

Non-Fee Grazing Cost Study for the Idaho Department of Lands

Submitted by:

John A. Tanaka, Kristie A. Maczko, Thomas Hilken, and Kasey Dollerschell¹

March 31, 2020

Background

In 2015, Idaho Department of Lands (IDL) began a review of their state grazing rate formula that had been in effect since 1993. During the August 2018 Land Board meeting, the State Board of Land Commissioners decided to continue using the status quo grazing rate methodology but directed IDL to engage with the University of Wyoming in their collaborative project with the Public Lands Council Endowment Trust (PLCET). The collaborative PLCET project is intended to provide a comprehensive, up-to-date, third-party study on the non-fee costs for federal rangeland grazing (BLM and USFS) within the state of Idaho. Research on this topic started in the 1960's, continued into the 1990's and the PLCET felt it was now due for an update on federal rangelands.

In 2018, IDL and University of Wyoming finalized an agreement (Joint Funding Agreement No.19-416) for a study that would quantify an estimate of the non-fee costs of grazing livestock on Idaho Department of State Lands. This study would be completed in conjunction with the collaborative project funded by the PLCET.

Purpose and Objective

This study focused on non-fee costs associated with livestock grazing to determine the total cost of grazing on state endowment rangelands on a per AUM basis. It is our understanding that the information gained from this study may be used by the State Board of Land Commissioners in the process regarding the state grazing fee and methodology in accounting for non-fee costs of grazing on state endowment rangelands.

The objective of this study was to quantify and estimate the non-fee costs of grazing livestock on Idaho Department of Lands (IDL) lease lands and compare those costs with federal (USDI Bureau of Land Management (BLM) and the USDA Forest Service (USFS)) and private rangelands within Idaho. This project is being done in conjunction with a collaborative project funded by the Public Lands Council Endowment Trust (PLCET) and the University of Wyoming to estimate non-fee costs on rangelands managed by the BLM and USFS, as well as private rangelands within the State of Idaho. The PLCET project is also estimating the non-fee costs of federal and private lands in Wyoming and California.

Methods

This project consisted of in-person interviews using a questionnaire developed specifically for collecting information from Idaho state land lessees (Attachment 1). The survey form was

¹ Authors are Professor Emeritus, Executive Director of the Sustainable Rangelands Roundtable, Research Assistant, and Graduate Research Assistant, University of Wyoming

compiled by researchers from the University of Wyoming with input from IDL. It was based on the survey conducted in the early 1990's by a group of researchers looking at the non-fee costs of grazing on public lands (Torell et al. 1993). After the questionnaire was developed, it was submitted to the University of Wyoming Institutional Review Board for approval to conduct research with human subjects and was approved for use (Attachment 2). Similar questionnaires were used to collect information for non-fee costs associated with federal and private rangelands.

Survey information from the completed questionnaires were then transferred to Excel spreadsheets and summarized. Data were summarized in the same categories as were used in the original 1966 non-fee grazing study that established the federal grazing fee (Table 1). Other information obtained from the questionnaire, but not summarized in the worksheets, included: general ranch characteristics such as rangeland vegetation and topography; number of and class of livestock; grazing management practices; and, when the state lease was purchased and the purchase price.

Table 1. Summary of Fee and Non-Fee Grazing Costs, 1966.

Item	Cattle	Cattle	Sheep	Sheep
	Public	Private	Public	Private
Lost Animals	0.60	0.37	0.70	0.65
Association Fees	0.08	-	0.04	-
Veterinarian	0.11	0.13	0.11	0.11
Moving Livestock	0.24	0.25	0.42	0.38
Herding	0.46	0.19	1.33	1.16
Salt and Feed	0.56	0.83	0.55	0.45
Travel	0.32	0.25	0.49	0.43
Water	0.08	0.06	0.15	0.16
Horse Cost	0.16	0.10	0.16	0.07
Maintenance	0.43	0.40	0.20	0.24
Development Depreciation	0.11	0.03	0.09	0.02
Other Costs	0.13	0.14	0.29	0.22
Private Lease Rate	-	1.79	-	1.77
Total Non-Fee Costs	3.28	4.54	4.53	5.66
Cost Difference/Forage Value		1.26		1.13
Weighted Cost Difference			1.23	
(weighting by relative AUMS of cattle and sheep on public lands)				
Source: USDI and USDA. 1977. Study of Fees for Grazing Livestock on Federal Lands. Table 5, Page 2-22.				

