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In the Matter of:
Clark County
Esmeralda County
Eureka County
Lincoln County
Mineral County
Storey Pine County

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2012-2013 Ratio Study

NOTICE OF DECISION

Appearances

Bruce Bartolowits, Supervisor of the Locally Assessed Section, appeared on behalf of the Department of Taxation.

Rocky Steele and Doug Scott on behalf of Michele Shafe, Clark County Assessor; Ruth Lee, Esmeralda County Assessor; Dorothy Fowler, Mineral County Assessor; and Jana Seddon, Storey County Assessor, appeared for their respective counties. Michael Mears, Eureka County Assessor and Melanie McBride, Lincoln County Assessor, made no appearance as required by NRS 361.333(4)(a) and (b).

Summary

The matter of the approval of the 2012-2013 Ratio Study came before the Nevada Tax Commission (Commission) for hearing in Reno and via video conference to Las Vegas, Nevada, on June 25, 2012 after due notice to each Assessor. The Commission reviewed the ratio study and the report of the Department. With regard to the work practices of each county assessor, the Department concluded each assessor has adequate procedures in place to ensure that all property subject to taxation is being assessed in a correct and timely manner. Using statistical tests designed for mass appraisal, all types of property fell within the range required by NRS 361.333.

DECISION

The Commission, having considered all evidence and testimony pertaining to the matter, hereby approves the 2012-2013 Ratio Study as reported by the Department and finds no further action is required pursuant to the authority granted in NRS 361.333.

BY THE NEVADA TAX COMMISSION THIS 23rd DAY OF JULY, 2012.

[Signature]
Christopher G. Nielsen, Executive Director

cc: County Assessors
Gina Session, Chief Deputy Attorney General



NEVADA DEPARTMENT OF TAXATION
Division of Local Government Services

2012-2013 REPORT OF ASSESSMENT RATIO STUDY

Division of Local Government Services

2012-2013

Report of Assessment Ratio Study

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Adopted by the Nevada Tax Commission
June 25, 2012

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INTRODUCTION

2012-13 RATIO STUDY

AUTHORITY, OVERSIGHT AND REPORTING

Under NRS 361.333, the Nevada Tax Commission is obligated to equalize property under its jurisdiction. Equalization is the process by which the Commission ensures “that all property subject to taxation within the county has been assessed as required by law.”¹

There are two types of information which the Commission considers to determine whether property has been assessed equitably. The first type of information comes from a ratio study, which is a statistical analysis designed to study the level and uniformity of the assessments. The second type of information comes from a procedural audit which is designed to fulfill the requirements of NRS 361.333(1)(b)(2). The procedural audit examines the work practices of the assessor to determine whether all property is being assessed in a correct and timely manner.

It is important to note that the statistical analysis required by NRS 361.333 is a quality control technique designed for mass appraisal. Mass appraisal, like single-property appraisal, is a “systematic method for arriving at estimates of value.”² The difference between mass appraisal and single-property appraisal is only a matter of scope:

Mass appraisal models have more terms because they attempt to replicate the market for one or more land uses across a wide geographic area. Single-property models, on the other hand, represent the market for one kind of land use in a limited area.

Quality is measured differently in mass appraisal and single-property appraisal. The quality of a single-property appraisal is measured against a small number of comparable properties that have sold. The quality of mass appraisals is measured with statistics developed from a sample of sales in the entire area appraised by the model.³

Typically, mass appraisal techniques using valuation models for groups and classes of property are used by county assessors to determine taxable value.⁴ Mass appraisal techniques are also assumed to be used by assessors in NRS 361.260(5), which requires the application of land factors to groups of property using statistical analysis.

¹ NRS 361.333(4)(a) “The board of county commissioners and the county assessor, or their representatives, shall present evidence to the Nevada Tax Commission of the steps taken to ensure that all property subject to taxation within the county has been assessed as required by law.” Compare this statutory requirement to the International Association of Assessing Officers definition of equalization: “The process by which an appropriate governmental body attempts to ensure that property under its jurisdiction is appraised equitably at market value or as otherwise required by law.”

² Eckert, Joseph K., Ed., Property Appraisal and Assessment Administration (IAAO: Chicago, 1990), p. 35.

³ Ibid.

⁴ NRS 361.227(1) defines taxable value as the full cash value of land plus the replacement cost new less statutory depreciation of the improvements.

NRS 361.333(2) permits the Department to conduct a ratio study on smaller groups of counties instead of the entire state in any one year. The ratio study is therefore conducted over a three year cycle. The counties reviewed for 2012-2013 are Clark, Esmeralda, Eureka, Lincoln, Mineral, and Storey Counties.

If inequity or bias is discovered, NRS 361.333 provides the Nevada Tax Commission the authority to apply factors designed to correct inequitable conditions to classes of property or it may order reappraisal, the goal of which is to determine whether all real and personal property is assessed at 35% of taxable value. In addition, NRS 360.215 authorizes the Department of Taxation to assist county assessors in appraising property which the ratio study shows to be in need of reappraisal. The Department also consults on the development and maintenance of standard assessment procedures to ensure that property assessments are made equal.

RATIO STUDY DESIGN PARAMETERS AND STANDARDS FOR ANALYSIS

Generally speaking, a "ratio study" is "designed to evaluate appraisal performance by comparing the estimate of assessed value produced by the assessor on each parcel in the sample to the estimate of taxable value produced by the Department. The comparison is called a "ratio."

The properties comprising the sample are physically inspected by Department appraisers and valued according to statutory and regulatory requirements. For instance, the Department valued improvements using the Valuation Cost Service published by Marshall Swift, pursuant to NAC 361.128. Land was valued for each sample property by using comparable sales and analyzed pursuant to NRS 361.118. In the event there were insufficient sales of vacant land, Department staff extracted land values using allocation or abstraction methods authorized pursuant to NRS 361.119.

The appraisals conducted by the Department comprise a *sample* of the *universe or population* of all properties within the jurisdiction being reviewed. From the information about the *sample*, the Department *infers* what is happening to the population as a whole.

The Department examines the ratio information for *appraisal level* and *appraisal uniformity*. Appraisal level compares how close the assessor's estimate of assessed value is to the legally mandated standard of 35% of taxable value. Appraisal level is measured by a descriptive statistic called a *measure of central tendency*. A measure of central tendency, such as the mean, median, or aggregate ratio, is a single number or value that describes the center or the middle of a set of data. In the case of this ratio study, the median describes the middle of the array of all ratios comparing the assessed value to the taxable value established for each parcel.

Assessment uniformity refers to the degree to which different properties are assessed at equal percentages of taxable value. If taxable value could be described as the center of a "target," then assessment uniformity looks at how much dispersion or distance there is between each ratio and the "target." The statistical measure known as the coefficient of dispersion (COD) measures uniformity or the distance from the "target."

The ratio study by law must include the median ratio of the total property within each subject county and each class of property. The study must also include two comparative statistics known as the overall ratio (also known as the aggregate ratio or weighted mean ratio) and the coefficient of dispersion (COD) of the

median, for both the total property in each subject county and for each major class of property within the county. NRS 361.333 (5)(c) defines the major classes of property as:

- I. Vacant land;
- II. Single-family residential;
- III. Multi-residential;
- IV. Commercial and industrial; and
- V. Rural

In addition, the statistics are calculated specifically for improvement, land, and total property values. The classes are further defined as those within the reappraisal area.

The median is a statistic describing the measure of central tendency of the sample. It is the middle ratio when all the ratios are arrayed in order of magnitude, and divides the sample into two equal parts. The median is the most widely used measure of central tendency by equalization agencies because it is less affected by extreme ratios or "outliers," and is therefore the preferred measure for monitoring appraisal performance or evaluating the need for a reappraisal.⁵ NRS 361.333(5)(c) states that under- or- over assessment may exist if the median of the ratios falls in a range less than 32% or more than 36%.

The Department calculates the overall or aggregate ratio by dividing the total assessed value of all the observations (parcels) in the sample by the total taxable value of all the observations (parcels) in the sample. This produces a ratio weighted by dollar value. Because of the weight given to each dollar of value, parcels with higher values exert more influence than parcels with lower values. The aggregate ratio helps identify under or over assessment of higher valued property. For instance, an unusually high aggregate ratio might indicate that higher valued property is over assessed, or valued at a rate higher than other property. The statutory and regulatory framework does not dictate any range of acceptability for the aggregate ratio.

The COD is a measure of dispersion relating to the uniformity of the ratios and is calculated for all property within the subject jurisdiction and for each class of property within the subject jurisdiction. The COD measures the deviation of the individual ratios from the median ratio as a percentage of the median and is calculated by (1) subtracting the median from each ratio; (2) taking the absolute value of the calculated differences; (3) summing the absolute differences; (4) dividing by the number of ratios to obtain the "average absolute deviation;" and (5) dividing by the median. The COD has "the desirable feature that its interpretation does not depend on the assumption that the ratios are normally distributed."⁶ The COD is a relative measure and useful for comparing samples from different classes of property within counties, as well as among counties.

In 2010, the Nevada Tax Commission adopted regulation LCB File No. R039-10. The regulation adopted the *Standard on Automated Valuation Models*, September 2003 edition published by the International Association of Assessing Officers. The *Standard on Automated Valuation Models*, Section 8.4.2.1, discusses the coefficient of dispersion and Table 2 references Ratio Study Performance Standards with regard to the COD. The IAAO *Standard on Ratio Studies* states that "the smaller the measure, the better the uniformity, but extremely low measures can signal acceptable causes such as extremely homogeneous properties or very stable markets; or unacceptable causes such as lack of quality control, calculation errors, poor sample representativeness or sales chasing. Note that as market activity changes or as the

⁵ International Association of Assessing Officers, *Standard on Ratio Studies*, (2010), p.12; 27.

⁶ International Association of Assessing Officers, *Standard on Ratio Studies*, (2010), p. 13.

complexity of properties increases, the measures of variability usually increase, even though appraisal procedures may be equally valid.”⁷ The IAAO recommended ratio study performance standards are as follows:

<u>Type of Property</u>	<u>COD</u>
Single-family Residential	
Newer, more homogenous areas	5.0 to 10.0
Older, heterogeneous areas	5.0 to 15.0
Rural residential and seasonal	5.0 to 20.0
Income-producing properties	
Larger, urban jurisdictions	5.0 to 15.0
Smaller, rural jurisdictions	5.0 to 20.0
Vacant land	5.0 to 25.0
Other real and personal property	Varies with local conditions ⁸

RATIO STUDY CONSLUSIONS

The 2012-2013 Ratio Study presentation includes the comparison of the median and aggregate ratios and the COD of all 17 counties required by NRS 361.333(1)(b)(1)⁹. These charts show the aggregate and median ratios and the coefficient of dispersion for the past three study years (2009-2011) across all counties for all properties.

Similar data is shown just for the counties in the 2012 study year⁹. Here the aggregate and median ratios, the COD, and the median related differential (MRD) are compared across types of property in the six counties. Data for each individual county is displayed for each type of property across all appraisal areas within the county, not just the reappraisal area⁹.

Median Related Differential

The median related differential¹⁰ is a statistic that tends to indicate regressivity when it is above 1.03 and progressivity when it is below .98. It is an indication of whether high-value properties are appraised higher or lower than low-value properties. The standard is not an absolute when samples are small or when wide variations in prices exist. In that case, other statistical tests may be more useful. This particular test is not required by statute.

⁷ International Association of Assessing Officers, Standard on Ratio Studies, (2010), p. 13.

⁸ International Association of Assessing Officers, Standard on Ratio Studies, (2010), p. 17; and Standard on Automated Valuation Models (2003), p. 25 and p. 28.

⁹ See Contents for page numbers of referenced reports

¹⁰ See Contents for page numbers of referenced reports

The chart indicates that of the six counties studied for 2012-2013, regressivity is present for vacant land in Lincoln County; and overall property in Mineral County. Progressivity is present in both Mineral and Storey Counties for single family improvements. Other counties where progressivity or regressivity occurred in prior years are also listed.

Aggregate Ratio

The data for the aggregate (overall) ratio, or weighted mean, for the subject counties are within the range of 32% to 36% on a composite basis, except multi-family improvements in Esmeralda County, vacant land in Lincoln County, and improvements, single family improvements, and multi-family improvements in Mineral County.

Median Ratio

The median ratios of assessed value to taxable value generally indicate over-or-undervaluation of those types of property taken as a whole within the entire appraisal jurisdiction. This is not to say that inequity might not exist in pocket areas. However, this study makes these inferences for property groups as a whole within the jurisdiction, without regard to individual market areas. As noted above, for purposes of monitoring appraisal performance and for direct equalization, the median ratio is the preferred measure of central tendency.

Based on the median ratio, we can infer the appraisal level for all classes of property in each county included in this study fell between 32% and 36% using the results of the sample taken by the Department, except for multi-family improvements in Esmeralda County and single family and multi-family improvements in Mineral County. The land, improvement, and the overall ratios of the assessed value established by each county assessor, measured against the taxable value established by the Department, are within statutory limits.

In addition, the COD for each reappraisal area for each county indicate the appraisals are relatively uniform, with the exception of Mineral County. A small sample of patented mining claims confirmed the findings in the Land Performance Audit that there is an issue with how patented mining claims are valued. The Department is working with the Mineral County assessor to address these issues as well as other issues identified in the Performance Audit adopted by the Tax Commission on March 9, 2012.

PROCEDURAL AUDIT/OFFICE REVIEW AND PERFORMANCE AUDIT

2012-13 RATIO STUDY

NRS 361.333 (1)(b)(2) requires the Department to make a determination about whether each county has adequate procedures to ensure that all property subject to taxation is being assessed in a correct and timely manner, and to note any deficiencies. The Department historically used Procedural Audits / Office Reviews to obtain information used in this determination. The Department is conducting Performance Audits and will be conducting Performance Audits in the future to build on the past Procedural Audits / Office Reviews for this determination.

