ROCKY MOUNTAIN
VALUATION SPECIALISTS

2004
PROPERTY ASSESSMENT STUDY

Jefferson County

Prepared for

The Colorado Legislative Council

ROCKY MOUNTAIN
VALUATION SPECIALISTS

September 15, 2004

Mr. Kirk Mlinek
Director of Research
Colorado Legislative Council
Room 209, State Capitol Building
Denver, Colorado 80203

RE: Final Report for the 2004 Colorado Property Assessment Study for Jefferson County

Dear Mr. Mlinek:

Rocky Mountain Valuation Specialists LLC is pleased to submit the Final Report for the 2004 Colorado Property Assessment Study for Jefferson County.

This report represents the results of a two-part analysis and audit: a procedural analysis and a statistical analysis.

The procedural analysis 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 residences and 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.

Statistical analysis was also performed on vacant land, residential properties, commercial/industrial properties, agricultural land, agricultural residences and outbuildings, other agricultural properties and personal property.

ROCKY MOUNTAIN
VALUATION SPECIALISTS

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**
Managing Director
Rocky Mountain Valuation Specialists LLC

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INTRODUCTION

Beginning in 1967 and continuing through the present, the Tax Commission and its successor, the Division of Property Taxation, have conducted a sales valuation analysis (sales ratio study) each year. In the analysis, the sales prices of properties are compared to their assessed valuations to determine how well assessed valuations reflect real property values.

In 1982, the voters of Colorado approved an amendment to the State Constitution which affected the manner in which property is assessed. This amendment was proposed in anticipation of implementation of the 1977 level of value during 1983.

The Amendment requires appropriate consideration of the three approaches to value: cost, market, and income. There are two exceptions to this requirement. Residential property is valued on market and cost only. Agricultural land is valued solely on the earning or productive capacity of such lands.

All property is assessed at 29% of actual value with two exceptions. Residential property, the first exception, is assessed at its yearly determined assessed value. Producing mines and oil and gas leaseholds are the second exception and are assessed at a portion of annual production.

Also, beginning in 1983, the State Board of Equalization was to review assessments for conformance to the Constitution. The State Board will order revaluations for counties whose valuations do not reflect the 1977 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. 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 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, develops time adjustments and performs and plans periodic physical property inspections. The audit also examines the procedures for discovering, classifying and valuing subdivision build-out and subdivision discounting procedures. Valuation methodology for residential properties and commercial properties is 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 are also reviewed.

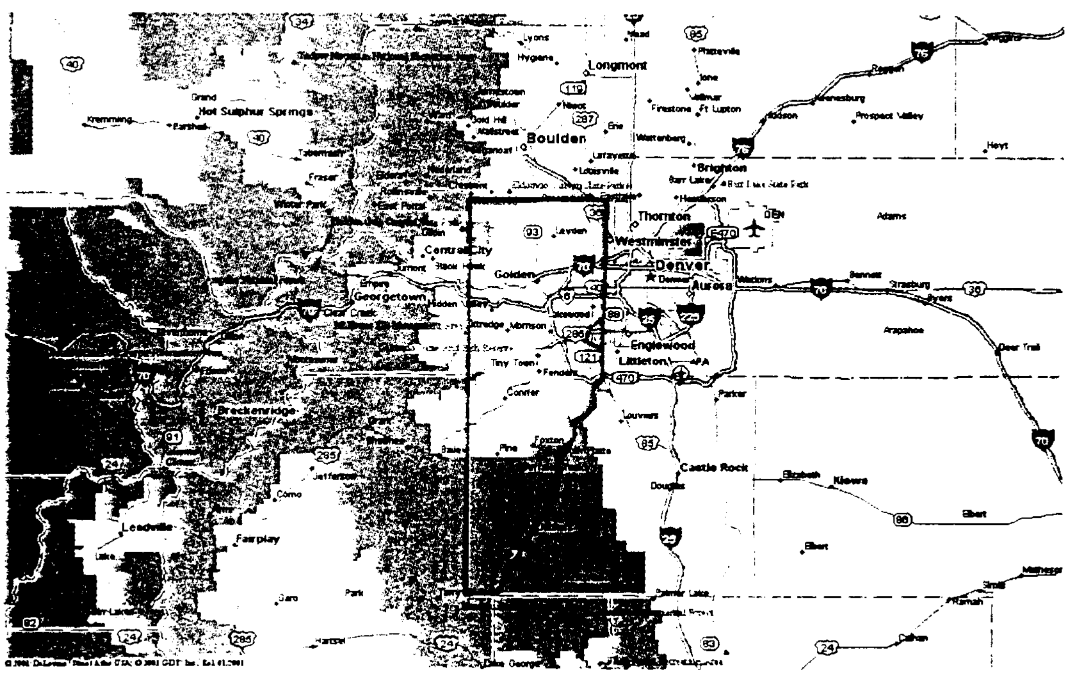
Statistical analysis is also performed on vacant land, residential properties, commercial/industrial properties, agricultural land, agricultural residences and outbuildings, other agricultural properties and personal property.