Table 1 shows the estimated costs in 1966 dollars for cattle and sheep on public and private lands. The weighted cost difference between private and public land costs of grazing was used to initially establish the federal grazing fee. The Public Rangelands Improvement Act (PRIA, PL 95-514) established a formula to update the federal grazing fee using the \$1.23 base. This was amended in 1986 to the current \$1.35/AUM base by Executive Order 12548.

Rancher cost information is personal and confidential. IDL was not involved in the selection process and no personal information from this study was shared outside the research team. In addition, the final data from this project are combined totals. No individual data can be released. The list of ranchers sampled has been destroyed as per the University of Wyoming approved protocol. Because most of the interviewees had both a federal permit and state lease, two researchers conducted every interview with each researcher being responsible for either the state lease, federal allotment, or private lease.

Initially, a random sample of 100 livestock producers was drawn from a list of federal permittees who participated in the study conducted in the 1990's. In addition, a random sample of 100 state land lessees was drawn from the state lessee list of 800 provided by IDL. A package to introduce the project and invite participation, along with a copy of the questionnaire, was mailed to the randomly selected producers. The letter informed the ranchers that participation was voluntary and there was no need to travel as the 2 researchers would visit them to conduct the approximately 2 to 3-hour interview, depending upon the amount of information filled out by the rancher prior to the interview. We encouraged participation by informing the ranchers that their shared information would be greatly appreciated and aid in the research on this topic, particularly since data has not been updated for over 20 years. Because response was extremely low from the initial mailing, it was decided that phone calls would be made to encourage participation. After phoning every name that had a phone number on the list once (and twice if a message was left or no answer from the first attempt), it became quite evident that participation was going to be a challenge. Therefore, a second random sample of 100 federal permittees and state lessees was selected from their respective lists. The PLCET study provided a second federal list, while the second state list was pulled from the original list provided by IDL in an attempt to get the desired number of respondents. Phone calls were then made to the second lists in another attempt to get to the desired number of interviews.

In addition, IDL sent out a letter to all 800 lessees encouraging participation from those ranchers that were previously selected from the 2 random samples. The initial intent was to ensure we had enough IDL respondents to meet a 95% confidence level with a 10% margin of error. Given 800 lessees with IDL leases, this would be 86 respondents needed. Every opportunity was afforded to the ranchers to become involved in this study.

Results and Discussion

It was our understanding that there were approximately 1,400 IDL leases held by approximately 800 lessees. As previously mentioned, the original intent was to sample 86 lessees to meet a 95% confidence level with 10% margin of error. However, because of low lessee participation, we ended up interviewing 38 lessees that held 85 leases. In discussions with the researchers that conducted the last study in the early 1990's this approach was consistent with what they did (Rimbey, N.R., personal communication). The first randomly selected list resulted in 14 interviews while the second list resulted in 16 interviews. Six interviews were completed as a result of federal lists that contained federal permittees that also had control of one or more state leases. The final 2 phone interviews (for a total of 38 interviews) resulted from IDL sending a letter to all 800 lessees requesting participation. It remains a mystery as to why the ranching community would not want to be involved, however one can only speculate that ranchers may

have been reluctant due to fear of their grazing rates increasing as a result of this study. The 38 respondents did result in 85 leases surveyed totaling 25,486 AUMs with a range of 8 to 1,800 AUMs per lease, and an average of 299 AUMs per lease.

Table 2 shows the results for the Idaho state lands, the federal lands in Idaho, and private leases in Idaho in the same format as the original 1966 grazing fee cost study. All 3 are shown here for comparison purposes and will be discussed further.

Table 2. Non-fee grazing costs for Idaho Department of Lands leases, federal allotments, and private leases, 2018.

Item	2018 Survey IDAHO	2018 Survey Federal	2018 Survey Private
Lost Animals	8.86	6.02	5.32
Association Fees			
Veterinarian	0.38	0.48	0.17
Moving Livestock	3.92	5.76	3.69
Herding	2.99	10.43	3.38
Salt and Feed	1.65	1.96	1.25
Travel	0.16	0.03	0.01
Water	1.00	1.29	0.07
Horse Cost	0.18	0.19	0.13
Maintenance	3.84	5.85	2.43
Development Depreciation	7.11	3.12	0.54
Other Costs	2.09	1.06	1.63
Technology	0.13	0.03	0.13
Private Lease Rate ¹			18.00
Total Non-Fee Costs	32.30	36.22	36.77
Grazing Fee	8.03	1.41	
Total Cost	40.33	37.63	36.77

