



2008
ARAPAHOE COUNTY
PROPERTY ASSESSMENT
STUDY



ROCKY MOUNTAIN
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.

A handwritten signature in black ink, appearing to read "Mark R. Linné".

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

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INTRODUCTION



Colorado

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 Arapahoe County in the following report.

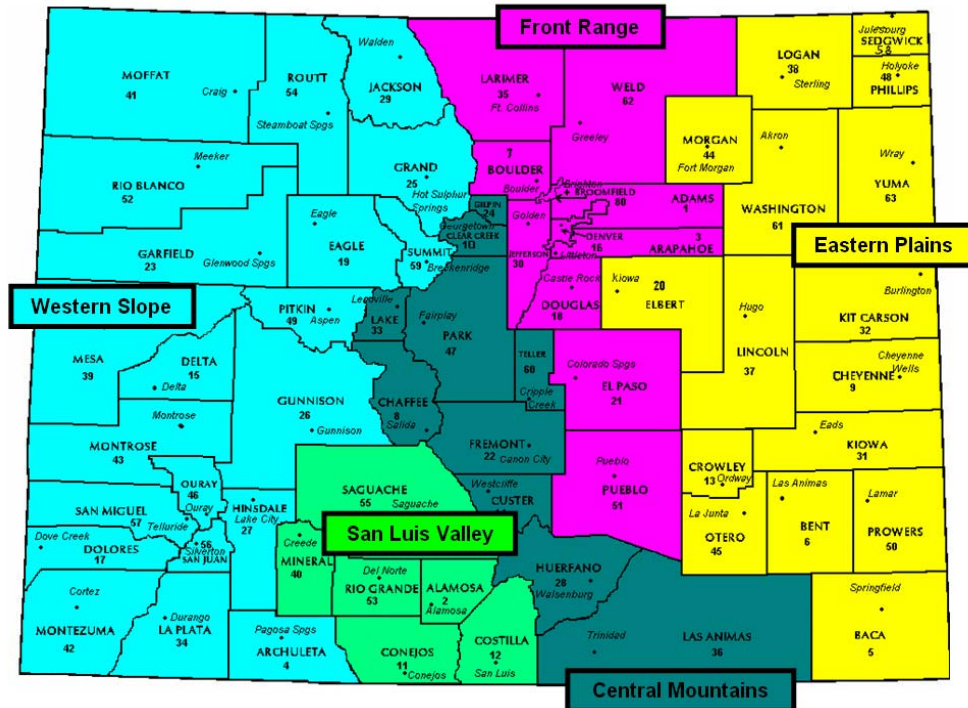
REGIONAL/HISTORICAL SKETCH OF ARAPAHOE COUNTY

Regional Information

Arapahoe 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.



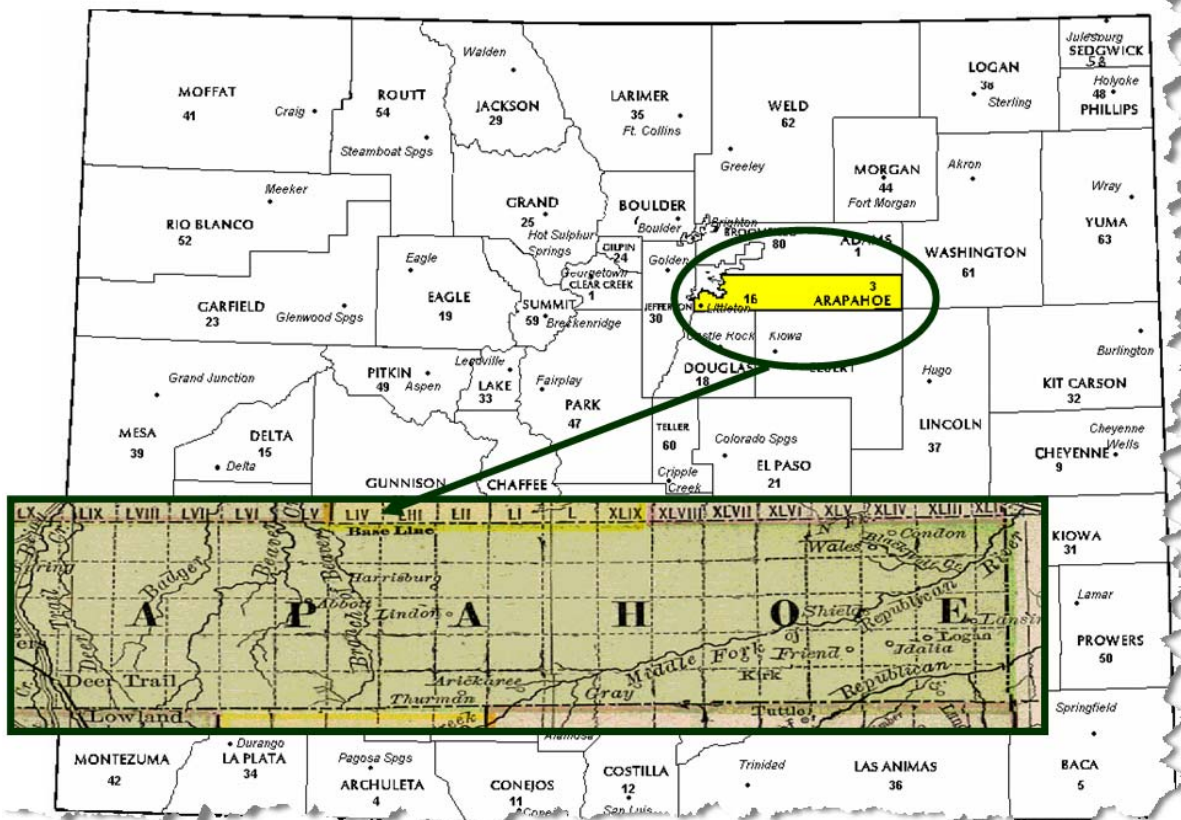
Historical Information

Arapahoe County has a population of approximately 537,197 people with 607.6 people per square mile, according to the U.S. Census Bureau's 2006 estimated population data.

The County was established in 1861 with 797 square miles in area and was the first established county in the Colorado Territory. It was named for the Arapaho Indians who had inhabited eastern Colorado. The name is also spelled 'Arapaho.' This is not, however, the name that the Arapaho people use for themselves. It is said to be derived from Pawnee tiraapuhu 'he is bartering' or iriiraraapuhu

'trader.' The Pawnee, however, do not use this term to refer to the Arapaho, so it may have been misunderstood by the settlers. Another possible source is Crow aa-raxpe'-ahu, literally 'tattoo.'

In 1861 Denver was the county seat of Arapahoe County. In 1902, Arapahoe County split and created Denver and Adams Counties and sent parts of Arapahoe County to Washington and Yuma Counties. In 1904 Littleton defeated Englewood in an election to determine the permanent county seat. (William Bright, Colorado Place Names, 3rd Edition, Johnson Books, 2004, p. 8)





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 Arapahoe County are:

Arapahoe County Ratio Grid					
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis
Commercial/Industrial	224	0.999	0.999	5.9	Compliant
Condominium	N/A	N/A	N/A	N/A	N/A
Single Family	18,964	1.000	1.004	4	Compliant
Vacant Land	95	1.000	1.036	6.7	Compliant

Ratio Statistics

Econ Area	Sale Count	Median	Weighted Mean	Price Related Differential	Coefficient of Dispersion
1.0	55	.999	.999	1.005	.036
2.0	76	.993	.996	1.003	.038
3.0	570	1.001	1.002	1.005	.044
4.0	342	.998	.997	1.011	.061
5.0	638	1.001	.974	1.032	.050
6.0	300	.992	.984	1.021	.066
7.0	1,048	1.000	1.002	1.005	.046
8.0	3,260	1.000	.998	1.003	.044
10.0	2,003	.999	.997	1.005	.036
11.0	2,115	1.000	.999	1.002	.035
12.0	406	.999	1.003	1.000	.037
13.0	547	1.000	1.001	1.003	.038
14.0	739	.999	.996	1.004	.043
15.0	138	.997	.997	1.004	.050
16.0	136	.998	.991	1.001	.038
17.0	347	.999	.999	1.003	.049
18.0	5,757	1.000	1.000	1.002	.034
19.0	104	.993	.989	1.000	.063
20.0	80	1.000	.994	1.003	.040

