FINAL
MINIMUM RENT ANALYSIS & SCHEDULE

ALASKA 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

00036811

IVIS PROJECT NUMBER

L13049

DATE OF REPORT
April 1, 2015

SUBMITTED BY

Anne Renaud-Wilkinson, MAI
Department of the Interior
Office of Valuation Services
1220 SW 3rd Ave., Suite 1010
Portland, Oregon 97204

UNITED STATES DEPARTMENT OF THE INTERIOR
OFFICE OF VALUATION SERVICES
1220 SW 3RD AVENUE, SUITE 1010
PORTLAND, OREGON 97204-2825

April 1, 2015

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 - ALASKA

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. This study was conducted for the purposes of establishing or updating current BLM minimal rent schedule fees for non-linear rights-of-way. A streamlined and uniform approach to establishing small tract rental fees is consistent with provisions of 43CFR§2806. 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.

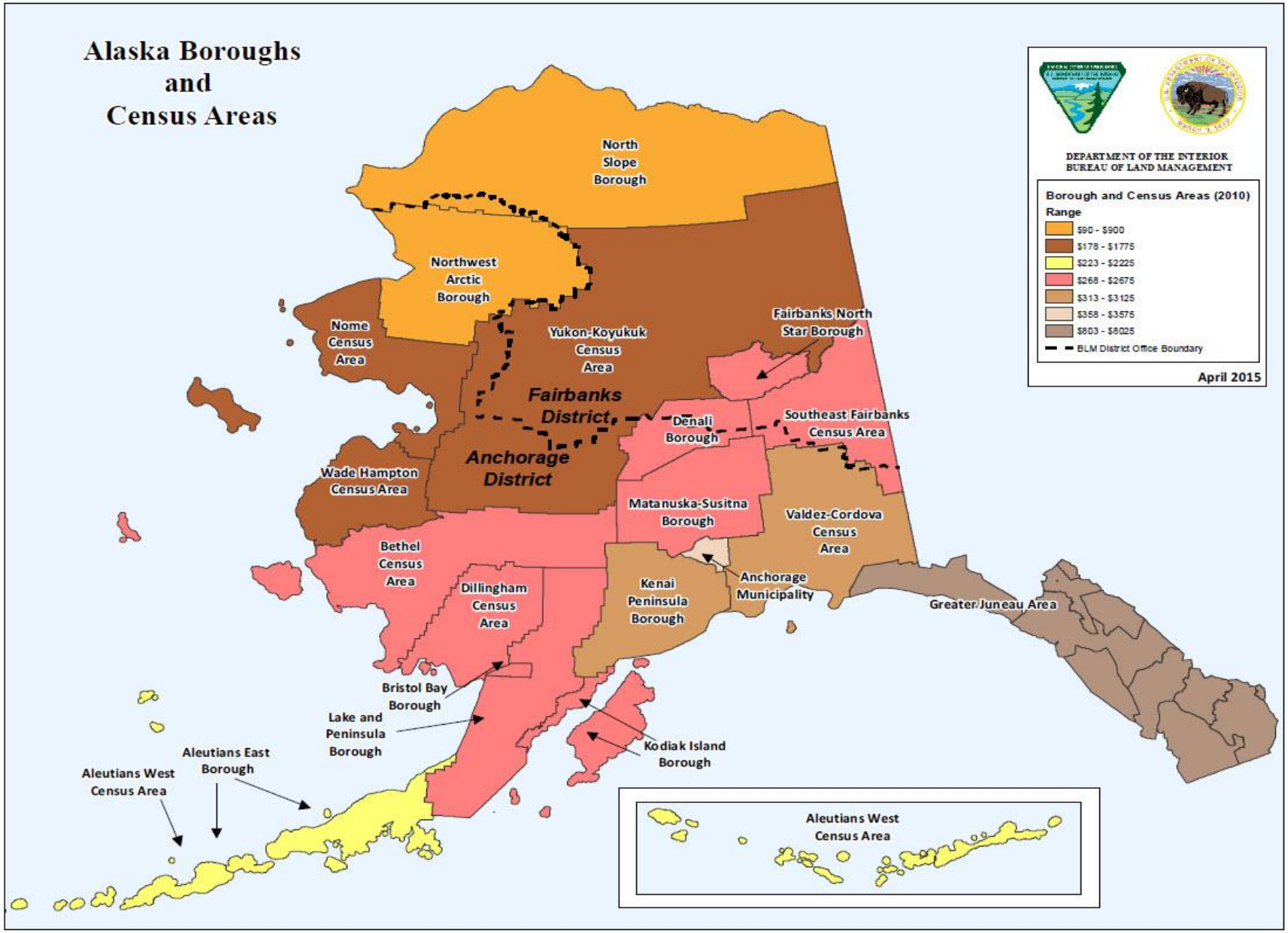
This fee schedule is not intended to replace existing schedules for mineral, hydrolelectric, geothermal, telecommunication, linear right-of-way uses, or any other use fee established by specific authorization. Further, this fee schedule is based on the premise that requested permits are in remote areas with limited access with no public utility systems and with no apparent competition. Appraisals may be necessary for commercial, industrial or long term rent situations on sites that may appeal to multiple users.

