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In the Matter of:)
Carson City Assessor)
Churchill County Assessor)
Elko County Assessor) **2009-2010 Ratio Study**
Lander County Assessor)
Pershing County Assessor)
White Pine County Assessor)

NOTICE OF DECISION

Appearances

Terry Rubald, Chief, Division of Assessment Standards, appeared on behalf of the Department of Taxation.

Dave Dawley, Carson City Assessor; Norma Green, Churchill County Assessor; Celeste Hamilton, Pershing County Assessor; and Robert Bishop, White Pine County Assessor, appeared for their respective counties.

Summary

The matter of the approval of the 2008-2009 Ratio Study came before the Nevada Tax Commission (Commission) for hearing in Carson City, Nevada, on May 5, 2008 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 2008-2009 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 6th DAY OF MAY, 2008

Dino DiCianno, Executive Director

DEPARTMENT OF TAXATION

Division of Assessment Standards

2008-2009 Report of Assessment Ratio Study

DIVISION OF ASSESSMENT STANDARDS

2008-09 Report of Assessment Ratio Study

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Adopted by the Nevada Tax Commission
May 5, 2008

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2008-09 Report on 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]

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[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.

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.

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 2008-2009 are Carson City, Churchill, Elko, Lander, Pershing, and White Pine Counties. In 2005, the Tax Commission changed the cycle so that the ratio study in Douglas and Washoe Counties would occur in the same year.

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. 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.

[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.

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

[5] International Association of Assessing Officers, Standard on Ratio Studies, (1999), p. 23.

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.

There is no range of acceptability stated in statute or regulations for the COD measure. However, the International Association of Assessing Officials (IAAO) states that "the smaller the measure, the better the uniformity, although extremely low measures can signal a flawed study, non-representative appraisals, extremely homogenous properties or stable markets. As market activity changes or as the complexity of properties increase, 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:

Type of Property	COD
Single-family Residential	
Newer, more homogenous areas	10.0% or less
Older, heterogeneous areas	15.0% or less
Rural residential and seasonal	20.0% or less
Income-producing properties	
Larger, urban jurisdictions	15.0% or less
Smaller, rural jurisdictions	20.0% or less
Vacant land	20.0% or less
Other real and personal property	Varies with local conditions

Ratio Study Conclusions

The 2008-2009 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). *See pages 21-24.* These charts show the aggregate and median ratios and the coefficient of dispersion for the past three study years (2006-2008) across all counties for all properties. The data indicates the aggregate ratio for all property in Nye County was low at the time of the ratio

[6] International Association of Assessing Officers, Standard on Ratio Studies, (1999), p. 24.

[7] International Association of Assessing Officers, Standard on Ratio Studies, (1999), p. 24.

study in 2007, but aggregate ratios for the "all property" category in all other counties were within range. The Nye County data was previously discussed in the 2007-2008 ratio study.

The median related differential on page 24 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.

Similar data is shown just for the counties in the 2008 study year beginning at page 25. Here the aggregate and median ratios, the COD, and the median related differential (MRD) are compared across types of property in the six counties. Beginning at page 31, data for each individual county is displayed for each type of property across all appraisal areas within the county, not just the reappraisal area.

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. The median ratios for the subject counties have met the statutory range of 32% to 36%.

Based on the median, we can infer the appraisal level of the entire population of properties in the reappraisal area of each county is within statutory limits, using the results of the sample taken by the Department. In other words, the ratio of the assessed value established by the assessor measured against the taxable value established by the Department is within statutory limits. In addition, the COD for each reappraisal area for each county is less than 15%, indicating the appraisals are relatively uniform.

The median ratios of assessed value to taxable value for all classes of property in each reappraisal and factored area included in this study fell between 32% and 36%. *(see page 25).* This measure indicates minimal 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.

The calculated COD in all counties examined for 2008-2009 indicate an acceptable level of uniformity of assessments when compared to the standards listed above from the IAAO. The exceptionally low CODs for improvements reflect the fact that the assessors and the Department use the same source to value improvements, and the ratios are consistent with that fact.

In some cases the minor differences between Division valuation conclusions and assessor valuation conclusions appears to be due to the practice by some assessors of using a lump-sum amount for minor improvements such as fencing or sprinkler systems, rather than itemizing and costing the individual minor improvement. In general, the Division recognizes that some counties use

the lump-sum approach because of the time-consuming and inefficient nature of accounting for minor improvements.

Procedural Audit

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. In addition, 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.

The 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 Audit consists 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. An example of the audit questions used in each subject county may be found in the Appendix.

Procedural Audit Topics

The topics included in the procedural audit were selected based on subject matters examined in the prior two ratio studies. Procedures relating to the following topics were included in the audit:

- *Data collection, including geographic and property characteristics data*

An effective property tax information system requires the accurate collection of data on property characteristics. Audit questions were designed to elicit information about the mapping program, criteria used to determine a parcel of land, what factors affecting value that are tracked, and how the assessor went about data collection.

- *Verification of land sales, including sales transaction data, verification procedures, and sold property data*

Sales data are required to conduct the ratio studies that measure various aspects of appraisal performance. Sales data must be carefully screened to ensure accuracy. Audit questions were designed to examine how thoroughly sales are verified.

- *Stratification*

Questions about how assessors stratify data were included in the audit to discover the extent of use of the stratification tool in pursuing equitable assessments.

- *Analysis of land sales, including alternative methods of land valuation and subdivision discounts*

An effective appraisal system depends on accurate land values. Audit questions were designed to discover how assessors use the sales comparison approach, alternative methods of land valuation, and how they determine and apply subdivision discounts.

- *Cost approach*

Even though statutes and regulations are specific about how the cost approach is applied, there are choices to be made in the use of the Marshall/Swift cost manual. Audit questions were designed to find out how assessors apply the cost approach.

- *Valuation and assessment of agricultural property*

Questions were designed to find out how assessors qualify land for agricultural assessment and how land is removed from agricultural assessment.

- *Valuation and assessment of personal property*

Questions centered on discovery procedures, whether accounts are audited, and the procedures used to value personal property when declarations are not returned by taxpayers.

- *Assessment administration, including status of reference material, timely reporting to the state, certification and training of staff, defense of appealed property, appraisal cycle, and billing and collection procedures.*

The property tax process does not stop with valuation. This section of the audit investigated how assessors address maintaining reference material, how timely reports are returned to the department, how well trained the staff is, data regarding appeals, appraisal cycle, and billing and collection procedures.

Procedural Audit Conclusions

Carson City

Based on the procedural audit, the Department concludes the assessor has adequate procedures in place to ensure that all property subject to taxation is being assessed in a correct and timely manner. The recommendations listed

below are designed to help the assessor achieve improved work performance or to note best practices.

Data Collection

Geographic Data

Use of the 8-digit identifier is a uniform, manageable numeric expression. Map information is clear, accurate and well-presented. The use of GIS provides additional accuracy, especially in area calculation. Maps are drawn on appropriate scales using standardized layouts, linework, and symbols. Map sheets are a uniform, convenient size.

Property Characteristics Data

Factors that influence the local market are collected and maintained. Aerial photographs are used to help in data collection. Interiors of new construction are inspected to aid in the determination of quality class and to identify improvements that should be included in the Marshall/Swift cost analysis. (#27)

Consider routine collection of income information for commercial, industrial, and multi-family residence properties to aid in the identification of obsolescence and market trends. (#43)

Sales Data: No Recommendations.

Sales Verification Procedures

Questionable sales are verified by contact with title companies, buyers, and realtors.

Consider using a sales questionnaire to gain information relating to the validity of the sale. Questionnaires are not used at present because of low return rates and cost.

Sold Property Data

Characteristics of sold properties are identified and maintained.

Stratification

Stratification by neighborhood and/or market area conforms with best practice because it aids in the development of accurate valuation models. (#82)

Analysis of Land Sales

Plotting land sales on maps by price per unit to help visualize patterns in land sales is a best practice. (#87)

Consider developing standard procedures in writing for the valuation of triangular, trapezoidal, or other irregularly shaped lots. These procedures can

be derived from rule-of-thumb models such as the 4-3-2-1 rule, but should be verified by market analysis whenever possible. Shape adjustments are typically recorded as percentages to be applied to the base unit values. (#97)

Alternative Methods of Land Valuation

Comparative vacant land sales analysis is often difficult in built up urban areas, and could be supplemented with results from alternative methods of land valuation. Consider estimating market value of improvements for use in the abstraction method by developing local costs to build on a regular basis. (#105)

The assessor might be afforded a better opportunity to use the capitalization of ground rents method for commercial properties (#108) If income information were routinely collected. (see #43 recommendations above).

Subdivision Discounts: No recommendations

Cost Approach

Costing minor improvements from the Marshall/Swift Manual conforms to best practice because it results in a more accurate valuation. (#123)

Additional cost multipliers located in the Marshall & Swift cost manuals now being used are climate, foundation, wind, seismic, and architectural on commercial.

Agricultural Property: No recommendations

Personal Property: No recommendations

Assessment Administration: No Recommendations

Churchill County

Based on the procedural audit, the Department concludes the assessor has adequate procedures in place to ensure that all property subject to taxation is being assessed in a correct and timely manner. The recommendations listed below are designed to help the assessor achieve improved work performance or to note best practices.

Data Collection

Geographic Data

Use of the 8-digit identifier is a uniform, manageable numeric expression. Map information is clear, accurate and well-presented. Maps are drawn on

appropriate scales using standardized layouts, linework, and symbols. Map sheets are a uniform, convenient size. (#1-#24) Extensive use of GIS and ortho photographs help to provide accurate data.

Property Characteristics Data

The routine inspection and drawing of interiors of new construction to aid in the determination of quality class and to identify improvements that should be included in the Marshall/Swift cost analysis conforms to best practice. It increases the reliability of building quality and condition ratings, as well as improves overall data credibility. (#27)

The re-measurement of existing property to verify questionable data conforms to best practice. (#28)

Utilizing GIS and ortho photography for data collection enhances accuracy and conforms to best practice. (#35)

Routine collection of income information, particularly rents, for commercial, industrial, and multi-family residence properties to aid in the identification of obsolescence and market trends is a best practice. (#43)

Sales Data

Information is maintained in the land value workbook.

Sales Verification Procedures

Sales are verified from multiple sources.

Example of sales questionnaire conforms to best practice (#54 - #65). The information is obtained from parties to the sale and is sufficient from which to make a determination about whether a sale is valid and represents an arm's length sale.

Sales are verified and reviewed and sales ratio studies are run on each group of properties. This is a best practice. (#79)

Sold Property Data

Characteristics of sold property are identified and maintained. Water rights are included in sales data.

Stratification

Stratification by neighborhood and/or market area conforms to best practice because it aids in the development of accurate valuation models. (#82)

Single-family residential sales are stratified by improvement characteristics.

Analysis of Land Sales

Plotting land sales on maps by price per unit to help visualize patterns in land sales conforms to best practice. (#87) Sales can be viewed with GIS and the land value workbook.

