

# MINIMUM RENT ANALYSIS & SCHEDULE

## NEW MEXICO DISTRICTS

### BLM Land Use Authorizations Tracts of BLM Land to 25 Acres

#### SUBMITTED TO

Bureau of Land Management  
Janet Eubanks, Realty Specialist  
2800 Cottage Way  
Sacramento, CA 95825

#### IVIS CASE NUMBER

00036807

#### IVIS PROJECT NUMBER

L13046

#### DATE OF REPORT

September 26, 2014

#### SUBMITTED BY

Kent Wilkinson  
Department of the Interior  
Office of Valuation Services  
125 South State Street, Suite 1209  
Salt Lake City, Utah 84138-1126



**UNITED STATES DEPARTMENT OF THE INTERIOR  
OFFICE OF VALUATION SERVICES  
125 SOUTH STATE STREET, SUITE 1209  
SALT LAKE CITY, UTAH 84138-1126**

September 26, 2014

Bureau of Land Management  
Janet Eubanks, Realty Specialist  
2800 Cottage Way  
Sacramento, CA 95825

Re: Fee Schedule of Minimal Rents on BLM small tracts up to 25 acres

Dear Ms. Eubanks:

Per the request of the Bureau of Land Management (BLM) via the Office of Valuation Services, I have conducted a study of comparable commercial practices and other valuation methodologies that are useful in establishing a reasonable rent schedule for Land Use Authorization grants for small uses up to 25 acres in Utah. This study relies heavily on previous work and analysis that was conducted by Anne Renaud-Wilkinson, and James Green, in recent Minimum Rent Analysis Studies for Idaho and California. For clarity and consistency the applicable methodology and analysis was retained and was applied for New Mexico.

The purpose of this Study is to help BLM Field Offices establish or update current BLM minimal rent schedule fees for non-linear rights-of-way and small permits. A streamlined and uniform approach to establishing small tract rental fees is consistent with provisions of 43 CFR §2806 and 43 CFR §2920. Within the context of this study the terms rent and fee are interchangeable.

Past experience has demonstrated that appraising individual Land Use Authorizations (LUAs) request is not economically beneficial to the U.S. Government as the time and cost associated with an appraisal was substantially higher than the rent achieved. For this reason, development of a rent schedule is warranted. Hence, I have conducted a study and this report provides my findings of comparable commercial practices, as well as establishing a fee schedule for small non-linear tracts of BLM land.

It is important for the realty specialist along with any user of this study to read the study in its entirety in order to understand the analysis prior to using any information or data contained herein.

Please note, as this study is a compilation of a wide variety of information including BLM memorandums, regulations, along with other private and public sources, some of the comments, discussions and explanations may not have been specifically cited.

The following pages contain the fee schedule for minimal rents on BLM lands in New Mexico. The schedules are specific to the identified BLM Districts, as well as individual counties within New Mexico. Following the schedule charts is the explanation of how the fees were derived.

**This fee schedule is not intended use for site rights-of-way or permits where there is a well-established market, sufficient lease data for comparing similar sites, and a process that is economically practical to support the completion of individual appraisals based on the appraisal cost and the anticipated rent.**

**It is also not intended for use for site rights of way that are outside the size parameters identified in the schedule, or where there are well established markets, and sufficient data exists, to demonstrate rental fees for particular uses significantly higher than the fees identified on the schedule.**

**If there is a question about a specific permit or right or way case, OVS can help BLM Realty Personnel screen which cases should be appraised.**

**This schedule is also not intended to replace existing schedules for solar, filming, hydroelectric, geothermal, telecommunication, linear right-of-way uses, recreation and permit fees under 43 CFR 2930, or any other use fee established by specific authorization.**