The following pages contain the fee schedule for small minimal rents on BLM lands in Alaska. The schedules are specific to the identified BLM Districts, as well as individual bureaus within Alaska. The schedule is not inconsistent with the current minimum rent schedule that charges $400 to $900 for remote possessory leases and $200 to $250 for remote non-possessory leases. This new schedule refines that fee with geographic specificity and with an extension of the acreage up to 25 acres. Following the schedule charts is the explanation of how the values were derived.

Respectfully submitted,

Anne Renaud-Wilkinson, MAI
Department of the Interior
Office of Valuation Services
1220 SW 3rd Ave., Suite 1010
Portland, Oregon 97204

ANNUAL FEE												
ANCHORAGE DISTRICT OFFICE												
Boroughs/ Census Areas	0.1 – 5 ACRES			5.1 – 10 ACRES			10.1 – 15 ACRES			15.1 – 25 ACRES		
Impact >	Minimal	Moderate	High	Minimal	Moderate	High	Minimal	Moderate	High	Minimal	Moderate	High
Anchorage (143)	$358	$536	$715	$715	$1073	$1430	$1072	$1609	$2145	$1788	$2681	$3575
Denali, Matanuska-Susitna (107)	$268	$401	$535	$535	$803	$1070	$803	$1204	$1605	$1338	$2006	$2675
Kenai (125)	$313	$469	$625	$625	$938	$1250	$938	$1406	$1875	$1563	$2344	$3125
Kodiak, Lake & Peninsula, Dillingham, Bethel, Bristol Bay (107)	$268	$401	$535	$535	$803	$1070	$803	$1204	$1605	$1338	$2006	$2675
Aleutians, East & West (89)	$223	$334	$445	$445	$668	$890	$668	$1001	$1335	$1113	$1669	$2225
Greater Juneau Area (321)	$803	$1204	$1605	$1605	$2408	$3210	$2407	$3611	$4815	$4013	$6019	$8025
Valdez, Cordova, (125)	$313	$469	$625	$625	$938	$1250	$938	$1406	$1875	$1563	$2344	$3125
Nome, Wade Hampton Yukon-Koyukuk (71)	$178	$266	$355	$355	$533	$710	$533	$799	$1065	$888	$1331	$1775
Northwest Arctic (36)	$90	$135	$180	$180	$270	$360	$270	$405	$540	$450	$675	$900


