



STATE OF NEVADA
DEPARTMENT OF TAXATION

Web Site: <http://tax.nv.gov>

1550 College Parkway, Suite 115
Carson City, Nevada 89706-7937

Phone: (775) 684-2000 Fax: (775) 684-2020

Call Center (866) 962-3707

LAS VEGAS OFFICE

700 E. Warm Springs Rd.
Second Floor

Las Vegas, Nevada 89101

Phone: (702) 486-2300 Fax: (702) 486-2373

RENO OFFICE

4600 Kietzke Lane
Building L, Suite 235
Reno, Nevada 89502

Phone: (775) 687-9999
Fax: (775) 688-1303

STEVE SISOLAK
Governor

JAMES C. DEVOLLD
Chair, Nevada Tax Commission
SHELLIE HUGHES
Executive Director

NEVADA TAX COMMISSION
NOTICE OF HEARING

March 29, 2022

CERTIFIED MAIL – 9171 9690 0935 0270 6529 51

TRENT THOLEN
DOUGLAS COUNTY ASSESSOR
PO BOX 218
MINDEN, NV 89423

Date and Time: May 2, 2022 - 9:00 a.m.

You may participate by using Zoom, by telephone or in person. Please connect by Zoom or by telephone between 8:15 a.m. and 8:45 a.m. on the date of the meeting.

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When prompted to provide the Meeting ID, please enter: 837 0126 2556#

To dial in by telephone, dial: US: +1 669 900 9128 or +1 253 215 8782 or

+1 346 248 7799 or +1 646 558 8656 or +1 301 715 8592 or +1 312 626 6799

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You may also attend at either of the following physical locations:

Nevada Department of Taxation
1550 E. College Parkway
Carson City, Nevada 89706

Nevada Department of Taxation
700 E. Warm Springs Rd, Suite 200
Las Vegas, Nevada 89119

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Legal Authority and Jurisdiction of the Nevada Tax Commission: NRS 360.215

The Nevada Department of Taxation will present to the Nevada Tax Commission for its review, approval, or adoption the following:

2022-2023 Ratio Study: Pursuant to NRS 361.333

NRS 361.333(4) requires the presence of the Board of County Commissioners and the County Assessors, or their representatives for the purposes of the Ratio Study for the following counties:

Douglas County, Humboldt County, Lyon County, Nye County, and Washoe County

If you have any questions, please call 775-684-2095.


Jeffrey Mitchell, Deputy Director

cc: Nevada Tax Commission



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ANDY HEISER
HUMBOLDT COUNTY ASSESSOR
50 W FIFTH STREET
WINNEMUCCA, NV 89445

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TROY VILLINES
LYON COUNTY ASSESSOR
27 S. MAIN STREET
YERINGTON, NV 89447

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SHEREE STRINGER
NYE COUNTY ASSESSOR
160 N. FLOYD DRIVE
PAHRUMP, NV 89060

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MIKE CLARK
WASHOE COUNTY ASSESSOR
PO BOX 11130
RENO, NV 89520-0027

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MARK GARDNER, CHAIRMAN
DOUGLAS COUNTY COMMISSION
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MINDEN, NV 89423

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RON CERRI, CHAIRMAN
HUMBOLDT COUNTY COMMISSION
50 W 5TH ST #205
WINNEMUCCA, NV 89445

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KEN GRAY, CHAIRMAN
LYON COUNTY COMMISSION
27 S. MAIN STREET
YERINGTON, NV 89447

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FRANK CARBONE, CHAIRMAN
NYE COUNTY COMMISSION
2101 CALVADA BLVD STE 200
PAHRUMP, NV 89048

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VAUGHN HARTUNG, CHAIRMAN
WASHOE COUNTY COMMISSION
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The Nevada Department of Taxation will present to the Nevada Tax Commission for its review, approval, or adoption the following:

2022-2023 Ratio Study: Pursuant to NRS 361.333

NRS 361.333(4) requires the presence of the Board of County Commissioners and the County Assessors, or their representatives for the purposes of the Ratio Study for the following counties:

Douglas County, Humboldt County, Lyon County, Nye County, and Washoe County

If you have any questions, please call 775-684-2095.


Jeffrey Mitchell, Deputy Director

cc: Nevada Tax Commission

NEVADA TAX COMMISSION
May 2, 2022

TOPIC: Approval of 2022-2023 Ratio Study

AUTHORITY: The Department conducts the Ratio Study in accordance with NRS 361.333. It requires the Department to determine the ratio of the county derived assessed values, to the taxable value of property that is determined by the Department through appraisals of individual parcels. If the ratio of assessed value to taxable value falls between 32% and 36% it's in compliance with statute.

NRS 361.333 also obligates the Nevada Tax Commission 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.

EXPLANATION: There are two types of information the Commission considers in order to determine whether property has been assessed equitably. The first comes from a ratio study, which is a statistical analysis designed to study the level and uniformity of the assessments. It's a quality control technique designed for mass appraisal. The second comes from a review to determine whether each county has adequate procedures in place to ensure that all property subject to taxation is being assessed in a correct and timely manner.

The ratio study, by law, must include the median ratio of the total property within each class of property in each county studied. It also must 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 county and for each major class of property.

2022-2023 RATIO STUDY: The ratio study is conducted over a three-year cycle. The counties reviewed for 2022-2022 are Douglas, Humboldt, Lyon, Nye, and Washoe Counties.

RECOMMENDATIONS: The Department recommends the adoption of the 2022-2023 Report of Assessment Ratio Study by the Nevada Tax Commission.

Prepared by Locally Assessed Section, Division of Local Government Services

Executive Summary

The following table lists exceptions within the statistical data as well as any Department Findings or comments in specified counties.

Page	County	Issue/Comments
n/a	Dept Comments	<ul style="list-style-type: none"> • Pursuant to NRS 361.260(5) All counties report that land is annually reappraised, making the land factor no longer applicable. • The Department’s access to any county data beyond what is available to the public via county websites is limited. • The Department began adding a large parcel sample to this year’s Ratio Study at the request of this body <ul style="list-style-type: none"> • In general nominal values are used by county offices to value large remote parcels with no comparable sales. These are often tax-exempt land owned by government entities but do include privately owned land • Supporting data to defend nominal and large parcel values is not generally available or maintained in most counties • In most cases, remote large parcel values have not changed in many years and county staff cannot determine when or how the value was established • In most counties adjustments for large parcels need to be better quantified with supporting documentation. • Department is seeing an increase in the Coefficients of Dispersions which can be expected in a volatile market. However, most still fall with IAAO standards. <i>See below</i> • Counties are losing institutional knowledge as staff retires. Many counties are having difficulty hiring or maintaining new staff
10	Statewide ¹ Statutory Statistics	<p>Overall property class statistical data Statewide for Real Property, fall into the statutory ratio range of 32-36% with exception of</p> <ul style="list-style-type: none"> • Aggregate Ratio Vacant Land 28.8% • Analysis of the data leads us to believe this is due to large parcels being a larger percentage of the overall sample than past ratio studies, and that larger parcels have had a greater exemption rate. <p>Overall property class statistical data for Real Property, for the counties in this year’s study, fall into the statutory ratio range of 32-36% with</p>

¹ Statewide refers to all counties within the state in the current Ratio Study

		<p>exception of</p> <ul style="list-style-type: none"> • Douglas County- <i>Aggregate Ratio</i> Vacant Land 30.8% • Humboldt County- <i>Aggregate Ratio</i> Vacant Land 30.5% • Lyon County- <i>Aggregate Ratio</i> Single Family Improvements 37.6%; Single Family Total Property 36.3%; Multi-Family Improvements 36.3%; <i>Median Ratio</i> Single Family Improvements 37.8%; Single Family Total Property 36.2% • Nye County- <i>Aggregate Ratio</i> Total Property 21.5%; Improved Land 31.6%; Vacant Land 14.4%; Single Family Land 26.9%; Multi-Family Land 31.9% • All Counties- <i>Aggregate Ratio</i> All Property 31.3%; Vacant Land 24.6% <p>Personal Property (PP) statistical data, for the counties in this year’s study, falls into the statutory ratio range of 32-36% with exception of</p> <ul style="list-style-type: none"> • Douglas County- <i>Aggregate Ratios</i> for All Secured 21.0%; Secured Comm/Ind 16.0%; All Unsecured 23.5%; Unsecured Comm/Ind 20.8% • Lyon County- <i>Aggregate Ratios</i> Unsecured Aircraft 45.4%; <i>Median Ratio</i> Unsecured Aircraft 45.4% <p>Coefficients of Dispersions fall into the International Association of Assessing Officers (IAAO) recommended performance standards with exception of</p> <ul style="list-style-type: none"> • Nye County- Vacant Land 46.3
24	Douglas	<ul style="list-style-type: none"> • ADS transition to GSA should be complete by April 25th • Two Findings see Douglas Narrative <ol style="list-style-type: none"> 1. <i>NRS 361.227(1)</i> Underassessment of land values in pocket areas of county. Assessor to perform in-depth analysis during 22-23 to address. Resulted in statistical outliers. 2. <i>NRS 361.227(4), NAC 361.1365(3)</i> Incorrect Life assignments applied to Personal Property Telecom accounts within the sample. Resulted in statistical outliers. Have been corrected • Past practices have been to adjust quality class when homes are either significantly updated or dilapidated. Recommended ensuring all such practices have been abandoned and corrected in favor of age weighting and the use of obsolescence when appropriate. • Visual Site Improvements are lump sum values which are undervalued, not being updated and the assessor is often unable to identify what the value applies to. Currently not creating significant valuation differences.

