# 2008 JEFFERSON COUNTY PROPERTY ASSESSMENT STUDY

ROCKY MOUNTAIN
VALUATION SPECIALISTS

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VALUATION SPECIALISTS

September 15, 2008

Mr. Mike Mauer
Director of Research
Colorado Legislative Council
Room 029, State Capitol Building
Denver, Colorado 80203

**RE: Final Report for the 2008 Colorado Property Assessment Study for Colorado's sixty four counties**

Dear Mr. Mauer:

Rocky Mountain Valuation Specialists LLC is pleased to submit the Final Reports for the 2008 Colorado Property Assessment Study for all sixty four counties that make up the State of Colorado.

These reports represent the result of a two-part analysis and audit for each county: A procedural analysis and a statistical analysis.

The procedural analysis, for each county, included all classes of property and specifically looked at how the assessor developed economic areas, confirmed and qualified their sales, developed their time adjustments, and performed their periodic physical property inspections. The audit also reviewed the procedures for discovering, classifying and valuing agricultural outbuildings, discovering subdivision build-out and subdivision discounting procedures. Valuation methodology for residential properties and commercial properties was examined. Procedures for producing mines, oil and gas leaseholds and lands producing, producing coalmines, producing earth and stone products, severed mineral interests, and non-producing patented mining claims were also reviewed. Starting in 2007, procedural analyses of agricultural outbuildings were performed for each county.

Statistical analysis was also performed, for each county, on vacant land, residential properties, commercial/industrial properties, and agricultural land. A statistical analysis was performed to check for personal property compliance on the top 11 counties: Adams, Arapahoe, Boulder, Denver, Douglas, El Paso, Jefferson, Larimer, Mesa, Pueblo, and Weld. All other counties received a procedural study.

Throughout this project RMVS has remained committed to its belief that for an ad valorem system to be successful, values must be equitable and market-driven in all parts of Colorado. Only then is the taxpayer assured of a fair property tax.

RMVS appreciates the opportunity to be of service to the State of Colorado.

Mark R. Linné **MAI, CAE, ASA, CRE, FRICS**
Managing Director
***Rocky Mountain Valuation Specialists LLC***

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# INTRODUCTION


The Colorado Constitution directs that each property tax levy shall be uniform upon all real and personal property not exempt from taxation. The constitution goes on to direct that the actual value of all applicable real and personal property shall be determined under general laws, which shall prescribe such methods and regulations as shall secure just and equalized valuations (Colo. Const., Art. X, Sec. 3 (1)(a)).

In order to check that all applicable property has been valued with just and equalized valuations, the Constitution states that commencing in 1983 the general assembly shall cause a valuation for assessment study to be conducted. Such study shall determine whether or not the assessor of each county has complied with the property tax provisions of this constitution and of the statutes in valuing property and has determined the actual value and valuation for assessment of each and every class of taxable real and personal property consistent with such provisions. Such study shall sample at least one percent of each and every class of taxable real and personal property in the county (Colo. Const., Art. X, Sec. 3 (2)(a)).

The State Board of Equalization (SBOE) reviews assessments for conformance to the Constitution. The SBOE will order revaluations for counties whose valuations do not reflect the proper valuation period level of value.

C.R.S. 39-1-104 (16)(a)(b) and (c) outlined how this was to be accomplished by stating that during each property tax year, the director of research of the legislative council shall contract with a private person for a valuation for assessment study to be conducted as set forth in this subsection (16). The study shall be conducted in all counties of the state to determine whether or not the assessor of each county has, in fact, used all manuals, formulas, and other directives required by law to arrive at the valuation for assessment of each and every class of real and personal property in the county. The person conducting the study shall sample each class of property in a statistically valid manner, and the aggregate of such sampling shall equal at least one percent of all properties in each county of the state. The sampling shall show that the various areas, ages of buildings, economic conditions, and uses of properties have been sampled. Such study shall be completed, and a final report of the findings and conclusions thereof shall be submitted to the state board of equalization, by September 15 of the year in which the study is conducted.

The legislative council sets forth two criteria that are the focus of the audit group:

To determine whether each county assessor is applying correctly the constitutional and statutory provisions, compliance requirements of the State Board of Equalization, and the manuals published by the State Property Tax Administrator to arrive at the actual value of each class of property.

To determine if each assessor is applying correctly the provisions of law to the actual values when arriving at valuations for assessment of all locally valued properties subject to the property tax.

The property assessment audit conducts a two-part analysis: A procedural analysis and a statistical analysis.

The procedural analysis includes all classes of property and specifically looks at how the assessor develops economic areas, confirms and qualifies sales, and develops time adjustments. The audit also examines the procedures for adequately discovering, classifying and valuing agricultural outbuildings, discovering subdivision build-out and subdivision discounting procedures. Valuation methodology for vacant land, improved residential properties and commercial properties is examined. Procedures for producing mines, oil and gas leaseholds and lands producing, producing coal mines, producing earth and stone products, severed mineral interests and non-producing patented mining claims are also reviewed.

Statistical analysis is performed on vacant land, residential properties, commercial industrial properties, agricultural land, and personal property. The statistical study results are compared with State Board of Equalization compliance requirements and the manuals published by the State Property Tax Administrator.

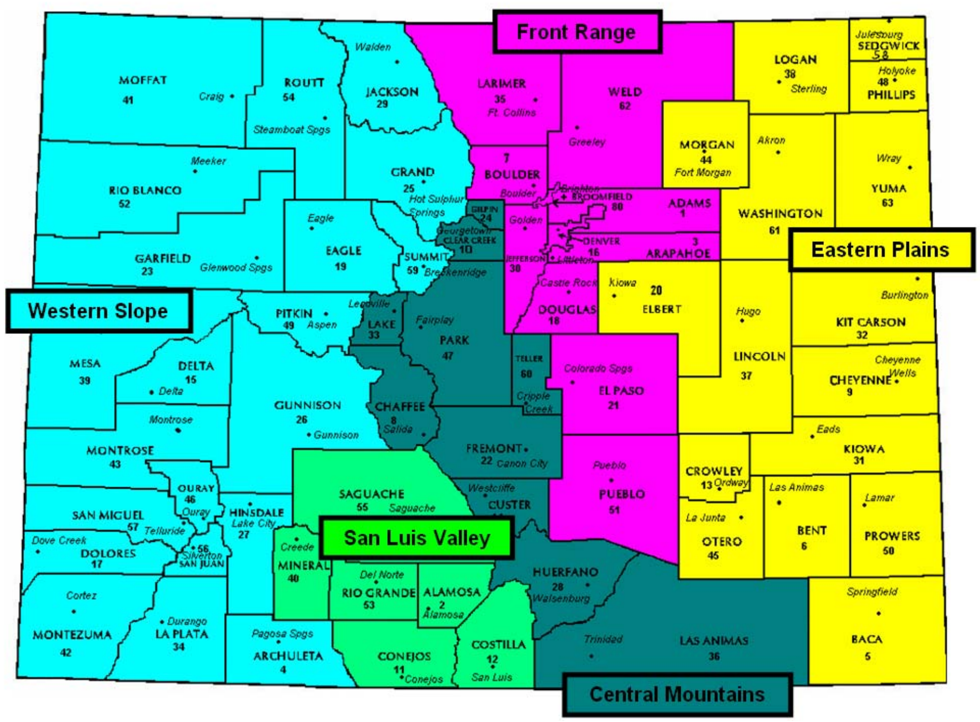
RMVS has completed the Property Assessment Study for 2008 and is pleased to report its findings for Jefferson County in the following report.

# REGIONAL/HISTORICAL SKETCH OF JEFFERSON COUNTY

## Regional Information

Jefferson County is located in the Front Range region of Colorado. The Colorado Front Range is a colloquial geographic term for the populated areas of the State of Colorado which are just east of the foothills of the Front Range, from which the region takes its name. The region contains the largest cities and the majority of the population of Colorado, aligned in a north-south configuration on the western edge of the Great Plains, where they meet the Rockies. Geologically, the region lies mostly within the Colorado Piedmont, in the valley of the South Platte and Arkansas rivers on the east side of the Rockies.

The Front Range includes Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, El Paso, Jefferson, Larimer, Pueblo, and Weld counties. The Colorado Front Range communities include (in a roughly north-to-south order): Fort Collins, Greeley, Loveland, Longmont, Boulder, Denver-Aurora Metropolitan Area, Castle Rock, Colorado Springs, Pueblo.

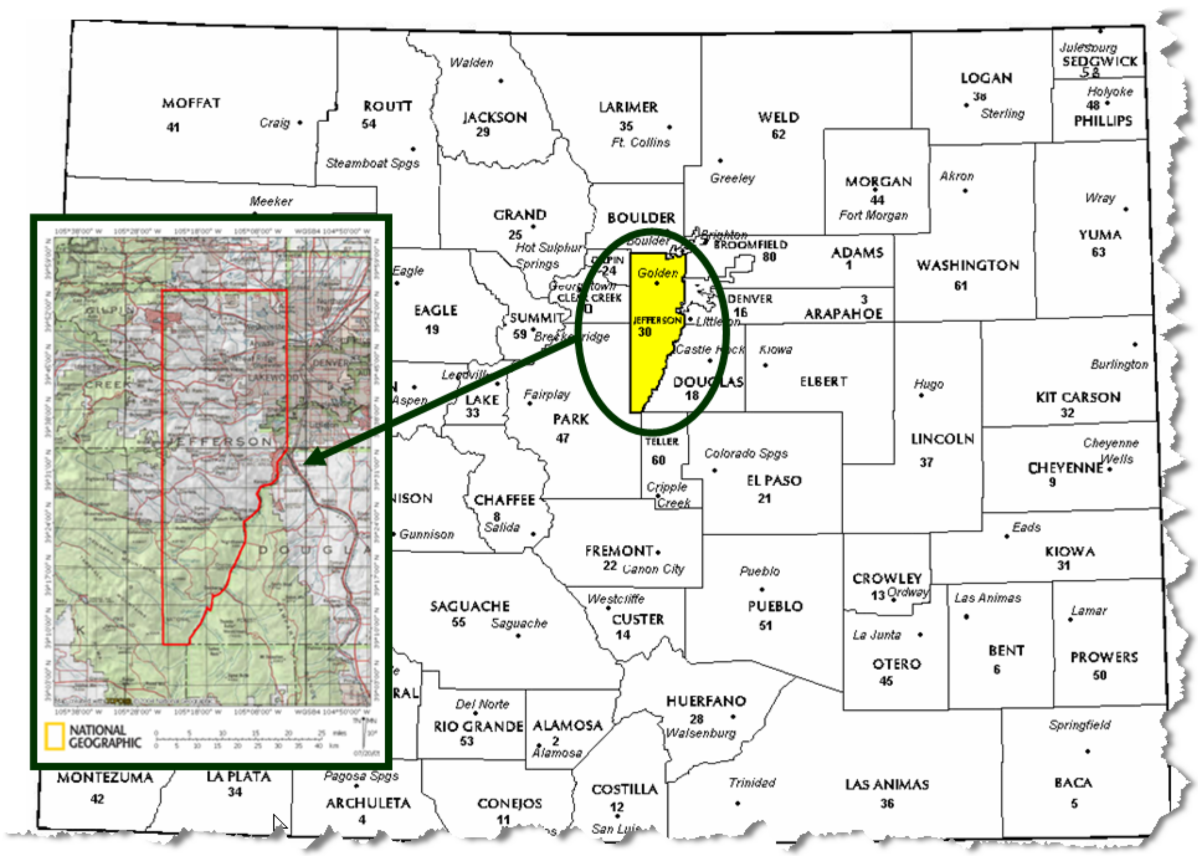


## Historical Information

Jefferson County has a population of approximately 526,994 people with 682.6 people per square mile, according to the U.S. Census Bureau's 2006 estimated population data.