Ratio = Current Asmt / TASP

After applying the above described methodologies, it is concluded from the sales ratios that Arapahoe 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 Arapahoe County has complied with the statutory requirements to analyze the effects of time on value in their county. Arapahoe 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

Arapahoe 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 Arapahoe County is reasonably treating its

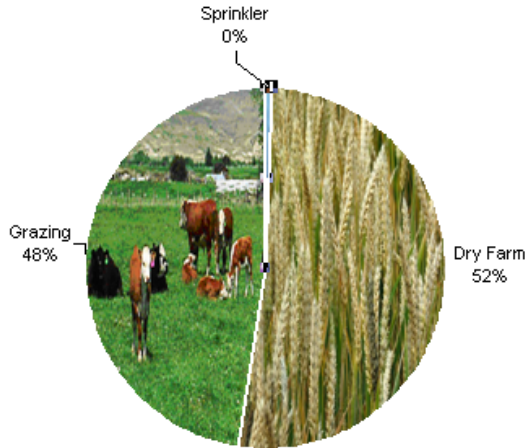
sold and unsold properties in the same manner.

Recommendations

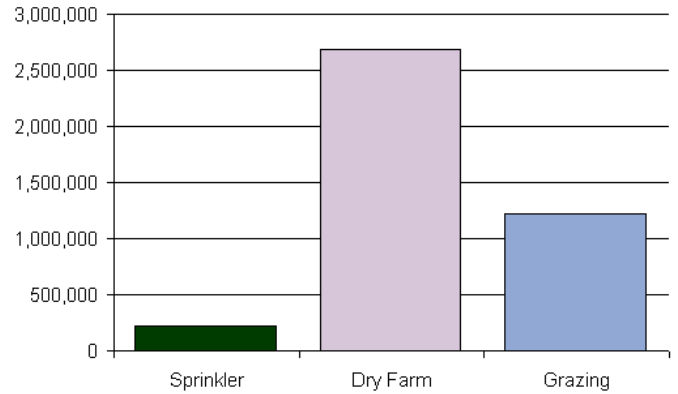
None

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:

Arapahoe County Agricultural Land Ratio Grid						
Abstract Code	Land Class	Number Of Acres	County Value Per Acre	County Assessed Total Value	RMVS Total Value	Ratio
4107	Sprinkler	1,817	119.00	215,645	226,294	0.95
4127	Dry Farm	201,055	13.00	2,697,052	2,729,763	0.98
4147	Grazing	184,410	7.00	1,226,656	1,226,656	1.00
Total/Avg		387,282	11.00	4,128,126	4,182,713	0.99

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

Arapahoe 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 Arapahoe County. This study was conducted by checking selected sales from the master sales list for the 2007-2008 valuation period. Specifically RMVS selected 30 sales listed as unqualified.

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

Conclusions

Arapahoe 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

Arapahoe County has submitted a written narrative describing the economic areas that make up the county's market areas. Arapahoe 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 Arapahoe 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

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

Producing Oil and Gas Procedures

Methodology

The Colorado Revised Statutes (CRS) in Article 39, Section 7, and the Assessor's Reference Library (ARL), Volume 3 were the basis for valuing the production of gas property. For gas, the gross volume of thousand cubic feet (MCF) sold was multiplied by the current average field price per unit sold. For Oil, the gross volume of barrels sold was multiplied by the current average field price per unit sold. Any federal, state or local government ownership (royalty) was deducted from the gross value sold to arrive at actual value.

Conclusions

County valued oil and gas production using acceptable appraisal procedures.

Recommendations:

None

VACANT LAND

Subdivision Discounting

In 2008 subdivisions were reviewed in Arapahoe 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 accomplished 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

Arapahoe 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.

Arapahoe 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

Arapahoe 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

Arapahoe 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.

Arapahoe 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
- Personal Observation, Physical Canvassing or Word of Mouth
- Sales Tax List

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.

Arapahoe 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:

- New businesses filing for the first time
- Incomplete or inconsistent declarations
- Accounts with omitted property

- Non-filing Accounts - Best Information Available
- Accounts close to the \$2,500 actual value exemption status
- Accounts protested with substantial disagreement

Arapahoe 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

Arapahoe 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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Katie Linné, *Administrative Assistant*

APPENDICES

STATISTICAL ANALYSIS ARAPAHOE COUNTY 2008

I. OVERVIEW

Arapahoe County is an urban County located along the Front Range region of Colorado. The County has a total of 201,671 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	12,303	6.1
RESIDENTIAL	178,611	88.6
COMMERCIAL	6,020	3.0
INDUSTRIAL	36	.0
AGRICULTURAL	3,310	1.6
NATURAL RESOURCES	1,391	.7
Total	201,671	100.0

Vacant Land

The vacant land class of properties has a total of 12,303 parcels. The majority (90%) of these parcels fall into the residential (100, 1112) or PUD (400) use category. The remaining vacant parcels are mix of commercial/industrial, multi-family, condo, mobile home, or have a subclass code that is delineated by the acreage of the parcel.

SUBCLASS CODE

	Frequency	Percent
100 Residential Lots	4,339	35.3
200 Commercial Lots	511	4.2
300 Industrial Lots	126	1.0
400 PUD Lots	6,153	50.0
510 Less Than 1.0 ACRES	40	.3
520 1.0 to 4.99 ACRES	82	.7
530 5.0 to 9.99 ACRES	30	.2
540 10.0 to 34.99 ACRES	54	.4
550 35.0 to 99.99 ACRES	47	.4
560 100.0 ACRES and Up	6	.0
1112 Single Family Residence Land	600	4.9
1120 Multi-Units (4-8) Land	27	.2
1125 Multi-Units (9 & Up) Land	24	.2
1130 Condominiums Land	45	.4
1135 Manuf Housing (Mobile Homes) Land	192	1.6
1140 Manuf Housing (Land, Park, Etc.) Land	26	.2
1150 Partially Exempt (Taxable Part) Land	1	.0
Total	12,303	100.0

Residential

The residential subclass category has a total of 178,611 parcels. Over 82% of the parcels in this category have a single-family (1212) subclass code. The remaining parcels in this category are multi-unit, condos and mobile homes.

SUBCLASS CODE

	Frequency	Percent
1212 Single Family Residence	148,064	82.9
1215 Duplexes-Triplexes	907	.5
1220 Multi-Units (4-8)	275	.2
1225 Multi-Units (9 & Up)	1,483	.8
1230 Condominiums	25,958	14.5
1235 Manuf Housing (Mobile Homes)	1,897	1.1
1240 Manuf Housing (Land, Park, Etc.)	17	.0
1250 Partially Exempt (Taxable Part)	5	.0
1610 - Res/CM Mixed Use	2	.0
1620 - Res/CM Mixed Use	1	.0
1630 - Res/AG Mixed Use	2	.0
Total	178,611	100.0

Commercial/Industrial

The commercial/industrial subclass category has a total of 6,056 properties. This category represents 3% of the total property inventory. The majority (99%) of these parcels have a commercial use. The breakdown by subclass code is as follows:

SUBCLASS CODE

	Frequency	Percent
2020 Airport Possessory Interest	21	.3
2021 Entertainment Possessory Int	1	.0
2022 Recreation Possessory Interest	3	.0
2023 Other Commercial Possessory Int	2	.0
2112 Merchandising	6	.1
2115 Lodging	3	.0
2120 Offices	7	.1
2125 Recreation	55	.9
2130 Special Purpose	255	4.2
2135 WareHouse/Strg	74	1.2
2140 Multi-Use (3+)	4	.1
2145 Recreation Lands (CRS 39-3-112)	1	.0
2150 Partially Exempt (Taxable Part)	4	.1
2212 Merchandising	595	9.8
2215 Lodging	49	.8
2220 Offices	758	12.5
2225 Recreation	73	1.2
2230 Special Purpose	1,192	19.7
2235 WareHouse/Strg	1,749	28.9
2240 Multi-Use (3+)	488	8.1
2245 Commercial Condo	653	10.8
2250 Partially Exempt (Taxable Part)	27	.4
3115 Manuf/Processing	1	.0
3215 Manuf/Processing	35	.6
Total	6,056	100.0

Other

The remaining 4,701 parcels are a mix of natural resource and agricultural properties.