BACKGROUND

Beginning with the 2007-2008 Report on Assessment Ratio Study five years ago, the Department began a more comprehensive "Procedural Audit" process, also known as an "Office Review" process. In conducting the Procedural Audits / Office Reviews each year, Department staff traveled to the offices of county assessors to review the procedures used to discover, value, and assess all real and personal property within the jurisdiction of the County Assessor. The Department reviewed the resources of the office; reviewed a sample of property files; and interviewed assessors and their staffs. The Procedural Audits / Office Reviews consisted of observations about departures from required or accepted appraisal practices, recommendations to consider for improvement to work practices and procedures, and identification of best practices, defined as practices which efficiently and effectively capture taxable value keeping in mind the limitations of statutes and regulations.

The Procedural Audits / Office Reviews provided a "baseline" of performance over a broad range of topics and resulted in county assessors making adjustments in their operations to improve performance. The Performance Audit Program will narrow the focus of examinations to allow a more detailed analysis of a particular topic. The Performance Audit Process is described in more detail below under the heading "Performance Audit Program."

This ratio study and future ratio studies will not contain new Procedural Audits / Office Reviews for each county included in the ratio study. Instead, the ratio study will report the current status of prior recommendations for all counties. This will essentially be an update or annual report of the baseline data together with an update or annual report on the Performance Audit Program.

IMPLEMENTATION STATUS OF PROCEDURAL AUDITS / OFFICE REVIEW

The following sections report on the results of Procedural Audits / Office Reviews previously conducted and the current status of implementation.

During the "baseline" period (FY07-08, FY08-09, and FY 09-10), the Department made 166 recommendations for improvements to office practices and valuation procedures. 56% of the recommended corrective actions were fully implemented, and 34% were partially implemented. 10% were either no longer applicable or no action was taken. The recommendations made by the Department do not necessarily imply statutory violations, although those were included in the total.

The following table summarizes the number of recommendations for performance improvements that were made in the 2011-2012 Ratio Study and their status of implementation since May, 2011 and the current report. Eleven of 25 recommendations were fully implemented; 12 were partially implemented; and no action was taken on two recommendations. In Elko, the recommendation was to conform the mapping program to statutory requirements, a finding that has been made for several years. In Carson City, the recommendation was to add attached garages to the replacement cost new of the residence when the garage shares both common walls and roof construction to ensure proper age weighting and depreciation.

	Partially Implemented	Fully Implemented	No Longer Applicable	No action	Total
Carson City	5	1		1	7
Churchill	1				1
Elko	2	2		1	5
Lander	1	3			4
Pershing	1	1			2
White Pine	2	4			6
Total Recommendations	12	11		2	25

PERFORMANCE AUDIT PROGRAM

In January 2010, the Department implemented its Performance Audit Program. The Performance Audit Program is designed to provide a much more in depth analysis of specific areas of the Nevada property tax system. Topics are selected for performance audits based on assessment of risk, current circumstances, significance, and cost/benefit analysis. Performance Audits are performed in compliance with Generally Accepted Government Auditing Standards.

The first performance audit evaluated each of the 17 counties' practices related to valuation of land for property tax assessment, including whether activities were carried out in accordance with applicable state laws, regulations, policies, and procedures. The audit focused on each of the 17 counties' activities for the 2010-2011 secured roll cycle beginning in May 2009 and ending October or November 2010. The audits also included activities through June 2011 for certain areas.

Information about the Performance Audit Program, the definition of the program, as well as the actual Performance Audit #1001 on Land Valuation and the associated 2012 Economic and Demographic Report may be downloaded from the Taxation website at <http://tax.state.nv.us> . Select "Publications;" then "Local Government Services Publications"; then "Performance Audit Program."

LAND AND IMPROVEMENT FACTORS

The Department reviews assessments in those areas where land and improvement factors are applied pursuant to NRS 361.260(5) to ensure the factors are appropriately applied. In the last fiscal year no counties in the State used the factor for land values since all counties annually reappraise land in each county. Improvement Factors for the 2011-2012 tax year are also available on the Taxation website at <http://tax.state.nv.us> .

2012-2013

REPORT OF ASSESSMENT RATIO STUDY

STATISTICAL TABLES

NEVADA DEPARTMENT OF TAXATION
2012-2013 RATIO STUDY
AGGREGATE RATIOS

SUBJECT COUNTY	STUDY YEAR	ALL PROPERTY	IMPROVEMENTS	IMPROVED LAND	VACANT LAND	SINGLE FAMILY RESIDENCE	MULTI-FAMILY RESIDENCE	COMMERCIAL INDUSTRIAL	RURAL LAND & IMPROVEMENTS
CARSON CITY	2011	32.9	31.5	34.3	34.9	33.6	33.3	31.1	34.9
CHURCHILL	2011	34.1	34.0	34.4	33.8	33.3	33.5	36.3	35.0
CLARK	2012	34.2	34.2	34.4	34.2	33.8	34.0	34.3	34.9
DOUGLAS	2010	34.1	34.3	33.8	34.6	34.5	33.7	34.3	35.0
ELKO	2011	33.1	33.0	33.5	33.6	33.0	31.8	33.6	34.8
ESMERALDA	2012	32.9	32.7	33.2	33.0	33.4	30.5	32.2	35.0
EUREKA	2012	34.1	34.1	34.5	33.4	34.8	32.2	34.6	35.0
HUMBOLDT	2010	34.1	34.3	34.6	34.3	33.3	32.9	35.0	35.1
LANDER	2011	33.3	34.5	30.6	29.0	33.9	30.0	33.8	34.7
LINCOLN	2012	33.1	33.2	34.2	28.8	33.2	34.2	32.6	35.0
LYON	2010	32.3	32.1	32.9	31.2	31.2	31.4	33.1	35.0
MINERAL	2012	32.1	31.4	34.0	33.3	31.1	30.0	33.2	34.4
NYE	2010	31.9	33.1	30.2	33.2	34.8	31.0	31.3	35.0
PERSHING	2011	34.3	34.2	34.4	34.8	34.1	34.1	34.5	35.1
STOREY	2012	33.9	34.3	33.7	32.6	34.6	33.2	34.1	35.0
WASHOE	2010	33.9	34.0	33.8	33.9	34.5	34.0	33.7	35.0
WHITE PINE	2011	29.5	28.6	32.1	33.6	30.9	33.4	24.6	30.3
STATEWIDE	2012	33.7	33.6	33.7	33.8	33.6	33.0	33.8	33.3

NEVADA DEPARTMENT OF TAXATION
2012-2013 RATIO STUDY
MEDIAN RATIOS

SUBJECT COUNTY	STUDY YEAR	ALL PROPERTY	IMPROVEMENTS	IMPROVED LAND	VACANT LAND	SINGLE FAMILY RESIDENCE	MULTI-FAMILY RESIDENCE	COMMERCIAL INDUSTRIAL	RURAL LAND & IMPROVEMENTS
CARSON CITY	2011	34.1	33.4	34.7	35.0	34.0	33.7	33.6	34.9
CHURCHILL	2011	34.5	34.6	34.5	34.4	34.2	33.8	36.3	35.0
CLARK	2012	34.4	34.4	34.0	34.5	34.5	34.1	34.1	35.0
DOUGLAS	2010	34.8	35.0	34.4	35.0	34.9	34.3	34.7	35.0
ELKO	2011	33.3	33.1	34.0	34.0	33.0	32.9	34.0	35.0
ESMERALDA	2012	33.2	33.3	34.4	32.7	33.2	30.2	32.4	35.0
EUREKA	2012	34.5	34.9	34.7	34.2	35.0	33.1	34.7	35.0
HUMBOLDT	2010	34.3	34.1	34.7	34.3	34.3	33.8	33.6	35.0
LANDER	2011	33.3	34.2	34.1	32.1	34.0	29.3	33.3	35.0
LINCOLN	2012	33.7	33.3	34.0	33.3	33.2	33.8	32.9	35.0
LYON	2010	33.2	33.8	33.3	33.3	33.2	33.1	33.1	35.0
MINERAL	2012	33.3	32.0	34.0	33.9	30.0	30.1	33.1	34.9
NYE	2010	34.2	34.7	34.0	34.1	34.5	34.0	33.6	35.0
PERSHING	2011	34.9	33.9	34.8	35.0	33.8	33.4	33.6	35.0
STOREY	2012	33.9	33.7	34.2	33.4	33.7	34.2	33.9	35.0
WASHOE	2010	34.3	34.2	34.6	34.2	34.4	34.1	33.6	34.9
WHITE PINE	2011	32.9	32.5	33.5	34.0	32.2	33.5	32.2	31.8
STATEWIDE	2012	34.1	34.1	34.2	34.1	34.1	33.7	33.8	35.0

NEVADA DEPARTMENT OF TAXATION
2012-2013 RATIO STUDY
COEFFICIENTS OF DISPERSION

SUBJECT COUNTY	STUDY YEAR	ALL PROPERTY	IMPROVEMENTS	IMPROVED LAND	VACANT LAND	SINGLE FAMILY RESIDENCE	MULTI-FAMILY RESIDENCE	COMMERCIAL INDUSTRIAL	RURAL LAND & IMPROVEMENTS
CARSON CITY	2011	3.2	4.2	3.3	2.8	2.6	2.7	5.3	0.3
CHURCHILL	2011	4.1	5.5	2.7	5.4	3.7	2.2	3.5	0.1
CLARK	2012	3.0	3.8	2.9	2.7	3.0	2.7	3.1	1.3
DOUGLAS	2010	2.3	2.5	2.9	2.3	2.5	2.2	2.2	0.4
ELKO	2011	3.6	4.4	5.4	2.8	3.2	3.0	4.6	0.6
ESMERALDA	2012	6.7	3.5	8.9	10.5	1.4	10.7	5.7	0.0
EUREKA	2012	3.6	5.7	2.6	2.7	4.7	2.7	2.2	0.0
HUMBOLDT	2010	6.7	8.3	7.0	2.4	2.8	6.1	16.5	1.1
LANDER	2011	11.8	5.6	15.5	20.9	4.8	8.9	7.1	2.0
LINCOLN	2012	7.6	5.6	3.7	15.9	5.2	3.6	2.7	0.0
LYON	2010	8.4	10.6	9.7	9.5	9.5	8.3	7.1	0.0
MINERAL	2012	13.0	20.4	10.5	5.0	18.4	30.5	14.4	1.6
NYE	2010	10.4	4.5	22.2	7.0	6.4	13.1	16.7	0.1
PERSHING	2011	3.0	4.8	2.2	1.9	3.7	4.5	2.5	0.3
STOREY	2012	6.7	11.7	3.2	5.1	10.7	4.0	4.2	0.0
WASHOE	2010	3.1	4.2	3.9	3.3	1.6	3.2	4.5	0.2
WHITE PINE	2011	6.7	9.5	4.9	2.1	5.5	4.1	11.7	20.4
STATEWIDE	2012	5.8	6.7	6.5	5.7	5.1	6.3	7.5	1.7

NEVADA DEPARTMENT OF TAXATION
2012-2013 RATIO STUDY
MEDIAN RELATED DIFFERENTIALS

SUBJECT COUNTY	STUDY YEAR	ALL PROPERTY	IMPROVEMENTS	IMPROVED LAND	VACANT LAND	SINGLE FAMILY RESIDENCE	MULTI-FAMILY RESIDENCE	COMMERCIAL INDUSTRIAL	RURAL LAND & IMPROVEMENTS
CARSON CITY	2011	1.03	1.06	1.01	1.00	1.01	1.01	1.08	1.00
CHURCHILL	2011	1.01	1.02	1.00	1.02	1.03	1.01	1.00	1.00
CLARK	2012	1.00	1.01	0.99	1.01	1.02	1.00	0.99	1.00
DOUGLAS	2010	1.02	1.02	1.02	1.01	1.01	1.02	1.01	1.00
ELKO	2011	1.01	1.00	1.01	1.01	1.00	1.04	1.01	1.01
ESMERALDA	2012	1.01	1.02	1.03	0.99	0.99	0.99	1.01	1.00
EUREKA	2012	1.01	1.02	1.01	1.02	1.01	1.03	1.00	1.00
HUMBOLDT	2010	1.00	1.00	1.00	1.00	1.03	1.03	0.96	1.00
LANDER	2011	1.00	0.99	1.11	1.11	1.00	0.98	0.98	1.01
LINCOLN	2012	1.02	1.00	0.99	1.16	1.00	0.99	1.01	1.00
LYON	2010	1.03	1.05	1.01	1.07	1.06	1.06	1.00	1.00
MINERAL	2012	1.04	1.02	1.00	1.02	0.96	1.01	1.00	1.01
NYE	2010	1.07	1.05	1.13	1.03	0.99	1.10	1.07	1.00
PERSHING	2011	1.02	0.99	1.01	1.00	0.99	0.98	0.97	1.00
STOREY	2012	1.00	0.99	1.01	1.02	0.97	1.03	0.99	1.00
WASHOE	2010	1.01	1.00	1.02	1.01	1.00	1.00	1.00	1.00
WHITE PINE	2011	1.11	1.14	1.04	1.01	1.04	1.00	1.31	1.05
STATEWIDE	2012	1.01	1.01	1.01	1.01	1.01	1.02	1.00	1.05

NEVADA DEPARTMENT OF TAXATION
2012-2013 RATIO STUDY
ALL APPRAISAL AREAS

OVERALL (AGGREGATE) RATIO

Subject County	All Property
CLARK	34.2
ESMERALDA	32.9
EUREKA	34.1
LINCOLN	33.1
MINERAL	32.1
STOREY	33.9
ALL COUNTIE	34.1