29	Humboldt	<ul style="list-style-type: none"> • ADS to GSA transition has not begun. • No Findings • Several errors were found in Minor Improvement Cost Tables causing specific improvements to be incorrectly valued. • Rural Manual costs were being improperly used on improvements that do meet criteria causing incorrect reduced values • To decrease errors mentioned above and increase efficiency and accuracy, Minor Improvements, that can be, are being valued in the Marshal & Swift (M&S) software
31	Lyon	<ul style="list-style-type: none"> • Transition from ADS to GSA is complete • Finding see Lyon Narrative- <i>NAC 361.128(1)</i>, Residential Local Cost Multipliers (LCM), Energy, Foundation, and Seismic adjustments were defaulting in the GSA system to Reno, where historically Fallon multipliers/adjustments have been used. Staff for the Department used Fallon multipliers/adjustments to conduct the ratio study. The difference caused residential properties to fall out of ratio. This resulted in statistical outliers. The Assessor contacted GSA to have multipliers/adjustments in future years default to Fallon as has been done historically. It is believed the Fallon multipliers/adjustments better reflect the Lyon County area. Reno multipliers are also acceptable to use under Marshall and Swift standards. Ratios would have, in most instances, fallen within standards if Department Staff had used Reno multipliers in the study. The Department Staff concurs with the Lyon County Assessor's office that Fallon multiplier should be used. The Lyon County office will do so in future years. It is not believed that this is an equitability issue that needs to be addressed by the Tax Commission.
34	Nye	<ul style="list-style-type: none"> • With exception of one appraiser, all appraisal staff is new and working under a Temporary Certification in the Pahrump Office • Finding see Nye Narrative- <i>NAC 361.1192</i>, land in the sample was underassessed as a result of an incomplete sales database and lack of neighborhood stratification. • Comparable sales used for large parcel valuation were questionably adjusted using abstraction. Size adjustments are lacking data to support reductions. • Large parcel outliers skewed the data, as large parcels were a larger part and carried a larger weight within the ratio study compared to past studies. • Bullets 2 & 4 resulted in Statistical Outlier Ratios. • 11 of 14 Residential Improvements outliers resulted from the use

		of the Regional Local Multiplier instead of the Local Cost Multiplier as recommended by M&S
38	Washoe	<ul style="list-style-type: none"> • Washoe County had support documentation for all adjustments and land values requested by the Department • Half of the outliers were the result of a systemic error in the LCM of residential property generated by GSA. The assessor addressed the issue with their GSA representative to have corrected.



NEVADA DEPARTMENT OF TAXATION
Division of Local Government Services

2022-2023 REPORT OF
ASSESSMENT RATIO STUDY

2022 - 2023

Report of Assessment Ratio Study

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2022-2023 RATIO STUDY

INTRODUCTION: AUTHORITY, OVERSIGHT AND REPORTING

NRS 361.333 requires the Department to determine the ratio of the assessed value of each type or class of property, for which the county assessor has the responsibility of assessing in each county, to the taxable value of that property as determined by the Department through appraisals of individual parcels. The ratio is in compliance with statute if the ratio of assessed value to taxable value is more than 32 percent or less than 36 percent. See NRS 361.333(5)(c).

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 the Commission considers in determining whether property has been assessed equitably. The first 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 review to determine whether each county has adequate procedures to ensure that all property subject to taxation 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. For example, mass appraisal techniques for land valuation are described in NAC 361.11795, and reference the use of base lot values as benchmarks for valuing properties within a stratum. In addition, an assessor is required to use the IAAO “Standard on Automated Valuation Models” when developing mass appraisal models, pursuant to NAC 361.1216.

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.

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 2022-2023 are Douglas, Humboldt, Lyon, Nye, and Washoe 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 ensure that each of the classifications of real and personal property is assessed between 32% and 36% 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 uniformly made.

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 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 improvements, land, and total property values.

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.⁴ 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, and 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.”⁵ The COD is a relative measure and useful for comparing samples from different classes of property within, as well as among, counties.

In 2010, the Nevada Tax Commission adopted NAC 361.1216. 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 complexity of properties increases, the measures of variability usually increase, even though appraisal procedures may be equally valid.”⁶

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

⁴ International Association of Assessing Officers, Standard on Ratio Studies, (2010), p.12; 27.

⁵ International Association of Assessing Officers, Standard on Ratio Studies, (2010), p. 13.

⁶ International Association of Assessing Officers, Standard on Ratio Studies, (2013), p. 17.

<u>Type of Property</u>	<u>COD</u>
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 ⁷

RATIO STUDY CONCLUSIONS

The 2022-2023 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). These charts show the aggregate and median ratios and the Coefficient of Dispersion for the past three study years (2020 - 2022) across all counties for all properties.

Similar data is shown just for the counties in the 2022-2023 study year. 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 area. Department Finding and Recommendations, within the individual county Narratives, can be directly linked to the statistical results.

Median Related Differential

The Median Related Differential 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.*

The chart on page 15 indicates that of the six counties studied in 2022-2023, regressivity is present in Vacant and Improved Land in Douglas County resulting in regressivity; Vacant Land in Humboldt County; and Vacant and Improved Land in Nye County resulting in regressivity in All Property. Land regressivity in Nye County was the main contributor to regressivity within All Counties Vacant Land and All Property. Conversely, progressivity was not present in any class of property. Progressivity or regressivity which occurred statewide, over the past three-year period, is listed on page 13.

Aggregate Ratio

The data for the Aggregate (Overall) Ratio, or Weighted Mean, shown on page 14 are within the acceptable standard range of 32% to 36% on a composite basis for the five counties studied in 2022-2023, with the following exceptions noted: Douglas County Vacant Land; Humboldt County Vacant Land; and Nye County Improved Land and Vacant Land which resulted in All Property in Nye County having an Aggregate Ratio below the acceptable range. Lyon County Improvements and Single-Family Residence were slightly above the acceptable range. As a result of the Nye County Vacant Land Ratio, Vacant Land in All Counties, within the study, when combined

⁷ International Association of Assessing Officers, Standard on Ratio Studies, (2013), p. 17; and Standard on Automated Valuation Models (2003), p. 28.

created a ratio below the acceptable range. The Aggregate Ratio for all five counties produced a total All Property ratio of 31.3% which is below the acceptable standard range. Statewide Aggregate Ratios, over the past three-year period, are listed on page 10.

Aggregate Ratios within Personal Property (PP) typically are within acceptable standard range of 32% to 36%. This year, two counties fell outside of this range in the following categories, Douglas County All Secured PP and Commercial/Industrial, and All Unsecured PP and Commercial/Industrial, shown on page 16, and Lyon County Secured Aircraft, shown on page 18.

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. Median Ratios may be acceptable, yet inequity could still 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.

The Median Ratios shown on page 14 indicate the appraisal level for all classes of property in each county included in this study, measured against the taxable value established by the Department, are within the acceptable standard range of 32% and 36% using the results of the sample taken by the Department with the exception of Lyon County Single Family Residence which is just above the acceptable standard. Statewide Median Ratios, over the past three-year period, are listed on page 11.

Median Ratios within Personal Property typically are within acceptable standard Range of 32% to 36%. However, Lyon County, shown on page 18, had a Median Ratio within Unsecured Aircraft above the acceptable range.

Coefficient of Dispersion (COD)

The COD ratios, shown on page 15, for the five counties studied in 2022-2023, indicate the ratios for all property, and each class of property, within the jurisdictions are relatively uniform with the following exceptions, Nye County Vacant Land and All Property, and All Counties Vacant Land, which are outside of IAAO recommended performance standards. The COD ratios reported are typically at the low end or below the IAAO range standards but this year ratios are higher than what is typical. The standards are more appropriate for comparison in market-based assessment systems than in Nevada's unique hybrid system.

PROCEDURAL / OFFICE REVIEW

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. For the 2022-2023 Ratio Study, the Department reviewed assessors' procedures as part of the ratio study process.

LAND AND IMPROVEMENT FACTORS

Pursuant to NRS 361.260(5), the Department reviews assessments in areas where improvement factors are applied. All counties report that land is annually reappraised, making the land factor no longer applicable. Improvement Factors for the 2022-2023 tax year are available on the Taxation website at <https://tax.nv.gov/>.