RMVS has completed the Property Assessment Study for 2004 and is pleased to report its findings for Jefferson County in the following report.

HISTORICAL SKETCH OF JEFFERSON COUNTY

Jefferson County was established in 1861 with 783 square miles and has an approximate population of 438,430. It is one of the seventeen original territorial counties. The county was named for Jefferson Territory, the extralegal government that 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, Johnson Books, 1993, p.78 and 61)



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 2001 and June 2002. Counties with less than 30 sales were allowed to extend the sale period back 5 years prior to June 30, 2002 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 to fall below 30. Although we examined grouping smaller counties by economic region to augment commercial sale totals, we still examined each county individually for compliance. There were no sale quantity issues for counties requiring vacant land analysis or condominium analysis. Although the requirement was to 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. For counties with obvious outliers, the data was trimmed to include only sale ratios between 0.25 and 2.0. In every case, we examined the loss in data by this trimming method to insure that only true outliers were excluded. Any county with a significant portion of sales excluded by this trimming method were examined further. In no case was a county allowed to pass the audit if more than 10% 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 found for your county are:

RATIO GRID					
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis
Commercial/ Industrial	203	0.951	1.017	10.3	Compliant
Condominium	N/A	N/A	N/A	N/A	N/A
Single Family	18,636	0.988	1.009	6.1	Compliant
Vacant Land	505	0.98	1.063	14.3	Compliant

Ratio Statistics for CURRTOT / TASP by ECONOMIC AREA

ECONAREA	Median	Price Related Differential	Coefficient of Dispersion
1	.992	1.003	.049
2	.990	1.007	.067
3	.985	1.009	.059
4	.988	1.007	.055
5	.986	1.008	.061
6	.985	1.009	.067
7	.990	1.021	.100
8	.986	1.015	.086
9	.983	1.017	.102

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

To verify if time trending analysis was considered by each county for each appropriate class of property, we used an inverted ratio regression analysis where the sale price was divided by the 2002 assessed total value (2002 assessed land value for vacant land) for each sale. The resulting ratios were trimmed if there were any identified outliers. The reported time trending for each county was tested against the time trend model developed by the auditor. When appropriate, the time trending analysis was broken down by economic area or sub-class, as in the case of counties with significant condominium properties. Our goal was to validate, not replicate, the county's time trending methodology. For classes with significant trends, the actual monthly adjustment used by the county was compared to the coefficient we derived for the same data. Appraisal judgment was also considered. As long as the assessor could justify to the auditor the modification of a demonstrable trend based on an appraisal rationale, the county was found in compliance. Any discrepancy was noted and discussed with the county assessor. Also considered was the length of the sale period and the number of actual sales. Counties with very small sale amounts were analyzed, but this was carefully weighted against the statistical significance and relevance of the sale data quantity.

Conclusions

After verification and analysis, Jefferson County is determined to comply with the statutory requirements to analyze the effects of time on value in Jefferson 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 verify that "sales chasing" had not occurred. The auditors employed a two-tiered process to determine how unsold properties were considered. The first tier test was a ratio analysis using the 2002 and 2004 actual values for each qualified class of property. A class was considered qualified if it met the criteria for the ratio analysis. 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. The goal was to construct the proper decision tree to select the unsold sample. 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 next tier test was 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, the conclusion was that the county had treated the unsold properties in a different manner than the sold. In other words, it was concluded that the county had chased sales.