A statistical analysis is performed on each group of properties.

Alternative Methods of Land Valuation

County uses abstraction, allocation, land residual technique, capitalization of ground rent, and cost of development method if necessary due to lack of vacant land sales. This represents a best practice. (#104-#109)

Subdivision Discounts: No recommendations.

Cost Approach

All Marshall/Swift multipliers are considered and used when applicable. Costing minor improvements from the Marshall/Swift Manual conforms to best practice because it results in a more accurate valuation. (#123)

Agricultural Property

The procedures for processing applications and for removing a parcel from agricultural deferment are well-documented and constitute a best practice. (#125 - #130) Water rights are identified, documented and updated as changes occur. Agricultural maps showing land classification are drawn using GIS.

Personal Property

Consider field audits of new accounts and where declarations are not returned or do not meet benchmarks.

Assessment Administration:

Well organized and efficient, best practice office.

Elko County

Based on the procedural audit, the Department concludes the assessor has adequate procedures in place to ensure that all property subject to taxation is being assessed in a correct and timely manner. The recommendations listed below are designed to help the assessor achieve improved work performance or to note best practices.

Data Collection

Geographic Data

Consider using the 12-digit APN based on township-range-section as a parcel numbering system. The 12-digit parcel identifier permits direct reference to the location of the parcel within a township-range-section (T-R-Sec). The T-R-Sec has general meaning and can be referenced on any map with township-range-section designations, rather than to a map book which can only be referenced in books maintained in the assessor's office.

GIS is now used in the mapping process enhancing accuracy, especially in calculating area.

Property Characteristics Data

Consider routine collection of income information, particularly rents, for commercial, industrial, and multi-family residence properties to aid in the identification of obsolescence and market trends. (#43)

Sales Data

Sales data is maintained in an excel worksheet.

Sales Verification Procedures

Verifying sales information routinely from a second source (title company, buyers, sellers) besides the declaration of value promotes accuracy of information conforms to best practice. The declaration of value is designed for the collection of the real property transfer tax and has little information regarding the arm's length nature of the sale. (#54)

Consider using a sales questionnaire to gain additional information relating to the validity of the sale, such as length of time property was on the market (#53). The Department recommends the sales validation questionnaire in the IAAO Standard on Ratio Studies as a model. (#55) Questionnaires are currently not used because of low return rates and cost.

Sold Property Data

Characteristics of sold property are identified and maintained.

Stratification

Stratification by neighborhood and/or market area conforms with best practice because it aids in the development of accurate valuation models. (#82)

Analysis of Land Sales

Plotting land sales on maps by price per unit to help visualize patterns in land sales is a best practice. (#87)

Alternative Methods of Land Valuation

Alternate methods of land valuation used only as a check to vacant land sales.

Subdivision Discounts: No recommendations.

Cost Approach

Consider utilizing all available additional multipliers located in the Marshall & Swift cost manuals. The assessor currently uses the energy, foundation, and hillside adjustments.

Costing minor improvements from the Marshall/Swift Manual conforms to best practice because it results in a more accurate valuation. (#123)

Agricultural Property

The procedures for processing applications and for removing a parcel from agricultural deferment are well-documented and constitute a best practice. (#125 - #130)

The addition of GIS enables more accurate identification of land classification and area calculation.

Consider identifying and updating water rights for agricultural parcels.

Personal Property

Consider establishing benchmarks for certain types of businesses to identify typical amounts of personal property.

Consider field audits of new accounts and where declarations are not returned or do not meet benchmarks.

Consider implementing a personal property auditing program during reappraisal years, at least a sample of business types (#134).

Assessment Administration

Consider in-house training sessions on difficult subject matters and/or office procedures. This may enhance cross-training. (#152)

Lander County

Based on the procedural audit, the Department concludes the assessor has adequate procedures in place to ensure that all property subject to taxation is being assessed in a correct and timely manner. The recommendations listed below are designed to help the assessor achieve improved work performance or to note best practices.

Data Collection

Geographic Data

Use of the 8-digit identifier is a uniform, manageable numeric expression. Map information is clear, accurate and well-presented. Maps are drawn on appropriate scales using standardized layouts, linework, and symbols. Map sheets are a uniform, convenient size. (#1-#24)

Property Characteristics Data

Consider improving data collection techniques by use of aerial photography. (#35)

Sales Data

Sales data is maintained in an excel worksheet.

Sales Verification Procedures

The Assessor uses a questionnaire to obtain information from parties to the sale and is sufficient from which to make a determination about whether a sale is valid and represents an arm's length sale. Using a questionnaire conforms to best practice because verifying sales information from a second source in addition to the declaration of value promotes accuracy of information. (#54)

Consider adding questions to the sales questionnaire to gain additional information relating to the validity of the sale, such as length of time property was on the market. (#53) The Department recommends the sales validation questionnaire in the IAAO Standard on Ratio Studies as a model. (#55)

Sold Property Data

Consider collecting data on improved sales for use if abstraction or allocation methods of land valuation are needed.

Stratification

Stratification by neighborhood and/or market area conforms with best practice because it aids in the development of accurate valuation models. (#82)

Analysis of Land Sales

Plotting land sales on maps by price per unit to help visualize patterns in land sales is a best practice. (#87)

Alternative Methods of Land Valuation

Comparative sales analysis is often difficult in rural areas, and could be supplemented with results from alternative methods of land valuation. Consider

estimating market value of improvements for use in the abstraction method by developing local costs to build. (#105)

Subdivision Discounts: No recommendations.

Cost Approach

Consider utilizing all available additional multipliers located in the Marshall & Swift cost manuals. The assessor currently uses only the climate adjustment.

Costing minor improvements from the Marshall/Swift Manual conforms to best practice because it results in a more accurate valuation. (#123)

Agricultural Property

Consider identifying and updating water rights for agricultural parcels.

Personal Property: **No recommendations.**

Assessment Administration: **No recommendations.**

Pershing County

Based on the procedural audit, the Department concludes the assessor has adequate procedures in place to ensure that all property subject to taxation is being assessed in a correct and timely manner. The recommendations listed below are designed to help the assessor achieve improved work performance or to note best practices.

Data Collection

Geographic Data

Use of the 8-digit identifier is a uniform, manageable numeric expression. Map information is clear, accurate and well-presented. Maps are drawn on appropriate scales using standardized layouts, linework, and symbols. Map sheets are a uniform, convenient size. (#1-#24) Pershing County is in the process of building a GIS database.

Property Characteristics Data

The routine inspection and drawing of interiors of new construction to aid in the determination of quality class and to identify improvements that should be included in the Marshall/Swift cost analysis conforms to best practice. It increases the reliability of building quality and condition ratings, as well as improves overall data credibility. (#27)

The re-measurement of existing property to verify questionable data conforms to best practice. (#28)

Sales Data: **No recommendations.**

Sales Verification Procedures

The Assessor uses a questionnaire to obtain information from parties to the sale and is sufficient from which to make a determination about whether a sale is valid and represents an arm's length sale. Using a questionnaire conforms to best practice because verifying sales information from a second source in addition to the declaration of value promotes accuracy of information. Further, the declaration of value is only designed for the collection of the real property transfer tax and has little information regarding the arm's length nature of the sale. (#54)

Consider adding questions to the sales questionnaire to gain additional information relating to the validity of the sale, such as length of time property was on the market. (#53)

Sold Property Data

Characteristics of sold property are identified and maintained.

Stratification

Stratification by neighborhood and/or market area conforms to best practice because it aids in the development of accurate valuation models. (#82)

Analysis of Land Sales

Plotting land sales on maps by price per unit to help visualize patterns in land sales conforms to best practice. (#87)

Alternative Methods of Land Valuation

Alternate methods of land valuation are currently not utilized.

Comparative sales analysis is often difficult in rural areas, and could be supplemented with results from alternative methods of land valuation. Consider estimating market value of improvements for use in the abstraction method by developing local costs to build. (#105)

Subdivision Discounts: No Recommendations.

Cost Approach

Consider utilizing all available additional multipliers located in the Marshall & Swift cost manuals when applicable. (#116)

Costing minor improvements from the Marshall/Swift Manual conforms to best practice because it results in a more accurate valuation. (#123)

Agricultural Property

The procedures for processing applications and for removing a parcel from agricultural deferment are well-documented and constitute a best practice. (#125 - #130)

Consider identifying and updating water rights on agricultural parcels.

Personal Property

Consider field audits of new accounts and where declarations are not returned or do not meet benchmarks.

Consider implementing a personal property auditing program during reappraisal years, at least a sample of business types. (#134)

Assessment Administration: **No Recommendations.**

White Pine County

Based on the procedural audit, the Department concludes the assessor has adequate procedures in place to ensure that all property subject to taxation is being assessed in a correct and timely manner. The recommendations listed below are designed to help the assessor achieve improved work performance or to note best practices.

Data Collection

Geographic Data

Consider using the 12-digit APN based on township-range-section as a parcel numbering system. The 12-digit parcel identifier permits direct reference to the location of the parcel within a township-range-section (T-R-Sec). The T-R-Sec has general meaning and can be referenced on any map with township-range-section designations, rather than to a map book which can only be referenced in books maintained in the assessor's office.

Property Characteristics Data

Consider routine inspection of interiors of new construction to aid in the determination of quality class and to identify improvements that should be included in the Marshall/Swift cost analysis. It increases the reliability of building quality and condition ratings, as well as improves overall data credibility. Assessor states inspection of interiors is conducted. (#27)

Consider improving data collection techniques by use of aerial photography. (#35)

Sales Data: No Recommendations.

Sales Verification Procedures

The Assessor uses a questionnaire to obtain information from parties to the sale and is sufficient from which to make a determination about whether a sale is valid and represents an arm's length sale. Using a questionnaire conforms to best practice because verifying sales information from a second source in addition to the declaration of value promotes accuracy of information. Further, the declaration of value is only designed for the collection of the real property transfer tax and has little information regarding the arm's length nature of the sale. (#54)

Consider adding questions to the sales questionnaire to gain additional information relating to the validity of the sale, such as length of time property was on the market. (#53)

Sold Property Data

Characteristics of sold property are identified and maintained.

Stratification: **No Recommendations.**

Analysis of Land Sales

Plotting land sales on maps by price per unit to help visualize patterns in land sales conforms to best practice. (#87)

Alternative Methods of Land Valuation

Comparative sales analysis is often difficult in rural areas, and could be supplemented with results from alternative methods of land valuation. Consider estimating market value of improvements for use in the abstraction method by developing local costs to build. (#105)

Subdivision Discounts: No Recommendations.

Cost Approach

Consider utilizing all available additional multipliers located in the Marshall & Swift cost manuals when applicable. (#116)

Costing minor improvements from the Marshall/Swift Manual conforms to best practice because it results in a more accurate valuation. (#123)

Agricultural Property

The procedures for processing applications and for removing a parcel from agricultural deferment are well-documented and constitute a best practice. (#125 - #130)

Consider identifying water rights on agricultural properties.