The County was established in 1861 with an area of 783 square miles. It is one of the seventeen original territorial counties. The county was named for Jefferson Territory, the extralegal government which preceded Colorado Territory and took its name from President Thomas Jefferson.

The county seat is Golden which was named for Thomas L. Golden who, with James Saudners and George W. Jackson, established a temporary camp near the mouth of Clear Creek Canyon in 1858. The city, however, was actually established by the Boston Company which was headed by George West and which, from 1862 to 1867, was the capital of Colorado Territory. (William Bright, Colorado Place Names, 3rd Edition, Johnson Books, 2004, p. 94 and 74)



# RATIO ANALYSIS

## Methodology

All significant classes of properties were analyzed. Sales were collected for each property class over the appropriate sale period, which was typically defined as the 18-month period between January 2005 and June 2006. Counties with less than 30 sales typically extended the sale period back up to 5 years prior to June 30, 2006 in 6-month increments. If there were still fewer than 30 sales, supplemental appraisals were performed and treated as proxy sales. Residential sales for all counties using this method totaled at least 30 per county. For commercial sales, the total number analyzed was allowed, in some cases, to fall below 30. There were no sale quantity issues for counties requiring vacant land analysis or condominium analysis. Although it was required that we examine the median and coefficient of dispersion for all counties, we also calculated the weighted mean and price-related differential for each class of property. Counties were not passed or failed by these latter measures, but were counseled if there were anomalies noted during our analysis. Qualified sales were based on the qualification code used by each county, which were typically coded as either "Q" or "C." The ratio analysis included all sales. The data was trimmed for counties with obvious outliers using IAAO standards for data analysis. In every case, we examined the loss in data from trimming to insure that only true outliers were excluded. Any county with a significant portion of sales excluded by this trimming method were examined further. No county was allowed to pass the audit if more than 5% of the sales were "lost" because of trimming. For the largest 11 counties, the residential ratio statistics were broken down by economic area as well.

## Conclusions

For this final analysis report, the minimum acceptable statistical standards allowed by the State Board of Equalization are:

| ALLOWABLE STANDARDS RATIO GRID | | |
|---|---|---|
| Property Class | Unweighted Median Ratio | Coefficient of Dispersion |
| Commercial/Industrial | Between .95-1.05 | Less than 20.99 |
| Condominium | Between .95-1.05 | Less than 15.99 |
| Single Family | Between .95-1.05 | Less than 15.99 |
| Vacant Land | Between .95-1.05 | Less than 20.99 |

The results for Jefferson County are:

| Jefferson County Ratio Grid | | | | | |
|---|---|---|---|---|---|
| Property Class | Number of Qualified Sales | Unweighted Median Ratio | Price Related Differential | Coefficient of Dispersion | Time Trend Analysis |
| Commercial/Industrial | 252 | 0.983 | 1.043 | 12.4 | Compliant |
| Condominium | N/A | N/A | N/A | N/A | N/A |
| Single Family | 15,620 | 0.989 | 1.010 | 6.8 | Compliant |
| Vacant Land | 198 | 0.972 | 1.058 | 12.8 | Compliant |

**Ratio Statistics**

| ECON AREA | Sale Count | Median | Weighted Mean | Price Related Differential | Coefficient of Dispersion |
|---|---|---|---|---|---|
| 1 | 2,170 | .987 | .985 | 1.007 | .056 |
| 2 | 2,780 | .987 | .981 | 1.010 | .073 |
| 3 | 2,766 | .994 | .993 | 1.007 | .068 |
| 4 | 3,542 | .988 | .983 | 1.008 | .058 |
| 5 | 486 | .979 | .955 | 1.016 | .069 |
| 6 | 639 | .991 | .975 | 1.010 | .074 |
| 7 | 67 | .998 | .998 | 1.032 | .112 |
| 8 | 704 | .989 | .969 | 1.018 | .097 |
| 9 | 715 | .996 | .990 | 1.008 | .095 |
| CONDO | 1,751 | .991 | .985 | 1.009 | .063 |
| Overall | 15,620 | .989 | .982 | 1.010 | .068 |

RATIO = CURRENT ASMT / TASP

After applying the above described methodologies, it is concluded from the sales ratios that Jefferson County is in compliance with SBOE, DPT, and Colorado State Statute valuation guidelines.

## Recommendations

None

# Time Trending Verification

## Methodology

While we recommend that counties use the inverted ratio regression analysis method to account for market (time) trending, some counties have used other IAAO-approved methods, such as the weighted monthly median approach. We are not auditing the methods used, but rather the results of the methods used. Given this range of methodologies used to account for market trending, we concluded that the best validation method was to examine the sale ratios for each class across the appropriate sale period. To be specific, if a county has considered and adjusted correctly for market trending, then the sale ratios should remain stable (i.e. flat) across the sale period. If a residual market trend is detected, then the county may or may not have addressed market trending adequately, and a further examination is warranted. This validation methodology also considers the number of sales and the length of the sale period. Counties with few sales across the sale period were carefully examined to determine if the statistical results were valid.

## Conclusions

After verification and analysis, it has been determined that Jefferson County has complied with the statutory requirements to analyze the effects of time on value in their county. Jefferson County has also satisfactorily applied the results of their time trending analysis to arrive at the time adjusted sales price (TASP).

## Recommendations

None

# Sold/Unsold Analysis

## Methodology

Jefferson County was tested for the equal treatment of sold and unsold properties to insure that "sales chasing" has not occurred. The auditors employed a multi-step process to determine if sold and unsold properties were valued in a consistent manner.

All qualified residential and commercial class properties were examined using the unit value method, where the actual value per square foot was compared between sold and unsold properties. A class was considered qualified if it met the criteria for the ratio analysis. The median value per square foot for both groups was compared from an appraisal and statistical perspective. If no significant difference was indicated, then we concluded that no further testing was warranted and that the county was in compliance in terms of sold/unsold consistency.

If either residential or commercial differences were significant using the unit value method, or if data limitations made the comparison invalid, then the next step was to perform a ratio analysis comparing the 2006 and 2008 actual values for each qualified class of property. All qualified vacant land classes were tested using this method. The sale property ratios were arrayed using a range of 0.8 to 1.5, which theoretically excluded changes between years that were due to other unrelated changes in the property. These ratios were also stratified at the appropriate level of analysis. Once the percent change was determined for each appropriate class and sub-class, the next step was to select the unsold sample. This sample was at least 1% of the total population of unsold properties and excluded any sale properties. The unsold sample was filtered based on the attributes of the sold dataset to closely correlate both groups. The ratio analysis was then performed on the unsold properties and stratified. The median and mean ratio distribution was then compared between the sold and unsold group. A non-parametric test such as the Mann-Whitney test for differences between independent samples was undertaken to determine whether any observed differential was significant. If this test determined that the unsold properties were treated in a manner similar to the sold properties, it was concluded that no further testing was warranted and that the county was in compliance.

If a class or sub-class of property was determined to be significantly different by this method, the final step was to perform a multi-variate mass appraisal model that developed ratio statistics from the sold properties that were then applied to the unsold sample. This test compared the measures of central tendency and confidence intervals for the sold properties with the unsold property sample. If this comparison was also determined to be significantly different, then the conclusion was that the county had treated the unsold properties in a different manner than sold properties.

These tests were supported by both tabular and chart presentations, along with saved sold and unsold sample files.

| Sold/Unsold Results | |
|---|---|
| **Property Class** | **Results** |
| Commercial/Industrial | Compliant |
| Condominium | N/A |
| Single Family | Compliant |
| Vacant Land | Compliant |

## Conclusions

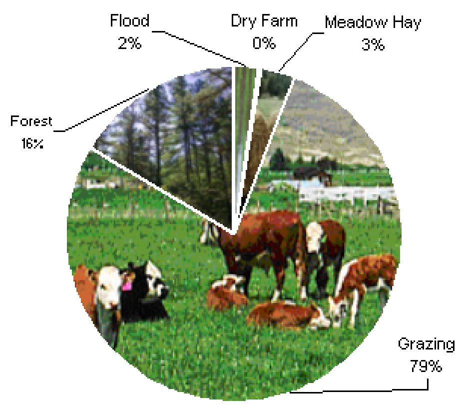
After applying the above described methodologies, it is concluded that Jefferson County is reasonably treating its sold and unsold properties in the same manner.

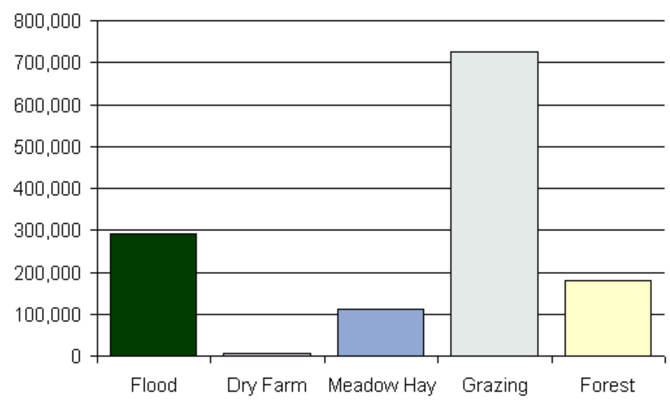
## Recommendations

None

# AGRICULTURAL LAND STUDY

| Acres By Subclass | Value By Subclass |
| --- | --- |




## Agricultural Land

County records were reviewed to determine major land categories such as irrigated farm, dry farm, meadow hay, grazing and other lands. In addition, county records were reviewed in order to determine if: Aerial photographs are available and are being used; soil conservation guidelines have been used to classify lands based on productivity; crop rotations have been documented; typical commodities and yields have been determined; orchard lands have been properly classified and valued; expenses reflect a ten year average and are typical landlord expenses; grazing lands have been properly classified and valued; the number of acres in each class and subclass have been determined; the capitalization rate was properly applied. Also, documentation was required for the valuation methods used and any locally developed yields, carrying capacities, and expenses. Records were also checked to ensure that the commodity prices and expenses, furnished by the Property Tax Administrator (PTA), were applied properly. (See Assessor Reference Library Volume 3 Chapter 5.)

