

## SUMMARY OF FINDINGS

The following bulleted list summarizes the findings of this analysis:

- ✓ The definition of residual improvement error is presented and a study of four properties is made to demonstrate how to detect the error and how to calculate its value. The errors committed by the appraiser in using Lot 99 Meeks Bay and Lot 89 Rubicon Bay are found to be respectively \$42,000 and \$175,000. That is, his determinations of value at the 120 sites at Echo Lakes are based on comparable values that are from \$42,000 to \$175,000 too high.  
[Part I, p. 9]
- ✓ In the Meeks Bay study, it is shown that due to selecting the wrong comparable vacant lot a residual improvement error of \$42,000 was incorporated into the evaluation of the 120 sites around Echo Lakes in the 1999-2000 appraisal. The author also demonstrates the proper technique in comparable selection given that the focus is to select for vacant lots with fair market values reflecting land in its “native and natural state.”  
[Part I, Lot 99 and Lot 100 Tables, pp. 11 - 12]
- ✓ In the Rubicon Bay study, it is shown that due to selecting the wrong comparable vacant lot a residual improvement error of \$175,000 was incorporated into the evaluation of the 120 sites around Echo Lakes in the 1999-2000 appraisal.  
[Part I, Lot 89 and Lot 92 Tables, pp. 13 -15]
- ✓ In the Echo Hemlock Tract (APN 020-160-052) study, it is reported that the land had a USFS designed appraised value of \$346,521 per acre. The El Dorado county assessor’s office assessed the land value at \$38,760 per acre. The United States Department of Agriculture places land value in El Dorado at \$3,637 per acre (modeled). The USFS determination is decidedly off-the-mark. It is shown to be 9,528 % in excess of the Index of Agricultural Land Value published and maintained by the analysts of the United States Department of Agriculture Economic Research Service.  
[Part I, Example 1, Table 1, p. 18]
- ✓ In the discussion pursuant to the Hemlock Tract study, the author presents a more suitable calculation for the land value of Echo Hemlock Lot 20. By a transparent demonstrated calculation, the land associated with the site is shown to have a value of \$3,584 per site. (The 2002 IALV land value in El Dorado county stood at \$3,637 vpa). So it is possible to obtain, by selecting carefully, a land value more closely in accord with the Department of Agriculture Economic Research Service. (Compare. The USFS determined and selected site land value was \$79,700. The El Dorado county assessor’s estimate is \$8,915.)  
[Part I, Table 2, p. 20]

- ✓ In the Rural Land Study, a random sample of rural unimproved land value was taken. It was found that this type of land had an average value per acre of \$9,768 per acre with a standard deviation of \$11,092. These values are far more consistent with values found in the Index. Based upon the sample distribution, the author was able to characterize land “value per acre” as an exponentially distributed random variable with a density function presented as Equation (1) on p. 31. This density will be used in Part III to measure the unusual and unlikely nature of the USFS appraisal values.  
[Part II, Table 5, pp. 22 - 29]
  
- ✓ In the Echo Site study, all 120 site evaluations determined in the 1999-2000 appraisal are presented in the along with two values characterizing their unusual nature. Each value is characterized by (1) the number of standard deviations its value is above the mean sample value determined in Part II; and (2) the likelihood of seeing such a value in a random sample. It is found that the lowest value the USFS determined was three standard deviations above the mean which is unlikely but still possible; most of the values were 20 to 35 standard deviations above the mean which are far beyond impossible to being completely wrong; up to one land value reconciliation of an astonishing 57.8 standard deviations above the mean. The likelihood of this last reconciliation is  $6 \times 10^{-40}$ , an astonishing small probability. It is roughly equivalent to the chances of throwing 125 heads in a row in 125 flips of a coin.  
[Part III, Table 8, pp. 33 - 37]
  
- ✓ In the Mermaid Cove Study, the author tracts the fees paid from 1970 to 2009 by a representative of the Mermaid Cove tract. The record shows that the USFS over the last 40 years has received a return on the true value of the site of over 100% each year up to a high of 488%. This is considerably in excess of the average return on long term treasuries of about 4.3%. It is also shown that fees are growing at an annual growth rate of 7.61% compounded annually. So fees are growing exponentially and with no upper limit.  
[Part IV, Table 9, pp. 38- 39; Equation (2), p. 43]
  
- ✓ In the El Dorado County Assessor Study, the author lists the land site values for all 120 sites about Echo Lakes and finds that the El Dorado county assessor considers these sites to be have a value of either \$6,875 or \$10,324 per site. The appraiser’s reconciliations were considerably higher than the counties actual factual site values due to residual improvement errors of up to \$500,000 per acre or up to \$90,000 per site. In the Echo South Shore alone, \$1,470,000 per acre of over-evaluation was left in the appraisal base for the 40 sites.  
[Part V, Tables 10 - 15, pp. 46 - 53]

# LAND VALUE

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by

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## FAIRNESS

**PUBLIC LAW 137 - AUGUST 31, 1951.**

**TITLE V**

**The Independent Offices Appropriation Act of 1952**

**31 U.S.C. 9701**

“It is the sense of the Congress that any work, service,...benefit,...use,...or similar thing of value or utility performed, furnished, provided, granted, prepared, or issued by any Federal agency... to or for any person...shall be self-sustaining to the full extent possible, and the head of each Federal agency is authorized by regulation... to prescribe therefor such fee, charge, or price, if any, as he shall determine... **to be fair and equitable** taking into consideration direct and indirect cost to the Government, value to the recipient, public policy or interest served, and other pertinent facts, and any amount so determined... shall be collected and paid into the Treasury as miscellaneous receipts...”<sup>6</sup>

## CONSISTENCY

**PUBLIC LAW 106–291 – OCTOBER 11, 2000.**

**TITLE VI**

**USER FEES UNDER FOREST SYSTEM**

**RECREATION RESIDENCE PROGRAM**

“The purposes of this title are-  
(1) to ensure, to the maximum extent practicable, that the National Forest System recreation residence program is managed to preserve the opportunity for individual and family-oriented recreation; and  
(2) to develop and implement a **more consistent procedure** for determining cabin users fees, taking into consideration, the limitations of an authorization and other relevant market factors.”<sup>7</sup>

# LIMITATION

## CALIFORNIA CONSTITUTION ARTICLE 13A [TAX LIMITATION]

“SECTION 1. (a) The maximum amount of any ad valorem tax on real property shall not exceed One percent (1%) of the full cash value of such property. The one percent (1%) tax to be collected by the counties and apportioned according to law to the districts within the counties.”<sup>29</sup>

# REGULATION

“The Property and Special Taxes Department administers three major property tax programs:  
the State-Assessed Property program;  
the Private Railroad Car Tax program;  
and the Timber Yield Tax program.  
In addition, the Department provides guidance to the 58 county assessors, who are charged with establishing values for approximately 12 million properties each year, and monitors the adequacy of their assessment practices.”<sup>30</sup>

## PRELUDE

Our sorry tale unfolds in five segments. It's a tale of confusion, whether deliberate or incompetent doesn't really matter in the end.

More than 100 years ago, a noble program opened the nation's forests to ordinary American families, rather than only to commercial interests such as timber and mining. How that program, with all its successes, is now in danger of being priced out of reach of ordinary families, is the subject of this study.

The objective of this study in five parts is to try

**TO DETERMINE WHAT VALUES LAND SHOULD HAVE –  
RURAL LAND IN ITS NATIVE AND NATURAL STATE.**

By doing this, the author hopes to make the reader aware and wary of “wrongful evaluations.” The hope is the reader will develop a strong number sense of an incorrect appraisal and incorrect appraisal method, as well as, of appraisals that are fair.

Despite its title, the Cabin Users' Fee Fairness Act is not about “fairness” per se, but about consistency in appraising the market value of the unimproved lots on which the nearly 15,000 cabin users are located. It is imperative that CUFFA must be read in tandem with *The Independent Offices Appropriation Act of 1952. PUBLIC LAW 137 - AUGUST 31, 1951. TITLE V*, cited in the prelude, which is all about fairness.

The five parts shall be composed of:

**Part I** in three studies introduces the reader to Residual Improvement Error(s) (RIE) and how to quantify them. Also, in advance of Part III, some of the data from the United States Department of Agriculture, Economic Research Service, Index of Agricultural Land Value is used to help the reader develop a number sense of correct land values and incorrect land values. The three studies are, in order of appearance: (1) The Meeks Bay Study; (2) The Rubicon By Study; and (3) The Echo Hemlock Study. A corrected determination of Echo Hemlock Lot 20 land value is produced.

**Part II** in The Rural Land Value Study presents a random sample of rural lands and seller's asking price for these lands. It is demonstrated that the average value-per-acre (vpa) is consistent with the Index of Agricultural Land Value. The random nature of value-per-acre is developed. Its probability density function is presented in Equation (1).

**Part III** in The Echo Lakes Study presents a complete look at the appraised land values of all 120 sites around Echo Lakes. The over-evaluations that resulted in the appraisal are quantified by determining how many standard deviations they are above a factual sample mean for rural land in its native and natural state. These land values are also characterized by their likelihood of being detected in any random sample of native and natural land value. The reconciliation values produced by the appraiser and accepted at face value by the USFS are shown to be an inaccurate measure of rural land in its native and natural state.

**Part IV** in The Mermaid Cove Study presents the forty year history of fees paid by a sub group of Mermaid Cove tract of permittees. It is observed that the USFS over this extended time period made a return on land value in excess of 100% per year every year, reaching a high of over 470%. It is demonstrated that this represents a clear violation of the directives from the Office of Management and Budget which limits any and all federal agencies to a fair market return not to exceed the return for 30 year Treasuries (4.2% - 4.7% per year)<sup>14</sup>.

**Part V** in The El Dorado County Assessor Study presents the recorded and assessed land values of all 120 sites around Echo Lakes as compiled from the El Dorado county assessor's office website.

**Appendix 2** provides the reader with a look at and analysis of the Index of Agricultural Land Values for the State of California. (1920 – 1992 with predictions based upon modeling into 2009). This is the Index CUFFA authorizes the Secretary of the USDA to use to make annual adjustments to the base fees determined by appraisals done every ten years. So the Index of Agricultural Land Value data and results are acceptable to both the USDA and USFS. Hence if the USFS encourages and supports the development and imposition of fees way out of line with the Index, they are acting inconsistently with their governing authority, the U.S. Department of Agriculture.

In summary, the author presents in five parts an analysis of land value for lands in their native an natural state. It is hoped therefore that the reader will develop a learned understanding of rural land value. It is further hoped that the reader will be readily prepared to detect evaluations that are incorrect, wrong and inaccurate as well as evaluations that make good common sense.

The mathematical techniques used by the author in this work can be found in the following several references.<sup>19, 20, 21, 22, 23</sup>

## PART I: INTRODUCTION TO RESIDUAL IMPROVEMENT ERROR (RIE)

It is the purpose of this analysis to show that the appraisal methods advocated and used by the United States Forest Service in the three major land appraisals since 1969 result in land values on the forest lands rented by cabin users in excess of natural (fair) market value. The USFS initiated this approach in 1969 as a way to set higher cabin user fees. They attempted three appraisals during the years from 1969 to the present: (1) the first in 1969; (2) the second in 1979; and (3) the last and current appraisal of 1999. Each appraisal had been challenged by cabin users in that each appraisal produced huge fees and huge increases in fees. The appeals fell on deaf ears. The USFS simply will not respond to any challenge by an appeal from below.

The directions that each appraiser must follow are specified by the USFS in their C-2 document. **Site** is defined as

“The site is the actual physical area of National Forest System land as described in a permit, said land being in a natural, native state when the exclusive use was first permitted by an authorized officer.”<sup>24</sup>

So this directive predates CUFFA and was in effect for all National Forest System permit usages for the 1999-2000 appraisals.

What follows is the main mistake made by the USFS and leads to remarkably inaccurate measurement of the land value of the 120 sites around Echo Lakes. In a subsequent section of the C-2 directive, one finds the statement of **purpose of the appraisal** and **definition of market value**

“A. Purpose of Appraisal. The appraisal purpose is a cash market value estimate of the fee simple interest of the National Forest System land underlying an area authorized by a permit, but without consideration as to how the permit would, or could, affect the fee title of the site(s) within a recreational residence tract...”<sup>25</sup>

and

“B. Definition of Market Value. The amount in cash or in terms reasonably equivalent to cash for which in all probability the property would be sold by a knowledgeable owner willing but not obligated to sell to a knowledgeable purchaser who desires but is not obligated to buy. The value estimate must give accurate and careful consideration of all market forces and factors which tend to influence the value of property, and which bear on the most probable price in terms of money which the site should bring in a competitive and open market under all conditions requisite to a fair sale.”<sup>26</sup>

The inflated value problem arises due to this directive enforced by the USFS in their eventual fee charge. Appraisals are to be used for informational purpose, at best. They should never be used as a basis for taxation or for a fee. It was exactly this type of method that produced the Jarvis-Gann tax initiative of 1975 resulting in the California State Constitution being amended by an easy majority of taxpayers in the state.

One is not allowed in the state of California to tax on a fiction – on a “make believe” sale of property. No one taxed (charged a fee) at Echo Lakes is selling their cabin and the permit to use the land beneath it, at present. This type of unregulated unlimited fee will drive the current residents from their summer recreational cabins in much the same way as the exact same appraisal based taxation was driving senior citizens and others out of their principal residences in the years prior to 1975.

The lands that the USFS want appraised are highly unusual. These lands have to be appraised as if they are in their “native and natural state” and are **not** currently for sale in an open and free market. Government cannot tax or fee on an anticipation of sale or on a fiction of ownership.

For example, consider this scenario. One imagines owning 100 shares of Google common stock at \$350 per share. The IRS then approaches and says “The fair market value of your imagined holdings is \$35,000 in a free and competitive market. We are going to tax you on the anticipated make-believe sale of your make-believe fictional holdings at a 20% long term capital gain rate.”

The author is fairly certain that this is highly illegal. But this scenario holds in its essence precisely the same fundamental principle underlying the USFS approach to determining a permittee fee.

The USFS wants and needs to perform some sort of method that allows them to charge a rent and no longer a permit fee. A permit fee is simply that – a simple inexpensive fee for processing a permit to use. It does not cost very much nor does it increase in amount except by an inflationary factor.

The USFS, it seems to the author, has two logical and reasonable options. Option one is cheap and relatively easy and simple to accomplish. Simply use the county assessors tax roll land value as the fee basis. No tax payer moneys are spent for expensive appraisals which produce *faux* land values anyway, as will be shown below in our study. The second option is to appraise using correctly selected comparables. Select comparables that accurately and precisely reflect the market condition and value of the target land sites.

Few if any of the sites are developed and urban-like. None are in planned developments but are part of the state’s land zoned as “public.” These lands are owned by the citizens of the United States and are managed and cared for by the USFS. Most of the lands used by permittees are unplanned communities on rural and semi-inaccessible land. But most importantly, these assets are not on the market, are not for sale, and most importantly not in any way owned by the permittee.

So the appraisal process or method cannot be a typical run-of-the-mill appraisal. The method of appraisal requires a choice of comparables consistent with the nature of the target land in its native and natural state as well as its market condition.

The United States Department of Agriculture specifies and defines exactly what is to be done in these appraisals.

“(9) Lot. –The term “lot” means a parcel of land in the National Forest System—

(A) on which ...

(B) that is considered to be in its **natural, native state** [ed. bolding added by the author] at the time at which a use of the lot described

in subparagraph (A) is **first** [ed.].] permitted by the Secretary.

