



2016

CHAFFEE COUNTY PROPERTY ASSESSMENT STUDY



WILDROSE
APPRAISAL, INCORPORATED
Audit Division



September 15, 2016

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

RE: Final Report for the 2016 Colorado Property Assessment Study

Dear Mr. Mauer:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2016 Colorado Property Assessment Study.

These reports are the result of two analyses: A procedural audit and a statistical audit.

The procedural audit examines all classes of property. It specifically looks at how the assessor develops economic areas, confirms and qualifies sales, develops time adjustments and performs periodic physical property inspections. The audit reviews the procedures for determining subdivision absorption and subdivision discounting. Valuation methodology is examined for residential properties and commercial properties. Procedures are reviewed 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.

Statistical audits are performed on vacant land, residential properties, commercial/industrial properties and agricultural land. A statistical analysis is performed for personal property compliance on the eleven largest counties: Adams, Arapahoe, Boulder, Denver, Douglas, El Paso, Jefferson, Larimer, Mesa, Pueblo and Weld. The remaining counties receive a personal property procedural study.

Wildrose Appraisal Inc. – Audit Division appreciates the opportunity to be of service to the State of Colorado. Please contact us with any questions or concerns.

A handwritten signature in black ink that reads "Harry J. Fuller". The signature is written in a cursive style.

Harry J. Fuller
Project Manager
Wildrose Appraisal Inc. – Audit Division

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INTRODUCTION



Colorado

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.

The statutory basis for the audit is found in C.R.S. 39-1-104 (16)(a)(b) and (c).

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.

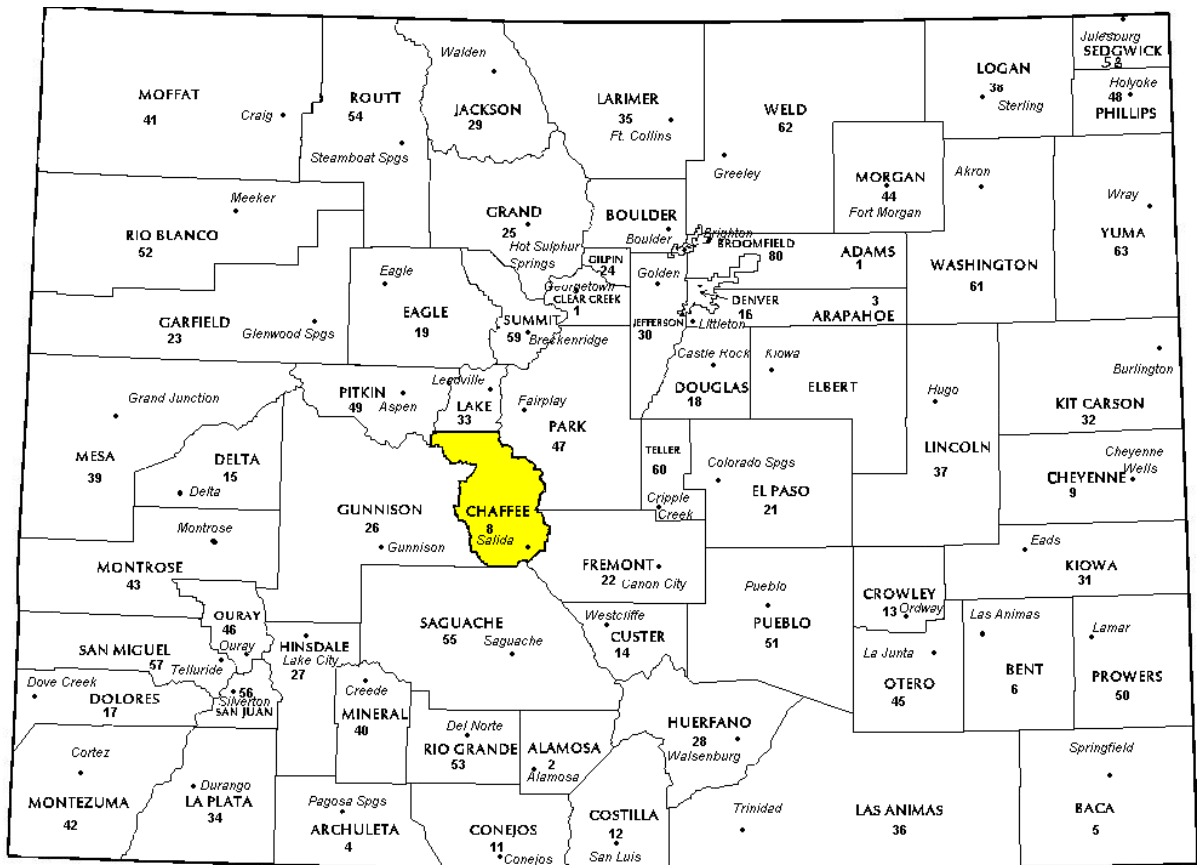
Wildrose Audit has completed the Property Assessment Study for 2016 and is pleased to report its findings for Chaffee County in the following report.