Respectfully submitted,



Kent Wilkinson  
Department of the Interior  
Office of Valuation Services  
125 South State St., Suite 1209  
Salt Lake City, UT 84138-1126

| ANNUAL FEE           |             |          |       |                 |          |       |                  |          |       |                  |          |       |
|----------------------|-------------|----------|-------|-----------------|----------|-------|------------------|----------|-------|------------------|----------|-------|
| ALBUQUERQUE DISTRICT |             |          |       |                 |          |       |                  |          |       |                  |          |       |
| COUNTY               | 0 – 5 ACRES |          |       | 5.01 – 10 ACRES |          |       | 10.01 – 15 ACRES |          |       | 15.01 – 25 ACRES |          |       |
|                      | Minimal     | Moderate | High  | Minimal         | Moderate | High  | Minimal          | Moderate | High  | Minimal          | Moderate | High  |
| Impact >             |             |          |       |                 |          |       |                  |          |       |                  |          |       |
| Bernalillo<br>(001)  | \$84        | \$127    | \$169 | \$169           | \$253    | \$337 | \$253            | \$380    | \$506 | \$422            | \$633    | \$844 |
| Catron<br>(003)      | \$32        | \$48     | \$64  | \$64            | \$95     | \$127 | \$95             | \$143    | \$191 | \$159            | \$238    | \$318 |
| Cibola<br>(006)      | \$23        | \$35     | \$46  | \$46            | \$70     | \$93  | \$70             | \$104    | \$139 | \$116            | \$174    | \$232 |
| McKinley<br>(031)    | \$23        | \$35     | \$47  | \$47            | \$70     | \$94  | \$70             | \$105    | \$141 | \$117            | \$176    | \$234 |
| Sandoval<br>(043)    | \$39        | \$59     | \$78  | \$78            | \$117    | \$156 | \$117            | \$175    | \$233 | \$195            | \$292    | \$389 |
| Socorro<br>(053)     | \$37        | \$55     | \$73  | \$73            | \$110    | \$147 | \$110            | \$165    | \$220 | \$183            | \$275    | \$367 |
| Torrance<br>(057)    | \$27        | \$41     | \$54  | \$54            | \$81     | \$108 | \$81             | \$122    | \$162 | \$135            | \$203    | \$271 |
| Valencia<br>(061)    | \$70        | \$105    | \$140 | \$140           | \$210    | \$280 | \$210            | \$315    | \$421 | \$350            | \$526    | \$701 |

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**ANNUAL FEE**

**FARMINGTON DISTRICT**

| COUNTY<br>Impact    | 0 - 5 ACRES |          |        | 5.01 - 10 ACRES |          |        | 10.01 - 15 ACRES |          |        | 15.01 - 25 ACRES |          |         |
|---------------------|-------------|----------|--------|-----------------|----------|--------|------------------|----------|--------|------------------|----------|---------|
|                     | Minimal     | Moderate | High   | Minimal         | Moderate | High   | Minimal          | Moderate | High   | Minimal          | Moderate | High    |
| Colfax<br>(007)     | \$29        | \$44     | \$59   | \$59            | \$88     | \$118  | \$88             | \$133    | \$177  | \$147            | \$221    | \$295   |
| Harding<br>(021)    | \$21        | \$32     | \$42   | \$42            | \$63     | \$84   | \$63             | \$95     | \$126  | \$105            | \$158    | \$211   |
| Los Alamos<br>(028) | \$1136      | \$1704   | \$2272 | \$2272          | \$3408   | \$4544 | \$3408           | \$5112   | \$6816 | \$5680           | \$8520   | \$11359 |
| McKinley<br>(031)   | \$23        | \$35     | \$47   | \$47            | \$70     | \$94   | \$70             | \$105    | \$141  | \$117            | \$176    | \$234   |
| Mora<br>(033)       | \$41        | \$62     | \$83   | \$83            | \$124    | \$165  | \$124            | \$186    | \$248  | \$206            | \$310    | \$413   |
| Rio Arriba<br>(039) | \$54        | \$81     | \$108  | \$108           | \$162    | \$215  | \$162            | \$242    | \$323  | \$269            | \$404    | \$539   |
| San Juan<br>(045)   | \$26        | \$39     | \$52   | \$52            | \$78     | \$104  | \$78             | \$117    | \$155  | \$129            | \$194    | \$259   |
| San Miguel<br>(047) | \$28        | \$42     | \$56   | \$56            | \$84     | \$112  | \$84             | \$126    | \$168  | \$140            | \$210    | \$280   |
| Santa Fe<br>(049)   | \$63        | \$94     | \$126  | \$126           | \$189    | \$252  | \$189            | \$283    | \$378  | \$315            | \$472    | \$629   |
| Taos<br>(055)       | \$87        | \$131    | \$175  | \$175           | \$262    | \$349  | \$262            | \$393    | \$524  | \$436            | \$655    | \$873   |
| Union<br>(059)      | \$27        | \$41     | \$55   | \$55            | \$82     | \$109  | \$82             | \$123    | \$164  | \$137            | \$205    | \$273   |