(10) NATURAL, NATIVE STATE.— The term “natural, native state” means the condition of a lot or site, free of any improvements, at the time a which the lot or site is first authorized for recreation residence use by the agency.”<sup>3</sup>

The lots surrounding Echo Lakes in their natural, native state in 1915 were rural unimproved (zoned “public”) agricultural raw land. So Echo Lakes “land” has this specific meaning consistent with CUFFA 16 USC 6203, SEC. 604.<sup>3</sup>

Any appraiser must not lose his focus and pick “any old property” for a comparable property. The choice of comparables must be closely aligned with the nature of the target property. The appraiser must seek out land that is as close as possible to land in its “native and natural state **not** on the market” with a value in accord with this condition.

What happened historically in the three appraisals of 1969, 1979, and 1999 was a choice of comparable properties with land values far in excess of land values for native and natural rural land. The comparable vacant lots selected were vacant lots that had been recently sold. This is standard practice for appraisers. However, standard practice or method cannot be used here for the simple reason that it attributes to land in its native and natural state **not for sale** a value far in excess of what the land value actually is. The value of land is a historical fact and recorded as such by each county. (County recorder and /or county assessor.) This is factual land value and the only type of value that can be validly used as a basis for fee or tax.

So inappropriate properties were selected (by design) at which point the appraiser corrected for standard inequities by subtracting **costs** of whatever obvious visible improvements existed on or were associated with that comparable. Such corrections that might exist for vacant lots and are typically corrected for might be those associated with water, electrical, and grey and black water sewage hookups. These are obvious – they can be seen. (Or the correction can be done by multiplying by an appropriate factor that reduces the value of an improved lot down to a value that presumably represents the value of an unimproved lot.) . There are no structures on the vacant comparable lot so there is no cost adjustment needed for this circumstance. The total value remaining, after these obvious adjustments, is then attributable to the land – there’s nothing else around to attribute this value to! This is standard, textbook land appraisal. And this is what was followed to the letter by the California state licensed appraisers in all of the three years mentioned above. So what could possibly go wrong?

This standard method leaves a subtle and hidden value in the land value associated with the comparable. The source of this extra value, completely ignored in any standard appraisal, is the **historical recorded increase in value associated with and attributable to a market event between buyer and seller.**

*Basically, THE COMPARABLE LAND WAS SOLD !!!*

AND THE TARGET PROPERTY IS NOT BEING SOLD.

THESE TWO PROPERTIES ARE COMPLETELY DIFFERENT.

THIS METHOD OF SELECTING COMPARABLES IS ANALOGOUS TO

DETERMINING THE WEIGHT OF AN ANT

BY SAMPLING WEIGHTS FROM A HERD OF ELEPHANTS.

We will provide examples (two) below to show how land value increases in a sale and then define and calculate the **residual improvement error** associated with these increases. These billable recorded historical events in the “value of a piece of land” can only be discovered by doing an historical trace of the changes in land value of any comparable over as many preceding years as are readily obtainable (or, better still, for the entire recorded life of the land, but this is considerably difficult and also not necessary). And this method should replace the standard textbook method so as not to inappropriately *raise high the roof beam carpenters*<sup>28</sup> on rents, fees, or taxes.

Market events improve land value over and above the value of that land in its native and natural state. These market events occur when a buyer and seller agree on the real value of a parcel of land. This historically significant event in the “life” of a piece of land is recorded with a county recorder. This value then becomes the basis for a *ad valorem* land value tax a county assessor. The assessor is prevented by law to use a *faux* appraisal to inflate the real transaction amount. The assessor can only use the value that historically happened and that was recorded as such. The assessor’s activities (at least in California) are monitored, reviewed, refereed and corrected (from above) by California’s Board of Equalization. Assessors in all 58 counties of California are very definitely not allowed to be **self-regulating**. [See p. vii, above.]

A licensed appraiser performing an independent for-hire appraisal is not regulated or is at best self-regulated. Once an appraisal is made there is no effective review for error or inaccuracy. The fundamental and overwhelming error made by the appraiser in the 1999-2000 appraisal of 120 sites around Echo Lake was in ignoring the improvement value due to multiple occurring sales in the comparables he chose. In fact it was precisely the most recent sale (1999 and 2000) that led him to pick the particular comparables. He selected for inflated land values. By not subtracting these improvements values, the appraisal method leaves an artifact that this author names as “**residual improvement error (RIE)**.”

Land left alone does not change in value. There is no seller and no buyer around to influence or alter the land's value. (Of course, it can seem to change in value by inflation, but this is not an issue here.) The appraiser in the 1999-2000 appraisal of the Echo Lakes sites selected comparables that had just been sold and had an associated drastic increase in value (improvement value due to a sale) above the value that land would have had in its native and natural state.

Buyer and seller agreements place an unnatural value onto any land. But it is this market activity that attracts appraisers to the property like "bees to honey." This is the standard method which is used by all appraisers as a matter of course in selecting comparables. Unfortunately the method does not include a procedure for understanding, recognizing, detecting or correcting for the value added by the very activity that attracts appraisers.

**Definition. Residual Improvement Error.** An actual sale of land produces an improved value for the land. Leaving this improvement value in (producing a **residual**) an appraised determination of value produces **residual improvement error** – but only for appraisals performed to determine the value of target land in its natural and native state.

An appraiser can leave any value he wishes on land when appraising for other purposes – such as land for sale or land evaluated for estate purposes, etc. But the appraisals required by the USFS are not typical. These types of appraisals must consider and correct for these hidden improvement values else the appraisers produce inaccurate and unfair overestimates and are in violation of public law.<sup>3</sup>

And by not correcting for these residual improvement errors, the resulting evaluations for the target lands are inflated and unfair. It is to be pointed out, however, that the appraisers are doing an honest, textbook appraisal. Unfortunately, their appraisal is for a target property that is about to be sold or has sold. Or the appraisals are requested by a land owner for "informational purpose" only. Appraisals are not **fact**. Appraisals are guesses. No county assessor in California is allowed to re-assess land or property based upon a fictional anticipated sale of property. The USFS should not use a fiction to increase their fees.

In review, **residual improvement error** results in adding to land that is supposed to be considered as land in its native and natural state the extra artificial and unnaturally enormous increased value produced by a buyer and seller transaction.

In any of the 58 counties in California one is allowed to access county recorded property sales events. In most counties, however, one must actually visit the assessor's office to access the records. The assessor of El Dorado county, on the other hand, has made available over the internet a 20 year historical data base of all properties with an APN in that county.<sup>17</sup>

This makes the determination and discovery of residual land error convenient. To demonstrate the identification and calculation of the magnitude of residual improvement error that occurred in the USFS 1999-2000 appraisal of the 120 sites surrounding Echo Lakes, four 20-year event histories are provided below.

## THE MEEKS BAY STUDY.

Two lots are chosen from Meeks Bay. One is Lot 99 used by the appraiser<sup>8, 15</sup> in the 1999-2000 appraisal to evaluate all 120 sites at Echo Lakes including Echo Hemlock Lot 20 (a typical to be used for determining the value of 17 other Hemlock lots nearby on the upper lake of Echo Lakes). The other is the neighboring lot 100 discovered and selected by the author. Lot 99 had two historical occurrences of improved value due to sales and was chosen by the appraiser precisely because it had a recorded and assessed billable event in 1999 – selling for \$45,000. Ignoring the property's historical record and selecting the property because of its 1999-2000 sale is the **mistake in method** made by the appraiser and by the USFS for accepting the appraisal at face value.

The second sale added the following value to the property

$$\text{Value added} = \$45,000 - \$23,842 = \$21,158$$

– for this event. It is inappropriate to leave these two improvement values in the land value determination of the target sites at Echo Lakes.

On the other hand, Lot 100 had no recordable (billable) events in the last 20 years. One can then easily detect the difference in values between the two lots over the twenty year historical track. One notices, for example, that for the first eight years (1988 - 1995) the land values for both lots 99 and 100 were identical. So the values of lot 100 serve as a benchmark for the value of land in its native and natural state at Meeks Bay (at least over the last 20 years since 1988). And the values of its next door neighbor Lot 99 provide clear evidence of how strongly market realty transactions improve the value of land.

The bottom line here is that the appraiser chose the wrong property to determine the value of Echo Hemlock Lot 20. He should have used the Meeks Bay Vista Lot 100 – the lot without any improved value.

The evidence of these land values is presented in the two tables that follow.

**SUBDIVISION TRACT 7 MEEKS BAY VSTA****016-101-32-100****LOT 99 (ALICE LANE)<sup>17</sup>**

<b>ROLL</b>	<b>DATE</b>	<b>APN STATUS</b>	<b>TYPE</b>	<b>VALUE</b>
2008	01/01/2008	Annual Roll	Roll	458,565
2007	02/23/2007	Not billed	Change in ownership	
2007	02/15/2007	Not billed	Change in ownership	
2007	01/01/2007	Annual Roll	Roll	449,574
2006	04/14/2006	Not billed	Change in ownership	
2006	04/11/2006	Not billed	Change in ownership	
2006	01/01/2006	Annual Roll	Roll	440,759
2005	01/01/2005	Annual Roll	Roll	432,117
2004	01/01/2004	Annual Roll	Roll	423,645
2003	07/21/2003	Billed	Completion of Construction	422,754
2003	01/01/2003	Annual Roll	Roll	367,754
2002	01/01/2002	Annual Roll	Roll	76,818
2001	01/01/2001	Annual Roll	Roll	45,900
2000	01/01/2000	Annual Roll	Roll	45,000
1999	09/24/1999	Billed	Change in Ownership	45,000
1999	01/01/1999	Annual Roll	Roll	23,842
1998	01/01/1998	Annual Roll	Roll	23,409
1997	01/01/1997	Annual Roll	Roll	22,950
1996	03/01/1996	Annual Roll	Roll	22,500
1995	12/28/1995	Billed	Change in Ownership	22,500
1995	03/01/1995	Annual Roll	Roll	2,743
1994	03/01/1994	Annual Roll	Roll	2,711
1993	03/01/1993	Annual Roll	Roll	2,658
1992	03/01/1992	Annual Roll	Roll	2,606
1991	03/01/1991	Annual Roll	Roll	2,555
1990	03/01/1990	Annual Roll	Roll	2,505
1989	03/01/1989	Annual Roll	Roll	2,456
1988	03/01/1988	Annual Roll	Roll	2,408

Two jump improvements in land value occur. The first jump occurs in 1995 and improves the land value by \$19,757 to \$22,500 – the sale price agreed to by seller and buyer. The second jump in 1999 adds an additional \$21,158 making the land in 1999-2000 worth \$45,000. This is the figure used by the appraiser to estimate the value of Echo Hemlock Lot 20. The residual improvement error is easy to calculate once one is presented with the neighboring lot's value history.

**Subdivision Tract 7 MEEKS BAY VSTA**  
**016-101-31-100**  
**LOT 100 (ALICE LANE)<sup>17</sup>**

<b>ROLL</b>	<b>DATE</b>	<b>APN STATUS</b>	<b>TYPE</b>	<b>VALUE</b>
<b>2008</b>	01/01/2008	Annual Roll	Roll	3,497
<b>2007</b>	01/01/2007	Annual Roll	Roll	3,429
<b>2006</b>	01/01/2006	Annual Roll	Roll	3,362
<b>2005</b>	01/01/2005	Annual Roll	Roll	3,297
<b>2004</b>	01/01/2004	Annual Roll	Roll	3,233
<b>2003</b>	01/01/2003	Annual Roll	Roll	3,175
<b>2002</b>	01/01/2002	Annual Roll	Roll	3,113
<b>2001</b>	01/01/2001	Annual Roll	Roll	3,052
<b>2000</b>	01/01/2000	Annual Roll	Roll	2,993
<b>1999</b>	01/01/1999	Annual Roll	Roll	2,935
<b>1998</b>	01/01/1998	Annual Roll	Roll	2,883
<b>1997</b>	01/01/1997	Annual Roll	Roll	2,827
<b>1996</b>	03/01/1996	Annual Roll	Roll	2,772
<b>1995</b>	03/01/1995	Annual Roll	Roll	2,743
<b>1994</b>	03/01/1994	Annual Roll	Roll	2,711
<b>1993</b>	03/01/1993	Annual Roll	Roll	2,658
<b>1992</b>	03/01/1992	Annual Roll	Roll	2,606
<b>1991</b>	03/01/1991	Annual Roll	Roll	2,555
<b>1990</b>	03/01/1990	Annual Roll	Roll	2,505
<b>1989</b>	03/01/1989	Annual Roll	Roll	2,456
<b>1988</b>	03/01/1988	Annual Roll	Roll	2,408

The values for Lot 100 exhibit the natural land values for the years 1988 through 2008 – there was no market activity to change the land value other than the 2% growth rate in value used by the county. For example, the value found in the record for the year 2000 is very simply calculated by

$$\$2,993 \approx \$2,408 \cdot (1.02)^{11}$$

By using the full uncorrected \$45,000 as the land value of Lot 99 the appraiser introduces a residual improvement error (RIE) of

$$\text{RIE} = \$45,000 - \$2,993 = \$42,007$$

into his eventual determination of land value for Echo Hemlock Lot 20 as well as of all the other 119 sites around both lakes. Hence Echo Hemlock Lot 20 and seventeen other sites in Hemlock tract are given a value associated with land that had two recorded sales events in its history since 1988 increasing value well beyond its native and natural state. Echo Hemlock Lot 20 should have been evaluated at \$2,993 (per site) – a value completely in line with agricultural land values recorded in the index of agricultural land value. [See **Appendix 2**, below.]

As a result of this error the total over evaluation for the 18 sites linked to this typical is, based upon using Meeks Lot 99,

$$\text{Total error (Hemlock)} = 18 \times \$42,007 = \$756,126.$$

$$\text{Total error (All Echo)} = 120 \times \$42,007 = \$5,040,840.$$

The corresponding fee overcharge to the community is taken at 5% of the over evaluation further corrected for limited use at 4/12

$\text{Fee overcharge} = .05(\$756,126 + \$5,040,840)/3 = \$96,616 \text{ per community}$
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#### THE RUBICON BAY STUDY.

A second property used by the appraiser was one near Rubicon Bay at 9045 Manzanita Drive, South Lake Tahoe. It was used to value the sites associated with the Echo typical lots: Channel 9 & 12, Hemlock 25 & 42, Mermaid Cove 14, and South Shore 5, 22, and 41. Its land value history is reported in the following table.

**SUBDIVISION TRACT 175 RUB PROP 2 S 3****APN 016-432-13-100****LOT 89 9045 MANZANITA<sup>17</sup>**

<b>ROLL</b>	<b>DATE</b>	<b>APN STATUS</b>	<b>TYPE</b>	<b>VALUE</b>
2008	01/01/2008	Annual Roll	Roll	873,946
2007	01/01/2007	Annual Roll	Roll	856,811
2006	01/01/2006	Annual Roll	Roll	840,012
2005	01/01/2005	Annual Roll	Roll	832,542
2004	02/13/2004	Billed	Completion of Construction	807,395
2004	01/01/2004	Annual Roll	Roll	725,395
2003	01/01/2003	Annual Roll	Roll	412,364
2002	01/01/2002	Annual Roll	Roll	159,181
2001	01/01/2001	Annual Roll	Roll	156,060
2000	01/01/2000	Annual Roll	Roll	153,000
1999	01/01/1999	Annual Roll	Roll	150,000
1998	07/14/1998	Billed	Change in Ownership	150,000
1998	01/01/1998	Annual Roll	Roll	33,423
1997	01/01/1997	Annual Roll	Roll	32,768
1996	03/01/1996	Annual Roll	Roll	32,126
1995	03/01/1995	Annual Roll	Roll	31,774
1994	03/01/1994	Annual Roll	Roll	31,401
1993	03/01/1993	Annual Roll	Roll	30,786
1992	03/01/1992	Annual Roll	Roll	30,183
1991	03/01/1991	Annual Roll	Roll	29,592
1990	03/01/1990	Annual Roll	Roll	29,120
1989	03/01/1989	Annual Roll	Roll	28,444
1988	10/20/1988	Billed	Change in Ownership	28,376
1988	03/01/1988	Annual Roll	Roll	6,753

A very bad unrelated error occurs here. The recorded sales price in 1998 according to this record was \$150,000. By year 2000, this value had become \$153,000. The appraiser instead used a value of \$182,000 in his determinations of

value for Echo Hemlock Lot 20, a value in excess by roughly \$30,000.