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

Conclusions

UNSOLD/UNSOLD RESULTS	
Property Class	**Result**
Commercial/Industrial	Compliant
Condominium	N/A
Single Family	Compliant
Vacant Land	Compliant

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

Agricultural Land

Methodology

In 2003 a field study was conducted in Jefferson County. The land was classified using the Soil Survey developed by the Natural Resources Conservation Service. This provided the basis for the production classes for the various use types of agricultural lands. Yields established by the county were compared to the yields reported in CAS. The county was checked to see if carrying capacities for grazing land had been established using range site data and local surveys. Expenses were reviewed to assure that only those expenses that were proper and necessary were used. Also, each agricultural land class formula was reviewed to ensure that all applicable commodity prices, expenses and other directives provided by the Division of Property Taxation (DPT) were used. In addition, a minimum of one percent of the land was physically reviewed. In 2004 the values of the different agricultural classes were compared with the 2003 values to see if there had been any changes in excess of 5%. If there were changes in value in excess of 5% the counties were queried to see if the changes were in conformance with DPT guidelines for changes during an intervening year.

Conclusions

An analysis of the data collected for agricultural lands indicates an acceptable level has been achieved. Yields used by the county compare favorably with those published in CAS. Expenses used in the formulas were within a reasonable range and were all allowable expenses. Directives provided by the DPT were utilized. The percentage of change from 2003 to 2004 was within DPT guidelines.

Agricultural Residences

Jefferson County is exempt from the Agricultural Residence Study.

Agricultural Outbuildings

Jefferson County is exempt from the Agricultural Outbuilding Study.

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 has conducted a study of the sales verification procedures in 2004 for Jefferson County. This study was performed by checking selected sales listed as verified by the county for the 2003, 2004 valuation period. Specifically, RMVS selected 73 sales listed as verified but unqualified.

The sales selected had all been disqualified as "non-arms length sales" with a code 58: "Sale reviewed through analysis; sale conditions non-arms length or non-market."

Jefferson County uses its own set of sales codes separate from the DPT recommended sales codes found in the ARL Volume 3 page 3.19 through 3.21.

Of the 73 sales checked, 61 gave reasons that were clear and supportable.

The remaining 12 sales had six sales with no notes, two sales that were "coded bad through analysis" with no additional reasons given, three sales that were "coded out" with assumptions made as to the arms length nature of the sale with no supporting evidence to back the assumptions, and one sale listed as "not indicative of the market" with no additional support for the disqualification.

Conclusions

Jefferson County appears to be doing an adequate job of verifying their sales. It is suggested that they should continue to emphasize the need for complete documentation when they disqualify sales. Also, they need to be very careful when disqualifying sales due to a subjective conclusion such as "suspect related parties/business value but cannot verify." These types of reasons are to be rejected as conclusive reasons for classifying a sale as non-arms length and should be considered as qualified sales until clear reasoning can be given to the contrary.

Recommendations

None

ECONOMIC AREA REVIEW AND EVALUATION

Economic Area Narrative and Maps

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 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.

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

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

Recommendations

None

VACANT LAND

Subdivision Discounting

In 2003 subdivisions were reviewed and discounted pursuant to the Colorado Revised Statutes in Article 39-1-103 (14). Discounting procedures were applied to all subdivisions where less than 80 percent of all sites were sold, using present worth method. The market approach was applied where more than 80 percent of the subdivision sites were sold. Questionnaires were mailed to all developers to obtain information regarding expense data for each subdivision. An absorption period was estimated for each subdivision that was discounted. A discount rate of .15 percent was developed, using the summation method. Subdivision land with structures was appraised at full market value. In 2004, the county is currently applying the recommended methodology in ARL Volume 3 Chapter 4 page 7 in their subdivision discounting pertaining to the intervening year by either reducing the absorption period by one year prior to calculating present worth value for the modified absorption period or, if the number of sales within the approved plat since the current appraisal date is less than the absorption rate per year calculated for the plat, leaving the absorption period unchanged.

