($6,781)	($6,781)	0
Auto Dealers & Service Stations	19	$0	($14,306)	($14,306)	0
Eating & Drinking	20	$0	($8,760)	($8,760)	0
F.I.R.E.	21	$0	($47,968)	($47,968)	0
Hotels and Lodging Places	22	$0	($171)	($171)	0
Health Care	23	$0	($27,799)	($27,799)	-1
Services	24	$0	($40,825)	($40,825)	-1
Regional Income	25	$0	($380,413)	($380,413)	0

	Direct Impacts	Indirect/Induced Impacts	Total Impacts
Total Industry Impacts	($1,067,500)	($467,211)	($1,534,711)
Total Regional Income	$0	($380,413)	($380,413)
Total Employment Impacts			-17
Total Economic Impacts	($1,067,500)	($847,624)	($1,915,124)

Dairy Impacts

The recent increase in dairy herd size and new dairies coming into Owyhee County might cause concerns to the state and county due to various environmental concerns related to the dairy industry. However, before hastily condemning the opening and expanding of dairy facilities, the county would be smart to look at the economic impacts these dairies have on the county.

By taking the value of dairy production, which includes the sale of milk and cull animals, and dividing that figure by the total number of dairy cows in the county an estimate of value of production per dairy cow can be established. The value of production per dairy cow in Owyhee County is $1,657 ($23,195,356 / 1,400 = $1,656.81). Table 4 shows the economic impacts of a 1,500 head dairy operation to Owyhee County's economy.

The total economic impact of one 1,500 head dairy to the Owyhee County economy amounts to $4,395,081 of which $1,150,956 are indirect and induced impacts. This dairy also supports 8 jobs in the dairy industry and an additional 17 jobs spread throughout the rest of the industries. A total of $758,908 in regional income is generated as well.

Table 4. Economic Impacts of a 1,500 head Dairy to Owyhee County's Economy.

		Direct Output Impacts	Indirect/Induced Output Impacts	Total Output Impacts	Total Employment Impacts
Dairy	1	$2,485,217	$0	$2,485,217	8
Misc. Livestock	2	$0	$2,732	$2,732	0
Range Cattle	3	$0	$943	$943	0
Feedlots	4	$0	$1,568	$1,568	0
Grains	5	$0	$84,587	$84,587	1
Forage Crops	6	$0	$123,212	$123,212	2
Misc. Crops	7	$0	$12,041	$12,041	0
Sugar Beets	8	$0	$62,759	$62,759	1
Ag Services	9	$0	$99,086	$99,086	3
Mining	10	$0	$3,638	$3,638	0
Construction	11	$0	$52,859	$52,859	0
Manufacturing	12	$0	$133,926	$133,926	0
Transportation and Communication	13	$0	$55,080	$55,080	1
Gas and Electric Services	14	$0	$31,231	$31,231	0
Irrigation and Water Serv.	15	$0	$35,866	$35,866	0
Wholesale Trade	16	$0	$28,347	$28,347	0
Retail Trade	17	$0	$22,603	$22,603	1
Food Stores	18	$0	$13,492	$13,492	0
Auto Dealers & Service Stations	19	$0	$17,080	$17,080	0
Eating & Drinking	20	$0	$18,384	$18,384	1
F.I.R.E.	21	$0	$95,552	$95,552	0
Hotels and Lodging Places	22	$0	$372	$372	0
Health Care	23	$0	$55,436	$55,436	1
Services	24	$0	$200,164	$200,164	4
Regional Income	25	$0	$758,908	$758,908	0

	Direct Impacts	Indirect/Induced Impacts	Total Impacts
Total Industry Impacts	$2,485,217	$1,150,956	$3,636,173
Total Regional Income Impact	$0	$758,908	$758,908
Total Employment Impacts			25
Total Economic Impacts	$2,485,217	$1,909,864	$4,395,081

4 County Economic Impact Model

The 4 County Economic Impact Model was constructed in the same manner as the Owyhee County Economic Impact Model with the expected use of examining the economic impacts of non-residential tourist visitors to the Snake River Birds of Prey (BOP) National Conservation Area and other uses of BLM managed lands in Ada, Canyon, Elmore, and Owyhee Counties.

Estimating the impacts of recreational visitor days (RVDs) can be difficult and caution should be used when evaluating expenditures by visitors and the number of RVDs used to calculate total impacts. Some things to pay close attention to when developing surveys are the fact that in order to have an economic impact on an economy, the recreationist or tourist must visit from outside the study area. In this instance, the recreationist may not live in any of the 4 counties as this represents. This is due to the fact that it is assumed that if the activity, whether it is bird watching, hunting, golfing, or even going to the movies, were not available the local person would find another local activity to spend their disposable income on. Other considerations while surveying recreational/tourist visitors should include whether the visitor is on a day trip, staying overnight at the recreational area, or staying overnight at a local hotel, as well as the number of days visiting the recreational/tourist site. The number of days visiting the specific site is important as to not overestimate average daily spending associated with the recreational area and spending at other recreational/tourist activities.

As there currently are no estimated reports of visitor days or expenditures associated the BOP the following analysis will draw on data from a study by Stynes and Sun (2002) estimating impacts of spending on recreation at Crater Lake National Park in

Oregon. Table 5 shows the non-local day user expenditures and expenditures for those visitors camping in the park (Stynes and Sun, 2002). The retail expenditures included (groceries; gas and oil; and souvenirs), need to be adjusted for leakages outside the local economy due to the fact that most retail goods are not produced in the local economy. This process is called margining the retail trade expenditures.

Table 5. Visitor Spending by Sector at Crater Lake National Park ($ per day).

Spending category	Non-local day user	Margined[1] Non-local	Camp-In	Margined[1] Camp-In
Lodging Fees	$0.00	$0.00	$14.90	$0.00
Restaurants and Bars	$10.38	$10.38	$4.93	$4.93
Groceries, take-out food/drinks	$6.52	$1.63	$11.74	$2.94
Gas and Oil	$9.42	$2.36	$11.97	$2.99
Local Transportation	$0.17	$0.17	$0.09	$0.09
Admissions and Fees[2]	$8.18	$8.18	$7.82	$7.82
Souvenirs and other	$16.11	$4.03	$10.50	$2.63
Totals	$50.79	$26.75	$61.96	$21.40

[1]The margined expenditures assume that retail goods are not produced locally, therefore only the mark-up is considered as a local impact. In this case the margin is 25%. Therefore, for every $1.00 worth of goods purchased 75% of that purchase is considered an import.
[2]Admissions/fees are considered services for purposes of this analysis. If any admission charges or user fees are charged and paid to the government, these fees would be subtracted as government is exogenous of this model.

Using the margined figures in Table 5 as surrogates for visitor expenditures to BOP, the impacts of non-local recreational visitors can be estimated. Table 6 shows the impacts of 20,000 non-local recreational visitor days to the BOP recreational area. It is assumed that these visitors are participating in non-consumptive activities such as bird watching or hiking. This example economic activity from recreational visitors to the 4 County Regional economy from 20,000 RVD's totals a direct impact of $534,900 with regional income totaling $409,947. The total economic impact amounts to $1,445,579 and supports 19 jobs.

Table 6. Economic Impacts of 20,000 Recreational Visitor Days at Birds of Prey National Conservation Area.

		Direct Final Demand Impacts	Indirect/Induced Final Demand Impacts	Total Final Demand Impacts	Total Employment Impacts
Dairy	1	$0	$283	$283	0
Misc. Livestock	2	$0	$204	$204	0
Range Cattle	3	$0	$474	$474	0
Feedlots	4	$0	$488	$488	0
Grains	5	$0	$31	$31	0
Forage Crops	6	$0	$71	$71	0
Misc. Crops	7	$0	$3,174	$3,174	0
Sugar Beets	8	$0	$49	$49	0
Ag Services	9	$0	$1,340	$1,340	0
Mining	10	$0	$177	$177	0
Construction	11	$0	$12,805	$12,805	0
Manufacturing	12	$0	$115,912	$115,912	0
Transportation and Communication	13	$3,400	$33,457	$36,857	0
Gas and Electric Services	14	$0	$8,121	$8,121	0
Irrigation and Water Serv.	15	$0	$2,242	$2,242	0
Wholesale Trade	16	$0	$29,458	$29,458	0
Retail Trade	17	$80,600	$20,475	$101,075	3
Food Stores	18	$32,600	$6,142	$38,742	1
Auto Dealers & Service Stations	19	$47,100	$7,943	$55,043	1
Eating & Drinking	20	$207,600	$15,861	$223,461	7
F.I.R.E.	21	$0	$88,126	$88,126	1
Hotels and Lodging Places	22	$0	$4,254	$4,254	0
Health Care	23	$0	$38,155	$38,155	1
Services	24	$163,600	$111,490	$275,090	6
Regional Income	25	$0	$409,947	$409,947	0

	Direct Impacts	Indirect/Induced Impacts	Total Impacts
Total Industry Impacts	$534,900	$500,733	$1,035,633
Total Regional Income Impact	$0	$409,947	$409,947
Total Employment Impacts			19
Total Economic Impacts	$534,900	$910,679	$1,445,579

Summary and Conclusions

There is an increasing demand for economic impact studies of agricultural commodity production and tourism in rural communities because of federal, state, and local policy decisions and the quest of these communities to diversify their local economies. Lawmakers, land managers, and concerned citizens need this type of information to make informed decisions that have the possibility of impacting, whether negative or positive, rural economies and residents' livelihoods. Input-output modeling is a quantitative tool used to estimate these types of impacts to local or regional economies. However, oftentimes nationally based models are used without regard to the varying production practices and differing economic linkages that rural communities in the Western United States enjoy. Robison (1997) states that the regional input-output model is valuable in estimating impacts of rural issues. However, the off-the-shelf IMPLAN model needs refinement to include a rural community focus along with local expenditure flows.

As shown previously there are many different applications to input-output models like public land policy analysis, impacts of various industries on a local economy, and the impact of tourism and recreational visitors to a local or regional economy. Great care should be taken as to the direct impacts used for any of these activities. There are many things to consider when estimating the regional economic impacts of these activities.

For example, when estimating the impacts of BLM policy changes to the range cattle sector, the impacts of all affected production should be included. In the example provided, the actual loss of BLM AUMs on the Bruneau ranch model amounted to only 2,490 but affected an additional 270 AUMs from other sources that could no longer be used. The difference in direct impacts to the economy if the value of production from additional AUMs is omitted seems paltry at a mere $10,400. However, when expanded to include losses on other ranches in the area the underestimation expands to over $104,000.

Recreational tourism impacts on a regional economy can be problematic to estimate as well. One of the hardest figures to come across in this type of analysis is the expenditure pattern of the non-local visitors. Most times a visitor survey must be administered with careful consideration given to the questions asked and the compilation

of data in a way as to not over- or underestimate impacts. In the same vein, there are many estimates of non-local recreational visitor expenditures available to use as an estimate in a given region, if proper consideration is given to the complexity or simplicity of the rural economy being studied. If the number of recreationists visiting an area is available without expenditure data and there is no time to survey for those expenditures, a policy maker might want to modify existing data for similar recreation activity expenditures to meet the needs of their analysis. As with the example shown, no data for BOP recreational visitor expenditures were available so data from a different, federally managed, recreational area were adjusted to estimate potential impacts of recreation in the BOP National Conservation Area. Some of those adjustments included margining the retail trade, omitting camping fees due to government management of camping areas, and the omission of any user fees for the same reason.

Lastly, when comparing impacts from one activity to another, consideration should always include the preservation of current economic activities when proposing new ones. A job is a job does not necessarily hold true in all cases. Economies are complex, some jobs pay more than others and some industries provide more local impacts than others due to their purchase and sale patterns. These are just some of the things to consider when looking at tradeoffs between industries and impacts decisions and policies have on regional or local economies. As Taylor et al. demonstrated, there are also impacts on the local community that go beyond just the businesses that are directly impacted. As they examined in a case study in Wyoming, when ranching is reduced in favor of recreation, there will be a shift in the effects. Those that lose will not likely be the same as those who gain, nor will the gainers necessarily be better off than they were before. As they showed, the earnings per job in the recreation industry are about two-thirds of what they are in the ranching industry. The results of their study showed that it would be better for the local economy if both industries were maintained or improved rather than casting the argument that it is an either/or decision.

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APPENDIX A

Users' Guide for the Owyhee County and 4 County Economic Impact Models

Owyhee County and 4 County Economic Impact Model Programs

The Owyhee County and Four County Study Area Economic Impact Models are fully functional Windows applications. A computer running under a Windows© platform (Windows 3.1, Windows 95©, Windows 98©, Windows 2000©, and Windows XP©) and at least five megabytes of hard disk space are needed to install and operate the impact model. The user enters values representing "shocks" to the economy in terms of final demand or industry output. The values entered are then used to derive economic impacts for the study area, changes in household income, and employment. The program has a menu used for entering data, calculating impacts, printing output and saving data. Figure 3 shows the title screen of the impact model.