REGIONAL/HISTORICAL SKETCH OF CHAFFEE COUNTY

Regional Information

Chaffee County is located in the Central Mountains region of Colorado. The Central Mountains Region is in the central portion of Colorado. It extends from the northern Gilpin county boundary approximately 210 miles

southeasterly to the southern boundary of Colorado, including Chaffee, Clear Creek, Custer, Fremont, Gilpin, Huerfano, Lake, Las Animas, Park, and Teller counties.



Historical Information

Chaffee County had an estimated population of approximately 18,363 people with 17.6 people per square mile, according to the U.S. Census Bureau's 2014 estimated census data. This represents a 3.1 percent change from April 1, 2010 to July 1, 2014.

Chaffee County is on the eastern slope of the Rocky Mountains in central Colorado. Bordered on the west by the Sawatch Range, including the 14,000 foot Continental Divide, the eastern boundary of the county follows the Mosquito Range, descending toward the south. Located high in the Upper Arkansas Valley, the Arkansas River flows toward the southeast, between the two mountain ranges.

The area is the crossroads for the three highways: U.S. 24, 50 and 285. Driving distance from Denver is approximately 144 miles, 102 miles from Colorado Springs and Pueblo, and 65 miles from Gunnison.

The elevation of the area ranges from just under 7,000 to over 14,000 feet on its highest

peaks, providing some of the most spectacular views to be seen anywhere in the world. In fact, Chaffee County has more mountain peaks of 14,000-foot or more than any other county in Colorado and is often referred to as the "Fourteener" Region.

The history of the County and the surrounding area is a rich mix of many influences. The area was originally settled by the Ute Indians, for whom many of the local mountain peaks are named. Chaffee County was established in 1879 and named for Jerome Chaffee, Colorado's first United States Senator and local investor.

Early in its history the area experienced an influx of explorers, miners, railroad expansionists, farmers and ranchers. The influence of each has dwindled over the years, but their mark in the history of the area is evident throughout the valley.

(salida.com)

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 2013 and June 2014. Counties with less than 30 sales typically extended the sale period back up to 5 years prior to June 30, 2014 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 ensure that only true outliers were excluded. Any county with a significant portion of sales excluded by this trimming method was 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 Chaffee County are:

Chaffee County Ratio Grid					
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis
Commercial/Industrial	79	0.996	1.041	16.3	Compliant
Condominium	N/A	N/A	N/A	N/A	N/A
Single Family	859	1.000	1.015	9.6	Compliant
Vacant Land	237	1.000	1.035	10.8	Compliant

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

Chaffee County was tested for the equal treatment of sold and unsold properties to ensure 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.

We test the hypothesis that the assessor has valued unsold properties consistent with what is observed with the sold properties based on several units of comparison and tests. The units of comparison include the actual value per square foot and the change in value from the previous base year period to the current base year. The first test compares the actual value per square foot between sold and unsold properties by class. The median and mean value per square foot is compared and tested for any significant difference. This is tested using non-parametric methods, such as the Mann-Whitney test for differences in the distributions or medians between sold and unsold groups. It is also examined graphically and from an appraisal perspective. Data can be stratified based on location and subclass. The second test compares the difference in the median change in value from the previous base year to the current base year between sold and unsold properties by class. The same combination of non-parametric and appraisal testing is used as with the first test. A third test employing a valuation model testing a sold/unsold binary variable while controlling for property attributes such as location, size, age and other attributes. The model determines if the sold/unsold variable is statistically and empirically significant. If all three tests indicate a significant difference between sold and unsold properties for a given class, the Auditor may meet with the county to determine if sale chasing is actually occurring,

or if there are other explanations for the observed difference.

If the unsold properties have a higher median value per square foot than the sold properties, or if the median change in value is greater for the unsold properties than the sold properties, the analysis is stopped and the county is concluded to be in compliance with sold and unsold guidelines. All sold and unsold properties in a given class are first tested, although properties with extreme unit values or percent changes can be trimmed to stabilize the analysis. The median is the primary comparison metric, although the mean can also be used as a comparison metric if the distribution supports that type of measure of central tendency.

The first test (unit value method) is applied to both residential and commercial/industrial sold and unsold properties. The second test is applied to sold and unsold vacant land properties. The second test (change in value method) is also applied to residential or commercial sold and unsold properties if the first test results in a significant difference observed and/or tested between sold and unsold properties. The third test (valuation modeling) is used in instances where the results from the first two tests indicate a significant difference between sold and unsold properties. It can also be used when the number of sold and unsold properties is so large that the non-parametric testing is indicating a false rejection of the hypothesis that there is no difference between the sold and unsold property values.