2022-2023

REPORT OF ASSESSMENT RATIO STUDY

STATISTICAL TABLES

DRAFT

NEVADA DEPARTMENT OF TAXATION
2022-2023 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	2020	34.5	34.2	35.2	33.9	34.1	36.2	34.3	35.0
CHURCHILL	2020	34.3	34.2	34.3	32.0	34.6	34.3	34.5	35.2
CLARK	2021	34.4	34.8	34.2	33.5	34.5	34.4	34.7	35.0
DOUGLAS	2022	33.3	35.1	32.7	30.8	33.6	34.3	35.2	34.5
ELKO	2020	34.2	35.4	29.9	28.5	34.8	31.4	35.3	35.0
ESMERALDA	2021	34.0	33.9	34.5	34.1	34.1	34.3	34.0	33.9
EUREKA	2021	35.0	35.1	34.5	33.5	34.2	35.3	35.1	35.3
HUMBOLDT	2022	34.5	34.9	33.9	30.5	34.4	33.9	35.0	35.0
LANDER	2020	34.9	35.3	33.8	34.5	34.6	34.0	35.9	35.0
LINCOLN	2021	33.6	34.3	33.3	31.0	34.5	34.7	33.5	31.9
LYON	2022	35.3	36.3	34.4	33.9	36.3	35.6	34.0	33.8
MINERAL	2021	35.3	36.0	33.8	34.5	34.5	41.2	32.4	34.6
NYE	2022	21.5	34.0	31.6	14.4	33.8	34.7	33.0	34.7
PERSHING	2020	34.6	34.2	34.7	35.2	34.2	34.0	35.3	35.0
STOREY	2021	34.3	34.8	33.1	34.1	32.2	34.5	35.0	35.6
WASHOE	2022	34.3	35.3	34.2	33.5	34.9	34.4	34.5	34.5
WHITE PINE	2020	33.8	33.9	33.8	33.4	33.6	34.0	34.0	35.0
STATEWIDE	2022	33.4	34.8	33.9	28.8	34.4	34.4	34.7	34.3

NEVADA DEPARTMENT OF TAXATION
2022-2023 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	2020	34.3	34.0	34.6	33.1	34.0	34.5	34.4	35.0
CHURCHILL	2020	34.7	34.5	34.4	34.4	34.7	34.3	34.6	35.0
CLARK	2021	34.5	34.8	34.4	34.3	34.6	34.3	34.4	35.0
DOUGLAS	2022	34.2	34.9	34.2	32.5	34.5	34.2	34.8	35.0
ELKO	2020	34.6	34.9	34.4	34.1	34.6	34.0	34.7	35.0
ESMERALDA	2021	34.1	34.3	34.1	33.3	34.1	34.2	34.1	34.9
EUREKA	2021	34.7	34.9	35.0	33.4	34.4	34.6	35.0	35.0
HUMBOLDT	2022	34.7	35.0	34.4	34.0	34.6	34.7	34.9	35.0
LANDER	2020	34.5	35.1	33.9	33.9	34.9	34.3	34.6	35.0
LINCOLN	2021	34.5	34.5	34.4	34.7	34.4	34.6	33.9	35.0
LYON	2022	34.5	35.9	34.4	34.0	36.2	35.4	34.2	34.0
MINERAL	2021	34.4	33.5	33.8	35.0	33.5	33.9	34.4	35.0
NYE	2022	34.1	34.3	33.2	33.9	34.2	34.0	33.8	35.0
PERSHING	2020	34.9	34.7	34.5	34.6	34.7	34.7	35.2	35.0
STOREY	2021	34.5	34.3	34.5	34.0	33.5	34.4	34.7	35.7
WASHOE	2022	34.7	35.3	34.4	34.5	34.9	34.5	34.6	35.0
WHITE PINE	2020	34.1	34.2	33.9	33.4	34.0	34.1	34.2	35.0
STATEWIDE	2022	34.4	34.7	34.3	34.1	34.5	34.3	34.5	35.0

NEVADA DEPARTMENT OF TAXATION
2022-2023 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	2020	4.7	3.2	6.3	7.6	2.3	9.1	2.1	0.4
CHURCHILL	2020	3.3	2.5	2.1	7.2	2.0	1.7	1.5	0.2
CLARK	2021	2.3	2.9	2.8	2.6	1.9	3.3	2.0	0.3
DOUGLAS	2022	6.1	3.1	4.2	12.5	2.9	1.6	1.7	0.9
ELKO	2020	7.5	4.0	9.8	15.4	5.9	6.4	4.1	0.0
ESMERALDA	2021	2.8	2.2	2.2	4.7	1.7	1.8	2.5	1.4
EUREKA	2021	4.5	2.8	3.8	10.1	2.9	2.5	0.7	0.9
HUMBOLDT	2022	4.2	3.0	3.1	9.5	2.0	1.6	3.5	0.1
LANDER	2020	3.0	4.3	2.6	2.2	2.1	2.4	6.5	0.1
LINCOLN	2021	3.7	2.6	3.8	8.1	1.6	0.9	3.2	1.8
LYON	2022	4.5	6.0	2.3	4.6	3.1	2.7	3.8	0.4
MINERAL	2021	10.6	21.8	2.2	1.4	6.6	30.5	14.4	2.2
NYE	2022	18.0	7.6	10.9	46.3	7.4	4.5	5.4	0.7
PERSHING	2020	4.8	6.1	11.4	6.2	3.4	3.8	7.2	0.0
STOREY	2021	4.4	3.2	8.3	2.9	7.5	1.7	2.5	2.3
WASHOE	2022	2.1	3.0	2.5	2.4	1.8	2.6	1.7	0.6
WHITE PINE	2020	2.8	3.5	2.0	2.2	3.2	1.4	3.0	0.2
STATEWIDE	2022	4.2	4.6	4.7	8.8	3.5	4.7	3.8	0.9

NEVADA DEPARTMENT OF TAXATION
2022-2023 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	2020	1.00	1.00	0.98	0.98	1.00	0.95	1.00	1.00
CHURCHILL	2020	1.01	1.01	1.00	1.07	1.00	1.00	1.00	0.99
CLARK	2021	1.00	1.00	1.01	1.02	1.00	1.00	0.99	1.00
DOUGLAS	2022	1.03	0.99	1.04	1.05	1.03	1.00	0.99	1.01
ELKO	2020	1.01	0.98	1.15	1.19	0.99	1.08	0.98	1.00
ESMERALDA	2021	1.00	1.01	0.99	0.98	1.00	1.00	1.00	1.03
EUREKA	2021	0.99	0.99	1.02	1.00	1.01	0.98	1.00	0.99
HUMBOLDT	2022	1.01	1.00	1.01	1.12	1.01	1.02	1.00	1.00
LANDER	2020	0.99	0.99	1.00	0.98	1.01	1.01	0.96	1.00
LINCOLN	2021	1.03	1.01	1.04	1.12	1.00	1.00	1.01	1.10
LYON	2022	0.98	0.99	1.00	1.00	1.00	0.99	1.00	1.01
MINERAL	2021	0.97	0.93	1.00	1.02	0.97	0.82	1.06	1.01
NYE	2022	1.58	1.01	1.05	2.35	1.01	0.98	1.03	1.01
PERSHING	2020	1.01	1.02	1.00	0.98	1.01	1.02	1.00	1.00
STOREY	2021	1.00	0.99	1.04	1.00	1.04	1.00	0.99	1.00
WASHOE	2022	1.01	1.00	1.01	1.03	1.00	1.00	1.00	1.01
WHITE PINE	2020	1.01	1.01	1.00	1.00	1.01	1.00	1.01	1.00
STATEWIDE	2022	1.03	1.00	1.01	1.18	1.00	1.00	0.99	1.02

NEVADA DEPARTMENT OF TAXATION
 2022-2023 RATIO STUDY
 ALL APPRAISAL AREAS
 OVERALL (AGGREGATE) RATIO

Subject County	All Property
DOUGLAS	33.3
HUMBOLDT	34.5
LYON	35.3
NYE	21.5
WASHOE	34.3
ALL COUNTIES	31.3

Class of Property							
Improvements	Improved Land	Vacant Land	Single Family Residence	Multi-Family Residence	Commercial Industrial	Rural Land & Improvements	
35.1	32.7	30.8	33.6	34.3	35.2	34.5	
34.9	33.9	30.5	34.4	33.9	35.0	35.0	
36.3	34.4	33.9	36.3	35.6	34.0	33.8	
34.0	31.6	14.4	33.8	34.7	33.0	34.7	
35.3	34.2	33.5	34.9	34.4	34.5	34.5	
35.1	33.6	24.6	34.5	34.5	34.7	34.5	

MEDIAN RATIO

Subject County	All Property
DOUGLAS	34.2
HUMBOLDT	34.7
LYON	34.5
NYE	34.1
WASHOE	34.7
ALL COUNTIES	34.5

Class of Property							
Improvements	Improved Land	Vacant Land	Single Family Residence	Multi-Family Residence	Commercial Industrial	Rural Land & Improvements	
34.9	34.2	32.5	34.5	34.2	34.8	35.0	
35.0	34.4	34.0	34.6	34.7	34.9	35.0	
35.9	34.4	34.0	36.2	35.4	34.2	34.0	
34.3	33.2	33.9	34.2	34.0	33.8	35.0	
35.3	34.4	34.5	34.9	34.5	34.6	35.0	
35.0	34.2	33.9	34.7	34.5	34.4	35.0	

NEVADA DEPARTMENT OF TAXATION
 2022-2023 RATIO STUDY
 ALL APPRAISAL AREAS
 COEFFICIENT OF DISPERSION (COD)

Subject County	All Property
DOUGLAS	6.1
HUMBOLDT	4.2
LYON	4.5
NYE	18.0
WASHOE	2.1
ALL COUNTIES	6.7

Class of Property							
Improvements	Improved Land	Vacant Land	Single Family Residence	Multi-Family Residence	Commercial Industrial	Rural Land & Improvements	
3.1	4.2	12.5	2.9	1.6	1.7	0.9	
3.0	3.1	9.5	2.0	1.6	3.5	0.1	
6.0	2.3	4.6	3.1	2.7	3.8	0.4	
7.6	10.9	46.3	7.4	4.5	5.4	0.7	
3.0	2.5	2.4	1.8	2.6	1.7	0.6	
4.6	4.5	14.3	3.9	2.9	3.2	1.1	

MEDIAN RELATED DIFFERENTIAL

Subject County	All Property
DOUGLAS	1.03
HUMBOLDT	1.01
LYON	0.98
NYE	1.58
WASHOE	1.01
ALL COUNTIES	1.10