### Conclusions

An analysis of the agricultural land data indicates an acceptable appraisal of this property type. Directives, commodity prices and expenses provided by the PTA were properly applied. County yields compared favorably to those published by Colorado Agricultural Statistics. Expenses used by the county were allowable expenses and were in an acceptable range. Grazing lands carrying capacities were in an acceptable range. The data analyzed resulted in the following ratios:

| Jefferson County Agricultural Land Ratio Grid | | | | | | |
|---|---|---|---|---|---|---|
| Abstract Code | Land Class | Number Of Acres | County Value Per Acre | County Assessed Total Value | RMVS Total Value | Ratio |
| 4117 | Flood | 1,704 | 170.76 | 290,978 | 290,945 | 1.00 |
| 4127 | Dry Farm | 361 | 14.56 | 5,257 | 5,316 | 0.99 |
| 4137 | Meadow Hay | 2,581 | 43.48 | 112,233 | 112,233 | 1.00 |
| 4147 | Grazing | 61,079 | 11.86 | 724,316 | 724,316 | 1.00 |
| 4177 | Forest | 12,969 | 13.96 | 181,049 | 181,049 | 1.00 |
| **Total/Avg** | | **78,694** | **16.70** | **1,313,833** | **1,313,858** | **1.00** |

## Recommendations

None

# Agricultural Outbuildings

## Methodology

A sample of various use types of agricultural outbuildings with varying ages was reviewed to see if the guidelines found in the Assessor's Reference Library (ARL) Volume 3, pages 5.73 through 5.78 were being followed.

## Conclusions

Jefferson County has complied with all of the recommended procedures provided by the Division of Property Taxation for the valuation of agricultural outbuildings.

## Recommendations

None

# SALES VERIFICATION

According to Colorado Revised Statutes:

*A representative body of sales is required when considering the market approach to appraisal.*

*(8) In any case in which sales prices of comparable properties within any class or subclass are utilized when considering the market approach to appraisal in the determination of actual value of any taxable property, the following limitations and conditions shall apply:*

*(a)(I) Use of the market approach shall require a representative body of sales, including sales by a lender or government, sufficient to set a pattern, and appraisals shall reflect due consideration of the degree of comparability of sales, including the extent of similarities and dissimilarities among properties that are compared for assessment purposes. In order to obtain a reasonable sample and to reduce sudden price changes or fluctuations, all sales shall be included in the sample that reasonably reflect a true or typical sales price during the period specified in section 39-1-104 (10.2). Sales of personal property exempt pursuant to the provisions of sections 39-3-102, 39-3-103, and 39-3-119 to 39-3-122 shall not be included in any such sample.*

*(b) Each such sale included in the sample shall be coded to indicate a typical, negotiated sale, as screened and verified by the assessor. (39-1-103, C.R.S.)*

*The assessor is required to use sales of real property only in the valuation process.*

*(8)(f) Such true and typical sales shall include only those sales which have been determined on an individual basis to reflect the selling price of the real property only or which have been adjusted on an individual basis to reflect the selling price of the real property only. (39-1-103, C.R.S.)*

Part of the Property Assessment Study is the sales verification analysis. RMVS has used the above-cited statutes as a guide in our study of the county's procedures and practices for verifying sales.

RMVS reviewed the sales verification procedures in 2008 for Jefferson County. This study was conducted by checking selected sales from the master sales list for the valuation period. Specifically RMVS selected 45 sales listed as unqualified.

All of the sales in the unqualified sales sample had reasons that were clear and supportable.

## Conclusions

Jefferson County appears to be doing an excellent job of verifying their sales. RMVS agreed with the county's reason for disqualifying each of the sales selected in the sample. There are no recommendations or suggestions.

## Recommendations

None

# Economic Area Review and Evaluation

## Methodology

Jefferson County has submitted a written narrative describing the economic areas that make up the county's market areas. Jefferson County has also submitted a map illustrating these areas. Each of these narratives have been read and analyzed for logic and appraisal sensibility. The maps were also compared to the narrative for consistency between the written description and the map.

## Conclusions

After review and analysis, it has been determined that Jefferson County has adequately identified homogeneous economic areas comprised of smaller neighborhoods. Each economic area defined is equally subject to a set of economic forces that impact the value of the properties within that geographic area and this has been adequately addressed. Each economic area defined adequately delineates an area that will give "similar values for similar properties in similar areas."

## Recommendations

None

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# NATURAL RESOURCES

## Earth and Stone Products

### Methodology

Under the guidelines of the Assessor's Reference Library (ARL), Volume 3, Natural Resource Valuation Procedures, the income approach was the primary method applied to find value for production of earth and stone products. The number of tons was multiplied by an economic location factor that represented the landlord's royalty. The landlord's share was multiplied by a recommended Hoskold factor to determine the actual value. The Hoskold factor was determined by the life of the reserves, or the lease. The value was primarily based on two variables: life and tonnage. The operator determines these since there is no other means to obtain production data through any state or private agency.

### Conclusions

County has applied the correct formulas and state guidelines to earth and stone production.

### Recommendations

None

# VACANT LAND

## Subdivision Discounting

In 2008 subdivisions were reviewed in Jefferson County. The review showed that subdivisions were discounted pursuant to the Colorado Revised Statutes in Article 39-1-103 (14) and by applying the recommended methodology in ARL Vol 3, Chap 4. Subdivision Discounting in the intervening year was accomlished by reducing the absorption period by one year. In instances where the number of sales within an approved plat was less than the absorption rate per year calculated for the plat, the absorption period was left unchanged.

### Conclusions

Jefferson County has implemented proper procedures to adequately estimate absorption periods, discount rates, and lot values for qualifying subdivisions.

### Recommendations

None

# POSSESSORY INTEREST PROPERTIES

Possessory interest property discovery and valuation is described in the Assessor's Reference Library (ARL) Volume 3 section 7 in accordance with the requirements of 39-1-103 (17)(a) (II) C.R.S. Possessory Interest is defined by the Property Tax Administrator's Publication ARL Volume 3, Section 7: A private property interest in government-owned property or the right to the occupancy and use of any benefit in government-owned property that has been granted under lease, permit, license, concession, contract, or other agreement.

Jefferson County has been reviewed for their procedures and adherence to guidelines when assessing and valuing possessory interest properties. The county has also been queried as to their confidence that the possessory interest properties have been discovered and placed on the tax rolls.

## Conclusions

Jefferson County has implemented a discovery process to place possessory interest properties on the roll. They have also correctly and consistently applied the correct procedures and valuation methods in the valuation of possessory interest properties.

## Recommendations

None

# Personal Property Audit

Jefferson County was studied for its procedural compliance with the personal property assessment outlined in the Assessor's Reference Library (ARL) Volume 5, and in the State Board of Equalization (SBOE) requirements for the assessment of personal property. The SBOE requirements are outlined as follows:

Use ARL Volume 5 including current discovery, classification, and documentation procedures, and including current economic lives table, cost factor tables, depreciation table, and level of value adjustment factor table.

The personal property audit standards narrative must be in place and current. A listing of businesses that have been audited by the assessor within the twelve-month period reflected in the plan is given to the auditor. The audited businesses must be in conformity with those described in the plan.

Aggregate ratio will be determined solely from the personal property accounts that have been physically inspected. The minimum assessment sample is one percent or ten schedules, whichever is greater, and the maximum assessment audit sample is 100 schedules.

For the counties having over 100,000 population, RMVS selected a sample of all personal property schedules to determine whether the assessor is correctly applying the provisions of law and manuals of the Property Tax Administrator in arriving at the assessment levels of such property. This sample was selected from the personal property schedules audited by the assessor. In no event was the sample selected by the contractor less than 30 schedules. The counties to be included in this study are Adams, Arapahoe, Boulder, Denver, Douglas, El Paso, Jefferson, Larimer, Mesa, Pueblo, and Weld. All other counties received a procedural study.

Jefferson County is compliant with the guidelines set forth in ARL Volume 5 regarding discovery procedures, using the following methods to discover personal property accounts in the county:

- Public Record Documents
- Chamber of Commerce/Economic Development Contacts
- Personal Observation, Physical Canvassing or Word of Mouth

The county uses the Division of Property Taxation (DPT) recommended classification and documentation procedures. The DPT's recommended cost factor tables, depreciation tables and level of value adjustment factor tables are also used.

Jefferson County submitted their personal property written audit plan and was current for the 2008 valuation period. The number and listing of businesses audited was also submitted and was in conformance with the written audit plan. The following audit triggers were used by the county to select accounts to be audited:

- Businesses in a selected area
- Accounts with obvious discrepancies
- Incomplete or inconsistent declarations
- Same business type or use

- Businesses with no deletions or additions for 2 or more years
- Non-filing Accounts - Best Information Available

Jefferson County's median ratio is 1.00. This is in compliance with the State Board of Equalization (SBOE) compliance requirements which range from .90 to 1.10 with no COD requirements.

## Conclusions

Jefferson County has employed adequate discovery, classification, documentation, valuation, and auditing procedures for their personal property assessment and is in statistical compliance with SBOE requirements.

## Recommendations

None

# RMVS Auditor Staff

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# APPENDICES

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# STATISTICAL ANALYSIS JEFFERSON COUNTY 2008

## I. OVERVIEW

Jefferson County is a large urban county that represents the western portion of the Denver metropolitan area. The County has a total of 201,218 parcels based on the data submitted by the County Assessor's office in 2008. The breakdown by property type is listed in the table below.

**PROPERTY TYPE**

| | Frequency | Percent |
|---|---|---|
| VACANT LAND | 9,497 | 4.7 |
| RESIDENTIAL | 182,848 | 90.9 |
| COMMERCIAL | 5,433 | 2.7 |
| INDUSTRIAL | 62 | .0 |
| OTHER | 3,378 | 1.7 |
| Total | 201,218 | 100.0 |

## Vacant Land

The vacant land class of properties has a total of 9,497 parcels. The majority (80%) of these parcels fall into the residential land (100,1112) use category. The remaining vacant parcels are a mix of commercial/industrial and multi-family, or have a subclass code that is delineated by the acreage of the parcel.

**SUBCLASS CODE**

| | Frequency | Percent |
|---|---|---|
| 100 Residential Lots | 5,514 | 58.1 |
| 200 Commercial Lots | 546 | 5.7 |
| 300 Industrial Lots | 191 | 2.0 |
| 510 Less Than 1.0 ACRES | 276 | 2.9 |
| 520 1.0 to 4.99 ACRES | 267 | 2.8 |
| 530 5.0 to 9.99 ACRES | 113 | 1.2 |
| 540 10.0 to 34.99 ACRES | 183 | 1.9 |
| 550 35.0 to 99.99 ACRES | 158 | 1.7 |
| 560 100.0 ACRES and Up | 21 | .2 |
| 600 Minor Structures on Vacant Land | 89 | .9 |
| 1112 Single Family Residence Land | 2,101 | 22.1 |
| 1120 Multi-Units (4-8) Land | 19 | .2 |
| 1125 Multi-Units (9 & Up) Land | 19 | .2 |
| Total | 9,497 | 100.0 |

## Residential

The residential subclass category has a total of 182,848 parcels. Over 91% of the parcels have a single-family (1212) subclass code. The remaining parcels in this category are multi-unit and condominiums.