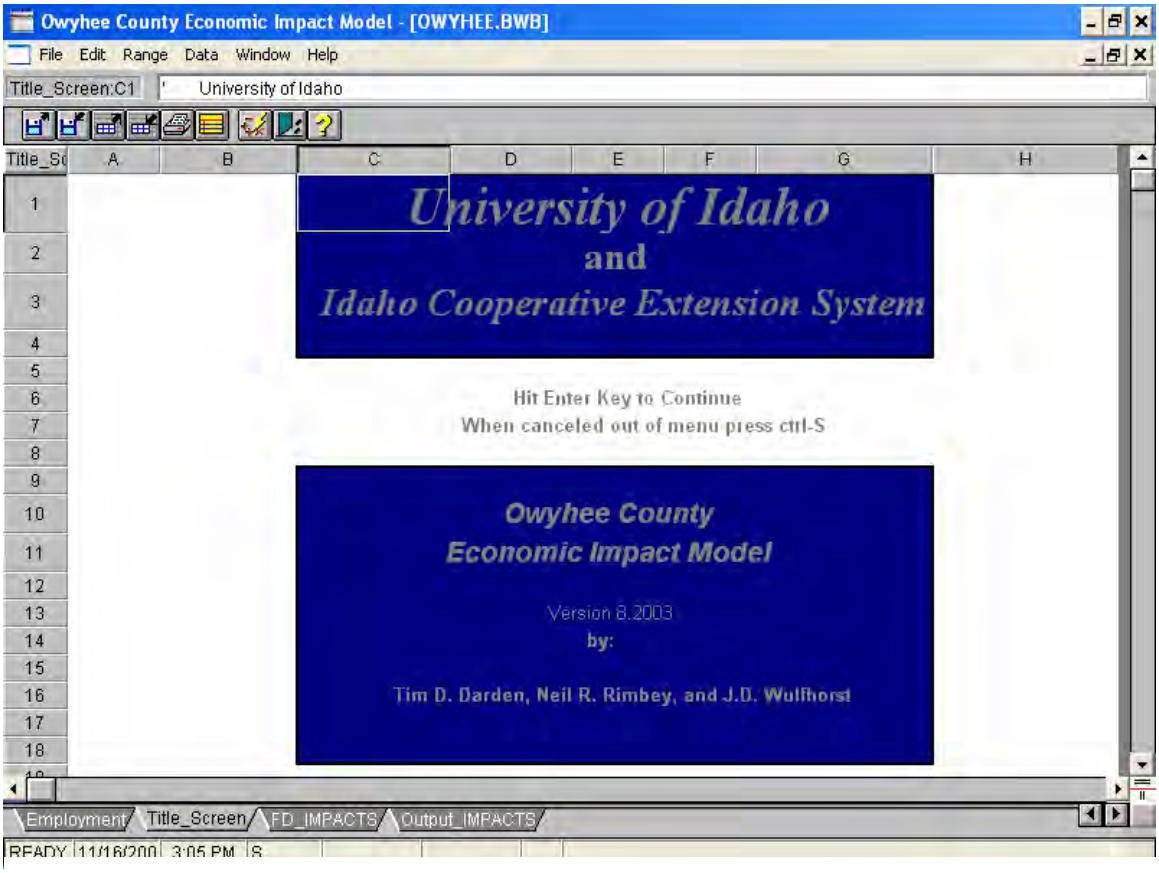


Figure 3. Owyhee County Economic Impact Model Title Screen.

Program Installation

To install the program under the Windows 2000© or Windows XP© platforms run the setup.exe program. To do this click on "Start" then "Run" from the program window and type "A:\Setup" or follow the instructions for your version of Windows©. The install wizard will guide the user through the installation and setup of the program. The installation will create a program group with icons and a copy of this document in Adobe Acrobat© format. To uninstall the programs simply go to the "Control Panel", select "Add/Remove Programs" and find the Owyhee Economic Impact (4 County Economic Impact) software and select remove. For more information please refer to your Windows User's Guide.

1.1 Program Menu

The primary Owyhee County (4 County) Economic Impact model will automatically open upon starting the program and the title screen will appear. Once the user "clicks" the mouse or strikes a key on the keyboard a menu as seen in Figure 4 will open. The menu contains eight options, an OK, Cancel and Help button. The eight available options consist of:

1. FD Changes – Final demand changes.

2. Calculate FD – Final demand impact calculation.

3. Output Changes – Output changes.

4. Calculate Output – Output impact calculation.

5. Print FD – Print final demand impact table.

6. Print Output – Print output impact table.

7. Quit – Exit the model.

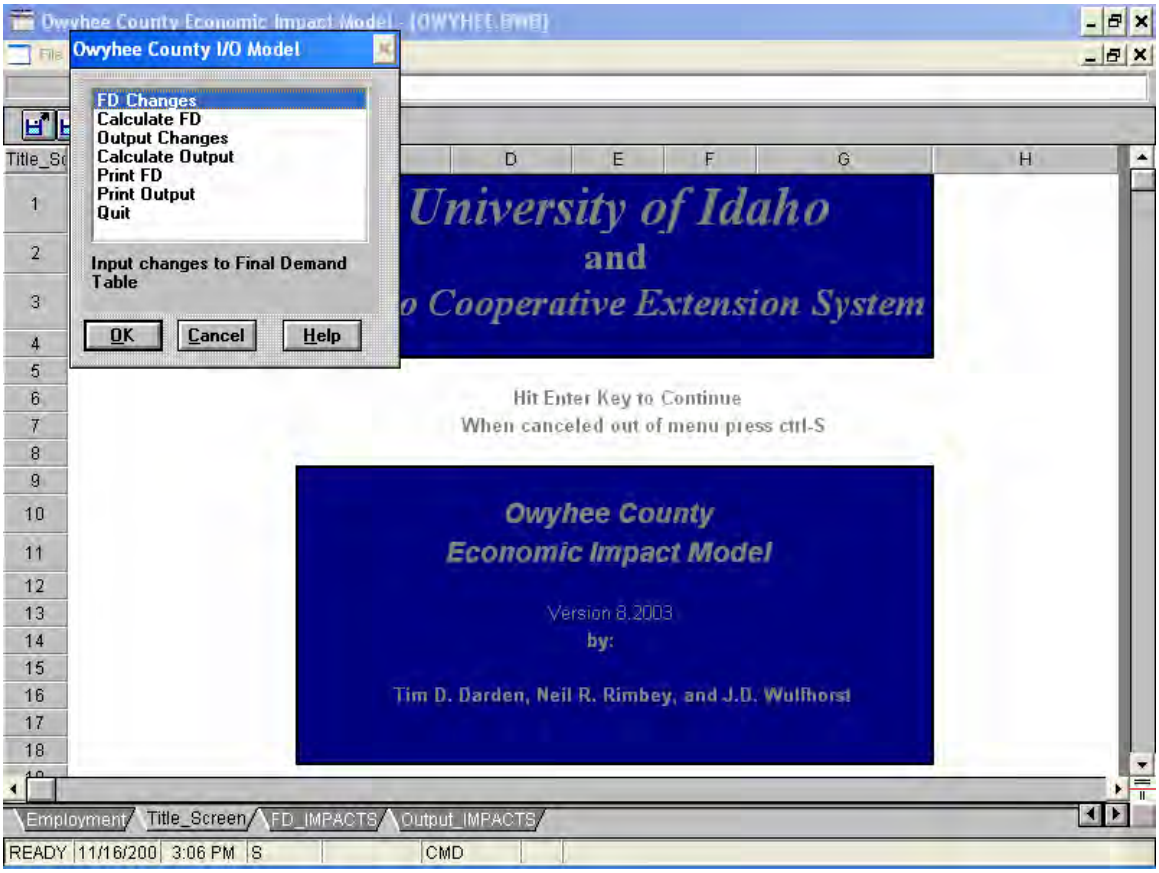


Figure 4. Owyhee County Economic Impact Model Menu.

The OK button works the same as double clicking with the mouse, or pressing enter on the keyboard while trying to execute a menu item. The Cancel button works to allow the user to exit from the menu and move around or look at the tables in the model, however there are limits to changes that can be made. *If the menu is cancelled for any reason it will not reappear until the user presses Ctrl and S on the keyboard simultaneously.*

Finally, the Help button is used to bring up the custom help file for use in operating the program or finding definitions of terms used in the impact model program.

Estimation of Final Demand Changes

To calculate final demand impacts with the Owyhee County (4 County) Economic Impact Model the user clicks on the FD Changes option located at the top of the menu. The screen will now show the final demand impact table and allow the user to enter a

value in the “Direct Final Demand Impacts” column only (Figure 5). In this example the analysis calls for a $1,000,000 increase in final demand sales for the Mining sector in the Owyhee County area economy. The impacts do not have to occur in only one economic sector. Enter as many values as needed to accurately estimate an impact.

After entering the desired economic “shocks” the user can strike the enter key or click anywhere on the screen to bring the model menu back. The user should then select the “Calculate FD” option and calculate the final demand impacts.

Table 6 shows the impacts calculated by the model for a $1,000,000 increase in mining final demand in Owyhee County. This change in the economy yields a total economic impact of $1,671,882. Employment impacts are shown as a total of 13 jobs in Owyhee County supported by this increase in economic activity with approximately 9 jobs created in the mining industry.

Distributional impacts are also shown to give the user an idea of where in the economy the impacts are taking place and to show the interaction between the directly impacted economic sector(s) and the rest of the study area economy. The bottom portion of Table 6 shows a summary of the total impacts by industry, household income, employment, and total economic impacts.

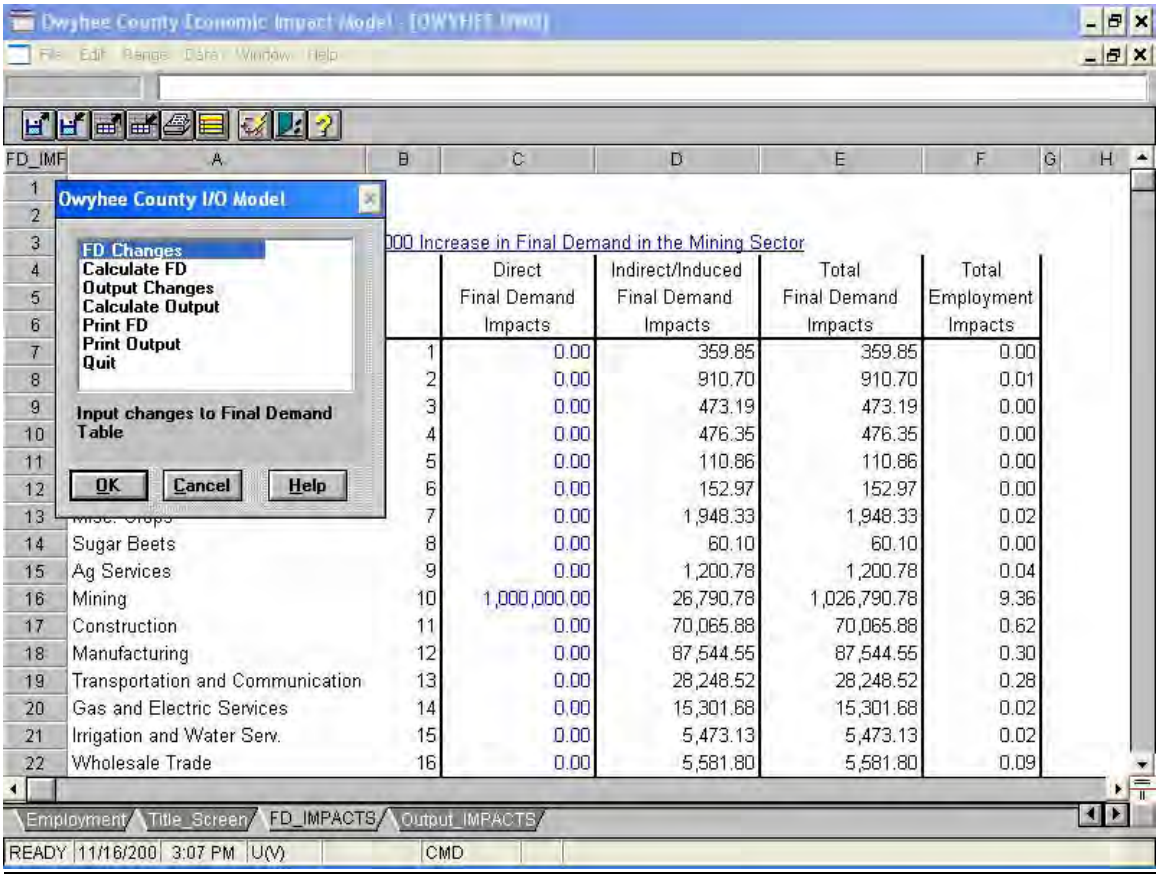


Figure 5. Final Demand Change Analysis Screen (FD Changes Menu Item).

Table 6. Final Demand Impacts Derived from Owyhee County Economic Impact Software.