Personal Property: **No Recommendations.**

Assessment Administration: **No Recommendations.**

2008-2009 Ratio Study Statistical Charts

NEVADA DEPARTMENT OF TAXATION
2008-2009 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	2008	33.9	33.5	33.4	33.5	34.4	34.4	33.0	35.1
CHURCHILL	2008	34.2	32.2	33.8	34.2	34.2	34.3	34.0	34.6
CLARK	2006	34.7	34.5	34.7	35.0	34.4	34.5	34.8	32.7
DOUGLAS	2007	34.7	34.4	35.0	34.7	34.8	34.9	34.4	35.0
ELKO	2008	33.4	33.6	32.7	33.8	34.3	34.2	32.5	34.7
ESMERALDA	2006	34.5	34.4	34.4	35.0	34.1	35.0	33.8	33.9
EUREKA	2006	34.0	33.1	35.0	34.8	33.9	34.6	32.2	34.9
HUMBOLDT	2007	33.3	34.1	30.8	32.0	34.2	32.0	33.3	35.2
LANDER	2008	33.9	34.1	33.6	33.0	35.2	33.5	30.1	35.1
LINCOLN	2006	34.4	34.5	34.2	34.3	33.0	36.1	34.3	35.0
LYON	2007	33.6	33.5	33.7	33.2	34.0	34.7	32.7	33.8
MINERAL	2006	34.6	34.5	34.9	34.8	34.9	34.6	34.5	33.4
NYE	2007	30.7	32.6	29.0	28.5	32.3	25.9	31.0	34.9
PERSHING	2008	33.6	33.4	34.0	34.3	33.7	33.1	33.3	33.7
STOREY	2006	33.8	34.1	33.7	34.4	33.5	32.7	34.2	35.1
WASHOE	2007	34.7	35.3	33.8	34.5	33.3	33.6	35.4	34.3
WHITE PINE	2008	32.6	31.6	34.2	34.4	35.0	37.3	27.4	35.1
STATEWIDE	**2008**	34.3	34.2	34.2	34.3	34.1	34.2	34.5	34.4

NEVADA DEPARTMENT OF TAXATION
2008-2009 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	2008	34.2	35.4	33.3	33.7	34.5	34.3	33.2	35.0
CHURCHILL	2008	34.2	34.6	33.3	35.0	34.2	34.1	33.9	34.9
CLARK	2006	34.7	34.3	35.0	35.0	34.6	34.4	34.7	34.0
DOUGLAS	2007	35.0	35.0	35.0	35.0	35.0	35.1	34.6	34.9
ELKO	2008	33.9	34.4	33.8	33.3	34.4	33.8	33.2	35.0
ESMERALDA	2006	35.0	34.6	34.7	35.0	34.4	35.2	33.7	34.6
EUREKA	2006	34.8	33.7	35.0	34.8	34.3	35.0	34.0	35.0
HUMBOLDT	2007	34.2	34.7	33.7	33.2	34.5	34.1	33.8	35.0
LANDER	2008	34.8	35.1	33.8	34.5	35.3	33.9	34.5	35.0
LINCOLN	2006	34.3	34.0	34.1	34.5	33.9	33.6	33.9	35.0
LYON	2007	34.2	34.6	34.6	33.6	34.1	34.8	34.0	34.9
MINERAL	2006	35.0	35.0	35.0	35.0	35.2	34.1	35.1	35.0
NYE	2007	32.6	33.1	33.9	27.8	32.7	28.0	31.4	34.9
PERSHING	2008	33.7	33.3	34.0	34.8	33.5	33.3	33.3	33.4
STOREY	2006	34.2	34.0	34.5	34.8	33.6	33.8	33.7	35.1
WASHOE	2007	34.4	34.1	35.0	34.9	34.3	34.1	34.1	34.9
WHITE PINE	2008	34.7	35.3	33.9	34.4	34.7	34.9	35.0	35.1
STATEWIDE	2008	34.6	34.3	34.8	34.8	34.4	34.3	34.2	35.0

NEVADA DEPARTMENT OF TAXATION
2008-2009 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	2008	4.2	9.6	2.4	4.4	4.2	3.1	4.1	0.4
CHURCHILL	2008	2.5	4.0	2.2	2.3	2.5	3.3	1.2	1.7
CLARK	2006	2.0	4.6	1.2	0.9	2.0	2.7	1.7	2.8
DOUGLAS	2007	1.3	3.8	0.1	0.7	1.4	1.6	2.1	0.4
ELKO	2008	3.7	5.0	3.5	3.0	3.0	2.3	6.0	0.7
ESMERALDA	2006	2.0	3.5	2.2	1.0	2.7	1.7	2.3	1.9
EUREKA	2006	3.2	8.2	0.7	0.7	5.9	2.3	8.1	0.4
HUMBOLDT	2007	5.0	4.3	5.4	8.7	3.1	3.1	4.7	0.7
LANDER	2008	6.6	6.6	3.6	8.1	4.7	3.9	10.8	0.2
LINCOLN	2006	4.2	6.2	2.8	2.1	3.6	7.2	5.7	0.1
LYON	2007	4.5	6.8	4.5	4.4	3.2	2.8	8.1	1.4
MINERAL	2006	2.2	4.4	0.5	0.6	1.7	3.2	5.3	1.9
NYE	2007	15.8	11.5	13.6	30.6	6.9	25.7	14.8	0.1
PERSHING	2008	2.9	3.8	2.8	2.0	2.8	1.8	2.3	3.9
STOREY	2006	3.5	10.6	3.0	2.8	3.4	6.5	3.1	0.0
WASHOE	2007	3.6	4.5	4.2	1.6	3.9	2.2	5.4	0.6
WHITE PINE	2008	5.1	8.4	2.6	2.9	3.7	15.4	10.4	0.3
STATEWIDE	2008	3.5	6.0	3.4	4.3	3.5	4.5	5.1	1.3

NEVADA DEPARTMENT OF TAXATION
2008-2009 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	2008	1.01	1.06	1.00	1.01	1.00	1.00	1.00	1.00
CHURCHILL	2008	1.00	1.07	0.99	1.02	1.00	0.99	1.00	1.01
CLARK	2006	1.00	0.99	1.01	1.00	1.01	1.00	1.00	1.04
DOUGLAS	2007	1.01	1.02	1.00	1.01	1.01	1.00	1.00	1.00
ELKO	2008	1.01	1.02	1.03	0.99	1.00	0.99	1.02	1.01
ESMERALDA	2006	1.02	1.00	1.01	1.00	1.01	1.00	0.99	1.02
EUREKA	2006	1.03	1.02	1.00	1.00	1.01	1.01	1.06	1.00
HUMBOLDT	2007	1.03	1.02	1.09	1.04	1.01	1.07	1.01	0.99
LANDER	2008	1.02	1.03	1.00	1.05	1.00	1.01	1.14	1.00
LINCOLN	2006	1.00	0.99	1.00	1.01	1.03	0.93	0.99	1.00
LYON	2007	1.02	1.03	1.03	1.01	1.00	1.00	1.04	1.03
MINERAL	2006	1.01	1.02	1.00	1.01	1.01	0.99	1.02	1.05
NYE	2007	1.06	1.02	1.17	0.98	1.01	1.08	1.01	1.00
PERSHING	2008	1.00	1.00	1.00	1.01	0.99	1.01	1.00	0.99
STOREY	2006	1.01	1.00	1.02	1.01	1.00	1.03	0.98	1.00
WASHOE	2007	0.99	0.96	1.03	1.01	1.03	1.02	0.96	1.02
WHITE PINE	2008	1.07	1.12	0.99	1.00	0.99	0.94	1.28	1.00
STATEWIDE	2008	1.01	1.00	1.02	1.01	1.01	1.00	0.99	1.02

NEVADA DEPARTMENT OF TAXATION
2008-2009 RATIO STUDY
ALL APPRAISAL AREAS

OVERALL (AGGREGATE) RATIO

		Class of Property						
Subject County	All Property	Improvements	Improved Land	Vacant Land	Single Family Residence	Multi-Family Residence	Commercial Industrial	Rural Land & Improvements
CARSON CITY	33.9	33.5	33.4	33.5	34.4	34.4	33.0	35.1
CHURCHILL	34.2	32.2	33.8	34.2	34.2	34.3	34.0	34.6
ELKO	33.4	33.6	32.7	33.8	34.3	34.2	32.5	34.7
LANDER	33.9	34.1	33.6	33.0	35.2	33.5	30.1	35.1
PERSHING	33.6	33.4	34.0	34.3	33.7	33.1	33.3	33.7
WHITE PINE	32.6	31.6	34.2	34.4	35.0	37.3	27.4	35.1
ALL COUNTIES	33.7	33.2	33.5	33.6	34.4	34.6	32.2	34.3

MEDIAN RATIO

		Class of Property						
Subject County	All Property	Improvements	Improved Land	Vacant Land	Single Family Residence	Multi-Family Residence	Commercial Industrial	Rural Land & Improvements
CARSON CITY	34.2	35.4	33.3	33.7	34.5	34.3	33.2	35.0
CHURCHILL	34.2	34.6	33.3	35.0	34.2	34.1	33.9	34.9
ELKO	33.9	34.4	33.8	33.3	34.4	33.8	33.2	35.0
LANDER	34.8	35.1	33.8	34.5	35.3	33.9	34.5	35.0
PERSHING	33.7	33.3	34.0	34.8	33.5	33.3	33.3	33.4
WHITE PINE	34.7	35.3	33.9	34.4	34.7	34.9	35.0	35.1
ALL COUNTIES	34.2	34.5	33.6	34.2	34.3	34.0	33.7	35.0