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- This schedule is also not intended to replace existing schedules for solar, filming, hydroelectric, geothermal, telecommunication, linear right-of-way uses, or any other use fee established by specific authorization.

| ANNUAL FEE          |             |          |       |                 |          |       |                  |          |       |                  |          |        |
|---------------------|-------------|----------|-------|-----------------|----------|-------|------------------|----------|-------|------------------|----------|--------|
| LAS CRUCES DISTRICT |             |          |       |                 |          |       |                  |          |       |                  |          |        |
| COUNTY<br>Impact >  | 0 - 5 ACRES |          |       | 5.01 - 10 ACRES |          |       | 10.01 - 15 ACRES |          |       | 15.01 - 25 ACRES |          |        |
|                     | Minimal     | Moderate | High  | Minimal         | Moderate | High  | Minimal          | Moderate | High  | Minimal          | Moderate | High   |
| Dona Ana<br>(013)   | \$133       | \$200    | \$266 | \$266           | \$400    | \$533 | \$400            | \$599    | \$799 | \$666            | \$999    | \$1332 |
| Grant<br>(017)      | \$28        | \$42     | \$56  | \$56            | \$84     | \$112 | \$84             | \$126    | \$167 | \$140            | \$209    | \$279  |
| Hidalgo<br>(023)    | \$18        | \$28     | \$37  | \$37            | \$55     | \$74  | \$55             | \$83     | \$111 | \$92             | \$138    | \$185  |
| Luna<br>(029)       | \$32        | \$48     | \$63  | \$63            | \$95     | \$126 | \$95             | \$142    | \$189 | \$158            | \$237    | \$315  |
| Otero<br>(035)      | \$31        | \$47     | \$62  | \$62            | \$94     | \$125 | \$94             | \$141    | \$187 | \$156            | \$234    | \$312  |
| Sierra<br>(051)     | \$21        | \$32     | \$43  | \$43            | \$64     | \$85  | \$64             | \$96     | \$128 | \$106            | \$160    | \$213  |

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| ANNUAL FEES        |             |          |      |                 |          |       |                  |          |       |                  |          |       |
|--------------------|-------------|----------|------|-----------------|----------|-------|------------------|----------|-------|------------------|----------|-------|
| PECOS DISTRICT     |             |          |      |                 |          |       |                  |          |       |                  |          |       |
| COUNTY<br>Impact   | 0 – 5 ACRES |          |      | 5.01 – 10 ACRES |          |       | 10.01 – 15 ACRES |          |       | 15.01 – 25 ACRES |          |       |
|                    | Minimal     | Moderate | High | Minimal         | Moderate | High  | Minimal          | Moderate | High  | Minimal          | Moderate | High  |
| Chaves<br>(005)    | \$27        | \$40     | \$54 | \$54            | \$80     | \$107 | \$80             | \$121    | \$161 | \$134            | \$201    | \$268 |
| Curry<br>(009)     | \$43        | \$65     | \$86 | \$86            | \$129    | \$172 | \$129            | \$194    | \$258 | \$215            | \$323    | \$431 |
| De Baca<br>(011)   | \$18        | \$28     | \$37 | \$37            | \$55     | \$74  | \$55             | \$83     | \$110 | \$92             | \$138    | \$184 |
| Eddy<br>(015)      | \$33        | \$50     | \$67 | \$67            | \$100    | \$133 | \$100            | \$150    | \$200 | \$166            | \$249    | \$333 |
| Guadalupe<br>(019) | \$20        | \$30     | \$40 | \$40            | \$59     | \$79  | \$59             | \$89     | \$119 | \$99             | \$148    | \$198 |
| Lea<br>(025)       | \$25        | \$38     | \$50 | \$50            | \$76     | \$101 | \$76             | \$113    | \$151 | \$126            | \$189    | \$252 |
| Lincoln<br>(027)   | \$26        | \$40     | \$53 | \$53            | \$79     | \$105 | \$79             | \$119    | \$158 | \$132            | \$198    | \$263 |
| Quay<br>(037)      | \$25        | \$37     | \$50 | \$50            | \$75     | \$100 | \$75             | \$112    | \$150 | \$125            | \$187    | \$249 |
| Roosevelt<br>(041) | \$36        | \$54     | \$72 | \$72            | \$109    | \$145 | \$109            | \$163    | \$217 | \$181            | \$272    | \$362 |