Class of Property							
Improvements	Improved Land	Vacant Land	Single Family Residence	Multi-Family Residence	Commercial Industrial	Rural Land & Improvements	
0.99	1.04	1.05	1.03	1.00	0.99	1.01	
1.00	1.01	1.12	1.01	1.02	1.00	1.00	
0.99	1.00	1.00	1.00	0.99	1.00	1.01	
1.01	1.05	2.35	1.01	0.98	1.03	1.01	
1.00	1.01	1.03	1.00	1.00	1.00	1.01	
1.00	1.02	1.37	1.01	1.00	0.99	1.01	

DOUGLAS COUNTY
2022-2023 RATIO STUDY

ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
COUNTYWIDE TOTAL PROPERTY	33.3%	34.2%	6.1%	90
COUNTYWIDE IMPROVEMENTS	35.1%	34.9%	3.1%	57
COUNTYWIDE IMPROVED LAND	32.7%	34.2%	4.2%	60
COUNTYWIDE VACANT LAND	30.8%	32.5%	12.5%	30
SINGLE FAMILY IMPROVEMENTS	34.8%	34.8%	4.0%	32
SINGLE FAMILY LAND	32.0%	34.2%	4.7%	32
SINGLE FAMILY TOTAL PROPERTY	33.6%	34.5%	2.9%	32
MULTIPLE FAMILY IMPROVEMENTS	34.9%	34.9%	2.3%	11
MULTIPLE FAMILY LAND	33.3%	32.6%	3.1%	11
MULTIPLE FAMILY TOTAL PROPERTY	34.3%	34.2%	1.6%	11
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	35.5%	35.1%	1.9%	12
COMMERCIAL/INDUSTRIAL LAND	34.0%	34.6%	3.8%	12
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	35.2%	34.8%	1.7%	12
RURAL IMPROVEMENTS	34.7%	34.7%	0.9%	2
RURAL LAND	34.3%	35.0%	1.5%	5
RURAL TOTAL PROPERTY	34.5%	35.0%	0.9%	5
SECURED PERSONAL PROPERTY				
ALL SECURED	21.0%	35.0%	7.1%	8
AIRCRAFT	n/a	n/a	n/a	-
AGRICULTURAL	n/a	n/a	n/a	-
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	16.0%	35.0%	18.9%	3
MOBILE HOMES	35.0%	35.0%	0.0%	5
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	23.5%	35.0%	7.2%	33
AIRCRAFT	34.2%	35.0%	6.0%	5
AGRICULTURAL	n/a	n/a	n/a	-
BILLBOARDS	35.0%	35.0%	0.0%	1
COMMERCIAL/INDUSTRIAL	20.8%	35.0%	9.9%	21
MOBILE HOMES	35.0%	35.0%	0.0%	6
TOTAL PERSONAL PROPERTY	23.4%	35.0%	7.2%	41

HUMBOLDT COUNTY
2022-2023 RATIO STUDY

ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
COUNTYWIDE TOTAL PROPERTY	34.5%	34.7%	4.2%	91
COUNTYWIDE IMPROVEMENTS	34.9%	35.0%	3.0%	61
COUNTYWIDE IMPROVED LAND	33.9%	34.4%	3.1%	68
COUNTYWIDE VACANT LAND	30.5%	34.0%	9.5%	23
SINGLE FAMILY IMPROVEMENTS	34.5%	34.8%	2.4%	30
SINGLE FAMILY LAND	33.9%	34.0%	2.4%	30
SINGLE FAMILY TOTAL PROPERTY	34.4%	34.6%	2.0%	30
MULTIPLE FAMILY IMPROVEMENTS	34.0%	35.0%	2.4%	9
MULTIPLE FAMILY LAND	33.5%	34.4%	3.3%	9
MULTIPLE FAMILY TOTAL PROPERTY	33.9%	34.7%	1.6%	9
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	35.2%	35.0%	3.9%	22
COMMERCIAL/INDUSTRIAL LAND	34.0%	34.3%	4.1%	22
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	35.0%	34.9%	3.5%	22
RURAL IMPROVEMENTS	n/a	n/a	n/a	-
RURAL LAND	35.0%	35.0%	0.1%	7
RURAL TOTAL PROPERTY	35.0%	35.0%	0.1%	7
SECURED PERSONAL PROPERTY				
ALL SECURED	35.0%	35.0%	4.2%	18
AIRCRAFT	35.0%	35.0%	0.0%	1
AGRICULTURAL	35.0%	35.0%	0.0%	3
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	35.0%	35.0%	15.1%	5
MOBILE HOMES	35.0%	35.0%	0.0%	9
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	35.0%	35.0%	2.0%	24
AIRCRAFT	35.0%	35.0%	0.0%	2
AGRICULTURAL	35.0%	35.0%	0.0%	2
BILLBOARDS	35.0%	35.0%	0.0%	1
COMMERCIAL/INDUSTRIAL	35.0%	35.0%	3.5%	13
MOBILE HOMES	35.1%	35.0%	0.6%	6
TOTAL PERSONAL PROPERTY	35.0%	35.0%	3.0%	42

LYON COUNTY
2022-2023 RATIO STUDY

ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
COUNTYWIDE TOTAL PROPERTY	35.3%	34.5%	4.5%	101
COUNTYWIDE IMPROVEMENTS	36.3%	35.9%	6.0%	57
COUNTYWIDE IMPROVED LAND	34.4%	34.4%	2.3%	63
COUNTYWIDE VACANT LAND	33.9%	34.0%	4.6%	38
SINGLE FAMILY IMPROVEMENTS	37.6%	37.8%	4.3%	32
SINGLE FAMILY LAND	34.5%	34.7%	2.1%	32
SINGLE FAMILY TOTAL PROPERTY	36.3%	36.2%	3.1%	32
MULTIPLE FAMILY IMPROVEMENTS	36.3%	35.7%	5.5%	11
MULTIPLE FAMILY LAND	34.8%	34.6%	1.5%	11
MULTIPLE FAMILY TOTAL PROPERTY	35.6%	35.4%	2.7%	11
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	34.1%	34.4%	4.5%	14
COMMERCIAL/INDUSTRIAL LAND	33.8%	33.7%	2.8%	14
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	34.0%	34.2%	3.8%	14
RURAL IMPROVEMENTS	n/a	n/a	n/a	-
RURAL LAND	33.8%	34.0%	0.4%	6
RURAL TOTAL PROPERTY	33.8%	34.0%	0.4%	6
SECURED PERSONAL PROPERTY				
ALL SECURED	35.0%	35.0%	0.9%	5
AIRCRAFT	n/a	n/a	n/a	-
AGRICULTURAL	35.5%	35.5%	0.0%	2
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	n/a	n/a	n/a	-
MOBILE HOMES	34.6%	35.0%	0.6%	3
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	35.0%	35.0%	2.1%	37
AIRCRAFT	45.4%	45.4%	0.0%	1
AGRICULTURAL	n/a	n/a	n/a	-
BILLBOARDS	35.0%	35.0%	0.0%	1
COMMERCIAL/INDUSTRIAL	34.9%	35.0%	0.4%	26
MOBILE HOMES	35.0%	35.0%	3.9%	9
TOTAL PERSONAL PROPERTY	35.0%	35.0%	1.9%	42

NYE COUNTY
2022-2023 RATIO STUDY

ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
COUNTYWIDE TOTAL PROPERTY	21.5%	34.1%	18.0%	83
COUNTYWIDE IMPROVEMENTS	34.0%	34.3%	7.6%	53
COUNTYWIDE IMPROVED LAND	31.6%	33.2%	10.9%	58
COUNTYWIDE VACANT LAND	14.4%	33.9%	46.3%	25
SINGLE FAMILY IMPROVEMENTS	34.5%	34.5%	8.7%	30
SINGLE FAMILY LAND	26.9%	32.7%	16.5%	30
SINGLE FAMILY TOTAL PROPERTY	33.8%	34.2%	7.4%	30
MULTIPLE FAMILY IMPROVEMENTS	35.0%	34.6%	5.3%	12
MULTIPLE FAMILY LAND	31.9%	33.0%	5.9%	12
MULTIPLE FAMILY TOTAL PROPERTY	34.7%	34.0%	4.5%	12
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	32.8%	33.7%	7.1%	10
COMMERCIAL/INDUSTRIAL LAND	34.6%	34.7%	3.1%	10
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	33.0%	33.8%	5.4%	10
RURAL IMPROVEMENTS	35.5%	35.5%	0.0%	1
RURAL LAND	34.7%	35.0%	0.8%	6
RURAL TOTAL PROPERTY	34.7%	35.0%	0.7%	6
SECURED PERSONAL PROPERTY				
ALL SECURED	34.5%	35.0%	1.5%	21
AIRCRAFT	n/a	n/a	n/a	-
AGRICULTURAL	n/a	n/a	n/a	-
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	34.2%	35.1%	2.9%	9
MOBILE HOMES	35.2%	35.0%	0.5%	12
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	33.4%	35.0%	3.8%	36
AIRCRAFT	35.0%	35.0%	0.0%	3
AGRICULTURAL	n/a	n/a	n/a	-
BILLBOARDS	35.0%	35.0%	0.0%	2
COMMERCIAL/INDUSTRIAL	33.3%	35.0%	6.6%	15
MOBILE HOMES	35.6%	35.0%	2.4%	15
TOTAL PERSONAL PROPERTY	33.4%	35.0%	3.0%	57