Class of Property							
Improvements	Improved Land	Vacant Land	Family Residence	Multi-Family Residence	Commercial Industrial	Rural Land & Improvements	
34.2	34.4	34.2	33.8	34.0	34.3	34.9	
32.7	33.2	33.0	33.4	30.5	32.2	35.0	
34.1	34.5	33.4	34.8	32.2	34.6	35.0	
33.2	34.2	28.8	33.2	34.2	32.6	35.0	
31.4	34.0	33.3	31.1	30.0	33.2	34.4	
34.3	33.7	32.6	34.6	33.2	34.1	35.0	
34.1	34.2	33.1	33.8	33.4	34.2	35.0	

MEDIAN RATIO

Subject County	All Property
CLARK	34.4
ESMERALDA	33.2
EUREKA	34.5
LINCOLN	33.7
MINERAL	33.3
STOREY	33.9
ALL COUNTIE	34.1

Class of Property							
Improvements	Improved Land	Vacant Land	Family Residence	Multi-Family Residence	Commercial Industrial	Rural Land & Improvements	
34.4	34.0	34.5	34.5	34.1	34.1	35.0	
33.3	34.4	32.7	33.2	30.2	32.4	35.0	
34.9	34.7	34.2	35.0	33.1	34.7	35.0	
33.3	34.0	33.3	33.2	33.8	32.9	35.0	
32.0	34.0	33.9	30.0	30.1	33.1	34.9	
33.7	34.2	33.4	33.7	34.2	33.9	35.0	
34.2	34.1	33.9	34.2	33.5	33.9	35.0	

NEVADA DEPARTMENT OF TAXATION
 2012-2013 RATIO STUDY
 ALL APPRAISAL AREAS
 COEFFICIENT OF DISPERSION (COD)

Subject County	All Property
CLARK	3.0
ESMERALDA	6.7
EUREKA	3.6
LINCOLN	7.6
MINERAL	13.0
STOREY	6.7
ALL COUNTIE	5.7

Class of Property							
Improvements	Improved Land	Vacant Land	Family Residence	Multi-Family Residence	Commercial Industrial	Rural Land & Improvements	
3.8	2.9	2.7	3.0	2.7	3.1	1.3	
3.5	8.9	10.5	1.4	10.7	5.7	0.0	
5.7	2.6	2.7	4.7	2.7	2.2	0.0	
5.6	3.7	15.9	5.2	3.6	2.7	0.0	
20.4	10.5	5.0	18.4	30.5	14.4	1.6	
11.7	3.2	5.1	10.7	4.0	4.2	0.0	
7.3	4.5	5.6	6.1	7.5	5.2	0.5	

MEDIAN RELATED DIFFERENTIAL

Subject County	All Property
CLARK	1.00
ESMERALDA	1.01
EUREKA	1.01
LINCOLN	1.02
MINERAL	1.04
STOREY	1.00
ALL COUNTIE	1.00

Class of Property							
Improvements	Improved Land	Vacant Land	Family Residence	Multi-Family Residence	Commercial Industrial	Rural Land & Improvements	
1.01	0.99	1.01	1.02	1.00	0.99	1.00	
1.02	1.03	0.99	0.99	0.99	1.01	1.00	
1.02	1.01	1.02	1.01	1.03	1.00	1.00	
1.00	0.99	1.16	1.00	0.99	1.01	1.00	
1.02	1.00	1.02	0.96	1.01	1.00	1.01	
0.99	1.01	1.02	0.97	1.03	0.99	1.00	
1.00	1.00	1.02	1.01	1.00	0.99	1.00	

CLARK COUNTY
2012-2013 RATIO STUDY

ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
COUNTYWIDE TOTAL PROPERTY	34.2%	34.4%	3.0%	267
COUNTYWIDE IMPROVEMENTS	34.2%	34.4%	3.8%	207
COUNTYWIDE IMPROVED LAND	34.4%	34.0%	2.9%	215
COUNTYWIDE VACANT LAND	34.2%	34.5%	2.7%	52
SINGLE FAMILY IMPROVEMENTS	33.8%	34.5%	3.6%	128
SINGLE FAMILY LAND	34.0%	33.8%	2.7%	129
SINGLE FAMILY TOTAL PROPERTY	33.8%	34.5%	3.0%	129
MULTIPLE FAMILY IMPROVEMENTS	34.1%	34.0%	3.9%	22
MULTIPLE FAMILY LAND	33.4%	34.3%	3.3%	22
MULTIPLE FAMILY TOTAL PROPERTY	34.0%	34.1%	2.7%	22
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	34.3%	34.0%	4.1%	56
COMMERCIAL/INDUSTRIAL LAND	34.5%	34.5%	2.8%	58
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	34.3%	34.1%	3.1%	58
RURAL IMPROVEMENTS	n/a	n/a	n/a	n/a
RURAL LAND	34.9%	35.0%	1.3%	6
RURAL TOTAL PROPERTY	34.9%	35.0%	1.3%	6
SECURED PERSONAL PROPERTY				
ALL SECURED	n/a	n/a	n/a	-
AIRCRAFT	n/a	n/a	n/a	-
AGRICULTURAL	n/a	n/a	n/a	-
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	n/a	n/a	n/a	-
MOBILE HOMES	n/a	n/a	n/a	-
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	34.7%	35.0%	1.2%	41
AIRCRAFT	35.0%	35.0%	0.0%	6
AGRICULTURAL	35.0%	35.0%	0.0%	1
BILLBOARDS	35.0%	35.0%	0.0%	9
COMMERCIAL/INDUSTRIAL	33.8%	35.0%	4.7%	9
MOBILE HOMES	34.7%	35.0%	0.3%	16
TOTAL PERSONAL PROPERTY	34.7%	35.0%	1.2%	41

**ESMERALDA COUNTY
2012-2013 RATIO STUDY**

ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
COUNTYWIDE TOTAL PROPERTY	32.9%	33.2%	6.7%	49
COUNTYWIDE IMPROVEMENTS	32.7%	33.3%	3.5%	29
COUNTYWIDE IMPROVED LAND	33.2%	34.4%	8.9%	35
COUNTYWIDE VACANT LAND	33.0%	32.7%	10.5%	14
SINGLE FAMILY IMPROVEMENTS	33.3%	33.3%	1.9%	14
SINGLE FAMILY LAND	33.9%	34.1%	2.4%	14
SINGLE FAMILY TOTAL PROPERTY	33.4%	33.2%	1.4%	14
MULTIPLE FAMILY IMPROVEMENTS	33.5%	33.9%	1.8%	7
MULTIPLE FAMILY LAND	24.7%	24.5%	39.0%	7
MULTIPLE FAMILY TOTAL PROPERTY	30.5%	30.2%	10.7%	7
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	31.5%	31.7%	6.7%	7
COMMERCIAL/INDUSTRIAL LAND	35.5%	35.4%	5.0%	7
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	32.2%	32.4%	5.7%	7
RURAL IMPROVEMENTS	n/a	n/a	n/a	-
RURAL LAND	35.0%	35.0%	0.0%	7
RURAL TOTAL PROPERTY	35.0%	35.0%	0.0%	7
SECURED PERSONAL PROPERTY				
ALL SECURED	35.0%	35.0%	0.0%	11
AIRCRAFT	n/a	n/a	n/a	-
AGRICULTURAL	35.0%	35.0%	0.0%	3
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	35.0%	35.0%	0.0%	3
MOBILE HOMES	35.0%	35.0%	0.0%	5
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	35.0%	35.0%	6.5%	15
AIRCRAFT	34.7%	33.5%	4.7%	2
AGRICULTURAL	35.0%	35.0%	0.0%	2
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	34.9%	35.0%	29.8%	3
MOBILE HOMES	35.0%	35.0%	0.0%	8
TOTAL PERSONAL PROPERTY	35.0%	35.0%	3.8%	26

EUREKA COUNTY
2012-2013 RATIO STUDY

ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
COUNTYWIDE TOTAL PROPERTY	34.1%	34.5%	3.6%	64
COUNTYWIDE IMPROVEMENTS	34.1%	34.9%	5.7%	36
COUNTYWIDE IMPROVED LAND	34.5%	34.7%	2.6%	43
COUNTYWIDE VACANT LAND	33.4%	34.2%	2.7%	21
SINGLE FAMILY IMPROVEMENTS	34.8%	35.1%	6.6%	21
SINGLE FAMILY LAND	34.5%	34.5%	2.6%	21
SINGLE FAMILY TOTAL PROPERTY	34.8%	35.0%	4.7%	21
MULTIPLE FAMILY IMPROVEMENTS	31.7%	33.3%	3.3%	7
MULTIPLE FAMILY LAND	33.8%	33.4%	2.9%	7
MULTIPLE FAMILY TOTAL PROPERTY	32.2%	33.1%	2.7%	7
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	34.8%	35.0%	2.1%	8
COMMERCIAL/INDUSTRIAL LAND	34.1%	34.8%	3.4%	8
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	34.6%	34.7%	2.2%	8
RURAL IMPROVEMENTS	n/a	n/a	n/a	-
RURAL LAND	35.0%	35.0%	0.0%	7
RURAL TOTAL PROPERTY	35.0%	35.0%	0.0%	7
SECURED PERSONAL PROPERTY				
ALL SECURED	34.9%	35.0%	0.5%	21
AIRCRAFT	n/a	n/a	n/a	-
AGRICULTURAL	35.0%	35.0%	0.0%	6
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	35.0%	35.0%	0.2%	9
MOBILE HOMES	34.3%	35.0%	1.4%	6
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	35.0%	35.0%	0.3%	17
AIRCRAFT	35.0%	35.0%	0.0%	2
AGRICULTURAL	35.0%	35.0%	0.0%	3
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	35.0%	35.0%	0.8%	6
MOBILE HOMES	35.0%	35.0%	0.0%	6
TOTAL PERSONAL PROPERTY	35.0%	35.0%	0.4%	38

LINCOLN COUNTY
2012-2013 RATIO STUDY

ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
COUNTYWIDE TOTAL PROPERTY	33.1%	33.7%	7.6%	52
COUNTYWIDE IMPROVEMENTS	33.2%	33.3%	5.6%	30
COUNTYWIDE IMPROVED LAND	34.2%	34.0%	3.7%	37
COUNTYWIDE VACANT LAND	28.8%	33.3%	15.9%	15
SINGLE FAMILY IMPROVEMENTS	33.1%	33.1%	7.2%	15
SINGLE FAMILY LAND	33.9%	33.6%	2.6%	15
SINGLE FAMILY TOTAL PROPERTY	33.2%	33.2%	5.2%	15
MULTIPLE FAMILY IMPROVEMENTS	34.1%	35.0%	3.0%	7
MULTIPLE FAMILY LAND	35.3%	34.0%	5.4%	7
MULTIPLE FAMILY TOTAL PROPERTY	34.2%	33.8%	3.6%	7
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	32.6%	32.9%	3.5%	7
COMMERCIAL/INDUSTRIAL LAND	32.5%	32.3%	3.6%	7
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	32.6%	32.9%	2.7%	7
RURAL IMPROVEMENTS	n/a	n/a	n/a	-
RURAL LAND	35.0%	35.0%	0.0%	8
RURAL TOTAL PROPERTY	35.0%	35.0%	0.0%	8
SECURED PERSONAL PROPERTY				
ALL SECURED	35.0%	35.0%	0.3%	16
AIRCRAFT	n/a	n/a	n/a	-
AGRICULTURAL	35.0%	35.0%	0.1%	6
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	35.1%	35.3%	1.0%	4
MOBILE HOMES	35.0%	35.0%	0.0%	6
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	35.1%	35.0%	1.1%	20
AIRCRAFT	38.9%	35.0%	6.8%	3
AGRICULTURAL	35.0%	35.0%	0.0%	5
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	35.0%	35.0%	0.1%	7
MOBILE HOMES	35.0%	35.0%	0.0%	5
TOTAL PERSONAL PROPERTY	35.1%	35.0%	0.7%	36

**MINERAL COUNTY
2012-2013 RATIO STUDY**

ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
COUNTYWIDE TOTAL PROPERTY	32.1%	33.3%	13.0%	82
COUNTYWIDE IMPROVEMENTS	31.4%	32.0%	20.4%	52
COUNTYWIDE IMPROVED LAND	34.0%	34.0%	10.5%	55
COUNTYWIDE VACANT LAND	33.3%	33.9%	5.0%	27
SINGLE FAMILY IMPROVEMENTS	30.2%	28.7%	27.5%	26
SINGLE FAMILY LAND	33.8%	33.5%	2.5%	26
SINGLE FAMILY TOTAL PROPERTY	31.1%	30.0%	18.4%	26
MULTIPLE FAMILY IMPROVEMENTS	25.6%	25.7%	18.9%	7
MULTIPLE FAMILY LAND	44.2%	37.0%	39.4%	7
MULTIPLE FAMILY TOTAL PROPERTY	30.0%	30.1%	30.5%	7
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	33.8%	33.1%	14.3%	15
COMMERCIAL/INDUSTRIAL LAND	31.3%	33.9%	10.6%	16
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	33.2%	33.1%	14.4%	16
RURAL IMPROVEMENTS	n/a	n/a	n/a	-
RURAL LAND	34.4%	34.9%	1.6%	6
RURAL TOTAL PROPERTY	34.4%	34.9%	1.6%	6
SECURED PERSONAL PROPERTY				
ALL SECURED	34.8%	35.0%	0.8%	19
AIRCRAFT	n/a	n/a	n/a	-
AGRICULTURAL	35.0%	35.0%	0.0%	3
BILLBOARDS	32.8%	35.0%	2.0%	4
COMMERCIAL/INDUSTRIAL	35.3%	35.2%	1.1%	6
MOBILE HOMES	35.0%	35.0%	0.0%	6
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	35.3%	35.0%	7.3%	26
AIRCRAFT	32.6%	35.0%	3.9%	5
AGRICULTURAL	53.2%	35.1%	14.8%	4
BILLBOARDS	35.0%	35.0%	0.0%	5
COMMERCIAL/INDUSTRIAL	24.9%	34.4%	18.3%	6
MOBILE HOMES	34.8%	35.0%	0.2%	6
TOTAL PERSONAL PROPERTY	35.1%	35.0%	4.6%	45