In order to find benchmark unimproved values in this area, a property three parcels down the same street was discovered by the author.

**SUBDIVISION TRACT 175 RUB PROP 2 S 3**

**APN 016-432-16-100**

**LOT 92 MANZANITA DRIVE <sup>17</sup>**

<b>ROLL</b>	<b>DATE</b>	<b>APN STATUS</b>	<b>TYPE</b>	<b>VALUE</b>
2008	01/01/2008	Annual Roll	Roll	9,828
2007	01/01/2007	Annual Roll	Roll	9,636
2006	01/01/2006	Annual Roll	Roll	9,448
2005	01/01/2005	Annual Roll	Roll	9,263
2004	01/01/2004	Annual Roll	Roll	9,082
2003	01/01/2003	Annual Roll	Roll	8,916
2002	01/01/2002	Annual Roll	Roll	8,742
2001	01/01/2001	Annual Roll	Roll	8,571
2000	01/01/2000	Annual Roll	Roll	8,403
1999	01/01/1999	Annual Roll	Roll	8,239
1998	01/01/1998	Annual Roll	Roll	8,090
1997	01/01/1997	Annual Roll	Roll	7,923
1996	03/01/1996	Annual Roll	Roll	7,777
1995	03/01/1995	Annual Roll	Roll	7,693
1994	03/01/1994	Annual Roll	Roll	7,603
1993	03/01/1993	Annual Roll	Roll	7,454
1992	03/01/1992	Annual Roll	Roll	7,308
1991	03/01/1991	Annual Roll	Roll	7,165
1990	03/01/1990	Annual Roll	Roll	7,025
1989	03/01/1989	Annual Roll	Roll	6,888
1988	03/01/1988	Annual Roll	Roll	6,753

Once again change in ownership had an enormous effect on the land value for Lot 89. Both lots match in value in 1988 at \$6,753 (per site). Lot 92 then increased at an annual rate of 2% compounded annually. So that by the year 2000 (the year of interest in this study) its value had compounded 11 times to a value

$$8,403 \approx \$6,752 \cdot (1.02)^{11}$$

the value found in the LOT 92's table for the year 2000. On the other hand the value for the year 2000 for Lot 89 had grown to \$150,000 due to two changes in ownership. The total residual improvement error (including the error by the appraiser of using \$183,000 instead of \$150,000) turns out to be

$$\$150,000 + \$33,000 - \$8,403 = \$174,597$$

The total effect of this RIE is truly damaging for the many lots linked to the several typicals.

$$\text{Total error(Channel 9 \& 12)} = 10 \times \$174,597 = \$1,745,970$$

$$\text{Total error(Mermaid 14)} = 6 \times \$174,597 = \$1,047,582.$$

$$\text{Total error(Hemlock 25 \& 42)} = 9 \times \$174,597 = \$1,571,373$$

$$\text{Total error(South Shore 5, 12 \& 41)} = 18 \times \$174,597 = \$3,142,746$$

and these errors result in a fee overcharge determined by

$\text{Fee overcharge} = .05(\$7,507,671)/3 = \$125,128 \text{ per community}$
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And these comparables were just two of the four used in determining Echo site values. The other properties used in the appraisal were located in Nevada County at Donner Lake. The Nevada county recorder does not provide website access to records as advantageous for research as does the El Dorado county website. The author notes here that this activity is not a game and shouldn't be performed by the USFS in such a cavalier way. Making an error with magnitude in the range of \$96,616 to \$125,128 in and of itself is very bad business and not good governance.

But since the appraiser as well as the USFS are self-regulated and the USFS is not performing a due diligent critical review of the appraisal calculations, such errors won't be discovered and corrected and their consequences are going to end up severely harming the target permittees. Furthermore, it is an historical fact that the USFS is unwilling to recognize, acknowledge nor correct such errors when they are brought to their attention by the permittees. Permittees have absolutely no power nor influence to make the USFS correct themselves.<sup>1, 18</sup>

And, once again, the appraiser did not quite grasp the nature of what he was supposed to do. His value determinations were not associated with a determination of land value in its native and natural state.. By using the value of Lot 89 instead of the value for Lot 92 in the Rubicon sites, his focus was on property that had sold (more than once) rather than on property that had not sold and which still sustains a value more in line with value of land in its native and natural state.

The next discussion is about fundamental issues.

To remind the reader. . .

**THE SIX FUNDAMENTAL ISSUES IN THIS ANALYSIS.**

**WHAT IS RURAL LAND IN ITS NATIVE AND NATURAL STATE?**

**WHAT ARE THE CORRECT METHOD(S) TO BE EMPLOYED BY A LICENSED APPRAISAL TO CORRECTLY DETERMINE A VALUE FOR LAND IN ITS NATIVE AND NATURAL STATE?**

**WHAT IS THE MARKET VALUE OF IMPROVED LAND AND HOW SHOULD ITS VALUE BE CORRECTLY ESTIMATED?**

**HOW DOES ONE DETECT AND CALCULATE RESIDUAL IMPROVEMENT ERROR?**

These first four issues have been demonstrated in the two previous studies: the Meeks Bay and the Rubicon Bay studies. Of more philosophical concern are the following two issues.

**SHOULD THE FOREST SERVICE BE TREATING THE PERMITTEE SITES IN ANY OF THE NATIONAL FORESTS AS IF THEY ARE BEING BOUGHT AND SOLD EVERY TEN YEARS?**

**SHOULD THE USFS BE ENGAGED IN APPRAISING IN THE FIRST PLACE?**

The author believes the answers to these last two questions are a resounding and emphatic **no!** He also believes that Congress needs to step in and “wonder” about what the USFS is now and has been doing for the last 40 years (since 1969). For example, is it an appropriate expenditure of tax payers’ dollars for the USFS to engage in these highly expensive “fictional” appraisals? After all, the site land values have already been recorded by the El Dorado county recorder. Their land values are part of a true historical record – there is no estimate or guess involved.

**THESE RECORDED LAND VALUES ARE HISTORICAL FACTS**

and the only type of land values that an assessment for fees or taxes should be based on.

The USFS is commissioned by an act of Congress to care for and manage the nation’s public national forests. There was never any mention of nor intent for them to employ licensed appraisers and develop an expensive cottage industry in appraising.

**APPRAISING HAS NOTHING TO DO WITH FORESTRY NOR FOREST MANAGEMENT.**

What is the market value of rural unimproved agricultural raw land and how should it be correctly characterized and analyzed? The data resource for the value of land is provided by the USDA **Economic Research Service** (ERS). Any appraisal of land value that is to be considered accurate, reasonable or fair must look to the data in this survey produced by the ERS for consistency.

For nearly a century, the **Economic Research Service** (ERS) and its predecessor agencies have supported USDA programs with economic data, research, and analysis needed for sound decision-making. Henry C. Taylor (1873-1969)—who served as the first chief of the Bureau of Agricultural Economics from 1922 to 1925—set the stage for much of the work done in ERS today by organizing economic research into one agency and expanding the role of economics for understanding our food and agriculture system. [From <http://www.ers.usda.gov/>. . .<sup>4</sup>]

ERS publishes the **Index of Agricultural Land Value** which is downloadable from its website (see above). It provides the value of rural unimproved agricultural raw land throughout the United States. The data for California counties is used in Part II, below, to provide the reader with a deeper understanding of California rural unimproved agricultural raw land value.

This index is the benchmark value of land for comparison purposes. It is the objective of the USDA ERS to present the most natural and realistic assessment of land value. In this work, the Index values are considered to be **fair market value**. The value of unimproved land is characterized by **value per acre (VPA)**. Any appraisal performed in California in any specific county should show some consistency with this Index. And any determination and characterization of **land value** should be done in terms of “value per acre.” Such vagaries as “value per site” or “value per lot” are meaningless, unquantifiable and result in flawed appraisal methods to go unchallenged and therefore uncorrected. These should be avoided.

The resulting inflated land values can be extraordinarily high as the following study indicates.

**THE ECHO HEMLOCK STUDY.**

**Example 1. Comparison of Lot 20 Hemlock tract to sale comparable Donner Lake Lots 2 and 3.**

This information is drawn from an analysis performed by Peter Bedford, et. al., and included in Appendices I - III of his letter to the USFS. (Dated 04/23/2003.)<sup>1</sup> and from El Dorado County tax records. A cabin site’s land (Hemlock tract, lot 20, APN 020-160-052) is being evaluated by an appraiser hired by the USFS using two properties close to the shores of Lake Tahoe in El Dorado county and two properties close to the shore of Donner Lake in Nevada county.

**TABLE 1: LOT 20 HEMLOCK TRACT**

COUNTY	NAME APN	VPS	%S	%L	A	VPA	IALV 2002
<b>EL DORADO COUNTY ASSESSOR</b>							
El Dorado	Hemlock 20 020-160-052	\$8,915*	.84	.16	.23	\$38,760	\$3,637
<b>THE APPRAISER<sup>2</sup></b>							

El Dorado	Meeks Bay 016-101-32	\$28,243	.00	1.00	.18	\$156,906	\$3,637
Nevada	Donner 13 016-432-13	\$53,971	.00	1.00	.24	\$224,789	\$3,637
Nevada	Donner 2 17-390-12	\$143,971**	.00	1.00	.32	\$449,909	\$3,637
Nevada	Donner 3 17-410-08	\$134,971	.00	1.00	.34	\$396,974	\$3,637
El Dorado	Hemlock 20 020-160-052	\$79,700***	.84	.16	.23	\$346,521	\$3,637

\* per site. . .i.e, per .23 acre for this property.

\*\* per site. . .i.e., per .34 acres. (THE HERZOG GROUP, INC.<sup>2</sup>)

\*\*\*An inflated value for .34 acres is applied directly to .23 acres – producing even higher than normal market value for the land.

Key : **VPS** (Land Value per site); **%S** (Cabin Value Percent of assessed value); **%L** (Land Value Percent of assessed value); **A** (acres); **VPA** (Value per acre); **IALV** (Index of Agricultural Land Value, per acre).

The appraiser took the sales prices of four vacant lots in highly developed semi-urban areas: Meeks Bay Vista Lot 99, Donner Terrace Lot 21, Donner Terrace Lot 34 and Donner Heights Lot 5. He made some minor utility adjustments, to change the value “of the site with utilities” to presumably a “fair market value” of the land. He made no attempt to remove the high value that the sales activity added to the value of land. This was demonstrated previously to be an over estimate of \$42,000 to \$175,000 in two of his determinations. The corresponding errors could not be obtained for the three Donner sites due to lack of convenient historical data. But based on the evidence of just one of the comparables used, the appraiser introduced a tremendous residual improvement error. The four “adjusted” values he ended up with are not much different from the unadjusted sales price. So in effect no substantive adjustment was really made.

As a result of incorporating the residual improvement error in the reconciliation value for Hemlock Lot 20, the appraiser produces a value extraordinarily larger than the benchmark value in the Index of \$3,637 per acre, it is found that the

$$\text{Percent Discrepancy} = \$346,521 / \$3,637 = 9,528\%$$

above the Economic Research Service measured Index value.

The author suggests the following reasonable calculation, using estimates for the three Donner properties. Start with the \$2,993 value in year 2000 for Meeks lot 100.

(1) Make a suitable Season of Use adjustment for Meeks Lot 100

$$\$2,993 - (8/12)\$2,998 = \$998$$

(2) The Donner properties were 5.1, 4.8 and 1.9, respectively, more than the Meeks Bay property. Build an estimate, as shown below, for these more valuable properties. (In lieu of the lack of historical data for properties at Donner Lake.)

(3) The appraiser's reconciliation value of \$90,000 turns out (by accident, I suppose, since the appraiser won't tell how he does this) to be the average of his four values; that is,

$$\frac{\$28,243 + \$143,971 + \$134,971 + \$53,971}{4} \approx \$90,000$$

So do the same below, finding

$$\frac{\$998 + \$5,090 + \$4,790 + \$1,896}{4} \approx \$3,194$$

**TABLE 2: LOT 20 HEMLOCK TRACT RECALCULATED**

A MORE REASONABLE RECONCILIATION							
COUNTY	NAME APN	VPS	%S	%L	A	VPA	IALV 2002
El Dorado	Meeks Bay 016-101-31	\$998	.00	1.00	.18	\$5,544	\$3,637
Nevada	estimate 1 1.90(998)	\$1,896	.00	1.00	.24	\$7,900	\$3,637
Nevada	estimate 2 5.10 (998)	\$5,090	.00	1.00	.32	\$15,906	\$3,637
Nevada	estimate 3 4.80 (998)	\$4,790	.00	1.00	.34	\$14,088	\$3,637
El Dorado	Hemlock 20 020-160-052	\$3,194	.84	.16	.23	\$13,874	\$3,637

Key : **VPS** (Land Value per site); **%S** (Cabin Value Percent of assessed value); **%L** (Land Value Percent of assessed value); **A** (acres); **VPA** (Value per acre); **IALV** (Index of Agricultural Land Value, per acre).

Referring back to Table 1, such a marked disparity with both the Index of Agricultural Land Value and with the Eldorado County Assessor should not be allowed and is inconsistent with **PUBLIC LAW 137 - AUGUST 31, 1951. TITLE V . The Independent Offices Appropriation Act of 1952** quoted in the introduction. The Forest Service certainly failed to notice this inconsistency in their acceptance without critical review of the appraisal.

CUFFA finds no error in this determination since the defined purpose of CUFFA is merely “to develop and implement a **more consistent procedure.**” *De facto*, the appraiser’s method was “consistent.” Consistently inaccurate, imprecise, incorrect, and wrong. The appraiser applied similar (consistent) techniques in appraising the Pinecrest lots in Tuolumne County.<sup>9</sup> And the Pinecrest appraisal evaluations were extremely overvalued. The appraiser consistently made the residual improvement errors in both of these appraisals since he consistently chose vacant lots with values that were elevated due to sales activity. And this unfortunately does not violate the clearly stated intent of CUFFA in its third section 603, which is. . .

“The purposes of this title are-...

(2) to develop and implement a **more consistent procedure** for determining cabin users fees, taking into consideration, the limitations of an authorization and other relevant market factors.”<sup>7</sup>

On another note, what makes the appraiser’s results more troublesome, is that both he and the Forest Service seemingly did not possess the desire nor the capability of looking at the appraisal results and detecting that they were then and are still inconsistent with the Index of Agricultural Land Value. They also did not detect nor understand that they were characterizing market active properties with inactive properties. To come close to the value of rural land in its natural and native state, an appraiser must not select comparable properties with a lot of sales activity in their history.

Evidently neither the appraiser nor the USFS had any realistic number sense of what a correct land value per acre should be for rural land in its natural and native state. Instead the appraiser went by the book and used comparables with recent and many improved values due to multiple sales activity. “Fair market value” meant “go for comparables that have just sold.” The appraiser consistently picked properties for the comparables that were actively changing ownership and therefore had values well in excess of native unimproved land. Neither the appraiser nor the Forest Service had any inkling of what they were trying to evaluate. They were supposed to be evaluating lands that do not sell very often.<sup>15</sup> They were side-tracked by the expression “fair market value” and lost their focus.

Rural raw unimproved dormant land is “dirt.” Sold urban or semi-urban land in a planned development is not “dirt.” Rural dormant land may be located in some nice areas. It might even be located next to a lake or has a river run on it. But even the nicest rural raw unimproved dirt in California is not worth 9,528 % more than the acceptable value per acre in the Index of Agricultural Land Value.