**SUBCLASS CODE**

| | Frequency | Percent |
|---|---|---|
| 1212 Single Family Residence | 166,680 | 91.2 |
| 1215 Duplexes-Triplexes | 2,562 | 1.4 |
| 1220 Multi-Units (4-8) | 706 | .4 |
| 1225 Multi-Units (9 & Up) | 491 | .3 |
| 1230 Condominiums | 12,409 | 6.8 |
| Total | 182,848 | 100.0 |

## Commercial/Industrial

The commercial/industrial subclass category has a total of 5,495 properties. This category represents 2.7% of the total property inventory. The majority (98%) of these parcels have a commercial use. The breakdown by subclass code is listed below.

**SUBCLASS CODE**

| | Frequency | Percent |
|---|---|---|
| 2112 Merchandising | 43 | .8 |
| 2120 Offices | 5 | .1 |
| 2125 Recreation | 1 | .0 |
| 2130 Special Purpose | 1 | .0 |
| 2145 Recreation Lands (CRS 39-3-112) | 6 | .1 |
| 2212 Merchandising | 1,178 | 21.4 |
| 2215 Lodging | 83 | 1.5 |
| 2220 Offices | 1,156 | 21.0 |
| 2225 Recreation | 60 | 1.1 |
| 2230 Special Purpose | 1,204 | 21.9 |
| 2235 WareHouse/Strg | 792 | 14.4 |
| 2245 Commercial Condo | 904 | 16.5 |
| 3115 Manuf/Processing | 7 | .1 |
| 3130 Industrial Condo | 2 | .0 |
| 3215 Manuf/Processing | 53 | 1.0 |
| Total | 5,495 | 100.0 |

## Other

The majority of the remaining 3,378 parcels have an agricultural subclass code.

## II. SALES FILE

The sale file provided by the Jefferson County Assessor's Office contained 20,680 sales between the dates of January 2005 and June 2006. The breakdown of sales activity by sale month and year is as follows:

Count

| | | SALE YEAR | | |
|---|---|---|---|---|
| | | 2005 | 2006 | Total |
| SALE MONTH | January | 769 | 722 | 1,491 |
| | February | 940 | 889 | 1,829 |
| | March | 1,224 | 1,181 | 2,405 |
| | April | 1,255 | 1,034 | 2,289 |
| | May | 1,378 | 1,337 | 2,715 |
| | June | 1,481 | 1,325 | 2,806 |
| | July | 1,375 | 0 | 1,375 |
| | August | 1,416 | 0 | 1,416 |
| | September | 1,271 | 0 | 1,271 |
| | October | 1,126 | 0 | 1,126 |
| | November | 1,010 | 0 | 1,010 |
| | December | 947 | 0 | 947 |
| Total | | 14,192 | 6,488 | 20,680 |

Once the sales were edited to keep the most recent sale, transactions that were coded as unqualified by the County were excluded from the analysis. The following table provides a breakdown of the qualified and unqualified sales.

**SALE INVESTIGATION CODE**

| | Frequency | Percent |
|---|---|---|
| QUALIFIED | 17,339 | 88.4 |
| UNQUALIFIED | 2,285 | 11.6 |
| Total | 19,624 | 100.0 |

ROCKY MOUNTAIN VALUATION SPECIALISTS

There were 17,339 sales that were classified as qualified. The breakdown of the sales by current property type is listed below.

**SALE TYPE**

| | Frequency | Percent |
|---|---|---|
| VACANT | 198 | 1.1 |
| VACANT SALE WITH NON-VACANT LAND SUBCLASS | 280 | 1.6 |
| RESIDENTIAL | 16,602 | 95.7 |
| COMM/IND | 252 | 1.5 |
| IMPROVED SALE WITH VACANT SUBCLASS | 5 | .0 |
| OTHER | 2 | .0 |
| Total | 17,339 | 100.0 |

## III. RESIDENTIAL SALES RESULTS

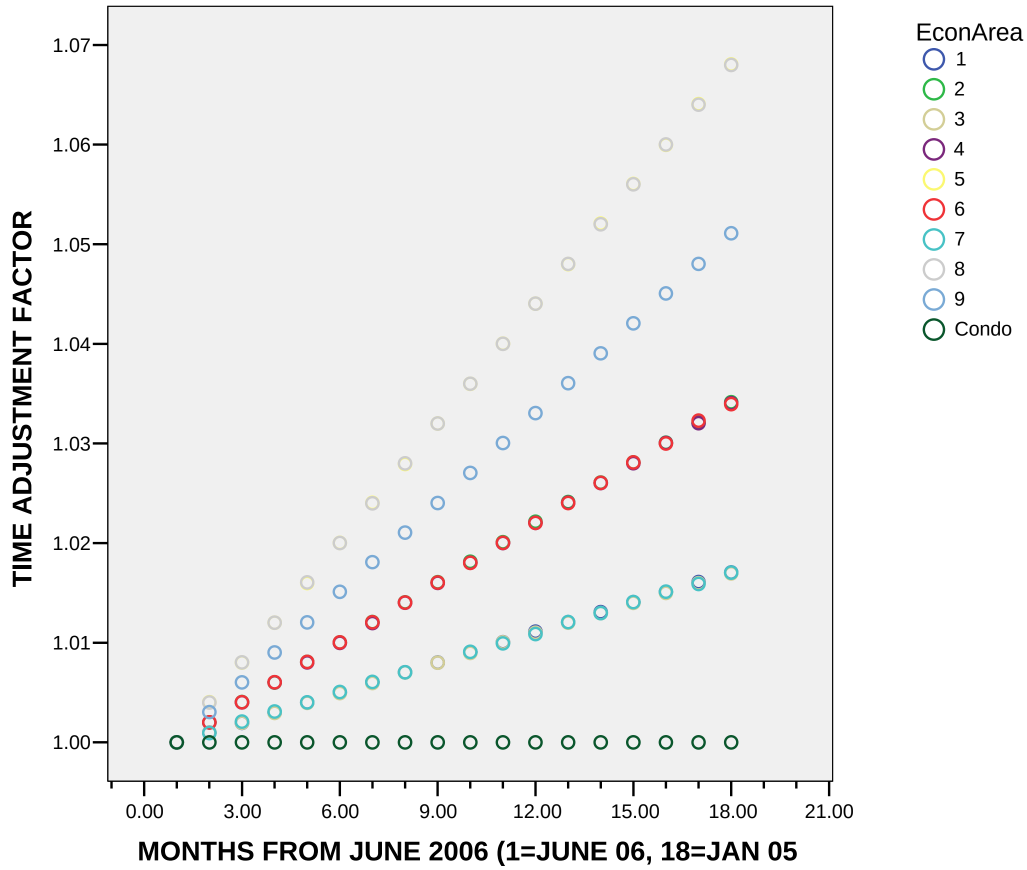
For the residential analysis, 16,602 sales between the dates January 2005 and June 2006 were analyzed. A breakdown of the sales by residential subclass is listed below.

**SUBCLASS CODE**

| | Frequency | Percent |
|---|---|---|
| 1212 Single Family Residence | 14,480 | 87.2 |
| 1215 Duplexes-Triplexes | 145 | .9 |
| 1220 Multi-Units (4-8) | 47 | .3 |
| 1225 Multi-Units (9 & Up) | 27 | .2 |
| 1230 Condominiums | 1,903 | 11.5 |
| Total | 16,602 | 100.0 |

These sales were used to perform a sales ratio analysis to determine whether the statutory guidelines for the level and quality of the assessments have been satisfied. In order to perform a sales ratio analysis all sales must reflect market conditions as of June 30, 2006.

Based on an examination of the sales file, the County applied time adjustments to the sales during this time period. The following graph illustrates the various time adjustment factors applied to the residential sales.



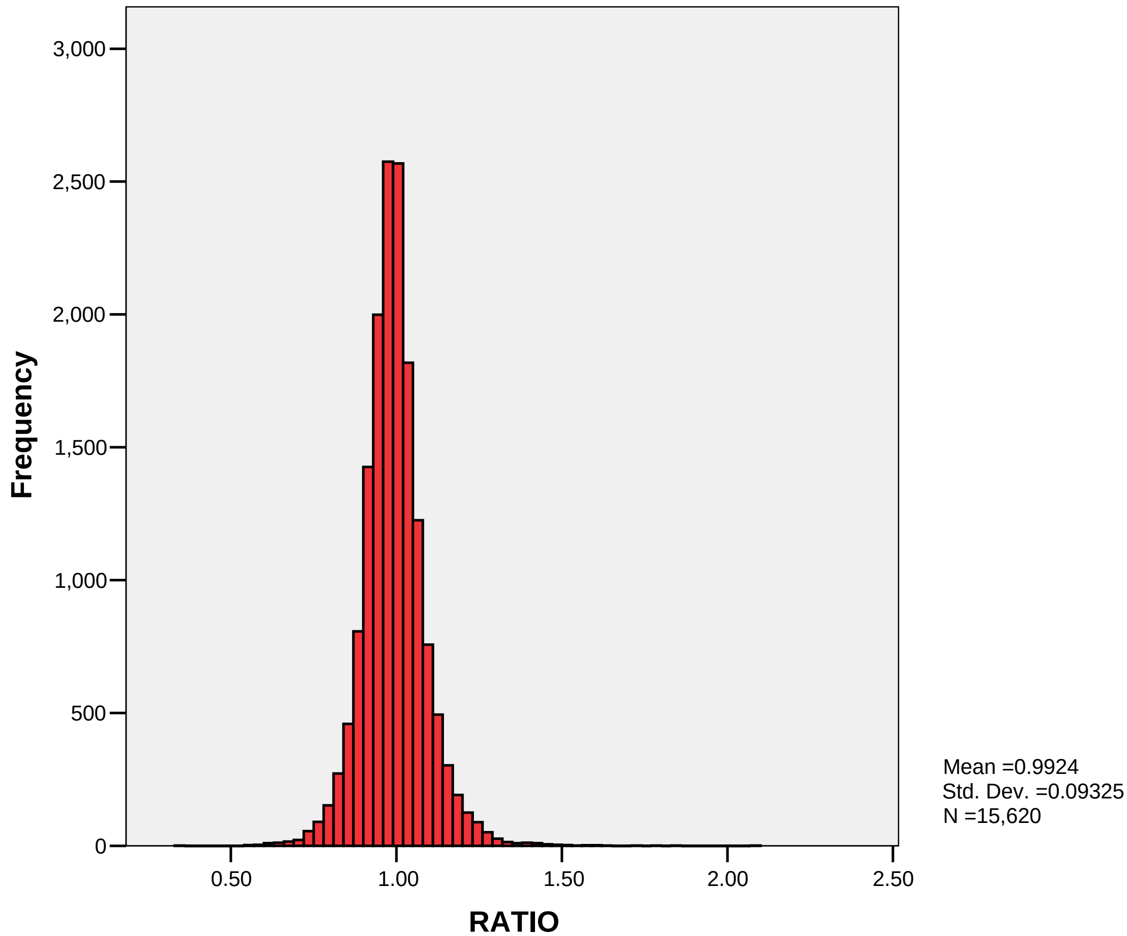

The following table outlines the sales ratio statistics by economic area for residential properties in Jefferson County.