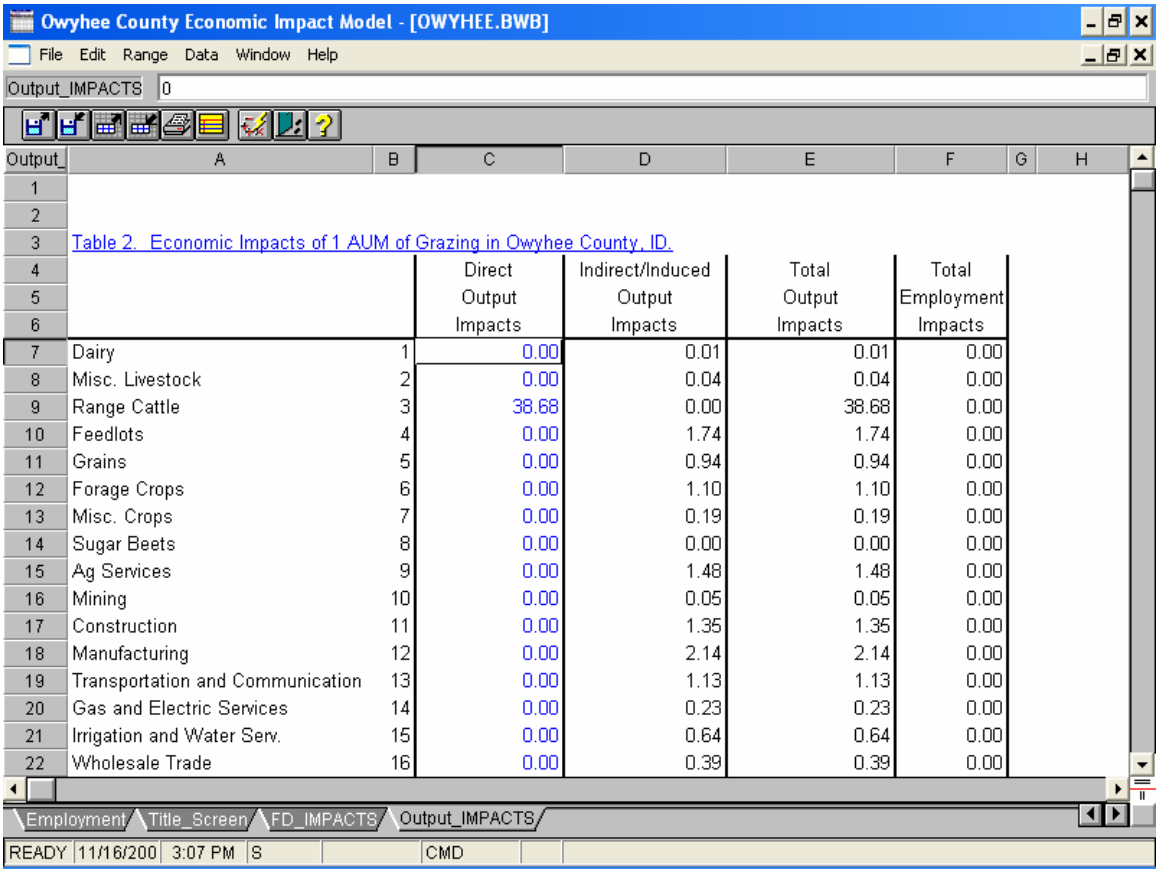
Table 1. Economic Impact of $1,000,000 Increase in Final Demand in the Mining Sector

		Direct Final Demand Impacts	Indirect/Induced Final Demand Impacts	Total Final Demand Impacts	Total Employment Impacts
Dairy	1	0.00	359.85	359.85	0.00
Misc. Livestock	2	0.00	910.70	910.70	0.01
Range Cattle	3	0.00	473.19	473.19	0.00
Feedlots	4	0.00	476.35	476.35	0.00
Grains	5	0.00	110.86	110.86	0.00
Forage Crops	6	0.00	152.97	152.97	0.00
Misc. Crops	7	0.00	1,948.33	1,948.33	0.02
Sugar Beets	8	0.00	60.10	60.10	0.00
Ag Services	9	0.00	1,200.78	1,200.78	0.04
Mining	10	1,000,000.00	26,790.78	1,026,790.78	9.36
Construction	11	0.00	70,065.88	70,065.88	0.62
Manufacturing	12	0.00	87,544.55	87,544.55	0.30
Transportation and Communication	13	0.00	28,248.52	28,248.52	0.28
Gas and Electric Services	14	0.00	15,301.68	15,301.68	0.02
Irrigation and Water Serv.	15	0.00	5,473.13	5,473.13	0.02
Wholesale Trade	16	0.00	5,581.80	5,581.80	0.09
Retail Trade	17	0.00	2,430.45	2,430.45	0.11
Food Stores	18	0.00	5,035.09	5,035.09	0.11
Auto Dealers & Service Stations	19	0.00	4,527.12	4,527.12	0.11
Eating & Drinking	20	0.00	7,523.00	7,523.00	0.25
F.I.R.E.	21	0.00	70,392.26	70,392.26	0.07
Hotels and Lodging Places	22	0.00	355.47	355.47	0.01
Health Care	23	0.00	16,978.62	16,978.62	0.42
Services	24	0.00	47,851.15	47,851.15	0.96
Regional Income	25	0.00	272,089.40	272,089.40	0.00

	Direct Impacts	Indirect/Induced Impacts	Total Impacts
Total Industry Impacts	$1,000,000.00	$399,792.61	$1,399,792.61
Total Regional Income Impact	$0.00	$272,089.40	$272,089.40
Total Employment Impacts			13
Total Economic Impacts	$1,000,000.00	$671,882.01	$1,671,882.01

Estimation of Output Changes

To use the Owyhee County (4 County) Economic Impact Model to derive impacts from output changes the user clicks on the "Output Changes" option (see Figure 3) that will transfer the user to the output impacts screen as shown in Figure 6. For this example the user assumes a decrease of $1,000,000 in the range cattle sector output of Owyhee County. After inputting the $1,000,000 decrease in the direct impact column the economic impacts are calculated by striking the enter key and clicking on the "Calculate Output" option from the menu.



		Direct Output Impacts	Indirect/Induced Output Impacts	Total Output Impacts	Total Employment Impacts
Dairy	1	0.00	0.01	0.01	0.00
Misc. Livestock	2	0.00	0.04	0.04	0.00
Range Cattle	3	38.68	0.00	38.68	0.00
Feedlots	4	0.00	1.74	1.74	0.00
Grains	5	0.00	0.94	0.94	0.00
Forage Crops	6	0.00	1.10	1.10	0.00
Misc. Crops	7	0.00	0.19	0.19	0.00
Sugar Beets	8	0.00	0.00	0.00	0.00
Ag Services	9	0.00	1.48	1.48	0.00
Mining	10	0.00	0.05	0.05	0.00
Construction	11	0.00	1.35	1.35	0.00
Manufacturing	12	0.00	2.14	2.14	0.00
Transportation and Communication	13	0.00	1.13	1.13	0.00
Gas and Electric Services	14	0.00	0.23	0.23	0.00
Irrigation and Water Serv.	15	0.00	0.64	0.64	0.00
Wholesale Trade	16	0.00	0.39	0.39	0.00

Figure 6. Output Change Analysis Screen (Output Changes Menu Item)

Table 7 shows that with a $1,000,000 decrease in output from the Owyhee County range cattle sector there will be an extra $437,669 decrease in industrial economic activity through indirect and induced effects for a total negative industry impact of $1,437,669. Household income will decrease by $356,359. Also, total employment is

expected to decrease by 16 jobs. Once again the table shows distributional impacts to industry output, household income, employment, total county revenues, and total county expenditures in a summary at the bottom of the table.

Table 7. Output Impacts Derived from UCED Impact Software.

Table 2. Economic Impact of a $1,000,000 decrease in the Range Cattle Sector in Owyhee County, ID.

		Direct Output Impacts	Indirect/Induced Output Impacts	Total Output Impacts	Total Employment Impacts
Dairy	1	0.00	(252.85)	(252.85)	(0.00)
Misc. Livestock	2	0.00	(1,124.24)	(1,124.24)	(0.01)
Range Cattle	3	(1,000,000.00)	0.00	(1,000,000.00)	(10.08)
Feedlots	4	0.00	(44,933.86)	(44,933.86)	(0.12)
Grains	5	0.00	(24,364.95)	(24,364.95)	(0.21)
Forage Crops	6	0.00	(28,446.42)	(28,446.42)	(0.52)
Misc. Crops	7	0.00	(4,946.96)	(4,946.96)	(0.04)
Sugar Beets	8	0.00	(82.40)	(82.40)	(0.00)
Ag Services	9	0.00	(38,270.91)	(38,270.91)	(1.34)
Mining	10	0.00	(1,400.21)	(1,400.21)	(0.01)
Construction	11	0.00	(34,773.53)	(34,773.53)	(0.31)
Manufacturing	12	0.00	(55,200.54)	(55,200.54)	(0.19)
Transportation and Communication	13	0.00	(29,137.35)	(29,137.35)	(0.28)
Gas and Electric Services	14	0.00	(6,014.22)	(6,014.22)	(0.01)
Irrigation and Water Serv.	15	0.00	(16,656.09)	(16,656.09)	(0.06)
Wholesale Trade	16	0.00	(9,999.97)	(9,999.97)	(0.16)
Retail Trade	17	0.00	(4,724.61)	(4,724.61)	(0.22)
Food Stores	18	0.00	(6,352.67)	(6,352.67)	(0.14)
Auto Dealers & Service Stations	19	0.00	(13,401.61)	(13,401.61)	(0.32)
Eating & Drinking	20	0.00	(8,205.86)	(8,205.86)	(0.27)
F.I.R.E.	21	0.00	(44,935.08)	(44,935.08)	(0.05)
Hotels and Lodging Places	22	0.00	(159.77)	(159.77)	(0.01)
Health Care	23	0.00	(26,041.58)	(26,041.58)	(0.65)
Services	24	0.00	(38,243.19)	(38,243.19)	(0.77)
Regional Income	25	0.00	(356,358.62)	(356,358.62)	0.00

	Direct Impacts	Indirect/Induced Impacts	Total Impacts
Total Industry Impacts	($1,000,000.00)	($437,668.85)	($1,437,668.85)
Total Regional Income Impact	$0.00	($356,358.62)	($356,358.62)
Total Employment Impacts			(16)
Total Economic Impacts	($1,000,000.00)	($794,027.46)	($1,794,027.46)

Printing of Software Tables

After final demand and output estimations have been calculated the software allows the user to print the tables by selecting the "Print FD" or "Print Output" option from the menu. Upon selecting one of these options the user will be asked to enter a title for the table as shown in Figure 7. This user may enter any text or not have any text at all by deleting the highlighted text in the title entry box. The table format will look just like tables 1 and 2 when printed.

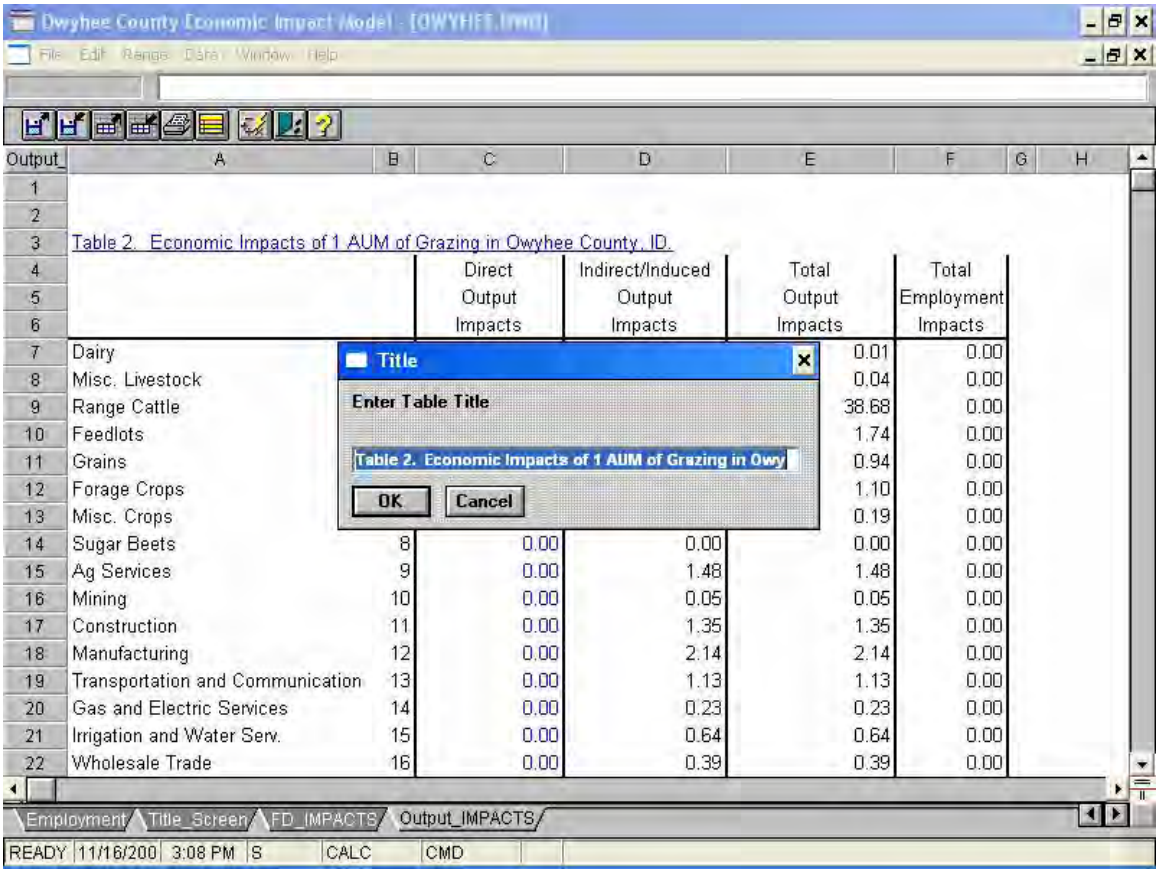


Figure 7. Example Title for Analysis Table Printing

Help Directory

A help directory has been included with the model to assist the user in operation and definition of terms used in the impact modeling software. The help directory consists of four sections. Section one lists definitions of the economic sectors used in the model. Section two shows the definitions of selected economic terms and functions used in the

impact model. Section three provides a step-by-step guide to impact analysis using the Owyhee County (4 County) Economic Impact Model. Lastly, section four provides a description and definition of the Economic Impact software menu items.