Land improved by a sale, multiple sales, or being part of a development in urban or semi-urban recreational settings such as those in areas surrounding Lake Tahoe,

Donner Lake, Lake Almanor, Bear Valley, Pine Mountain Lake, or urban Tuolumne County have inherently greater value than the value of land in its native and natural state . (See Part II below.)

In summary, The appraiser failed to address the fundamental issues accurately:

(1) he lost his focus and chose comparables that were not representative of rural land in its native and natural state and ignored nearby properties with little or no sales activity that would have been closer to the truth; as such. . .

(2) he did not figure out nor did he have a good number sense about correct rural raw unimproved land value; and

(3) he obfuscated his reconciliation by vaguely calling the value a “value per site”, where “value per site” is neither quantifiable nor comparable and easily hides any and all mistakes in an appraisal - including enormous residual improvement error.

In order to come to some sort of idea of the value of land in its native and natural state, the author took a random sample of 56 rural unimproved vacant properties and statistically studied the land values in the sample to determine a sample average and sample standard deviation of these types of values. The data and analysis are presented next in **PART II**, below.

## **PART II: A RANDOM SAMPLE OF SELLER ASKING PRICES FOR LAND IN RURAL CALIFORNIA COUNTIES**

The author collected a random sample of 56 vacant property land values to determine the properties of the continuous random variable **Seller’s Asking Price VPA** of rural unimproved agricultural raw land in California that is intended to be sold and then used for recreational purposes. The counties selected were rural in nature: Butte(12), El Dorado(3), Humboldt(6), Kern(1), Lake(5), Lassen(5), Modoc(5), Nevada(1), Placer(1), Shasta(1), Siskiyou(12), Tehama(3), and Tuolumne(1). The numbers in parentheses indicate the number of properties sampled from the respective county.

This sample of 56 recreational land values was taken from the following websites [www.unitedcountry.com](http://www.unitedcountry.com) and [www.eaglestar.net](http://www.eaglestar.net) . The search parameters used were (1) land only; (2) recreational. The year was 2008 and the months sampled were June and July. Although this random variable might overestimate the value of this type of land, it would not be listed in MLS unless some real estate agent/broker accepted the proposed asking price for the listing to be a reasonable value reflective of the respective markets(in other words, **rural land value pricing is regulated!**) . The author shows below that these values are consistent with the Index of Agricultural Land Value values for California. So these values are the type of values that should be used to characterize values on Forest Service managed lands.

The results are produced in Table 5 below.

**TABLE 5: A RANDOM SAMPLE OF SELLER'S ASKING PRICES  
FOR RURAL UNIMPROVED AGRICULTURAL RAW LAND**

LISTING	PRICE	ACRES	PRICE/ ACRE	CITY	CO	DESCRIPTION
<b>BUTTE COUNTY</b>						
04049-10052	650,000	52.16	12,461	Oroville	Butte	Lake view, 2 gold mines
04175-16014	444,000	11.44	38,812	Magalia	Butte	Horse property, rural, well treed
04175-10022	225,000	40	5,625	Chico	Butte	Distant horizon view, flat land, no trees, very rural
04175-50109	159,000	10	15,900	Paradise	Butte	Open grass lands, well treed, hunting, very private quiet
04175-16011	112,000	7.54	14,854	Concow	Butte	Secluded, rural, near lakes, fishing
04175-31586	98,000	40	2,450	Oroville	Butte	Views, wooded, streams, secluded, rural
04175-50126	89,000	5.45	16,330	Oroville	Butte	Mountain view, Mt. Land, fishing, turkey hunting, rural
04175-50125	75,000	4.86	15,432	Oroville	Butte	Spectacular Mt. Views, Mt. Land, fishing, hunting
04175-14022	78,500	2.95	26,610	Berry Creek	Butte	Near Lake Oroville, filtered views well treed
04175-31591	69,000	4	17,250	Berry Creek	Butte	Lake Oroville, fishing, hunting, wooded area w. good views

04175-50131	65,000	17	4,059	Oroville	Butte	Rural land, private setting on a good gravel road, located approx 1/2 hour from town. Gently sloping, good spring and seasonal creek. Located in the Concow area of Butte County, approx 15 minutes from Lake Oroville
04049-10037	50,000	1.09	45,872	Feather Falls	Butte	Lake view property. Surrounded by public land means no neighbors
<b>EL DORADO COUNTY</b>						
04056-84528	1,200,000	120	10,000	Somerset	El Dorado	Recreational land river frontage
04056-96677	349,000	7.58	46,042	Placerville	El Dorado	Hilltop views, close to town, non-rural
04175-16010	250,000	48.26	5,180	Grizzly Flat	El Dorado	Well forested, snow, dirt road
<b>HUMBOLDT COUNTY</b>						
20589	320,000	160	2,000	Mad River	Humboldt	Fresh mountain air, clean water, panoramic views to the east of the Trinity Alps.
20594	320,000	160	2,000	Mad River Zenia rd	Humboldt	Big and private acreage close to the Van Duzen River on Zenia Rd. near Lost Bridge and not far from Lassics Wilderness area
20624	175,000	27.43	6,380	Mad River So. Fork Mt. rd	Humboldt	Beautiful property on S.Fork Mt. is forested with cedar trees and oaks, with some big specimens of both. Fabulous view of Mt. Lassie. Very private

19709	8,336,000	2,000	4,168	Timberland Ranch	Humboldt	15 million board feet Douglas fir. Net value harvestable now approx \$6M. Very high growth rate. Example. Cut 1 million board feet per year for ten years, Growth replaces itself in 10 years. Presently growth is about 1 million board feet per year. Excellent spring(s) water throughout ranch. Couple hundred acres of pasture, remaining timberlands
18053	6,800,000	4,512	1,507	Timberland	Humboldt	Two Management areas: Species: Douglas Fir - Devils Canyon = 3,480 acres Approximately 15.5 million board feet standing. Approximately 3.5 million board feet harvest
20593	439,000	67	6,552	Bridgeville	Humboldt	Great rural agricultural property on the beautiful Van Duzen River! Solid two bedroom, one bath home on 67 Ac. with 2 APN's features fabulous panoramic mountain and river views, horse barn and shelter, horse fencing, shed, new greenhouse, developed gardens and interior roads.
<b>KERN COUNTY</b>						
15307	200,000	20	10,000	Weldon	Kern	Bare mountain land within the Sierra Nevada Mountain Range.

LAKE COUNTY						
04036-96939	640,000	640	1,000	Clearlake Oaks	Lake	Spring, undeveloped road access
04036-99508	1,320,000	920	1,435	Lower Lake	Lake	Remote land
04036-95925	\$360,000	120	3,000	Lower Lake	Lake	Private road access
04036-96937	320,000	120	2,667	Lower Lake	Lake	Rugged land, hunting property
04036-01699	145,000	132	1,000	Clearlake Oaks	Lake	Undeveloped, seasonal creek, fronts HWY 20
LASSEN COUNTY						
04283-29347	380,000	1900	200	Ravendale	Lassen	Very rural
04037-27450	80,000	80	1,000	Madeline	Lassen	Agriculture, flat, no trees
04283-29343	72,000	60	1,200	Termo	Lassen	Level land, no power, views
20700	1,700,000	3,420	497	Buntingville	Lassen	Gentlemen Ranchettes, Year Round Access, Water Fowl and Wild Life Hunting, Near Ski Resorts with Hillside and Lake Views
04283-29327	49,900	20	2,495	Ravendale	Lassen	Nice parcel in high desert. There is an older mobile on the property w/2 bedrooms,bath,kitchen,living room and wood stove. It is in good condition to stay in while you build your dream home or just spend some time in the country away from it all. Great views of the surrounding mountains

MODOC COUNTY						
04037-25930	1,500,000	680	2,206	Alturas	Modoc	Views of Mountain and valley
04037-25510	59,900	30	1,997	Alturas	Modoc	Terrain is mountainous, with gentle to steep slopes. Cantrall Creek flows through the northeastern corner, and the tree cover consists of White Fir, Ponderosa & Jeffery Pine. The road is dirt, and is not maintained in the winter. Snow in W.
04070-30050	45,000	3.55	12,676	Lookout	Modoc	Live in the mountains at 4200 ft. elevation. Level building site. Well, septic and power in, phone at property edge. Fronts county maintained gravel road.
04037-26400	40,000	40	1,000	Alturas	Modoc	Hunting property in the heart of Modoc National Forest's Crowder Flat Ranger District. Near Fletcher Creek and within miles of several different reservoirs. Junipers and native grasses abound as well as the mule deer and the antelope.
04037-27760	39,500	1.84	21,296	New Pine Creek	Modoc	Property has it all with electricity, phone, well and septic all located on a paved road on 1.84 acres. Property is level with views of Goose Lake, Warner Mountains & wildlife.
NEVADA COUNTY						
04068-29192	750,000	28	26,786	Nevada City	Nevada	Lake, Fishing, boating, trees, country

PLACER COUNTY						
18427	6,900,000	1047	6,590	Foresthill	Placer	Main residence – 2 or 3 bedrooms, 3062 SF. Sports building on same 20 acres as main residence, houses the gym, spa and home theatre on the main level; Adjoining 20 acres is a 1600 sf guesthouse, 2 bed., 2 bath plus a 5-car garage.
SHASTA COUNTY						
04057-02684	98,900	20	4,945	Cottonwood	Shasta	Views, well
SISKIYOU COUNTY						
04236-95702	450,000	254	1,772	Fort Jones	Siskiyou	Seasonal creek, solitude, privacy, springs
04175-14025	399,000	41	9,732	Butte Valley	Siskiyou	Year round stream, views, near Lake Oroville
04237-95204	279,000	57	4,894	Fort Jones	Siskiyou	Cherry Creek, snow in Winter, private, serene, very quiet
04236-95407	205,000	46	4,456	Greenview	Siskiyou	Privacy, trees, spring water
04237-91267	179,000	10	17,900	Etna	Siskiyou	Pine, Fir, Cedar, Trail head to high mt. Lakes
04237-94265	149,000	15	9,933	Cecilville	Siskiyou	Salmon R. Runs through very rural
04237-94264	129,000	11	11,727	Cecilville	Siskiyou	Salmon R., 500 feet beautiful river frontage
04237-93490	100,000	14.9	6,711	Scott Bar	Siskiyou	Scott r. frontage, rafting to Klamath r. 1 mi north
04236-94437	69,000	160	431	Hornbrook	Siskiyou	Awesome views, very remote, 6000 feet elevation, snow in Winter

15838	799,000	28	28,535	Montague	Siskiyou	In the Siskiyou's where the Klamath River flows into Copco Lake. 4 waterfront lots. Lakefront home, 3000 sq. ft. 3 bedroom 2 bath, 2 kitchens, plus office. incredible views of the lake, private dock,600 feet of frontage on Copco Lake. Small community. Easy access all year.
17844	2,400,000	580	4,138	Fort Jones	Siskiyou	200 irrigated, 6 ponds, yr round stream, house, barns, lots of wild life, can cut into 40's
04064-92806	49,500	40	1,238	Macdoel	Siskiyou	Peaceful 40 acres.
<b>TEHAMA COUNTY</b>						
04237-93506	189,000	18	10,500	Red Bluff	Tehama	Private recreation, waterfront, peace and quiet
04057-02084	100,000	37.83	2,643	Red Bluff	Tehama	Spectacular views, seasonal stream, secluded, gated access, Oaks, Pines, no power, graveled roads
04057-00840	79,000	39	2,026	Red Bluff	Tehama	Rolling blond hills, hunting. Amazing views, no power, gravel road
<b>TUOLUMNE COUNTY</b>						
04236-89244	144,500	5	28,900	Quartz Valley	Tuolumne	Trees, power, well, semi-secluded

[ed. Stopped on p 12 of [www.unitedcountry.com](http://www.unitedcountry.com) 6/25/08]

A basic statistical sample analysis produces the following sample statistics for **Seller's Asking Price VPA (V)** :

Year: 2008 (June - July)  
 Sample Size: 56  
 Average VPA = \$9,768  
 Std Dev  $\sigma$  = \$11,092  
 Min VPA = \$200  
 Q1 = \$2,000  
 Median = \$5,062  
 Q3 = \$13,765  
 Max VPA = \$46,042

The average for this sample of size 56 is within one standard deviation of the vpa predicted by the logistic model for California of \$3,340 per acre. (The Economic Research Service of the USDA has not as of this date reported the next collection of Index of Agricultural Land Value data values.) Half of the properties sampled had land value less than \$5,062 per acre (the median value) and half of all land values sampled had values between \$2,000 and \$13,765 per acre (these are the first and third quartiles respectively.) Any proposed value outside of these ranges is to be considered highly unlikely to ever occur in any sampling of any real land market.

To figure the chances or likelihood of the appraisal values produced in the various appraisals, the author develops a reasonable probability model for the random variable **Seller's Asking Price VPA (V)**. The 56 values have the following distribution.

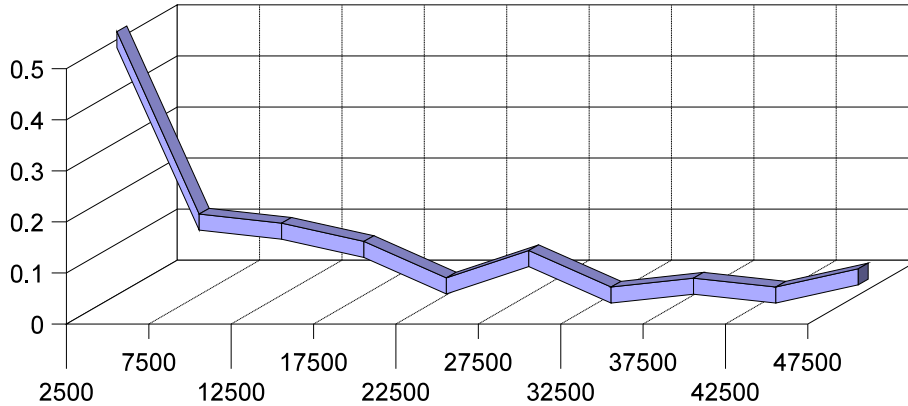
**TABLE 6: A TABLE OF VPA INTERVALS  
 AND THEIR RESPECTIVE SAMPLE PROBABILITIES**

CATEGORY	V RANGE	MID V	NUMBER	P
1	VPA < \$5,000	\$2,500	28	28/56
2	\$5,000 < VPA < \$10,000	\$7,500	8	8/56
3	\$10,000 < VPA < \$15,000	\$12,500	7	7/56
4	\$15,000 < VPA < \$20,000	\$17,500	5	5/56
5	\$20,000 < VPA < \$25,000	\$22,500	1	1/56
6	\$25,000 < VPA < \$30,000	\$27,500	4	4/56
7	\$30,000 < VPA < \$35,000	\$32,500	0	0
8	\$35,000 < VPA < \$40,000	\$37,500	1	1/56
9	\$40,000 < VPA < \$45,000	\$42,500	0	0
10	\$45,000 < VPA < \$50,000	\$47,500	2	2/56
	<b>TOTAL</b>		56	1

A graph of the distribution along with the near equality of the sample mean  $\bar{x}$  (9,768) and the standard deviation  $\sigma$  (11,092) indicates that value per acre  $V$  is a continuous random variable that can effectively be modeled using an exponential distribution probability density function.

## VPA distribution

Mid VPA value vs. Probability



To obtain the probability density function for this random variable  $V$ , the following equation is solved for the theoretical expected value of  $V$ ,  $\mu$

$$\frac{1}{2} = \frac{1}{\mu} \int_0^{5000} e^{-v/\mu} dv$$

The calculation is straightforward and finds the theoretical mean to be  $\mu = 7213$ . Then the probability density for random variable  $V$  is (Seller's Asking VPA =  $V$  and any particular value is  $v$ )

$$f(t) = \begin{cases} 0 & v < 0 \\ \frac{1}{7213} e^{-\frac{v}{7213}} & v \geq 0 \end{cases} \quad .(1)$$

To verify the goodness of fit, a calculation of the various event probabilities is compared to the actual probabilities. If the fit is good, then the probability model can be used to accurately quantify the appraised values made for the various Forest Service managed lots evaluated in the 1999 appraisals.