WASHOE COUNTY
2022-2023 RATIO STUDY

ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
COUNTYWIDE TOTAL PROPERTY	34.3%	34.7%	2.1%	96
COUNTYWIDE IMPROVEMENTS	35.3%	35.3%	3.0%	72
COUNTYWIDE IMPROVED LAND	34.2%	34.4%	2.5%	71
COUNTYWIDE VACANT LAND	33.5%	34.5%	2.4%	25
SINGLE FAMILY IMPROVEMENTS	35.5%	35.7%	2.0%	30
SINGLE FAMILY LAND	34.1%	34.1%	2.7%	30
SINGLE FAMILY TOTAL PROPERTY	34.9%	34.9%	1.8%	30
MULTIPLE FAMILY IMPROVEMENTS	34.7%	34.1%	4.3%	15
MULTIPLE FAMILY LAND	34.2%	34.4%	2.7%	15
MULTIPLE FAMILY TOTAL PROPERTY	34.4%	34.5%	2.6%	15
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	34.9%	35.0%	2.7%	20
COMMERCIAL/INDUSTRIAL LAND	34.2%	34.7%	2.1%	20
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	34.5%	34.6%	1.7%	20
RURAL IMPROVEMENTS	33.2%	33.2%	0.0%	1
RURAL LAND	35.0%	35.0%	0.1%	6
RURAL TOTAL PROPERTY	34.5%	35.0%	0.6%	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	35.0%	35.0%	0.3%	37
AIRCRAFT	35.0%	35.0%	0.0%	2
AGRICULTURAL	n/a	n/a	n/a	-
BILLBOARDS	35.0%	35.0%	0.0%	2
COMMERCIAL/INDUSTRIAL	35.0%	35.0%	0.2%	25
MOBILE HOMES	35.7%	35.0%	0.7%	8
TOTAL PERSONAL PROPERTY	35.0%	35.0%	0.3%	37

**ALL COUNTIES INCLUDED IN
2022-2023 RATIO STUDY**

ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
ALL COUNTIES TOTAL PROPERTY	31.3%	34.5%	6.7%	461
ALL COUNTIES IMPROVEMENTS	35.1%	35.0%	4.6%	300
ALL COUNTIES IMPROVED LAND	33.6%	34.2%	4.5%	320
ALL COUNTIES VACANT LAND	24.6%	33.9%	14.3%	141
SINGLE FAMILY IMPROVEMENTS	35.4%	35.1%	5.1%	154
SINGLE FAMILY LAND	33.1%	34.1%	5.8%	154
SINGLE FAMILY TOTAL PROPERTY	34.5%	34.7%	3.9%	154
MULTIPLE FAMILY IMPROVEMENTS	35.0%	34.8%	4.2%	58
MULTIPLE FAMILY LAND	33.9%	34.1%	3.8%	58
MULTIPLE FAMILY TOTAL PROPERTY	34.5%	34.5%	2.9%	58
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	34.9%	34.8%	4.0%	78
COMMERCIAL/INDUSTRIAL LAND	34.1%	34.3%	3.3%	78
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	34.7%	34.4%	3.2%	78
RURAL IMPROVEMENTS	34.6%	34.7%	2.1%	4
RURAL LAND	34.4%	35.0%	1.1%	30
RURAL TOTAL PROPERTY	34.5%	35.0%	1.1%	30
SECURED PERSONAL PROPERTY				
ALL SECURED	34.9%	35.0%	3.3%	52
AIRCRAFT	35.0%	35.0%	0.0%	1
AGRICULTURAL	35.0%	35.0%	0.6%	5
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	34.8%	35.0%	9.3%	17
MOBILE HOMES	35.0%	35.0%	0.3%	29
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	33.2%	35.0%	3.1%	167
AIRCRAFT	35.0%	35.0%	4.6%	13
AGRICULTURAL	35.0%	35.0%	0.0%	2
BILLBOARDS	35.0%	35.0%	0.0%	7
COMMERCIAL/INDUSTRIAL	33.1%	35.0%	3.7%	100
MOBILE HOMES	35.4%	35.0%	1.8%	44
TOTAL PERSONAL PROPERTY	33.7%	35.0%	3.1%	219

**STATEWIDE
2020-2023 RATIO STUDIES**

ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
STATEWIDE TOTAL PROPERTY	33.4%	34.5%	5.0%	1,575
STATEWIDE IMPROVEMENTS	34.8%	34.7%	4.6%	1,085
STATEWIDE IMPROVED LAND	33.9%	34.3%	4.7%	1,160
STATEWIDE VACANT LAND	28.8%	34.1%	8.8%	411
SINGLE FAMILY IMPROVEMENTS	34.9%	34.7%	4.1%	530
SINGLE FAMILY LAND	33.4%	34.1%	5.5%	532
SINGLE FAMILY TOTAL PROPERTY	34.4%	34.5%	3.5%	533
MULTIPLE FAMILY IMPROVEMENTS	34.6%	34.5%	5.6%	243
MULTIPLE FAMILY LAND	34.0%	34.1%	5.8%	242
MULTIPLE FAMILY TOTAL PROPERTY	34.4%	34.3%	4.7%	243
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	34.9%	34.8%	4.9%	281
COMMERCIAL/INDUSTRIAL LAND	34.1%	34.3%	2.9%	283
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	34.7%	34.5%	3.8%	285
RURAL IMPROVEMENTS	34.4%	34.7%	3.5%	16
RURAL LAND	34.2%	35.0%	1.5%	103
RURAL TOTAL PROPERTY	34.3%	35.0%	0.9%	103
SECURED PERSONAL PROPERTY				
ALL SECURED	35.0%	35.0%	2.6%	172
AIRCRAFT	35.0%	35.0%	0.0%	1
AGRICULTURAL	35.0%	35.0%	0.2%	26
BILLBOARDS	35.6%	35.6%	0.3%	2
COMMERCIAL/INDUSTRIAL	35.0%	35.0%	6.2%	64
MOBILE HOMES	35.1%	35.0%	0.5%	79
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	34.0%	35.0%	2.2%	424
AIRCRAFT	35.0%	35.0%	1.4%	45
AGRICULTURAL	35.0%	35.0%	0.2%	19
BILLBOARDS	35.0%	35.0%	0.1%	21
COMMERCIAL/INDUSTRIAL	33.8%	35.0%	2.1%	206
MOBILE HOMES	35.2%	35.0%	3.3%	132
TOTAL PERSONAL PROPERTY	34.3%	35.0%	2.3%	596

2022-2023

REPORT OF ASSESSMENT RATIO STUDY

COUNTY ABSTRACTS
AND FINDINGS

DRAFT

DOUGLAS COUNTY NARRATIVE

2022-23 RATIO STUDY

The Assessor¹ annually reappraises all land and improvements. This includes the re-costing of improvements annually and physical inspection of 1/5 of the county each year, using aerial photography and physical inspections, to capture any new improvements added without permits within the last five years. This is the best practice for discovery of new improvements.

DEPARTMENT FINDINGS

Property Type	Sample Size	In Ratio	Out of Ratio	Exception Rate
LAND (Note 1)				
Vacant Land	30	21	9	30%
Single-Family Residential Land	32	30	2	6%
Multi-Family Residential Land	11	11	0	0%
Commercial and Industrial Land	12	11	1	8%
Agricultural Land	6	6	0	0%
IMPROVEMENTS				
Single Family Residential Improvements	32	31	1	3%
Multi-family Residential Improvements	11	11	0	0%
Commercial and Industrial Improvements	12	12	0	0%

(Note 1) Land: See Finding 3

Property Type	Sample Size Accounts Reviewed	Total Property Records Examined	Records In Ratio	Records Out of Ratio	Exception Rate
Personal Property	41	670	621	49 (Note)	7%

Notes: Records Out of Ratio reflect outliers after adjusting for rounding differences. 49 records had incorrect lives within 2 of the 4 telecom accounts. One record had a non-year which resulted in a missing value and one outlier was an error in acquisition cost. All outliers and errors have been corrected.

¹ All references to the Assessor indicate the Assessor or the Assessor's staff

OBSERVATIONS AND SUMMARY

Transition: Douglas County is among the counties transitioning from ADS to GSA. Douglas County closed their 2022/23 tax roll in ADS. The assessor is currently maintaining the ADS system, after a delay in transition, but is expected to be live by the presentation of this Ratio Study report.

Staffing: Maintaining an adequate staff is crucial to operate efficiently and effectively. Douglas County has experienced staff turnover recently and operates with five real property appraisers and one personal property appraiser. Three of the current appraisal staff is dual certified and two appraisers are currently operating under a temporary appraisal certification issued by the Department. The Assessor is monitoring their progress closely to ensure success in completing certification and education requirements in a timely manner. Due to growth occurring in Douglas County, the Department recommends the assessor continue to evaluate staffing needs to accommodate the high demand on his appraisal staff. The lengthy process of hiring, certifying, training, and retaining appraisers could be a factor in the ability of Douglas County to meet N.R.S requirements and deadlines.

Marshall and Swift: The Assessor uses Marshall and Swift costing manuals to value improvements. Upon review of prior ratio studies, the Department found quality class rankings have been previously reported as not being used consistently and accurately to classify the quality of buildings. Across the county the assessor uses quarter quality classifications. While not prohibited, it is not standard practice statewide. Prior recommendations by the Department were to review the quality class of properties using Marshall and Swift to determine the most appropriate class and rank identifications. The Assessor has been reviewing as adjusting inconsistent quality classes as discovered. Specifically related to the 2022-23 Ratio Study, the assessor indicated, while not common, it has been past practice to, in certain instances, adjust the quality class as the property ages depending on building maintenance and updates. This is an inappropriate use of quality class as outlined in Marshall and Swift guidelines. Maintenance, or lack of, and the need for remodeling is addressed and captured in statutory straight-line depreciation. If warranted, the application of obsolescence should be utilized. If substantial remodeling or improvements occur, the age of the home should be adjusted. The Department recommends the assessor abandon the practice of using quality class to adjust value for maintenance and remodeling purposes as homes age, for the use of obsolescence and age weighting (effective age) which is standard appraisal practice.