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## **CONCEPTUAL OVERVIEW**

The Office of Valuation Services has been tasked with the mission of updating and standardizing a state-by-state process of charging fees for individual, sometimes incidental, non-linear uses of small tracts of BLM managed land. Historically, these fees were established based on linear rights-of-way formulas, comparable fees established by other federal agencies, or appraisals, as dictated by 43 CFR§2806 and 43CFR§ 2920:

***Section 2806.5 (Rights-of-Way)*** - *When neither the linear nor the communication use rent schedule is appropriate, BLM determines your rent through a process based on comparable commercial practices, appraisals, competitive bid, or other reasonable methods.*

***Section 2920.8 (Permits)*** - *The rental shall be based either upon the fair market value of the rights authorized in the land use authorization or as determined by competitive bidding. In no case shall the rental be less than fair market value.*

Setting rents is difficult as there are no generally acceptable standards or methods in setting rents to cover a broad range of uses over a wide geographic area.

In the past, these types of rents were based on surveys of other federal agencies; sometimes set based on an analysis of other minimum fees, or established by individual appraisals. Often, individual real estate appraisals are not economically feasible as the time and cost associated with an appraisal is often substantially higher than the economic benefit to the government with regards to the compensation achieved. Furthermore, appraisal methodologies such as market rent surveys do not generally translate as well for establishing rent schedules over large areas.

Given the nature of this assignment, to assist BLM in their development of a statewide fee schedule for sites under 25 acres applicable to users of government land, it was necessary to consider alternative methods that are more attune to economic reasoning than traditional valuation methodology. Nonetheless, these methods find there basis in those used by other federal agencies.

***Intended BLM users of this fee schedule should exercise reasonable judgment in assessing the impact to the proposed rental sites. While the preceding charts provide exact values within the acreage ranges, there is great leeway for the intended users to interpret the category of use and degree of impact. For instance, a request to stage and conduct a race event on BLM land may encompass a cumulatively large area. And yet, actual use will not significantly impact any specific area at any one time. The selection of a minimal impact fee within a small acreage size (0 to 5 acres) may be appropriate, or selection of a high impact within a larger range may likewise be appropriate, depending on the interpretation of the user.***

***Duration or intermittent uses may also require interpretation with regard to the degree of impact. Use of BLM land as a staging area for a day or for periodic use could be interpreted as minimal, even though use is exclusive and intense during that period.***



## SCOPE OF THIS ASSIGNMENT

When determining an appropriate alternative methodology, I relied on the following scope of work:

- I determined if the BLM state was operating under an existing minimum rent schedule, or if a schedule needed to be established.
- I surveyed other federal agencies, state agencies and private parties for information that might provide data within the context of comparable commercial practices.
- I referenced the Code of Federal Regulations, specifically 43 CFR, Public Lands: Interior, for guidance as to how fees had been established for similar land use. (Linear right-of-ways, mineral leasing, filming, hydrologic, geothermal, and telecommunication uses have specific, formula-based fee schedules.)

## METHODOLOGY

After careful consideration, I determined the Rate of Return to Land would provide a reasonable basis for opining rent for use of government lands. This method is similar to that used for the linear ROW schedule used by BLM under 43 CFR 2800, 2880, and 2920. Derivation of per county rental rates employed a five step process<sup>1</sup>:

1. Determine the LAND VALUE ESTIMATE per county (NASS values x 80%)
2. Derive a RATE OF RETURN. (See following derivation)
3. Determine an ENCUMBRANCE FACTOR. (See following discussion)
4. Apply the RATE OF RETURN to the LAND VALUE ESTIMATE, then multiply the per acre value times the largest acreage size in each of the size brackets (0-5 acres, 5.01-10 acres, 10.01-15 acres, 15.01-25 acres). This is the 100% encumbrance rental rate for that size bracket.<sup>2</sup>
5. Apply 50% and 75% to the 100% value from #4 to arrive at the minimal impact and moderate impact rates.