II. SALES FILE

The sale file provided by the Arapahoe County Assessor's Office contained 40,485 sales. These sales had a sale date range of January 2005 thru June 2006. The breakdown of sales activity by sale month and year is as follows:

		SALE YEAR		Total
		2005	2006	
SALE MONTH	January	1,778	1,713	3,491
	February	1,970	1,807	3,777
	March	2,403	2,243	4,646
	April	2,316	2,174	4,490
	May	2,474	2,425	4,899
	June	2,862	2,616	5,478
	July	2,404	0	2,404
	August	2,686	0	2,686
	September	2,413	0	2,413
	October	2,072	0	2,072
	November	2,049	0	2,049
	December	2,080	0	2,080
Total		27,507	12,978	40,485

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	19,434	59.7
CHARACTERISTIC CHANGES AFTER SALE	486	1.5
UNQUALIFIED	12,632	38.8
Total	32,552	100.0

There were 19,434 sales that were classified as qualified. The breakdown of the sale property type is listed below.

SALE TYPE

	Frequency	Percent
OTHER	12	.1
VACANT	226	1.2
RESIDENTIAL	18,964	97.6
COMM/IND	224	1.2
IMPROVED SALE WITH VACANT SUBCLASS	6	.0
AGRICULTURE	2	.0
Total	19,434	100.0

III. RESIDENTIAL SALES RESULTS

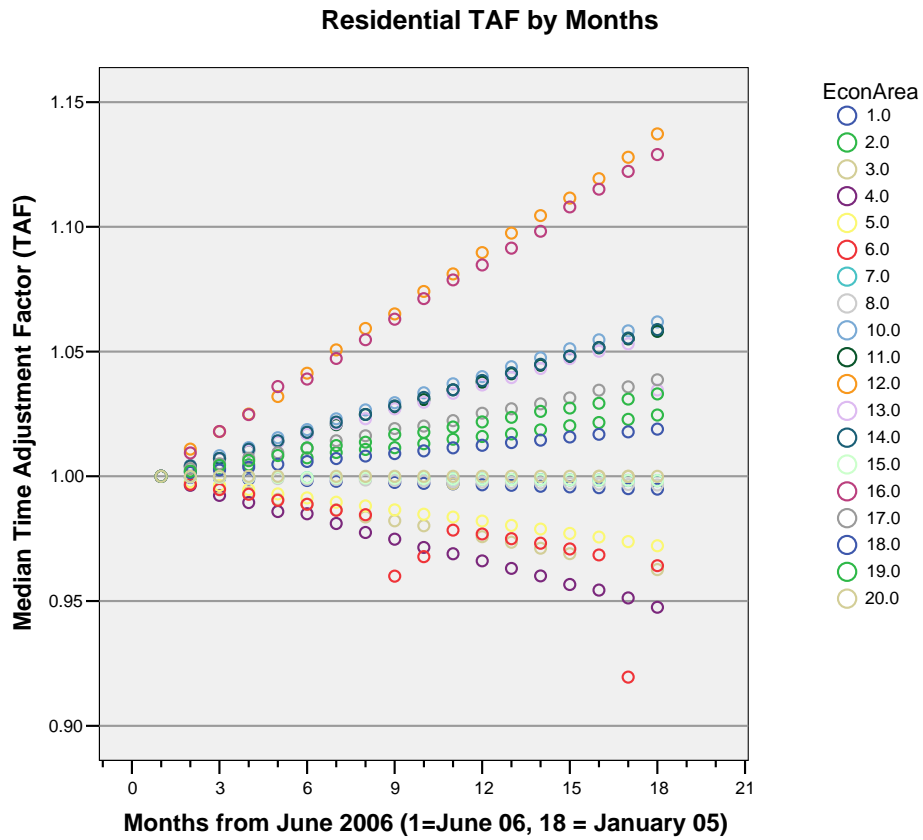
For the residential analysis, 18,964 sales between the dates January 2005 thru June 2006 were analyzed. A breakdown of the sales by subclass is listed below.

SUBCLASS CODE

	Frequency	Percent
1212 Single Family Residence	15,324	80.8
1215 Duplexes-Triplexes	93	.5
1220 Multi-Units (4-8)	34	.2
1225 Multi-Units (9 & Up)	32	.2
1230 Condominiums	3,330	17.6
1235 Manuf Housing (Mobile Homes)	151	.8
Total	18,964	100.0

**Note: Manufactured Housing Sales (1235) will be excluded from the following analysis.*

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 median monthly time adjustment factor by economic area.



The following table outlines the sales ratio statistics for residential properties in Arapahoe County.

Ratio Statistics

Mean	1.002
Median	1.000
Weighted Mean	.998
Price Related Differential	1.004
Coefficient of Dispersion	.040

Ratio = Current Asmt / TASP

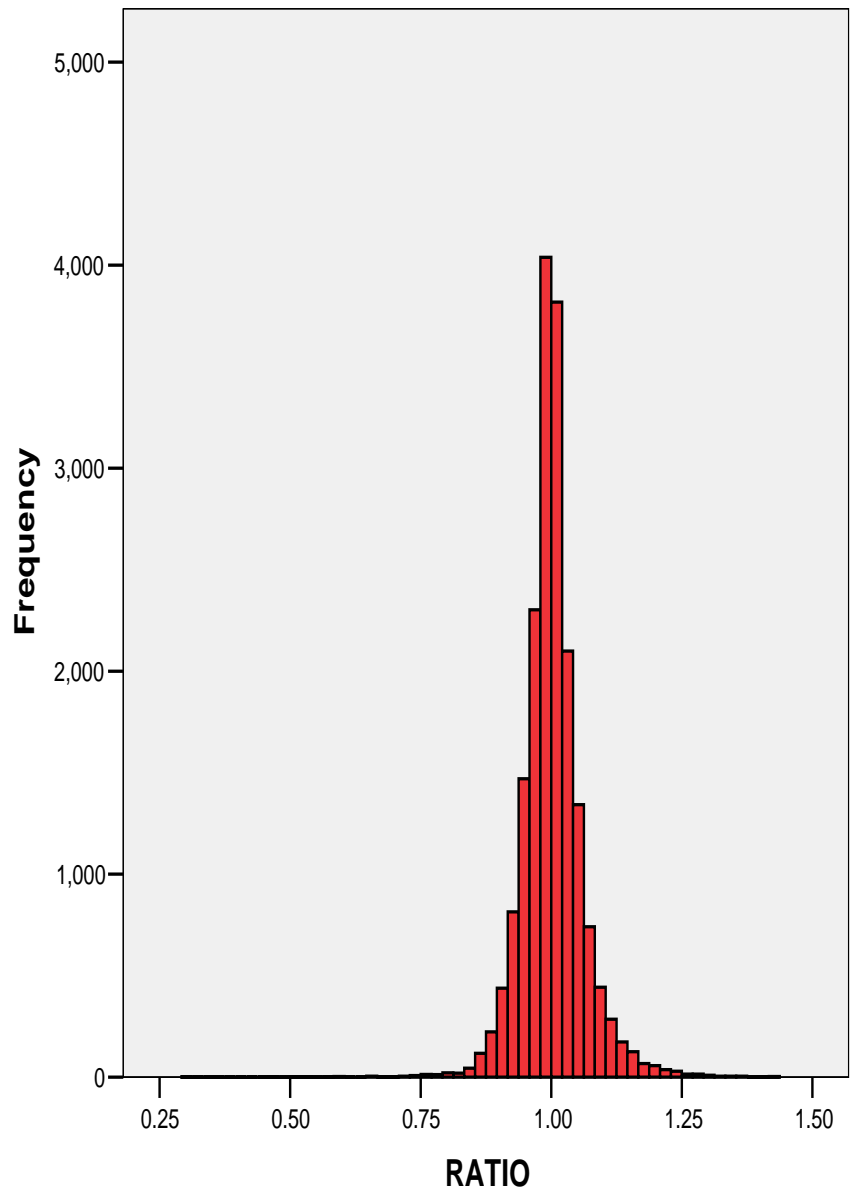
A breakdown of the sales ratio statistics by economic area is described in the table below.