Minor Improvements: The Assessor uses lump sum visual site improvements (VSI) values for certain minor improvements. Lump sum values reflect a base sum of \$1,000 and are ranked .5-6.0. A lump sum having the rank of 2.5 would have a value of \$2,500. VSI is a multi-use "catch-all" category and in many cases the Assessor was not able to identify improvements being captured as VSI. Without a method of identifying and quantifying improvements valued as VSI, proper valuation is difficult to achieve. The assigned ranks are not consistent and accurately reflect the actual current costs of minor improvements, on the sample properties, such as fencing, paving, and landscaping. Costs are not adjusted due to changes in Marshall & Swift costs or Local & Current Cost Multipliers. The Assessor plans to carry this practice forward when they transition to the GSA system. VSI vs actual cost differences are not considered significant in the overall value at this time but could become problematic in the future if not addressed. The

Department recommends that the Assessor put procedures in place to identify those improvements which are subject to VSI costing with a method to adjust values as M&S costs and multipliers change so that a more accurate visual site inspection may be conducted, and accurate rankings assigned.

Land Valuation: Douglas County has widely varying market areas with sufficient sales data to use varying approved appraisal techniques for accurate land valuation in most areas. The lack of comparable large land sales poses a challenge for the assessor in determining large parcel land values. Sales that do exist provide little to no correlation between size, time and selling price. Historical data is maintained and can be utilized to establish and apply nominal values where appropriate on large parcels. When asked to provide supporting data related to land values of large parcels, the assessor was unable to produce any form of analysis to justify values or adjustments. It is recommended that the Assessor conduct a historical sales analysis of large parcel sales and establish nominal values that can be applied equitably to all government and private owned land where sales are not available and/or likely to occur. Nominal value analysis should also be updated with new sales and re-evaluated periodically to ensure reasonable valuation. The Department also recommends the assessor do an analysis to quantify adjustments made to land throughout the county. This will ensure staff is equitably and equally assigning adjustments throughout the county.

FINDINGS AND RECOMMENDATIONS

Finding No. DO 2022-1

Criteria

NRS 361.227(4) Requires the taxable value of taxable personal property, except a mobile or manufactured home, to be determined by subtracting from the cost of replacement of the property all applicable depreciation and obsolescence. Nevada Administrative Code (N.A.C.) 361.1365(3) requires each county assessor to use the Personal Property Manual in determining the taxable value of personal property. The Life Expectancy Guidelines within the Personal Property assigns typical asset lives to each major industrial classification. Assessors are to use these guidelines to determine the appropriate life assignments for each piece of property reported.

Condition

There were four telecom accounts within the Ratio Study sample. Two accounts were found to have a significant number of assets with incorrect life assignments increasing the amount of depreciation applied to the acquisition cost and thus underassessing the affected equipment. Correct life assignments could be found on page 33 & 34. Telecom Distribution Plants (30yrs), Premise Equipment (10yrs) and Electronics (10yrs) were all incorrectly assigned 5 year lives.

Cause

Personal Property in Douglas County still depends on manual entry which allows for a higher probability of error. Equipment codes are used to assign the life. In this case, the equipment was assigned the incorrect equipment code causing incorrect depreciation.

Effect

Incorrect assignments resulted in an underassessment of value within the 2 accounts generating lower tax bills. The Total Taxable Value, from the two accounts in the study, for the assets with incorrect life assignments was \$494,180. Using the correct life assignments would have resulted in a Taxable Value of \$1,108,537. An undervaluation of \$614,357 taxable or \$215,025 assessed.

Recommendation

When the Assessor was informed of the incorrect life assignments, corrections were immediately made, and other accounts were reviewed to ensure these assets reported on other accounts were correct systemwide. No further action is needed.

Finding No. DO 2022-2

Criteria

NRS 361.227(1) Requires persons determining the taxable value of real property to appraise the full cash value of Vacant land as defined by NRS 361.025 which states that "Full cash value" means the most probable price which property would bring in a competitive and open market under all conditions requisite to a fair sale.

Condition

Several parcels within the Ratio Study sample were assessed notably lower than full cash value causing the underassessment of land. This was not consistent throughout the county. Underassessed land was found in pocket areas of the county, often in neighborhoods still being developed, new areas prime for building or highly desirable. There were adequate sales to indicate large increases were needed in several areas and market conditions were present to indicate the real estate market will likely continue to increase into 2022 before a period of stabilization is likely.

Cause

In the 2020 summer of Covid, the assessor anticipated the statewide shut down and loss of employment would result in a decline in market conditions effecting value in a negative way. In response to those expectations, the assessor took a more conservative approach to land valuation than what is typical. While overall market conditions did decline, the real estate market grew, selling prices increased and real estate growth amplified. The assessor took a more aggressive approach in valuing land in 2021 but not to the degree to reach full cash value in all areas.

Effect

Sales prices did not increase evenly across the county. Newer, more desirable, and up and coming neighborhoods experienced a larger increase in sales prices. The assessor was hesitant to apply such large increases which further widened the gap from full cash value created the previous year. Underassessment in some areas and not others create inequity throughout the county and tends to lead to regressivity, meaning high value properties are under assessed relative to low value properties.

Recommendation

The assessor plans to conduct an in-depth analysis of land values when completing the 23-24 assessments. While many assessors tend to take a conservative approach when valuing land and our lien date limits the use of the most recent sales, when experiencing a real estate bubble, being behind the real estate curve, is exacerbated at a greater

pace increasing the probability of falling out of statutory compliance. With regulations in place to protect the taxpayer from excessive tax increases, the Department recommends the assessor fully comply with NRS 361.227(1) and assess land at actual full cash value as defined by statute in the coming tax year, without placing conservative constraints on the process.

DRAFT

HUMBOLDT COUNTY NARRATIVE

2022-23 RATIO STUDY

All improvements are re-valued, and land is reappraised annually in Humboldt County. The Assessor¹ continues to physically inspect one-fifth of the county each year to capture any new improvements added without a permit within the previous five years.

DEPARTMENT FINDINGS

Property Type	Sample Size	In Ratio	Out of Ratio	Exception Rate
LAND				
Vacant Land	25	21	3	12%
Single-Family Residential Land	30	30	0	0%
Multi-Family Residential Land.	8	8	0	0%
Commercial and Industrial Land	20	18	2	10%
Agricultural Land	6	6	0	0%
IMPROVEMENTS				
Single Family Residential Improvements	30	29	1	3%
Multi-family Residential Improvements	8	7	1	12.5%
Commercial and Industrial Improvements (Note 1)	20	16	4	20%

Note 1: Commercial Improvements: Of the 4 outliers, one is in the physically inspected area and consists of an addition that was not age weighted on an exempt property.

¹ All references to the Assessor mean the Assessor or the Assessor's staff

Property Type	Sample Size Accounts Reviewed	Total Property Records Examined	Records In Ratio	Records Out of Ratio	Exception Rate
Personal Property	42	793	786	9 (Note)	1%

Note: *Records Out of Ratio* reflect outliers after adjusting for computer system rounding differences. 7 outliers were the result of incorrect life assignment. All outliers have been corrected.

O B S E R V A T I O N S A N D S U M M A R Y

Transition: After reverting from DevNet back to ADS, the Assessor’s Office is awaiting transition from ADS to GSA.

Staffing: Humboldt County currently has three certified appraisers, one real property, one personal property, and one dual certified. There are also three trainees currently on a temporary certificate and taking classes to become certified.

Marshall and Swift & Minor Improvements: In preparation for transition to GSA, and to function more efficiently, all improvements that can be valued in the Marshall and Swift software program are being transferred into that portion of the ADS system. Several incorrect costs were discovered within the minor improvement Cost Tables, used in valuing minor improvements not valued in the Marshall and Swift software. The organization within the Cost Tables was difficult to follow, increasing the potential for human error. Rural Manual costs were being incorrectly used. Concrete, fencing and other similar costs in the Rural Manual have a multiplier applied to adjust the costs for extra large quantities on rural properties. The assessor was using these costs to value all improvements of that type in the county. The assessor stated they will stop using those costs unless appropriate. Transitioning improvements into Marshall & Swift will streamline the valuation process, increase the accuracy of property valuations and once complete, reduce the workload of staff.

Land: The Department was unable to review how taxable values were ascertained. In a later conversation with the assessor the Department was told that they do have supporting analysis for their values and the current assessor has begun reviewing the neighborhoods and grouping them into smaller more comparable neighborhoods so that more appropriate stratification of sales can take place to produce more accurate land values. It is recommended that the Assessor conduct a historical sales analysis of large parcel sales to establish and defend nominal values that can be applied equitably to all government and privately owned land where comparable sales are not available and are unlikely to occur. Nominal value analysis should be updated with new sales, if any, and re-evaluated periodically to ensure reasonable valuation is still present. The Assessor maintains historical sales for large parcels but has not recently updated it to consider new sales. This will be done during the 23-24 valuation year. To ensure adherence with NAC 361.1182, whenever adjustments or percent changes are used, the Department recommends the assessor have an analysis to quantify adjustments made to land throughout the county and update it occasionally to confirm adjustments are still appropriate. This will ensure staff is equitably and equally assigning adjustments in neighborhoods and throughout the county.

LYON COUNTY NARRATIVE

2022-23 RATIO STUDY

Lyon County revalues land, re-costs all improvements annually and conducts an aerial review of improvements in the 1/5 of the county, designated as the reappraisal area, each year to determine if a physical inspection is needed.