STOREY COUNTY
2012-2013 RATIO STUDY

ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
COUNTYWIDE TOTAL PROPERTY	33.9%	33.9%	6.7%	82
COUNTYWIDE IMPROVEMENTS	34.3%	33.7%	11.7%	50
COUNTYWIDE IMPROVED LAND	33.7%	34.2%	3.2%	54
COUNTYWIDE VACANT LAND	32.6%	33.4%	5.1%	28
SINGLE FAMILY IMPROVEMENTS	35.0%	33.8%	16.1%	28
SINGLE FAMILY LAND	33.2%	33.4%	3.5%	28
SINGLE FAMILY TOTAL PROPERTY	34.6%	33.7%	10.7%	28
MULTIPLE FAMILY IMPROVEMENTS	32.9%	33.6%	5.5%	7
MULTIPLE FAMILY LAND	34.3%	34.5%	2.3%	7
MULTIPLE FAMILY TOTAL PROPERTY	33.2%	34.2%	4.0%	7
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	34.2%	33.5%	6.5%	13
COMMERCIAL/INDUSTRIAL LAND	33.8%	34.2%	2.1%	14
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	34.1%	33.9%	4.2%	14
RURAL IMPROVEMENTS	n/a	n/a	n/a	-
RURAL LAND	35.0%	35.0%	0.0%	5
RURAL TOTAL PROPERTY	35.0%	35.0%	0.0%	5
SECURED PERSONAL PROPERTY				
ALL SECURED	35.0%	35.0%	0.0%	2
AIRCRAFT	n/a	n/a	n/a	-
AGRICULTURAL	n/a	n/a	n/a	-
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	n/a	n/a	n/a	-
MOBILE HOMES	35.0%	35.0%	0.0%	2
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	35.0%	35.0%	6.3%	12
AIRCRAFT	n/a	n/a	n/a	-
AGRICULTURAL	n/a	n/a	n/a	-
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	35.0%	35.0%	0.3%	6
MOBILE HOMES	36.3%	35.0%	12.3%	6
TOTAL PERSONAL PROPERTY	35.0%	35.0%	5.4%	14

**ALL COUNTIES INCLUDED IN
2012-2013 RATIO STUDY**

ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
ALL COUNTIES TOTAL PROPERTY	34.1%	34.1%	5.7%	596
ALL COUNTIES IMPROVEMENTS	34.1%	34.2%	7.3%	404
ALL COUNTIES IMPROVED LAND	34.2%	34.1%	4.5%	439
ALL COUNTIES VACANT LAND	33.1%	33.9%	5.6%	157
SINGLE FAMILY IMPROVEMENTS	33.8%	34.4%	8.2%	232
SINGLE FAMILY LAND	33.9%	33.7%	2.9%	233
SINGLE FAMILY TOTAL PROPERTY	33.8%	34.2%	6.1%	233
MULTIPLE FAMILY IMPROVEMENTS	33.2%	33.4%	5.8%	57
MULTIPLE FAMILY LAND	34.3%	34.3%	12.1%	57
MULTIPLE FAMILY TOTAL PROPERTY	33.4%	33.5%	7.5%	57
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	34.2%	33.9%	6.0%	106
COMMERCIAL/INDUSTRIAL LAND	34.3%	34.4%	4.3%	110
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	34.2%	33.9%	5.2%	110
RURAL IMPROVEMENTS	33.7%	29.8%	0.0%	1
RURAL LAND	35.0%	35.0%	0.5%	39
RURAL TOTAL PROPERTY	35.0%	35.0%	0.5%	39
SECURED PERSONAL PROPERTY				
ALL SECURED	34.9%	35.0%	0.5%	69
AIRCRAFT	n/a	n/a	n/a	-
AGRICULTURAL	35.0%	35.0%	0.0%	18
BILLBOARDS	32.8%	35.0%	2.0%	4
COMMERCIAL/INDUSTRIAL	35.2%	35.0%	0.6%	22
MOBILE HOMES	34.7%	35.0%	0.4%	25
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	35.0%	35.0%	3.3%	131
AIRCRAFT	35.0%	35.0%	2.7%	18
AGRICULTURAL	35.1%	35.0%	4.0%	15
BILLBOARDS	35.0%	35.0%	0.0%	14
COMMERCIAL/INDUSTRIAL	34.8%	35.0%	6.7%	37
MOBILE HOMES	35.0%	35.0%	1.7%	47
TOTAL PERSONAL PROPERTY	35.0%	35.0%	2.3%	200

**STATEWIDE
2010-2013 RATIO STUDIES**

ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
STATEWIDE TOTAL PROPERTY	33.7%	34.1%	5.8%	1,917
STATEWIDE IMPROVEMENTS	33.6%	34.1%	6.7%	1,332
STATEWIDE IMPROVED LAND	33.7%	34.2%	6.5%	1,410
STATEWIDE VACANT LAND	33.8%	34.1%	5.7%	505
SINGLE FAMILY IMPROVEMENTS	33.6%	34.1%	6.2%	673
SINGLE FAMILY LAND	33.8%	33.9%	5.1%	674
SINGLE FAMILY TOTAL PROPERTY	33.6%	34.1%	5.1%	674
MULTIPLE FAMILY IMPROVEMENTS	33.0%	33.8%	6.0%	276
MULTIPLE FAMILY LAND	33.1%	34.0%	9.0%	274
MULTIPLE FAMILY TOTAL PROPERTY	33.0%	33.7%	6.3%	276
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	33.8%	33.9%	8.2%	333
COMMERCIAL/INDUSTRIAL LAND	33.8%	34.1%	8.6%	338
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	33.8%	33.8%	7.5%	338
RURAL IMPROVEMENTS	30.5%	33.6%	10.4%	16
RURAL LAND	34.8%	35.0%	1.3%	124
RURAL TOTAL PROPERTY	33.3%	35.0%	1.7%	124
SECURED PERSONAL PROPERTY				
ALL SECURED	34.9%	35.0%	1.2%	216
AIRCRAFT	35.0%	35.0%	0.0%	2
AGRICULTURAL	34.4%	35.0%	2.1%	63
BILLBOARDS	32.8%	35.0%	2.0%	4
COMMERCIAL/INDUSTRIAL	35.0%	35.0%	1.4%	61
MOBILE HOMES	34.8%	35.0%	0.4%	86
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	34.5%	35.0%	2.4%	431
AIRCRAFT	34.9%	35.0%	3.4%	97
AGRICULTURAL	35.0%	35.0%	1.5%	54
BILLBOARDS	34.9%	35.0%	1.5%	42
COMMERCIAL/INDUSTRIAL	32.9%	35.0%	3.4%	93
MOBILE HOMES	35.1%	35.0%	1.8%	145
TOTAL PERSONAL PROPERTY	34.7%	35.0%	2.0%	647

2012-2013

REPORT OF ASSESSMENT RATIO STUDY

OUTLIER REPORTS

CLARK COUNTY NARRATIVE

2012-13 RATIO STUDY

Clark County annually reappraises all land and improvements. The assessor's website includes the past and current assessed and taxable values for land and improvements, previous sale data, building sketches when applicable, chronological aerial photography with measurement tools, plat maps, and other valuable information for each parcel.

NRS 361.333 requires a comparison of the assessed value of each type or class of property determined by the county assessor to the taxable value of that type or class of property within that county determined by the Department through appraisals of individual parcels. The comparison, or "ratio," is in compliance with statutory requirements if the ratio of assessed value to taxable value is 35%. Ratios less than 32% or more than 36% are considered to be under-or-over assessed. See *NRS 361.333(5)(c)*.

(a) Property Type	(b) Sample Size	(c) Samples in Compliance	(d) Samples out of Compliance	(e) Exception Rate
Vacant Land	57	57	0	0%
Single-Family Residential Land	130	130	0	0%
Multi-Family Residential Land	22	22	0	0%
Commercial and Industrial Land	58	58	0	0%
Agricultural Land	7	7	0	0%
Single Family Residential Improvements	130	124	6	5%
Multi-family Residential Improvements	22	20	2	9%
Commercial and Industrial Improvements	58	53	5	9%

PROCEDURES, ISSUES AND RECOMMENDATIONS

Improvement Discovery / Identification:

Procedure - County appraisers perform site inspections of improvements prior to occupancy to inspect interiors and current on-site minor improvements including porches, patios, and driveway area. Once an area is built-out, however, the assessor's office relies on building permits and/or annual aerial photography to capture any changes or new improvements to existing properties throughout the county.

Issue - During the physical inspection portion of this year's study, the department appraiser discovered some properties that included minor improvements that were not valued by the assessor's office. While most of these discoveries did not result in the properties being out of the range of tolerance for the level of assessment (32-36%), the issue still exists that undiscovered improvements may be escaping assessment on a much larger scale. Two of the department's samples revealed major changes upon review of the chronological aerial photos on the assessor website. This valuable tool also revealed other improvement discovery where no rear yard access was available. These were items that were most likely added without the proper building permits, or were simply over-looked during the review of aerial photography overlays by staff. Once an item is added to a property, but not captured on aerial review, it would continue to appear on the photo overlays but elude valuation.

Recommendation - The County advised that the current procedure is the only realistic method of yearly revaluation of the approximately 730,000 properties in Clark County, and the Department does not disagree. However, the Department recommends the county consider internal control measures to avoid property escaping taxation, such as, but not limited to, sample checks by review appraisers, sample checks against aerial photography from 3 or 5 years prior; or sample site inspections.

Depreciation:

Procedure - Upon the discovery of a new improvement on an existing property, the assessor's office adds this improvement to the property card or appraisal record. For example, if it is discovered that a swimming pool was constructed on a subject property, it is valued accordingly and placed in the record. The sum of all of the improvements are calculated and then depreciated based on the single year construction of the home. If the home was constructed in 1978, but the pool was later added in 2007, the pool would be depreciated based on the 1978 construction year of the home. This was also noted when reviewing county "hand" sketches for older properties where individual improvement construction years were labeled on the sketch, but not accounted for on the appraisal record. The assessor's office has indicated that they do add certain larger site

improvements such as detached garages, guest quarters, casitas, and pool houses on as a separate record from the older house so that it does get proper depreciation; sometimes even pools are added on as separate records if they are done at the same time as some of the other newer structures.

It is generally the smaller things that are added that may not get proper depreciation, like concrete, patios, fencing, etc., with pools possibly being the biggest item generally that falls in that category. Also, the assessor's office does correctly calculate the weighted age of a substantial addition or garage conversion.

Issue - NAC 361.124 reads: Determination of actual age of improvement or newly constructed addition to improvement. ([NRS 360.090](#), [360.250](#), [361.227](#), [361.229](#)) In determining the actual age of:

1. An improvement or newly constructed addition to an existing improvement, the county assessor shall use the actual year of construction, if it is available, or else an estimated year of construction.
2. An improvement that has been constructed over a period of years, the county assessor shall use the weighted average age of the improvement.

Recommendation - The Department recommends applying depreciation based on the age of each improvement. The assessor's office has indicated that a new Marshall and Swift costing system will be installed which is customized into the current CAMA (Computer Assisted Mass Appraisal) system. The new CAMA will have a new "Commercial" cost system only. The "Residential" costs will be the same costs based on the Marshall and Swift cost tables (manuals). This CAMA system will allow appraisers to depreciate individual items on a parcel at different ages. The new system is projected to be active the first part of 2013.

Cost System:

Procedure - The Clark County assessor's office currently employs a cost system where the replacement cost of all the improvements in the assessor's records are revalued by the mainframe computer loaded with the current Marshall and Swift cost tables directly from the manuals. Individual component adjustments are indicated on the Commercial Appraisal Record, and a cost per square foot for the individual structure is developed. This differs from the Marshall & Swift Estimator programs utilized by the department as all adjustments are made by entering the various building components and multipliers in the proper location and clicking a "calculate" tab when complete.

Issue - It is sometimes difficult to pinpoint the exact cause of an outlier due to the different appearance of the reports generated by the two costing systems. Both variations of the Marshall & Swift costing system used by Clark County and the Department are allowable per regulation.

NAC 361.128, (b) reads: For other improvements, use the standards in the cost manuals, including modifiers of local costs, published through or furnished by the Marshall and Swift Publication Company, as they existed on October 1 of the year preceding the closure of the roll for the appropriate assessment year, if the Executive Director approves it for use by county assessors in determining the costs of improvements. A computer program for determining cost furnished by the Marshall and Swift Publication Company may also be used. Other computer programs for determining cost which are based on costs published by the Marshall and Swift Publication Company may be used with the prior approval of the Executive Director.

Due to the many complexities and factors involved with the costing of a building, results may differ slightly depending on which variation of the Marshall and Swift costing structure is used. These minor differences will at times result in outliers based solely on cost calculations. Without a forensic analysis of each individual building component in each costing system, determining where the differences lie may not be possible. The Department has met with the Assessor and reviewed the cost system that they have in place and validated that it meets regulatory requirements.

Recommendation - The Department recommends the Assessor apply for approval of the new program to assure the records are current.

Obsolescence - Due to the recent economic decline, the assessor has applied economic obsolescence to improvements in various market areas uniformly and equally throughout Clark County as a result of an extensive analysis of recent market sales data. The assessor maintains a listing of sales of improved and vacant properties within the county. Once a land value is established, a ratio analysis is done by analyzing market areas and a factor for obsolescence is applied to all properties where taxable value exceeds market value within that strata based on the statistical analysis.