Exiting the Program

To exit the impact software program the user must first select "Quit" from the menu and strike enter on the keyboard or click "OK" with the mouse pointer. If any changes were made to the tables in the impact software the program will ask if you would like to save the file. The user can choose to save or not to save the program as entering zeros and recalculating the final demand impacts or output impacts will always reset the program.

APPENDIX B

Final Demand and Output Requirements (Multipliers)

for the

Owyhee County Economic Impact Model

Table 1B. Final Demand Requirements (Multipliers) for Owyhee County Economic Impact Model.

Sector		Dairy	Misc. Livestock	Range Cattle	Feedlots	Grains	Forage Crops	Misc. Crops
		1	2	3	4	5	6	7
Dairy	**1**	1.0812760	0.0007939	0.0002608	0.0007677	0.0004690	0.0004998	0.0005882
Misc. Livestock	**2**	0.0011886	1.0550475	0.0011598	0.0009271	0.0020642	0.0022628	0.0029157
Range Cattle	**3**	0.0004101	0.0356059	1.0316180	0.0394039	0.0007841	0.0008572	0.0010082
Feedlots	**4**	0.0006821	0.0032722	0.0463546	1.0407604	0.0012887	0.0014671	0.0016909
Grains	**5**	0.0368025	0.0152625	0.0251353	0.0593551	1.0026038	0.0027102	0.0011274
Forage Crops	**6**	0.0536073	0.0426014	0.0293458	0.0600309	0.0040148	1.0048795	0.0040323
Misc. Crops	**7**	0.0052388	0.0090713	0.0051034	0.0039158	0.0115880	0.0141426	1.0340015
Sugar Beets	**8**	0.0273056	0.0156757	0.0000850	0.0000725	0.0001651	0.0001873	0.0002201
Ag Services	**9**	0.0431107	0.0997055	0.0394810	0.0165536	0.0791721	0.0953036	0.1080722
Mining	**10**	0.0015828	0.0013532	0.0014445	0.0014622	0.0035686	0.0037645	0.0035066
Construction	**11**	0.0229979	0.0173302	0.0358730	0.0095288	0.0242198	0.0248432	0.0243325
Manufacturing	**12**	0.0582690	0.0516499	0.0569459	0.0557887	0.1139399	0.1214097	0.1425341
Transportation and Communication	**13**	0.0239645	0.0211838	0.0300586	0.0233560	0.0369950	0.0378930	0.0259044
Gas and Electric Services	**14**	0.0135880	0.0080641	0.0062044	0.0074045	0.0263651	0.0265704	0.0084841
Irrigation and Water Serv.	**15**	0.0156046	0.0077412	0.0171827	0.0057962	0.0148458	0.0163086	0.0249445
Wholesale Trade	**16**	0.0123332	0.0107616	0.0103162	0.0079407	0.0156773	0.0158809	0.0138672
Retail Trade	**17**	0.0098343	0.0508039	0.0048740	0.0043748	0.0025329	0.0080593	0.0038270
Food Stores	**18**	0.0058699	0.0058612	0.0065535	0.0071181	0.0053449	0.0056874	0.0081747
Auto Dealers & Service Stations	**19**	0.0074312	0.0048092	0.0138253	0.0115113	0.0040322	0.0095425	0.0060029
Eating & Drinking	**20**	0.0079984	0.0078432	0.0084653	0.0092009	0.0071561	0.0075711	0.0107185
F.I.R.E.	**21**	0.0415730	0.0417212	0.0463558	0.0422513	0.0694852	0.0588215	0.0647148
Hotels and Lodging Places	**22**	0.0001619	0.0001758	0.0001648	0.0001665	0.0001974	0.0001792	0.0002253
Health Care	**23**	0.0241194	0.0252824	0.0268650	0.0282862	0.0187415	0.0228977	0.0287742
Services	**24**	0.0870879	0.0378721	0.0394524	0.0338558	0.0586005	0.0533058	0.0523044
Regional Income	**25**	0.3301880	0.3305177	0.3676260	0.4036162	0.2999901	0.3192843	0.4610068
Final Demand Multiplier		1.9122258	1.9000067	1.8507511	1.8734452	1.8038422	1.8543291	2.0329784
Industry Multiplier		1.5820378	1.5694890	1.4831251	1.4698290	1.5038521	1.5350448	1.5719716

Table 1 B. Continued.

Sector		Sugar Beets	Ag Services	Mining	Construction	Manufacturing	Transportation and Communication	Gas and Electric Services
		8	9	10	11	12	13	14
Dairy	**1**	0.0003448	0.0005001	0.0003598	0.0008307	0.0051816	0.0005971	0.0002009
Misc. Livestock	**2**	0.0015907	0.0102487	0.0009107	0.0020709	0.0103789	0.0014345	0.0005475
Range Cattle	**3**	0.0005830	0.0024882	0.0004732	0.0010945	0.0067601	0.0007829	0.0002645
Feedlots	**4**	0.0009736	0.0023833	0.0004763	0.0011113	0.0067944	0.0007847	0.0002648
Grains	**5**	0.0006440	0.0004891	0.0001109	0.0003735	0.0012466	0.0001798	0.0000651
Forage Crops	**6**	0.0022926	0.0010612	0.0001530	0.0004817	0.0015091	0.0002127	0.0000876
Misc. Crops	**7**	0.0064064	0.0722068	0.0019483	0.0050597	0.0111305	0.0026961	0.0013242
Sugar Beets	**8**	1.0167810	0.0002251	0.0000601	0.0001395	0.0008172	0.0000979	0.0000340
Ag Services	**9**	0.0614294	1.0129351	0.0012008	0.0040315	0.0035843	0.0011443	0.0006388
Mining	**10**	0.0019917	0.0027880	1.0267908	0.0052673	0.0104689	0.0033721	0.0215483
Construction	**11**	0.0229568	0.0175741	0.0700659	1.0080972	0.0158444	0.0357833	0.0560304
Manufacturing	**12**	0.0834346	0.1180796	0.0875445	0.2022855	1.2729915	0.1456213	0.0486829
Transportation and Communication	**13**	0.0189634	0.0459865	0.0282485	0.0426026	0.0443468	1.1634095	0.0197650
Gas and Electric Services	**14**	0.0057998	0.0059742	0.0153017	0.0062249	0.0097264	0.0054258	1.0260071
Irrigation and Water Serv.	**15**	0.0215393	0.0081836	0.0054731	0.0092550	0.0099957	0.0169671	0.0078866
Wholesale Trade	**16**	0.0207695	0.0105006	0.0055818	0.0114996	0.0152599	0.0072304	0.0027089
Retail Trade	**17**	0.0397413	0.0050611	0.0024304	0.0069734	0.0028134	0.0030169	0.0017985
Food Stores	**18**	0.0056759	0.0102647	0.0050351	0.0122830	0.0049646	0.0063425	0.0038032
Auto Dealers & Service Stations	**19**	0.0043142	0.0074182	0.0045271	0.0179296	0.0040189	0.0053146	0.0032225
Eating & Drinking	**20**	0.0184112	0.0139700	0.0075230	0.0135101	0.0082149	0.0101465	0.0052170
F.I.R.E.	**21**	0.0600761	0.0568583	0.0703923	0.0541858	0.0368003	0.0492079	0.0263230
Hotels and Lodging Places	**22**	0.0001705	0.0003602	0.0003555	0.0003298	0.0004385	0.0004417	0.0001685
Health Care	**23**	0.0220714	0.0362429	0.0169786	0.0354278	0.0173308	0.0217965	0.0129929
Services	**24**	0.0641758	0.0768211	0.0478512	0.0871245	0.0720495	0.1279654	0.0362373
Regional Income	**25**	0.3187100	0.5802644	0.2720894	0.5678030	0.2759690	0.3481888	0.2082451
Final Demand Multiplier		1.7998471	2.0988852	1.6718820	2.0959921	1.8486362	1.9581606	1.4840646
Industry Multiplier		1.4811371	1.5186208	1.3997926	1.5281891	1.5726672	1.6099717	1.2758195

Table 1 B. Continued.

Sector		Irrigation and Water Serv.	Wholesale Trade	Retail Trade	Food Stores	Auto Dealers & Service Stations	Eating & Drinking	F.I.R.E.
		15	16	17	18	19	20	21
Dairy	**1**	0.0007596	0.0003914	0.0003383	0.0003427	0.0003364	0.0006703	0.0000629
Misc. Livestock	**2**	0.0017480	0.0011520	0.0010725	0.0011386	0.0010436	0.0027514	0.0002183
Range Cattle	**3**	0.0009945	0.0005163	0.0004480	0.0004538	0.0004455	0.0009187	0.0000938
Feedlots	**4**	0.0009975	0.0005152	0.0004484	0.0004512	0.0004473	0.0009032	0.0001276
Grains	**5**	0.0002111	0.0001167	0.0001075	0.0001072	0.0001077	0.0002154	0.0000675
Forage Crops	**6**	0.0002641	0.0001676	0.0001678	0.0001637	0.0001696	0.0003592	0.0002115
Misc. Crops	**7**	0.0030251	0.0030199	0.0030272	0.0033678	0.0028777	0.0187138	0.0007372
Sugar Beets	**8**	0.0001234	0.0000675	0.0000598	0.0000610	0.0000593	0.0001287	0.0000163
Ag Services	**9**	0.0012270	0.0013455	0.0017124	0.0015046	0.0018044	0.0035686	0.0053753
Mining	**10**	0.0045293	0.0022156	0.0019507	0.0019736	0.0019410	0.0038859	0.0003572
Construction	**11**	0.0916124	0.0097388	0.0132094	0.0102623	0.0145112	0.0170630	0.0185148
Manufacturing	**12**	0.1855573	0.0944568	0.0812781	0.0820756	0.0809443	0.1629969	0.0152716
Transportation and Communication	**13**	0.0555741	0.0413315	0.0332233	0.0304238	0.0344644	0.0373999	0.0108071
Gas and Electric Services	**14**	0.0135015	0.0064735	0.0079913	0.0075791	0.0081748	0.0102487	0.0013732
Irrigation and Water Serv.	**15**	1.1101633	0.0092843	0.0107058	0.0093152	0.0113211	0.0179835	0.0047638
Wholesale Trade	**16**	0.0094081	1.0069420	0.0043248	0.0044864	0.0042545	0.0130995	0.0008425
Retail Trade	**17**	0.0035139	0.0042759	1.0045500	0.0051799	0.0042733	0.0036465	0.0004517
Food Stores	**18**	0.0067963	0.0093471	0.0099270	1.0114298	0.0092668	0.0077391	0.0008975
Auto Dealers & Service Stations	**19**	0.0074653	0.0070402	0.0075850	0.0083800	1.0072362	0.0059605	0.0009050
Eating & Drinking	**20**	0.0092531	0.0130110	0.0136461	0.0152494	0.0129423	1.0156830	0.0015844
F.I.R.E.	**21**	0.0408805	0.0560475	0.0679423	0.0655254	0.0690223	0.0616796	1.0521947
Hotels and Lodging Places	**22**	0.0003669	0.0004159	0.0003856	0.0003544	0.0003994	0.0004587	0.0001152
Health Care	**23**	0.0217558	0.0326970	0.0346216	0.0401547	0.0321903	0.0269814	0.0029540
Services	**24**	0.0725019	0.1014394	0.0922125	0.0779317	0.0985271	0.0918410	0.0332184
Regional Income	**25**	0.3484677	0.5240223	0.5550037	0.6439281	0.5159294	0.4321638	0.0471478
Final Demand Multiplier		1.9906977	1.9260308	1.9459390	2.0218401	1.9126898	1.9370604	1.1983094
Industry Multiplier		1.6422300	1.4020086	1.3909353	1.3779120	1.3967604	1.5048966	1.1511616

Table 1 B. Continued.