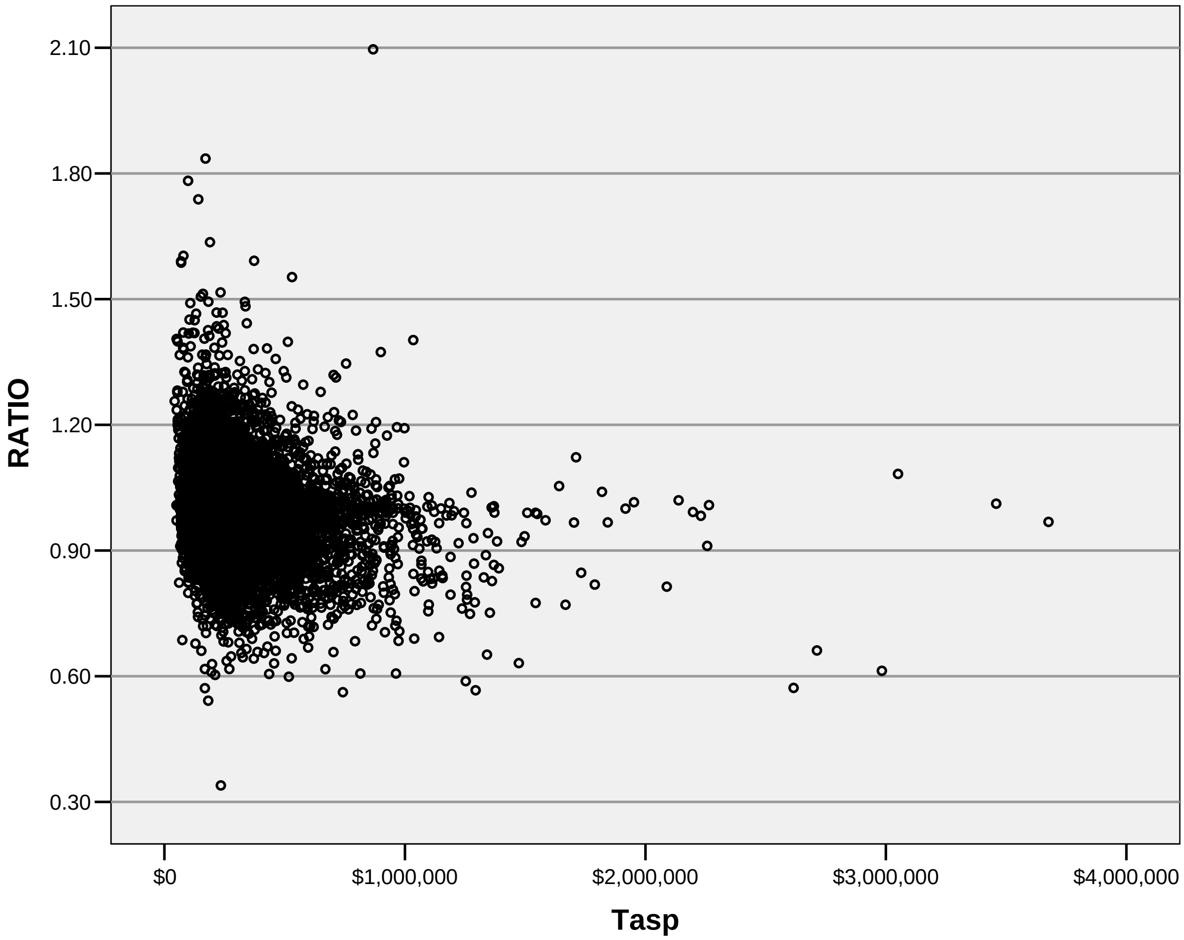
**Ratio Statistics**

| ECON AREA | Sale Count | Median | Weighted Mean | Price Related Differential | Coefficient of Dispersion |
|---|---|---|---|---|---|
| 1 | 2,170 | .987 | .985 | 1.007 | .056 |
| 2 | 2,780 | .987 | .981 | 1.010 | .073 |
| 3 | 2,766 | .994 | .993 | 1.007 | .068 |
| 4 | 3,542 | .988 | .983 | 1.008 | .058 |
| 5 | 486 | .979 | .955 | 1.016 | .069 |
| 6 | 639 | .991 | .975 | 1.010 | .074 |
| 7 | 67 | .998 | .998 | 1.032 | .112 |
| 8 | 704 | .989 | .969 | 1.018 | .097 |
| 9 | 715 | .996 | .990 | 1.008 | .095 |
| CONDO | 1,751 | .991 | .985 | 1.009 | .063 |
| Overall | 15,620 | .989 | .982 | 1.010 | .068 |

RATIO = CURRENT ASMT / TASP

The residential sale ratios are in compliance with the standards set forth by the Colorado State Board of Equalization (SBOE) for the overall sales. The following graphical exhibits describe further the sales ratio distribution for all of these properties:



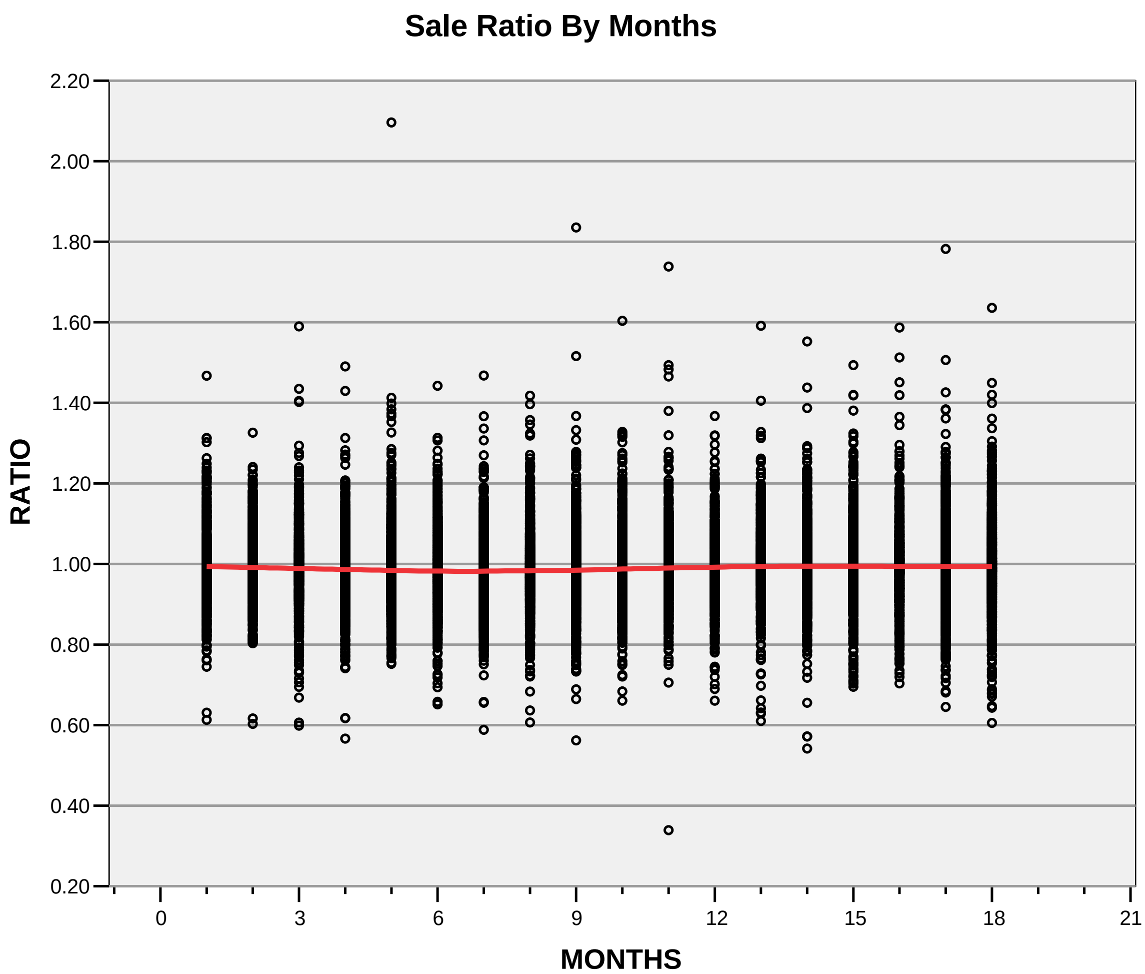



*Note: To enhance interpretation, 4 sales > 7 million were excluded from the above graph.*

The above graphs indicate that the distribution of the sale ratios are within state mandated limits, and that there are no significant price related differential issues.

**Residential Market Trend Analysis**

We verified that market trending was accounted for in the residential valuations by analyzing the sale ratios over the 18 month time period. The following graph indicates that there is no trend in sale ratios during this time period when evaluated on a countywide basis.