The following table summarizes this comparison.

**TABLE 7: A TABLE COMPARING  
SAMPLE PROBABILITIES TO THEORETICAL PROBABILITIES**

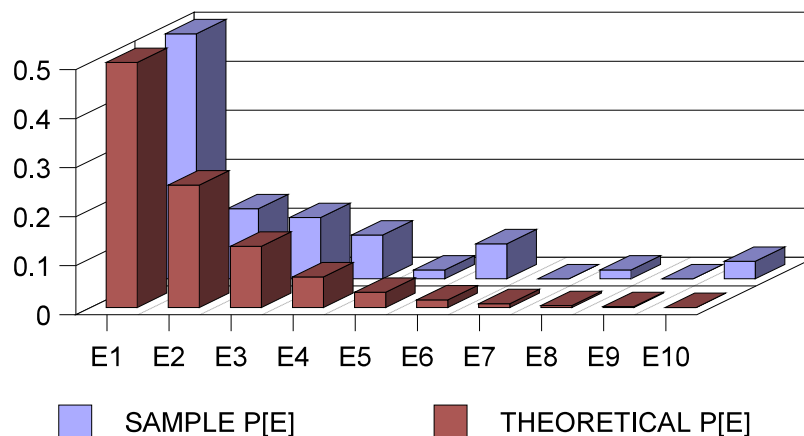
EVENT VPA	P	SAMPLE P	THEORETICAL P
VPA < \$5,000	28/56	.5	.5000
\$5,000 < VPA < \$10,000	8/56	.1429	.2500

\$10,000 < VPA < \$15,000	7/56	.1250	.1250
\$15,000 < VPA < \$20,000	5/56	.0892	.0625
\$20,000 < VPA < \$25,000	1/56	.0179	.0312
\$25,000 < VPA < \$30,000	4/56	.0714	.0156
\$30,000 < VPA < \$35,000	0	.0000	.0078
\$35,000 < VPA < \$40,000	1/56	.0179	.0039
\$40,000 < VPA < \$45,000	0	.0000	.0020
\$45,000 < VPA < \$50,000	2/56	.0357	.0001
<b>TOTAL</b>	<b>1</b>	<b>1</b>	<b>.9981</b>

A graph comparing the sample probabilities  $P[E]$  to the theoretical interval probabilities follows and along with the data in Table 7 provide confidence in the probability density determined for the random variable **Seller's Asking Price VPA (V)**.

## A GRAPH COMPARING

SAMPLE TO THEORETICAL PROBABILITIES



It is to be noted, however, that there are VPA's in California that are well above the Index of Agricultural Land Value. These are typically found in villages, towns, or cities and have these high values because of the development value that is included in the sale price recorded with a county. These would be excluded from any random sample of rural agricultural land in its native and natural state because improved land in a planned development is neither native nor natural – it's developed – and not what one is sampling. These types of realty should not be used by an appraiser in trying to assign value to the agricultural (public) lands in Echo Lakes, Wrights Lake, Dark Lake, Pinecrest or any other permittee tract on rural land in its native and natural state.

In summary. . .Parts I & II have introduced to the reader the essence of the value of land in its native and natural state as well as to the over evaluation of such lands caused by selecting comparables that are no longer in their native and natural state due to the fact that their value has been changed (increased) by seller-buyer interaction.

This study now proceeds with The Echo Site Study which shows how land values were elevated far above correct values for land in its native and natural state for Echo Lakes.

**PART III: A CASE STUDY OF INFLATED LAND VALUES PRODUCED BY THE METHOD(S) USED BY THE UNITED STATES FOREST SERVICE TO EXACT HIGH PERMITTEE FEES.**

**THE ECHO LAKE SITE STUDY.**

There are two ways to quantify the error in the appraisal values in the 1999-2000 appraisals of sites at Echo Lakes. One way is to count the number of standard deviations above the average. For example, in a random sample of a random variable it is very likely and usual to see values within one or two standard deviations of the average. A value beyond three standard deviations is considered unlikely and improbable. A value well beyond three standard deviations would be considered impossible. Such an unusual value would not realistically ever be expected to be observed in any random sample for the random variable. It would be considered to be an “outlier” and not representative of typical values.

The second way would be to actually calculate the probability of seeing values larger than the value in question. This is called a tail probability and measures the unlikelihood of the value.

In the following table the proposed land values for the 1999-2000 Echo Lake appraisal are presented along with the corresponding number of standard deviations above the mean for each land value as well as its likelihood of occurrence.

The likelihood of seeing a land value in a random sample is calculated by finding the area under the graph of the probability density function from its unusual value out to the end of the real number line. These are referred to as “tail probability” because they are the area under the tail of the graph of the density function and calculate the probability of seeing values higher than the unusual land value.

The mean value in these calculations will be taken as the sample average  $\bar{x} = \$9,768$  and standard deviation will be taken as the sample standard deviation  $s = \$11,092$  as observed in the random sample reported in Part II.

A typical determination of the number of standard deviations a particular land value has is simply calculated as

$$\#SD = \frac{VPA - Average}{std. dev.}$$

For N. Shore Lot 5, the calculation is

$$\#SD = \frac{124,531 - 9,768}{11,092} = 10.3 \text{ sd above the average}$$

To calculate the tail probability (the likelihood of this land value) which gives a quantitative measure of how unlikely it would be to see such a value in a random sample of rural land values, the following is used

$$P[V > 124,531] = \int_{124,531}^{\infty} \frac{1}{7213} e^{-\frac{v}{7213}} dv = e^{-\frac{124,531}{7213}} \approx 3 \cdot 10^{-8}$$

Similar calculations are done for the rest of the appraiser's reconciled Echo Lake land values and appear in Table 8 below. The tail probabilities appear in the last column headed "likelihood."

It is to be noted that a likelihood of 1 in 1000 is considered unlikely! The very first likelihood is  $3 \times 10^{-8}$  which is not just unlikely but goes beyond realistically impossible to just being plain wrong!

**TABLE 8: A TABLE OF STANDARD DEVIATIONS (SD)  
AND LIKELIHOODS FOR ECHO LAKES LAND VALUES**

N	TRACT	LOT NO.	APPRAISED VALUE	ACRES	VPA	#SD	LIKELIHOOD
1	N. Shore	5	\$79,700	0.64	\$124,531	10.3	$3 \times 10^{-8}$
2	N. Shore	6	\$79,700	0.69	\$115,507	9.5	$1 \times 10^{-7}$
3	N. Shore	19	\$79,700	0.50	\$159,400	13.5	$3 \times 10^{-10}$
	<b>N. Shore</b>	<b>7</b>	<b>\$79,700</b>	<b>1.24</b>	<b>\$62,274</b>	<b>4.7</b>	<b><math>1.7 \times 10^{-4}</math></b>
4	N. Shore	8	\$79,700	1.38	\$57,754	4.3	$3.3 \times 10^{-4}$
5	N. Shore	9	\$79,700	1.98	\$40,252	2.7	.004
6	N. Shore	15	\$79,700	0.47	\$169,574	14.4	$6.0 \times 10^{-11}$
7	N. Shore	16	\$79,700	0.44	\$181,136	15.4	$1.2 \times 10^{-11}$
8	N. Shore	10	\$79,700	1.12	\$71,161	5.5	$5.2 \times 10^{-5}$
9	N. Shore	11	\$79,700	0.87	\$91,609	7.4	$3.0 \times 10^{-6}$
10	N. Shore	12	\$79,700	0.34	\$234,411	20.3	$7.7 \times 10^{-15}$
11	N. Shore	13	\$79,700	0.21	\$379,523	33.3	$1.4 \times 10^{-23}$
12	N. Shore	14	\$79,700	0.35	\$227,714	19.6	$1.9 \times 10^{-14}$
13	N. Shore	20	\$79,700	0.36	\$221,389	19.1	$4.7 \times 10^{-14}$
<b>14</b>	<b>Island</b>	<b>2</b>	<b>\$112,000</b>	<b>0.52</b>	<b>\$215,384</b>	<b>18.5</b>	<b><math>1.1 \times 10^{-13}</math></b>
15	Channel	2	\$88,700	0.46	\$192,826	16.5	$2.5 \times 10^{-12}$
16	Channel	3	\$88,700	0.30	\$295,667	25.8	$1.6 \times 10^{-18}$
17	Channel	4	\$88,700	0.33	\$268,788	23.3	$6.6 \times 10^{-17}$
18	Channel	5	\$88,700	0.23	\$385,652	33.9	$6.6 \times 10^{-24}$
19	Channel	6	\$88,700	0.28	\$316,786	27.7	$8.4 \times 10^{-20}$
<b>20</b>	<b>Channel</b>	<b>7</b>	<b>\$88,700</b>	<b>0.24</b>	<b>\$369,583</b>	<b>32.4</b>	<b><math>5.6 \times 10^{-23}</math></b>
21	Channel	8	\$88,700	0.28	\$316,786	27.7	$8.4 \times 10^{-20}$

22	Channel	16	\$88,700	0.24	\$369,583	32.4	5.6 x 10 <sup>-23</sup>
23	Channel	22	\$88,700	0.18	\$492,778	43.5	2.1 x 10 <sup>-30</sup>
<b>24</b>	<b>Channel</b>	<b>9</b>	<b>\$43,700</b>	<b>0.32</b>	<b>\$136,563</b>	<b>11.4</b>	<b>6.0 x 10<sup>-9</sup></b>
25	Channel	18	\$43,700	0.15	\$291,333	25.4	2.9 x 10 <sup>-18</sup>
26	Channel	19	\$43,700	0.24	\$182,083	15.5	1.1 x 10 <sup>-11</sup>
27	Channel	20	\$43,700	0.20	\$218,500	18.8	7.0 x 10 <sup>-14</sup>
28	Channel	21	\$43,700	0.26	\$168,077	14.3	7.6 x 10 <sup>-11</sup>
<b>29</b>	<b>Channel</b>	<b>12</b>	<b>\$21,200</b>	<b>0.42</b>	<b>\$50,476</b>	<b>3.7</b>	<b>9.0 x 10<sup>-4</sup></b>
30	Channel	10	\$21,200	0.34	\$62,353	4.7	1.8 x 10 <sup>-4</sup>
31	Channel	13	\$21,200	0.40	\$53,000	3.9	6.4 x 10 <sup>-4</sup>
32	Channel	14	\$21,200	0.43	\$49,302	3.6	.001
33	Channel	15	\$21,200	0.45	\$47,111	3.4	.001
34	Mermaid	9	\$43,700	0.36	\$121,389	10.1	5.0 x 10 <sup>-8</sup>
35	Mermaid	10	\$43,700	0.15	\$291,333	25.4	2.9 x 10 <sup>-18</sup>
36	Mermaid	11	\$43,700	0.20	\$218,500	18.8	7.0 x 10 <sup>-14</sup>
37	Mermaid	12	\$43,700	0.19	\$230,000	19.9	1.4 x 10 <sup>-14</sup>
38	Mermaid	13	\$43,700	0.26	\$168,076	14.3	7.6 x 10 <sup>-11</sup>
<b>39</b>	<b>Mermaid</b>	<b>14</b>	<b>\$43,700</b>	<b>0.20</b>	<b>\$218,500</b>	<b>18.8</b>	<b>7.0 x 10<sup>-14</sup></b>
40	Mermaid	3	\$97,700	1.55	\$63,032	4.8	1.6 x 10 <sup>-4</sup>
41	Mermaid	4	\$97,700	1.62	\$60,308	4.6	2.3 x 10 <sup>-4</sup>
42	Mermaid	5	\$97,700	1.52	\$64,276	4.9	1.3 x 10 <sup>-4</sup>
43	Mermaid	8	\$97,700	0.34	\$287,353	25.0	5.0 x 10 <sup>-18</sup>
<b>44</b>	<b>Mermaid</b>	<b>15</b>	<b>\$97,700</b>	<b>0.97</b>	<b>\$100,722</b>	<b>8.2</b>	<b>8.6 x 10<sup>-7</sup></b>
45	Mermaid	17	\$97,700	0.24	\$407,083	35.8	3.1 x 10 <sup>-25</sup>
46	Mermaid	18	\$97,700	0.15	\$651,333	57.8	6.1 x 10 <sup>-40</sup>
47	Mermaid	1	\$75,200	0.18	\$417,778	36.8	7.0 x 10 <sup>-26</sup>

48	Mermaid	2	\$75,200	0.27	\$278,519	24.2	1.7 x 10 <sup>-17</sup>
49	Mermaid	6	\$75,200	1.05	\$71,619	5.6	4.9 x 10 <sup>-5</sup>
50	Mermaid	7	\$75,200	1.15	\$65,391	5.0	1.2 x 10 <sup>-4</sup>
<b>51</b>	<b>Mermaid</b>	<b>16</b>	<b>\$75,200</b>	<b>0.25</b>	<b>\$300,800</b>	<b>26.2</b>	<b>7.7 x 10<sup>-19</sup></b>
52	Hemlock	1	\$79,700	0.39	\$204,358	17.5	5.0 x 10 <sup>-13</sup>
53	Hemlock	2	\$79,700	0.39	\$204,358	17.5	5.0 x 10 <sup>-13</sup>
54	Hemlock	4	\$79,700	0.35	\$227,714	19.6	2.0 x 10 <sup>-14</sup>
55	Hemlock	5	\$79,700	0.34	\$234,411	20.3	3.0 x 10 <sup>-14</sup>
56	Hemlock	6	\$79,700	0.32	\$249,063	21.6	1.0 x 10 <sup>-15</sup>
57	Hemlock	7	\$79,700	0.29	\$274,828	23.9	2.8 x 10 <sup>-17</sup>
58	Hemlock	8	\$79,700	0.26	\$306,538	26.8	3.5 x 10 <sup>-19</sup>
59	Hemlock	9	\$79,700	0.27	\$295,185	25.7	1.7 x 10 <sup>-18</sup>
60	Hemlock	10	\$79,700	0.43	\$185,349	15.9	6.9 x 10 <sup>-12</sup>
61	Hemlock	11	\$79,700	0.34	\$234,411	20.3	7.7 x 10 <sup>-15</sup>
62	Hemlock	14	\$79,700	0.28	\$284,643	24.8	7.3 x 10 <sup>-18</sup>
63	Hemlock	18	\$79,700	0.29	\$274,828	23.9	2.8 x 10 <sup>-17</sup>
64	Hemlock	19	\$79,700	0.17	\$468,823	41.4	5.9 x 10 <sup>-29</sup>
<b>65</b>	<b>Hemlock</b>	<b>20</b>	<b>\$79,700</b>	<b>0.23</b>	<b>\$346,521</b>	<b>30.4</b>	<b>1.4 x 10<sup>-21</sup></b>
66	Hemlock	21	\$79,700	0.21	\$379,524	33.3	1.4 x 10 <sup>-23</sup>
67	Hemlock	26	\$79,700	0.28	\$284,643	24.8	7.3 x 10 <sup>-18</sup>
68	Hemlock	27	\$79,700	0.30	\$265,667	23.1	1.0 x 10 <sup>-16</sup>
69	Hemlock	28	\$79,700	0.32	\$249,063	21.6	1.0 x 10 <sup>-15</sup>
70	Hemlock	12	\$25,000	0.29	\$86,207	6.9	6.4 x 10 <sup>-6</sup>
71	Hemlock	13	\$25,000	0.29	\$86,207	6.9	6.4 x 10 <sup>-6</sup>
<b>72</b>	<b>Hemlock</b>	<b>25</b>	<b>\$25,000</b>	<b>0.30</b>	<b>\$83,333</b>	<b>6.6</b>	<b>9.6 x 10<sup>-6</sup></b>
73	Hemlock	37	\$25,000	0.30	\$83,333	6.6	9.6 x 10 <sup>-6</sup>
74	Hemlock	38	\$25,000	0.31	\$80,645	6.4	1.4 x 10 <sup>-5</sup>
75	Hemlock	40	\$25,000	0.19	\$131,578	11.0	1.2 x 10 <sup>-8</sup>
76	Hemlock	41	\$25,000	0.16	\$156,250	13.2	3.9 x 10 <sup>-10</sup>