DEPARTMENT FINDINGS

Property Type	Sample Size	In Ratio	Out of Ratio	Exception Rate
LAND				
Vacant Land	38	35	3	8%
Single-Family Residential Land	30	30	0	0%
Multi-Family Residential Land	11	11	0	0%
Commercial and Industrial Land	14	14	0	0%
Agricultural Land	6	6	0	0%
IMPROVEMENTS				
Single Family Residential Improvements (Note 1)	32	8	24	75%
Multi-family Residential Improvements (Note 2)	11	6	5	45%
Commercial and Industrial Improvements (Note 3)	14	13	1	7%

Note 1: Single Family Residential Improvements: Of the 24 outliers listed above, 1 was found in the reappraisal. 23 were in the 4/5 of the county which was not reviewed.

Note 2: Multi-Family Residential Improvements: Of the 5 outliers listed above, all were found to be in the 4/5 of the county which was not reviewed.

Note 3: Commercial and Industrial Improvements: The only outlier listed above was in the 4/5 of the county which was not reviewed.

Property Type	Sample Size Accounts Reviewed	Total Property Records Examined	Records In-Ratio	Records Out of Ratio	Exception Rate
Personal Property	27	608	606	2 (Notes)	0.3%

Notes: *Records Out of Ratio* reflect outliers after adjusting for computer system rounding differences.

OBSERVATIONS AND SUMMARY

Transition: Lyon County completed the transition to GSA in early 2021. Overall, the Assessor¹ has positive reviews of the new system despite having a conversion issue with Marshall & Swift (M&S) values defaulting to an incorrect local area. The Assessor looks forward providing a more transparent look at the appraisal process and being able to assist other counties looking to move to GSA.

Staffing: There are currently two Personal Property Appraisers, one Real Property Appraiser and two dual certified Appraisers doing assessment work in the office. The Deputy Assessor is also dual certified, and the Assessor is certified in Real Property. The staff continuously works to improve procedures internally and are open to assistance from the Department.

New Construction: New construction is discovered using the county building permits and aerial imagery. Aerial imagery is flown over the reappraisal area each year. Often improvements are put in place without the need or use of a county permit and therefore are not discovered until the reappraisal year the property is in. A few of the outliers were caused by property escaping taxation because of new improvements not yet appearing via aerial imagery.

Land Valuation: The county performs annual reappraisal of land throughout the county, with all real property appraisers being responsible for land valuations in their assigned areas. An analysis of large vacant parcels, 40 acres and above, has shown that many of the values have remained relatively unchanged for many years. One of the large parcel samples was an outlier. It is recommended that the Assessor conduct a historical sales analysis of large parcel sales, to establish and defend nominal values, that can be applied equitably to both government and private owned land where comparable sales are not available and are unlikely to occur. Nominal value analysis should also be updated with new sales, if any, re-evaluated periodically to ensure reasonable valuation is still present, and values updated accordingly. Additionally, an analysis to quantify adjustments to land should also be developed, reviewed, and updated periodically in compliance with NAC 361.1182. This will ensure staff is equitably and equally assigning nominal values and adjustments throughout the county.

¹ All references to the Assessor mean the Assessor or the Assessor's staff

FINDINGS AND RECOMMENDATIONS

Finding No. LY 2022-01

Criteria

The calculation of the cost of replacement of an improvement must be calculated in accordance with *NAC 361.128(1)* which states that the standards and modifiers of local costs, published in the version of the *Residential Cost Handbook, Marshall Valuation Service, Residential Estimator* software adopted by reference pursuant to *NAC 361.1177* as of January 1 of the year immediately preceding the lien date for the current year, must be utilized.

Condition

Local multipliers reflect local cost conditions, are based on weighted labor and material costs, which include local sales taxes, and are designed to adjust the basic costs to each locality. The county inadvertently used the defaults from the *Marshall Valuation Service, Residential Estimator* software which, defaulted to Reno, when valuing residential properties.

Cause

This is a GSA/Marshall & Swift issue. When converting to the GSA system, the Residential Local Cost Multipliers (LCM), Energy, Foundation, and Seismic adjustments were set to default. When using ADS, the assessor was able to manually override all multipliers and adjustments to use those of Fallon, which is the most comparable area represented in Marshall & Swift. In the new CAMA system, GSA sets up the overriding zip code, to use a specific LCM, and other adjustments. The Assessor was unaware that this was not implemented by GSA when Lyon County went live last year. As a result, the system defaulted to the Reno multipliers and adjustments when the 22-23 improvement values were calculated instead of Fallon which has historically been used by the Assessor's Office. The Department used Fallon when calculating the values for the ratio study, as has historically been done.

Effect

The default multiplier combined with the default Energy, Foundation, and Seismic adjustments resulted in values increasing, by varying degrees, depending on the building's exterior wall type and quality, when compared to the M&S costing manual's multiplier and adjustments for the Fallon area. This accounts for most of the outliers in the Ratio Study for Lyon County Single and Multi-Family improved properties. The result was an overassessment, by a ratio of .06% - 6.85% , of residential improvement values within the sample. The default setting is an appropriate use of M&S and would have resulted, in most instances, in the ratios being within standards.

Recommendation

Since it is the assessors' discretion whether to allow the Marshall & Swift Software to default based on the parameters set up within the program, or override to more appropriate adjustments, the Department reached out to the county to determine their intent. The assessor intends to proceed using Fallon, as they historically have, and contacted GSA to correct the system. No further action is recommended.

NYE COUNTY NARRATIVE

2022-23 RATIO STUDY

All improvements are re-costed, and land is reappraised annually in Nye County. In addition, the Assessor¹ continues to physically inspect one-fifth of the county each year to capture any new improvements added without a permit within the previous five years. Nye County is the largest county in Nevada, with one office in Tonopah and another in Pahrump.

DEPARTMENT FINDINGS

Property Type	Sample Size	In Ratio	Out of Ratio	Exception Rate
LAND				
Vacant Land (Note 1)	25	19	6	24%
Single-Family Residential Land (Note 1)	30	20	10	33.33%
Multi-Family Residential Land (Note 1)	12	11	1	8.33%
Commercial and Industrial Land	10	10	0	0%
Agricultural Land	6	6	0	0%
IMPROVEMENTS				
Single Family Residential Improvements (Note 2)	30	20	10	33.33%
Multi-family Residential Improvements (Note 2)	12	8	4	33.33%
Commercial and Industrial Improvements (Note 3)	10	8	2	20.00%

NOTE 1: Land: 12 of the 17 land outliers resulted from values in certain areas that increased considerably higher than what the assessor applied. The remaining five were large rural parcels with limited sales data.

NOTE 2: Single & Multi Family Residential Improvements: Of the 14 outliers listed above, all but 3 were found in converted manufactured homes, not found in manufactured housing parks, with the Regional Local Multiplier applied instead of the Local Cost Multiplier.

NOTE 3: Commercial & Industrial Improvements: Of the two outliers listed above, one was due to property escaping taxation due to lost data during the DevNet transition.

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

Property Type	Sample Size Accounts Reviewed	Total Property Records Examined	Records In-Ratio	Records Out of Ratio	Exception Rate
Personal Property	56	714	701	13	1.82%

Note: *Records Out of Ratio* reflect outliers after adjusting for computer system rounding differences.

OBSERVATIONS AND SUMMARY

Ratio Study 2019-2020: Finding Number NY 2019-01 and NY 2019-02 were both addressed after the ratio study completed. The Assessor's diligence and commitment to Nye County taxpayers is commendable.

CAMA System: Nye County has been using the DevNet system for the past two and half years. The county is still working to get the system to function properly. Much effort and time has been spent by the Assessor troubleshooting various issues.

Sales Records: Since the transition to the DevNet System, the Assessor maintains all sales records in DevNet. This has been a challenge for the Assessor's office as not all vacant sales were included in their sales ratio analysis due to how sales were identified in the system. The assessor is in the process of making sure all valid vacant sales are identified properly.

Staffing: There are three appraisers in the Tonopah office. The Deputy Assessor who is certified in Personal Property and working to obtain Real Property, one other Personal Property Appraiser and one who is dual certified. The Pahrump office currently has only one dual certified appraiser and the Assessor who is Personal Property certified. Three new appraisers are working under Temporary Certificates. This has been a challenge for the Pahrump office since the one licensed appraiser is reviewing the new appraisers work, providing training and performing all their other responsibilities. The Assessor is monitoring the progress of new staff closely to ensure success in completing certification and education requirements in a timely manner.

Marshall & Swift: The Marshall & Swift Residential Cost Handbook (M&S) page Mfg-3 states that the Regional Local Multiplier (RLM) found on page F-10 "is for Manufactured Homes sited in a Manufactured Housing Park. Manufactured Homes located individually in a site-built community can use the regular Local Multipliers for their locality." The handbook allows the appraiser to decide which multiplier reflects their local cost best. In the 2022-2023 tax year, the difference between the RLM and the LCM is 17%, causing an overvaluation of single-family and multi-family properties consisting of converted manufactured homes not found in Manufactured Housing Parks. The Department feels that the converted manufactured homes are being treated differently than the site-built properties located in communities with converted manufactured homes and site-built homes. To equalize the county, the Department recommends using the Local Cost Multiplier on all homes not found in a Manufactured Housing Park as recommended in the M&S manual. The Assessor recognizes the problem; however, in their new DevNet system they are not able to see what multiplier is used. The Assessor is working with DevNet to try to correct the issues moving forward.