Notes:

2018 Private Lease Rates from USDA-NASS (Ag. Prices, February 2019).

Results from the survey interviews indicate that Idaho Department of Lands grazing leases appear to have the highest total cost, but the lowest non-fee costs of the 3 kinds of ownership. The lost animals and development depreciation costs appear to be the highest on IDL lands. Additionally, although it is speculation on our part, there appears to be more incentive for ranchers to invest in rangeland improvements on state lands. One new category of non-fee cost that was added to this study was the rancher's use of technology in managing their operation. While it is not an extremely high cost at this point, it will be interesting to see how this cost changes in the future.

We note that the sample of private land leases is very small. There is no systematic way to collect a population of ranches that lease private land, so this sample is more opportunistic. In some cases, it was ranchers that had state leases that also had private leases and in others it was word of mouth. Statistically, it is impossible to say how accurate the results are for private leases. The population is unknown and there was no random sample (two of the requirements for a statistical sample). In previous studies, researchers have been able to work with groups like the USDA-National Agricultural Statistics Service (USDA-NASS) to identify those producers that reported leasing private land for beef cattle or sheep production. While we tried that route, we were told by USDA-NASS that approach is no longer possible.

Conclusions

In the original 1966 study that compared costs of grazing between federal and private lands, non-fee costs on federal permits averaged \$1.23 per AUM less than total costs on private land leases. Following that same logic, it appears that grazing on Idaho State Lands is more expensive than grazing that occurs on private land and federal allotments. The State of Idaho may wish to investigate why it appears to have higher total costs than other kind of permitted or leased lands. Possible areas to explore include the investment and maintenance of range improvements (water developments, corrals, roads, juniper, and invasive plant control, etc.) and death losses/lost animals on state lands. Depending on who maintains title to the range improvements and what happens when leases change hands, that relatively large cost may be an acceptable difference in total costs.

Additionally, comparing previous studies can shed some light on structural changes in how cattle and sheep are raised using these leases and permits. As Rimbey and Torell (2011) explained when they used the indices to adjust costs from 1992 to 2010, they could only account for inflation and not any structural changes that had occurred. Table 3 shows the 1966, 1992, and 2018 study results, all in 2018 dollars. Cost indices were derived from the USDA-SRS (1967) and USDA-NASS Agricultural Prices (2011 and 2019) and used to adjust prices to 2018. Indices were the same ones used by Rimbey and Torell (2011) and shown in Table 4.

As shown in Table 3, when all 3 surveys are put in real dollars (2018 \$), the total costs are similar. The base year of 1910-14 was used as it is the only index reported for all 3 years without having to calibrate different base years. The 1966 cattle total costs on federal land is the only one that appears to be much lower than the others. It is important to remember that this study sought to obtain results that are plus or minus 10% with a 95% confidence (with 85 responses, it turns out to be plus or minus 10.06%). As such, it is unlikely that any of the other total costs would be statistically different. The basic conclusion from this study is that grazing in Idaho on IDL lands, federal lands, and private lands are generally equivalent.

There are differences in how the non-fee costs are distributed over time, however (Table 5). Table 5 shows the percent of total fee and non-fee costs for each component item based on the information in Table 3. Just comparing the Federal lands over time, it appears that the components stay approximately the same on a percentage basis from 1992 to 2018. There are some differences however, such as horse costs going down and likely traded for ATV use. In looking at state leases, lost animals and development depreciation make a much larger

percentage of total costs while moving livestock and herding appear much lower than on the other land types. Also note the difference in how much the different fees are from a low of 3.4% for federal grazing fees and a high of 49.2% for private land leases.

It is worth mentioning that some ranchers expressed the following concerns with the survey: (1) the survey did not capture the price of bidding and acquiring the lease when it came up for renewal, and (2) the survey did not account for indirect effects of wolf depredation (Steele et al. 2013) such as lack of cow/calf performance, disruption of prescribed grazing system, and overall stress. One younger rancher had a death loss rate of nearly 8% and reported he was probably not going to meet his loan repayment obligations. Another concern was that comparisons are made between a private lease rate and a state lease rate should include taxes that have to be paid for by the private lease holder and not the State.