Alaska Boroughs
and
Census Areas
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Borough and Census Areas (2010)
Range
$90 - $900
$178 - $1775
$223 - $2225
$268 - $2675
$313 - $3125
$358 - $3575
$803 - $8025
BLM District Office Boundary
April 2015
North Slope Borough
Northwest Arctic Borough
Nome Census Area
Yukon-Koyukuk Census Area
Fairbanks North Star Borough
Fairbanks District
Anchorage District
Denali Borough
Southeast Fairbanks Census Area
Wade Hampton Census Area
Matanuska-Susitna Borough
Valdez-Cordova Census Area
Bethel Census Area
Dillingham Census Area
Kenai Peninsula Borough
Anchorage Municipality
Greater Juneau Area
Bristol Bay Borough
Lake and Peninsula Borough
Kodiak Island Borough
Aleutians East Borough
Aleutians West Census Area
Aleutians West Census Area

ANNUAL FEE												
FAIRBANKS DISTRICT OFFICE												
Boroughs/ Census Areas	**0.1 – 5 ACRES**			**5.1 – 10 ACRES**			**10.1 – 15 ACRES**			**15.1 – 25 ACRES**		
Impact >	**Minimal**	**Moderate**	**High**	**Minimal**	**Moderate**	**High**	**Minimal**	**Moderate**	**High**	**Minimal**	**Moderate**	**High**
Fairbanks North, S'east Fairbanks, Denali (107)	$268	$401	$535	$535	$803	$1070	$803	$1204	$1605	$1338	$2006	$2675
North Slope (36)	$90	$135	$180	$180	$270	$360	$270	$405	$540	$450	$675	$900
Yukon-Koyukuk (71)	$178	$266	$355	$355	$533	$710	$533	$799	$1065	$888	$1331	$1775

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 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§2806.50:

> *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.*

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; set arbitrarily and adjusted based on demand, or established by individual appraisals. However, 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 translate well for establishing such rent schedules. This is because when considering market rent, the term "market" implies the presence of potentially competing renters for a specific property type along with competitive property owners interested in attracting at least one of those renters. In short, market rent requires that a competitive market exist. Given that small land use authorizations (including linear right-of- ways) are site specific and generally non-competitive, they are not market orientated uses. That is, there are ***not*** multiple users competing for use of a property where there are multiple substitute properties.

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 (BLM staff) to interpret the category of use and degree of impact. For instance, a take-off and landing area may only be used intermittently so a fee in the minimal range may be appropriate. And yet, some surface disturbance may be required to clear a rudimentary runway, resulting in a level of exclusivity for the permit holder, and resulting in a moderate to high impact rating. The BLM staff user will have to use some judgment as to the level of impact, depending on the terms of the permit.

Time constraints may also require interpretation with regard to the degree of impact. Use of BLM land as a staging area for a day use may be interpreted as minimal, even though use is exclusive and intense.

SCOPE OF THIS ASSIGMENT

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

- I determined if Alaska was operating under an existing minimum rent schedule, or if a schedule needed to be established. I located a survey from March of 2011 that indicated that the Alaska BLM had developed a fee schedule similar to the ROW schedule. Minimum annual rental of $400 to $900 was charged for remote possessory leases and $200 to $250 was charged for remote non-possessory leases. The schedule did not appear to be borough specific, nor minimum site size specific. (This rent analysis and new rent schedule appears to be reasonable consistent with the existing schedule, although the extension of the rates onto >15 acre tracts creates rental fees that are ostensibly greater.)
- I surveyed other federal agencies, state agencies and private parties for information that might provide data within the context of comparable commercial practices. The State of Alaska, through the Department of Natural Resources, has a fee schedule generally based on a rate of 5% of the underlying land value. Likewise, the Alaska Railroad Corporation has a long term rental policy based on a fee of 8% of land value, although the ARC considers rentals to be based on commercial land values.
- 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. The only applicable codes referenced Linear right-of-ways, Mineral, hydrologic, geothermal and telecommunication uses, with formula-based fee schedules. There was little specific guidance for determining non-linear right of way rental fee schedules. Again, reference 43 CFR§2806.50 is invoked here to rationalize the methodology herein:

  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.