Agricultural Parcels - The methods used to determine the value of agricultural land are defined in the Nevada Administrative Code (NAC) Chapter 361A.180. The Nevada Tax Commission adopted revised permanent regulations that became effective on December 4, 2003. The Assessor has properly valued the agricultural land in the county.

Personal Property - The on-line system provides the ability to review declarations as well as all aspects of the way that the tax was calculated. The county discovers business property from a variety of sources including business licensing agencies, tenant lists and a variety of media publications; for aircraft, from airport tie-down lists, hangar owner records, FAA reports, flight schools, and referrals.

The county requests copies of sales agreements, receipts, and IRS depreciation schedules to estimate the personal property component of the sales price when personal property is purchased with real property for a lump-sum amount. When a declaration is not returned by the taxpayer, the county estimates a value based on cost manuals and comparable businesses. The county is developing benchmarks for certain industries where expected value ranges can be established. When a declaration does not meet benchmarks for the type of business, the county will conduct telephone interviews, internet research, and visit the site, as well as request additional documents to support reported values.

The personal property field portion of the ratio study examined 9 Billboard accounts; 9 Commercial/Industrial accounts; 1 Agricultural account; 15 Mobile Home accounts; and 6 Aircraft accounts, with a total of 273 records. There were 23 records out of ratio tolerance; however, most were the result of rounding issues or items with minimal values. Hard copy documents are scanned into the computer and were reviewed for each account.

CLARK COUNTY OUTLIER REPORT

2012-13 RATIO STUDY

APN	L	I	T	0 ENTITY I. D.	COMMENTS
162-01-601-023	32.61%	31.19%	31.92%	COM	This outlier was only slightly out of ratio tolerance. The Marshall & Swift Commercial Estimator software used by the DLGS appraiser produced a higher cost per sq ft for the main structure (Service Repair Garage) than that of the assessor. The assessor's costs, adjustments, and subsequent value were discussed, verified, and supported in the Marshall & Swift Commercial Manual. No recommendations for this sample.
162-03-211-009	34.38%	30.37%	31.74%	MFR	DLGS appraiser discovered three shed-type buildings in the rear yard of this property from a review of aerial photography available on the Clark County website. With no rear yard access, this proved to be a valuable tool for the discovery of improvements not visible from a ground inspection. Recommend a review of aerial photography on this parcel.
162-04-310-052	34.18%	10.25%	13.16%	SFR	Upon ground inspection, the DLGS appraiser noticed several variations on this subject from what appeared in the county records (attached garage, recent paving, etc.). A review of the year-by-year aerial photography on the county website revealed a possible total remodel of this house in approximately 2006 and the addition of a two car attached garage in 2010 or early 2011. Recommend appointment and full ground re-inspection for this property by county appraiser.
162-06-213-010	32.96%	19.00%	20.92%	SFR	Similar to the above sample, this outlier appeared to be the result of improvements added throughout the years that were over-looked by the assessor's office upon their yearly review of aerial overlays. There is also an issue with the Clark County valuation program that currently does not allow for individual depreciation of separate items such as the new swimming pool that replaced an old pool in the rear yard of this property in 2006. Per the assessor's office, this problem will be

CLARK COUNTY OUTLIER REPORT

2012-13 RATIO STUDY

APN	L	I	T	ENTITY I. D.	COMMENTS
					resolved with the implementation of the new CAMA system to be put into place in early 2013. Recommend appointment and full ground re-inspection for this property by a county appraiser.
162-19-701-008	32.62%	28.71%	29.56%	COM	The Marshall & Swift Commercial Estimator software used by the DLGS produced a higher cost per sq ft for the main structures (3 Storage Warehouses) than that of the assessor. The assessor's costs, adjustments, and subsequent value were discussed, verified, and supported in the Marshall & Swift Commercial Manual. No recommendations for this sample.
164-24-510-002	35.20%	31.11%	31.18%	COM	The reason for this outlier was the discovery of various minor improvements including a carport structure; above ground tank; large and small "Conex" boxes (storage); barrier posts; and concrete paving. Pursuant to Appendix F in the State Personal Property Manual, these items are considered to be fixtures and valued as real property. Recommend a re-inspection from ground level by the county appraiser.
177-33-510-007	32.12%	26.28%	26.83%	SFR	Several variations were noted upon inspection of this property. The DLGS appraiser valued as quality class 4.0 (county valued as 3.0); larger square footage (4,981 vs. 4,813); with a front 2 nd floor balcony porch; a rear yard large "grass hut" structure (valued as gazebo); and approx. 1,800 sq ft of concrete paving (county has 750 sq ft). Recommend appointment and full ground re-inspection for this property by county appraiser.
041-36-301-006	33.77%	26.94%	28.76%	SFR	The DLGS improvement value is greater than that of Clark County due to the discovery of a 600 square foot covered deck that is not presently valued by Clark County. It is recommended that Clark County re-inspect this property.
070-12-310-067	33.38%	29.16%	30.33%	SFR	The DLGS appraiser classified and

CLARK COUNTY OUTLIER REPORT

2012-13 RATIO STUDY

APN	L	I	T	ENTITY I. D.	COMMENTS
					valued this property as a manufactured home on the Marshall & Swift Residential Estimator software. The assessor also had this subject properly classified. The DLGS improvement value is slightly greater than that of Clark County. No recommendations for this sample.
070-13-710-066	33.27%	42.38%	39.80%	COM	The Marshall & Swift Commercial Estimator software used by the DLGS produced a lower cost per sq ft for the main structure (Mixed Retail w/ Residential Units and Basement) than that of the assessor. The assessor's costs, adjustments, and subsequent value were discussed, verified, and supported in the Marshall & Swift Commercial Manual. No recommendations for this sample.
001-16-203-009	35.00%	31.55%	33.64%	COM	The DLGS appraiser discovered and valued a new walk-up kiosk and additional concrete flat work. This resulted in a slightly higher improvement value than that of Clark County. It is recommended that Clark County re-inspect this property.
001-16-602-022	34.32%	31.13%	31.49%	MFR	The DLGS appraiser discovered and valued additional concrete flat work for new parking. This resulted in a slightly higher improvement value than that of Clark County. It is recommended that Clark County re-inspect this property.
001-19-512-003	32.99%	31.97%	32.09%	SFR	This outlier was only slightly out of ratio tolerance. Upon inspection, the DLGS appraiser determined that the subject "style" is that of a 1 ½ Story Single-Family Residence. The assessor has this structure valued as a 2 Story Single Family Residence.

ESMERALDA COUNTY NARRATIVE

2012-13 RATIO STUDY

All land is reappraised each year in Esmeralda County. The Nevada Tax Commission approved the Assessor's¹ request to reappraise all land, rather than apply a land factor in non-reappraisal areas in 2008. Beginning in 2011 the assessor began annual re-costing of all improvements though still reappraising 1/5 of the county physically each year.

NRS 361.333 requires a comparison of the assessed value of each type or class of property determined by the county assessor to the taxable value of that type or class of property within that county determined by the Department through appraisals of individual parcels. The comparison, or "ratio," is in compliance with statutory requirements if the ratio of assessed value to taxable value is 35%. Ratios less than 32% or more than 36% are considered to be under-or-over assessed. See *NRS 361.333(5)(c)*.

Property Type	Sample Size	Samples in Compliance	Samples out of Compliance	Exception Rate
Vacant Land	14	10	4	29%
Single-Family Residential Land	14	14	0	0%
Multi-Family Residential Land	7	2	5	71%
Commercial and Industrial Land	7	6	1	14%
Agricultural Land	7	7	0	0%
Single Family Residential Improvements	14	14	0	0%
Multi-family Residential Improvements	7	7	0	0%
Commercial and Industrial Improvements (Note 1)	7	3	4	57%

Note 1: Commercial and Industrial Improvements: Of the four outliers listed above, one was found in the reappraisal area for tax year 2012-2013 and three were found in the non-reappraisal areas for the

¹ All references to the Assessor means the Assessor or the Assessor's staff.

same tax year. .

PROCEDURES, ISSUES AND RECOMMENDATIONS

Marshall& Swift: The Assessor did not use the zone 3 seismic adjustment during work year 2010 but began utilizing it in 2011 since the default seismic adjustment was updated in M&S. As of 2011 all M&S calculations will reflect the use of Zone 3 since assessor began re-costing all improvements that year.

The Assessor is directly entering multipliers and not relying on the M&S ZIP code defaults.

Minor Improvements: Minor improvements are identified by the Assessor and valued from either the Marshall Swift cost manuals, the Assessor's Handbook of Rural Building Costs and (most commonly) internally prepared documents summarizing the most commonly used (in Esmeralda County) appraisal categories and property appraisal value tables. These documents are updated annually. These costs are derived directly from the statutorily approved cost manuals (Marshall & Swift and the Rural Manual), with reference columns that include Unit of Measurement, Total Cost; Base Cost; Section & Page from the corresponding manual, and the proper multipliers assigned to Esmeralda County.

The assessor does not employ lump sum costing but instead values minor improvements individually. When practical this is a best practice.

However there are instances where buildings are valued from rural manual data as "General Purpose" buildings (implying built by unskilled labor even when that does not seem to be the case). Assessor should consider using M&S in these instances and if necessary incorporating an adjustment for very low quality.

There were a few instances in which small minor improvements were not picked up in the reappraisal area but were not enough to create an outlier. In general, these are small decks, patio covers, etc. associated with personal property mobile homes plus older perimeter farm wire fencing. In contrast, nicer small sheds and pump houses (<120 SF) are valued even when not fastened to a foundation or slab. These examples usually did not cause an outlier.

Improvement Factor: The minimal numbers of improvement outliers suggests that the improvement factor has been working as intended.

New Construction Valuation: Esmeralda County does not have an official "building department". New construction is discovered byword of mouth, random observation and during the physical reappraisal of each area. In one instance, where construction was approximately 50% completed the appraiser classified an obvious commercial building as a "General Purpose Building" (from the Rural Manual) since the intended use of the building was unknown (no permits). The Department recommended the assessor use M&S based on a reasonable assumption as to the intended use and apply a "percent completed" factor to the value.

Land: Esmeralda County has a relatively large number of vacant land sales compared to other rural counties. The assessor is able to utilize these sales in valuing land and does not rely on abstraction, which would be difficult to use with so little new construction and almost no newer homogeneous neighborhoods in the county.

In the Goldfield area (and for the most part elsewhere in the county) the assessor does not make a distinction in value between residential and commercial land values. In Goldfield this practice is based on a study some time ago by the Department and the assessor. Per the assessor and ratio study findings this assumption remains valid. This facilitates the use of vacant sales (LUC 100) in valuing land throughout the county. Ratio study land values were usually in ratio based on recent sales (2008 – 2011) of similar size parcels without regard to LUC of the subject.

The exception to the above was noted in the “Multi-Family Residential Land” section of the outlier report and occurred since there are no sales of similar size parcels. Specifically this occurred with 2.25 acre parcels in the Silver Peak area and there are no sales (since at least 2005) of similar size parcels anywhere in the county. Assessor elected to leave value basically unchanged since “no justification on which to base a change” (i.e. no sales and no viable abstraction options). Department appraiser suggested maintaining yearly statistics on county wide trends of land values in order to have some justification for adjusting (or not) the value of such parcels over time.

Assessor applies adjustments for topography, utilities and access to some parcels however the files contain no documentation that supports these adjustments. Adjustments are based on assessor’s “local knowledge” and may be accurate however it was suggested that documentation supporting the adjustments be included in the files.

Assessor has also applied an across the board 10% reduction of land values over the past year. Again, property files did not contain supporting documentation.

Appraisal Records: Esmeralda County parcel files are neat, organized and generally up to date. New computerized sketches of improved properties are replacing old hand-drawn sketches as needed. Minor improvements are generally not included on the APEX sketch however the “Appraiser’s Information” sheet provides enough detail to distinguish existing from new minor improvements.

None of this information is available on-line to the general public on the Esmeralda County Assessor website. Assessor is aware of the need to make property information files available online.