Lastly, the biggest caveat on these results is the low number of ranchers that participated. We assume from the data collected that there would have been more variation between operations than within an operation. That is, more variation in results from rancher to rancher than within multiple state leases within the same ranch. Another caveat is that this is a one-year snapshot of non-fee costs compared to 2 historical snapshots of those same non-fee costs. Whether such items as lost animals is an anomaly in 2018 compared to other years is unknown based on this study.

Table 3. Non-fee costs found in 1966, 1992, and 2018 rancher surveys expressed in 2018 dollars.

Item	1966 Cattle Public	1966 Cattle Private	1966 Sheep Public	1966 Sheep Private	1992 Federal	1992 Private	2018 Survey IDL	2018 Survey Federal	2018 Survey Private
All Values in 2018 \$									
Lost Animals	1.99	1.23	2.32	2.16	6.19	3.46	8.86	6.02	5.32
Association Fees	0.62		0.31		0.99				
Veterinarian	1.25	1.48	1.25	1.25	0.28	0.32	0.38	0.48	0.17
Moving Livestock	2.31	2.41	4.05	3.66	6.37	3.62	3.92	5.76	3.69
Herding	5.25	2.17	15.17	13.23	12.13	7.37	2.99	10.43	3.38
Salt and Feed	3.40	5.04	3.34	2.73	2.24	2.97	1.65	1.96	1.25
Travel	2.40	1.88	3.68	3.23	1.36	0.39	0.16	0.03	0.01
Water	0.62	0.46	1.15	1.23	0.90	0.28	1.00	1.29	0.07
Horse Cost	0.76	0.47	0.76	0.33	0.69	0.33	0.18	0.19	0.13
Maintenance	4.25	3.95	1.98	2.37	6.86	4.24	3.84	5.85	2.43
Development Depreciation	0.85	0.23	0.69	0.15	0.99	0.37	7.11	3.12	0.54
Other Costs	1.00	1.08	2.23	1.69	1.07	0.32	2.09	1.06	1.63
Technology							0.13	0.03	0.13
Private Lease Rate		13.77		13.62		19.70			18.00
Total Non-Fee Costs	24.70	34.17	36.94	45.67	40.07	43.37	32.30	36.22	36.77
Cost Difference/Forage Value		9.48		8.73	1.41		8.03	1.41	
Weighted Cost Difference			9.42						
Fee and Non-Fee Costs	24.70	34.17	36.94	45.67	40.07	43.37	40.33	37.63	36.77

Table 4. Agricultural Prices index categories.

		1966	1992	2018
Non-Fee Cost Item	Agricultural Prices Index	1910-14=100		
Lost Animals	Meat animals/Prices received	322	935	1069
Association Fees	Production Items	287	1003	2208
Veterinarian	Wage Rates	812	3824	9260
Moving Livestock	(Auto & Trucks) + (Wage Rates)	648	3315	6247.5
Herding	Wage Rates	812	3824	9260
Salt and Feed	(Auto & Trucks)+(feed)	354.5	1647.5	2151.5
Travel	(Auto & Trucks)+(fuel & energy)	331	1766.5	2487.5
Water	Production Items	287	1003	2208
Horse Cost	Feed	225	489	1068
Maintenance	(Wage Rates) + (Building & Fencing)	606.5	2587	5992.5
Development Depreciation	Production Items	287	1003	2208
Other Costs	Production Items	287	1003	2208
Technology	Production Items			2208

Notes:

Cost items with more than one index listed were updated using an average of the indices listed.

Indices derived from USDA SRS (1967) and NASS (1992, and 2018) Agricultural Prices.

Table 5. Percent of cost item of the total fee and non-fee costs as adjusted to 2018 dollars.

Item	1966	1966	1966	1966	1992	1992	2018	2018	2018
	Cattle	Cattle	Sheep	Sheep			Survey	Survey	Survey
	Public	Private	Public	Private	Federal	Private	IDL	Federal	Private
	Percent (%)								
Lost Animals	8.07	3.59	6.29	4.73	15.45	7.98	21.96	15.99	14.46
Association Fees	2.49		0.83		2.47				
Veterinarian	5.08	4.34	3.40	2.75	0.70	0.74	0.94	1.27	0.47
Moving Livestock	9.37	7.05	10.96	8.02	15.90	8.35	9.73	15.31	10.04
Herding	21.24	6.34	41.06	28.97	30.27	16.99	7.41	27.71	9.19
Salt and Feed	13.76	14.74	9.04	5.98	5.59	6.85	4.08	5.21	3.41
Travel	9.74	5.50	9.97	7.08	3.39	0.90	0.39	0.08	0.04
Water	2.49	1.35	3.12	2.70	2.25	0.65	2.48	3.44	0.20
Horse Cost	3.08	1.39	2.06	0.73	1.72	0.76	0.44	0.50	0.36
Maintenance	17.20	11.57	5.35	5.19	17.12	9.78	9.52	15.55	6.62
Development Depreciation	3.43	0.68	1.87	0.34	2.47	0.85	17.63	8.30	1.48
Other Costs	4.05	3.15	6.04	3.71	2.67	0.74	5.18	2.81	4.43
Technology							0.31	0.08	0.36
Private Lease Rate		40.30		29.82		45.42			48.95
Total Non-Fee Costs									
Grazing Fee							19.91	3.75	