Conclusions

Jefferson County has implemented proper procedures to adequately estimate value and expenses for subdivisions. Jefferson County is also correctly applying the subdivision discounting procedures to qualifying subdivisions for the intervening year.

Recommendations

None

POSSESSORY INTEREST PROPERTIES

Possessory interest property discovery and valuation is described in the Assessor's Reference Library (ARL) Volume 3 section 7 pages 71 through 104 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 7.79; *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.* This county under audit, has been reviewed for their procedures and adherence to guidelines when assessing and valuing possessory interest properties. The county under audit has also been queried as to their confidence that the possessory interest properties have been discovered and placed on the tax rolls.

Conclusion

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

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.

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
- Local Telephone Directories, Newspapers or Other Local Publications
- Questionnaires, Letters and/or Phone Calls to Buyer, Seller and/or Realtor

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 2004 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:

- Same business type or use
- Businesses with no deletions or additions for 2 or more years
- Non-filing Accounts - Best Information Available
- Lease buyouts incorrectly reported
- B.O.E. or B.A.A. order or finding
- Accounts which seem undervalued compared to similar businesses

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.

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.

RMVS AUDITOR STAFF

Mark Linne, MAI, CAE, ASA, CRE, *Corporate Managing Director of RMVS*

Stephen M. Snyder, CAE, *Audit Director of RMVS*

Suzanne J. Howard, *Audit Executive Assistant for RMVS*

M. Steven Kane, *Statistical Analyst of RMVS, Audit Division*

Garth Thimgan, CAE, *General Audit Support and Consultant to RMVS*

Helen D. Powszukiewicz, *General Audit Support Administrative Assistant*

Carl W. Ross, *Agricultural Coordinator and Supervisor for RMVS*

Cathie B. Ross, *Agricultural Audit Administrative Assistant*

APPENDICES

ROCKY MOUNTAIN
VALUATION SPECIALISTS

STATISTICAL ANALYSIS FOR JEFFERSON COUNTY 2004

I. OVERVIEW

Jefferson County is located in central Colorado, and represents the western portion of the Denver metropolitan area. The county has a total of 193,988 parcels, according to the land file submitted by the county assessor's office. The following table provides a breakdown of property classes covered in this analysis:

Class	Parcel Count	Percent	Sub-Class	Sub-Class Count	Subclass Percent*
Vacant Land	8,705	4.5%		N/A	N/A
Residential	179,019	92.3%			
Commercial/Ind	4,469	2.3%			N/A
Other	1,795	0.9%			
TOTAL	193,988				

*- Percent of Class Total

The vacant land class of properties was dominated by residential land. Residential lots (coded 100) accounted for **76.1%** of all parcels, no other subclass accounted for more than 20% of the total.

For residential improved properties, single family properties accounted for **91.7%** of all residential properties. No sub-class breakdowns were indicated.

Commercial and industrial properties represented a smaller proportion of property classes in comparison.

II. SALES FILE

The following sale analyses were based on the requirements of the 2004 Property Assessment Study, based on information provided by the Jefferson County Assessor's Office. There was a total of **29,916** sales in the file; of these, **26,095** were qualified sales by the county. The sales period spanned 24 months (July 2000 to June 2002). We analyzed Jefferson County's data using the 18-month period for each of the three major property classes, but used the 24 month period to verify proper time trending. Further data reductions will be described in each property class section.

III. RESIDENTIAL SALES RESULTS

The following steps were taken to analyze the appropriate residential sale dataset for Jefferson County:

Steps	**Results**
1. Selected sales coded as "Q"	26,095 Sales
2. Selected improved sales (Status = "I")	25,381 Sales
3. Selected sale with subclass codes 11120 to 11200	25,125 Sales
4. Sales between 1/1/2001 and 6/30/2002	18,636 Sales

The **18,636** sales were analyzed using the required measurements for the level of assessment, as well as for the quality of the assessment, as follows:

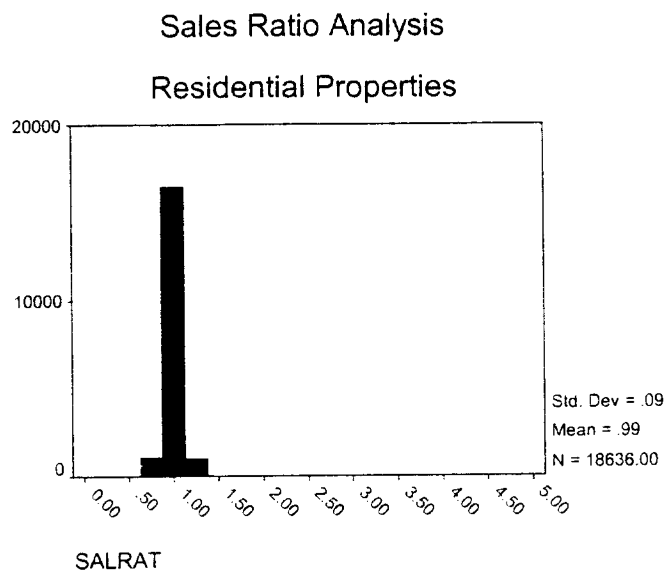
OVERALL Ratio Statistics for CURRTOT / TASP

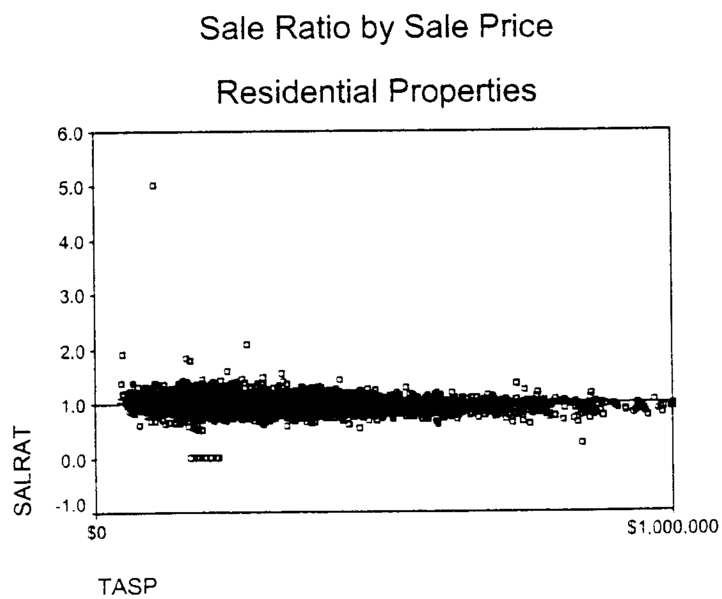
Median	.988
Price Related Differential	1.009
Coefficient of Dispersion	.061

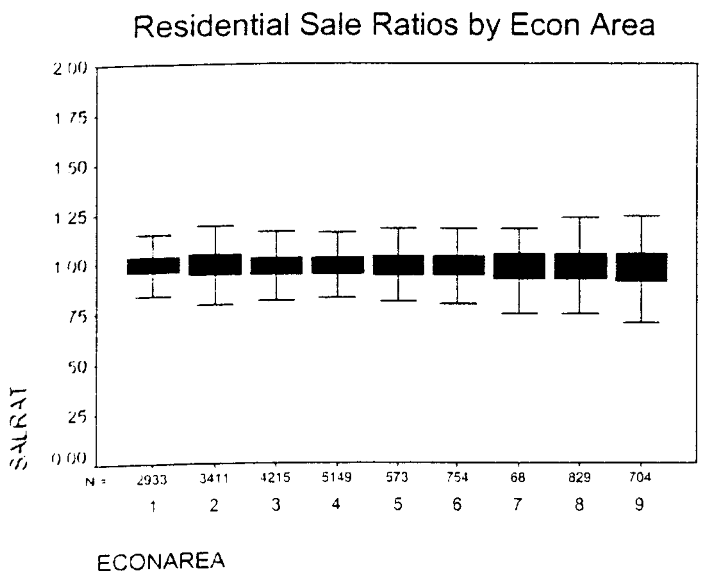
Ratio Statistics for CURRTOT / TASP by ECONOMIC AREA

ECONAREA	Median	Price Related Differential	Coefficient of Dispersion
1	.992	1.003	.049
2	.990	1.007	.067
3	.985	1.009	.059
4	.988	1.007	.055
5	.986	1.008	.061
6	.985	1.009	.067
7	.990	1.021	.100
8	.986	1.015	.086
9	.983	1.017	.102

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







The [illegible] graphs indicate that the distribution of the sale ratios was within state [illegible] and that there are no significant price related differential issues.