NEVADA DEPARTMENT OF TAXATION
2008-2009 RATIO STUDY
ALL APPRAISAL AREAS

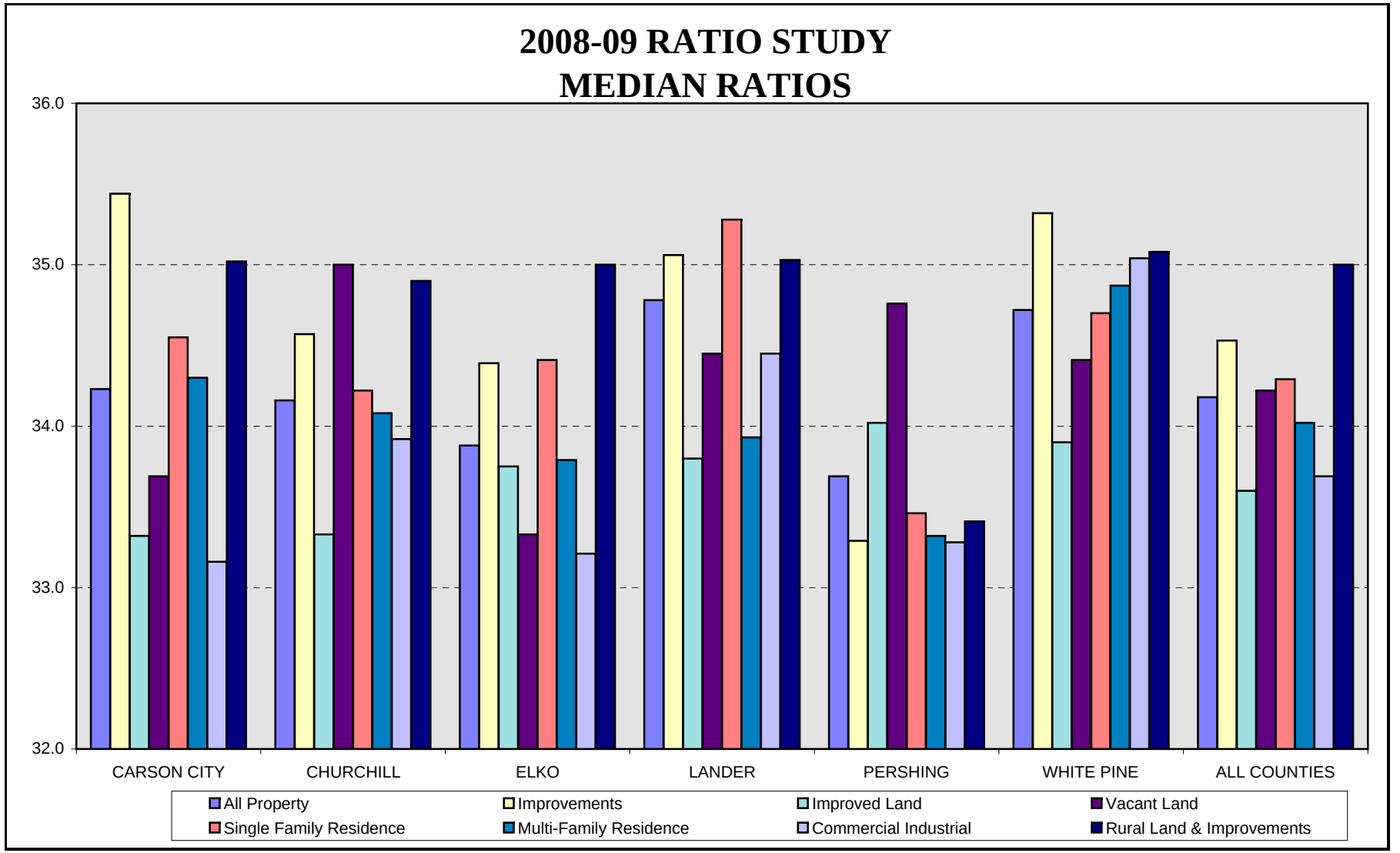
COEFFICIENT OF DISPERSION (COD)

Subject County	All Property	Class of Property						
		Improvements	Improved Land	Vacant Land	Single Family Residence	Multi-Family Residence	Commercial Industrial	Rural Land & Improvements
CARSON CITY	4.2	9.6	2.4	4.4	4.2	3.1	4.1	0.4
CHURCHILL	2.5	4.0	2.2	2.3	2.5	3.3	1.2	1.7
ELKO	3.7	5.0	3.5	3.0	3.0	2.3	6.0	0.7
LANDER	6.6	6.6	3.6	8.1	4.7	3.9	10.8	0.2
PERSHING	2.9	3.8	2.8	2.0	2.8	1.8	2.3	3.9
WHITE PINE	5.1	8.4	2.6	2.9	3.7	15.4	10.4	0.3
ALL COUNTIES	4.3	6.4	2.9	4.3	3.7	4.8	5.9	1.7

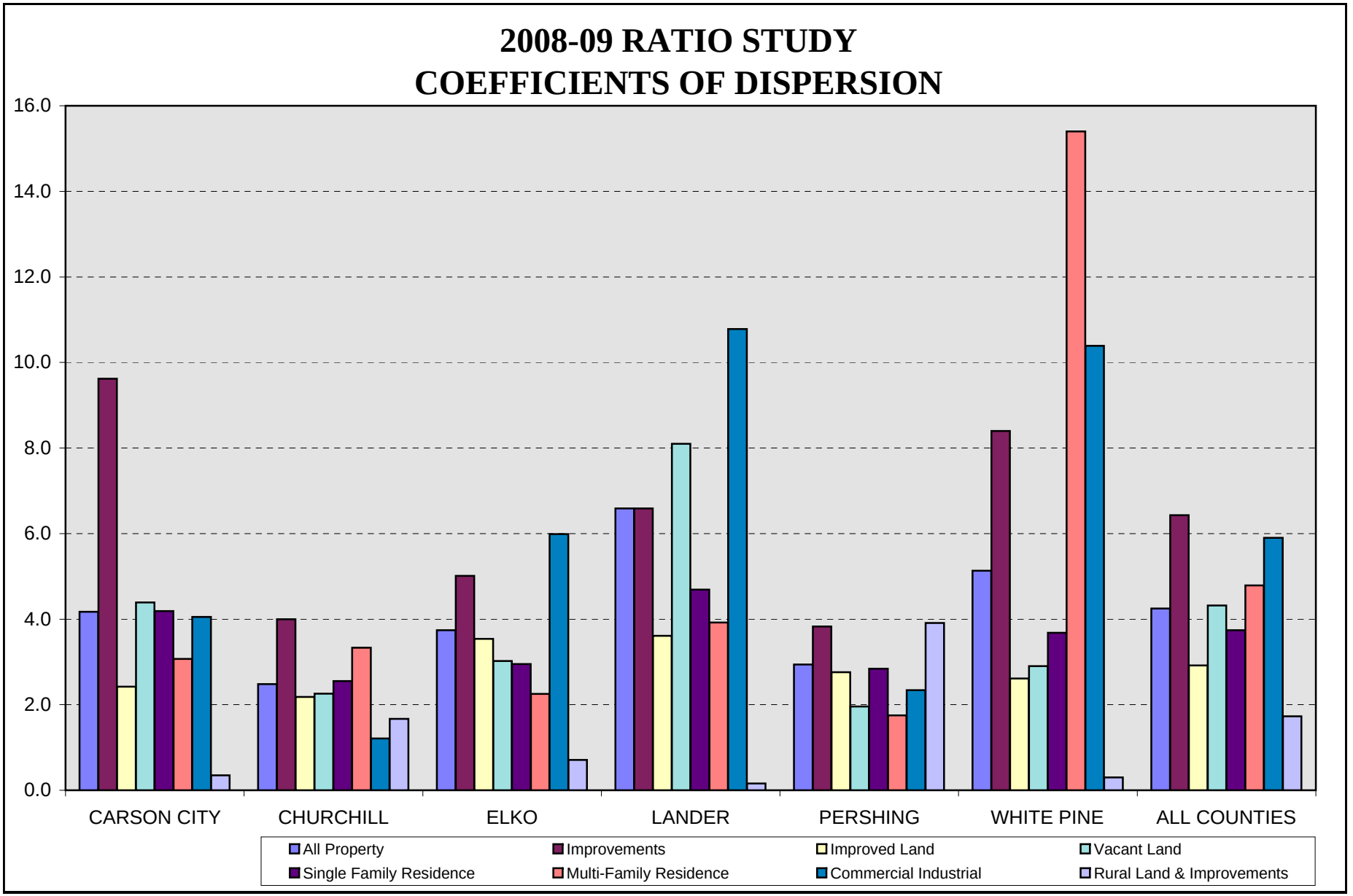
MEDIAN RELATED DIFFERENTIAL

Subject County	All Property	Class of Property						
		Improvements	Improved Land	Vacant Land	Single Family Residence	Multi-Family Residence	Commercial Industrial	Rural Land & Improvements
CARSON CITY	1.01	1.06	1.00	1.01	1.00	1.00	1.00	1.00
CHURCHILL	1.00	1.07	0.99	1.02	1.00	0.99	1.00	1.01
ELKO	1.01	1.02	1.03	0.99	1.00	0.99	1.02	1.01
LANDER	1.02	1.03	1.00	1.05	1.00	1.01	1.14	1.00
PERSHING	1.00	1.00	1.00	1.01	0.99	1.01	1.00	0.99
WHITE PINE	1.07	1.12	0.99	1.00	0.99	0.94	1.28	1.00
ALL COUNTIES	1.01	1.04	1.00	1.02	1.00	0.98	1.05	1.02