Ratio Statistics

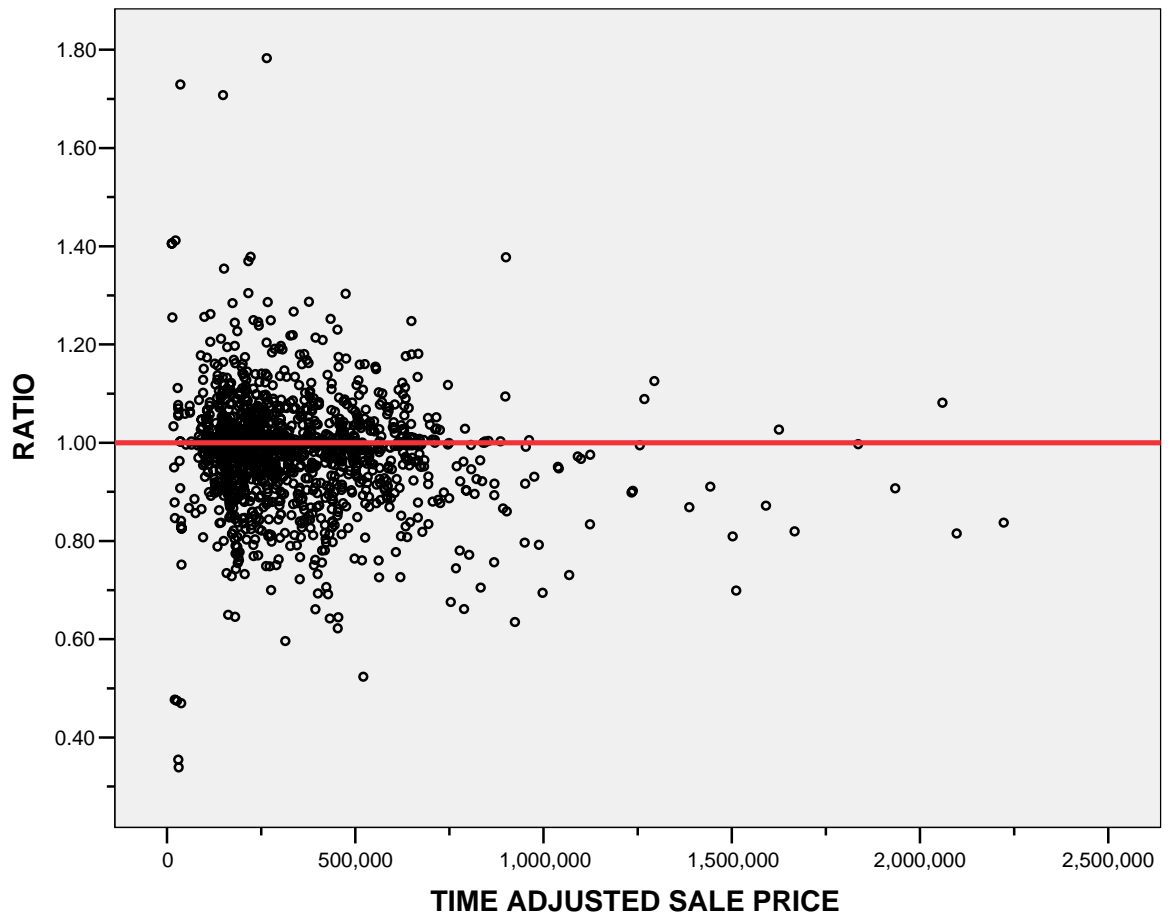
Econ Area	Sale Count	Median	Weighted Mean	Price Related Differential	Coefficient of Dispersion
1.0	55	.999	.999	1.005	.036
2.0	76	.993	.996	1.003	.038
3.0	570	1.001	1.002	1.005	.044
4.0	342	.998	.997	1.011	.061
5.0	638	1.001	.974	1.032	.050
6.0	300	.992	.984	1.021	.066
7.0	1,048	1.000	1.002	1.005	.046
8.0	3,260	1.000	.998	1.003	.044
10.0	2,003	.999	.997	1.005	.036
11.0	2,115	1.000	.999	1.002	.035
12.0	406	.999	1.003	1.000	.037
13.0	547	1.000	1.001	1.003	.038
14.0	739	.999	.996	1.004	.043
15.0	138	.997	.997	1.004	.050
16.0	136	.998	.991	1.001	.038
17.0	347	.999	.999	1.003	.049
18.0	5,757	1.000	1.000	1.002	.034
19.0	104	.993	.989	1.000	.063
20.0	80	1.000	.994	1.003	.040

Ratio = Current Asmt / TASP

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:



Mean =1.0022
Std. Dev. =0.05817
N =18,813



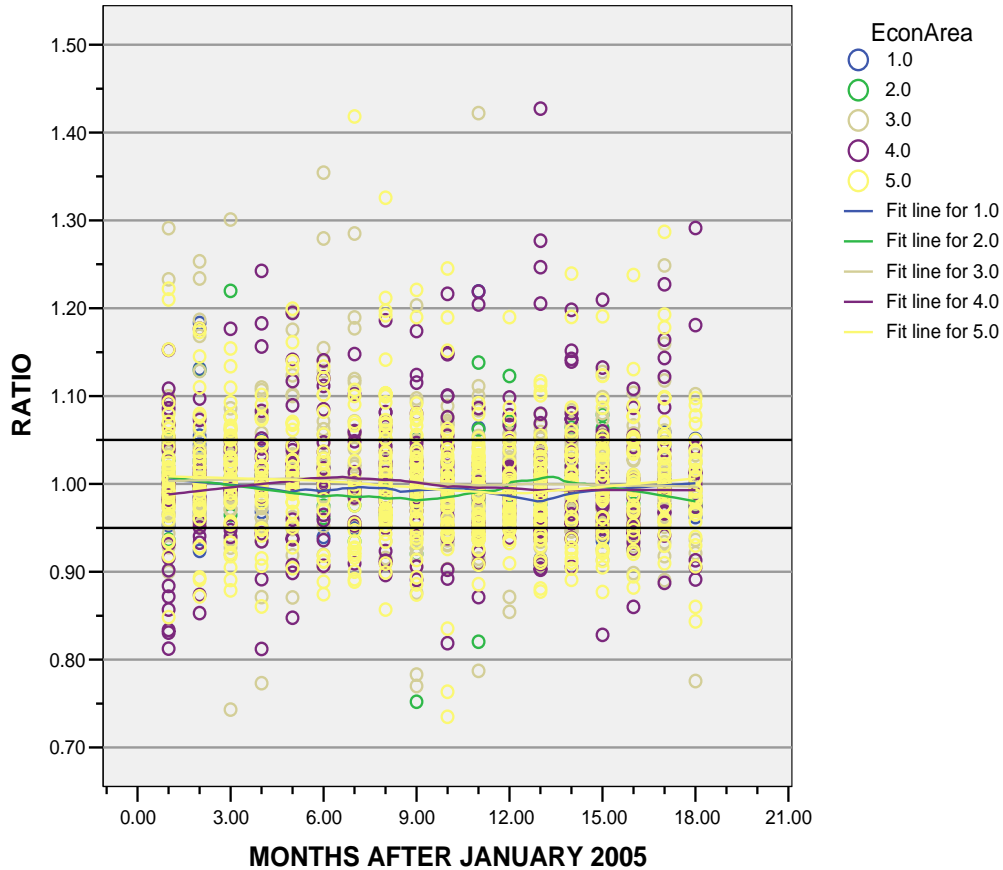
**Note: Sale Prices > 2.5 million were excluded from the above graph.*

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.