Literature Cited

- Rimbey, N.R., and L.A. Torell. 2011. Grazing costs: What's the current situation? University of Idaho Agricultural Economics Extension Series No. 2011-02.
- Steele, J.R., B.S. Rashford, T.K. Foulke, J.A. Tanaka, and D.T. Taylor. 2013. Wolf (*Canus lupis*) predation impacts on livestock production: direct effects, indirect effects, and implications for compensation ratios. *Rangeland Ecology and Management* 66:539-544.
- Torell, L.A., L.W. Van Tassell, N.R. Rimbey, E.T. Bartlett, T. Bagwell, P. Burgener, and J. Coen. 1993. The value of public land forage and the implications for grazing fee policy. New Mexico State University Agricultural Experiment Station Bulletin 767.
- USDA, National Agricultural Statistics Service. 2011. Agricultural Prices. January 2011. ISSN: 1937-4216.
- USDA, National Agricultural Statistics Service. 2019. Agricultural Prices. February 2019. ISSN: 1937-4216.
- USDA, Statistical Reporting Service. 1967. Agricultural Prices. January 1967. PR 1 (1-67).
- USDI and USDA. 1977. Study of fees for grazing livestock on federal lands: A report from the Secretary of Interior and the Secretary of Agriculture. October 21, 1977. Washington, D.C.

University of Wyoming
2019 Non-Fee Grazing Cost Evaluation
Idaho State Endowment Trust Lands

The following information is being collected to determine the actual total costs of running livestock subject to leases on Idaho's state endowment trust lands. This survey is being conducted by the University of Wyoming for the Idaho Department of Lands (IDL) in conjunction with a larger tristate study, including Idaho, Wyoming, and California, for costs associated with grazing on federal public and private lands.

Be assured that any information you provide will be strictly confidential. Only summary statistics for Idaho will be released and individual responses will not be maintained.

Enumerator

I. GENERAL RANCH DESCRIPTION

The following information is for the **2018** operating year. Please include accurate information for your entire operation that includes Idaho state leased land.

A. What was your average livestock inventory on January 1, 2018?

1.) Mother Cows_____ No. Repl. Heifers_____ No.

Bulls_____ No.

2.) Yearling market livestock (Over 6 months of age)

Raised Steers_____ No. Raised Heifers_____ No.

Purchased Steers_____ No. Purchased Heifers_____ No.

3.) Ewes_____ No. Rams_____ No.

Yearlings_____ No.

4.) Horses_____ No.

5.) Other Livestock (specify) _____ No.

II. LIST OF IDAHO STATE TRUST LAND LEASES

1. Are your IDL state leases: (select all that apply)

- Managed as a stand-alone, blocked **state** land unit ☐
- Managed as scattered section(s) within BLM or USFS permits ☐
- Managed as part of a grazing association, run in common ☐
- Managed only in conjunction with your private land ☐

2. Please provide a list of all state land, IDL leases in 2018.

A. Lease 1 Allotment Name (if applicable) _____

Lease Number _____

Is this lease combined with BLM ☐ USFS ☐ or other IDL leases? ☐

Name of IDL supervisory area in which the lease is located:

B. Lease 2 Name _____

Lease Number _____

Is this lease combined with BLM ☐ USFS ☐ or other IDL leases? ☐

Name of IDL supervisory area in which the lease is located:

C. Lease 3 Name _____

Lease Number _____

Is this lease combined with BLM ☐ USFS ☐ or other IDL leases? ☐

Name of IDL supervisory area in which the lease is located:

D. **For any additional state land leases please add another page like this one.**

III. LEASE CHARACTERISTICS AND MANAGEMENT

This section will be filled out for IDL leases identified in Part II and used during 2018.