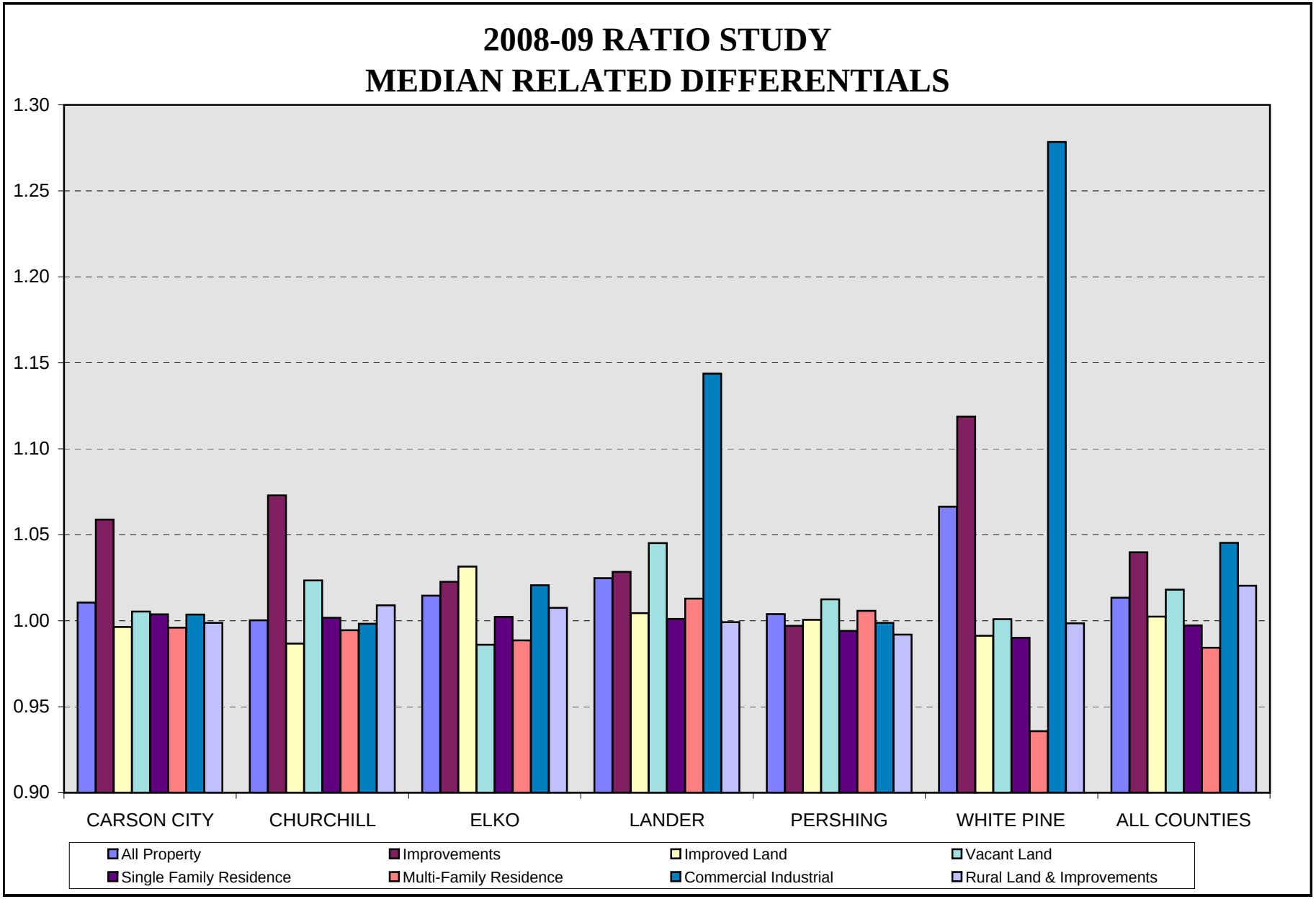
NEVADA DEPARTMENT OF TAXATION
2008-2009 RATIO STUDY
ALL APPRAISAL AREAS



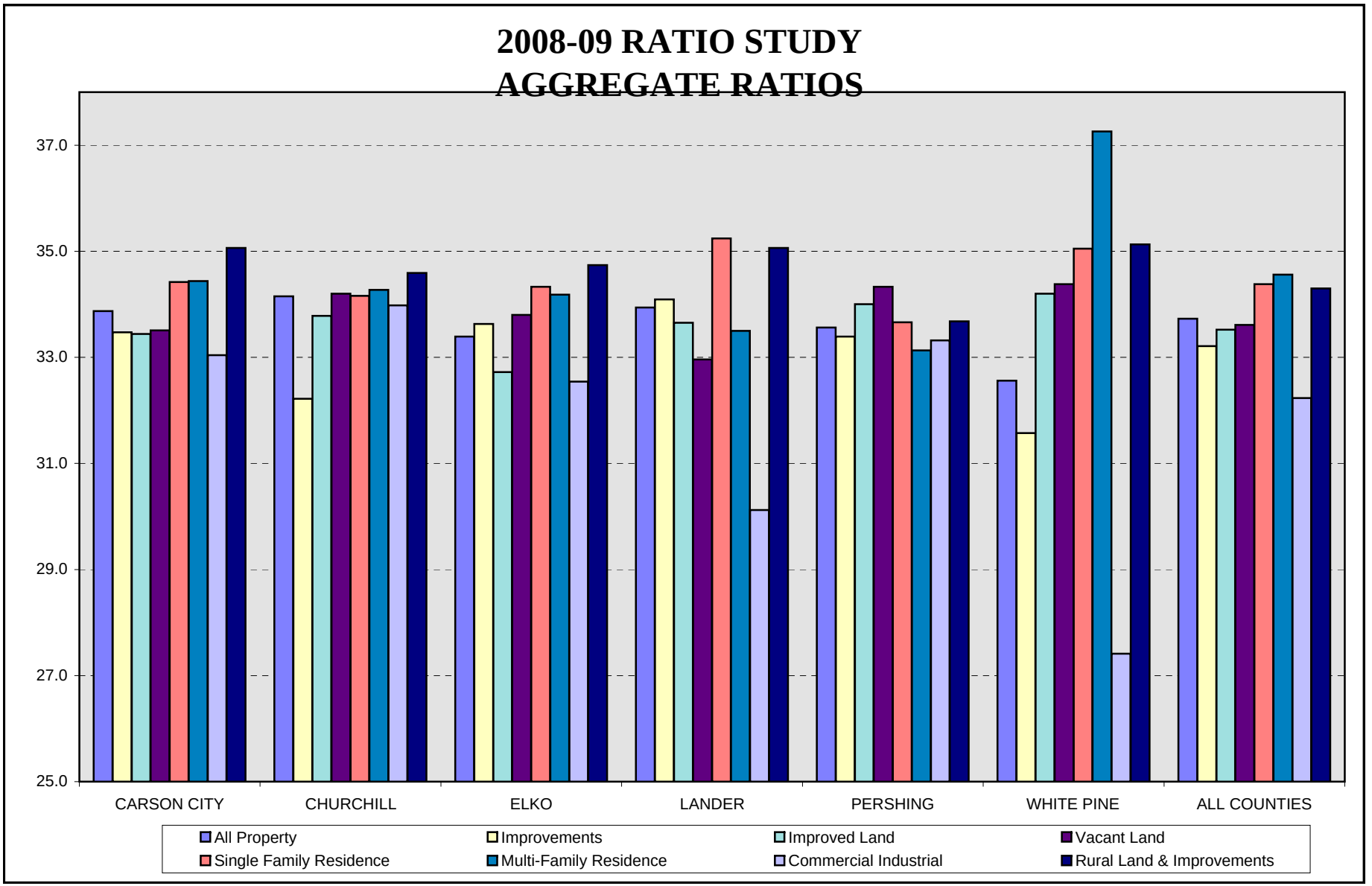
NEVADA DEPARTMENT OF TAXATION
2008-2009 RATIO STUDY
ALL APPRAISAL AREAS



NEVADA DEPARTMENT OF TAXATION
2008-2009 RATIO STUDY
ALL APPRAISAL AREAS



NEVADA DEPARTMENT OF TAXATION
2008-2009 RATIO STUDY
ALL APPRAISAL AREAS



CARSON CITY
2008-2009 RATIO STUDY
ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
COUNTYWIDE TOTAL PROPERTY	33.9%	34.2%	4.2%	129
COUNTYWIDE IMPROVEMENTS	33.5%	35.4%	9.6%	85
COUNTWIDE IMPROVED LAND	33.4%	33.3%	2.4%	87
COUNTYWIDE VACANT LAND	33.5%	33.7%	4.4%	42
SINGLE FAMILY IMPROVEMENTS	35.5%	36.1%	7.7%	58
SINGLE FAMILY LAND	33.4%	33.2%	2.2%	58
SINGLE FAMILY TOTAL PROPERTY	34.4%	34.5%	4.2%	58
MULTIPLE FAMILY IMPROVEMENTS	35.6%	35.5%	6.9%	12
MULTIPLE FAMILY LAND	33.5%	33.2%	2.2%	12
MULTIPLE FAMILY TOTAL PROPERTY	34.4%	34.3%	3.1%	12
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	32.3%	33.3%	11.9%	12
COMMERCIAL/INDUSTRIAL LAND	33.6%	33.5%	2.5%	12
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	33.0%	33.2%	4.1%	12
RURAL IMPROVEMENTS	n/a	n/a	n/a	-
RURAL LAND	35.1%	35.0%	0.4%	5
RURAL TOTAL PROPERTY	35.1%	35.0%	0.4%	5
SECURED PERSONAL PROPERTY				
ALL SECURED	35.0%	35.0%	0.3%	13
AIRCRAFT	n/a	n/a	n/a	-
AGRICULTURAL	35.0%	35.0%	0.0%	1
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	35.0%	35.0%	0.6%	6
MOBILE HOMES	35.0%	35.0%	0.0%	6
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	35.0%	35.0%	0.2%	24
AIRCRAFT	35.0%	35.0%	0.0%	6
AGRICULTURAL	35.0%	35.0%	0.0%	3
BILLBOARDS	35.0%	35.0%	0.0%	3
COMMERCIAL/INDUSTRIAL	35.0%	35.0%	0.5%	6
MOBILE HOMES	35.0%	35.0%	0.0%	6
TOTAL PERSONAL PROPERTY	35.0%	35.0%	0.2%	37

CHURCHILL COUNTY
2008-2009 RATIO STUDY

ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
COUNTYWIDE TOTAL PROPERTY	34.2%	34.2%	2.5%	144
COUNTYWIDE IMPROVEMENTS	32.2%	34.6%	4.0%	105
COUNTWIDE IMPROVED LAND	33.8%	33.3%	2.2%	114
COUNTYWIDE VACANT LAND	34.2%	35.0%	2.3%	30
SINGLE FAMILY IMPROVEMENTS	34.3%	34.7%	3.9%	66
SINGLE FAMILY LAND	33.9%	33.3%	2.2%	66
SINGLE FAMILY TOTAL PROPERTY	34.2%	34.2%	2.5%	66
MULTIPLE FAMILY IMPROVEMENTS	34.6%	34.3%	5.4%	18
MULTIPLE FAMILY LAND	33.6%	33.3%	1.5%	18
MULTIPLE FAMILY TOTAL PROPERTY	34.3%	34.1%	3.3%	18
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	34.3%	33.8%	2.3%	18
COMMERCIAL/INDUSTRIAL LAND	33.6%	33.3%	1.5%	18
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	34.0%	33.9%	1.2%	18
RURAL IMPROVEMENTS	8.5%	33.4%	2.4%	3
RURAL LAND	34.7%	34.9%	1.5%	12
RURAL TOTAL PROPERTY	34.6%	34.9%	1.7%	12
SECURED PERSONAL PROPERTY				
ALL SECURED	35.0%	35.0%	1.4%	17
AIRCRAFT	n/a	n/a	n/a	-
AGRICULTURAL	35.0%	35.0%	0.0%	6
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	34.7%	35.0%	4.3%	5
MOBILE HOMES	35.6%	35.0%	0.5%	6
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	34.9%	35.0%	0.6%	22
AIRCRAFT	34.8%	35.0%	1.3%	6
AGRICULTURAL	34.9%	35.0%	0.3%	6
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	35.0%	35.0%	0.5%	5
MOBILE HOMES	35.0%	35.0%	0.0%	5
TOTAL PERSONAL PROPERTY	34.9%	35.0%	1.0%	39