77	Hemlock	29	\$30,200	0.27	\$111,852	9.2	1.8 x 10 <sup>-7</sup>
78	Hemlock	30	\$30,200	0.28	\$107,857	8.8	3.2 x 10 <sup>-7</sup>
<b>79</b>	<b>Hemlock</b>	<b>42</b>	<b>\$30,200</b>	<b>0.16</b>	<b>\$188,750</b>	<b>16.1</b>	<b>4.3 x 10<sup>-12</sup></b>
80	S Shore	3	\$39,200	0.17	\$230,588	19.9	1.3 x 10 <sup>-14</sup>
81	S Shore	4	\$39,200	0.19	\$206,316	17.7	3.8 x 10 <sup>-13</sup>
<b>82</b>	<b>S Shore</b>	<b>5</b>	<b>\$39,200</b>	<b>0.16</b>	<b>\$245,000</b>	<b>21.2</b>	<b>1.8 x 10<sup>-15</sup></b>
83	S Shore	20	\$39,200	0.16	\$245,000	21.2	1.8 x 10 <sup>-15</sup>
84	S Shore	43	\$39,200	0.43	\$91,163	7.3	3.2 x 10 <sup>-6</sup>
85	S Shore	45	\$39,200	0.15	\$261,333	22.7	1.8 x 10 <sup>-16</sup>
86	S Shore	21	\$21,200	0.17	\$124,705	10.4	3.1 x 10 <sup>-8</sup>
<b>87</b>	<b>S Shore</b>	<b>22</b>	<b>\$21,200</b>	<b>0.18</b>	<b>\$117,778</b>	<b>9.7</b>	<b>8.1 x 10<sup>-8</sup></b>
88	S Shore	23	\$21,200	0.17	\$124,705	10.4	3.1 x 10 <sup>-8</sup>
89	S Shore	24	\$21,200	0.16	\$132,500	11.1	1.1 x 10 <sup>-8</sup>
90	S Shore	29	\$21,200	0.21	\$100,952	8.2	8.3 x 10 <sup>-7</sup>
91	S Shore	30	\$21,200	0.17	\$124,705	10.4	3.1 x 10 <sup>-8</sup>
92	S Shore	31	\$21,200	0.17	\$124,705	10.4	3.1 x 10 <sup>-8</sup>
93	S Shore	32	\$21,200	0.25	\$84,800	6.8	7.8 x 10 <sup>-6</sup>
94	S Shore	33	\$21,200	0.32	\$66,250	5.1	1.0 x 10 <sup>-4</sup>
95	S Shore	34	\$21,200	0.31	\$68,387	5.3	7.6 x 10 <sup>-5</sup>
96	S Shore	42	\$21,200	0.26	\$81,538	6.5	1.2 x 10 <sup>-5</sup>
97	S Shore	1	\$61,700	0.17	\$362,941	31.8	1.4 x 10 <sup>-22</sup>
98	S Shore	2	\$61,700	0.18	\$342,778	30.0	2.3 x 10 <sup>-21</sup>
99	S Shore	6	\$61,700	0.18	\$342,778	30.0	2.3 x 10 <sup>-21</sup>
100	S Shore	7	\$61,700	0.15	\$411,333	36.2	1.7 x 10 <sup>-25</sup>
101	S Shore	8	\$61,700	0.17	\$362,941	31.8	1.4 x 10 <sup>-22</sup>
102	S Shore	9	\$61,700	0.15	\$411,333	36.2	1.7 x 10 <sup>-25</sup>
103	S Shore	10	\$61,700	0.15	\$411,333	36.2	1.7 x 10 <sup>-25</sup>

104	S Shore	11	\$61,700	0.21	\$293,810	25.6	2.0 x 10 <sup>-18</sup>
105	S Shore	12	\$61,700	0.21	\$293,810	25.6	2.0 x 10 <sup>-18</sup>
106	S Shore	15	\$61,700	0.17	\$362,941	31.8	1.4 x 10 <sup>-22</sup>
107	S Shore	16	\$61,700	0.15	\$411,333	36.2	1.7 x 10 <sup>-25</sup>
108	S Shore	17	\$61,700	0.16	\$385,625	33.9	6.0 x 10 <sup>-24</sup>
109	S Shore	18	\$61,700	0.20	\$308,500	26.9	2.7 x 10 <sup>-19</sup>
110	S Shore	25	\$61,700	0.20	\$308,500	26.9	2.7 x 10 <sup>-19</sup>
111	S Shore	26	\$61,700	0.15	\$411,333	36.2	1.7 x 10 <sup>-25</sup>
112	S Shore	27	\$61,700	0.14	\$440,714	38.9	2.9 x 10 <sup>-27</sup>
113	S Shore	28	\$61,700	0.24	\$257,083	22.3	3.3 x 10 <sup>-16</sup>
114	S Shore	35	\$61,700	0.13	\$474,615	41.9	2.7 x 10 <sup>-29</sup>
115	S Shore	36	\$61,700	0.15	\$411,333	36.2	1.7 x 10 <sup>-25</sup>
116	S Shore	37	\$61,700	0.12	\$514,167	45.5	1.1 x 10 <sup>-31</sup>
<b>117</b>	<b>S Shore</b>	<b>38</b>	<b>\$61,700</b>	<b>0.24</b>	<b>\$257,083</b>	<b>22.3</b>	<b>3.3 x 10<sup>-16</sup></b>
118	S Shore	39	\$61,700	0.17	\$362,941	31.8	1.4 x 10 <sup>-22</sup>
119	S Shore	46	\$61,700	0.15	\$411,333	36.2	1.7 x 10 <sup>-25</sup>
120	S.Shore	41	\$12,200	0.17	\$71,765	5.6	4.8 x 10 <sup>-5</sup>

\* Acreage from El Dorado County Assessor's map Bk. 20, pp. 7 - 20

\*\* Typical Lots are highlighted in **bold**. Similar Groups are separated by **bold rows**.

The values collected in Table 8, above are simply astonishing. To place them in some sort of perspective, imagine a young graduate student in a PhD program who comes up with a truly fantastic mathematically sophisticated and difficult theory of water phenomena. If the theory predicts with certainty that water flows up a wall against gravity, the graduate student is forced to go back to his theory and find the error. A method or theory that predicts or produces unlikely and impossible events is simply wrong. Hence the title of this essay. Table 8 collects enough evidence to overwhelmingly establish that the method(s) used by the USFS and their appraisers in their 1999-2000 appraisals were not then and are not now consistent with the market reality of rural agricultural undeveloped land value in its native and natural state. Since these values are going to be used to tax a permittee with a permit fee, they cannot be taken cavalierly – taxation or exacting a permit fee is serious; it involves extracting money from a U. S. Citizen by the government. And the taxing authority must make sure that it is charging a fee or tax based upon an accurate, precise, consistent and fair evaluation. Furthermore, consistent with the purpose of this essay, making a table similar to Table 8 in all future appraisals is exactly how one would detect “a faulty appraisal” and quantify the magnitude of an appraisal’s error(s).

Having developed a still shot of 120 land value determinations gives clear evidence of a decided inaccurate determination of land values for Echo Lakes’ sites. It is also worth analyzing the forty year sequence of fees. The author collected such a data sample and presents this study next.

**PART IV: A CASE STUDY OF THE RATE OF GROWTH IN FEES COLLECTED BY THE UNITED STATES FOREST SERVICE.**

The following table tracks the fees paid by Mermaid Cove Tract Lot #11. This will be representative of the increases suffered by Lots 9 - 14 with Lot 14 being the **typical**. The acreage is

0.20 acres. The VPA is calculated as  $VPA = \frac{FEE}{.05 \cdot .20} = 100 \cdot FEE$ . The value of the land

property is calculated simply as the Index of Agricultural Land Value per acre times the acreage (0.2 acres) (in column 6 of Table 9). The first return is simply calculated as  $\$125/\$73 = 171.23\%$ . All other returns are similarly calculated.

**THE MERMAID COVE STUDY.**

**TABLE 9: A TABLE OF ALL FEES  
PAID BY THE PERMITTEE OF MERMAID COVE TRACT #11  
1970 - 2009  
AND SUBSEQUENT RETURN TO THE USFS  
(AND BY EXTENSION LOTS 9, 10, 1, 13, 14)**

Year	Fee	Rate of Growth in Fees (%)	VPA	IALV VPA (El Dorado county)	VALUE (IALV * .2)	RETURN ON IALV VALUE (%)
1970	\$125	40.00	\$12,500	\$365	\$73	171.23%
1971	\$175	28.57	\$17,500	\$358	\$72	243.06%
1972	\$225	22.22	\$22,500	\$351	\$71	316.90%
1973	\$275	18.18	\$27,500	\$344	\$69	398.55%
1974	\$325	0	\$32,500	\$339	\$68	477.94%
1975	\$325	2.15	\$32,500	\$419	\$84	386.90%
1976	\$332	2.11	\$33,200	\$518	\$104	319.23%
1977	\$339	2.06	\$33,900	\$640	\$128	264.84%
1978	\$346	2.02	\$34,600	\$791	\$158	219%
1979	\$353	2.27	\$35,300	\$876	\$175	201.7%
1980	\$361	1.94	\$36,100	\$970	\$194	186.08%
1981	\$368	2.17	\$36,800	\$1,074	\$215	171.16%
1982	\$376	2.13	\$37,600	\$1,190	\$238	158%
1983	\$384	2.08	\$38,409	\$1,297	\$259	148.26%
1984	\$392	2.04	\$39,200	\$1,413	\$283	138.52%
1985	\$400	2.25	\$40,000	\$1,539	\$308	129.87%
1986	\$409	1.96	\$40,900	\$1,677	\$335	122.1%

1987	\$417	2.16	\$41,700	\$1,827	\$365	114.25%
1988	\$426	2.11	\$42,600	\$1,944	\$389	109.51%
1989	\$435	2.07	\$43,500	\$2,069	\$414	105.07%
1990	\$444	23.64	\$44,400	\$2,202	\$440	100.91%
1991	\$549	10.56	\$54,900	\$2,745	\$549	100.00%
1992	\$607	2.64	\$60,700	\$2,343	\$469	129.42%
1993	\$623	2.73	\$62,300	\$2,493	\$499	124.85%
1994	\$640	1.56	\$64,000	\$2,617	\$523	122.37%
1995	\$650	1.85	\$65,000	\$2,748	\$550	118.18%
1996	\$662	2.11	\$66,200	\$2,886	\$577	114.73%
1997	\$676	1.33	\$67,600	\$3,030	\$606	111.55%
1998	\$685	1.46	\$68,500	\$3,181	\$636	107.70%
1999	\$695	1.29	\$69,500	\$3,340	\$668	104.40%
2000	\$704	1.99	\$70,400	\$3,409	\$682	103.23%
2001	\$718	1.67	\$71,800	\$3,479	\$696	103.16%
2002	\$730	1.78	\$73,000	\$3,551	\$710	102.82%
2003	\$743	1.62	\$74,300	\$3,624	\$725	102.48%
2004	\$755	2.12	\$75,500	\$3,699	\$740	102.03%
2005	\$771	3.24	\$77,100	\$3,776	\$755	102.12%
2006	\$796	3.89	\$79,600	\$3,853	\$771	103.24%
2007	\$827	3.14	\$82,700	\$3,933	\$787	105.08%
2008	\$853	156.15	\$85,300	\$4,014	\$803	106.23%
2009	\$2,185		\$218,500	\$4,097	\$819	266.79%

From Table 9, it is observed that the USFS initiated its *ad valorem* land value determination of fee with an increase in fees over the four year period from 1970 to 1974 of 260% over the initial fee of \$125. That is

$$\$325 = \$125 \cdot 2.6$$

In terms of land value in \$ per acre, this represents

$$\$32,000 = \$12,500 \cdot 2.6 \quad \text{per acre.}$$

This land value is highly inaccurate for two reasons:

(1) The initial land value of \$12,500, taken as a good average measure of land value per acre has never been observed in El Dorado county's history based upon the average values collected in the Index. Furthermore, using the logistic model determined below in Appendix 2

$$\text{Logistic: } VPA(t) = \frac{4427}{1 + 9953e^{-.13t}} + 48$$

the \$12,500 will never be observed. This model for El Dorado's growth is capped at \$4,478 per acre.

However, one could model land value growth in this county using an unlimited exponential growth model (in order to estimate when a value of \$12,500 is likely to occur in the future); the model has the formula

$$\text{Exponential: } VPA(t) = 12.42 \cdot (1+.071878)^t \quad (\text{Correlation: .9662});$$

under this model, El Dorado's land value will reach \$12,500 fully 100 years after 1920 in 2020 and fifty years in the future from the year it was used, i.e., in 1969-1970 .

(2) the value accepted by the USFS as appropriate in the year 1974 has also never been observed to occur at any time in El Dorado county agricultural land value index history; under the exponential model, this land value is predicted to occur 113 years after 1920 in 2032 or 60 years in the future from 1974 when it was used.

This four year fee increase was accomplished by a four-fold compounding at four different annual rates exhibited by the following formula

$$\$325 = \$125(1.40)(1.2857)(1.2222)(1.1818)$$

This increase in El Dorado county land value is completely at odds with what was observed and measured by the US Department of Agriculture's ERS. From 1969 to 1974, land value in this county **decreased** from \$365 per acre down to \$339 per acre. So in 1974, the USFS were using **increasing land values** for this property (and all the other properties around Echo Lakes, in an analogous way) not only in excess of the historical Index reality but completely at odds with it.

From 1974 through 1989 the land values were then compounded upward from the already highly inflated value of \$32,500 with 15 non-constant relative growth rates fluctuating near 2.00%. (These were taken from the inflation index used by the USFS.) Thus by 1989 when the land value had reached \$43,500 per acre (the fee being \$435) the 20 year growth rate in fees had on the average been sustained at

$$r = \sqrt[19]{\frac{43,500}{12,500}} - 1 \approx .067835 \approx 6.78\%$$

per year co

The corresponding El Dorado land value growth rate (interpolating between actual Index of Agricultural Land Value data values) as determined by the ERS was

$$r = \sqrt[19]{\frac{2,240}{360}} - 1 \approx 100998 \approx 10.10\% \quad \text{per year co}$$

[note: land value had decreased from \$365 in 1969 to roughly \$360 in 1970.]

The USFS was now lagging behind the land value growth rate but were way ahead in value by \$41,260 per acre (i.e., \$43,500 - \$2,240 = \$41,260 per acre discrepancy). They then in 1989 sought a re-evaluation by appraisal to pump up the land values (and fees) by yet another exorbitant jump.

This time, quite dramatically, the USFS accepted a re-appraisal that increased the land value and corresponding fee over two years by 34.20%: a 23.64% gain from 1991-1992, followed by a 10.56% gain from 1992-1993.