1. Allotment Management Unit

Ownership	Acreage			AUMS		
	State Lease 1	State Lease 2	State Lease 3	State Lease 1	State Lease 2	State Lease 3
Bureau of Land Management						
U.S. Forest Service						
Other Federal						
State Trust Land						
Private Deeded						
Private Lease						
Uncontrolled						
Other (describe)						
TOTAL						

2. What type of vegetation is on each state grazing lease?

Type	State Lease 1	State Lease 2	State Lease 3
(1) Sagebrush	%	%	%
(2) Salt Desert Shrub (Atriplex, Greasewood)	%	%	%
(3) Chaparral (Oakbrush, Mt. Mahogany, Chamise)	%	%	%
(4) Creosote bush (Blackbrush, cactus, mesquite, etc.)	%	%	%
(5) Pinyon-Juniper	%	%	%
(6) Coniferous Forest Types (Ponderosa, Lodgepole, etc.)	%	%	%
(7) Broadleaf Woodland (Aspen, Oaks, Cottonwood-River Bottom)	%	%	%
(8) Native Grassland	%	%	%
(9) Native Meadowland	%	%	%
(10) Seeded Grasses	%	%	%
(11) Invasive Annual Grasses	%	%	%

(11) Other (Describe)

%

%

%

3. What were the number of livestock on each state lease in 2018?

Lease 1	On the Lease		Off the Lease	
	Number	Date	Number	Date
Total Cows (Include cows with calves and dry cows)				
Weaned Calves (Weaning age to 1 year old)				
Yearlings (1 to 2 years old. excluding cows listed above)				
Bulls				
Ewes				
Rams				
Weaned Lambs (weaning age to 1 year old)				
Wethers				
Horses (Include only horses under permit or license)				

Lease 2	On the Lease		Off the Lease	
	Number	Date	Number	Date
Total Cows (Include cows with calves and dry cows)				
Weaned Calves (Weaning age to 1 year old)				
Yearlings (1 to 2 years old. excluding cows listed above)				
Bulls				
Ewes				
Rams				
Weaned Lambs (weaning age to 1 year old)				
Wethers				

Horses (Include only horses under permit or license)				
--	--	--	--	--

Lease 3	On the Lease		Off the Lease	
	Number	Date	Number	Date
Total Cows (Include cows with calves and dry cows)				
Weaned Calves (Weaning age to 1 year old)				
Yearlings (1 to 2 years old. excluding cows listed above)				
Bulls				
Ewes				
Rams				
Weaned Lambs (weaning age to 1 year old)				
Wethers				
Horses (Include only horses under permit or license)				

4. What topographic features best describe each state lease? (give proportion)

Description	Lease 1 (%)	Lease 2 (%)	Lease 3 (%)
Steep			
Steep and Rocky			
Rolling Hills			
Gentle, Flat			
Other (describe)			

5. How many pasture (units) are there in each state lease?

Lease 1 _____

Lease 2 _____

Lease 3 _____

6. How would you describe your current grazing management plan on each lease?

	State Lease 1		State Lease 2		State Lease 3	
Scheduled rest rotation among a number of pastures (one or more pastures used each year).	Y	N	Y	N	Y	N
How many pastures are used each year?	_____		_____		_____	
Scheduled deferred rotation among a number of pastures.	Y	N	Y	N	Y	N
How many pastures are used each year?	_____		_____		_____	
Open rotation with scheduled moves.	Y	N	Y	N	Y	N
How many pastures were used each year?	_____		_____		_____	
How many moves while in this lease?	_____		_____		_____	
Continuous grazing, with all livestock distributed freely	Y	N	Y	N	Y	N
Decision deferment (i.e., non-scheduled moves, Savory Grazing System)	Y	N	Y	N	Y	N
Other (specify)	Y	N	Y	N	Y	N

7. How many years have you had each state lease or how long has each state lease been in your family?

Lease 1 _____

Lease 2 _____

Lease 3 _____

8. If state lease was purchased via assignment, sublease, or premium auction bid:

Year Purchased

How much was paid? (\$/AUM for
sublease, premium bid for auction,
or payment for an assignment.)

IV. RANGE DEVELOPMENT AND MAINTENANCE COSTS

Include here all range improvements and developments that service the IDL state trust land leases or allow harvest of forage, regardless of land ownership. Include all improvements made to run your operation.