ELKO COUNTY
2008-2009 RATIO STUDY
ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
COUNTYWIDE TOTAL PROPERTY	33.4%	33.9%	3.7%	130
COUNTYWIDE IMPROVEMENTS	33.6%	34.4%	5.0%	87
COUNTWIDE IMPROVED LAND	32.7%	33.8%	3.5%	91
COUNTYWIDE VACANT LAND	33.8%	33.3%	3.0%	38
SINGLE FAMILY IMPROVEMENTS	34.5%	34.6%	3.6%	50
SINGLE FAMILY LAND	33.7%	33.6%	2.4%	50
SINGLE FAMILY TOTAL PROPERTY	34.3%	34.4%	3.0%	50
MULTIPLE FAMILY IMPROVEMENTS	34.5%	34.3%	3.6%	12
MULTIPLE FAMILY LAND	33.0%	32.7%	1.7%	12
MULTIPLE FAMILY TOTAL PROPERTY	34.2%	33.8%	2.3%	12
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	32.8%	33.0%	8.0%	24
COMMERCIAL/INDUSTRIAL LAND	31.9%	34.3%	5.5%	23
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	32.5%	33.2%	6.0%	24
RURAL IMPROVEMENTS	32.5%	32.5%	0.0%	1
RURAL LAND	35.1%	35.1%	0.2%	6
RURAL TOTAL PROPERTY	34.7%	35.0%	0.7%	6
SECURED PERSONAL PROPERTY				
ALL SECURED	33.9%	35.0%	1.4%	17
AIRCRAFT	n/a	n/a	n/a	-
AGRICULTURAL	33.7%	33.8%	3.1%	6
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	35.0%	35.0%	0.0%	6
MOBILE HOMES	35.0%	35.0%	0.0%	5
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	34.9%	35.0%	2.5%	32
AIRCRAFT	31.9%	32.2%	5.5%	6
AGRICULTURAL	34.2%	35.0%	1.6%	6
BILLBOARDS	35.0%	35.0%	0.0%	6
COMMERCIAL/INDUSTRIAL	35.0%	35.0%	0.1%	8
MOBILE HOMES	35.0%	35.0%	2.4%	6
TOTAL PERSONAL PROPERTY	34.9%	35.0%	2.1%	49

LANDER COUNTY
2008-2009 RATIO STUDY
ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
COUNTYWIDE TOTAL PROPERTY	33.9%	34.8%	6.6%	125
COUNTYWIDE IMPROVEMENTS	34.1%	35.1%	6.6%	78
COUNTWIDE IMPROVED LAND	33.6%	33.8%	3.6%	78
COUNTYWIDE VACANT LAND	33.0%	34.5%	8.1%	47
SINGLE FAMILY IMPROVEMENTS	35.5%	35.6%	5.1%	47
SINGLE FAMILY LAND	33.3%	33.9%	3.6%	47
SINGLE FAMILY TOTAL PROPERTY	35.2%	35.3%	4.7%	47
MULTIPLE FAMILY IMPROVEMENTS	33.1%	34.3%	6.6%	12
MULTIPLE FAMILY LAND	34.1%	33.7%	2.5%	12
MULTIPLE FAMILY TOTAL PROPERTY	33.5%	33.9%	3.9%	12
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	29.0%	32.8%	14.1%	12
COMMERCIAL/INDUSTRIAL LAND	33.7%	33.1%	4.1%	13
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	30.1%	34.5%	10.8%	13
RURAL IMPROVEMENTS	n/a	n/a	n/a	-
RURAL LAND	35.1%	35.0%	0.2%	6
RURAL TOTAL PROPERTY	35.1%	35.0%	0.2%	6
SECURED PERSONAL PROPERTY				
ALL SECURED	34.4%	35.0%	0.6%	18
AIRCRAFT	n/a	n/a	n/a	-
AGRICULTURAL	34.2%	35.0%	1.6%	6
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	35.0%	35.0%	0.1%	6
MOBILE HOMES	35.0%	35.0%	0.0%	6
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	33.2%	35.0%	1.2%	24
AIRCRAFT	n/a	n/a	n/a	-
AGRICULTURAL	32.6%	35.0%	1.9%	6
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	35.0%	35.0%	0.1%	6
MOBILE HOMES	34.6%	35.0%	1.3%	12
TOTAL PERSONAL PROPERTY	33.5%	35.0%	0.9%	42

PERSHING COUNTY
2008-2009 RATIO STUDY
ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
COUNTYWIDE TOTAL PROPERTY	33.6%	33.7%	2.9%	126
COUNTYWIDE IMPROVEMENTS	33.4%	33.3%	3.8%	96
COUNTWIDE IMPROVED LAND	34.0%	34.0%	2.8%	96
COUNTYWIDE VACANT LAND	34.3%	34.8%	2.0%	30
SINGLE FAMILY IMPROVEMENTS	33.6%	33.3%	3.7%	62
SINGLE FAMILY LAND	33.9%	33.6%	2.8%	62
SINGLE FAMILY TOTAL PROPERTY	33.7%	33.5%	2.8%	62
MULTIPLE FAMILY IMPROVEMENTS	33.0%	33.4%	2.7%	12
MULTIPLE FAMILY LAND	33.6%	33.9%	2.7%	12
MULTIPLE FAMILY TOTAL PROPERTY	33.1%	33.3%	1.8%	12
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	33.1%	32.6%	3.3%	12
COMMERCIAL/INDUSTRIAL LAND	34.0%	34.6%	1.7%	12
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	33.3%	33.3%	2.3%	12
RURAL IMPROVEMENTS	32.9%	34.1%	5.9%	10
RURAL LAND	34.9%	34.9%	1.2%	10
RURAL TOTAL PROPERTY	33.7%	33.4%	3.9%	10
SECURED PERSONAL PROPERTY				
ALL SECURED	33.4%	35.0%	2.8%	16
AIRCRAFT	n/a	n/a	n/a	-
AGRICULTURAL	34.2%	35.0%	1.1%	5
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	30.5%	36.2%	5.2%	5
MOBILE HOMES	36.6%	35.0%	1.6%	6
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	31.5%	35.0%	5.5%	20
AIRCRAFT	34.8%	32.2%	8.6%	2
AGRICULTURAL	35.5%	35.0%	0.7%	3
BILLBOARDS	35.0%	35.0%	1.6%	3
COMMERCIAL/INDUSTRIAL	29.1%	35.0%	11.9%	6
MOBILE HOMES	34.6%	35.0%	2.6%	6
TOTAL PERSONAL PROPERTY	32.1%	35.0%	4.3%	36

WHITE PINE COUNTY
2008-2009 RATIO STUDY

ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
COUNTYWIDE TOTAL PROPERTY	32.6%	34.7%	5.1%	103
COUNTYWIDE IMPROVEMENTS	31.6%	35.3%	8.4%	64
COUNTWIDE IMPROVED LAND	34.2%	33.9%	2.6%	69
COUNTYWIDE VACANT LAND	34.4%	34.4%	2.9%	34
SINGLE FAMILY IMPROVEMENTS	35.3%	35.3%	4.6%	44
SINGLE FAMILY LAND	34.0%	33.8%	2.6%	44
SINGLE FAMILY TOTAL PROPERTY	35.0%	34.7%	3.7%	44
MULTIPLE FAMILY IMPROVEMENTS	38.2%	35.7%	20.7%	10
MULTIPLE FAMILY LAND	33.6%	33.4%	1.6%	10
MULTIPLE FAMILY TOTAL PROPERTY	37.3%	34.9%	15.4%	10
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	25.7%	35.4%	12.7%	10
COMMERCIAL/INDUSTRIAL LAND	34.6%	34.7%	1.7%	10
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	27.4%	35.0%	10.4%	10
RURAL IMPROVEMENTS	n/a	n/a	n/a	-
RURAL LAND	35.1%	35.1%	0.3%	5
RURAL TOTAL PROPERTY	35.1%	35.1%	0.3%	5
SECURED PERSONAL PROPERTY				
ALL SECURED	35.6%	35.0%	7.1%	17
AIRCRAFT	n/a	n/a	n/a	-
AGRICULTURAL	34.9%	35.0%	3.8%	5
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	37.1%	35.0%	16.9%	6
MOBILE HOMES	35.0%	35.0%	0.0%	6
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	34.4%	35.0%	9.3%	21
AIRCRAFT	35.7%	35.0%	17.3%	5
AGRICULTURAL	35.0%	35.0%	0.0%	3
BILLBOARDS	35.0%	35.0%	0.0%	1
COMMERCIAL/INDUSTRIAL	35.0%	35.0%	0.0%	6
MOBILE HOMES	24.8%	35.0%	18.1%	6
TOTAL PERSONAL PROPERTY	34.6%	35.0%	8.3%	38

ALL COUNTIES INCLUDED IN 2008-2009 RATIO STUDY

ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
ALL COUNTIES TOTAL PROPERTY	33.7%	34.2%	4.3%	757
ALL COUNTIES IMPROVEMENTS	33.2%	34.5%	6.4%	515
ALL COUNTIES IMPROVED LAND	33.5%	33.6%	2.9%	535
ALL COUNTIES VACANT LAND	33.6%	34.2%	4.3%	221
SINGLE FAMILY IMPROVEMENTS	34.8%	34.7%	5.4%	327
SINGLE FAMILY LAND	33.6%	33.5%	2.7%	327
SINGLE FAMILY TOTAL PROPERTY	34.4%	34.3%	3.7%	327
MULTIPLE FAMILY IMPROVEMENTS	35.1%	34.3%	7.7%	76
MULTIPLE FAMILY LAND	33.5%	33.3%	2.2%	76
MULTIPLE FAMILY TOTAL PROPERTY	34.6%	34.0%	4.8%	76
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	31.6%	33.7%	8.4%	88
COMMERCIAL/INDUSTRIAL LAND	33.3%	34.1%	3.6%	88
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	32.2%	33.7%	5.9%	89
RURAL IMPROVEMENTS	21.8%	33.3%	5.1%	14
RURAL LAND	34.9%	35.0%	0.8%	44
RURAL TOTAL PROPERTY	34.3%	35.0%	1.7%	44
SECURED PERSONAL PROPERTY				
ALL SECURED	34.4%	35.0%	2.3%	98
AIRCRAFT	n/a	n/a	n/a	-
AGRICULTURAL	34.2%	35.0%	2.0%	29
BILLBOARDS	n/a	n/a	n/a	-
COMMERCIAL/INDUSTRIAL	34.2%	35.0%	4.6%	34
MOBILE HOMES	35.5%	35.0%	0.4%	35
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	34.7%	35.0%	3.0%	143
AIRCRAFT	33.6%	35.0%	6.6%	25
AGRICULTURAL	33.8%	35.0%	0.9%	27
BILLBOARDS	35.0%	35.0%	0.4%	13
COMMERCIAL/INDUSTRIAL	34.8%	35.0%	2.1%	37
MOBILE HOMES	32.0%	35.0%	3.8%	41
TOTAL PERSONAL PROPERTY	34.7%	35.0%	2.7%	241