## LAND VALUE ESTIMATE

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<sup>1</sup> This method is recognized in other agencies as being a reasonable and well received method of rent determination. Indeed, under the authority of 16 U.S.C. 792-828c; and 42U.S.C. 7101-7352, the Federal Energy Regulatory Commission established an annual per-acre rental fee based on an adjusted per-acre value multiplied by an encumbrance factor multiplied by the rate of return multiplied by the annual adjustment factor. This formula was established after a lengthy legal challenge and public comment period.

<sup>2</sup> The largest acreage size in each category was used in schedule calculations to help ensure fees within that class reasonably cover authorizations in the class as required in CFR 2920.8, and for consistency with the calculations used in the most recent BLM minimum rental studies for other States.

Estimating land value over a large geographical area is difficult to say the least. However, given the predominately rural nature of BLM land, using agricultural land values as the basis for this analysis is reasonable. Support for using the USDA/NASS published reports on land value is provided by Congress, which specifically endorsed the use of this data for rental determination purposes when it passed the "National Forest Organizational Camp Fee Improvement Act of 2003" (Pub. L. 108-7) (16 U.S.C. 6231). This law established a formula for determining rent for organizational camps located on NFS lands by applying a 5 percent rate of return to the average per acre land and building value, by state and county, as reported in the most recent NASS Census. The law also provided for a process to update the per acre land values annually based on the change in per acre land value, by county, from one census period to another.

The United States Department of Agriculture (USDA) publishes an annual agricultural land value report via the National Agricultural Statistics Service (NASS) identified by ISSN: 1949-1867 ([http://www.nass.usda.gov/Charts\\_and\\_Maps/Land\\_Values/index.asp](http://www.nass.usda.gov/Charts_and_Maps/Land_Values/index.asp)). Agricultural land values are reported by state and broken down into per county values. For the State of New Mexico, the AG LAND, INCLUDING BUILDINGS, ASSET VALUE, MEASURED IN \$/ACRE, was used as the reference for arriving at the land value estimate. These values are found in the NASS on-line web site at <http://quickstates.nass.usda.gov/data/printable> where the numerical value represents the overall per acre value. Since BLM land covers a broad spectrum of land types, with prime recreational land associated with fishing resources, as well as remote high desert land, it is reasonable to use a similarly all-encompassing agricultural land value. Nonetheless, the overall value does include irrigated land and buildings, so an adjustment to the overall land value is applied to account for these conditions. Guidance for this adjustment can be found in Federal Register, 43 CFR Parts 2800, 2880, and 2920, Update of Linear Right-of-Way Schedule; Final Rule of October 31, 2008. In this rule, a 20% adjustment is deemed appropriate as a diminution to the overall land value to account for irrigation and buildings. Therefore, a 20% diminution is applied to each county's overall land value to arrive at a base Land Value Estimate as shown below.

| ALBUQUERQUE DISTRICT |                         | FARMINGTON DISTRICT |                         | CANYON COUNTRY DISTRICT |                        | COLOR COUNTRY DISTRICT AND GSENM |                        |
|----------------------|-------------------------|---------------------|-------------------------|-------------------------|------------------------|----------------------------------|------------------------|
| County               | Adj.Land Value \$/ acre | County              | Adj.Land Value \$/ acre | County                  | Adj.Land Value \$/acre | County                           | Adj.Land Value \$/acre |
| Bernalillo           | 907                     | Colfax              | 317                     | Donna Ana               | 1432                   | Chaves                           | 288                    |
| Catron               | 342                     | Harding             | 226                     | Grant                   | 300                    | Curry                            | 463                    |
| Cibola               | 250                     | Los Alamos          | 12214                   | Hidalgo                 | 198                    | De Baca                          | 198                    |
| McKinley             | 252                     | McKinley            | 252                     | Luna                    | 339                    | Eddy                             | 358                    |
| Sandoval             | 418                     | Rio Arriba          | 444                     | Otero                   | 336                    | Guadalupe                        | 213                    |
| Socorro              | 394                     | San Juan            | 579                     | Sierra                  | 229                    | Lea                              | 271                    |
| Torrance             | 291                     | San Miguel          | 278                     |                         |                        | Lincoln                          | 283                    |
| Valencia             | 754                     | Santa Fe            | 302                     |                         |                        | Quay                             | 390                    |
|                      |                         | Taos                | 677                     |                         |                        | Roosevelt                        | 288                    |
|                      |                         | Union               | 938                     |                         |                        |                                  |                        |