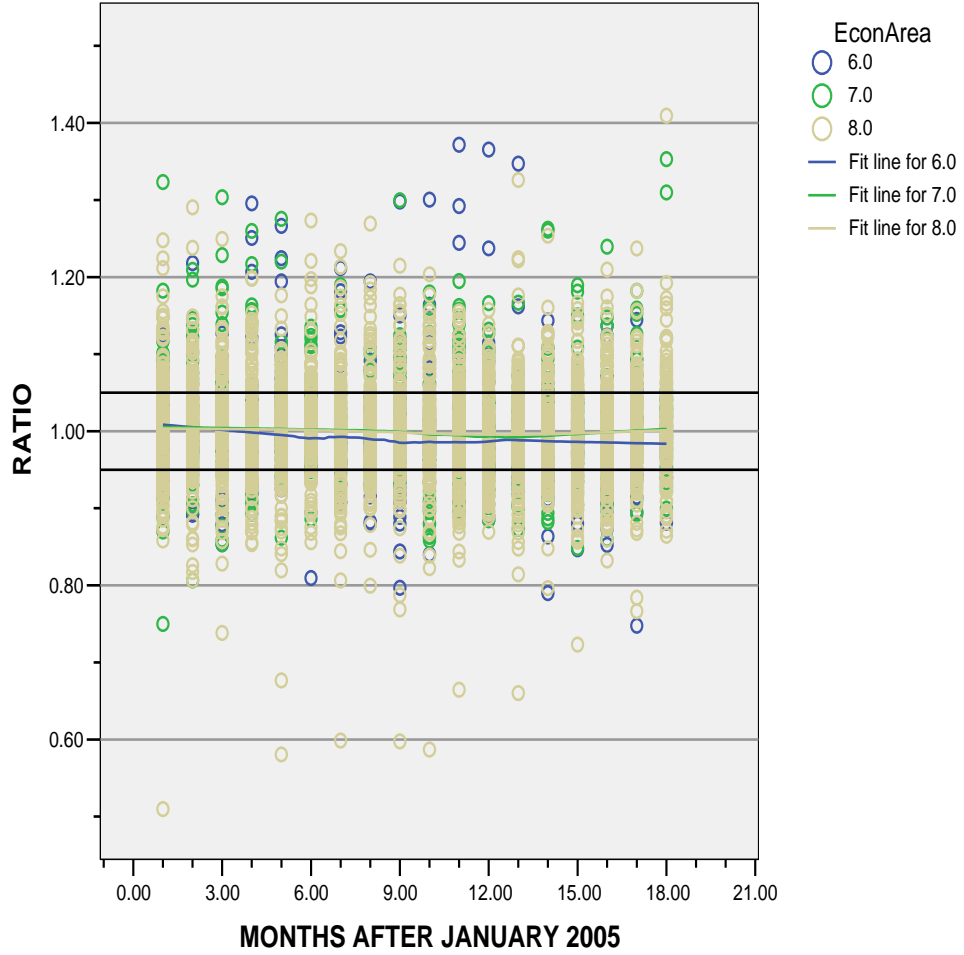
Residential Market Trend Analysis

We verified that market trending was accounted for in the residential valuations by analyzing the sale ratios over the 18 month time period in each economic area. The following graphs illustrate a horizontal pattern in each economic area indicating no significant changes in sale ratios during this time period.

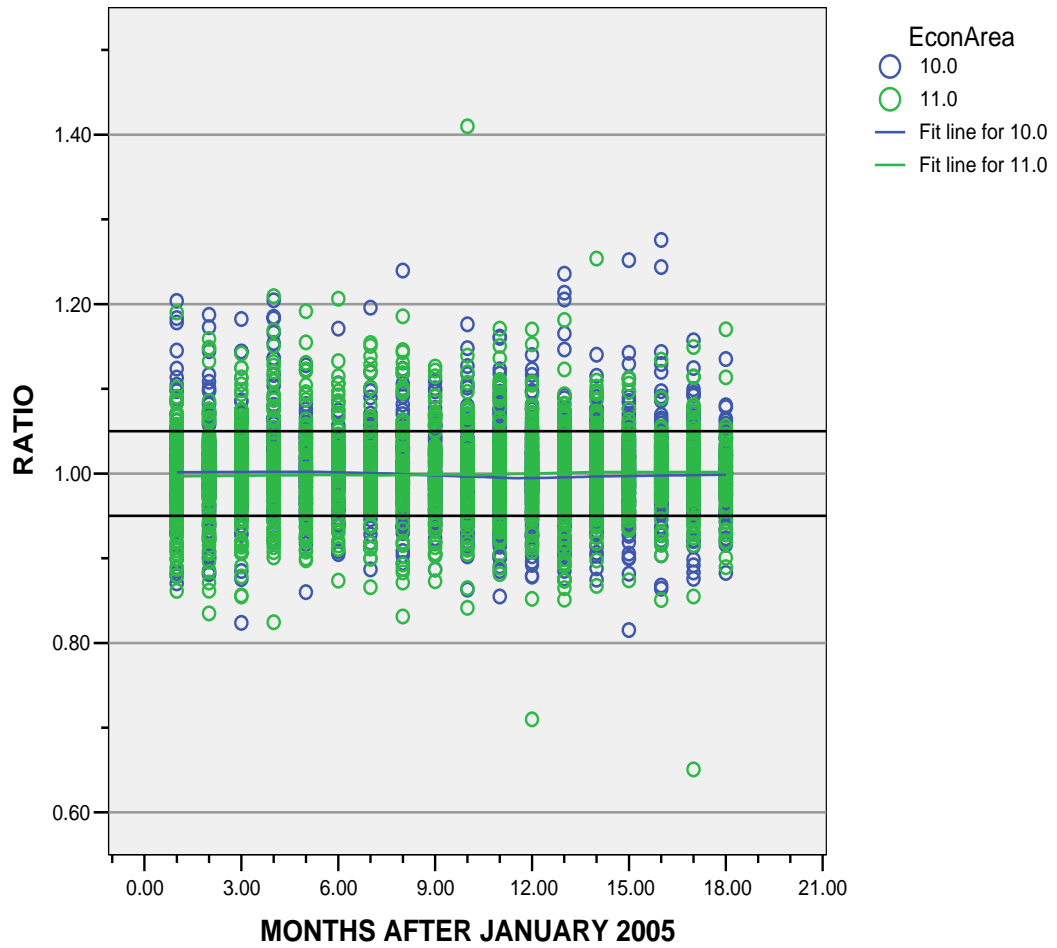
Sale Ratio by Months (ECON AREA 1-5)



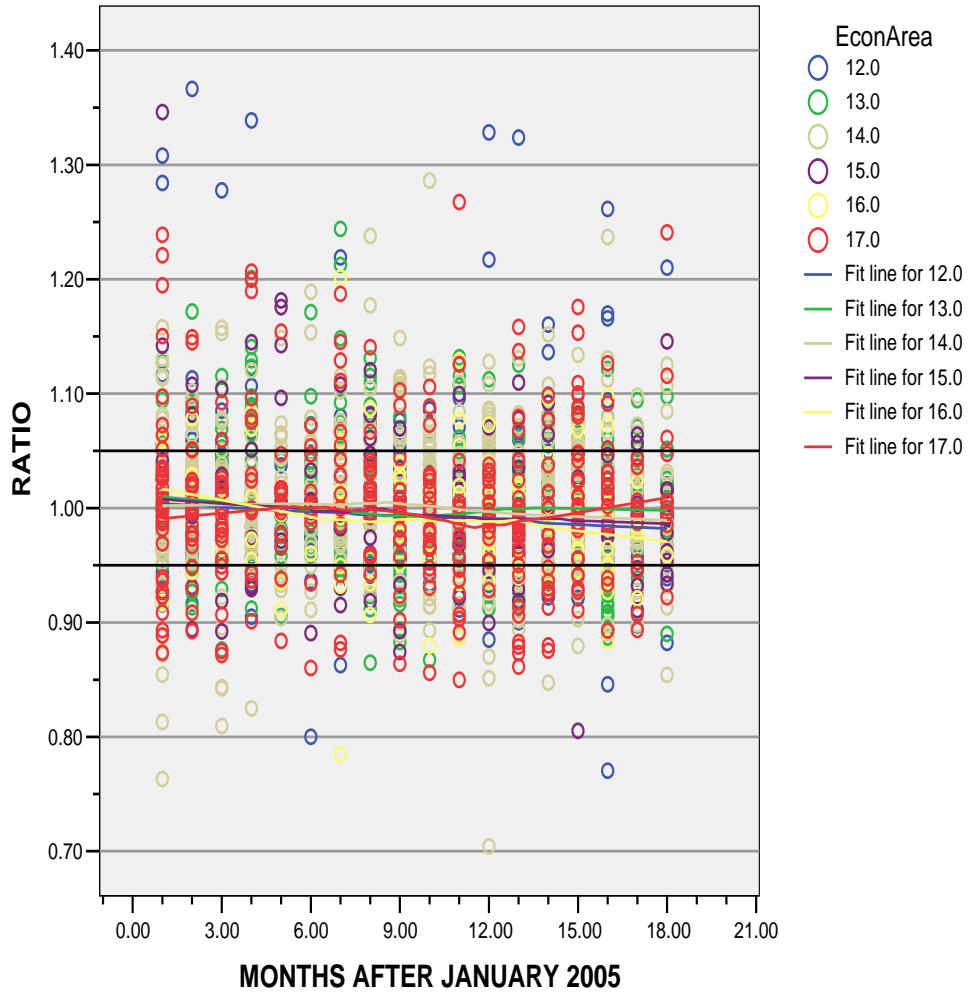
Sale Ratio by Months (ECON AREA 6-8)