STATEWIDE
2006-2009 RATIO STUDIES
ALL APPRAISAL AREAS

REAL PROPERTY	AGGREGATE RATIO	MEDIAN RATIO	COD MEDIAN	SAMPLE SIZE
STATEWIDE TOTAL PROPERTY	34.3%	34.5%	4.0%	2,104
STATEYWIDE IMPROVEMENTS	34.2%	34.3%	6.0%	1,476
STATEWIDE IMPROVED LAND	34.2%	34.8%	3.4%	1,544
STATEWIDE VACANT LAND	34.3%	34.8%	4.3%	559
SINGLE FAMILY IMPROVEMENTS	34.3%	34.5%	4.9%	832
SINGLE FAMILY LAND	33.9%	34.7%	3.4%	832
SINGLE FAMILY TOTAL PROPERTY	34.1%	34.4%	3.5%	832
MULTIPLE FAMILY IMPROVEMENTS	34.3%	34.4%	6.6%	292
MULTIPLE FAMILY LAND	34.0%	34.9%	4.0%	293
MULTIPLE FAMILY TOTAL PROPERTY	34.2%	34.3%	4.5%	293
COMMERCIAL/INDUSTRIAL IMPROVEMENTS	34.7%	34.0%	7.9%	301
COMMERCIAL/INDUSTRIAL LAND	34.4%	34.7%	3.5%	301
COMMERCIAL/INDUSTRIAL TOTAL PROPERTY	34.5%	34.2%	5.1%	302
RURAL IMPROVEMENTS	25.1%	33.3%	4.8%	31
RURAL LAND	34.7%	35.0%	0.8%	118
RURAL TOTAL PROPERTY	34.4%	35.0%	1.3%	118
SECURED PERSONAL PROPERTY				
ALL SECURED	35.0%	35.0%	1.0%	356
AIRCRAFT	n/a	n/a	n/a	-
AGRICULTURAL	34.7%	35.0%	1.4%	86
BILLBOARDS	34.8%	35.0%	1.3%	5
COMMERCIAL/INDUSTRIAL	35.0%	35.0%	1.6%	123
MOBILE HOMES	35.1%	35.0%	0.1%	142
UNSECURED PERSONAL PROPERTY				
ALL UNSECURED	34.9%	35.0%	1.3%	447
AIRCRAFT	34.9%	35.0%	2.2%	82
AGRICULTURAL	34.3%	35.0%	0.9%	66
BILLBOARDS	35.0%	35.0%	0.7%	34
COMMERCIAL/INDUSTRIAL	34.8%	35.0%	1.1%	120
MOBILE HOMES	34.1%	35.0%	1.4%	145
TOTAL PERSONAL PROPERTY	34.9%	35.0%	1.2%	803

Appendix

Appendix

Glossary of Terms

Aggregate Ratio: (also known as the weighted mean): the sum of the assessed values divided by the sum of the department's assessed values.

Assessed value: A value set on real and personal property by the county assessor as a basis for levying taxes. The level of assessment, also defined as the ratio of the assessed value to taxable value, is set by NRS 361.225: "All property subject to taxation must be assessed at 35 percent of its taxable value."

Taxable value: A value determined pursuant to NRS 361.227. In the case of real property, taxable value is the sum of the full cash value of the land under certain statutory conditions plus the replacement cost new of any improvements on the land, considering all applicable depreciation and obsolescence. In the case of personal property, taxable value is also based on replacement cost new less depreciation as determined by regulation of the Nevada Tax Commission.

Central tendency: The tendency of most kinds of data to cluster around some typical or central value, such as the mean or median.[1]

Class: A set of items defined by common characteristics. NRS 361.333 defines the major classes subject to the ratio study as:

Vacant;
Single-family residential;
Multi-residential;
Commercial and industrial; and
Rural

Coefficient of Dispersion (COD): The average deviation of a group of numbers from the median expressed a percentage of the median. In ratio studies, the average percentage deviation from the median ratio.[2]

Median: A measure of central tendency. The value of the middle item in an uneven number of items arranged or arrayed according to size; the arithmetic average of the two central items in an even number of items similarly arranged.[3]

Outliers: Observations that have unusual values, that is, differ markedly from a measure of central tendency. Some outliers occur naturally; others are due to data errors.

Representative sample: A random sample of observations from a larger population of observations, such that statistics calculated from the sample can be expected to represent the characteristics of the population being studied.[4]

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[1] International Association of Assessing Officers, Standard on Ratio Studies (1999), p. 37.

[2] Ibid, p. 38.

[3] Ibid., p. 39.

[4] Ibid., p. 40.

Division of Assessment Standards

Example of Procedural Audit Questions

Authority: NRS 360.215(6): The Department shall continually supervise assessment procedures which are carried on in the several counties of the State and advise county assessors in the application of such procedures. The Department shall make a complete written report to each session of the Legislature, which must include all reports of its activities and findings and all recommendations which it has made to the several county assessors, and the extent to which the recommendations have been followed.

Topic List for 2008-2009

Data Collection
- Geographic Data
- Property Characteristics Data

Verification of land sales
- Sales Transaction Data
- Verification Procedures
- Sold Property Data

Stratification
Analysis of land sales
Alternative methods of land valuation
Subdivision Discounts
Cost Approach
Agricultural Property

Personal Property

Description of Ratio Study Sample Observations and Number of Outliers

Assessment Administration
- Status of Reference Material
- Reporting
- Certification and Training
- Defense of Appealed Property
- Appraisal Cycle
- Billing and Collection Procedures

- -

Data Collection

Refer to NRS 361.189 through 361.220 for mapping requirements. Refer to NAC 361.118 for property characteristics and sales data requirements.

STANDARD: NRS 361.189(a): All land in this State must be legally described for tax purposes by parcel number in accordance with the parceling system prescribed by the Department.
NRS 361.189(b): Each county shall prepare and possess a complete set of maps drawn in accordance with such parceling system for all land in the county.

Geographic Data	Yes	No	N/A or Other	Comments
1. Is the county divided into geographical areas using recognized and permanent boundaries, such as township, range or section lines?				
2. Is each geographic area designated as a map book with an assigned number?				
3. Are all pages numbered within each map book?				
4. Are the maps drawn using suitable scales to cover every type or class of property?				

Geographic Data Con't	Yes	No	N/A or Other	Comments
5. Is a parcel number assigned to each parcel of land?				
6. Does the county maintain a county index map which shows the area covered by each map book?				
7. Is the map book index located in the front of each book?				
8. Is there a map book subdivision index in each book?				
9. What type of mapping system does the county maintain? (i.e. metes & bounds; coordinate; lot & block)				
10. In the event the legal description is vague, what procedures does the county use to map the parcel?				
Criteria used to determine a "parcel" of land				
11. Are master parcel numbers used to summarize the assessment of several parcels?				
12. Are parcels designated to reflect the largest area that can be legally and practically parceled?				
13. Provide examples of determinations of contiguous and non-contiguous land configurations. (Attach)				
14. Is an 8-digit identifier used as the basis of the APN?				
If not, explain reason for variance				
15. In a parcel split, is a new APN assigned?				
Assessment Map Standards				
Size and material of maps				
16. Is the size 12 x 18" or 11.5" x 17.5"?				
17. Is line work and lettering neat, readable, and conform with standard lettering guides, such as the Leroy Lettering System?				
18. Do map symbols conform with standard symbols used by USGS, the U.S. Board of Surveys and Map Standards?				
19. Are standard cadastral map scales listed?				
20. Does the scale selected improve map accuracy, clarity, and provide essential data?				
21. How are discrepancies between surveys and legal descriptions resolved?				
22. How is area calculated?				
23. Are maps stored in effective, quality-controlled filing systems? Are the maps stored in a fire-proof area?				

Geographic Data Con't	Yes	No	N/A or Other	Comments
24. Is the following data maintained? Chain of title, including copy of the recorded deed with the correct legal description Record of survey Ancillary legal documents & surveys Deed record numbers and recording dates Assessment work map Date of map's development Gross & net acreages plus all the acreage revisions and corrections				

STANDARD: NAC 361.118(1)(b): The elements of comparison between the comparable properties and the subject property that may be used by the county assessor include, without limitation, the real property rights conveyed, financing terms, conditions of sale, market conditions, location, physical characteristics, size, zoning or use, governmental restrictions and nonrealty components of value.

Property Characteristics Data	Yes	No	N/A or Other	Comments
25. Are factors that influence the local market collected and maintained?				
Lot size and shape				
Topography				
Soil type				
Traffic				
Proximity to positive or negative value influence centers (e.g., central business district, view of water, golf courses, mountains, or greenbelts)				
Other				
Other				
Describe the process by which physical inspection takes place.				
26. How often is property physically re-inspected?				
27. If the property is improved, is the interior of the property inspected?				
28. Does re-inspection include A. partial measurement of the two most complex sides of improvements and B. a walk around to identify deletions and additions?				
29. How is quality class determined?				
30. Is a comprehensive exterior inspection conducted, including measurement of improvements?				
31. Has the county developed a data collection manual? If so, attach.				
32. Is the coding of data as objective as possible, i.e. number of plumbing fixtures instead of poor, average, good plumbing.				

Property Characteristics Data Con't	Yes	No	N/A or Other	Comments
33. Does the data-entry program have data edit capabilities? (i.e. error or warning messages generated in response to invalid or unusual data items).				
34. Is building permit, occupancy permit information used and maintained?				
35. Are aerial photographs used and maintained?				
36. Is the local realtor multi-list used to obtain physical characteristic data?				
37. Are the correct land use and exemption codes being applied?				
38. Is data collected and maintained regarding zoning? Describe process.				
39. Is data collected and maintained for classifying land as vacant or improved? Describe process.				
40. List each property characteristic that is collected and maintained and specify whether it is primarily required for valuation, for defense of values, other, or non-essential.				
41. Is the data-entry form or screen clearly organized in a logical sequence that permits the data collector to check or circle common features or enter appropriate codes for less common features?				
42. Are hand-held computers used for field data-collection?				
43. Does the county have a program of routinely collecting income data for apartment buildings, retail stores, office buildings, and other commonly leased or rented properties?				
44. How is new construction discovered?				
45. How often are sites under construction visited and at what stages?				
46. Are building department or developer provided plans used for measurements of new construction?				
47. Is a final inspection done when the building is completed?				
48. Is the appraiser's name and the date of inspection available in the appraisal record?				
49. Is depreciation being calculated correctly?				
50. What lien date is being used?				
51. How does the assessor code tax districts? Attach example.				