These tests were supported by both tabular and graphics presentations, along with written documentation explaining the methodology used.

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

Conclusions

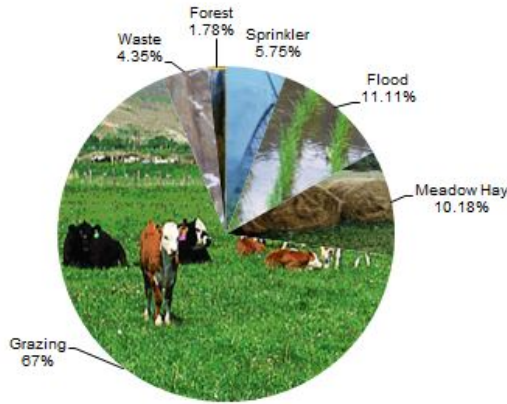
After applying the above described methodologies, it is concluded that Chaffee County is reasonably treating its sold and unsold properties in the same manner.

Recommendations

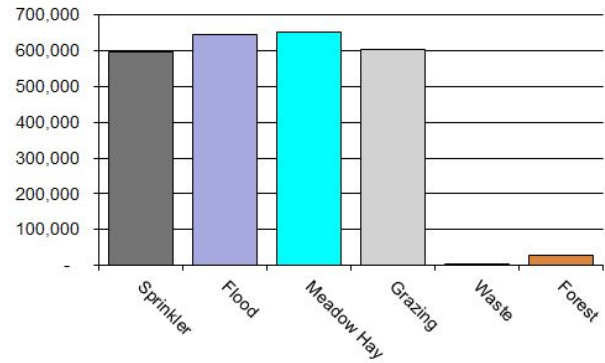
None

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:

Chaffee County Agricultural Land Ratio Grid						
Abstract Code	Land Class	Number Of Acres	County Value Per Acre	County Assessed Total Value	WRA Total Value	Ratio
4107	Sprinkler	3,675	162.02	595,416	595,832	1.00
4117	Flood	7,097	89.97	638,486	646,306	0.99
4137	Meadow Hay	6,499	100.25	651,527	651,527	1.00
4147	Grazing	42,669	14.13	603,016	603,016	1.00
4177	Forest	979	1.99	24,473	24,473	1.00
4167	Waste	3,347	1.99	6,649	6,649	1.00
Total/Avg		64,266	39.21	2,519,567	2,527,803	1.00

Recommendations

None

Agricultural Outbuildings

Methodology

Data was collected and reviewed to determine if the guidelines found in the Assessor's Reference Library (ARL) Volume 3, pages 5.74 through 5.77 were being followed.

Property Taxation for the valuation of agricultural outbuildings.

Recommendations

None

Conclusions

Chaffee County has substantially complied with the procedures provided by the Division of

Agricultural Land Under Improvements

Methodology

Data was collected and reviewed to determine if the guidelines found in the Assessor's Reference Library (ARL) Volume 3, pages 5.19 and 5.20 were being followed.

Conclusions

Chaffee County has used the following methods to discover land under a residential improvement on a farm or ranch that is determined to be not integral under 39-1-102, C.R.S.:

- Questionnaires
- Field Inspections
- Phone Interviews
- In-Person Interviews with Owners/Tenants
- Written Correspondence other than Questionnaire
- Personal Knowledge of Occupants at Assessment Date
- Aerial Photography/Pictometry

Chaffee County has used the following methods to discover the land area under a residential

improvement that is determined to be not integral under 39-1-102, C.R.S.:

- Questionnaires
- Field Inspections
- Phone Interviews
- In-Person Interviews with Owners/Tenants
- Written Correspondence other than Questionnaire
- Personal Knowledge of Occupants at Assessment Date
- Aerial Photography/Pictometry
- Building Dept - new permitted residences

Chaffee County has substantially complied with the procedures provided by the Division of Property Taxation for the valuation of land under residential improvements that may or may not be integral to an agricultural operation.

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. WRA has used the above-cited statutes as a guide in our study of the county's procedures and practices for verifying sales.

WRA reviewed the sales verification procedures in 2016 for Chaffee County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 41 sales listed as unqualified.

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

For residential, commercial, and vacant land sales with considerations over \$500, the contractor has examined and reported the ratio of qualified sales to total sales by class and performed the following analyses of unqualified sales:

The contractor has examined the manner in which sales have been classified as qualified or unqualified, including a listing of each step in the sales verification process, any adjustment procedures, and the county official responsible for making the final decision on qualification.