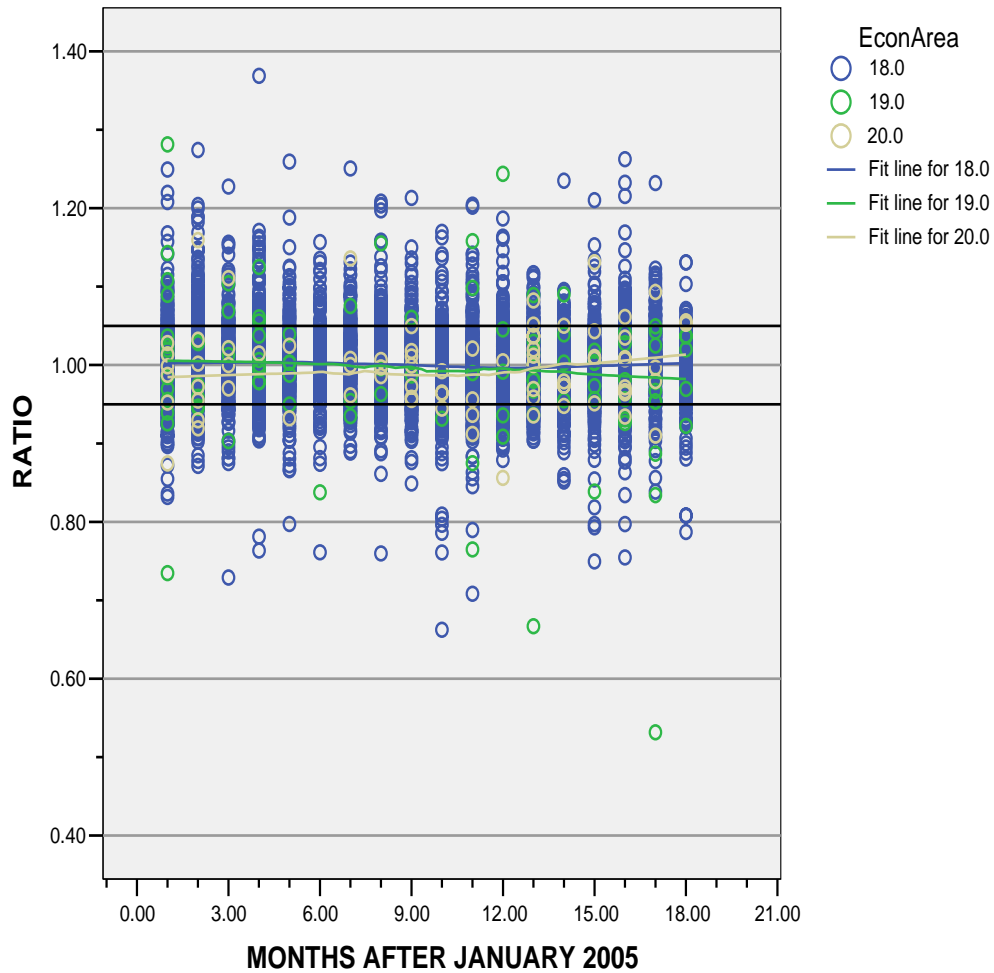
Sale Ratio by Months (ECON AREA 10-11)



Sale Ratio by Months (ECON AREA 12-17)



Sale Ratio by Months (ECON AREA 18-20)



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 properties were 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.

Report

CHANGE

CATEGORY	Median	N
SOLD	.0000	18,813
UNSOLD	.0000	159,156
Total	.0000	177,969

The above median percent change table of sold and unsold residential properties 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 tax year.

IV. COMMERCIAL/INDUSTRIAL SALES RESULTS

For the commercial/industrial analysis, 224 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	20	8.9
2215 Lodging	1	.4
2220 Offices	44	19.6
2230 Special Purpose	26	11.6
2235 WareHouse/Strg	73	32.6
2240 Multi-Use (3+)	11	4.9
2245 Commercial Condo	47	21.0
2250 Partially Exempt (Taxable Part)	1	.4
3215 Manuf/Processing	1	.4
Total	224	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 sales during this time period.

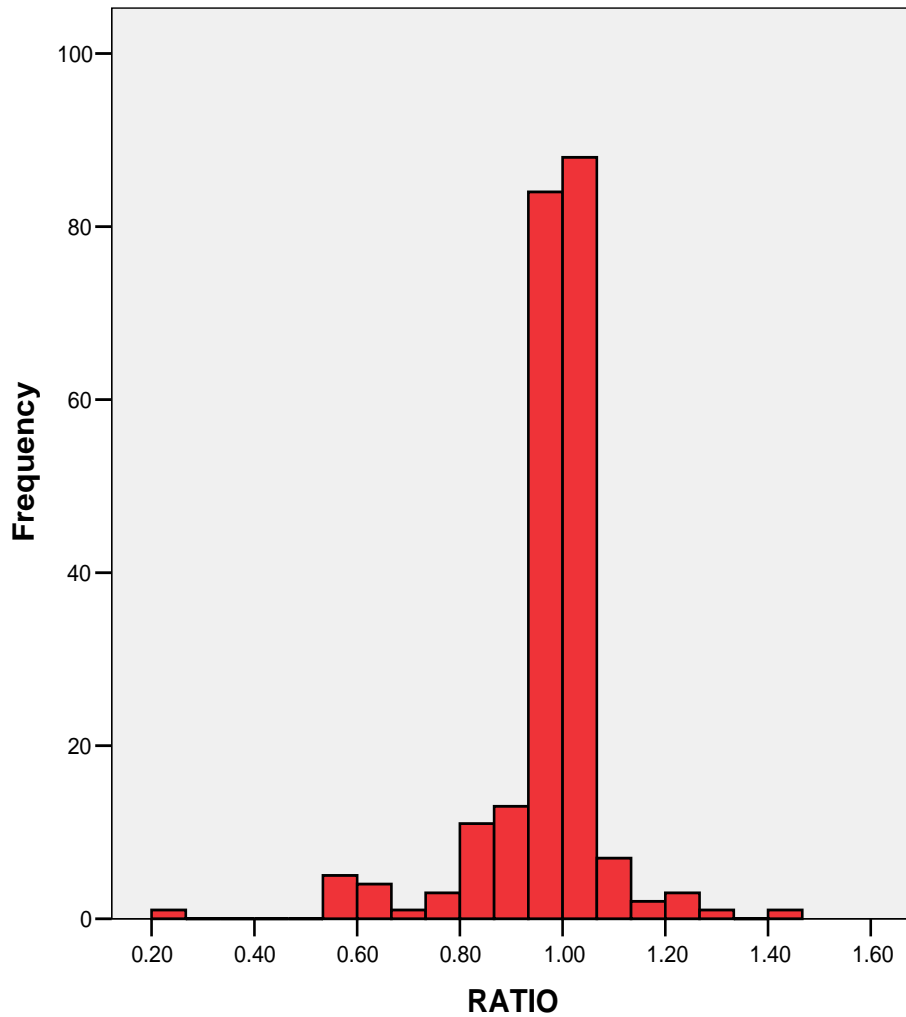
The following table outlines the sales ratio statistics for commercial and industrial properties in Arapahoe County.

