The core of the proposed new model is derived from four non-fee grazing costs identified within three cow-calf beef livestock enterprise budgets published by the University of Idaho's College of Agricultural and Life Sciences in 2020 (Attachment I). The sums of each of the non-fee costs identified within the budgets were averaged, then prorated using data from the 2014 University of Idaho research bulletin Idaho Private Rangeland Grazing – Lease Arrangements to reflect non-fee costs under private leases likely borne by lessees (Attachment J, Table 10). The model also includes two non-fee grazing costs derived from averages published in the 2011 University of Idaho study Grazing Costs: What's the Situation (Attachment K, Table 2) and the 2021 University of Wyoming study Evaluating Non-Fee Grazing Permit Costs (Attachment M, Table 6).

Model Rate as a Percentage of the Private Rate

The proposed new model nets the prorated sum of the non-fee grazing costs paid by lessees identified in the University of Idaho enterprise budgets and the non-fee costs identified in the Dollerschell and Rimbey/Torell studies against the prior-year USDA NASS private rate for Idaho, then divides this amount by the private rate to express the Idaho endowment grazing rate as a percentage of the USDA NASS private rate for Idaho. For purposes of simplicity, this percentage is rounded to the nearest one percent.

Calculating the Model Rate

Variables

A = NASS Idaho Private Rate (as published two years prior)

B = Sum of the Average Non-Fee Costs for Salt, Trucking, Labor and Repair (from 2020 UI Cattle Budgets)

C = % of Non-Fee Services Provided by Private Lessees (from budgets UI private lease arrangements study)

D = Sum of Non-Fee Costs for Lost Animals and Water (Dollerschell & Rimbey/Torell studies)

Formula

$$(A - (B \times C) - D) \div A = Endowment Rate as % of Private Rate$$

$$(\$18.50 - \$5.21 - \$4.96) \div \$18.50 = 45.03\%$$

$$\$8.33 \div \$18.50 = 45.03\%$$

Endowment Percentage Rate = 45% of the USDA NASS private Rate for Idaho (45.03% rounded to the nearest percent)

USDA NASS Private Rate for Idaho x Endowment Percentage Rate = Idaho Endowment AUM Rate

$$18.50 \times 45\% = 8.33/AUM$$

Non-Fee Grazing Costs from UI Cattle Budgets

| Non-Fee Services Lessor Provides* | UI Cattle Budget EBB- CC1-20 | UI Cattle Budget EBB- CC7-20 | UI Cattle Budget CC8-20 |
|--------------------------------------|---------------------------------|---------------------------------|----------------------------|
| Salt/Mineral | \$0.50 | \$0.54 | \$0.37 |
| Trucking to & from Docture | \$1.50 | ¢0.75 | ¢n 83 |

| Buildings & Improvements (Repair) | \$0.90 | \$1.07 | \$0.90 |
|-----------------------------------|--------|--------|--------|
| Hired Labor | \$7.35 | \$2.80 | \$3.65 |
| HUCKING TO & HOM FASTURE | φ1.50 | φυ./ 3 | φυ.ου |

* Non-fee costs accounted for in UI Cattle Budget using measures other than per AUM were converted to per AUM measurements.

Prorated Non-Fee Grazing Costs*

| Non-Fee Grazing Services | Avg. \$/AUM for Non-Fee Services | | % of Non-Fee Services Paid by Lessee | | Value Prov |
|-----------------------------------|-------------------------------------|---|---|---|---------------|
| Salt/Minerals | \$0.47 | x | 84.4% | = | \$0.40 |
| Trucking to & from Pasture | \$1.03 | X | 79.4% | = | \$0.82 |
| Hired Labor | \$4.60 | x | 79.4% | = | \$3.6: |
| Buildings & Improvements (Repair) | \$0.96 | x | 35.2% | = | \$0.34 |
| Total | | | | | \$5.27 |

* The independent third-party review of the proposed new grazing rate recommended calculating the prorations using 2014 non-fee costs indexed to 2020 values. However, non-fee cost data for the non-fee costs included in this table is not available for 2014. The alternative, to use 1992 data and index to 2020 was dismissed given age and relevancy concerns of data expressed in the third party review for other studies.

Average Non-Fee Costs for Lost Animals and Water

Non-Fee Grazing Costs from 2021 Dollerschell Study

| Water* | \$1.29 | \$.07 | \$1.22 | \$1.29** |
|---------------|-------------|--------------|-----------------|--------------|
| Lost Animals* | \$7.48 | \$2.53 | \$4.95 | 5.22** |
| Operation | 2018 Public | 2018 Private | 2018 Difference | Adjusted for |

Data from Evaluating Non-Fee Grazing Permit Costs, Dollerschell, May 2021

* Data from page 40, Table 6

** Inflation adjustments calculated using U.S. Bureau of Labor Statistics online calculator athttps://www.bls.gov/data/inflation calculator.htm

Non-Fee Grazing Costs from 2011 Rimbey Torell Study

| Operation | 2010 Public | 2010 Private | 2010 Difference | Adjusted for |
|---------------|-------------|--------------|-----------------|--------------|
| Lost Animals* | \$5.21 | \$2.92 | \$2.29 | 2.76** |
| Water* | \$.76 | \$.23 | \$.53 | \$.64** |

Data from Grazing Costs: What's the Current Situation, Rimbey Torell, March 2011

Average Lost Animals and Water Non-Fee Grazing Costs

| Operation | Dollerschell | Rimbey Torell | Average Non-F |
|--------------|--------------|---------------|---------------|
| Lost Animals | \$5.22 | \$2.76 | \$3.99 |
| Water | \$1.29 | \$.64 | \$.97 |
| Total | | | \$4.96 |

^{*} Data from page 6, Table 2; 1992 data indexed to 2010

^{**} Inflation adjustments calculated using U.S. Bureau of Labor Statistics online calculator at https://www.bls.gov/data/inflation_calculator.htm

Rate Change Impacts

The current 2021 endowment grazing rate of \$7.07/AUM is 38.2% of the USDA NASS private rate for Idaho. The model output rate for 2022 is 45% of the USDA NASS private rate for Idaho, or \$8.33/AUM. This change represents a 17.8% increase in grazing rates from 2021 to 2022.

The Department manages 1,107 endowment grazing leases, which range from 1 AUM to 25,253 AUMs, with an average count of 232 AUMs. The largest endowment grazing lease encompasses 25,253 AUMs, while the median lease contains 86 AUMs (**Attachment L**).

| | AUMs | Current Annual Rate | | @ 45% of Private Rate | Net (|
|---------|--------|---------------------|--|-----------------------|--------|
| Total | 256703 | \$1,814,890.21 | | \$2,138,335.99 | \$323 |
| Average | 232 | \$1,639.47 | | \$1932.56 | \$293 |
| Median | 86 | \$608.02 | | \$716.38 | \$108 |
| Maximum | 25253 | \$178,538.71 | | \$210,357.49 | \$31,8 |
| | | | | | |