The contractor has reviewed with the assessor any analysis indicating that sales data are inadequate, fail to reflect typical properties, or have been disqualified for insufficient cause. In addition, the contractor has reviewed the disqualified sales by assigned code. If there appears to be any inconsistency in the coding, the contractor has



conducted further analysis to determine if the sales included in that code have been assigned appropriately.

Conclusions

Chaffee County appears to be doing a good job of verifying their sales. WRA 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

Chaffee County has submitted a written narrative describing the economic areas that make up the county's market areas. Chaffee 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 Chaffee 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 applied to determine value for production of earth and stone products. The number of tons was multiplied by an economic royalty rate determined by the Division of Property Taxation to determine income. The income was multiplied by a recommended Hoskold factor to determine the actual value. The Hoskold factor is determined by the life of the reserves or the lease. Value is 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

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

Recommendations

None

VACANT LAND

Subdivision Discounting

Subdivisions were reviewed in 2016 in Chaffee 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

Chaffee 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

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 Chapter 39-1-103 (17)(a) (II) C.R.S. Possessory Interest is defined by the Property Tax Administrator's Publication ARL Volume 3, Chapter 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.

Chaffee County has been reviewed for their procedures and adherence to guidelines when assessing and valuing agricultural, commercial

and ski area 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

Chaffee 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

Chaffee 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 requires that counties use ARL Volume 5, including current discovery, classification, documentation procedures, 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, WRA 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.

Chaffee 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
- MLS Listing and/or Sold Books
- Local Telephone Directories, Newspapers or Other Local Publications
- Personal Observation, Physical Canvassing or Word of Mouth
- Questionnaires, Letters and/or Phone Calls to Buyer, Seller and/or Realtor
- Social Media Postings
- On-line Advertisements

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.

Chaffee County submitted their personal property written audit plan and was current for the 2016 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
- New businesses filing for the first time
- Incomplete or inconsistent declarations
- Accounts with omitted property
- Non-filing Accounts - Best Information Available



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- Accounts close to the \$7,300 actual value exemption status
- Accounts protested with substantial disagreement
- At request of Business owner

Conclusions

Chaffee 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

WILDROSE AUDITOR STAFF

Harry J. Fuller, *Audit Project Manager*

Suzanne Howard, *Audit Administrative Manager*

Steve Kane, *Audit Statistician*

Carl W. Ross, *Agricultural / Natural Resource Analyst*

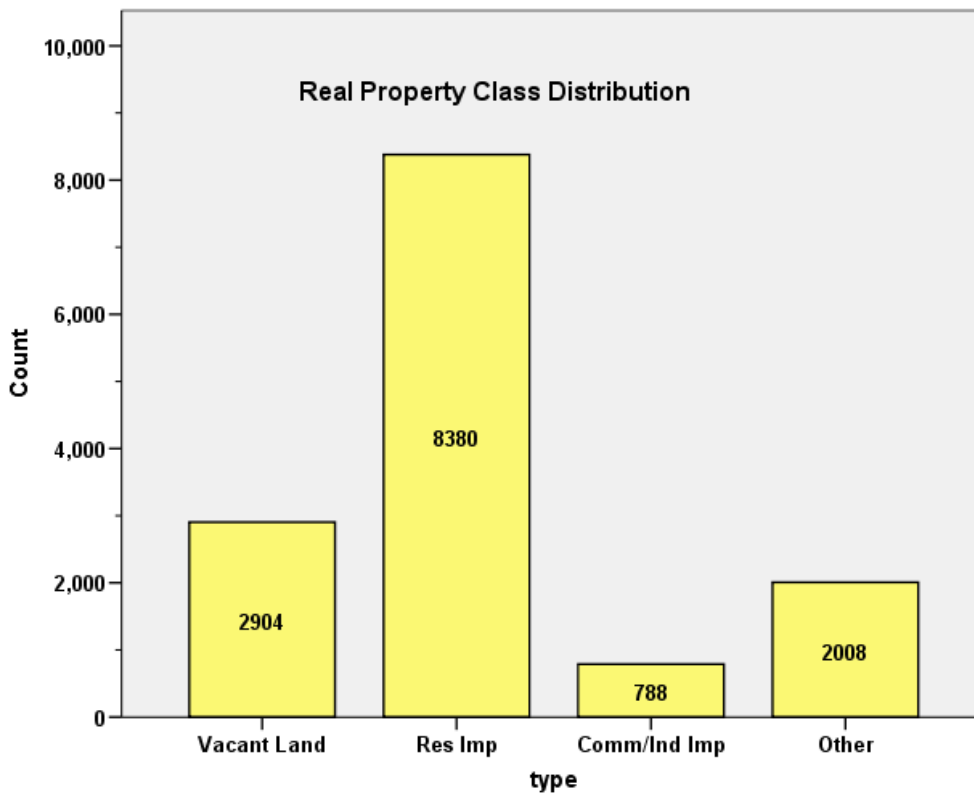
J. Andrew Rodriguez, *Field Analyst*

APPENDICES

STATISTICAL COMPLIANCE REPORT
FOR CHAFFEE COUNTY
2016

I. OVERVIEW

Chaffee County is located in central Colorado. The county has a total of 14,080 real property parcels, according to data submitted by the county assessor’s office in 2016. The following provides a breakdown of property classes for this county:



The vacant land class of properties was dominated by residential and PUD land. Residential lots (coded 100) accounted for 74.2% of all vacant land parcels.