## RATE OF RETURN

A rate of return is an income rate that expresses the relationship between rent (income) and the corresponding land value (capital). It is similar to a capitalization (cap) rate that an investor uses to convert income into an indication of value (direct capitalization) when analyzing income producing properties--- **net income divided by cap rate is an indication of value**. Cap rate, the ratio of income to the property value, is among the most widely used variables to quantify property values and plays an important role in real estate investment decisions. In reverse, a rate of return can be used to indicate rent--- **land value multiplied by a rate of return is an indication of rent (income)**.

Cap rates are typically extracted from sales of income producing properties. However, given the uniqueness of government property an alternative method is required to opine a reasonable rate of return. In theory, a cap rate, or in this case, a rate of return is the sum of four components: Expected Inflation, Real Return, Risk Premium, & Recapture Premium.

### Expected Inflation

By definition, an investment is the commitment of capital in exchange of a monetary benefit, or a return (income). Investors require a **return of capital invested** as a prerequisite for committing capital to a given venture or property. This required return should first provide for the preservation of the purchasing power of invested capital through time. Hence, the first component of required return is expected inflation, so that the purchasing power of invested capital will not decline through time. Ideally, this component is estimated based on inflation rate forecasts, however, many analysts use an average inflation rate over the past five or ten years.

The Consumer Price Index (CPI) averaged over the past five years as published by Bureau of Labor Statistics (<http://www.bls.gov/home.htm>) was used to project expected inflation.

| Year    | CPI                                   |
|---------|---------------------------------------|
| 2009    | -0.40%                                |
| 2010    | 1.60%                                 |
| 2011    | 3.20%                                 |
| 2012    | 2.10%                                 |
| 2013    | 2.10%                                 |
| Average | <b>1.72%</b><br>Expected<br>Inflation |

### Real Return

The second component of required return is the real return, which is the true monetary benefit that the investor will gain from committing his/her capital--- **return on capital**. This is typically estimated as the difference between the rate on government securities and the inflation rate reflecting a risk free rate or safe rate.

Using the average 30-year Treasury bond rate over the past five years is reasonable for estimating a real return on real estate. This is in tune with ground lease rates and is what the government is paying as a fair return to those who invest in the U.S. Government (<http://www.treasury.gov>).

| Year           | Rate         |
|----------------|--------------|
| 2009           | 4.08%        |
| 2010           | 4.25%        |
| 2011           | 3.91%        |
| 2012           | 2.92%        |
| 2013           | 3.45%        |
| <b>Average</b> | <b>3.72%</b> |

Deducting the five year average rate of expected inflation from the 30 year Treasury bond rates results in the real return as illustrated in the following chart.

**Real Return  
Calculation**

|                                   |              |
|-----------------------------------|--------------|
| 5 Year Average 30-Year Bond Rate  | 3.72%        |
| 5 Year Average Expected Inflation | <u>1.72%</u> |
| <b>Real Return</b>                | <b>2.00%</b> |

Risk Premium

A property investment is actually an investment in the property's future income earning capacity. However, there is a lot of uncertainty with this future income earning capacity. This risk is the uncertainty associated with the future income stream and the value of the property. Within this context, real estate investors require a risk premium on top of inflation and real return. The risk premium for a given property depends on the quality of the tenants occupying the property, the length of existing contracts, the property's occupancy rate, the strength of the property's location and expectations regarding the prospects of the economy and the local real estate market.

Since government owned land is not an investment per se, no risk is associated with leasing unimproved federally owned BLM land, and for this type of analysis a risk premium is not warranted.