Ratio Statistics

Mean	.972
Median	.999
Weighted Mean	.972
Maximum	1.444
Price Related Differential	.999
Coefficient of Dispersion	.059

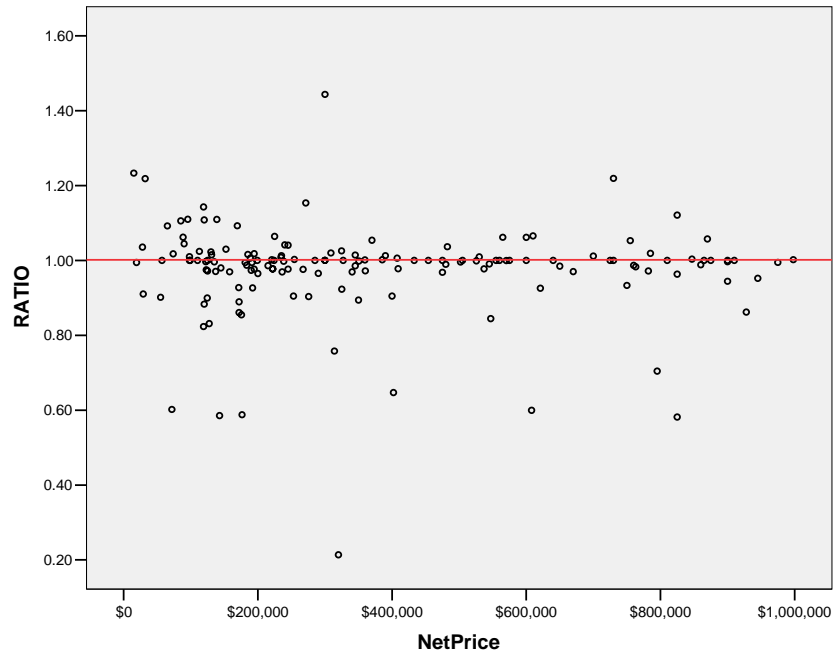
Ratio = Current Asmt / Netprice

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 these properties:

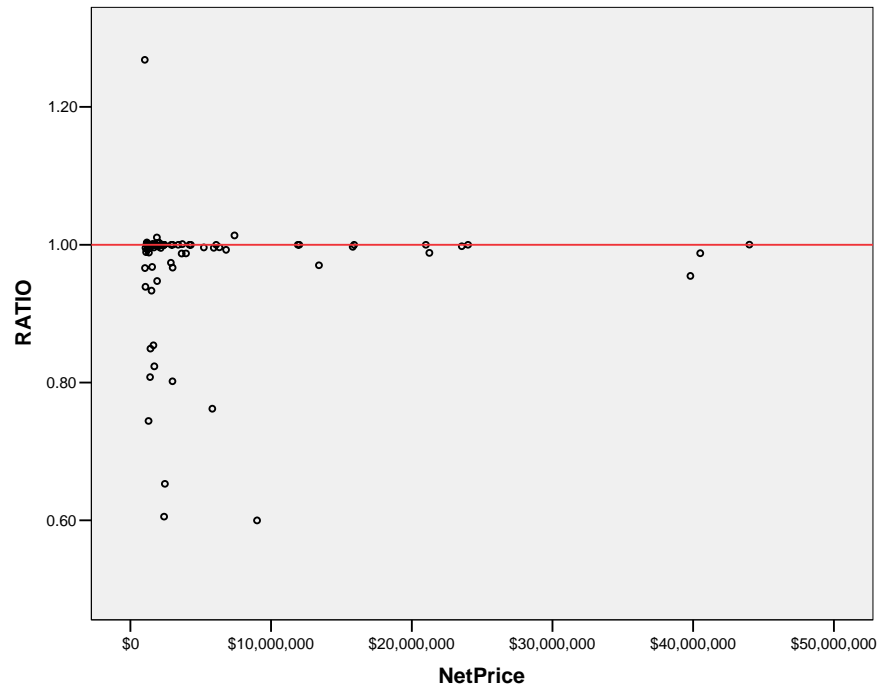


Mean =0.9717
Std. Dev. =0.11875
N =224

Ratios By Sale Price (<=1,000,000)

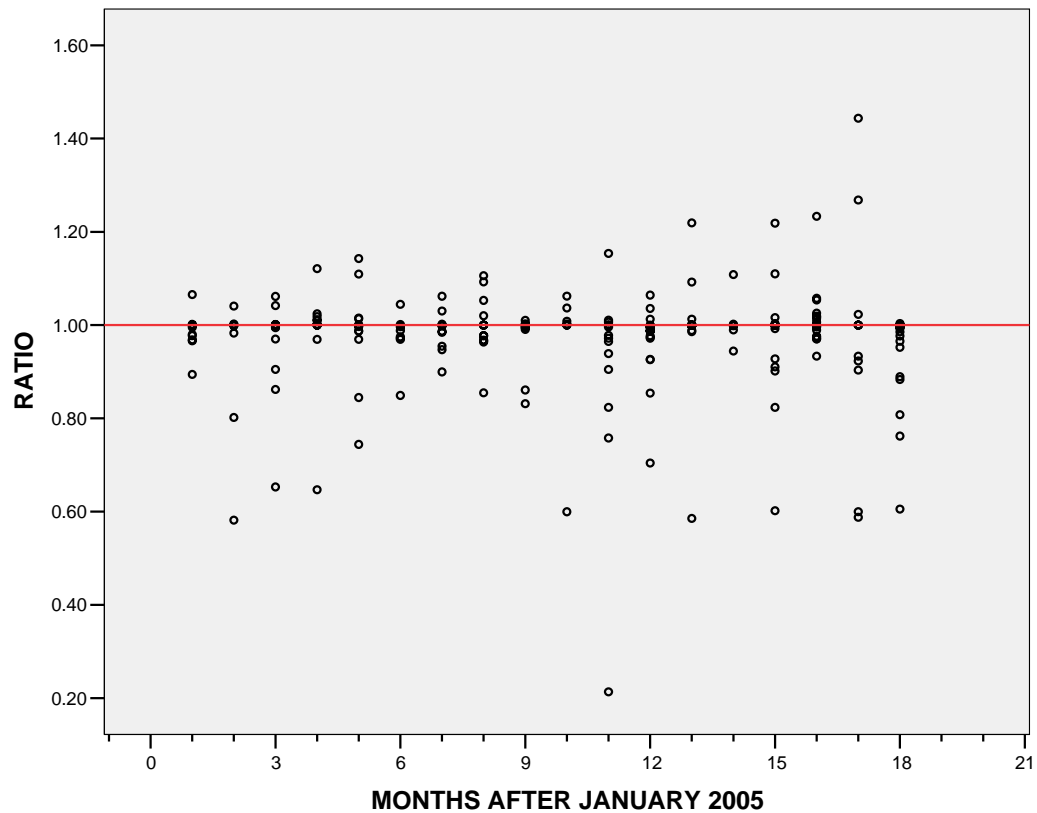


Ratios by Sale Price (>1,000,000)



Commercial Market Trend Analysis

The following graph describes the sales ratios over the 18 month time period. Since the ratios are tightly clustered around 1.0, there is no trend.



Sold/Unsold Analysis

For the 2007 revaluation year audit, an analysis was performed that confirmed the median assessed value per square foot of sold and unsold commercial/industrial properties were 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	223
UNSOLD	.0000	5,541
Total	.0000	5,764

The above median percent change table of sold and unsold commercial/industrial property indicates 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 tax year.

V. VACANT LAND SALE RESULTS

For the vacant land analysis, 223 sales between the dates of January 2005 and June 2006 were coded as vacant. A breakdown of the sales by current property type is listed below.