For residential improved properties, single family properties accounted for 92.8% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial sales accounted for 5.6% of all such properties in this county.

II. DATA FILES

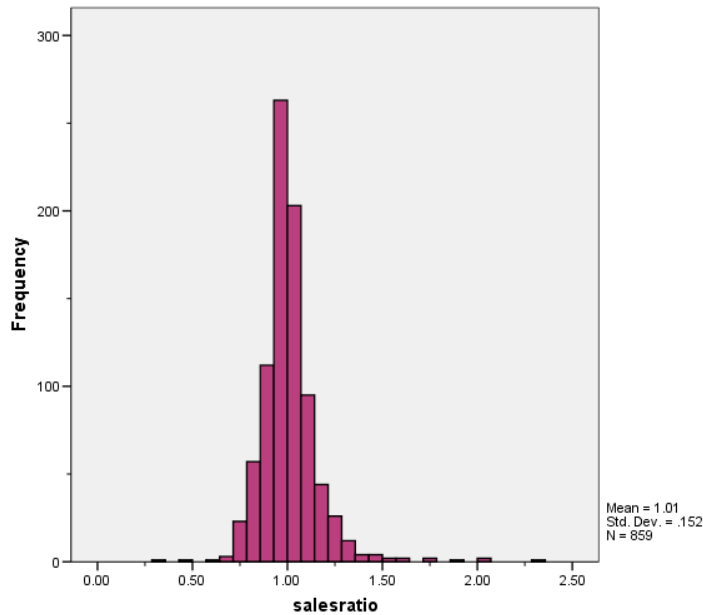
The following sales analyses were based on the requirements of the 2016 Colorado Property Assessment Study. Information was provided by the Chaffee Assessor’s Office in May 2016. The data included all 5 property record files as specified by the Auditor.

III. RESIDENTIAL SALES RESULTS

There were 860 qualified residential sales in the 36-month period prior to June 30, 2014; we excluded one sale based on its extreme sale ratio outlier value. The sales ratio analysis was analyzed as follows:

Median	1.000
Price Related Differential	1.015
Coefficient of Dispersion	9.6

The above ratio statistics were in compliance with the standards set forth by the Colorado State Board of Equalization (SBOE) for the overall residential sales. The following graphs describe further the sales ratio distribution for these properties:





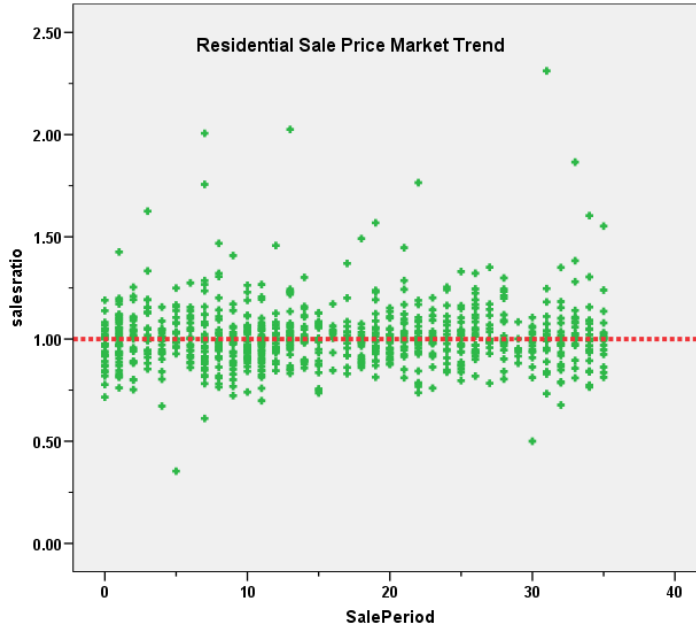
The above graphs indicate that the distribution of the sale ratios was within state mandated limits.

Residential Market Trend Analysis

We next analyzed the residential dataset using the 36-month sale period for any residual market trending, with the following results:

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.998	.010		104.408	.000
	SalePeriod	.001	.001	.048	1.399	.162

a. Dependent Variable: salesratio



The above analysis indicated that the assessor has adequately addressed market trending in the valuation of residential properties.