Personal Property: Esmeralda County maintains proper records for Personal Property. Twenty-five accounts comprising 274 records were examined. After discounting rounding errors there were a total of 2 outliers spread among 2 separate accounts as a result of applying an incorrect life and 3 mobile home (MH) accounts for which there was no supporting documentation of original cost (e.g. DRS or bill of sale, etc.). Both “life” related outliers were corrected and two of the 3 issues with MH cost documentation were corrected by assessor

ESMERALDA COUNTY OUTLIER REPORT

2012-13 RATIO STUDY

A.O. = Assessor's Office

APN	L	I	T	ENTITY I. D.	COMMENTS
001-028-03	20.21%		20.21%	VAC	Based on sales of 4 similar size vacant parcels the assessor's value is low.
001-074-05	22.79%		22.79%	VAC	Based on sales of 4 similar size vacant parcels the assessor's value is low.
001-144-04	26.60%		26.60%	VAC	Based on the sale of 6 similar size vacant parcels in similar areas the assessor's value is low.
001-313-01	23.19%		23.19%	VAC	Based on sales of 4 similar size vacant parcels the assessor's value is low.
001-272-12	47.49%	34.36%	38.15%	MFR	Based on the sale of 6 similar size vacant parcels in Book 1 the assessor's value is high.
002-013-03	14.31%	32.49%	26.52%	MFR	There are no sales of similar size parcels (2.25 acre or anything close) anywhere in Esmeralda County going back to 2005. Assessor has chosen to leave value unchanged in the absence of similar vacant parcel sales. (Silver Peak area). Suggested assessor track annual trends relative to overall land values in Esmeralda as a means of adjusting up or down the original value of those parcels lacking sales data. Printed ratios are based on the sale of 1..2 – 1.5 acre parcels. Ratios based on sale of 5 acre parcels (next closest in size) are only slightly higher.
002-061-22	14.51%	34.47%	26.26%	MFR	Same situation as the above parcel.
002-061-29	20.21%	34.66%	29.93%	MFR	Based on 5 sales of vacant similar size parcels the assessor's value is low. Note this is a Silver Peak parcel (no vacant sales of any parcel in this area since at least 2005) thus sales of half acre rural properties in book 1 were used for comparison.
002-061-31	24.50%	33.93%	30.19%	MFR	Based on 5 sales of vacant similar size parcels the assessor's value is low. Note this is a Silver Peak parcel (no vacant sales of any parcel in this area since at least 2005) thus sales of quarter acre rural properties in book 1 were used for comparison.
001-213-06	35.36%	31.65%	32.22%	COM	Above ground construction is 50% masonry and 50% wood siding. A.O. valued as 100% wood siding.
001-213-18	35.81%	27.04%	28.97%	COM	A.O. values as a general purpose building

ESMERALDA COUNTY OUTLIER REPORT

2012-13 RATIO STUDY

APN	L	I	T	ENTITY I. D.	COMMENTS
					built by unskilled labor. Structure is part of (built same time as) a 2 story office building of identical construction.
001-236-02	35.55%	29.61%	29.90%	COM	A.O. valued the new construction on this site (finished shell) as a general purpose building built by unskilled labor. Construction is identical to existing fairly new 2 story commercial structure. This later structure is valued by A.O. as a 1 story commercial building (office/retail/townhouse) but is a 1.5 story building.
001-278-10	40.36%	35.69%	37.38%	COM	Assessor's taxable land value is approximately 14% higher than DOAS estimate.
					COMMENTS (Reappraisal area outliers)
007-301-34	34.44%	31.70%	32.39%	COM	Sewer hookups were overlooked on 27 trailer hookups. Assessor is updating the file.

EUREKA COUNTY NARRATIVE

2012-13 RATIO STUDY

Eureka County comprises 5 distinct appraisal areas which are defined by geography and township, range and section boundaries. Beginning in 2011, all land and improvements within the county are reappraised each year by the Assessor¹. Inspections are performed in the five appraisal areas on an annual basis.

NRS 361.333 requires a comparison of the assessed value of each type or class of property determined by the county assessor to the taxable value of that type or class of property within that county determined by the Department through appraisals of individual parcels. The comparison, or “ratio,” is in compliance with statutory requirements if the ratio of assessed value to taxable value is 35%. Ratios less than 32% or more than 36% are considered to be under-or-over assessed. See *NRS 361.333(5)(c)*.

Property Type	Sample Size	Samples in Compliance	Samples out of Compliance	Exception Rate
Vacant Land	21	21	0	0%
Single-Family Residential Land	21	21	0	0%
Multi-Family Residential Land	7	7	0	0%
Commercial and Industrial Land	8	8	0	0%
Agricultural Land	7	7	0	0%
Single Family Residential Improvements	21	20	1	.05%
Multi-family Residential Improvements	7	6	1	14%
Commercial and Industrial Improvements	8	8	0	0%

¹ All references to the Assessor means the Assessor or the Assessor’s staff.

PROCEDURES, ISSUES AND RECOMMENDATIONS

Marshall& Swift: The Assessor values property using Marshall Swift Valuation Service (Marshall Swift) software pursuant to NAC 361.128.

Marshall Swift utilizes quarterly “current cost” and “local conditions” multipliers that trend the published costs to a current date and adjust the costs by location. There are also multipliers that adjust the base cost of a structure to account for climate, hillside location, foundation and proximity to areas of seismic activity. The proper seismic category for the State of Nevada is Zone 3. A review of the Assessor’s files indicates that the seismic adjustment is currently being used in the valuation of single family and multi-family residential properties. The “current cost” and “local conditions” multipliers have been applied appropriately.

The Assessor is using the zip code default multipliers within the ADS system for residential properties. These multipliers are verified correct by the Assessor prior to implementation and have been confirmed correct by the Department.

Minor Improvements: Minor improvements are identified by the Assessor and valued from either the Marshall Swift cost manuals or the Assessor’s Handbook of Rural Building Costs which are updated annually. These manuals contain tables that typically indicate a unit cost based on a certain area that is usually expressed in square footage. The Department appraiser discovered that when the appraisal value tables are used, the Assessor typically values minor improvements having a specific area closest to the published table area. For example a 288 square foot wood deck will be valued using a cost published for a 300 square foot area. This results in a cost per square foot that does not truly reflect the cost for a 288 square foot area. It is recommended that the Assessor use interpolation in order to more accurately value the minor improvements taken from the value tables. Interpolation is the process of finding the value that lies between two other values. When the area of the subject falls between two areas in the cost tables, the cost for the subject area is interpolated from the known data.

New Construction Valuation: Eureka County does not have a building department therefore the Assessor discovers new construction while performing field inspections during annual physical reappraisal. Every two weeks, the Assessor reviews property ownership changes by examining instruments particular to the transfer of property. The assessor is correctly valuing and depreciating new improvements upon discovery.

Appraisal Records: Eureka County’s files are efficiently maintained and at least one prior year’s assessment information can be accessed for comparison. Computerized drawings are available for most property improvements. Most

assessment information is available on-line to the public via the Eureka County website.

Personal Property: The Eureka County Assessor's office maintains Personal Property records efficiently. 21 secured property accounts and 17 unsecured property accounts comprising 398 personal property items were examined. After adjusting for rounding errors, there are no outliers.

EUREKA COUNTY OUTLIER REPORT

2012-13 RATIO STUDY

NON= Non Reappraisal Area A.O. = Assessor's Office

APN	LAND	IMP	TOTAL	TYPE	COMMENTS
001-023-02	34.73%	28.65%	29.92%	MFR	Improvement outlier a result of the subject mobile home hookup improvements previously having a 30% reduction in value due to partial completion. The mobile home hookups have had the value reduction removed by the county. The current Marshall Swift costs result in the subject having a value that exceeds the Eureka County valuation without the reduction.
003-092-06	34.79%	72.66%	58.00%	SFR	Improvement outlier a result of the subject bunkhouse being partially removed from its foundation. This improvement was not valued by Department as it is deemed uninhabitable and adds no contributory value to the property. Eureka County has subsequently made changes to the roll as appropriate.

LINCOLN COUNTY NARRATIVE

2012-13 RATIO STUDY

All land is reappraised each year in Lincoln County. The Nevada Tax Commission approved the Assessor's¹ request to reappraise all land, rather than apply a land factor in non-reappraisal areas in 2007. Assessor is not yet doing annual re-costing of all improvements though may start this year. Assessor is physically reappraising 1/5 of the county each year. Reappraisal area for this ratio study is County Tax District 4 (Alamo)

NRS 361.333 requires a comparison of the assessed value of each type or class of property determined by the county assessor to the taxable value of that type or class of property within that county determined by the Department through appraisals of individual parcels. The comparison, or "ratio," is in compliance with statutory requirements if the ratio of assessed value to taxable value is 35%. Ratios less than 32% or more than 36% are considered to be under-or-over assessed. See NRS 361.333(5)(c).

Property Type	Sample Size	Samples in Compliance	Samples out of Compliance	Exception Rate
Vacant Land	15	11	4	36%
Single-Family Residential Land	15	15	0	0%
Multi-Family Residential Land	7	6	1	14%
Commercial and Industrial Land	7	7	0	0%
Agricultural Land	8	8	0	0%
Single Family Residential Imps. (Note 1)	15	11	4	27%
Multi-family Residential Imps.	7	7	0	0%
Commercial and Industrial Imps. (Note 2)	7	6	1	14%

Note 1: SFR Improvements: Of the four outlier listed above, all were found in the non-reappraisal areas for tax year 2012-2013

Note 2: Commercial and Industrial Improvements: The one outlier listed above was found in the Non-reappraisal area for tax year 2012-2013.

¹ All references to the Assessor means the Assessor or the Assessor's staff.

PROCEDURES, ISSUES AND RECOMMENDATIONS

Marshall & Swift: Assessor uses the ADS version of M&S for costing residential properties and the standalone version of M&S for costing commercial properties.

The Assessor did not use the zone 3 seismic adjustment during work year 2010 but began utilizing it in 2011 since the default seismic adjustment was updated in M&S.

In general there is a tendency for the quality class to be on the high side though assessor is making a concerted effort and noticeable progress to bring quality more in line with recommendations in the Residential Cost Handbook.

There is a tendency (in areas that have not been physically inspected) to value improvements based on previous assessor's drawings despite repeated instances where previous assessor's drawings (when verified) were determined to be inaccurate. Assessor is aware that, as time allows, drawing measurements need to be verified and new APEX drawings created in order to produce valid M&S cost estimates.

Minor Improvements: Minor improvements are identified by the Assessor and valued from either the Marshall Swift cost manuals, the Assessor's Handbook of Rural Building Costs and (most commonly) internally prepared tables summarizing the most commonly used (in Lincoln County) appraisal categories and property appraisal value tables. These documents are updated annually. These costs are derived directly from the statutorily approved cost manuals (Marshall & Swift and the Rural Manual), and the values include the appropriate local multiplier.

Based on field observations recommend the assessor pay more attention to the distinction between mobile home hookups and trailer hookups.

There were a few instances in which small minor improvements were not picked up in the reappraisal area but were not enough to create an outlier. In general, these are small decks, patio covers, etc. associated with personal property mobile homes plus older perimeter farm wire fencing. The Department recommends closer inspection of these types of properties.

The assessor does not employ lump sum costing but instead values minor improvements individually. When practical this is a best practice.

Improvement Factor: The minimal numbers of improvement outliers suggests that the improvement factor in the non-reappraisal areas is working.

New Construction Valuation: Lincoln County Building Department does not work closely with the Assessor's office. For the most part new construction is discovered by word of mouth, random observation, inspections during the physical re-appraisal of each area and occasionally from information provided by the building department. Other than new construction in the 4 towns in Lincoln County, most property owners do not go through the permit process for improvements. The Department recommends attempting to improve the working relationship between the two offices (could be mutually beneficial to both offices).

Land: Lincoln County has a moderate number of sales (recorded transfers) of vacant parcels, however the majority are not considered valid sales (land contracts, trades, 'sales' between family members, etc.). Many of the vacant sales are multiple parcel sales and (per the assessor) there are 'paper sales' to friends, business partners, etc. in an attempt to raise the perceived value of the parcels. This practice is especially prevalent in the Rachel area.

In the Rachel area assessor has developed a base lot formula predicated on the sale of 5 acre parcels (which are relatively numerous). \$1500/acre up to 5 acres plus \$500/acre over 5 acres. While this works well for 5 acre parcels (and slightly larger) the formula is also used for larger parcels (10, 20, 30 acre parcels, etc.). This practice was implemented to prevent (e.g.) a 20 acre parcel having a taxable value less than a 5 acre parcel based on sales data alone. However there is no evidence (sales) that the resulting taxable value for larger parcels is in fact accurate (due to a lack of valid sales data).

The Department recommended that the assessor research sales in "similar" areas (based on topography, proximity to 'civilization' and desirability) in different parts of the county and even extending the search to surrounding counties.

Vacant land (lots) in Pioche, Panaca, Caliente and Alamo have adequate sales to support assessor's values.

Assessor is directed to develop documentation to support topography (and any other) discounts applied to land. In general, existing discounts are "logically" accurate however there is no documentation supporting these reductions in value.

Appraisal Records: Lincoln Co. property files (paper copies) are in need of work to become tidy, detailed and organized. In fairness to the assessor (and her staff) their efforts have been focused on getting the electronic records updated and/or corrected since taking over from the previous assessor that did not rely on

electronic files. Information needed to run the office and create paper files is available in ADS and assessor is aware that at some point files will need to be cleaned up. Recommended that assessor visit other assessor offices for ideas on how to organize files.

None of the property file information is available on-line to the general public on the Lincoln County Assessor website. Assessor is aware of the need to make property information files available online. Note there is a GIS link on the assessor website however (in my experience attempting to access it remotely) it has never worked properly. Assessor's office is aware of the problem. The Department recommended that assessor develop a plan for upgrading online access of property information.