Land Valuation: Nye County has two distinct market areas; Pahrump Valley, appraised from the Pahrump office and the rest of the county which is appraised from the Tonopah office. The Assessor currently runs a ratio analysis on all of Pahrump Valley as one market area and makes a single adjustment. *See Finding 1* For all other areas, valued by the Tonopah office, a mix of vacant land and improved land sales are used. When valuing large parcels, once a square foot cost is determined, staff adjusts the unit cost based on the concept of economies of scale. When size adjustments are used, the Department recommends that the county review adjustments and keep supporting data related to any adjustments pursuant to NAC 361.1182 2 and NAC 361.118 3(C)1. Staff should be able to quantify and support, through market data, any adjustments made to ensure a reduction is warranted and appropriate. The Department recommends caution when using improved and agricultural land sales of smaller parcels (>100 acres) to value large parcels, as it is hard to abstract the improved value on older properties in non-homogenous markets, or the value attributed to an agricultural property's ability to produce income, from the sales price. Subtracting replacement cost new less depreciation from the comparable sales can artificially inflate the remaining value causing overassessment when applied to large parcels.

The Department's calculation of land values for this ratio study includes both the Sales Comparison Approach and a Sales Ratio Analysis. The Department believes the methods used were the most accurate given the sufficient number of vacant sales in the Pahrump Valley area. In valuing large parcels in remote areas, the Department looked at historical sales to establish a nominal value when comparable sales were not available. This method compared to the assessor's method of abstraction of depreciated improvement values on smaller large parcel sales and agricultural land sales, adjusted for size, resulted in extreme large parcel outliers.

The Assessor exercised caution regarding any increase in values due to uncertainty regarding the economic impact of the pandemic as well market volatility. With regulations in place to protect the taxpayer from excessive tax increases, the Department recommends the assessor assess land at actual full cash value as defined by statute in the coming tax year, without placing conservative constraints on the process, to prevent further underassessment once the land module is fully functional.

Agricultural Land: Agricultural land is valued utilizing the values published by the Nevada Tax Commission. There was one parcel whose value did not update from the previous year. This was not a systemic issue but an isolated event. The Assessor's office has sent out the newly revised applications to all Agricultural landowners to update all the accounts. Any information about Agricultural Parcels is recorded and kept indefinitely. As part of the reappraisal cycle, the appraiser visits each parcel at least once every five years.

Personal Property: Three out of thirteen outliers were due to a difference in opinion in the appropriate life expectancy categorization in the Personal Property Manual for medical tools in a Veterinary clinic. One of the outliers was a difference in opinion on the life expectancy for *Conex Storage Boxes* categorized in the Personal Property Manual. Other outliers have been corrected.

All personal property records are well maintained, and all values were entered in the system. However, in one of the accounts, acquisition costs reported by the taxpayer in their Declaration as separate line items were combined into one item when entered at the assessor's office. The Department recommends that the assessor enter the data exactly how the taxpayer reports it to make removal of equipment and reconciliation easier for the taxpayer and Nye County.

FINDINGS AND RECOMMENDATIONS

Finding No. NY 2022-01

Criteria

General requirements for use of alternative methods to derive to the full cash value of land are outlined in NAC 361.1192. Specifically, subsection 1 which states the county assessor must examine and evaluate, the reliability and accuracy of the method used; the characteristics of the subject property; the sufficiency and quantity of the data used to derive the value; the reliability and accuracy of the data used and any pertinent adjustments made to comparable property; the relative validity of each comparable sale used; the number and magnitude of any adjustments made to comparable property or the reasons why no adjustments were made; and the relative importance of individual elements of comparison.

Condition

Nye county runs a Vacant Sales Ratio Analysis in the DevNet system to determine the market adjustment for the Pahrump Valley Area. The analysis was missing sales data. All of Pahrump Valley was analyzed as one market area, without a complete sales database, and one adjustment was applied to the entire Pahrump Valley.

Cause

The Assessor uses the Land Module in the DevNet system to assess the full cash value of land for the Pahrump Valley Area. The land module is a new tool the assessor is trying to implement. One of the challenges the assessor has is not being able to properly stratify the sales into neighborhoods the DevNet System forcing them to apply one factor for all Pahrump land values. Furthermore, at the time the values were set, the assessor was missing numerous sales in the data analysis due to the transition from ADS to DevNet. When the data was transferred, it did not transfer properly causing sales to be omitted when data was queried for analysis.

Effect

The sales ratio analysis the assessor did was for all of Pahrump Valley, as one market area, and made a single adjustment based on the sales data. Missing data prevented a complete analysis from being conducted. This caused an underassessment in some areas in Pahrump including several parcels in the sample. Overassessment may also have occurred, but no evidence is present within the sample of properties to confirm. Being behind the real estate curve creates an increased probability of continuing to be out of statutory compliance.

Recommendation

The Department recommends that the county stratify the Pahrump Valley into appropriate market “neighborhoods” and perform separate analyses for each stratum to obtain fair and equal assessment. Furthermore, the Department recommends the county start collecting land characteristics to create and defend adjustments when necessary. Until issues are resolved surrounding land sales in DevNet, and to avoid values falling behind, it would be beneficial to use another method, as a back-up to the DevNet land module, to help accurately identify sales and conduct a complete sales analysis. The assessor is aware of the stratification process; but feels DevNet has not provided the help needed to be successful with the Land Module. The assessor is considering contracting an independent appraiser to develop the land module. With a limited budget, a qualified consultant is being sought willing to work within the financial constraints. The Department believes that once Nye County has the land module working and data properly stored, they will be successful in making localized, sub-area adjustments.

WASHOE COUNTY NARRATIVE

2022-23 RATIO STUDY

The Washoe County Assessor's Office appraises all real property within the County each year¹. Historically, the County comprised five appraisal areas which are no longer valid due to annual re-appraisal of the entire County.

DEPARTMENT FINDINGS

Property Type	Sample Size	In Ratio	Out of Ratio	Exception Rate
LAND				
Vacant Land	25	25	0	0%
Single-Family Residential Land	30	30	0	0%
Multi-Family Residential Land	15	15	0	0%
Commercial and Industrial Land	20	20	0	0%
Agricultural Land	6	6	0	0%
IMPROVEMENTS				
Single-Family Residential Improvements (Note 1)	30	27	3	10%
Multi-family Residential Improvements	15	14	1	6.67%
Commercial and Industrial Improvements	20	20	0	0%
Vacant Improvements (Note 1)	2	0	2	100%

Note 1: Improvements: Three of the improvement outliers were due to the Assessor's office MVP program applying a different Local Cost Multiplier.

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

Property Type	Sample Size Accounts Reviewed	Total Property Records Examined	Records Out of Ratio	Exception Rate
Personal Property	46	1879	1 (Notes)	0%

Notes: *Records Out of Ratio* reflect outliers after adjusting for computer system rounding differences.

OBSERVATIONS AND SUMMARY

Minor Improvement Valuation: Washoe County utilizes a comprehensive list of various minor improvements referred to as extra features and out-buildings (XFOB), which include, but are not limited to, flatwork, outdoor lighting, porches, decks, and sheds. The Assessor also employs lump sum values for certain yard item costs that typically include fencing, walls, and/or lawn sprinkler areas. A variance study was conducted to determine whether the costs were comparable to similar component costs published in the Marshall Swift cost manuals, and the Department has validated these minor improvement costs.

CAMA System: Washoe County uses GSA for their CAMA system. During the ratio study, it was identified that the MVP program, which applies Current Cost (CCM) and Local Cost (LCM) Multipliers, incorrectly applied the LCM for residential properties throughout the county. The Assessor was made aware of the issue & contacted their point of contact at GSA. This miscalculation generated three slightly out-of-ratio outliers.

New Construction Improvement Valuation: The Assessor discovers and follows the progress of new construction using a tracking system developed by the Washoe County Assessor's Office. Construction permits are received on a monthly basis from Washoe County, the City of Reno and the City of Sparks. The progress of property under construction is physically examined at a minimum of once per year. Higher quality properties are visited more frequently.

Improvement Discovery/Identification: Since physical re-inspection of property is not mandatory, Washoe County relies on aerial photography and their in-house permit tracking system to capture new improvements. These methods have adequately reduced property escaping taxation within the Ratio Study sample.

Appraisal Records: Most improved property files having sketches have been scanned and are available via computer imaging. The remaining hand-drawn sketches are continually being digitally converted until a time when all files are electronic.

Personal Property: The Assessor uses GSA to value personal property. Taxpayers can file personal property declarations online via an e-Dec system or by mail. An estimate of value is applied when there is a failure to report or underreporting is suspected. The county determines these benchmarks using cost manuals & industry averages for comparable businesses.

Exemption Retention Procedures: Physical copies of personal exemption applications and other documentation are kept on file. Personal Exemptions must be renewed annually, and these renewals are retained for 1 year. Applications for Corporate

exemptions are scanned, and a digital copy is kept as a permanent record. Annual renewals for Corporate exemptions are not required but a renewal is sent every five years to update the file. Although retention guidelines require to maintain the initial application for 3 years, the office keeps them for five years in case they need to be referenced. Agricultural exemptions are kept either as hard files or electronic for at least 10 years. The Agricultural Deferment Application is sent upon request and delivered electronically or by certified mail. Once received, statutory steps are followed to review the application, property and operation. A summary of approval or disapproval is provided to the applicant via certified mail & archived by the Assessor. A physical inspection, either on-site inspection or aerial review, of the parcel is performed every 5 years. New permits, parcel map changes or physical alterations to the land also prompt an inspection.

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