PROPERTY TYPE

	Frequency	Percent
VACANT LAND	95	42.6
RESIDENTIAL	108	48.4
COMMERCIAL	20	9.0
Total	223	100.0

Vacant sales (95) 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.

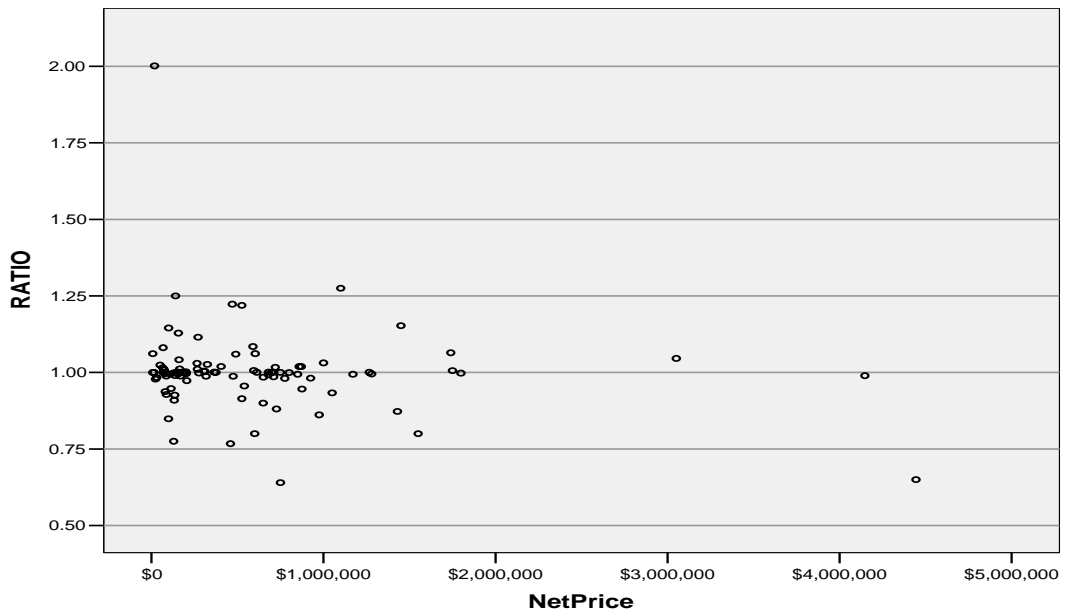
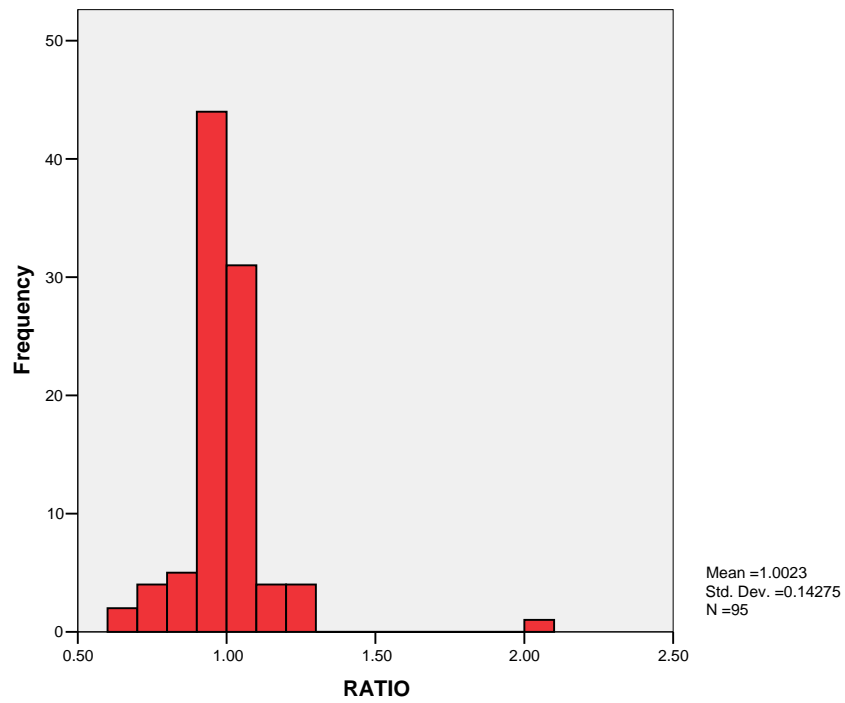
In order to perform a sales ratio analysis all vacant land sales must reflect market conditions as of June 30, 2006. Based on an examination of the sales file, the County did not apply time adjustments to the sales during this time period. The following table outlines the vacant land sales ratio statistics.

Ratio Statistics

Mean	1.002
Median	1.000
Weighted Mean	.967
Price Related Differential	1.036
Coefficient of Dispersion	.067

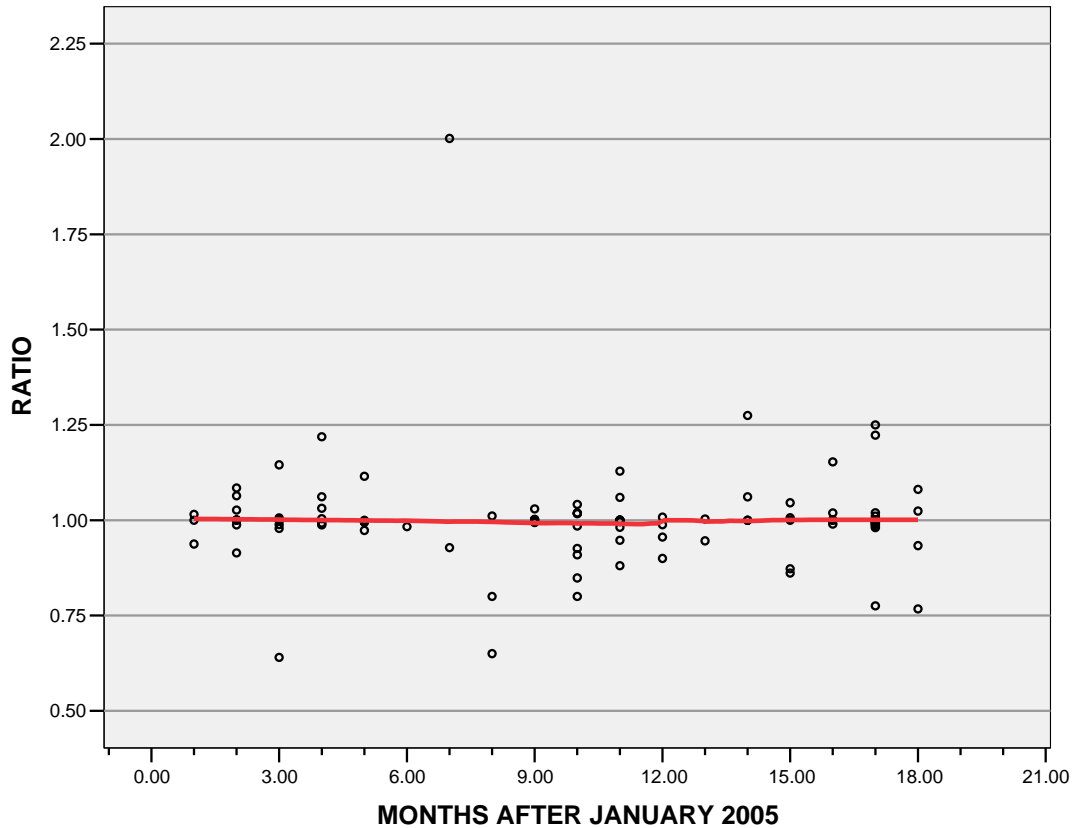
Ratio = Current Asmt / Netprice

The vacant land sales 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 this category:



Vacant Land Market Trend Analysis

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 land 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 for the current year.

2007 - 2008 PERCENT CHANGE

CHANGE		
CATEGORY	Median	N
SOLD	.0000	95
UNSOLD	.0000	11,826
Total	.0000	11,921

The above 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 tax year.

VII. CONCLUSIONS

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