Sector		Hotels and Lodging Places	Health Care	Services	Regional Income
		22	23	24	25
Dairy	**1**	0.0003609	0.0005476	0.0005209	0.0004980
Misc. Livestock	**2**	0.0010974	0.0016202	0.0015929	0.0017847
Range Cattle	**3**	0.0004831	0.0007243	0.0006903	0.0006593
Feedlots	**4**	0.0005033	0.0007249	0.0006896	0.0006476
Grains	**5**	0.0001418	0.0001638	0.0001605	0.0001514
Forage Crops	**6**	0.0002735	0.0002465	0.0002401	0.0002220
Misc. Crops	**7**	0.0030698	0.0040627	0.0039381	0.0056469
Sugar Beets	**8**	0.0000658	0.0000949	0.0000911	0.0000898
Ag Services	**9**	0.0045203	0.0022261	0.0021657	0.0016089
Mining	**10**	0.0021400	0.0031084	0.0029500	0.0028607
Construction	**11**	0.0295728	0.0118809	0.0278860	0.0070926
Manufacturing	**12**	0.0870943	0.1323651	0.1258009	0.1185738
Transportation and Communication	**13**	0.0533000	0.0410027	0.0478610	0.0360971
Gas and Electric Services	**14**	0.0108940	0.0075928	0.0083101	0.0097161
Irrigation and Water Serv.	**15**	0.0253121	0.0118366	0.0129613	0.0096982
Wholesale Trade	**16**	0.0047591	0.0068937	0.0067663	0.0067811
Retail Trade	**17**	0.0039553	0.0052884	0.0053523	0.0089544
Food Stores	**18**	0.0085851	0.0116806	0.0117080	0.0200451
Auto Dealers & Service Stations	**19**	0.0066337	0.0083793	0.0087473	0.0139178
Eating & Drinking	**20**	0.0124915	0.0171217	0.0164272	0.0257244
F.I.R.E.	**21**	0.0815924	0.0735776	0.0760826	0.0869135
Hotels and Lodging Places	**22**	1.0004303	0.0004744	0.0005043	0.0004241
Health Care	**23**	0.0298935	1.0473957	0.0410284	0.0710651
Services	**24**	0.1063772	0.1044533	1.1372784	0.0744172
Regional Income	**25**	0.4789806	0.6606948	0.6573800	1.1401078
Final Demand Multiplier		1.9525277	2.1541573	2.1971329	1.6436970
Industry Multiplier		1.4735472	1.4934625	1.5397530	0.5035897

Table 2 B. Output Requirements (Multipliers) for Owyhee County Economic Impact Model.

Sector		Dairy	Misc. Livestock	Range Cattle	Feedlots	Grains	Forage Crops	Misc. Crops
		1	2	3	4	5	6	7
Dairy	**1**	1.0000000	0.0007525	0.0002528	0.0007376	0.0004677	0.0004974	0.0005688
Misc. Livestock	**2**	0.0010992	1.0000000	0.0011242	0.0008908	0.0020588	0.0022518	0.0028198
Range Cattle	**3**	0.0003793	0.0337481	1.0000000	0.0378607	0.0007821	0.0008531	0.0009751
Feedlots	**4**	0.0006308	0.0031014	0.0449339	1.0000000	0.0012853	0.0014600	0.0016353
Grains	**5**	0.0340362	0.0144662	0.0243650	0.0570305	1.0000000	0.0026970	0.0010904
Forage Crops	**6**	0.0495778	0.0403786	0.0284464	0.0576799	0.0040044	1.0000000	0.0038997
Misc. Crops	**7**	0.0048450	0.0085980	0.0049470	0.0037624	0.0115579	0.0140739	1.0000000
Sugar Beets	**8**	0.0252531	0.0148578	0.0000824	0.0000697	0.0001647	0.0001864	0.0002128
Ag Services	**9**	0.0398702	0.0945033	0.0382709	0.0159053	0.0789665	0.0948408	0.1045184
Mining	**10**	0.0014639	0.0012826	0.0014002	0.0014049	0.0035594	0.0037462	0.0033913
Construction	**11**	0.0212692	0.0164260	0.0347735	0.0091556	0.0241569	0.0247226	0.0235323
Manufacturing	**12**	0.0538891	0.0489550	0.0552005	0.0536038	0.1136440	0.1208201	0.1378471
Transportation and Communication	**13**	0.0221631	0.0200785	0.0291373	0.0224413	0.0368989	0.0377090	0.0250526
Gas and Electric Services	**14**	0.0125667	0.0076434	0.0060142	0.0071145	0.0262966	0.0264413	0.0082051
Irrigation and Water Serv.	**15**	0.0144316	0.0073373	0.0166561	0.0055692	0.0148072	0.0162294	0.0241242
Wholesale Trade	**16**	0.0114062	0.0102001	0.0100000	0.0076297	0.0156366	0.0158038	0.0134112
Retail Trade	**17**	0.0090951	0.0481532	0.0047246	0.0042035	0.0025263	0.0080201	0.0037012
Food Stores	**18**	0.0054287	0.0055554	0.0063527	0.0068393	0.0053310	0.0056597	0.0079059
Auto Dealers & Service Stations	**19**	0.0068726	0.0045583	0.0134016	0.0110604	0.0040218	0.0094962	0.0058055
Eating & Drinking	**20**	0.0073972	0.0074340	0.0082059	0.0088405	0.0071375	0.0075343	0.0103660
F.I.R.E.	**21**	0.0384481	0.0395444	0.0449351	0.0405965	0.0693047	0.0585359	0.0625868
Hotels and Lodging Places	**22**	0.0001497	0.0001666	0.0001598	0.0001600	0.0001969	0.0001784	0.0002179
Health Care	**23**	0.0223065	0.0239633	0.0260416	0.0271784	0.0186929	0.0227865	0.0278280
Services	**24**	0.0805418	0.0358962	0.0382432	0.0325298	0.0584483	0.0530470	0.0505844
Regional Income	**25**	0.3053689	0.3132728	0.3563586	0.3878089	0.2992110	0.3177339	0.4458473
Final Demand Multiplier		1.7684900	1.8008732	1.7940275	1.8000734	1.7991575	1.8453249	1.9661271
Industry Output Multiplier		1.4631211	1.4876003	1.4376688	1.4122645	1.4999465	1.5275910	1.5202798

Table 2 B. Continued.

Sector		Sugar Beets	Ag Services	Mining	Construction	Manufacturing	Transportation and Communication	Gas and Electric Services
		8	9	10	11	12	13	14
Dairy	**1**	0.0003391	0.0004937	0.0003505	0.0008240	0.0040704	0.0005133	0.0001958
Misc. Livestock	**2**	0.0015645	0.0101178	0.0008869	0.0020543	0.0081531	0.0012330	0.0005336
Range Cattle	**3**	0.0005734	0.0024565	0.0004608	0.0010857	0.0053104	0.0006729	0.0002578
Feedlots	**4**	0.0009575	0.0023529	0.0004639	0.0011024	0.0053373	0.0006745	0.0002581
Grains	**5**	0.0006333	0.0004828	0.0001080	0.0003705	0.0009793	0.0001545	0.0000634
Forage Crops	**6**	0.0022548	0.0010477	0.0001490	0.0004778	0.0011855	0.0001829	0.0000854
Misc. Crops	**7**	0.0063007	0.0712847	0.0018975	0.0050190	0.0087436	0.0023174	0.0012906
Sugar Beets	**8**	1.0000000	0.0002222	0.0000585	0.0001384	0.0006420	0.0000842	0.0000332
Ag Services	**9**	0.0604156	1.0000000	0.0011694	0.0039991	0.0028157	0.0009836	0.0006226
Mining	**10**	0.0019588	0.0027524	1.0000000	0.0052249	0.0082239	0.0028985	0.0210021
Construction	**11**	0.0225779	0.0173497	0.0682377	1.0000000	0.0124466	0.0307573	0.0546101
Manufacturing	**12**	0.0820576	0.1165717	0.0852604	0.2006607	1.0000000	0.1251677	0.0474489
Transportation and Communication	**13**	0.0186504	0.0453993	0.0275115	0.0422604	0.0348367	1.0000000	0.0192640
Gas and Electric Services	**14**	0.0057040	0.0058979	0.0149024	0.0061749	0.0076406	0.0046637	1.0000000
Irrigation and Water Serv.	**15**	0.0211838	0.0080791	0.0053303	0.0091807	0.0078521	0.0145840	0.0076867
Wholesale Trade	**16**	0.0204268	0.0103666	0.0054362	0.0114073	0.0119874	0.0062148	0.0026403
Retail Trade	**17**	0.0390854	0.0049965	0.0023670	0.0069174	0.0022101	0.0025931	0.0017529
Food Stores	**18**	0.0055822	0.0101336	0.0049037	0.0121843	0.0038999	0.0054516	0.0037068
Auto Dealers & Service Stations	**19**	0.0042430	0.0073235	0.0044090	0.0177855	0.0031571	0.0045681	0.0031408
Eating & Drinking	**20**	0.0181073	0.0137916	0.0073267	0.0134016	0.0064532	0.0087214	0.0050848
F.I.R.E.	**21**	0.0590846	0.0561322	0.0685556	0.0537506	0.0289085	0.0422963	0.0256558
Hotels and Lodging Places	**22**	0.0001677	0.0003556	0.0003462	0.0003271	0.0003444	0.0003797	0.0001643
Health Care	**23**	0.0217072	0.0357801	0.0165356	0.0351432	0.0136142	0.0187350	0.0126636
Services	**24**	0.0631166	0.0758401	0.0466026	0.0864247	0.0565986	0.1099917	0.0353188
Regional Income	**25**	0.3134500	0.5728544	0.2649901	0.5632423	0.2167878	0.2992831	0.2029666
Final Demand Multiplier		1.7701423	2.0720825	1.6282597	2.0791567	1.4521985	1.6831224	1.4464468
Industry Output Multiplier		1.4566924	1.4992281	1.3632696	1.5159144	1.2354107	1.3838393	1.2434802

Table 2 B. Continued.

Sector		Irrigation and Water Serv.	Wholesale Trade	Retail Trade	Food Stores	Auto Dealers & Service Stations	Eating & Drinking	F.I.R.E.
		15	16	17	18	19	20	21
Dairy	**1**	0.0006842	0.0003887	0.0003367	0.0003389	0.0003340	0.0006600	0.0000597
Misc. Livestock	**2**	0.0015745	0.0011441	0.0010677	0.0011258	0.0010361	0.0027089	0.0002075
Range Cattle	**3**	0.0008958	0.0005127	0.0004460	0.0004487	0.0004423	0.0009045	0.0000891
Feedlots	**4**	0.0008985	0.0005116	0.0004464	0.0004461	0.0004441	0.0008893	0.0001213
Grains	**5**	0.0001902	0.0001159	0.0001070	0.0001060	0.0001069	0.0002121	0.0000641
Forage Crops	**6**	0.0002379	0.0001665	0.0001670	0.0001618	0.0001684	0.0003537	0.0002011
Misc. Crops	**7**	0.0027249	0.0029990	0.0030135	0.0033297	0.0028570	0.0184248	0.0007006
Sugar Beets	**8**	0.0001111	0.0000670	0.0000595	0.0000603	0.0000589	0.0001267	0.0000155
Ag Services	**9**	0.0011053	0.0013362	0.0017047	0.0014876	0.0017915	0.0035134	0.0051086
Mining	**10**	0.0040799	0.0022004	0.0019419	0.0019513	0.0019271	0.0038259	0.0003395
Construction	**11**	0.0825216	0.0096716	0.0131495	0.0101464	0.0144069	0.0167996	0.0175964
Manufacturing	**12**	0.1671442	0.0938056	0.0809100	0.0811481	0.0803628	0.1604801	0.0145140
Transportation and Communication	**13**	0.0500594	0.0410466	0.0330728	0.0300800	0.0342168	0.0368224	0.0102710
Gas and Electric Services	**14**	0.0121617	0.0064289	0.0079551	0.0074934	0.0081160	0.0100905	0.0013051
Irrigation and Water Serv.	**15**	1.0000000	0.0092202	0.0106573	0.0092099	0.0112397	0.0177058	0.0045275
Wholesale Trade	**16**	0.0084745	1.0000000	0.0043052	0.0044357	0.0042239	0.0128972	0.0008007
Retail Trade	**17**	0.0031652	0.0042464	1.0000000	0.0051213	0.0042426	0.0035902	0.0004293
Food Stores	**18**	0.0061219	0.0092827	0.0098820	1.0000000	0.0092002	0.0076196	0.0008529
Auto Dealers & Service Stations	**19**	0.0067245	0.0069917	0.0075506	0.0082853	1.0000000	0.0058685	0.0008602
Eating & Drinking	**20**	0.0083349	0.0129213	0.0135843	0.0150771	0.0128493	1.0000000	0.0015058
F.I.R.E.	**21**	0.0368239	0.0556611	0.0676346	0.0647850	0.0685264	0.0607272	1.0000000
Hotels and Lodging Places	**22**	0.0003305	0.0004130	0.0003839	0.0003504	0.0003966	0.0004516	0.0001095
Health Care	**23**	0.0195970	0.0324716	0.0344647	0.0397009	0.0319590	0.0265647	0.0028075
Services	**24**	0.0653074	0.1007401	0.0917949	0.0770511	0.0978192	0.0904229	0.0315706
Regional Income	**25**	0.3138887	0.5204096	0.5524899	0.6366514	0.5122228	0.4254908	0.0448090
Final Demand Multiplier		1.7931576	1.9127525	1.9371251	1.9989921	1.8989487	1.9071505	1.1388666
Industry Output Multiplier		1.4792689	1.3923429	1.3846352	1.3623407	1.3867258	1.4816596	1.0940576

Table 2 B. Continued.