Recapture Premium

Finally, investors require a recapture premium in the case of improved property investments, since improvements depreciate or lose value through time. Since the value of the property represents the owner's invested capital, it follows that by the end of the physical life of

improvements, when its value becomes theoretically zero, the investor loses its capital. The purpose of the recapture premium is to replace this capital loss through time. Thus, if the physical life of an improvement is 50 years the recapture premium should be 2% on an annual basis. If we assume though, that the capital that is recaptured every year is reinvested (sinking fund approach) then a less than 2% recapture rate will be required. Since my analysis involves unimproved government owned land, no recapture premium is warranted.

### Rate of Return Conclusion

The Rate of Return is estimated as the sum of the four components as discussed above and illustrated in the following:

|                          |              |
|--------------------------|--------------|
| Expected Inflation       | 1.72%        |
| Real Return              | 2.00%        |
| Risk Premium             | ---          |
| <u>Recapture Premium</u> | <u>---</u>   |
| <b>Rate of Return</b>    | <b>3.72%</b> |

As a test of reasonableness for this rate Ann Wilkinson, in the Idaho Schedule, examined the implied rates imbedded in the NASS data. Specifically, she looked at the cash rents and their relationship to the agricultural land value. As an example, the average rent received for agricultural land in Bannock County, Idaho is \$60.17 and the average unadjusted per acre value for agricultural land is \$1,807. The implied rate of return is:

$$\$60.17 \div \$1,807 = 0.033 = 3.3\%$$

My check of the Agricultural Resources Report for the four BLM districts in Utah found a range of rates for cropland and pasture rented for cash for the most recent year cited between 3.0 and 3.2 percent. This would also support a rate reasonably close to the rate calculated above.

As an added test of reasonableness for the rate of return analysis above, I considered sales and offerings of properties encumbered with an absolute net lease--- also known as a bond lease and reflective of ground leases. As these types of encumbrances are most similar to the characteristics associated with government Land Use Authorizations (LUAs). That is, bond lease tenants are similar to LUA user in that they would perform all obligations related to the premises including the construction and maintenance of improvements and are fully responsible--- in essence the only responsibility of the property owner is to cash the rent checks. In the private sector, these types of leases are known as "hell-or-high-water leases" meaning that regardless of what occurs on or off the property, the tenant is obligated to pay rent. Therefore, the credit worthiness of the tenant is similar to a company's bond rating--- hence, the term bond lease. That is, a strong credit tenant is generally referred to as an

investment grade tenant and considered economically similar to an investment grade bond secured by real property. The advantage in leasing to a credit tenant is strong and stable income stream that is risk averse, even when there are negative changes to market conditions.

The following chart illustrates median asking cap rates for properties offered for sale based on the companies that occupy the real estate.

**Median Asking Cap Rates by Company Occupied Real Estate**

| Company            | Cap rate | S & P Rating | Risk   |
|--------------------|----------|--------------|--------|
| McDonald's         | 4.05%    | A            | 0.33%  |
| Chase              | 4.60     | A+           | 0.88%  |
| Wells Fargo        | 4.70%    | AA           | 0.98%  |
| Bank of America    | 4.75%    | A            | 1.03%  |
| 7-Eleven           | 5.50%    | AA-          | 1.78%  |
| CVS                | 5.50%    | BBB+         | 1.78%  |
| Walgreens          | 5.58%    | A            | 1.86%  |
| AutoZone           | 5.69%    | BBB          | 1.97%  |
| Advance Auto Parts | 6.40%    | BBB          | -2.68% |
| Dollar General     | 6.50%    | BB           | 2.78%  |
| FedEx              | 6.50%    | BBB          | 2.78%  |

*Us 30 YR Treasury Bond Rate = 3.72%*

As shown, there is a relationship between a company's Standard & Poor's bond credit rating and real estate cap rate (or rate of return). Extracting the risk premium from the cap rate, further illustrates the association between risk, bond rating, and cap rates.

These added tests of reasonableness support a rate of return conclusion of 3.72%.