Time trends were next analyzed for each economic area. The results are as follows:

### TIME TREND SIGNIFICANCE TEST BY ECONOMIC AREA[a]

| EconArea | Model | | Unstandardized Coefficients B | Unstandardized Coefficients Std. Error | Standardized Coefficients Beta | t | Sig. |
|---|---|---|---|---|---|---|---|
| 1 | 1 | (Constant) | -.0125 | .003 | | -3.848 | .000 |
| | | MONTHS | .0002 | .000 | .013 | .609 | .543 |
| 2 | 1 | (Constant) | -.0243 | .004 | | -6.137 | .000 |
| | | MONTHS | .0011 | .000 | .057 | 3.019 | .003 |
| 3 | 1 | (Constant) | -.0090 | .004 | | -2.449 | .014 |
| | | MONTHS | .0005 | .000 | .028 | 1.488 | .137 |
| 4 | 1 | (Constant) | -.0151 | .003 | | -5.555 | .000 |
| | | MONTHS | .0003 | .000 | .019 | 1.136 | .256 |
| 5 | 1 | (Constant) | -.0263 | .009 | | -2.869 | .004 |
| | | MONTHS | -.0008 | .001 | -.046 | -1.016 | .310 |
| 6 | 1 | (Constant) | -.0187 | .009 | | -2.178 | .030 |
| | | MONTHS | -.0002 | .001 | -.009 | -.231 | .817 |
| 7 | 1 | (Constant) | .0453 | .039 | | 1.147 | .256 |
| | | MONTHS | -.0027 | .003 | -.096 | -.777 | .440 |
| 8 | 1 | (Constant) | -.0295 | .011 | | -2.572 | .010 |
| | | MONTHS | .0006 | .001 | .022 | .590 | .556 |
| 9 | 1 | (Constant) | -.0133 | .011 | | -1.211 | .226 |
| | | MONTHS | .0003 | .001 | .011 | .288 | .773 |
| CONDO | 1 | (Constant) | -.0250 | .004 | | -5.714 | .000 |
| | | MONTHS | .0015 | .000 | .092 | 3.873 | .000 |

a. Dependent Variable: LNRATIO

Economic areas that have significant trends (at the 95% confidence level) are highlighted in red. The two economic areas (2,CONDO) that indicate a significant trend suggest a time trend of less than .15% per month. Since the magnitude of these adjustments is small (less than 1.5% annually), they would not have a significant influence on the level of assessment for these economic areas. Therefore, no further analysis is necessary.

## Sold/Unsold Analysis

For the 2007 revaluation year audit, an analysis was performed that confirmed that the median assessed value per square foot of sold and unsold residential property was similar. Since tax year 2008 is the intervening year, this relationship should not change. If there is no change in either category, the conclusions from the 2007 audit would also be applicable to the current year.

**2007 - 2008 PERCENT CHANGE**

CHANGE

| CATEGORY | Median | N |
|---|---|---|
| SOLD | .0000 | 15,620 |
| UNSOLD | .0000 | 167,050 |

The above median percent change table of sold and unsold residential property indicates that there is no change in the residential category. Therefore, we can conclude that the analysis performed for the 2007 audit is also applicable for the 2008 intervening year.

## IV. COMMERCIAL/INDUSTRIAL SALES RESULTS

For the commercial/industrial analysis, 252 sales between the dates of January 2005 and June 2006 were analyzed. A breakdown of the sales by subclass is listed below.

**SUBCLASS CODE**

| | Frequency | Percent |
|---|---|---|
| 2212 Merchandising | 51 | 20.2 |
| 2215 Lodging | 1 | .4 |
| 2220 Offices | 55 | 21.8 |
| 2225 Recreation | 1 | .4 |
| 2230 Special Purpose | 42 | 16.7 |
| 2235 WareHouse/Strg | 33 | 13.1 |
| 2245 Commercial Condo | 68 | 27.0 |
| 3215 Manuf/Processing | 1 | .4 |
| Total | 252 | 100.0 |

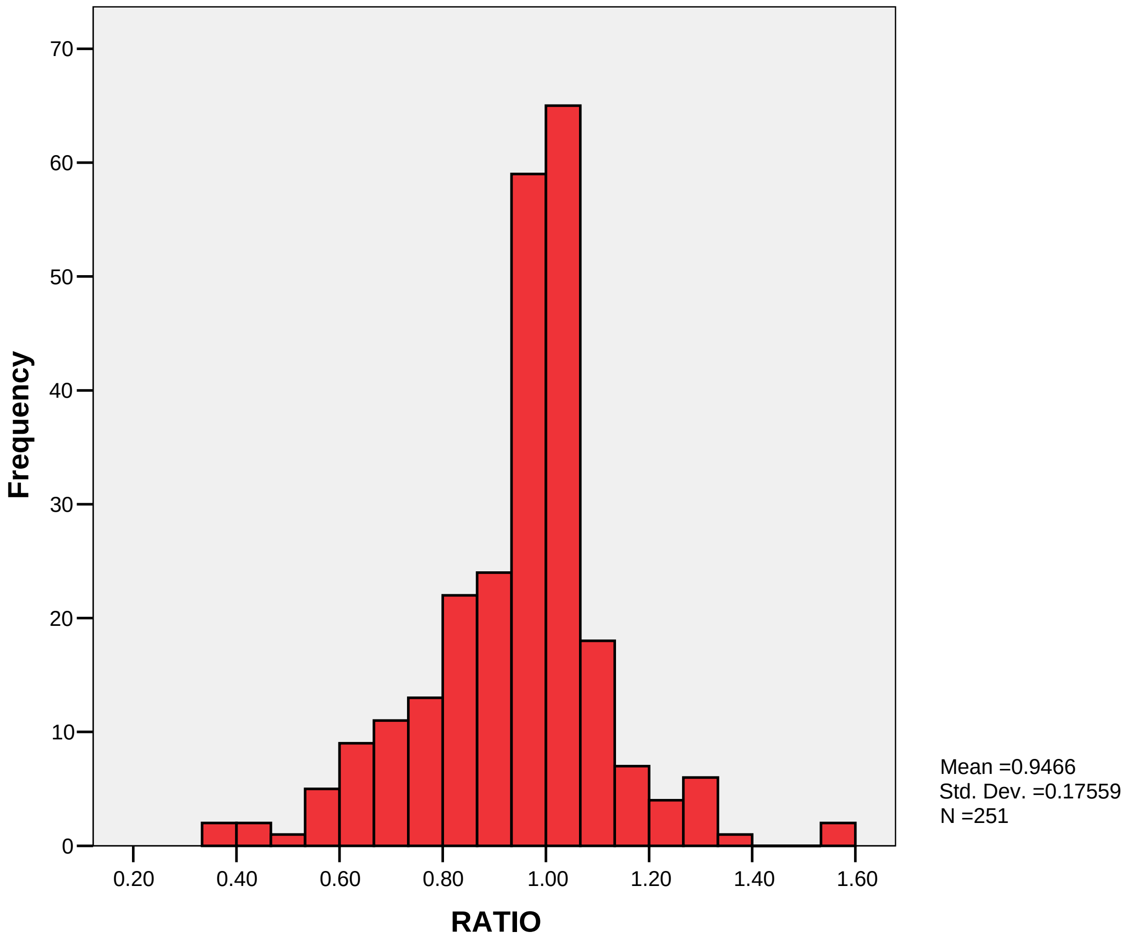
In order to perform a sales ratio analysis all commercial/industrial sales must reflect market conditions as of June 30, 2006. Based on an examination of the sales file, the County did not apply time adjustments to the sale file. The following table outlines the sales ratio statistics for commercial and industrial properties in Jefferson County.

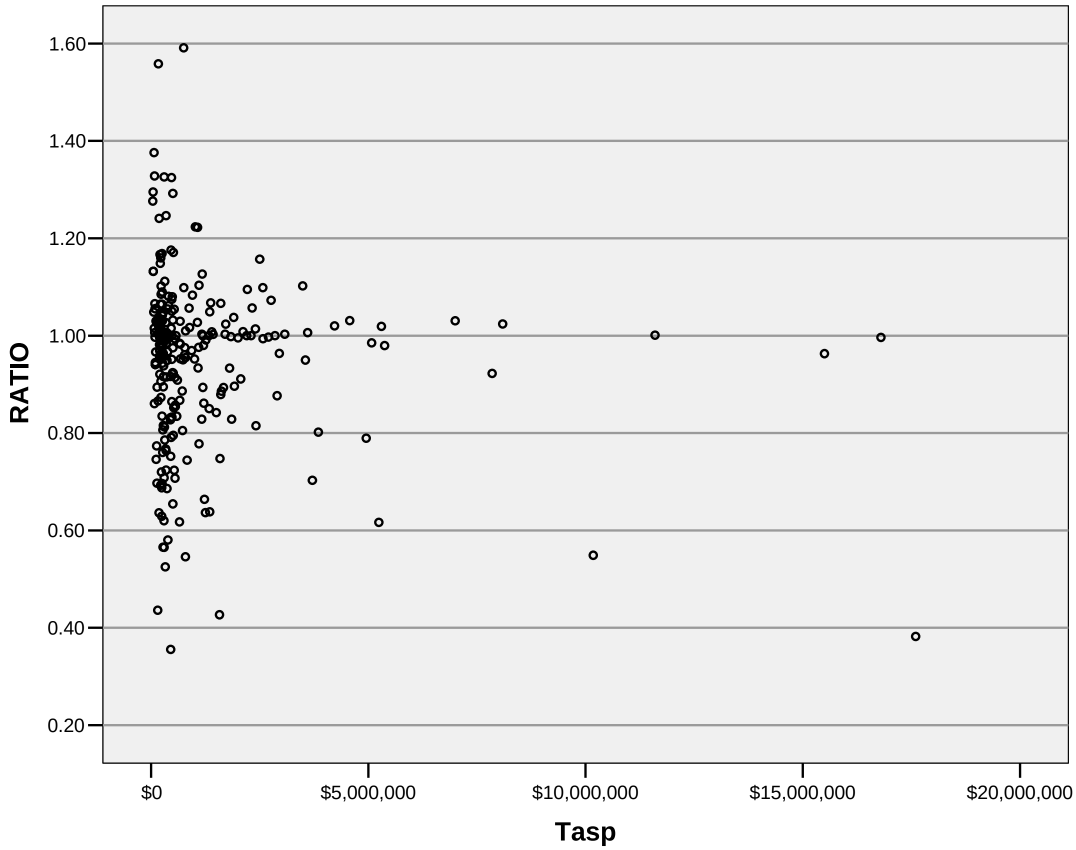
**Ratio Statistics**

| | |
|---|---|
| Mean | .947 |
| Median | .983 |
| Weighted Mean | .908 |
| Price Related Differential | 1.043 |
| Coefficient of Dispersion | .124 |