A. Range Improvement Developments

[illegible]

B. Range Improvement Maintenance

Maintenance Item	Cost
Water Maintenance	
(1) Water pumping costs (gas, electric, diesel, service)	
(2) Contract expenses to haul water?	
(3) Materials to maintain and clean wells, stock ponds and	
(4) Cost of bulldozers, and other equipment for water maintenance?	
(5) Other costs in maintaining stock ponds, wells, and springs on the IDL leases?	
Fence Maintenance	
(6) What was the cost of materials and equipment to maintain fences on the IDL leases during the last grazing season?	
Noxious Weed Control	
(7) Noxious Weed Control – What was the cost of materials and equipment to control noxious weeds on your IDL lease during the 2018 grazing season (including any contracted services).	
Other Costs	
(8) Did you have any costs in implementing or maintaining improvements other than those we have for the 2018 grazing season?	

V. OTHER CASH COSTS

This section of the questionnaire will be used to list the cash costs expended in grazing livestock on all IDL state leases.

- A. What were your cash expenditures for the following items that were used while livestock were on the leases in 2018?

Description	Units	Dollars
(1) Salt		
(2) Veterinary and Medicine		
(3) Protein Supplements. Grain, Hay		
(4) Contractor Feed		
(6) Predator Control (Poisons, trappers, wolf control methods)		

(7) Others (not previously listed)		

Do association fees pay for: (check all that apply)

- ☐ State Lease Fees

 ☐ Herding, rider
☐ Salt and Supplements

 ☐ Fence and Improvement maintenance
☐ Other (specify _____)

B. Miscellaneous Costs

What were the cash and non-cash expenditures for the following items pertaining to all leases during 2018? (Paperwork, stockmen's grazing meetings, planning, vandalism, rounding up stray stock after gates are left open, meetings with state personnel, endangered species protocol etc.)

	Transportation		Labor			
	Vehicle Type	Mileage	Manager Operated (hrs)	Family (hrs)	Regular Hired (hrs)	Day (hrs)
Paper work						
Meetings						
Vandalism						
Stray roundup						

VI. DEATH LOSSES

A. What was the average 2018 Livestock sale weights?

Steer calves

Heifer calves

Yearling steers

Yearling heifers

Cull cows

Lambs

Cull Ewes

Cull bucks

Wool per ewe

B. How many livestock died or disappeared on all IDL state leases in 2018?

Cows _____

Yearling Steers _____

Yearling Heifers _____

Steer Calves _____

Heifer Calves _____

Bulls _____

Rams _____

Ewes _____

Lambs _____

C. Did you receive any cash payments for livestock losses during 2018?

Dollar Amount: _____

VII. LABOR

This section of the questionnaire asks about the labor requirements (number of people and the hours required) to move livestock to IDL leases, to herd and distribute livestock on IDL leases, to gather and move livestock from IDL leases, to maintain the physical requirements of the IDL leases (fences, water tanks, dams, etc.) and the labor requirements for animal health and maintain (herd checking, doctoring, salting, feeding, watering, etc.) throughout 2018.

	Pay Unit* (code)	Wage rate per unit time	Approx. monthly cost for social security, unemployment, insurance, room and board, and benefits
Hired Manager			
Hired labor			
Day labor			

•paid by: hour=1 day=2 week =3 month =4 unpaid=5 exchange=6

	Livestock to IDL leases (A)		Herding, distribution, grazing mgt. (B)		Maintain IDL leases		Animal health and periodic Inspection (D)		Gathering & moving livestock (E)	
	no.	hrs.	no.	hrs.	no.	hrs.	no.	hrs.	no.	hrs.
Yourself/manager										
Family members										
Regular hired labor										
Day Labor										
Exchange Labor										

VIII. TRANSPORTATION

This section of the questionnaire asks about the vehicle requirements to move livestock to IDL leases, vehicle requirements to herd and distribute livestock on IDL leases, gather and move livestock from IDL leases, maintain the physical requirement of the IDL leases (fences, water tanks, dams. etc.) and the vehicles requirements for animal health and maintenance checking, doctoring, salting, watering, etc.) throughout 2018.

(Please: use hours on farm and industrial equipment instead of miles)

This section of the questionnaire will ask about the transportation of livestock to and from the IDL leases.

- A. What is the distance from your ranch headquarters to this IDL leases?

_____ miles

- B. If livestock were not taken directly from the ranch headquarters, give the distance from the last private lease, IDL lease, or owned pasture used.