Sector		Hotels and Lodging Places	Health Care	Services	Regional Income
		22	23	24	25
Dairy	**1**	0.0003608	0.0005228	0.0004580	0.0004368
Misc. Livestock	**2**	0.0010969	0.0015469	0.0014006	0.0015654
Range Cattle	**3**	0.0004829	0.0006915	0.0006069	0.0005783
Feedlots	**4**	0.0005031	0.0006921	0.0006064	0.0005680
Grains	**5**	0.0001417	0.0001564	0.0001411	0.0001328
Forage Crops	**6**	0.0002734	0.0002354	0.0002111	0.0001948
Misc. Crops	**7**	0.0030684	0.0038789	0.0034627	0.0049529
Sugar Beets	**8**	0.0000658	0.0000906	0.0000801	0.0000787
Ag Services	**9**	0.0045184	0.0021254	0.0019043	0.0014112
Mining	**10**	0.0021391	0.0029677	0.0025939	0.0025092
Construction	**11**	0.0295601	0.0113433	0.0245199	0.0062210
Manufacturing	**12**	0.0870568	0.1263754	0.1106157	0.1040023
Transportation and Communication	**13**	0.0532770	0.0391473	0.0420838	0.0316611
Gas and Electric Services	**14**	0.0108893	0.0072492	0.0073070	0.0085221
Irrigation and Water Serv.	**15**	0.0253012	0.0113010	0.0113967	0.0085063
Wholesale Trade	**16**	0.0047570	0.0065817	0.0059495	0.0059477
Retail Trade	**17**	0.0039536	0.0050491	0.0047062	0.0078540
Food Stores	**18**	0.0085814	0.0111521	0.0102947	0.0175817
Auto Dealers & Service Stations	**19**	0.0066309	0.0080002	0.0076914	0.0122075
Eating & Drinking	**20**	0.0124861	0.0163470	0.0144443	0.0225631
F.I.R.E.	**21**	0.0815573	0.0702482	0.0668989	0.0762327
Hotels and Lodging Places	**22**	1.0000000	0.0004530	0.0004435	0.0003720
Health Care	**23**	0.0298807	1.0000000	0.0360759	0.0623319
Services	**24**	0.1063314	0.0997267	1.0000000	0.0652721
Regional Income	**25**	0.4787745	0.6307977	0.5780290	1.0000000
Final Demand Multiplier		1.9516879	2.0566795	1.9319218	1.4417036
Industry Output Multiplier		1.4729134	1.4258818	1.3538927	0.4417036

APPENDIX C

Final Demand and Output Requirements (Multipliers)

for the

4 County Economic Impact Model

Table 1C. Final Demand Requirements (Multipliers) for 4 County Economic Impact Model.

Sector		Dairy	Misc. Livestock	Range Cattle	Feedlots	Grains	Forage Crops	Misc. Crops
		1	2	3	4	5	6	7
Dairy	**1**	1.0005468	0.0012739	0.0013703	0.0012560	0.0007493	0.0008005	0.0008136
Misc. Livestock	**2**	0.0003281	1.0080944	0.0002937	0.0002919	0.0004175	0.0004436	0.0004912
Range Cattle	**3**	0.0008893	0.0016544	1.1831857	0.0008198	0.0011928	0.0012596	0.0012356
Feedlots	**4**	0.0009269	0.0017297	0.0008761	1.1157870	0.0012498	0.0013220	0.0013027
Grains	**5**	0.0083590	0.0037675	0.0088397	0.0078309	1.0006767	0.0007161	0.0003031
Forage Crops	**6**	0.0201541	0.0090182	0.0213174	0.0188839	0.0015587	1.0016742	0.0006670
Misc. Crops	**7**	0.0039381	0.0064328	0.0032115	0.0031888	0.0069927	0.0080897	1.0179396
Sugar Beets	**8**	0.0001775	0.0003755	0.0001396	0.0001308	0.0002915	0.0003263	0.0003675
Ag Services	**9**	0.0299102	0.0706013	0.0199294	0.0178234	0.0565045	0.0651160	0.0776124
Mining	**10**	0.0002945	0.0004578	0.0002765	0.0002725	0.0004493	0.0004568	0.0003478
Construction	**11**	0.0161330	0.0192177	0.0208548	0.0195784	0.0236834	0.0237782	0.0246048
Manufacturing	**12**	0.1870345	0.3317228	0.1876180	0.1839501	0.2320107	0.2385462	0.2174085
Transportation and Communication	**13**	0.0583042	0.0634948	0.0590932	0.0573633	0.0541479	0.0553614	0.0554150
Gas and Electric Services	**14**	0.0129581	0.0131916	0.0101742	0.0104017	0.0107080	0.0110312	0.0137034
Irrigation and Water Serv.	**15**	0.0023176	0.0025651	0.0022772	0.0022934	0.0042814	0.0046221	0.0042192
Wholesale Trade	**16**	0.0697155	0.0678233	0.0719834	0.0677509	0.0844811	0.0834915	0.0754328
Retail Trade	**17**	0.0334008	0.0282645	0.0272124	0.0298256	0.0258558	0.0279256	0.0340720
Food Stores	**18**	0.0101315	0.0085388	0.0082196	0.0090250	0.0077875	0.0084199	0.0102985
Auto Dealers & Service Stations	**19**	0.0124867	0.0107129	0.0103196	0.0112429	0.0098994	0.0106540	0.0128921
Eating & Drinking	**20**	0.0228728	0.0196883	0.0186786	0.0204308	0.0178695	0.0192649	0.0234327
F.I.R.E.	**21**	0.1227115	0.1132932	0.1300336	0.1326649	0.1545420	0.1549592	0.1527018
Hotels and Lodging Places	**22**	0.0047456	0.0047556	0.0042776	0.0044849	0.0044277	0.0046711	0.0053781
Health Care	**23**	0.0654643	0.0594925	0.0586987	0.0629621	0.0485301	0.0525151	0.0643524
Services	**24**	0.1041411	0.1057669	0.0961344	0.0995425	0.1068708	0.1120460	0.1234952
Regional Income	**25**	0.6823556	0.5731878	0.5516906	0.6066314	0.5214618	0.5643006	0.6915949
Final Demand Multiplier		2.4702971	2.5251210	2.4967059	2.4844329	2.3766399	2.4517917	2.6100817
Industry Multiplier		1.7879416	1.9519333	1.9450152	1.8778015	1.8551781	1.8874912	1.9184868

Table 1C. Continued.

Sector		Sugar Beets	Ag Services	Mining	Construction	Manufacturing	Transportation and Communication	Gas and Electric Services
		8	9	10	11	12	13	14
Dairy	**1**	0.0006082	0.0005031	0.0003497	0.0008852	0.0026581	0.0005280	0.0001879
Misc. Livestock	**2**	0.0003348	0.0017558	0.0002296	0.0004842	0.0014532	0.0003055	0.0001177
Range Cattle	**3**	0.0009580	0.0023973	0.0005993	0.0015654	0.0053971	0.0008877	0.0003185
Feedlots	**4**	0.0010050	0.0024634	0.0006172	0.0016117	0.0055362	0.0009144	0.0003281
Grains	**5**	0.0001975	0.0000985	0.0000385	0.0001476	0.0002216	0.0000556	0.0000219
Forage Crops	**6**	0.0004358	0.0002266	0.0000885	0.0003463	0.0005226	0.0001260	0.0000503
Misc. Crops	**7**	0.0043354	0.0443444	0.0022035	0.0040455	0.0064489	0.0025102	0.0010923
Sugar Beets	**8**	1.0132188	0.0001036	0.0000591	0.0001517	0.0004453	0.0000878	0.0000317
Ag Services	**9**	0.0485124	1.0082060	0.0015621	0.0047693	0.0022578	0.0015612	0.0007683
Mining	**10**	0.0003436	0.0002893	1.0042340	0.0007518	0.0015618	0.0003171	0.0048309
Construction	**11**	0.0221568	0.0219884	0.0414831	1.0144392	0.0178120	0.0314122	0.0421986
Manufacturing	**12**	0.1825535	0.1989350	0.1474218	0.3856625	1.3738193	0.2184323	0.0782809
Transportation and Communication	**13**	0.0418841	0.0696202	0.0422722	0.0755011	0.0651280	1.1643424	0.0263231
Gas and Electric Services	**14**	0.0108949	0.0102754	0.0175475	0.0116869	0.0161662	0.0108751	1.0292025
Irrigation and Water Serv.	**15**	0.0058104	0.0022111	0.0020404	0.0031785	0.0031115	0.0042349	0.0020466
Wholesale Trade	**16**	0.0602132	0.0654344	0.0349112	0.0874955	0.0835203	0.0450397	0.0173227
Retail Trade	**17**	0.0222089	0.0364363	0.0336870	0.0561658	0.0304550	0.0341625	0.0162630
Food Stores	**18**	0.0066851	0.0110096	0.0100856	0.0134979	0.0091562	0.0102015	0.0048038
Auto Dealers & Service Stations	**19**	0.0085198	0.0138014	0.0131530	0.0359058	0.0117300	0.0134502	0.0066244
Eating & Drinking	**20**	0.0152310	0.0258352	0.0232273	0.0252185	0.0226981	0.0248657	0.0110034
F.I.R.E.	**21**	0.1243599	0.1361044	0.1493192	0.1395416	0.1185122	0.1350486	0.0615995
Hotels and Lodging Places	**22**	0.0039738	0.0066542	0.0058098	0.0068182	0.0075920	0.0072468	0.0028040
Health Care	**23**	0.0416378	0.0688087	0.0625170	0.0666305	0.0570427	0.0631777	0.0294475
Services	**24**	0.0903360	0.1613824	0.1109711	0.2071871	0.1541991	0.2092149	0.0679420
Regional Income	**25**	0.4474263	0.7391594	0.6720086	0.7157501	0.6121985	0.6782656	0.3164763
Final Demand Multiplier		2.1538409	2.6280441	2.3764365	2.8594379	2.6096435	2.6572636	1.7200860
Industry Multiplier		1.7064146	1.8888847	1.7044279	2.1436878	1.9974451	1.9789980	1.4036097

Table 1C. Continued.

Sector		Irrigation and Water Serv.	Wholesale Trade	Retail Trade	Food Stores	Auto Dealers & Service Stations	Eating & Drinking	F.I.R.E.
		15	16	17	18	19	20	21
Dairy	**1**	0.0005209	0.0004333	0.0003619	0.0003494	0.0003715	0.0006225	0.0002258
Misc. Livestock	**2**	0.0003004	0.0002637	0.0002383	0.0002455	0.0002369	0.0005148	0.0001331
Range Cattle	**3**	0.0009204	0.0007068	0.0005907	0.0005814	0.0006008	0.0010759	0.0003453
Feedlots	**4**	0.0009470	0.0007286	0.0006091	0.0005992	0.0006196	0.0011080	0.0003587
Grains	**5**	0.0000523	0.0000476	0.0000413	0.0000384	0.0000431	0.0000648	0.0000447
Forage Crops	**6**	0.0001209	0.0001086	0.0000942	0.0000879	0.0000981	0.0001491	0.0000998
Misc. Crops	**7**	0.0022813	0.0024439	0.0024035	0.0025787	0.0023378	0.0109508	0.0015036
Sugar Beets	**8**	0.0000847	0.0000741	0.0000629	0.0000596	0.0000652	0.0001057	0.0000577
Ag Services	**9**	0.0013629	0.0017706	0.0019118	0.0016445	0.0020629	0.0028470	0.0069845
Mining	**10**	0.0003639	0.0002614	0.0002315	0.0002247	0.0002370	0.0003978	0.0001256
Construction	**11**	0.0638175	0.0148056	0.0155355	0.0119303	0.0174788	0.0210898	0.0295225
Manufacturing	**12**	0.2283252	0.1725960	0.1438704	0.1423254	0.1459556	0.2647213	0.0768320
Transportation and Communication	**13**	0.0718823	0.0640291	0.0485101	0.0438780	0.0512676	0.0613963	0.0323136
Gas and Electric Services	**14**	0.0173490	0.0117550	0.0127230	0.0118080	0.0132963	0.0174850	0.0061446
Irrigation and Water Serv.	**15**	1.0243781	0.0027888	0.0029393	0.0025384	0.0031665	0.0054451	0.0024526
Wholesale Trade	**16**	0.0477706	1.0473749	0.0308740	0.0313523	0.0309168	0.0792075	0.0168255
Retail Trade	**17**	0.0310530	0.0357498	1.0377555	0.0417997	0.0360792	0.0348910	0.0172708
Food Stores	**18**	0.0089062	0.0107212	0.0113485	1.0126680	0.0107927	0.0104603	0.0051250
Auto Dealers & Service Stations	**19**	0.0137710	0.0138825	0.0145525	0.0156737	1.0141251	0.0135632	0.0069360
Eating & Drinking	**20**	0.0203166	0.0254899	0.0263153	0.0287009	0.0253635	1.0311665	0.0123148
F.I.R.E.	**21**	0.1061171	0.1412481	0.1519129	0.1447778	0.1568650	0.1588605	1.1776104
Hotels and Lodging Places	**22**	0.0057077	0.0075165	0.0064434	0.0059450	0.0067513	0.0081854	0.0039838
Health Care	**23**	0.0532129	0.0665796	0.0705880	0.0793112	0.0668733	0.0649456	0.0315521
Services	**24**	0.1449009	0.2033259	0.1639955	0.1372205	0.1788717	0.1912647	0.1130964
Regional Income	**25**	0.5717921	0.7153562	0.7586411	0.8525769	0.7186266	0.6977613	0.3389500
Final Demand Multiplier		2.4162547	2.5400574	2.5025502	2.5689155	2.4831030	2.6782796	1.8808089
Industry Multiplier		1.8444627	1.8247013	1.7439091	1.7163386	1.7644764	1.9805184	1.5418589

Table 1C. Continued.