RATIO = CURRENT ASMT / TASP

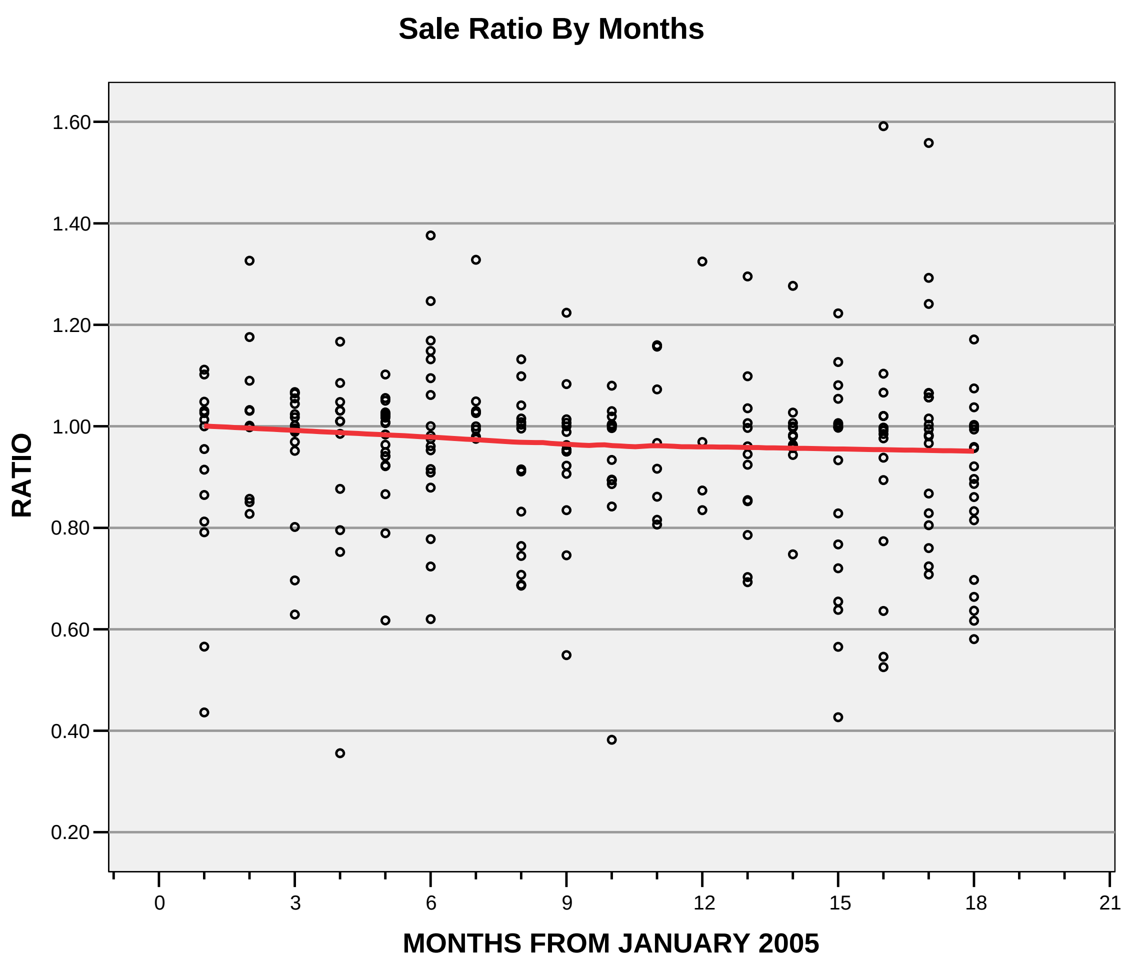
The commercial sale ratios are in compliance with the standards set forth by the Colorado State Board of Equalization (SBOE) for the overall sales. The following graphical exhibits describe further the sales ratio distribution for all of these properties:






## Commercial Market Trend Analysis

Sale ratios were analyzed over the 18-month time period to determine whether market trending was accounted for in the commercial valuations. The following graph illustrates a relatively horizontal pattern indicating no significant changes in sale ratios during this time period.




## Sold/Unsold Analysis

For the 2007 revaluation year audit, an analysis was performed that confirmed that the median assessed value per square foot for sold and unsold commercial/industrial property was similar. This analysis was performed by commercial neighborhoods that had a minimum of 4 sales. Since tax year 2008 is the intervening year, this relationship should not change. If there is no change in either category, the conclusions from the 2007 audit would also be applicable to the current year.

**2007 - 2008 PERCENT CHANGE**

CHANGE

| NBHD | CATEGORY | Median | N |
|---|---|---|---|
| 121.00 | SOLD | .0000 | 5 |
| | UNSOLD | .0000 | 53 |
| 122.00 | SOLD | .0000 | 7 |
| | UNSOLD | .0000 | 82 |
| 123.00 | SOLD | .0000 | 6 |
| | UNSOLD | .0000 | 115 |
| 131.00 | SOLD | .0000 | 5 |
| | UNSOLD | .0000 | 106 |
| 191.00 | SOLD | .0000 | 10 |
| | UNSOLD | .0000 | 169 |
| 213.00 | SOLD | .0000 | 4 |
| | UNSOLD | .0000 | 56 |
| 223.00 | SOLD | .0000 | 4 |
| | UNSOLD | .0000 | 64 |
| 232.00 | SOLD | .0000 | 5 |
| | UNSOLD | .0000 | 39 |
| 274.00 | SOLD | .0000 | 5 |
| | UNSOLD | .0000 | 39 |
| 293.00 | SOLD | .0000 | 8 |
| | UNSOLD | .0000 | 59 |
| 333.00 | SOLD | .0000 | 4 |
| | UNSOLD | .0000 | 113 |
| 343.00 | SOLD | .0000 | 6 |
| | UNSOLD | .0000 | 60 |
| 353.00 | SOLD | .0000 | 6 |
| | UNSOLD | .0000 | 96 |
| 361.00 | SOLD | .0000 | 4 |
| | UNSOLD | .0000 | 20 |

The median percent change table of sold and unsold commercial/industrial property indicates that there is no change in either category. Therefore, we can conclude that the analysis performed for the 2007 audit is also applicable for the 2008 intervening year.

## V. VACANT LAND SALE RESULTS

For the vacant land analysis, 478 sales between the dates of January 2005 and June 2006 were analyzed. A breakdown of the sales by current property type is listed below.

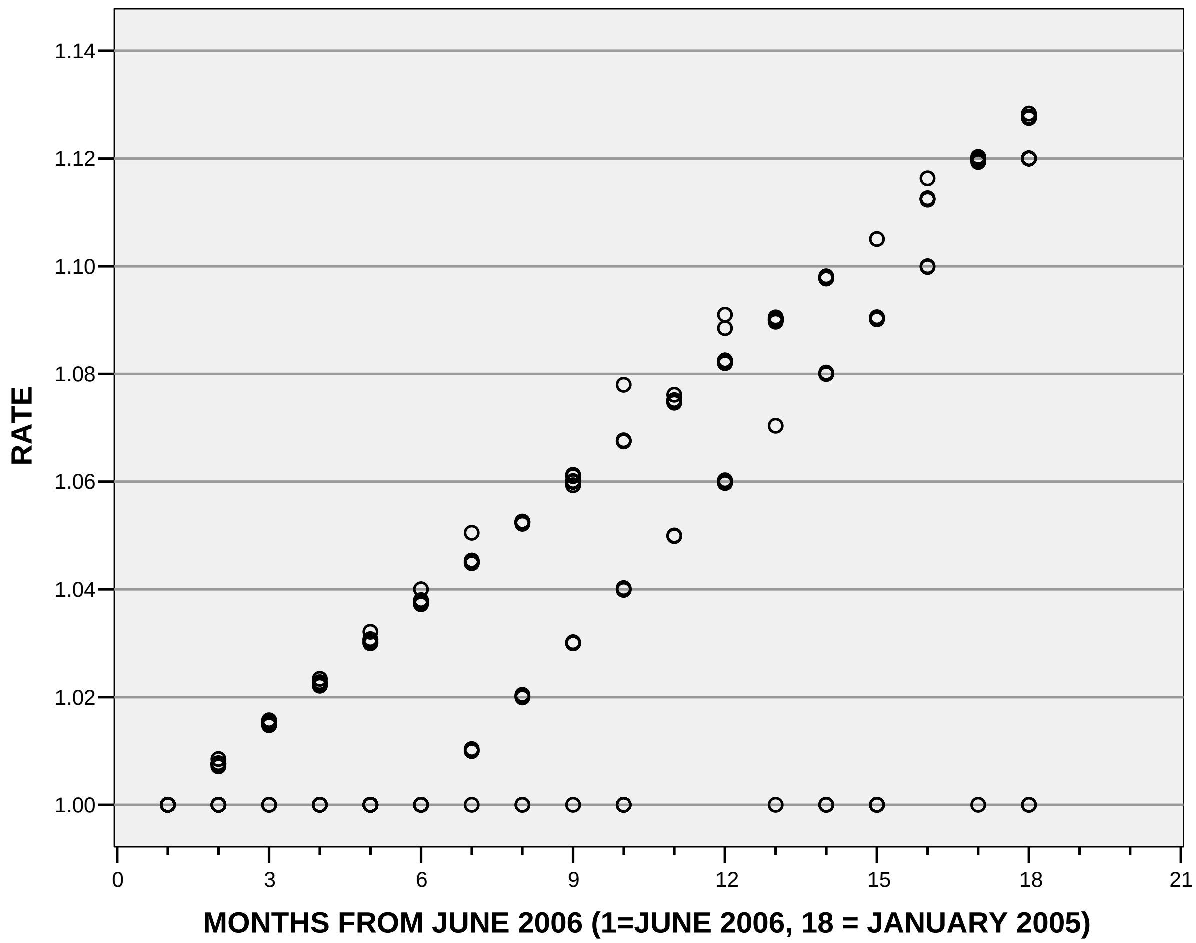
**PROPERTY TYPE**

| | Frequency | Percent |
|---|---|---|
| VACANT LAND | 198 | 41.4 |
| RESIDENTIAL | 256 | 53.6 |
| COMMERCIAL | 19 | 4.0 |
| INDUSTRIAL | 1 | .2 |
| OTHER | 4 | .8 |
| Total | 478 | 100.0 |

Vacant sales (198) that have a current vacant land subclass code were used in the vacant land sale ratio study. The remaining sales were excluded from the analysis.

In order to perform a sales ratio analysis all vacant land sales must reflect market conditions as of June 30, 2006. Based on an examination of the sales file, the County applied time adjustments to the sales during this time period. The following graph illustrates the various time adjustment factors applied to the vacant land sales.