### **THE ENCUMBRANCE FACTOR**

The Encumbrance Factor (EF) reflects the intensity of the proposed use and corresponding impact on the land. An encumbrance factor is mostly considered in easement valuations, i.e., the impact an easement has on market value. Easement valuations are reflected in differences in market value before & after the imposition of an easement. That is, a property is first valued without an easement and then valued with an easement; the difference in value being the easement's impact on value. Studies regarding the impact on value that a specific easement (or use) will have when it partially encumbers a property is time intensive and costly to perform. Hence, the enactment of the law regarding the BLM Linear Right-of-Way schedule and the development of a non-linear right-of-way schedule. Because of the time and cost, published studies are typically utilized and referenced when categorizing uses in determining an Encumbrance Factor.

One such study was conducted and published by Donald Sherwood, MAI, SR/WA in the May/June 2006 edition of the Right Of Way magazine, a portion of which is represented as follows:

## Easement Valuation Matrix

| Percentage of Fee | Comments   | Potential Types of Easements  |
|-------------------|--|---|
| 90% - 100%        | Severe impact on surface use.<br>Conveyance of future uses.        | Overhead electric<br>Flowage easements<br>Railroad ROW<br>Irrigation canals<br>Access roads |
| 75% - 89%         | Major impact on surface use.<br>Conveyance of future uses.         | Pipelines<br>Drainage easements<br>Flowage easements  |
| 51% - 74%         | Some impact on surface use.<br>Conveyance of ingress/egress rights | Pipelines<br>Scenic Easements   |
| 50%               | Balanced use by both owner and easement holder                     | Water line<br>Sewer line<br>Cable line<br>Telecommunication lines                           |

### High Impact (100%)

Characteristics of significant impact right-of-way grants or permits warranting a higher rent include: a relatively on going occupation, an exclusivity of use. While BLM rarely grants all use and control in their right of way and permit grants (for example BLM typically reserves the right to issue grants for other compatible uses), a reasonable analysis should look not just at the legal rights reserved but at the likelihood and possibility of compatible other uses on the site. Since for the highest category of impact, additional or other uses would generally not be physically compatible. Examples are; intense industrial type uses, large fenced areas, significant surface disturbance and/or ongoing disruption, high visual impacts, and little or no flexibility as to location. For high impact uses, I recommend an Encumbrance Factor of **100%** to be applied to land value based on the discussion above and consistency with the High impact percentage used in the most recent BLM minimum rental studies derived for other states.

High impact uses might include:

- Electric transformer stations
- Pump and compressor stations
- Equipment storage sites
- Processing sites
- Portal or tunnel sites
- Sewage lagoons
- Water treatment sites
- Large, fenced and gated staging areas Parking areas with intense use

### Moderate Impact (75%)

Characteristics of moderate impact right-of-way grants or permits include sites where the uses and impacts are moderate because the area and/or uses have permanent or ongoing occupation, have some surface disturbance, and/or may be quasi-commercial in nature.

For moderate impact uses, I have concluded an Encumbrance Factor of **75%** to be applied to land value. Moderate impact uses might include:

- Gates
- Culverts
- Small water diversion structures or tank sites
- Historic or commemorative monuments
- Small staging areas for geologic exploration or other uses
- Rustic work camp or outfitter sites
- Structures and areas used for cultural arts or educational uses
- Pump and compressor stations (off r/w or lease)
- Farm equipment and machinery storage yards
- Large haystack storage areas
- Highway and other permanent signs

### Minimal Impact (50%)

Characteristics of minimal impact right-of-way grants or permits include sites that are short term or intermittent, seldom visited, can be easily relocated if necessary, include smaller disturbed or enclosed areas, and have little or no ongoing surface disturbance. Typically, these sites can accommodate multiple uses. For instance, a minor water or air quality site would accommodate public access.

For minimal impact uses, I have concluded an Encumbrance Factor of **50%** to be applied to land value. Minimal impact uses might include:

- Small mail box sites
- Water and air quality monitoring sites
- Minor berms and earthwork
- Valve sites on pipelines
- Temporary sites with little or no surface disturbance
- Seasonal pivot crossings
- Temporary agricultural product storage sites

The degree of impact requires a significant level of interpretation on the part of BLM staff that will implement this schedule. Along with the size and often unique aspect of these land use authorizations comes an implied level of temporariness, adding another layer of interpretation to the authorization. In its most rudimentary interpretation, this rent schedule represents the minimum amount that should be applied to a land use authorization.