[illegible] Market Trend Analysis

Our [illegible] the residential dataset indicated market trending was applied for the sale [illegible] was expanded to 24 to account for seasonality. We confirmed this with our [illegible] as follows:

[illegible]	N	Median	Mean	Minimum	Maximum	Auditor
[illegible]	3693	.00517	.00556	.000	.008	.005
[illegible]	4422	.00605	.00648	.000	.009	.005
[illegible]	5376	.00585	.00573	.000	.010	.006
[illegible]	6714	.00513	.00553	.003	.008	.006
[illegible]	740	.00542	.00550	.000	.008	.006
[illegible]	960	.00608	.00659	.000	.011	.006
[illegible]	83	.00358	.00423	.003	.007	.004
[illegible]	1068	.00358	.00424	.003	.008	.003
[illegible]	987	.00407	.00441	.003	.007	.004

[illegible] results, we conclude that Jefferson County has correctly applied [illegible] adjustments to their residential sales.

Sold/Unsold Analysis

In terms of the consistent treatment of residential sold and unsold properties, we examined the change in value between 2002 and 2004 for residential property values between these two groups. The following table and graph compares the 2002 and 2004 actual values for residential properties in Jefferson County, grouped by sold and unsold properties:

GROUP	N	Median	Mean
Sold	23225	1.1937	1.1966
Unsold	146825	1.1918	1.1926
Total	170050	1.1920	1.1932

Based on the above analysis, we conclude that the Jefferson County Assessor has valued sold and unsold residential properties in a consistent manner.

IV. COMMERCIAL/INDUSTRIAL SALES RESULTS

The following steps were taken to analyze the appropriate commercial and industrial sale dataset for Jefferson County:

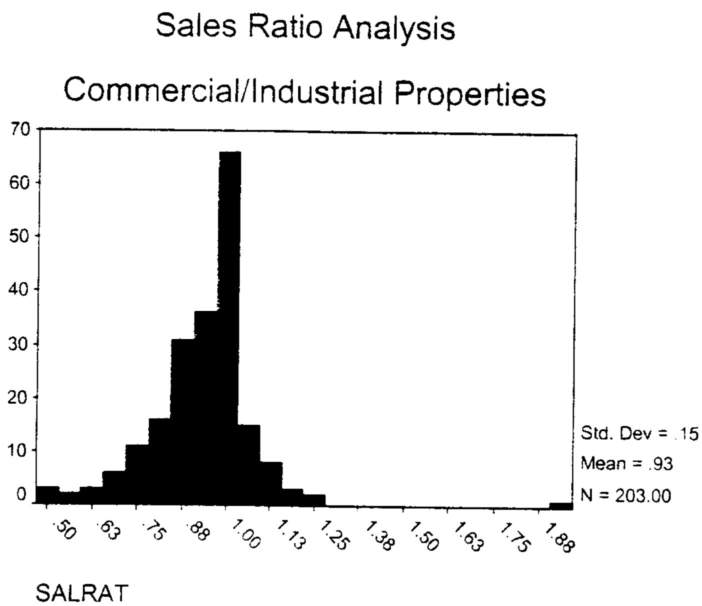
<u>**Steps**</u>	<u>**Results**</u>
1. Selected sales coded as "Q"	26,095 Sales
2. Selected improved sales (Status = "I")	25,381 Sales
3. Selected sale with subclass codes 2000 to 3999	254 Sales
4. Sales between 1/1/2001 and 6/30/2002	203 Sales