Verification of Land Sales

STANDARD: . . .the county assessor must acquire sufficient sales data concerning the comparable property . . . NAC 361.118(2)

Sales Data	Yes	No	N/A or Other	Comments
52. Describe in general how land sales are identified and maintained.				
53. Does the sales file include the following data:				
Total amount paid for the property				
Terms of sale				
Names & contact info of buyer & seller				
Relationship of buyer & seller				
Legal description, address, APN				
Information regarding arm's length sale				
Length of time property on market				
Extent of interest transferred to buyer				
Nature of non-realty items				
Date of transfer				

STANDARD: . . .the county assessor may determine the accuracy of the sales data through 4 enumerated methods. NAC 361.118(3)

Verification procedures	Yes	No	N/A or Other	Comments
54. Does the assessor routinely contact the following:				
Buyer				
Seller				
Title Company				
Other				
55. Does the assessor use a sales questionnaire?				
56. Is the questionnaire based on IAAO format?				
57. If questionnaires are used, what is the return rate?				
58. Questionnaire asks for total amount paid for property				
59. Questionnaire asks for terms of sale				
60. Questionnaire asks for names and contact				

information of buyer and seller				
61. Questionnaire asks for legal description, APN, physical address				
Verification procedures	**Yes**	**No**	**N/A or Other**	**Comments**
62. Questionnaire asks for length of time on market				
63. Questionnaire asks for extent of interest transferred to buyer				
64. Questionnaire asks for nature of non-realty items				
65. Questionnaire asks for date of transfer				
ATTACH EXAMPLE OF SALES VERIFICATION QUESTIONNAIRE, IF AVAILABLE.				
66. Does the assessor conduct personal interviews as necessary?				
67. Does assessor disclose use of information to contacted parties?				
68. Does the assessor review declarations of value routinely / always?				
69. How does assessor identify sales with potentially unreliable information?				
70. Are the sales listed in NAC 361.118(4) automatically rejected, or is there some process to qualify the sales?				
71. Are sales assigned a validation code, and entered into the system?				
72. Are sales documents screened by a knowledgeable appraiser or other properly trained and qualified person?				
73. Aside from splits and consolidations, are sales screened and entered into the system within 30 days of recording?				
74. Does the computer system maintain a "snapshot" of the properties at the time of sale?				
75. Are sales excluded that have been found to be invalid or for which the price is clearly inconsistent with sales of properties with similar features?				
76. Are older sales added or is the model redefined when there are too few current sales?				
77. Are separate models developed for different market areas in the jurisdiction which are characterized by substantially different value levels?				
78. Are properties with extreme errors ("outliers") reviewed, and are data corrected or the sale eliminated as appropriate?				

79. Describe the quality control practices the county employs to validate sales comparison models.				

Sold property data	Yes	No	N/A or Other	Comments
80. Are characteristics of sold property identified and maintained?				
Size				
Shape				
Use				
Zoning				
Topography				
Road frontage				
Other (list)				

Stratification

STANDARD: . . .the county assessor may sort sales and other market data into homogeneous groups to reflect different market influences and variations in zoning, other land-use controls and probable use, and to ensure that land values will reflect market data for parcels with similar or competitive uses in the same area. NAC 361.118 (5)

Stratification	Yes	No	N/A or Other	Comments
81. Is land stratified by zoning and then by location?				
82. Is land stratified into neighborhoods?				
83. Are strata created that do not have enough sales to support meaningful analysis?				
84. Check yes for all that apply: Single-family residential sales are sorted by				
Neighborhood				
Quality Class				
Living Area				
Year Built				
Other (List)				
85. Commercial property sales are sorted by				
Market area or neighborhood				
Location groupings based on supply, rents, vacancies, and access				
Other (List)				

86. What other variables are used for stratification? (List)				

Analysis of Land Sales

STANDARD: . . .the county assessor shall adjust the sales prices or unit values of comparable properties as necessary to eliminate differences between the comparable properties and the subject property that affect value. The adjustments must be made in the manner identified in NAC 361.118(1)(a)(1-3).

Analysis of Land Sales	Yes	No	N/A or Other	Comments
87. Are land sales analyzed in terms of a value per unit, and are the per unit values plotted on maps?				
88. Are sale prices adjusted for date and terms of sale?				
89. Does the county analyze land sales to establish a standard unit or benchmark value for each stratum? (i.e. comparative unit method or base lot method).				
90. If the comparative unit method is used, is size the major value determinant? (i.e. sale price per unit)				
91. If the base lot method is used, what other attribute(s) are the major determinants? Is the per-unit value established by appraising a benchmark parcel using the traditional sales comparison approach?				
92. Is multiple regression analysis used to adjust for size and other attributes simultaneously?				
93. Describe how commercial and industrial land is valued.				
94. Are front-foot or square foot values used in commercial areas?				
95. Are standard block face values posted to land maps in preparation for assigning individual parcel values?				
96. Does the county use market-derived tables to make size or depth adjustments?				
97. Does the county have a standard procedure for adjusting land values for shape and corner location, and are the adjustments based on market analysis?				
98. Are adjustments made for positive location (situs) factors?				
99. Is the adjustment a lump-sum dollar value or a percentage differential? (Provide examples)				

100. Are view adjustments considered in all neighborhoods?				
101. Describe the process when a view adjustment is made. (Provide examples).				
102. Does the county use spreadsheets or statistical software to help develop land values?				
103. Does the county use a GIS to assist in data quality control and fine-tuning valuation models?				

Alternative Methods of Land Valuation

STANDARD: . . .If the county assessor is not able to use the sales comparison approach for vacant land because sufficient sales of comparable properties which were vacant land at the time of sale are not available, the county assessor may determine valuation through one of several methods identified in NAC 361.119(1).

Alternative Methods of Land Valuation	Yes	No	N/A or Other	Comments
104. What are the criteria used to determine whether insufficient vacant land sales exist to use the sales comparison approach?				
105. Does the county use the abstraction technique? If so, describe the steps used.				
106. Does the county use the allocation technique? If so, describe the steps used.				
107. Does the county use the land residual technique? If so, describe the steps used.				
108. Does the county use the capitalization of ground rents? If so, describe the steps used.				
109. Does the county use the cost of development method? If so, describe the steps used.				

Subdivision Discounts

STANDARD: In determining the taxable value of land within a qualified subdivision, the county assessor shall use one of three methods listed in NAC 361.1295.

Subdivision Discounts	Yes	No	N/A or Other	Comments

110. What data is collected to verify eligibility for the subdivision discount?				
111. Where is eligibility data stored physically and in the computer?				
112. Which of the 3 methods available is used by the county?				

Cost Approach

STANDARD: . . .The taxable value of improvements made on the land is calculated by subtracting from the cost of replacement of the improvements all applicable depreciation and obsolescence. Depreciation of an improvement made on real property must be calculated at 1.5 percent of the cost of replacement for each year of adjusted actual age of the improvement, up to a maximum of 5 years. NRS 361.227(1)(b).
For rural buildings, use the standards in the manual entitled Rural Building Costs and for other improvements, use the standards in the cost manuals published by the Marshall and Swift Publication Company. NAC 361.128.

Cost Approach	Yes	No	N/A or Other	Comments
113. Does the county perform a cost analysis to verify or adjust the Marshall/Swift manual tables, or to use in the land abstraction approach?				
114. Are cost schedules fully computerized?				
115. Have alternative cost determinations been approved by the Executive Director of the Department?				
116. What adjustments provided by Marshall Swift are being used? (List)				
117. Are quality classes consistent with those described in Marshall Swift?				
118. Are all cost manuals available in the office?				
119. Have the cost manuals been correctly updated?				
120. What local multiplier and improvement factor is being used?				
121. Is the zip code used to key the local multiplier and climate code? If no, then please describe.				
122. Is the age of the improvements available in the appraisal record?				
123. How are minor improvements valued?				
124. How is cost established for a single unit in a multi-unit building?				

Agricultural Property

STANDARD: The assessing authority must determine from field inspection and other available information whether the activities conducted on the property qualify as agricultural pursuits. NAC 361A.150.
Upon a determination that an activity on the land qualifies as an agricultural pursuit, the assessing authority must then determine whether the operator is engaged in the agricultural pursuit as a business venture for profit. NAC 361A.160.

Agricultural Property	Yes	No	N/A or Other	Comments
125. Does the county physically inspect the property nominated for agricultural classification?				
126. What documents are inspected to verify whether the activity is an agricultural pursuit?				
127. Is the property re-inspected to verify it continues to qualify as agricultural land?				
128. How is the information on applications maintained and/or stored?				
129. In making a determination about capacity and viability of the land for agricultural use, does the county consider: the size of the parcel terrain availability of water soil capability type of vegetation grown growing season animal unit months and animal units Other				
130. Describe how deferred tax is calculated by the county. Attach an example.				

Personal Property

Personal Property	Yes	No	N/A or Other	Comments
131. What procedures are used to discover:				
Business personal property				
Aircraft				
Billboards				
Mobile or modular homes				
Other				
132. If personal property is acquired with real property for a lump-sum, what procedures are used to establish a separate acquisition cost or				

value for personal property?				
133. How are declarations stored and maintained?				
134. How are accounts audited?				
135. Are existing accounts field audited periodically?				
136. Are new accounts field audited?				
137. What are the procedures when a declaration is not returned?				
138. Are there benchmarks for different types of businesses?				
139. How are accounts tied and cross-referenced with corresponding real property?				
140. How are accounts cross referenced with leased property?				
141. What are the procedures when a declaration does not meet benchmarks for the type of business?				
142. Is the *Personal Property Manual* available and correctly applied?				

Assessment Administration	**Yes**	**No**	**N/A or Other**	**Comments**
Status of Reference Material				
143. Are the statutes and administrative code available?				
144. Are the statutes and administrative code up to date?				
145. Are files logically organized and maintained with current, accurate data?				
146. Is the Rural Building Manual current?				
147. Is the Personal Property Manual current?				
148. Is the Agricultural Bulletin current?				
149. Is the Department improvement factor letter on file?				
150. Is the NTC decision letter approving land factors on file?				
151. Is the NTC decision letter approving the minimum billing cost on file?				
Reporting				
Were the following reports received by the Department in a timely manner?				
Tax Roll – NAC 361.152				Date:
Affidavit - NRS 360.250				Date:
Affidavit – NRS 361.310				Date:
Open Roll Logs – NRS 361.310				Date:
Report of Appraisals – NAC 361.150				Date:
Sales Data – NAC 361.151				Date:
Factors – NRS 361.260				Date:
Qualified Heating & Cooling Systems – NRS 361.079 / NAC 361.058				Date:
Tax Roll after County Board - NRS 361.390 (1)				Date:

Assessment Administration	Yes	No	N/A or Other	Comments
Segregation Reports – NRS 361.390 (2)				Date:
Statistical Analysis of the Roll – NRS 361.390 (3)				Date:
Certification and Training				
Are all appraisers certified for the job they are performing?				Number & Type:
Is the Assessor certified?				Type:
Number of appraisers having in excess of 180 hours of continuing education				Average number of hours
Number of appraisers having less than 180 hours of continuing education				Average number of hours
152. Is in-office training provided?				
153. Typical number of hours of class-time staff attends annually				
Defense of appealed property				
154. Number of appeals resolved in-office				
155. Number of appeals heard by county board of equalization				
156. Number of appeals heard by state board of equalization				
157. Did documents and data sent to the State Board in defense of appeals conform to State Board regulations?				
Appraisal Cycle				
158. Was all real property reappraised at least once every 5 years?				
159. Did the NTC approve any change in the areas of reappraisal, and if so, is the decision letter on file?				
Billing and Collection Procedures				
160. Are penalties on delinquent accounts correctly calculated?				
161. Is interest on delinquent accounts correctly calculated?				
162. Are late notices sent to taxpayers?				
163. Are second late notices sent to taxpayers?				
164. Describe criteria used to determine whether penalty and interest will be waived (NRS 361.4835)				

Comments by Department Staff:
Response by County Assessor:

Prepared by:_____ Date:_____

Reviewed by:_____ Date:_____

Assessor:_____ Date:_____