## JEFFERSON COUNTY VACANT LAND TIME ADJUSTMENT FACTORS



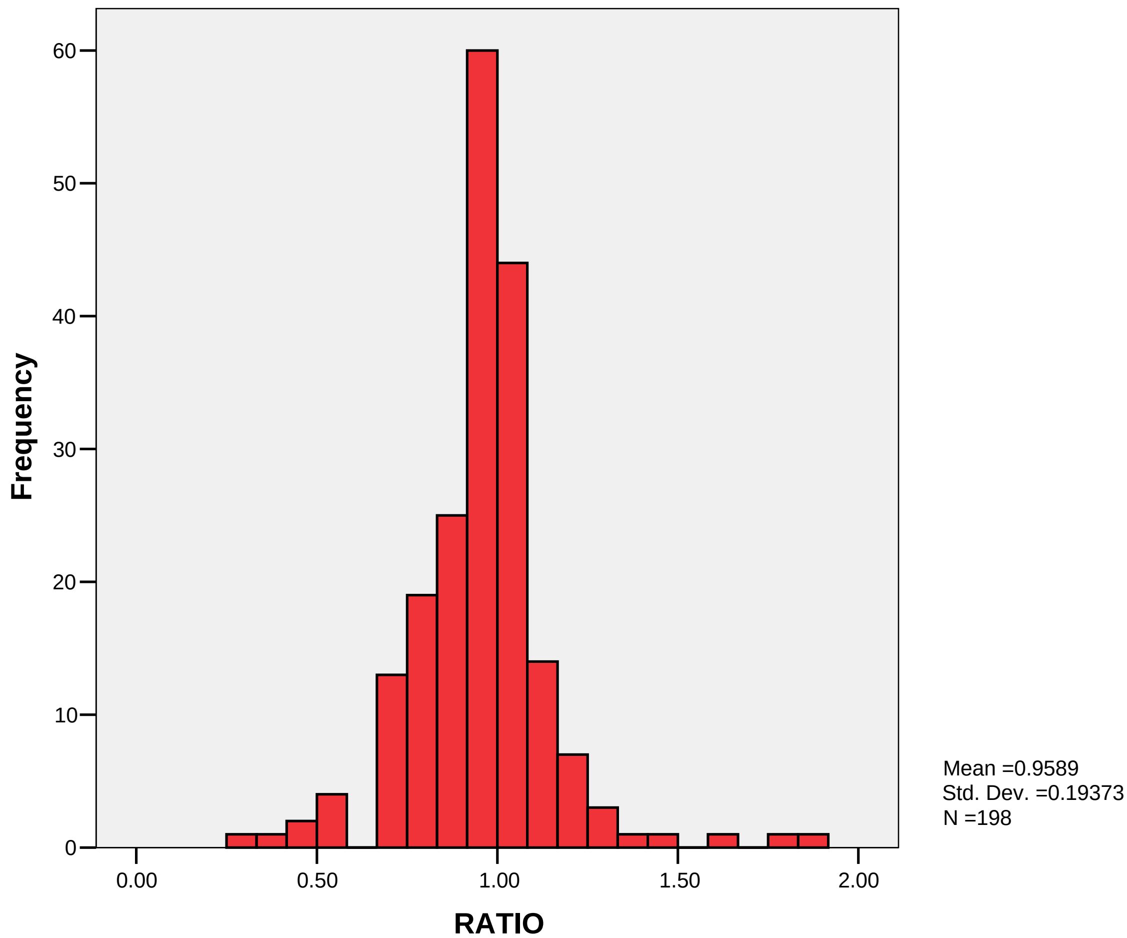

The following table outlines the sales ratio statistics for vacant land properties in Jefferson County.

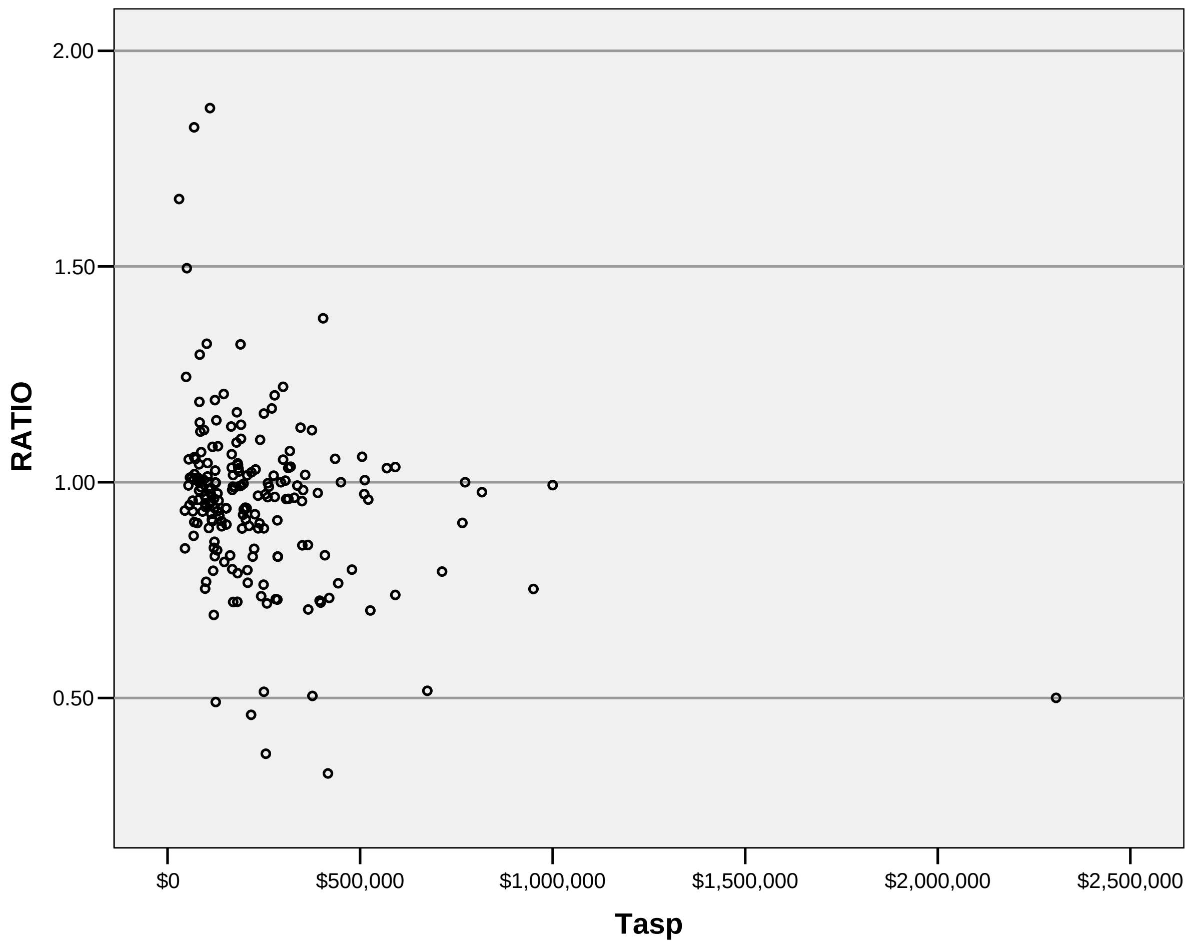
**Ratio Statistics**

| | |
|---|---|
| Mean | .959 |
| Median | .972 |
| Weighted Mean | .906 |
| Price Related Differential | 1.058 |
| Coefficient of Dispersion | .128 |

RATIO = CURRENT LV / TASP

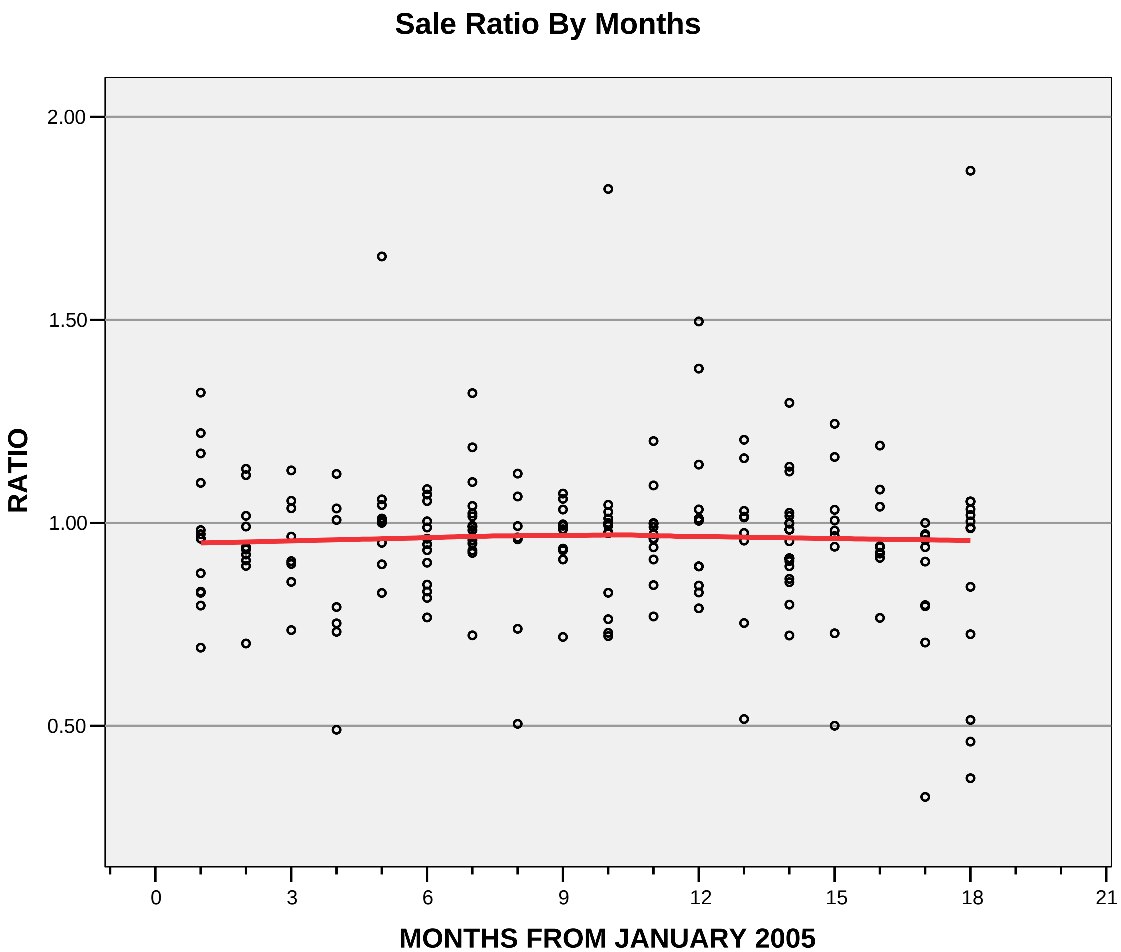
The vacant land sale ratios are in compliance with the standards set forth by the Colorado State Board of Equalization (SBOE) for the overall sales. The following graphical exhibits describe further the sales ratio distribution for all of these properties:






## Vacant Land Market Trend Analysis

Sale ratios were analyzed over the 18-month time period to determine whether market trending was accounted for in the commercial valuations. The following graph illustrates a horizontal pattern indicating no significant changes in sale ratios during this time period.




## Sold/Unsold Analysis

For the 2007 revaluation year audit, an analysis was performed that confirmed that the median change in value between sold and unsold was consistent. Since tax year 2008 is the intervening year, this relationship should not change. If there is no change in either category, the conclusions from the 2007 audit would also be applicable for the current year.

**2007 - 2008 PERCENT CHANGE**

CHANGE

| CATEGORY | Median | N |
|---|---|---|
| SOLD | .0000 | 198 |
| UNSOLD | .0000 | 9,087 |

The median percent change table of sold and unsold vacant land indicates that there is no change in either category. Therefore, we can conclude that the analysis performed for the 2007 audit is also applicable for the 2008 intervening year.

## VI. AGRICULTURAL IMPROVEMENTS ANALYSIS

Jefferson County was exempt from this portion of the 2008 audit.

## VII. CONCLUSIONS

Based on this statistical analysis, there are no intervening year compliance issues concluded for Jefferson County.