_____miles

- C. How were the livestock moved to the IDL leases?

_____ Hired trucks \$_____ Total Cost

_____ Owned trucks

_____ Trailed

_____ Other (specify _____)

- D. What was the distance to remove livestock from the IDL leases?

_____miles

- E. How were the livestock moved off of the IDL leases?

_____ Hired trucks \$_____ Total Cost

_____ Owned trucks

_____ Trailed

_____ Other (specify _____)

If hired trucks were used, what was the total cost in transporting livestock from the IDL lease? \$_____

Please fill out the following table with as much detail as possible:

Vehicle type used *	Livestock to IDL Lease		Herding and Distributio n in lease		Gathering and moving livestock in lease		Lease Maintenan ce		Animal Health and Maintenan ce	
	No. Use d	Mil es (hrs .)	No. Use d	Mil es (hrs .)	No. Use d	Mil es (hrs .)	No. Use d	Mil es (hrs .)	No. Use d	Mil es (hrs .)

*Some vehicles that might be used: Pickup, Pickup-stock trailer, Stock truck, Semi-tractor trailer, All-terrain vehicle (ATV), Water-tank truck, Tractors, Implements.

Of the total costs for equipment (to the IDL leases) what percentage was done by:

_____ % Rented/Contracted

_____ % Owned equipment

IX. Horse Use

This section of the questionnaire will ask you about the horse requirements to operate and maintain this IDL leases throughout 2018.

A. Horse requirements to operate and maintain this IDL leases

Horse Requirements		
	Average number of horses	Average days horses
Livestock to IDL leases		
Livestock distribution/herding/grazing management		
Livestock gathering		
Livestock off IDL leases		
Maintenance of IDL leases		
Animal health and maintenance		

B. What percent of the total horse requirements were by the following:

_____ % Owned horses

— _____ % Rented Horses

_____ % Horses provided by hired range riders

_____ % Horses provided by friend or neighbor

_____ % other (specify _____)

*Sum should equal 100%

X. Technology

This section will ask questions in the use of technology to maintain IDL leases throughout 2018.

A. Is there use of any subscriptions to local weather, roads or other apps?

App: _____

Cost: _____

App: _____

Cost: _____

App: _____

Cost: _____

B. Was any mobile technology purchased to use on the IDL leases?
iPad, GPS)

(Ex: laptop,

Device: _____

Cost: _____

Device: _____

Cost: _____

Device: _____

Cost: _____

END (Thank you)

UNIVERSITY OF WYOMING

Vice President for Research & Economic Development
1000 E. University Avenue, Department 3355 • Room 305/308, Old Main • Laramie, WY 82071
(307) 766-5353 • (307) 766-5320 • fax (307) 766-2608 • www.uwyo.edu/research

June 12, 2019

John Tanaka
Professor Emeritus
Ecosystem Science and Management
University of Wyoming

Kasey Dollerschell
Graduate Research Assistant
Ecosystem Science and Management
University of Wyoming

Tom Hilken
Research Assistant
Ecosystem Science and Management
University of Wyoming

Kristie Maczko
Research Scientist
Ecosystem Science and Management
University of Wyoming

Protocol #20190612JT02426

Re: IRB Proposal "Evaluating Non-fee Grazing Permit Costs in the Context of Social and Economic Characteristics of Public Land Ranchers"

Dear John, Kasey, Tom, and Kristie:

The proposal referenced above qualifies for exempt review and is approved as one that would not involve more than minimal risk to participants. Our exempt review and approval will be reported to the IRB at their next convened meeting on June 20, 2019.

Any significant change(s) in the research/project protocol(s) from what was approved should be submitted to the IRB (Protocol Update Form) for review and approval prior to initiating any change. Further information and the forms referenced above may be accessed at the "Human Subjects" link on the Office of Research and Economic Development website: <http://www.uwyo.edu/research/human-subjects/index.html>. Please note that exempt protocols are approved for a maximum of three years. If your study extends beyond three years, or beyond the duration that is approved in your protocol form, please be sure to submit an update before expiration to extend the duration. If you are not able to submit the update in time, you will need to submit a new exemption request for the project.

You may proceed with the project/research and we wish you luck in the endeavor. Please feel free to call me if you have any questions.

Sincerely,

Nichole Person

Nichole Person
Staff Assistant, Research Office
On behalf of the Chairman,
Institutional Review Board