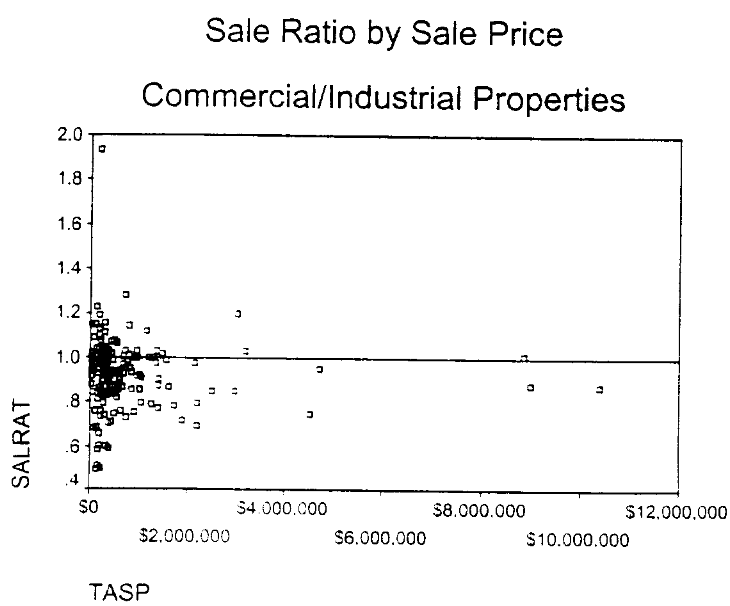
203 sales were analyzed using the required measurements for the level of assessment, as well as for the quality of the assessment.

Ratio Statistics for CURRTOT / TASP

Median	.951
Price Related Differential	1.017
Coefficient of Dispersion	.103

The above 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

The assessor did not apply a market trend factor to the commercial sales. Our analysis verified this conclusion, as follows:

Coefficients[a]

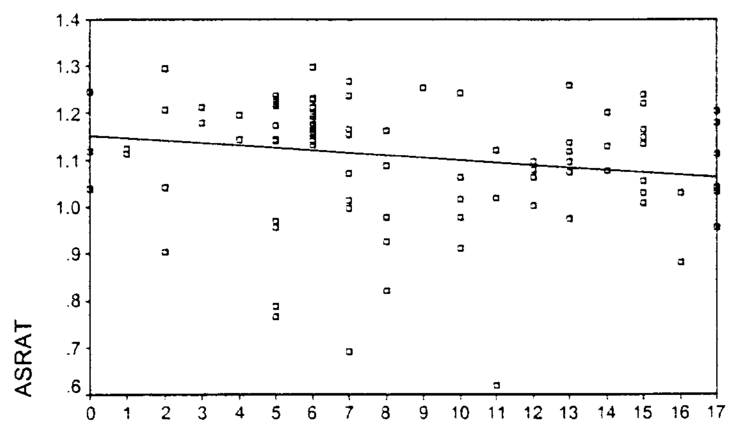
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.151	.025		46.692	.000
	SALPER	-.005	.003	-.190	-1.992	.049

a. Dependent Variable: ASRAT

The following scatter plot indicates the inverted ratios for commercial/industrial sales for the sale period:

Comm/Ind Market Trend Analysis

Inverted Ratio Method



Sold/Unsold Analysis

In terms of the consistent treatment of commercial/industrial sold and unsold properties, we examined the change in value between 2002 and 2004 for commercial/industrial property values between these two groups. The following table and graph compares the 2002 and 2004 actual values for commercial/industrial properties in Jefferson County, grouped by sold and unsold properties:

GROUP	N	Median	Mean
Sold	189	1.1594	1.1454
Unsold	3941	1.0712	1.0841
Total	4130	1.0741	1.0869

Based on the above analysis, we conclude that the Jefferson County Assessor has valued sold and unsold commercial properties in a consistent manner.