Personal Property: Lincoln County maintains proper records for Personal Property. Thirty-six accounts comprising 234 records were examined. After discounting rounding errors there was a total of 1 outlier as a result of applying an incorrect life. The "life" related outlier was corrected by the assessor

LINCOLN COUNTY OUTLIER REPORT

2012-13 RATIO STUDY

A.O. = Assessor's Office

APN	L	I	T	ENTITY I. D.	COMMENTS
001-072-07	17.16%		17.16%	VAC	Assessor's value for this parcel is low based on sales of 4 similar size parcels. Logically, assessor's value should reflect a topography based discount. Assessor noted a 50% discount but property file did not contain documentation supporting that discount.
001-092-29	16.53%		16.53%	VAC	Assessor's value for this parcel is low based on sales of 5 similar size parcels. Logically, assessor's value should reflect a topography based discount. Assessor noted a 50% discount but file did not contain documentation supporting that discount.
010-081-01	9.64%		9.64%	VAC	Assessor's value for this parcel is low based on sales of similar (District 5 and General County) VAC parcels. Discussed with assessor the use of sales of similar properties outside of Rachel, which she is not in favor of. Since no valid sales history for Rachel assessor has developed a base lot value of \$1500/ac up to 5 acres plus \$500/ac over 5 acres. Thus calculated base lot value for this parcel would be \$9125 and assessor's taxable value is \$12374 so parcel remains an outlier.
010-141-04	23.80%		23.80%	VAC	Assessor's value for this parcel is low based on sales of similar (District 5 and General County) VAC parcels. Discussed with assessor the use of sales of similar properties outside of Rachel, which she is not in favor of. Since no valid sales history for Rachel assessor has developed a base lot value of \$1500/ac up to 5 acres plus \$500/ac over 5 acres. Calculated base lot value for this parcel is \$10800 and assessor's taxable value is \$15814 so parcel remains an outlier
002-074-08	32.87%	37.99%	36.81%	SFR	A.O. had the quality level set considerably too high for this SFR. Assessor is aware of the inherited problems in Panaca and is working to correct them in the upcoming appraisal cycle.
002-131-11	32.10%	18.94%	23.6%	SFR	A.O. Specified incorrect siding, fireplace chimney height and inadvertently left off a daylight basement with same sq. footage

LINCOLN COUNTY OUTLIER REPORT

2012-13 RATIO STUDY

<i>APN</i>	<i>L</i>	<i>I</i>	<i>T</i>	<i>ENTITY I. D.</i>	<i>COMMENTS</i>
					as house. Assessor is aware of the inherited problems in Panaca and is working to correct them in the upcoming appraisal cycle.
003-087-03	33.12%	37.07%	36.13%	SFR	A.O. included a detached garage which didn't exist – and owner indicated there had not been one (and no old photos in the file). A.O. perhaps mistook a 120sf (exempt) shed/workshop as the garage.
003-092-02	35.38%	30.71%	32.02%	SFR	Large single story double concrete block fireplace/chimney was not picked up. Also missed small concrete open porch. Both are depicted in old file photos.
010-164-01	43.12%	35.04%	37.05%	MFR	There are no sales of parcels this size (or anything close) in or around Rachel. Thus assessor relies on a base lot calculation which in this case would produce a taxable value of \$22,105. Assessor's value on this parcel is \$27,878 which, compared to assessor's base lot formula, results in an outlier.
002-161-16	34.52%	31.51%	32.00%	COM	Main building measured and drawn incorrectly. Secondary building not included in calculations. Assessor is aware of the inherited problems in Panaca and is working to correct them in the upcoming appraisal cycle.

MINERAL COUNTY NARRATIVE

2012-13 RATIO STUDY

All land is reappraised each year in Mineral County. Group #1 Walker Lake and Northern 1/3rd of county, Books 5, part of 6 & all of Book 8. Group #2 Mina, Luning and southern 1/3rd of county, Books 2, 3 and part of Books 6 & 7. Group #3 Subdivisions of Town All in Book 1 pages 4,5,19,20,21,28,36,37,38,40,41. Group #4 North 1/2 of Town 5th to 10th and A to P, the base, part of book 6 pages 63,64,65,57,59. Group #5 South 1/2 of Town from 5th to 1st and from A to O.

NRS 361.333 requires a comparison of the assessed value of each type or class of property determined by the county assessor to the taxable value of that type or class of property within that county determined by the Department through appraisals of individual parcels. The comparison, or “ratio,” is in compliance with statutory requirements if the ratio of assessed value to taxable value is 35%. Ratios less than 32% or more than 36% are considered to be under-or-over assessed. See NRS 361.333(5)(c).

(a) Property Type	(b) Sample Size	(c) Observations in Compliance	(d) Observations out of Compliance	(e) Exception Rate
Vacant Land	27	24	3	11%
Single-Family Residential Land	27	27	0	0%
Multi-Family Residential Land	7	5	2	29%
Commercial and Industrial Land	15	12	3	20%
Agricultural Land	6	6	0	0%
Single Family Residential Improvements	27	7	20	74%
Multi-family Residential Improvements	7	3	4	57%
Commercial and Industrial Improvements	15	7	8	53%
Agricultural Improvements	9	8	1	11%

Note 1: Single-family Residential Improvements: Six observations in the non-

reappraisal area, twenty-one observations were located in the re-appraisal area. Six properties were out of compliance in the non- re-appraisal area, and fourteen properties were found to be out of compliance in the re-appraisal area.

Note 2: Multi-family Residential Improvements: There were two in the non-reappraisal area five observations located in the re-appraisal area. One was out of compliance in the non-reappraisal area and three out of compliance in the re-appraisal area.

Note 3: Commercial and Industrial Improvements: Two in the non-reappraisal area thirteen observations located in the re-appraisal area. One was out in non-reappraisal area. seven were out of compliance in the re-appraisal area.

Note 4: Agricultural Improvements: All nine observations were located in the non reappraisal area. One error (on 3 parcel numbers) was out of compliance.

PROCEDURES, ISSUES AND RECOMMENDATIONS

Minor Improvements: Minor improvements were identified by the assessor and valued from either the Marshall & Swift cost manuals or the Rural Building Cost Manual. The preferred method is to value all improvements by what is actually on the parcel. Subject in Mina, an old Motel/Bar has had attempts to rehab it several times but is no longer up to code and would be a tear-down. The assessor needs to reflect what is on the property now and have a proper sketch of the property. The Department recommends the assessor value what is actually on the property. Depreciation and obsolescence is a problem for Mineral County. Many buildings are older than 50 years. One area of town has older homes that most have converted their small garages to livable area. If obsolescence is used here it should be documented in each file.

Use of Rural Building Manual: Costs from the Rural Building Manual were inappropriately used. The Rural Building Manual is limited to the valuation of structures where unprofessional or unskilled labor was used to build the improvement; however, the costs were applied to certain improvements which were built by professional labor, resulting in the under valuation of improvements. After these observations were made, the Assessor addressed the issue and corrections were implemented.

New Construction Valuation: The Assessor discovers nearly all new construction using the county building inspector and permits. New construction that is discovered before the close of the roll in December is included at that time. New construction that is discovered after the close of the roll, but before July 1st, is included on the supplemental roll. However, many improvements are put in place by property owners without the need or use of a county permit and therefore are not discovered until reappraisal. The Assessor is correctly valuing

and depreciating new improvements once discovered. A review of several properties with new construction revealed that the improvements are being captured and when measured and valued, are done so correctly, with the exception of those stated in the minor improvement section above.

Marshall& Swift:

Occupancy type in the Marshall& Swift manual needs to be more closely reviewed when determining quality class. Quality classes are not consistently being used to accurately classify commercial buildings resulting in undervaluation. The Department recommends the Assessor review the quality class of all commercial properties during reappraisal to make accurate identifications, using the information provided in Marshall& Swift.

The seismic and energy adjustments are not being used currently on residential properties. It is recommended that the assessor utilize this adjustment as stated in the Marshall& Swift Residential Manual to Zone 3 and as directed by the Department's Guidance Letter received by the Assessor's in July 2010. As of work year 2011, the Assessor was still not applying this adjustment. It is further recommended that Mineral County use the energy adjustment allowed for in Marshall & Swift as county building codes require homes be built to this specification. The majority of outliers were due to non use of seismic and energy adjustments in Marshal and Swift. This adjustment on older homes can cause greater discrepancy in value. Current cost vs the improvement factor also contributed to the high number of outliers.

Single Family Residence: Two properties in the re-appraisal area had age weighting issues with several additions on one house with the original date of 1952. The Department recommends that the Assessor's Office create a procedure of documenting those parcels or areas which are given obsolescence, how much was applied during each given year and be able to produce documentation quantifying those adjustments. It is recommended that the Assessor create a database or spreadsheet of those parcels or areas which were given obsolescence in order to keep a running history for defense of values and future trending.

Appraisal Records: Mineral County's files are efficiently maintained and a minimum of one prior reappraisal cycle can be found for comparison. Agricultural property records are in general good order, but care should be taken with land be taken in and out of agricultural use. These must be noted more clearly on files. Continued agricultural use must be documented. The Department recommends review of mining claims to ensure properties are properly taxed. A data base needs to be constructed from the existing records to be handled more effectively.

Land Sales coding: The Assessor has done a good job compiling sales data but needs to produce a better procedure to interpret that data. The Department

recommends the Assessor design a sales data base. Internet sales should be coded for validity and not excluded. The Department recommends coding be added to reference “utilities available” for vacant land.

Golf Course and Open Space Land: The Department recommends that the golf course and open space land be valued every year. The value and the property must appear on the roll even if exempt. The golf course land and open space land should be valued with the steps in the Agricultural Bulletin. There is a new section adopted by the Nevada Tax Commission for 2012-2013. The assessor will be responsible for this new calculation in the 2013-2014 tax year.

Exempt Properties: All properties need to be valued by statute. **NRS 361.045** Land and Improvements. This has not been done on government, state or county properties.

NRS 361.050, .055,.060,.0605,.061,.062,.065

All outliers have been corrected or addressed by the Assessor .

Personal Property: The Assessor organizes Personal Property records very efficiently. 39 Accounts with a total of 180 records were examined. After adjusting for rounding there were 8 outliers. All were out due to calculation errors. Multipliers were correct, assessed values were not listed, taxable values were used.

Two aircraft have questionable purchase values, per the declaration of value. It is recommended that the Assessor require better documentation to support these values.

ⁱ Please see Outlier Report for details.

MINERAL COUNTY OUTLIER REPORT

2012-13 RATIO STUDY

APN	L	I	T	ENTITY I. D.	COMMENTS
Non-Reappraisal					
008-013-05	35.11%	27.27%	28.27%	SFR	Did not calculate other improvements and basement must check multiplier, addition of improvements, and square footage. No Marshall & Swift cost sheet. Undocumented depreciation, seismic adjustment
008-017-20	34.85%	39.43%	38.35%	SFR	Check multiplier, addition of improvements, and square footage. No Marshall & Swift cost sheet. Undocumented depreciation. Quality class, seismic adjustment, and Apex drawing needed.
008-053-24	33.58%	15.78%	23.07%	SFR	Improper use of Rural Manual, incorrect square footage, no longer on web for information. Sale? Split? Seismic adjustment
008-072-09	35.77%	46.23%	44.27%	SFR	No Marshall & Swift cost sheet. Different square footage. Check override for actual s.f. for modular. Garage stick built cost. Quality class, seismic adjustment
008-092-13	35.02%	25.27%	27.91%	SFR	Conflicting ages in file, last Marshall & Swift sheet dated 1999. Flat work not accounted for. Seismic adjustment
008-120-22	34.38%	30.04%	30.19%	SFR	No Marshall & Swift cost sheet. Deck measured but cost not calculated, no Apex sketch. Quality class, seismic adjustment
001-102-06	35.10%	25.28%	28.28%	MFR	More than 50 years depreciation, seismic adjustment
001-113-03	33.92%	27.72%	32.94%	VAC	New fence and no year on mobile hook-ups non reappraisal area.
003-033-06	34.43%	28.87%	30.16%	COM	Old bar/motel under rehab, new T1 exterior on one wall, sheds demolished, large slab with I beams usable. Non re appraisal area.
Reappraisal					
001-081-04	32.40%	33.36%	33.15%	SFR	The subject property has had 2 additions changing the weighted year to 1975 with 50 years depreciated, BUT DID NOT SHOW AS OUTLIER. Seismic adjustment
001-101-06	32.01%	13.41%	18.84%	SFR	Mineral County used more than 50 year's depreciation on this subject. Seismic adjustment
001-111-03	34.36%	20.98%	25.46%	SFR	The DLGS appraiser found 40 more feet in the footprint of this subject. Recommend appointment and full ground re-inspection for this property by county appraiser. Seismic adjustment
001-112-04	32.01%	21.51%	25.20%	SFR	Mineral County used more than 50 year's depreciation on this subject. Seismic adjustment
001-112-14	35.10%	26.49%	28.66%	SFR	Mineral County used more than 50 year's depreciation on this subject. Seismic adjustment

MINERAL COUNTY OUTLIER REPORT

2012-13 RATIO STUDY

APN	L	I	T	ENTITY I. D.	COMMENTS
001-144-04	33.53%	26.61%	29.34%	SFR	Mineral County used more than 50 year's depreciation on this subject. Seismic adjustment
001-294-18	33.80%	66.21%	44.75%	COM	This difficult subject has 4 buildings two larger buildings were cost on Marshall & Swift the other two 192 s.f. and 220 s.f. were cost on the rural manual using non farm labor cost. The assessor is reminded to use all cost available, insulation, heat and plumbing where applicable.
001-046-03	13.52%	34.12%	30.49%	COM	LAND needs adjustment Unequal %.
001-224-15	34.43%	7.62%	16.65%	SFR	The DLGS value is based on Marshall & Swift valuation. Assessor should not use Rural Manual cost in town. Seismic adjustment
001-262-01	35.10%	11.69%	19.79%	SFR	The DLGS improvement value is greater than that of Mineral County due to the discovery of additional 121 square feet and improved quality class do to remodel. Concrete has been removed. It is recommended re inspection and sketch done on Apex. Seismic adjustment
001-283-04	33.27%	31.16%	31.58%	SFR	Mineral County did a double age weighting error the new year should be 1986, seismic adjustment not used. No Marshall & Swift sheet in file.
001-284-05	33.27%	39.61%	38.07%	SFR	Mineral County used an incorrect multiplier on the SRF subject. Apex sketch is needed. Seismic adjustment
001-302-01	32.48%	24.73%	46.12%	SFR	The DLGS improvement value is more than that of Mineral County do to no plumbing fixtures accounted by the assessor. Quality Class is too low for this property and wood shake should be replaced with comp shingle. Seismic adjustment
001-325-20	33.91%	50.43%	46.92%	SFR	The DLGS improvement value is less than that of Mineral County. New mobile with different square foot amounts. New sketch in Apex and re-calculate. Quonset hut is on different parcel owned by the same person. Seismic adjustment not used.
001-254-04	32.92%	15.40%	20.98%	MFR	Quality class, DLGS appraised this as a duplex and now is classified as a single family dwelling. Cost sheet as of 12/08 Seismic adjustment not used.
001-044-20	35.53%	36.47%	36.09%	SFR	Quality class, rounding, seismic adjustment
006-440-01	128.84 %	31.93%	70.93%	MFR	LAND Parcel split map not completed at time of study, DLGS land value based on land sales of 40 ac parcels in Blk 6. Mean of

MINERAL COUNTY OUTLIER REPORT

2012-13 RATIO STUDY

APN	L	I	T	ENTITY I. D.	COMMENTS
					sales from 06,07,08,09,10. \$14,220. Seismic adjustment
001-222-08	37.00%	23.49%	26.06%	MFR	LAND Assessor needs to review sales in this area. Quality class, weighted age, 2 additions different times. Seismic adjustment
001-202-12	35.51%	26.05%	28.58%	SFR	The Assessor used more than 50 year's depreciation. Check multipliers, interpolate shed cost. Seismic Adjustment.
001-046-03	19.98%	34.12%	31.64%	COM	LAND Non reappraisal area Assessor needs better sales data base to deal with mass appraisal techniques.
001-092-06	32.20%	31.38%	31.53%	COM	Misuse of Rural Manual non farm labor constructed
001-255-22	33.95%	18.24%	20.22%	COM	Improper use of Rural Manual, non farm labor constructed metal building.
001-294-02	33.22%	30.90%	31.17%	COM	Quality class
003-071-01	49%	360.81 %	231.53 %	COM	Recommend inspection, measurement and photos. Assessor's records do not reflect what is on the property. The assessor has corrected this subject and adjusted land to reflect sales in this area.
006-550-09	30.29%		30.29%	VAC	Land small parcel in large parcel area 2.33Ac Mean s.f. 0.182
006-420-51	15.50%		15.50%	VAC	Lower to comparable 40 parcels at 217 per ac. Talk to assessor, possible mine value.