Sector		Hotels and Lodging Places	Health Care	Services	Regional Income
		22	23	24	25
Dairy	**1**	0.0004251	0.0005830	0.0005729	0.0004956
Misc. Livestock	**2**	0.0002568	0.0003698	0.0003521	0.0003686
Range Cattle	**3**	0.0006794	0.0009796	0.0009309	0.0008396
Feedlots	**4**	0.0007017	0.0010093	0.0009598	0.0008647
Grains	**5**	0.0000569	0.0000628	0.0000651	0.0000526
Forage Crops	**6**	0.0001286	0.0001437	0.0001485	0.0001208
Misc. Crops	**7**	0.0025473	0.0033701	0.0030823	0.0039982
Sugar Beets	**8**	0.0000818	0.0000997	0.0000992	0.0000831
Ag Services	**9**	0.0045912	0.0027198	0.0026826	0.0020688
Mining	**10**	0.0002828	0.0003533	0.0003440	0.0003205
Construction	**11**	0.0337235	0.0182182	0.0357905	0.0128959
Manufacturing	**12**	0.1622682	0.2400080	0.2267916	0.2064464
Transportation and Communication	**13**	0.0793034	0.0681674	0.0757795	0.0583740
Gas and Electric Services	**14**	0.0181325	0.0144608	0.0147786	0.0161297
Irrigation and Water Serv.	**15**	0.0077026	0.0038299	0.0038422	0.0032084
Wholesale Trade	**16**	0.0351160	0.0504003	0.0482579	0.0465158
Retail Trade	**17**	0.0348221	0.0469541	0.0428531	0.0663375
Food Stores	**18**	0.0104007	0.0142211	0.0128370	0.0202236
Auto Dealers & Service Stations	**19**	0.0137005	0.0176444	0.0167018	0.0243731
Eating & Drinking	**20**	0.0253293	0.0348865	0.0308999	0.0450529
F.I.R.E.	**21**	0.1910015	0.1900087	0.1854224	0.2029458
Hotels and Lodging Places	**22**	1.0076496	0.0089728	0.0091594	0.0080729
Health Care	**23**	0.0643760	1.0989585	0.0796648	0.1272013
Services	**24**	0.2115173	0.2214453	1.2747918	0.1669647
Regional Income	**25**	0.6916335	0.9566107	0.8557298	1.3675896
Final Demand Multiplier		2.5964284	2.9944779	2.9225377	2.3815440
Industry Multiplier		1.9047949	2.0378672	2.0668079	1.0139547

Table 2C. Output Requirements (Multipliers) for 4 County Economic Impact Model.

Sector		Dairy	Misc. Livestock	Range Cattle	Feedlots	Grains	Forage Crops	Misc. Crops
		1	2	3	4	5	6	7
Dairy	**1**	1.0000000	0.0012637	0.0011581	0.0011257	0.0007488	0.0007991	0.0007992
Misc. Livestock	**2**	0.0003279	1.0000000	0.0002483	0.0002616	0.0004172	0.0004429	0.0004826
Range Cattle	**3**	0.0008888	0.0016411	1.0000000	0.0007348	0.0011920	0.0012575	0.0012138
Feedlots	**4**	0.0009264	0.0017158	0.0007405	1.0000000	0.0012489	0.0013198	0.0012797
Grains	**5**	0.0083544	0.0037373	0.0074711	0.0070183	1.0000000	0.0007149	0.0002977
Forage Crops	**6**	0.0201431	0.0089458	0.0180170	0.0169243	0.0015577	1.0000000	0.0006552
Misc. Crops	**7**	0.0039360	0.0063811	0.0027143	0.0028579	0.0069879	0.0080762	1.0000000
Sugar Beets	**8**	0.0001774	0.0003725	0.0001180	0.0001172	0.0002913	0.0003257	0.0003610
Ag Services	**9**	0.0298938	0.0700344	0.0168439	0.0159739	0.0564663	0.0650072	0.0762446
Mining	**10**	0.0002943	0.0004541	0.0002337	0.0002442	0.0004490	0.0004560	0.0003416
Construction	**11**	0.0161242	0.0190634	0.0176260	0.0175467	0.0236673	0.0237385	0.0241712
Manufacturing	**12**	0.1869323	0.3290593	0.1585702	0.1648613	0.2318538	0.2381475	0.2135770
Transportation and Communication	**13**	0.0582723	0.0629849	0.0499441	0.0514106	0.0541113	0.0552688	0.0544384
Gas and Electric Services	**14**	0.0129510	0.0130857	0.0085989	0.0093223	0.0107008	0.0110127	0.0134619
Irrigation and Water Serv.	**15**	0.0023163	0.0025445	0.0019246	0.0020554	0.0042785	0.0046144	0.0041448
Wholesale Trade	**16**	0.0696774	0.0672787	0.0608386	0.0607203	0.0844239	0.0833520	0.0741034
Retail Trade	**17**	0.0333825	0.0280375	0.0229992	0.0267306	0.0258383	0.0278790	0.0334715
Food Stores	**18**	0.0101260	0.0084702	0.0069470	0.0080885	0.0077823	0.0084058	0.0101170
Auto Dealers & Service Stations	**19**	0.0124799	0.0106268	0.0087219	0.0100762	0.0098927	0.0106362	0.0126649
Eating & Drinking	**20**	0.0228603	0.0195302	0.0157867	0.0183106	0.0178574	0.0192327	0.0230197
F.I.R.E.	**21**	0.1226444	0.1123835	0.1099013	0.1188980	0.1544375	0.1547002	0.1500107
Hotels and Lodging Places	**22**	0.0047430	0.0047175	0.0036153	0.0040195	0.0044247	0.0046633	0.0052833
Health Care	**23**	0.0654285	0.0590148	0.0496107	0.0564284	0.0484972	0.0524274	0.0632183
Services	**24**	0.1040842	0.1049176	0.0812505	0.0892128	0.1067985	0.1118587	0.1213188
Regional Income	**25**	0.6819826	0.5685854	0.4662756	0.5436803	0.5211092	0.5633574	0.6794066
Final Demand Multiplier		2.4702971	2.5251210	2.4967059	2.4844329	2.3766399	2.4517917	2.6100817
Industry Output Multiplier		1.7869644	1.9362605	1.6438800	1.6829391	1.8539236	1.8843364	1.8846765

Table 2C. Continued.

Sector		Sugar Beets	Ag Services	Mining	Construction	Manufacturing	Transportation and Communication	Gas and Electric Services
		8	9	10	11	12	13	14
Dairy	**1**	0.0006002	0.0004990	0.0003482	0.0008726	0.0019349	0.0004534	0.0001825
Misc. Livestock	**2**	0.0003304	0.0017415	0.0002287	0.0004773	0.0010578	0.0002624	0.0001143
Range Cattle	**3**	0.0009455	0.0023778	0.0005968	0.0015432	0.0039285	0.0007624	0.0003095
Feedlots	**4**	0.0009919	0.0024434	0.0006146	0.0015888	0.0040298	0.0007853	0.0003188
Grains	**5**	0.0001949	0.0000977	0.0000383	0.0001455	0.0001613	0.0000478	0.0000212
Forage Crops	**6**	0.0004301	0.0002248	0.0000882	0.0003413	0.0003804	0.0001082	0.0000489
Misc. Crops	**7**	0.0042789	0.0439835	0.0021942	0.0039879	0.0046941	0.0021559	0.0010613
Sugar Beets	**8**	1.0000000	0.0001027	0.0000589	0.0001495	0.0003242	0.0000754	0.0000308
Ag Services	**9**	0.0478795	1.0000000	0.0015555	0.0047014	0.0016435	0.0013409	0.0007465
Mining	**10**	0.0003391	0.0002869	1.0000000	0.0007411	0.0011368	0.0002723	0.0046939
Construction	**11**	0.0218677	0.0218094	0.0413082	1.0000000	0.0129654	0.0269785	0.0410013
Manufacturing	**12**	0.1801718	0.1973158	0.1468002	0.3801731	1.0000000	0.1876015	0.0760598
Transportation and Communication	**13**	0.0413377	0.0690536	0.0420940	0.0744264	0.0474065	1.0000000	0.0255762
Gas and Electric Services	**14**	0.0107528	0.0101918	0.0174735	0.0115205	0.0117674	0.0093401	1.0000000
Irrigation and Water Serv.	**15**	0.0057346	0.0021931	0.0020318	0.0031332	0.0022648	0.0036372	0.0019886
Wholesale Trade	**16**	0.0594276	0.0649019	0.0347640	0.0862501	0.0607943	0.0386825	0.0168312
Retail Trade	**17**	0.0219192	0.0361397	0.0335450	0.0553664	0.0221681	0.0293406	0.0158016
Food Stores	**18**	0.0065979	0.0109200	0.0100431	0.0133058	0.0066648	0.0087616	0.0046675
Auto Dealers & Service Stations	**19**	0.0084087	0.0136891	0.0130976	0.0353948	0.0085382	0.0115517	0.0064364
Eating & Drinking	**20**	0.0150323	0.0256249	0.0231294	0.0248596	0.0165219	0.0213560	0.0106912
F.I.R.E.	**21**	0.1227374	0.1349966	0.1486896	0.1375554	0.0862647	0.1159870	0.0598517
Hotels and Lodging Places	**22**	0.0039219	0.0066000	0.0057853	0.0067212	0.0055262	0.0062239	0.0027244
Health Care	**23**	0.0410946	0.0682486	0.0622534	0.0656821	0.0415213	0.0542604	0.0286120
Services	**24**	0.0891575	0.1600688	0.1105033	0.2042381	0.1122412	0.1796850	0.0660143
Regional Income	**25**	0.4415890	0.7331432	0.6691753	0.7055623	0.4456179	0.5825310	0.3074966
Final Demand Multiplier		2.1538409	2.6280441	2.3764365	2.8594379	2.6096435	2.6572636	1.7200860
Industry Output Multiplier		1.6841521	1.8735106	1.6972418	2.1131752	1.4539358	1.6996701	1.3637838

Table 2C. Continued.

Sector		Irrigation and Water Serv.	Wholesale Trade	Retail Trade	Food Stores	Auto Dealers & Service Stations	Eating & Drinking	F.I.R.E.
		15	16	17	18	19	20	21
Dairy	**1**	0.0005085	0.0004137	0.0003487	0.0003450	0.0003663	0.0006037	0.0001917
Misc. Livestock	**2**	0.0002932	0.0002518	0.0002297	0.0002424	0.0002336	0.0004992	0.0001130
Range Cattle	**3**	0.0008984	0.0006748	0.0005692	0.0005742	0.0005924	0.0010434	0.0002932
Feedlots	**4**	0.0009245	0.0006956	0.0005869	0.0005917	0.0006110	0.0010745	0.0003046
Grains	**5**	0.0000510	0.0000455	0.0000398	0.0000379	0.0000425	0.0000629	0.0000379
Forage Crops	**6**	0.0001180	0.0001037	0.0000907	0.0000868	0.0000968	0.0001446	0.0000847
Misc. Crops	**7**	0.0022270	0.0023334	0.0023160	0.0025464	0.0023053	0.0106198	0.0012768
Sugar Beets	**8**	0.0000827	0.0000707	0.0000607	0.0000589	0.0000643	0.0001025	0.0000490
Ag Services	**9**	0.0013305	0.0016905	0.0018423	0.0016239	0.0020342	0.0027609	0.0059311
Mining	**10**	0.0003552	0.0002495	0.0002231	0.0002219	0.0002337	0.0003858	0.0001066
Construction	**11**	0.0622988	0.0141359	0.0149703	0.0117811	0.0172354	0.0204523	0.0250699
Manufacturing	**12**	0.2228915	0.1647892	0.1386361	0.1405450	0.1439227	0.2567202	0.0652440
Transportation and Communication	**13**	0.0701717	0.0611329	0.0467452	0.0433291	0.0505535	0.0595407	0.0274400
Gas and Electric Services	**14**	0.0169362	0.0112233	0.0122601	0.0116603	0.0131111	0.0169565	0.0052178
Irrigation and Water Serv.	**15**	1.0000000	0.0026626	0.0028324	0.0025067	0.0031224	0.0052805	0.0020827
Wholesale Trade	**16**	0.0466337	1.0000000	0.0297507	0.0309601	0.0304862	0.0768135	0.0142878
Retail Trade	**17**	0.0303140	0.0341327	1.0000000	0.0412768	0.0355767	0.0338364	0.0146660
Food Stores	**18**	0.0086942	0.0102362	0.0109356	1.0000000	0.0106424	0.0101441	0.0043520
Auto Dealers & Service Stations	**19**	0.0134433	0.0132545	0.0140231	0.0154776	1.0000000	0.0131532	0.0058899
Eating & Drinking	**20**	0.0198331	0.0243369	0.0253579	0.0283419	0.0250102	1.0000000	0.0104575
F.I.R.E.	**21**	0.1035917	0.1348592	0.1463861	0.1429667	0.1546801	0.1540590	1.0000000
Hotels and Lodging Places	**22**	0.0055718	0.0071766	0.0062090	0.0058706	0.0066573	0.0079380	0.0033829
Health Care	**23**	0.0519465	0.0635680	0.0680199	0.0783191	0.0659419	0.0629827	0.0267933
Services	**24**	0.1414526	0.1941290	0.1580290	0.1355039	0.1763803	0.1854838	0.0960389
Regional Income	**25**	0.5581846	0.6829991	0.7310403	0.8419115	0.7086173	0.6766718	0.2878286
Final Demand Multiplier		2.4162547	2.5400574	2.5025502	2.5689155	2.4831030	2.6782796	1.8808089
Industry Output Multiplier		1.8005683	1.7421662	1.6804625	1.6948680	1.7399000	1.9206582	1.3093116

Table 2C. Continued.