As a consequence of these two extraordinary increases, by 1992, the USFS had succeeded in increasing the land value of this site to \$60,700 per acre – whereas, according to the ERS El Dorado's land value was a mere \$2,493 per acre. The discrepancy between the USFS value and the Index of Agricultural Land Value (actual) value had now grown to \$58,207. The growth rate in USFS determined land value (and corresponding fees); however, only rose from 6.78% to 7.45%

$$r = \sqrt[22]{\frac{60,700}{12,500}} - 1 \approx .07447 \approx 7.45\%$$

That is, the overall 22 year rate of growth in land value promoted and developed by USFS had now reached 7.45% compounded annually

$$\$60,700 \approx \$12,500 \cdot (1+.07447)^{22}$$

However, El Dorado county's overall 22 year growth rate compounded annually dropped to 8.78%

$$r = \sqrt[22]{\frac{2493}{360}} - 1 \approx .087803 \approx 8.78\%$$

So although by 1992, the USFS was slightly behind the real data collected by the ERS in terms of growth rate (by 1.3%), they more than made up for the discrepancy by the highly inflated initial land value of \$12,500.

From 1992 through 2008, the USFS determined land value and fee continued to grow at rates fluctuating between 1.69% and 3.89% , again following the inflation index used by the USFS. So that by 2008, after 38 years of using an *ad valorem* land value fee approach, the USFS had manufactured and sustained a 38 year average growth in fees of 5.18% and produced a land value for this site, in the year 2008, of \$85,300 per acre. The calculation of the relative rate of interest is

$$r = \sqrt[38]{\frac{85,300}{12,500}} - 1 \approx .051837 \approx 5.18\%$$

which corresponds to growth in land values at 5.18% compounded annually

$$\$85,300 = \$12,500 \cdot (1+.051837)^{38}$$

that is, starting with the original **fee** of \$125 and compounding annually at 5.18% the USFS increased the fee charged from \$125 to \$853 over 38 years.

$$\$853 \approx \$125 \cdot (1+.05184)^{38}$$

or  $\$853 \times 100 = \$85,300$  per acre. Based upon the exponential unlimited growth model for land value in El Dorado county, it is predicted that this value will be reached in the year 2047, 40 years in the future.

Based upon the capped logistic model for El Dorado county (since there have been no data collected after 1992), the predicted (estimated) land value in El Dorado county in 2008 is about \$4,047 per acre – since the model predicts that El Dorado agricultural land value is passed its logistic growth phase and has now leveled out. Hence by 2008, the overall 38 year growth rate for El Dorado rural lands (modeled) is

$$r = \sqrt[38]{\frac{4,047}{360}} - 1 \approx .065745 \approx 6.57\%$$

So after 38 years the actual (from a logistic approach based upon the Index of Agricultural Land Value collected data) land value growth rate in El Dorado county is roughly 1.5% more than what the USFS has manufactured.

But all this changes dramatically with the 1999-2000 appraisal which goes into effect on December 31, 2008. The USFS accepted an appraised land value of \$218,500 per acre for this site – a one year astonishing 156.15% increase in land value and corresponding fees.! Now the overall 39 year growth in land value jumps back up to

$$r = \sqrt[39]{\frac{218,500}{12,500}} - 1 \approx .076118 \approx 7.61\%$$

one percentage point above the actual compounded growth in El Dorado county.

So in 2009, the USFS will be charging this fee (and all other 120 fees) based upon a discrepancy that now reaches the astonishing amount of \$214,453 per acre (assuming that El Dorado growth has logistically reached its limit). ( $\$218,500 - \$4,047 = \$214,453$ ). So not only has the USFS achieved a **growth value** far in excess of any real and realistic market value, they also have achieved an overall 39 year **growth rate 1%** in excess of the actual (as predicted by a logistic model) growth rate in El Dorado county of 5.54%. And this value is predicted to be seen under unlimited growth in land value (a highly unlikely hypothesis when land values become alarmingly high) in the year 2060, 50 years in the future.

[Note. This is not the USFS return on their investment. This represents their unnatural forced increases in the value of the land upon which a uniform 5% fee is charged. ]

Basically, the USFS through their appraisal methods has increased the value of this land (and all others around Echo Lakes) over the last 39 year period by roughly 5.6% above the inflation rate. This is a hyper-inflationary increase in land value. And the methods completely separate and isolate the “USFS investment” from any of the several recessionary episodes in the economy.

So the original overvalued land at \$12,500 per acre has been increased over 39 years by a

unlimited exponential growth at 7.612% compounded annually to

$$\$218,500 \approx \$12,500 \cdot (1+.07612)^{39}$$

By being self-regulating, the USFS and their appraisers have produced inaccurate and imprecise land evaluations leading to this astonishing unlimited exponential growth in fees.

The state of California engages each year with an appraisal of all property in the state through *ad valorem* land value determination of property tax. This type of determination is done by **assessment** not **appraisal**. The oversight agency in the state government responsible for monitoring this activity is the **State Board of Equalization (BOE)**. The regulatory guide is *The Assessor's handbook* which states

The operation of an assessor's office is geared to one end: production of a property assessment roll that reflects the current status of ownerships, owners' addresses, and values. This handbook sets forth what an assessor must do to comply with the constitutional, statutory, and administrative requirements of preparing both the regular local roll, as provided in section 601, and the supplemental roll, as provided in sections 75 through 75.80 of the Revenue and Taxation Code. It is also intended to simplify the assessor's job and promote uniformity among counties. The state-assessed "Board roll" is also covered in this handbook.

Recognizing that regulations designed for large organizations can be unworkable when applied to smaller operations, we have separately listed recommended procedures according to the size of county.

A manual cannot supply an answer to every problem encountered. Problems requiring a standard procedure are dealt with here, but sometimes unusual or exceptional problems occur. In such situations the ability to use good judgment is important. Each employee must be able to determine whether to rely on his or her own judgment or take the problem to the next level of supervision.<sup>14</sup>

Without this control and regulation, county assessments would diverge out of control. Even after 50 to 75 years of assessing, each of the 58 county assessors must report their activities to California's State Board and end up being corrected or modified in their procedures. Such over site does not exist for the USFS appraisals, and as could be predicted, their appraisals have gotten completely unrealistic, inaccurate but, interestingly enough, precise. Their evaluations are precisely off-target – the target being "fair market value."

There is no oversight committee to regulate, modify, guide, nor correct these mistakes in appraisal. The USFS is now and has remained self-regulated for the last 40 years in appraising.

As is overwhelmingly evident by the United States and world economic crisis of 2008-2009 in the financial and banking sectors, self regulation does not work and is inherently disastrous and dangerous. Long ago, in 1978, the California State Constitution was amended by an overwhelming vote of concerned and outraged citizens and taxpayers due precisely to out-of-control taxation by non-regulated county assessors.<sup>16</sup>

The **Office of Management and Budget** requires governmental agencies to charge fees for services:

"The Circular establishes Federal policy regarding fees assessed for Government services and for sale or use of Government goods or resources. It provides information on the scope and types of activities subject to user charges and on the basis upon which user charges are to be set. Finally, it provides guidance for agency implementation of charges and the disposition of collections."<sup>13</sup>

The determination of fees must be done by appropriate market analysis. . .It is not clear to the author that the USFS has engaged in a careful, cautious, regulated, and conservative approach in their appraisals over the last 40 years.

For the final bit of analysis the author went to the El Dorado county assessor's website and took a complete look at all the current property values of all 120 sites around the lake as well as a look at the events that occurred from 1988 to the present. Once again, the objective is to continue in the pursuit of trying to come to terms with appropriate accurate and correct **land values**.

The fifth and last study in this paper will show that the **assessor** presents a reasonable set of land values. And the reason is simple and obvious. The land values collected and recorded by the county assessor are real, factual and historical true land values. They are not those associated with an appraisal guess or estimate, but rather by cold hard historical fact.

## **PART V: A CASE STUDY OF THE EL DORADO COUNTY ASSESSOR'S DATA SET OF ALL 120 SITES AROUND ECHO LAKES.**

### **THE EL DORADO COUNTY ASSESSOR STUDY.**

Tim Holcomb, the El Dorado county assessor, has put together a marvelous collection of public information on recordable property events from 1988 through 2008.<sup>17</sup>

The data set is collected in book 20. The tracts and page numbers are listed below.

<b>SUBDIVISION NAME</b>	<b>BOOK</b>	<b>PAGE</b>	<b>TRACT NUMBER</b>
ECHO CHANNEL	020	110	786
ECHO HEMLOCK	020	140, 150, 160, 170	767
ECHO ISLAND	020	100	766
ECHO MERMAID	020	120, 130	760
ECHO NORTH SH	020	070, 080, 090	741
ECHO SOUTH SH	020	180, 190, 200	759

The appraiser's scheme of reconciliations is presented in the following table.

<b>THE FIFTEEN TYPICALS USED IN THE 1999-2000 AND THEIR ESTIMATED MARKET VALUE (AS IF BEING SOLD)</b>						
<b>TRACT</b>	<b>LOT</b>	<b>APN</b>	<b>ORIGINAL FEE SIMPLE MARKET VALUE</b>	<b>CORRECTED FEE SIMPLE MARKET VALUE</b>	<b>% REDUCTION</b>	<b>CODE</b>
<b>Channel</b>	7	020-110-072	\$100,000	\$88,700	11.30	1 <sup>st</sup> - B
<b>Channel</b>	9	020-110-142	\$50,000	\$43,700	12.60	2 <sup>nd</sup> - A

<b>Channel</b>	12	020-110-122	\$25,000	\$21,200	15.20	3 <sup>rd</sup> - B
<b>Hemlock</b>	20	020-160-05	\$90,000	\$79,700	11.44	1 <sup>st</sup> - C
<b>Hemlock</b>	25	020-160-14	\$30,000	\$25,000	16.67	3 <sup>rd</sup> - A
<b>Hemlock</b>	42	020-160-10	\$35,000	\$30,200	13.71	2 <sup>nd</sup> - C
<b>Island</b>	2	020-100-03	\$125,000	\$112,000	10.40	Unique
<b>Mermaid</b>	14	020-090-04	\$50,000	\$43,000	14.00	2 <sup>nd</sup> - A
<b>Mermaid</b>	15	020-080-02	\$110,000	\$97,700	12.30	1 <sup>st</sup> - A
<b>Mermaid</b>	16	020-080-03	\$85,000	\$75,200	11.53	1 <sup>st</sup> - D
<b>North</b>	7	020-070-08	\$90,000	\$79,700	11.44	1 <sup>st</sup> - C
<b>South</b>	5	020-190-16	\$45,000	\$39,200	12.89	2 <sup>nd</sup> - B
<b>South</b>	22	020-190-18	\$25,000	\$21,200	15.20	3 <sup>rd</sup> - B
<b>South</b>	38	020-200-04	\$70,000	\$61,700	11.86	1 <sup>st</sup> - E
<b>South</b>	41	020-180-03	\$15,000	\$12,200	18.67	3 <sup>rd</sup> - C

The APN number is constructed as "Book Number-Page Number-Seq. Number-200. The last "-200" signifies that the property is "active." So for example the Echo Hemlock Lot 10 has an APN of 020-110-13-200 which means that its property information can be found in Book 020, on Page 110, with sequence number 13 and is active.

We start with the 28 active sites of Echo Channel. In all the tables to follow, the typical is identified with a bold τ next to the lot number in the Lot column 2 as well as its row being shaded. Numbers in parentheses in column 3 will indicate the land value as if no billable event had occurred.

<b>TABLE 10: 2008 ECHO CHANNEL SITE LAND VALUES</b>						
<b>3 TYPICALS</b>						
<b>APN</b>	<b>LOT</b>	<b>ASSESSOR LAND VALUE 2008 (per site)</b>	<b>APPRAISAL LAND VALUE 2008 (per site)</b>	<b>TIER CTY</b>	<b>TIER USFS</b>	<b>NUMBER OF BILLABLE EVENTS</b>
020-110-13-200	10	\$6,875	\$21,200	3 <sup>rd</sup>	3 <sup>rd</sup> - B	0
020-110-12-200	12 τ	\$6,875	\$21,200	3 <sup>rd</sup>	3 <sup>rd</sup> - B	0
020-110-12-200	13	\$12,406 (\$6,875)	\$21,200	3 <sup>rd</sup>	3 <sup>rd</sup> - B	1 (1999)
020-110-12-200	14	\$6,875	\$21,200	3 <sup>rd</sup>	3 <sup>rd</sup> - B	0
020-110-09-200	15	\$7,119	\$21,200	3 <sup>rd</sup>	3 <sup>rd</sup> - B	0
020-110-12-200	16	\$10,324	\$88,700	1 <sup>st</sup>	1 <sup>st</sup> - B	0
020-110-18-200	18	\$7,439	\$43,700	3 <sup>rd</sup>	2 <sup>nd</sup> - A	0
020-110-19-200	19	\$6,875	\$43,700	3 <sup>rd</sup>	2 <sup>nd</sup> - A	0

020-110-19-200	2	\$39,591 (\$10,324)	\$88,700	1 <sup>st</sup>	1 <sup>st</sup> - B	1 (1992)
020-110-19-200	20	\$6,875	\$43,700	3 <sup>rd</sup>	2 <sup>nd</sup> - A	0
020-110-21-200	21	\$6,927	\$43,700	3 <sup>rd</sup>	2 <sup>nd</sup> - A	0
020-110-17-200	22	\$10,949	\$88,700	1 <sup>st</sup>	1 <sup>st</sup> - B	0
020-110-03-200	3	\$10,324	\$88,700	1 <sup>st</sup>	1 <sup>st</sup> - B	0
020-110-04-200	4	\$10,761	\$88,700	1 <sup>st</sup>	1 <sup>st</sup> - B	1(1991)
020-110-05-200	5	\$10,187	\$88,700	1 <sup>st</sup>	1 <sup>st</sup> - B	0
020-110-06-200	6	\$10,324	\$88,700	1 <sup>st</sup>	1 <sup>st</sup> - B	0
020-110-07-200	7 T	\$58,504 (\$10,324)	\$88,700	1 <sup>st</sup>	1 <sup>st</sup> - B	1(1999)
020-110-08-200	8	\$10,324	\$88,700	1 <sup>st</sup>	1 <sup>st</sup> - B	0
020-110-14-200	9 T	\$6,875	\$43,700	3 <sup>rd</sup>	2 <sup>nd</sup> - A	0
		<b>SUM</b>	\$1,122,100			
		<b>5% SUM</b>	\$56,105			

The Channel Tract exhibits the clear two tier set of values that El Dorado county uses to characterize the site values: 3<sup>rd</sup> tier at \$6,875, 1<sup>st</sup> tier at \$10,324. The USFS appraiser overvalues five of the lots, increasing their appraisal from a 3<sup>rd</sup> to a 2<sup>nd</sup>. There are three levels of over-evaluation: \$5,000, \$37,000, and \$80,000. There are eight permittees whose associated lands were over-evaluated by \$80,000 – which is quite harmful to them economically.

The next table produces the same sort of comparison land values for the 28 active properties of the Echo Hemlock tract.