V. VACANT LAND SALE RESULTS

Steps	Results
1 Selected sales coded as "Q"	26,095 Sales
2 Selected improved sales (Status = "V")	714 Sales
3 Selected sales with abstract codes less than 4000	714 Sales
4 Selected sales between Jan 2001 and June2002	505 Sales

The **505** vacant land sales were analyzed using the require measurements for the level of assessment, as well as for the quality of the assessment. The following ratio analysis indicates the results:

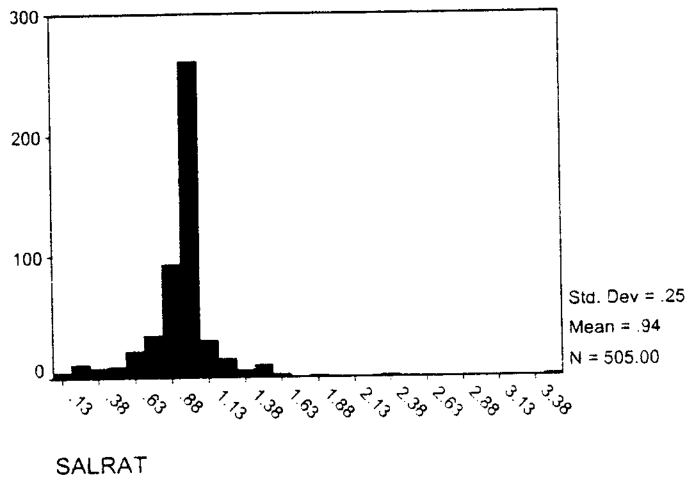
Ratio Statistics for NEWCURTO / TASP

Median	.980
Price Related Differential	1.063
Coefficient of Dispersion	.143

The above table indicates that the vacant land ratios are in compliance with the standards set forth by the Colorado State Board of Equalization (SBOE) for the overall sales. The following histogram and scatter plot describe the sales ratio distribution for all of these properties:

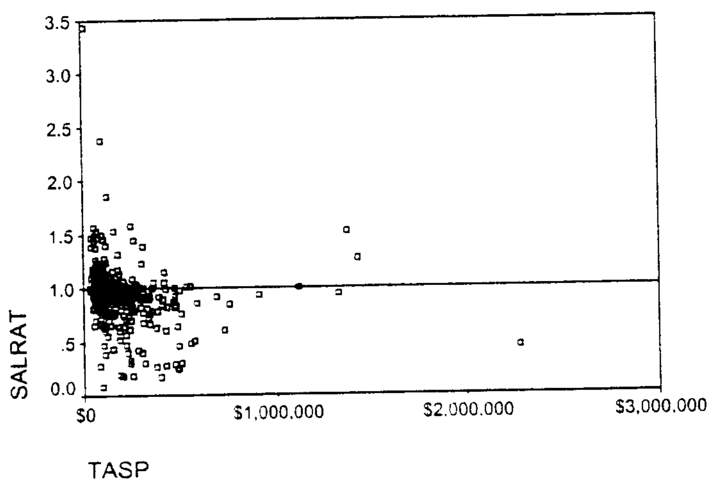
Sales Ratio Analysis

Vacant Land



Sale Ratio by Sale Price

Vacant Land



Vacant Land Market Trend Analysis

The assessor applied market trend adjustments to vacant land sales as part of their valuation development. An overall trend of 0.5% per month was indicated by the sale data. We performed an inverted ratio analysis of this data, and found similar results, as follows:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.299	.022		58.487	.000
	SALPER	-.006	.001	-.186	-3.871	.000

a. Dependent Variable: ASRAT

The following scatter plot indicates the inverted ratios for vacant land sales for the sale period:

Sold/Unsold Analysis

In terms of the consistent treatment of vacant land sold and unsold properties, we examined the change in value between 2002 and 2004 for vacant land property values between these two groups. The following table and graph compares the 2002 and 2004 actual values for these properties in Jefferson County, grouped by sold and unsold properties:

GROUP	N	Median	Mean
Sold	308	1.2140	1.2119
Unsold	4049	1.1366	1.1463
Total	4357	1.1427	1.1509

Based on the above analysis, we conclude that the Jefferson County Assessor has valued sold and unsold vacant land properties in a consistent manner.

VI. AGRICULTURAL IMPROVEMENTS ANALYSIS

Jefferson County was exempt from this portion of the 2004 audit.

VII. CONCLUSIONS

Based on this 2004 audit statistical analysis, residential, commercial/industrial, and vacant land properties were in compliance with state guidelines. This included sale ratio compliance, time trend validation, and sold/unsold valuation consistency.