Sector		Hotels and Lodging Places	Health Care	Services	Regional Income
		22	23	24	25
Dairy	**1**	0.0004218	0.0005305	0.0004494	0.0003624
Misc. Livestock	**2**	0.0002548	0.0003365	0.0002762	0.0002695
Range Cattle	**3**	0.0006743	0.0008914	0.0007303	0.0006139
Feedlots	**4**	0.0006964	0.0009184	0.0007529	0.0006323
Grains	**5**	0.0000565	0.0000571	0.0000510	0.0000385
Forage Crops	**6**	0.0001276	0.0001307	0.0001165	0.0000884
Misc. Crops	**7**	0.0025280	0.0030666	0.0024179	0.0029235
Sugar Beets	**8**	0.0000811	0.0000907	0.0000778	0.0000608
Ag Services	**9**	0.0045563	0.0024749	0.0021044	0.0015128
Mining	**10**	0.0002807	0.0003215	0.0002699	0.0002344
Construction	**11**	0.0334675	0.0165777	0.0280756	0.0094297
Manufacturing	**12**	0.1610364	0.2183958	0.1779048	0.1509564
Transportation and Communication	**13**	0.0787014	0.0620291	0.0594446	0.0426839
Gas and Electric Services	**14**	0.0179948	0.0131587	0.0115929	0.0117943
Irrigation and Water Serv.	**15**	0.0076441	0.0034850	0.0030139	0.0023460
Wholesale Trade	**16**	0.0348495	0.0458619	0.0378555	0.0340130
Retail Trade	**17**	0.0345578	0.0427260	0.0336158	0.0485069
Food Stores	**18**	0.0103217	0.0129406	0.0100699	0.0147878
Auto Dealers & Service Stations	**19**	0.0135965	0.0160556	0.0131016	0.0178219
Eating & Drinking	**20**	0.0251370	0.0317451	0.0242392	0.0329433
F.I.R.E.	**21**	0.1895515	0.1728989	0.1454531	0.1483967
Hotels and Lodging Places	**22**	1.0000000	0.0081648	0.0071850	0.0059030
Health Care	**23**	0.0638872	1.0000000	0.0624924	0.0930113
Services	**24**	0.2099116	0.2015047	1.0000000	0.1220868
Regional Income	**25**	0.6863829	0.8704702	0.6712702	1.0000000
Final Demand Multiplier		2.5964284	2.9944779	2.9225377	2.3815440
Industry Output Multiplier		1.8903345	1.8543622	1.6212905	0.7414174

BRENDA RICHARDS

TESTIMONY IN OVERSIGHT HEARING ON
"Threats, Intimidation and Bullying by Federal Land Management Agencies"

BEFORE THE

SUBCOMMITTEE ON PUBLIC LANDS AND EVIRONMENTAL REGULATION
NATURAL RESOURCES COMMITTEE
U.S. HOUSE OF REPRESENTATIVES

WASHINGTON, DC

OCTOBER 29, 2013

PROTOCOL FOR COORDINATION BETWEEN BLM-BOISE DISTRICT AND OWYHEE COUNTY, IDAHO

Introduction:

The BLM-Boise District (BLM) and the Owyhee County, Idaho Commissioners (Commissioners or County) have engaged in discussions regarding governmental interaction between BLM and County. On July 1, 2002 the Owyhee County Commissioners, the Lower Snake River District BLM, and Field Office Managers subordinate to the Lower Snake River District signed a Protocol for Coordination. That document contained a provision for periodic review and revision. In addition, organizational changes made by BLM in recent years have made the need for revision more imperative.

Both parties believe that it is important to have a revised protocol documenting their continued commitment to an open, effective, government-to-government relationship. In addition to fulfilling the coordination requirements set forth under FLPMA, the two entities hope to make better decisions, achieve efficiencies, enhance understanding and facilitate trust. It is their hope that this protocol will establish a means by which the two entities can work productively over time, as players and issues change and evolve.

This revised protocol, developed together by the Owyhee County Commissioners and the BLM, sets forth the process by which the Commissioners and the BLM expect to coordinate on issues of mutual interest and concern. It provides a venue for the Commissioners and the BLM to have direct communications and interactions. It also sets forth the process for making future adjustments to the protocol that are needed and mutually agreeable.

Mandate:

This protocol has been established to provide a forum for accomplishment of the BLM-to-local government coordination requirements of a variety of federal laws, regulations and executive orders and does not supercede the Federal Advisory Committee Act.

Purpose of the Protocol:

The purpose of this protocol is to aid in the implementation of the coordination required by law, regulation and executive orders currently in effect or yet to be enacted. It is designed as an upper level coordination effort, where management and policy-level work is discussed and coordinated directly among the Commissioners and BLM Managers. This does not limit or preclude the County or BLM from communicating via other means

or activities, e.g., formal correspondence, comment or legal means if necessary; it is intended to address and coordinate issues early and in as simple a manner as possible.

Participants:

Within this forum, protocol participants include:

1. Owyhee County Commissioner District 1
2. Owyhee County Commissioner District 2
3. Owyhee County Commissioner District 3
4. BLM Boise District Manager
5. BLM Owyhee Field Office Manager
6. BLM Bruneau Field Office Manager
7. BLM Four Rivers Field Office Manager, and
8. Staff members requested by the above listed participants.

Decision-making:

Forum Decision-makers are the Chairman of the Board of Commissioners, speaking the decision of the Board, and the BLM Boise District Manager or his designee, speaking for the BLM managers.

Decision-makers will work to reach consensus on matters of discussion. However, participants recognize that within the County and the BLM lay decision-making authorities and responsibilities to which they must be individually accountable. To that end, this forum will be used for coordination and collaboration to the extent possible; however, the Commissioners must make decisions in a manner that complies with all requirements of Idaho Code. Similarly, the BLM may take potential decisions to the state office, where those decisions will be subject to that review for approval. BLM decisions may be made at higher levels (e.g. State Director) or require other levels of review (e.g. by Solicitor's Office, State or Washington Office).

Staff role:

The BLM's and County's staffs will participate freely in discussion and presentation as determined by the Chairman of the Board of Commissioners and BLM District Manager, who each control the participation of their staff personnel.

Decision-makers recognize that both entities have staff that work for them, advise them on specific issues, study issues and recommend action. Staff of both entities will communicate, coordinate and work together on a regular basis on issues of concern to both parties.

Process:

1. Meetings

Coordination sessions will be normally scheduled on the second Thursday of each month, for a minimum of four hours, usually from 9:00 A.M. until 1:00 P.M. Meetings will be open, in accordance with the requirements of Idaho Code, and the participants will conduct meeting work. Invited staff will participate per agenda/issue requirements. Others are free to observe.

2. Agenda development

A County Commissioner or designee and the District Manager or designee will develop the agenda for each meeting. The County Commissioner and the District Manager, or designees, will design the meeting agenda based on the proposed and prioritized agenda items and in consideration of the available meeting time. Agendas will be finalized and distributed to participants no less than one week before the upcoming meeting. At each meeting, by mutual agreement, forum participants may add agenda topics and prioritize future agenda items.

3. Meeting Management and Facilitation

Meeting management and facilitation responsibilities will alternate between BLM and the County. A meeting record will be maintained that includes the:

a. Meeting date, time, location and participants
b. Topic discussed, list of concerns & outcome, including areas of agreement
c. Agenda topics for the next meeting
d. Action items

The notes will be reviewed as the first agenda item at the subsequent meeting for potential revision and approval. A template for taking these notes is included as Attachment 1.

4. Briefing sheets

A briefing sheet will be prepared by the BLM and/or Commissioners (and/or staffs) when 1) they are presenting and discussing a proposed action by either of the parties 2) they bring a proposal to this group for a decision by this group, and/or 3) they are presenting and discussing a topic for which feedback is requested. Briefing sheets may include description of issues, background, alternatives, resolutions, etc. Briefing sheets will be provided before the meeting along with the agenda to forum participants. On issues that

are complex or may be controversial a briefing sheet will be provided 5 working days prior to the meeting to allow for adequate staffing of the issue.

5. Issue Identification and Resolution

The forum will work collectively on agenda items to define issues and concerns, consider alternatives, and strive for consensus on issue resolution and follow-up actions. Considering that a wide range of topics will be included in the process, different methods may be appropriate to resolve issues of differing degrees of complexity or concern. Communication and information sharing between meetings is necessary to keep all parties informed, minimize misunderstandings, avoid surprises and resolve potential conflicts as quickly as possible. Therefore, any of the following options, or others as mutually agreed to by the forum, may be used to coordinate a given proposal or issue:

a. Participants will always have the option of responding immediately to proposals or issues that do not require further evaluation. This option will help to avoid unnecessarily deferring simple or non-controversial topics.

b. Where mutually acceptable to BLM and the County, coordination may be completed and documented by staff-to-staff communications before the next meeting.

c. Where further evaluation is needed, continuing discussion and resolution may be scheduled for the next meeting.

d. Issues may be referred to staff for review and recommendation and addressed again at a later meeting.

e. For an issue of special concern to either party, a special ad hoc meeting of the interested parties, a telephone conference call or a field tour may be scheduled to complete the process, on mutually agreed upon terms.

f. For a very sensitive/confidential issue, an executive session may be scheduled for the County Commissioners, the BLM District Manager and any necessary staff of the respective parties to discuss the issue so long as such executive session is allowed by Idaho Code.

g. As to any issue, resolution of which requires formal approval by the County's Board of Commissioners, a decision will have to await a regular or specially noticed meeting of the Board.

6. Unresolved issues

In the event participants cannot articulate a clear consensus or agreement on a given topic, the County Commissioner and the BLM District Manager or designees will prepare a one-page white paper outlining the issue, any potential areas of agreement, and the reasons for the lack of resolution in a manner that is equitable (in tone and space) to both entities. Both entities will confirm that the document accurately reflects its perspectives. A white paper template is included as Attachment 2.

7. Action items

For discussions requiring more than one meeting, participants will articulate and implement follow-up action items by identifying action, responsible person and deadline. Those action items will be reviewed and confirmed by the group before adjourning a given meeting. Absent highly sensitive or significant issues or concerns, follow-up will not exceed one month from the time it is initiated, unless mutual agreement is reached that a field tour or other action is needed that would require additional time.

Protocol revisions

The process will continue to evolve, but the basic premise will remain as expressed in this protocol. The process will be reviewed for potential revision on an annual basis.

AS INDICATED BY THE SIGNATURES AFFIXED BELOW, THIS PROTOCOL IS MUTUALLY ACCEPTABLE TO OWYHEE COUNTY AND THE BUREAU OF LAND MANAGEMENT, LOWER SNAKE RIVER DISTRICT.

Harold Loomis — 2-14-2006
Chairman, Board of County Commissioners — Date

Jim Caswell — 2/14/2006
BLM, BOISE Manager — Date

Dick Reynolds — 2-14-2006
Commissioner — Date

Randall Kay — 2/14/06
Owyhee Field Manager — Date

Dan Lee — 2-14-2006
Commissioner — Date

[illegible] — 2/14/2006
Bruneau Field Manager — Date

Roseman Thomas — 2/25/2006
FRFO Field Manager — Date

Attest: Charlotte Shepherd
Clerk of Board
Date: 2/21/06

ATTACHMENTS:

Attachment 1	Meeting notes template
Attachment 2	White paper template