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 the per Alaska Borough rental rate employed a five step process[1]:

1. Determine the LAND VALUE ESTIMATE per area. (State of Alaska, Department of Natural Resources data base was researched.)

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 (0.1-5 acres, 5.1-10 acres, 10.1-15 acres, 15.1-25 acres). This is the 100% encumbrance rental rate for that size bracket.

5. Apply 50% and 75% to the 100% value from #4 to arrive at a minimal and moderate rate based pm the interpreted level of impact.

LAND VALUE ESTIMATE

Estimating land value over a large geographical area is difficult to say the least. However, given the predominately rural nature of BLM land, using remote land values as the basis for this type of 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.

Alaska, however, has relatively little agricultural land, and while the Department of Agriculture does publish statistical data for agricultural land, it has proven to be too limiting for the variety of areas involved. I was able, however, to access the State of Alaska’s Rural Residential land sales via the Department of Natural Resources website. http://dnr.alaska.gov/mlw/appraise/sold. I believe this data is a suitable proxy for the NASS data. Within the extensive data base I captured just under 1,000 rural residential land sales that ranged from 1 to 25 acres, between 2010 and 2014. I filtered the sales data based on the following parameters:

[1] 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.

1. Sales were categorized in data sets for location in Southcentral, Southeast, Northern and Statewide Alaska.
2. I recognized that sales were both by auction and over-the-counter, however, this difference was not significant in very rural land sales. Remote tracts with difficult access could be isolated within the data sets and regardless of terms of sale, (over-the-counter and auction) prices were relatively consistent for specific areas.
3. I omitted "outlier" sales data. Sales that were wildly out of line with other sales were omitted from consideration. These outliers were more prevalent within very small acreages; generally sales of 1 to 2 acres had a significant number of outliers and suggested a minimum threshold value recognized by the market, or the presence of improvements. Neither of these conditions were considered appropriate for the market rent determination.
4. I selected random sales within each of the data sets (Southcentral, Southeast, Northern and Statewide Alaska) for verification of locational value attributes. That is, I checked actual locations of the random sales to verify their location within a specific district and then compared the implied per acre values against sales in other districts to see if trends were consistent. This corroborated the relationship between land values and location, i.e. sales in sales in the Kenai Borough were relatively consistent with sales in the Valdez and Cordova Boroughs. Surprisingly, sales in the Greater Juneau Area were far greater than any other Borough and attributable to the small amount of actual private land available in that area. Southcentral data (greater Anchorage area) proved to be the largest data set by far and value estimates in the Anchorage Borough have the highest degree of confidence. As a benchmark of land value, it was then reasonable to find land values falling within ranges relative to Anchorage, i.e., Valdez, Cordova, Mat-Su, and Kenai slightly less and Aleutians and Yukon-Koyukuk far less. Again, the Greater Juneau Area proved to be an anomaly, however, the lack of available private land and relative demand appears to be influencing land values.
5. With very few sales occurring in the North Slope and Arctic area, I researched recent sales from the U.S. Fish and Wildlife Services' recent acquisitions in northern Alaska. I then applied a discount to the State's Department of Resources Northern data set to account for the extremely rural and inaccessible condition of much of the North Slope of the Fairbanks District and the Northwest Arctic Borough in the Anchorage District.
6. I relied on the Bureau of Land Management's Alaska Boroughs and Census Areas map to identify District Offices and corresponding boroughs and census area.
7. I assigned a representative small tract per acre land value to the nine Anchorage Distirct Boroughs and the three Fairbanks District Boroughs. The per acre values were consistent with the limited NASS data agricultural land values, with respect to location. That is, the Greater Juneau Area values were the highest, followed by Anchorage Area, the Kenai Peninsula values, the Fairbanks values, followed by the Aleutian Island values. (This was the extent of the NASS data coverage.)
8. I applied the representative land values to the Rate of Return as derived herein, to determine the Base Land Values.