<b>TABLE 11: 2008 ECHO HEMLOCK SITE LAND VALUES</b>						
3 TYPICALS						
APN	LOT	ASSESSOR LAND VALUE 2008 (per site)	APPRAISAL LAND VALUE 2008 (per site)	TIER CTY	TIER USFS	NUMBER OF BILLABLE EVENTS
020-150-01-200	1	\$10,324	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-140-05-200	10	\$10,324	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-140-04-200	11	\$126,572 (\$10,324)	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	1(2005)
020-140-03-200	12	\$24,568	\$25,700	3 <sup>rd</sup>	3 <sup>rd</sup> - B	1(1993)
020-140-02-200	13	\$10,324	\$25,700	3 <sup>rd</sup>	3 <sup>rd</sup> - B	0

020-140-01-200	14	\$11,139	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-160-03-200	18	\$10,324	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-160-04-200	19	\$59,468	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	1(2005)
020-150-02-200	2	\$10,324	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-160-05-200	20 T	\$10,427	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	1(1990)
020-160-06-200	21	\$10,343	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-160-14-200	25 T	\$6,875	\$25,700	3 <sup>rd</sup>	3 <sup>rd</sup> - B	0
020-170-01-200	26	\$10,324	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-170-02-200	27	\$10,324	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-160-12-200	38	\$10,324	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-170-04-200	29	\$59,674	\$30,200	1 <sup>st</sup>	2 <sup>nd</sup> - C	1(1998)
020-170-05-200	30	\$37,938	\$30,200	1 <sup>st</sup>	2 <sup>nd</sup> - C	1(1995)
020-160-13-200	37	\$6,875	\$25,000	3 <sup>rd</sup>	3 <sup>rd</sup> - A	0
020-160-12-200	38	\$6,875	\$25,000	3 <sup>rd</sup>	3 <sup>rd</sup> - A	0
020-150-03-200	4	\$10,324	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-160-15-200	40	\$6,875	\$25,000	3 <sup>rd</sup>	3 <sup>rd</sup> - A	0
020-160-16-200	41	\$6,927	\$25,000	3 <sup>rd</sup>	3 <sup>rd</sup> - A	0
020-160-10-200	42 T	\$6,875	\$30,200	3 <sup>rd</sup>	2 <sup>nd</sup> - C	0
020-150-04-200	5	\$10,324	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-150-05-200	6	\$10,324	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-150-06-200	7	\$10,324	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-150-07-200	8	\$10,887	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-140-06-200	9	\$10,324	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
		<b>SUM</b>	\$1,702,300			
		<b>5% SUM</b>	\$85,115			

Once again, the county classifies these property sites with a two tier evaluation @ \$6,875 and \$10,324. The USFS has two types of 3<sup>rd</sup> tier evaluations of \$25,000 and \$30,200 for properties that are essentially similar. There are 16 over-evaluations by \$70,000 (above the county value) which is very harmful economically. There were 6 over-evaluations by \$19,000. The other lots had billable events in their past causing their land values to come close to the highly inflated estimates mad by the appraiser.

The next table produces the very singular and unique tract with one lot – Echo Island.

<b>TABLE 12: 2008 ECHO ISLAND SITE LAND VALUES</b>						
<b>APN</b>	<b>LOT</b>	<b>ASSESSOR LAND VALUE 2008 (per site)</b>	<b>APPRAISAL LAND VALUE 2008 (per site)</b>	<b>TIER CTY</b>	<b>TIER USFS</b>	<b>NUMBER OF BILLABLE EVENTS</b>
020-100-03-200	2	\$330,790	\$112,000	1 <sup>st</sup>	1 <sup>st</sup>	2(1991, 2002)
		<b>SUM</b>	\$112,000			
		<b>5% SUM</b>	\$5,600			

The single property on the only island in the 15,000+ permittee system is certainly unique and represents an unusual statistical outlier in this population of 120 land values. It also demonstrates how amazing the improvement in land value can be when a seller and buyer agree in a market transfer of title for money.

The next table produces comparison land values for the 18 active properties of the Echo Mermaid tract.

<b>TABLE 13: 2008 ECHO MERMAID SITE LAND VALUES 3 TYPICALS</b>						
<b>APN</b>	<b>LOT</b>	<b>ASSESSOR LAND VALUE 2008 (per site)</b>	<b>APPRAISAL LAND VALUE 2008 (per site)</b>	<b>TIER CTY</b>	<b>TIER USFS</b>	<b>NUMBER OF BILLABLE EVENTS</b>
020-130-11-200	1	\$11,144	\$75,200	1 <sup>st</sup>	1 <sup>st</sup> - C	1(1989)
020-130-02-200	10	\$6,810	\$75,200	3 <sup>rd</sup>	1 <sup>st</sup> - C	0
020-130-03-200	11	\$6,875	\$75,200	3 <sup>rd</sup>	1 <sup>st</sup> - C	0
020-130-04-200	12	\$26,917 (6,810)	\$43,700	3 <sup>rd</sup>	2 <sup>nd</sup> - A	1(1992)
020-130-05-200	13	\$6,875	\$43,700	3 <sup>rd</sup>	2 <sup>nd</sup> - A	0
020-130-06-200	14 T	\$6,875	\$43,700	3 <sup>rd</sup>	2 <sup>nd</sup> - A	0
020-130-12-200	15 T	\$10,575	\$97,700	1 <sup>st</sup>	1 <sup>st</sup> - A	0
020-130-09-200	16 T	\$10,324	\$75,200	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-130-08-200	17	\$10,324	\$97,700	1 <sup>st</sup>	1 <sup>st</sup> - A	0
020-130-07-200	18	\$10,324	\$97,700	1 <sup>st</sup>	1 <sup>st</sup> - A	0

020-130-10-200	2	\$10,744	\$75,200	1 <sup>st</sup>	1 <sup>st</sup> - D	0
020-120-04-200	3	\$101,219 (\$10,324)	\$97,700	1 <sup>st</sup>	1 <sup>st</sup> - A	1(2001)
020-120-02-200	4	\$10,324	\$97,700	1 <sup>st</sup>	1 <sup>st</sup> - A	0
020-120-03-200	5	\$10,324	\$97,700	1 <sup>st</sup>	1 <sup>st</sup> - A	0
020-130-14-200	6	\$10,324	\$75,200	1 <sup>st</sup>	1 <sup>st</sup> - D	0
020-130-13-200	7	\$11,646	\$75,200	1 <sup>st</sup>	1 <sup>st</sup> - D	1(1995)
020-120-05-200	8	\$45,578 (\$10,324)	\$97,700	1 <sup>st</sup>	1 <sup>st</sup> - A	1(2002)
020-130-01-200	9	\$7,553	\$43,700	3 <sup>rd</sup>	2 <sup>nd</sup> - A	0
		<b>SUM</b>	\$1,385,100			
		<b>5% SUM</b>	\$69,255			

There are 6 over-evaluations by \$80,000; 7 over-evaluations by \$65,000; and 4 by \$37,000. It goes without saying that this is quit damaging economically.

The next table produces comparison land values for the 15 active properties of the Echo Mermaid tract.

<b>TABLE 14: 2008 ECHO NORTH SH SITE LAND VALUES</b>						
<b>1 TYPICAL</b>						
<b>APN</b>	<b>LOT</b>	<b>ASSESSOR LAND VALUE 2008 (per site)</b>	<b>APPRAISAL LAND VALUE 2008 (per site)</b>	<b>TIER CTY</b>	<b>TIER USFS</b>	<b>NUMBER OF BILLABLE EVENTS</b>
020-080-04	10	\$10,744	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-090-01	11	\$10,324	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-090-02	12	\$10,530	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	2(1991, 1995)
020-090-03	13	\$80,300 (\$10,324)	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	1(2000)
020-090-04	14	\$10,324	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-080-02	15	\$10,421	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-080-03	16	\$10,324	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-070-05	19	\$10,324	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-090-05	20	\$10,324	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-070-03	5	\$10,744	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0

020-070-04	6	\$10,324	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-070-08	7 T	\$22,102 (\$10,324)	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	1(2002)
020-070-07	8	\$10,324	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
020-080-01	9	\$10,324	\$79,700	1 <sup>st</sup>	1 <sup>st</sup> - C	0
		<b>SUM</b>	\$1,115,800			
		<b>5% SUM</b>	\$55,790			

Both the county and the appraiser consider the North Shore sites to be of one kind. The appraiser over values all 15 sites by \$70,000 per site over the county's true recorded site value. The two sites that showed unusual values over \$10,324 had billable events that produced improvement value over the site value for land in its native and natural state.

The final table presents the land values for the 40 active Echo South Shore sites.

<b>TABLE 15: 2008 ECHO SOUTH SH SITE LAND VALUES</b>						
4 TYPICALS						
<b>APN</b>	<b>LOT</b>	<b>ASSESSOR LAND VALUE 2008 (per site)</b>	<b>APPRAISAL LAND VALUE (per site)</b>	<b>TIER CTY</b>	<b>TIER USFS</b>	<b>NUMBER OF BILLABLE EVENTS</b>
020-200-09	1	\$10,324	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	0
020-190-10	10	\$10,324	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	0
020-190-09	11	\$10,525	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	0
020-190-08	12	\$10,324	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	0
020-190-05	15	\$10,122	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	0
020-190-04	16	\$10,752	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	0
020-190-03	17	\$16,153	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	1(1992)
020-190-02	18	\$10,324	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	0
020-200-08	2	\$10,324	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	0
020-190-15	20	\$6,875	\$39,200	3 <sup>rd</sup>	2 <sup>nd</sup> - B	0
020-190-17	21	\$5,152	\$21,200	3 <sup>rd</sup>	3 <sup>rd</sup> - B	0
020-190-18	22 T	\$5,152	\$21,200	3 <sup>rd</sup>	3 <sup>rd</sup> - B	0
020-190-19	23	\$5,152	\$21,200	3 <sup>rd</sup>	3 <sup>rd</sup> - B	0
020-190-20	24	\$5,180	\$21,200	3 <sup>rd</sup>	3 <sup>rd</sup> - B	0

020-180-08	25	\$260,100 (\$10,324)	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	3(2001, 2005, 2007)
020-180-09	26	\$10,324	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	0
020-180-10	27	\$10,324	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	0
020-180-11	28	\$10,324	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	0
020-180-17	29	\$37,938 (\$10,324)	\$21,200	1 <sup>st</sup>	3 <sup>rd</sup> - B	1(1996)
020-200-02	3	\$37,938 (\$6,875)	\$39,200	1 <sup>st</sup>	2 <sup>nd</sup> - B	1(1996)
020-180-06	30	\$7,382	\$21,200	3 <sup>rd</sup>	3 <sup>rd</sup> - B	0
020-180-05	31	\$6,875	\$21,200	3 <sup>rd</sup>	3 <sup>rd</sup> - B	0
020-180-04	32	\$6,883	\$21,200	3 <sup>rd</sup>	3 <sup>rd</sup> - B	0
020-200-10	33	\$95,596 \$(6,875)	\$21,200	3 <sup>rd</sup>	3 <sup>rd</sup> - B	1(2001)
020-200-11	34	\$5,152	\$21,200	3 <sup>rd</sup>	3 <sup>rd</sup> - B	0
020-200-07	35	\$10,324	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	0
020-200-06	36	\$10,324	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	0
020-200-05	37	\$10,324	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	0
020-200-04	38 T	\$10,324	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	0
020-200-03	39	\$10,327	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	0
020-200-01	4	\$6,875	\$39,200	3 <sup>rd</sup>	2 <sup>nd</sup> - B	0
020-180-03	41 T	\$7,149	\$12,200	3 <sup>rd</sup>	3 <sup>rd</sup> - C	0
020-180-02	42	\$6,875	\$21,200	3 <sup>rd</sup>	3 <sup>rd</sup> - B	0
020-200-13	45	\$10,324	\$39,200	3 <sup>rd</sup>	2 <sup>nd</sup> - B	0
020-200-14	46	\$11,069	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	0
020-190-16	5 T	\$6,875	\$39,200	3 <sup>rd</sup>	2 <sup>nd</sup> - B	0
020-190-14	6	\$11,167	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	0
020-190-13	7	\$10,324	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	0
020-190-12	8	\$10,324	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	0
020-190-11	9	\$10,324	\$61,700	1 <sup>st</sup>	1 <sup>st</sup> - E	0
		<b>SUM</b>	\$1,860,500			
		<b>5% SUM</b>	\$930,250			

There are four types according to the appraiser: (1) Lots with typical Lot 38 at \$61,700; (2) Lots with typical Lot 5 at \$39,200; (3) Lots with typical 22 at \$21,200; and (4) the lone lot with itself as typical at \$12,200. The corresponding residual improvement errors in each are, respectively, 23 @ \$50,000, 5 @ \$30,000, 11 @ \$15,000, and 1 @ \$5,000. The total over-evaluation adds up to a considerable \$1,470,000 – and that’s a very large cumulative residual improvement error to leave uncorrected in the appraisal.

## **SUMMARY AND CONCLUSIONS**

The author hopes that any reader of this document has achieved a clearer understanding of land value in its native and natural state. It is also hoped that the reader will be able to detect and prevent false appraisals and support and encourage accurate ones – if this type of activity continues.

The author formally requests that Congress place a moratorium on the fees that are to be charged Echo Lake Association members as a result of the 1999-2000 appraisal. The USFS has for too long a time (40 years) flown under the radar of Congress. They have remained and are still unregulated in this very serious activity. Basically Congress needs to investigate the activity to determine if it is in compliance with law.

The author hopes that Congress stops the appraisal procedure in increasing permit fees – changing permit fees from a “simple fee to permit use” into a “rental fee of a site” that has not been owned nor maintained by the Forest Service. There have problems with this approach from its inception in 1969.<sup>31</sup> This process, now planned to be repeated every 10 years, is exorbitantly expensive and unnecessary. County recorders and assessors, nation wide, already have the lands recorded values open for public scrutiny. There is absolutely no need for the USFS to repeat an evaluation already in place and historically accurate. All they have to do is visit the county recorders office and look up and study the recorded land values already on the books. The appraisal activity is very much so a waste of tax-payers money and puts the Forest Service more out of budget than they already are at present.

The author hopes that if the Congress wishes to charge a larger permit fee, then they determine and enforce a fair and impartial fee, with review and input from the public including all permittees, consistent with all of their public laws. This is very definitely cheaper than very expensive appraisals repeated every ten years. And if Congress wants to base a permit fee on an *ad valorem* land evaluation, all Congress has to do is to review county records in whatever county they are operating in, and figure out, simply and exactly

**what is the value of land in its native and natural state.**

If the fee is to be determined by some sort of mathematical calculation, then the calculation must be completely transparent and not veiled in secrecy. It has been the author’s intention in this study to show, teach and indicate how exactly such transparent calculations should be done and displayed. The author has presented every calculation in this study as openly as he could so that the reader knows how to agree or disagree with his work.

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12. Marceron, Terri, *Letter to Echo Lake Residence Permit Holders*, August 5, 2008, p. 2.
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15. These two neighboring vacant lots to the chosen comparables were the vacant lot 100 (APN 016-101-31) in Meeks Bay Vista development, a 1 minute walk to the Meeks Bay beach with a spectacular view of all of Lake Tahoe; and vacant lot 92 (APN 16-432-16) in the Rubicon Bay development, 3 blocks from the shore of Lake Tahoe.
16. See [http://en.wikipedia.org/wiki/Proposition\\_13](http://en.wikipedia.org/wiki/Proposition_13) and [http://www.leginfo.ca.gov/const/article\\_13A](http://www.leginfo.ca.gov/const/article_13A)
17. Tim Holcomb, Assessor, El Dorado county, <http://main.co.el-dorado.ca.us> and follow the links: Assessor's Menu, Property Information Query. This office then provides for 14 different ways to search in the event one does not have a specific APN.
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# WEBSITES

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1. <http://www.co.el-dorado.ca.us/Ordinances/1756tr1.pdf> Site for El Dorado county parcel data information system
2. <http://www.co.el-dorado.ca.us/planning> . Site listing the Zoning Ordinance, Title 17, Lake Tahoe Basin Land Use Zoning.
3. <http://www.boe.ca.gov/> Site for California State Board of Equalization. Links to Property Taxes, Assessment Practices Survey, Letters to Assessors, Listing of County Assessors, etc.
4. [http://www.leginfo.ca.gov/const/article\\_13A](http://www.leginfo.ca.gov/const/article_13A) Site providing the text of Article 13A [TAX LIMITATION] in the California State Constitution
5. <http://main.co.el-dorado.ca.us> ElDorado county assessor's office website. Has a remarkable last 20 years of historical land value data on all properties with APNs in Dorado county.

## OTHER SITES OF INTEREST

1. <http://www.california.hometownlocator.com/index.cfm> . Incredible site for information on California cities, counties, maps, zip codes, features, hotels, and census.
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