STOREY COUNTY NARRATIVE

2012-13 RATIO STUDY

All land is reappraised each year in Storey County. The Nevada Tax Commission approved the Assessor's¹ request to reappraise all land, rather than apply a land factor in non-reappraisal areas, in 2008. Storey County conducts a full physical reappraisal of all improvements in 1/5 of the county each year and applies the NTC approved improvement factor to the other 4/5. An independent contractor is responsible for the valuation of the Industrial Area of Storey County each year for land and new construction and every 5 years for re-appraisal of all improvements.

NRS 361.333 requires a comparison of the assessed value of each type or class of property determined by the county assessor to the taxable value of that type or class of property within that county determined by the Department through appraisals of individual parcels. The comparison, or "ratio," is in compliance with statutory requirements if the ratio of assessed value to taxable value is 35%. Ratios less than 32% or more than 36% are considered to be under-or-over assessed. See NRS 361.333(5)(c).

Property Type	Sample Size	Samples in Compliance	Samples out of Compliance	Exception Rate
Vacant Land	28	24	4	14%
Single-Family Residential Land	28	25	3	11%
Multi-Family Residential Land	7	7	0	0%
Commercial and Industrial Land	14	14	0	0%
Agricultural Land/Mining	7	7	0	0%
Single Family Residential Improvements (Note 1)	28	16	12	43%
Multi-family Residential Improvements (Note 2)	7	6	1	14%
Commercial and Industrial Improvements (Note 3)	14	12	2	14%

¹ All references to the Assessor means the Assessor or the Assessor's staff.

Note 1: Single Family Residential Improvements: Of the 12 outliers listed above, 11 were found to be in the 4/5 of the county which had the improvement factor applied for the 2012-2013 tax year. 8 of those were located in Rainbow Bend and had incorrect obsolescence applied.

Note 2: Multi-Family Residential Improvements: The only outlier found was in the 4/5 of the county which had the improvement factor applied for the 2012-2013 tax year.

Note 3: Commercial and Industrial Improvements: Of the 2 outliers listed above, 1 was found in the 4/5 of the county which had the improvement factor applied for the 2012-2013 tax year but no paperwork was in file to determine cause..

PROCEDURES, ISSUES AND RECOMMENDATIONS

Marshall & Swift: The Assessor's Office began using the Zone 3 Seismic Adjustment during work year 2011. It will be a full reappraisal cycle (5 years) before all property in the county reflects the Zone 3 adjustment. Several of the residential outliers are due to the lack of this adjustment.

The Assessor's Office is using the Reno multipliers within the ADS system for Residential properties. These multipliers are verified correct by the Assessor prior to implementation and have been confirmed correct by the Department. The previous Ratio Study found that Storey County was in violation of NRS 361.229 by incorrectly age weighting homes that were fully depreciated prior to new construction. Most of these properties appear to be in the Virginia City and Gold Hill area. It was not corrected after the Department brought it to the Assessor's attention in 2008 but the new Assessor began correcting these properties in 2011 and will continue to correct them as they come up for reappraisal. Attached garages are not being age weighted with home additions when built as part of the home structure but remaining at the original year of construction. It is recommended that the Assessor correct these while correcting the previously mentioned issue.

Several outliers were caused by missing A/C units. The need to discover and value A/C units was brought to the attention of the Assessor's Office. The staff will check for the existence or lack of A/C units and value them beginning in the next reappraisal cycle and will continue to do so until all areas have been reappraised.

Minor Improvements: Minor improvements are identified by the Assessor's Office and valued from either the Marshall & Swift cost manuals or the Assessor's Handbook of Rural Building Costs. The new Assessor has implemented an electronic program for small improvements and depreciation which has already been implemented by many other counties throughout the state. This will greatly reduce errors caused by hand calculations and once all properties have been entered into this program, will reduce the workload for staff. It will take a full reappraisal cycle to have all properties entered. When the year a small improvement is unknown, it is best practice to estimate the year built utilizing known information and applying an estimated age in lieu of simply applying the same year of the building to the improvement in question as instructed in NAC 361.124. Due to a fire that destroyed all county records many years ago, all old, fully depreciated homes have a year of 1900 placed on them. It is recommended that as homes are reappraised, that a year is determined by utilizing known information if available and applying an estimated age in lieu of simply using 1900. *Physically* inspecting 1/5 of the county each year to capture any non permitted improvements added or removed is best practice and is being done by the Assessor's Office.

New Construction Valuation: The Assessor's Office discovers new construction using the county building permits, taxpayer notification and physical inspection. Nearly all new construction is discovered in this manner. New construction that is discovered before the close of the roll in December is included at that time. New construction that is discovered after the close of the roll, but before July 1st, is included on the roll log. However, many improvements are put in place without the need or use of a county permit and therefore are not discovered until physical reappraisal. It was found that the assessor is correctly valuing and depreciating new improvements once discovered. A review of several properties with new construction revealed that improvements are being captured and measured and are done so accurately by the Assessor's Office with the exception of those stated in the minor improvement section above.

Obsolescence: The Assessor has applied obsolescence to two areas of the county, Rainbow Bend and specific parcels within the Industrial Area. The Department reviewed a sampling of the properties within the scope of the Ratio Study and found the Assessor's final improvement value in Rainbow Bend is *not* supported. This area was not given enough obsolescence resulting in over market value outliers. The Assessor discovered this after the roll closed but before it was brought to her attention by the Department and has taken steps to correct during the re-opened roll period. The Assessor has no documentation to support obsolescence adjustments made in the Industrial Area. Adjustments made did not match obsolescence percentages supplied by their independent contractor and those percentages did not contain any supporting documentation

for *how* they were established. When current costs were compared to those containing obsolescence within the sample, an outlier did not result. This does not, however, eliminate the need for the Assessor's Office to have documentation to support adjustments. The Department recommends that the Assessor's Office create a procedure of documenting those parcels or areas which are given obsolescence, how much was applied during each given year and be able to produce documentation quantifying those adjustments.

Land: In order to properly adjust land for various positive or negative characteristics, all adjustments must be supported by market data and documented in the property record. The Department recommends that the Assessor's Office create a procedure of documenting and quantifying adjustments to the land and updating them periodically to reflect changes to the market that affect the adjustments made to areas and/or characteristic types. It is recommended that a manual or spreadsheet be maintained of all general adjustments made throughout the county in addition to specific adjustments within individual property records.

Of particular concern is the Industrial Area of Storey County. The Assessor's Office does not have appropriate documentation in office to support how values were arrived at in this area. The documentation the office does have is not consistent with the values listed on the roll, nor is the data to support adjustments made to the land. It is important that all information pertaining to the valuation of land be obtained and maintained each year within the Assessor's Office.

Because all of the land valuation was done by the prior Assessor who did not maintain discernable records of how land values were developed, the new Assessor had difficulty setting values without a useable sales/valuation database and historical information of past sales and values set. The Department recommends that the Assessor's Office establish a system of land valuation that documents how values were arrived at for the various market areas. It is recommended that as time permits or while establishing values from year to year, the Assessor's Office gather what historical information they can find and organize it in such a manner as to enable them to utilize it as a tool for additional support of values arrived at using authorized methods. This will assist in establishing accurate data for allocation, finding sales and trending patterns, maintaining a historical record of sales and/or values for understanding market area changes as well as use in training new staff to understand the various markets within the county.

Appraisal Records: Storey County's files contain a hand sketch or Apex, M&S, and small improvement sheets, if they have been entered into the computer. Small improvements for the properties not yet entered into the new computer program are on the M&S with construction year and are hand depreciated on the M&S form. The new Assessor is working to transition all hand calculated items into electronic form.

One outlier in the sample could not be reconciled because part of the required paperwork was missing. Attempts by the Assessor to obtain these copies from the independent contractor produced no results. The current process for receiving information from the contractor has been in place for many years. With the growing expectation of transparency this process is no longer feasible. The Department recommends that the Assessor put procedures in place with the contractor to receive copies of all valuation and support documentation for any improvements, land and adjustment values set to ensure full compliance with NAC 361.146. The Assessor is ultimately responsible for ensuring that the values are complete and correct for all properties in the county. It is important to have all documents available within the office should the need arise to defend a value and the contractor is not available to produce or defend their work in a timely manner.

Personal Property: 14 accounts with 61 records were examined. After adjusting for outliers caused by rounding, there were two valid outliers. One was caused by a life determination based on a general category vs. the specific item and the other one by a computer cost index calculation error on a mobile home. The Assessor's Office ran a query on all mobile homes with an age prior to 1982 to check for any other accounts that may have experienced the same computer issue and corrected them. This one account was the exception. Both outliers have been corrected by the assessor's office.

STOREY COUNTY OUTLIER REPORT

2012-13 RATIO STUDY

RA= Reappraisal Area				FA=Improvement Factor Applied	
APN	L	I	T	ENTITY ID	COMMENTS
01-071-03	36.15%	31.56%	32.68%	RA-SFR	AO did not value AC. Will be corrected at reappraisal 2016 Land Value just barely out recommend no adjustment
01-086-20	33.37%	27.33%	30.86%	RA-COM	AO did not value Storage garage retail store has 2 types of siding, Dept found more Asphalt and less spindle fence. To be corrected in 2012
001-091-04	31.71%	33.43%	33.02%	SFR	Land Value just barely out recommend no adjustment
002-011-14	36.59%	na	36.59%	VAC	Land Value just barely out recommend no adjustment
02-081-11	34.55%	36.17%	36.12%	FA-MFR	Sq ft difference, rough ins valued as plumbing fixtures, Zone 3 and current cost vs improvement factor in non-reappraisal area. Reappraisal 2013
02-141-06	34.46%	42.70%	38.71%	FA-SFR	Incorrect Weighted Age, Zone 3 Will be corrected during reappraisal 2013
002-141-14	27.29%	33.34%	32.60%	SFR	Land undervalued
03-122-34	35.10%	30.11%	31.28%	FA-SFR	Incorrect story, style, roof type and sq ft, no basement, Zone 3 AO will correct at reappraisal 2012
003-151-14	22.72%	na	22.72%	VAC	Land undervalued Assessor adjusted value down due to continued decrease in value after lien date
003-152-01	22.72%	na	22.72%	VAC	Land undervalued Assessor adjusted value down due to continued decrease in value after lien date
03-273-10	35.63%	31.26%	32.20%	FA-SFR	Quonset Steel bldg vs Steel Bldg AO to correct at reappraisal 2015

STOREY COUNTY OUTLIER REPORT

2012-13 RATIO STUDY

APN	L	I	T	ENTITY ID	COMMENTS
03-273-12	33.64%	31.55%	32.03%	FA-SFR	Current cost vs improvement factor in non-reappraisal area
03-296-01	32.40%	31.90%	31.96%	FA-SFR	Zone 3
03-391-07	35.46%	30.14%	31.04%	FA-MFR	Zone 3, A/C not valued and garage year incorrect
003-501-02	31.94%	na	31.94%	VAC	Land in area w no sales in 20+ yrs used most comp in other area. Value just barely out recommend no adjustment
03-523-03	32.81%	56.86%	48.22%	FA-SFR	A/C not valued, current cost vs improvement factor in non-reappraisal area. AO applied 25% OBS should have been 50% Corrected OBS
03-542-11	32.81%	56.20%	46.57%	FA-SFR	Wood Skirting not valued, A/O applied 25% OBS should have been 50% Corrected OBS
03-543-06	32.81%	54.28%	47.83%	FA-SFR	A/C not valued, current cost vs improvement factor in non-reappraisal area. AO applied 25% OBS should have been 50% Corrected OBS
03-545-14	32.22%	52.43%	45.92%	FA-SFR	Zone 3, AO applied 25% OBS should have been 50% Corrected OBS
03-552-14	32.81%	52.21%	45.84%	FA-SFR	Zone 3, AO applied 25% OBS should have been 50% Corrected OBS
04-121-38	32.09%	47.53%	44.00%	FA-SFR	Incorrect Weighted Age, Zone 3, current cost vs improvement factor in non-reappraisal area.
04-161-24	34.88%	22.09%	25.69%	FA-COM	Unknown reason for outlier, AO does not have any valuation paperwork for this property