BASE LAND VALUES

(Numbers in parenthesis in the previous tables)

Anchorage District			Fairbanks District		
Borough (Area)	**Representative Land Value $/acre**	**Base Land Value (Adj. Land Value times the Rate of Return 3.57%)**	**Borough (Area)**	**Adj.Land Value $/ acre**	**Base Land Value (Adj. Land Value times the Rate of Return 3.72%)**
Gr. Juneau	$9,000	$321	Fairbanks North, Southeast Fairbanks, Denali	$3,000	$107
Anchorage	$4,000	$143			
Valdez, Cordova	$3,500	$125	North Slope	$1,000	$36
Kenai	$3,500	$125	Yukon-Koyukuk	$2,000	$71
Denali,Matanuska Susitna	$3,000	$107			
Kodiak, Lake & Penninsula, Bristol Bay, Dillingham, Bethel	$3,000	$107			
Aleutians, East & West	$2,500	$89			
Nome,Wade Hampton, Yukon Koyukuk	$2,000	$71			
Northwest Arctic	$1,000	$36			

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
2010	1.60%
2011	3.20%
2012	2.10%
2013	2.10%
2014	1.60%
Average	**2.12%** **Expected 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 six 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
2010	4.25%
2011	3.91%
2012	2.92%
2013	3.45%
2014	3.32%
Average	**3.57%**

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

Real Return Calculation

Year Average 30-Year Bond Rate	3.57%
5 Year Average Expected Inflation	2.12%
Real Return	**1. 45%**

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 government owned vacant 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	2.12%
Real Return	1.45%
Risk Premium	---
Recapture Premium	---
Rate of Return	**3.57%**

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 an 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 steam 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%

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 be between risk, bond rating, and cap rates.

These added tests of reasonableness support a rate of return conclusion of **3.57%.**

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

<u>High Impact (100%)</u>

Characteristics of significant impact of non-linear right-of-way grants or permits warranting a higher rent include: a relatively on going occupation, an exclusivity of use (no other uses would be possible), an 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 have concluded an Encumbrance Factor of **100%** to be applied to land value.
High impact uses might include:

- Electric transformer stations
- Pump and compressor stations
- Equipment storage sites
- Boat dock or warf site
- Fish hatchery site
- Maricultural sites (farming marine products with upland facilities)
- Portal or tunnel sites
- Sewage lagoons
- Water treatment sites
- Large, fenced and gated staging areas for recreation or sport events
- Parking areas with intense use
- Take off and landing sites

- Shooting ranges, guide camps, dog sled touring sites
- Log storage sites

Moderate Impact (75%)

Characteristics of moderate impact non-linear right-of-way grants or permits include small sites where the uses and impacts are minimal because the area and/or uses are short term, intermittent, 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:

- Small permanent sign sites
- Gates
- Culverts
- Water pipeline and tank sites
- Historic or commemorative monuments
- Small temporary staging areas for sporting events
- Seasonal work camp or outfitter sites
- Cultural arts or educational events
- Sample collecting
- Research site Conex sites
- Passive reflector sites
- Farm equipment and machinery storage yard
- Large intermittent storage areas
- Highway signs
- Seasonal recreation uses such as camping areas or staging areas for races

Minimal Impact (50%)

Characteristics of minimal impact non-linear right-of-way grants or permits include small sites that are both temporary and long term or permanent, seldom visited, can be easily relocated if necessary, include smaller disturbed or enclosed areas, 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:

- Mail box sites
- Water and air quality monitoring sites
- Minor water control berms and earthwork
- Seasonal pivot crossings
- Temporary agricultural product storage site

The degree of impact requires a significant level of interpretation on the part of BLM staff that will implement this schedule. Along with the small 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.

End.