Sold/Unsold Analysis

In terms of the valuation consistency between sold and unsold residential properties, we compared the median actual value per square foot for 2016 between each group, as follows:

Report

VALSF			
sale	N	Median	Mean
UNSOLD	7,357	\$134.45	\$144.75
SOLD	857	\$137.92	\$142.72

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of VALSF is the same across categories of sold.	Independent-Samples Mann-Whitney U Test	.468	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

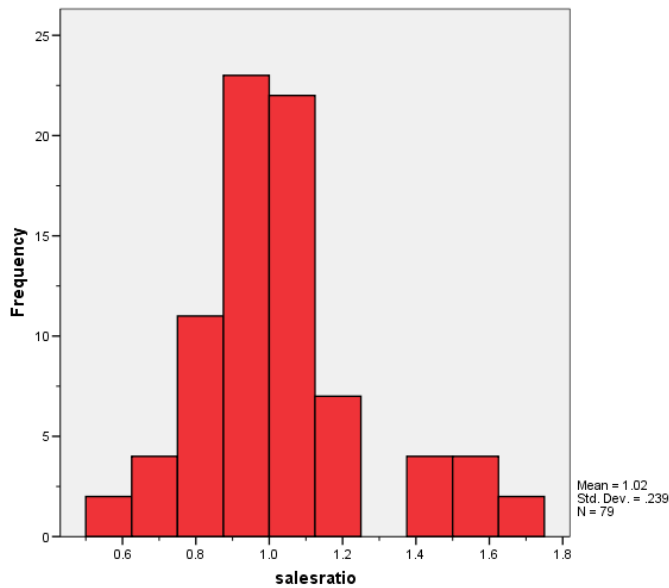
The above results indicate that sold and unsold residential properties were valued in a consistent manner.

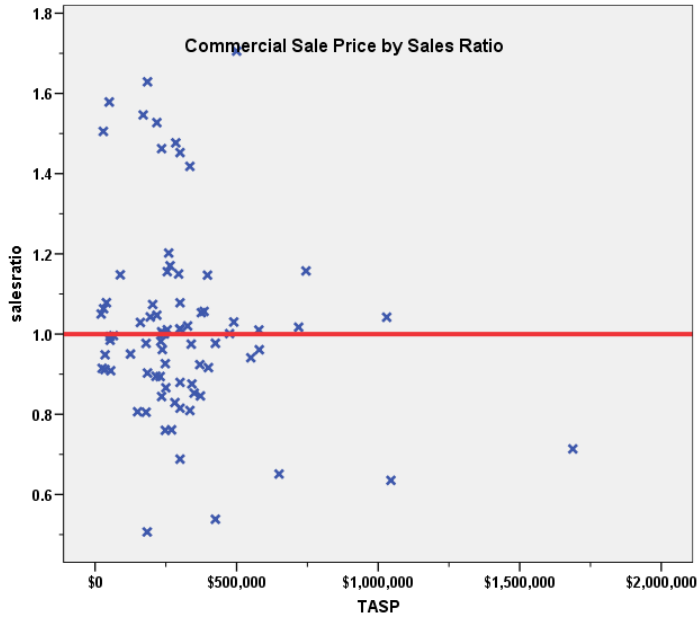
IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

There were 79 qualified commercial sales in the 60-month period prior to June 30, 2014. The sales ratio analysis was analyzed as follows:

Median	0.996
Price Related Differential	1.041
Coefficient of Dispersion	16.3

The above tables indicate that the Chaffee County commercial/industrial sale ratios were in compliance with the SBOE standards. The following histogram and scatter plot describe the sales ratio distribution further:



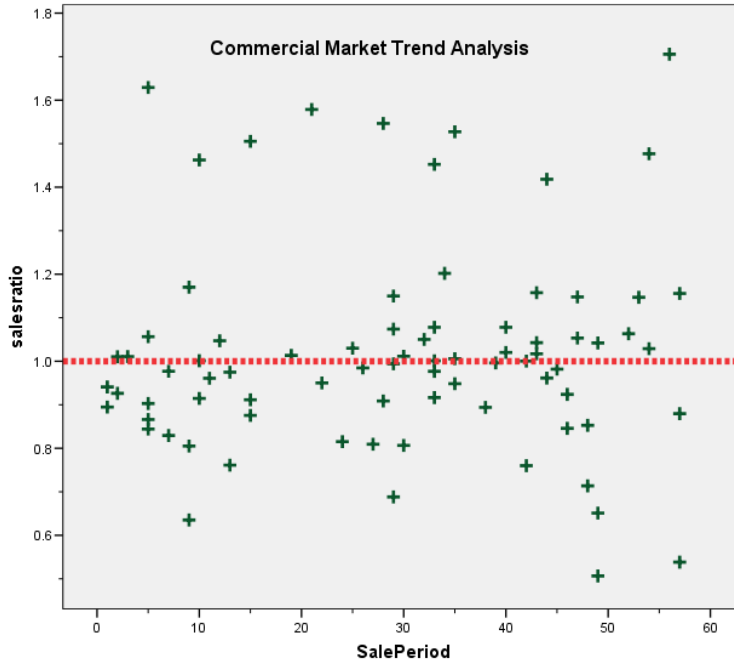


Commercial Market Trend Analysis

The 79 commercial/industrial sales were next analyzed, examining the sales ratios across the 60-month sale period with the following results:

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	1.005	.054	18.650	.000
	SalePeriod	.000	.002	.035	.761

a. Dependent Variable: salesratio



The market trend results indicated no statistically significant trend, indicating that the assessor has adequately addressed the issue of market trending for commercial/industrial properties in Chaffee County.

Sold/Unsold Analysis

We compared the median actual value per square foot for sold and unsold commercial properties to determine if the assessor was valuing each group consistently, as follows:

Report

VALSF			
Category	N	Median	Mean
UNSOLD	697	\$86.58	\$100.28
SOLD	79	\$86.60	\$104.04

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of VALSF is the same across categories of sold.	Independent-Samples Mann-Whitney U Test	.453	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

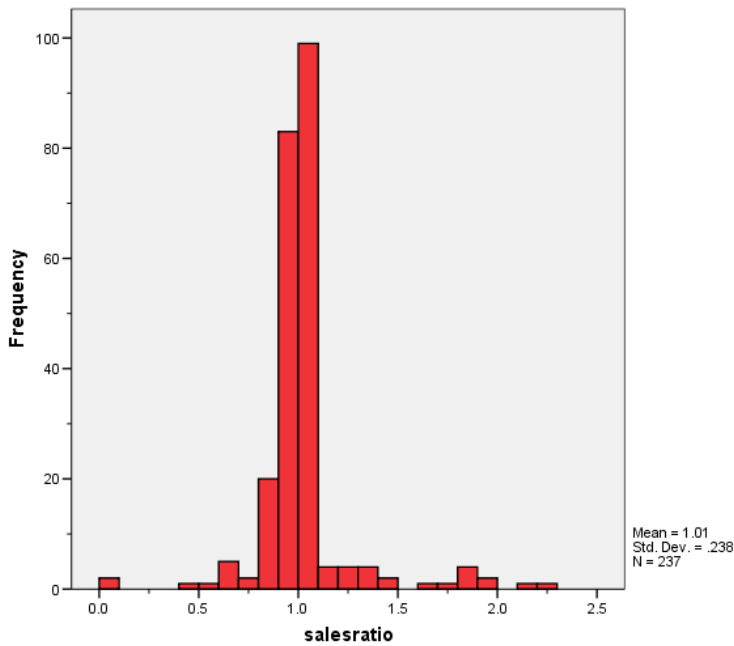
Based on these results, we concluded that the assessor was valuing sold and unsold commercial properties consistently in Chaffee County.

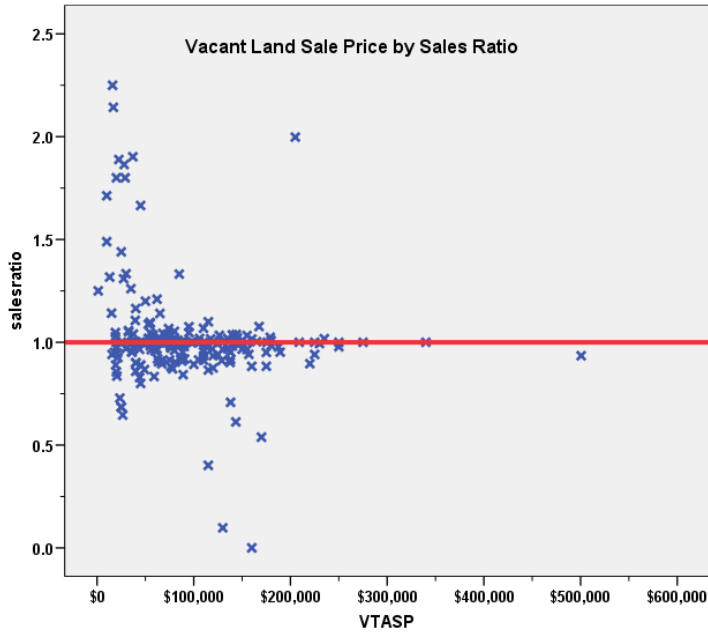
V. VACANT LAND SALE RESULTS

There were 237 qualified vacant land sales in the 24-month period prior to June 30, 2014. The sales ratio analysis was analyzed as follows:

Median	1.000
Price Related Differential	1.035
Coefficient of Dispersion	10.8

The above tables indicate that the Chaffee County vacant land sale ratios were in compliance with the SBOE standards. The following histogram and scatter plot describe the sales ratio distribution further:



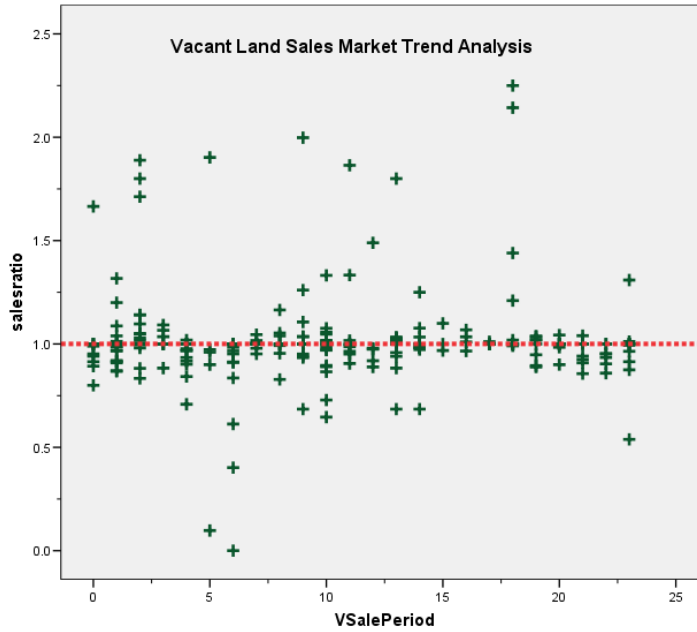


Vacant Land Market Trend Analysis

The 237 vacant land sales were next analyzed, examining the sales ratios across the 24-month sale period with the following results:

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.011	.027		37.825	.000
	VSalePeriod	.000	.002	.010	.151	.880

a. Dependent Variable: salesratio



Based on the above results, we concluded that the assessor has adequately addressed market trending in the vacant land valuation.

Sold/Unsold Analysis

We compared the median change in actual value between 2014 and 2016 for vacant land properties to determine if sold and unsold properties were valued consistently, as follows:

Report

DIFF			
diff	N	Median	Mean
UNSOLD	2,576	1.0000	1.0151
SOLD	225	.9929	1.0176

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of DIFF is the same across categories of sold.	Independent-Samples Mann-Whitney U Test	.920	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

The above results indicated that sold and unsold vacant land properties were valued consistently overall.

V. AGRICULTURAL IMPROVEMENTS ANALYSIS

The final statistical verification concerned the assigned actual values for agricultural residential improvements. We compared the actual value per square foot rate for this group and compared it to rates assigned to residential single family improvements in Chaffee County.

The following indicates that agricultural residential improvements were valued in a manner similar to the single family residential improvements in this county:

Report

IMPVALSF			
ABSTRIMP	N	Median	Mean
1212	7523	\$91.87	\$98.00
4277	42	\$99.11	\$101.99

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of IMPVALSF is the same across categories of ABSTRIMP.	Independent-Samples Mann-Whitney U Test	.303	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

VI. CONCLUSIONS

Based on this statistical analysis, there were no significant compliance issues concluded for Chaffee County as of the date of this report.

STATISTICAL ABSTRACT

Residential

Mean	95% Confidence Interval for Mean		Median	95% Confidence Interval for Median			Weighted Mean	95% Confidence Interval for Weighted Mean		Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Mean Centered
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			
1.009	.999	1.020	1.000	.995	1.000	95.2%	.994	.986	1.003	1.015	.096	15.0%

The confidence interval for the median is constructed without any distribution assumptions. The actual coverage level may be greater than the specified level. Other confidence intervals are constructed by assuming a Normal distribution for the ratios.

Commercial/Industrial

Mean	95% Confidence Interval for Mean		Median	95% Confidence Interval for Median			Weighted Mean	95% Confidence Interval for Weighted Mean		Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Mean Centered
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			
1.019	.965	1.072	.996	.950	1.017	95.8%	.978	.907	1.049	1.041	.163	23.5%

The confidence interval for the median is constructed without any distribution assumptions. The actual coverage level may be greater than the specified level. Other confidence intervals are constructed by assuming a Normal distribution for the ratios.

Vacant Land

Mean	95% Confidence Interval for Mean		Median	95% Confidence Interval for Median			Weighted Mean	95% Confidence Interval for Weighted Mean		Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Mean Centered
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			
1.015	.984	1.045	1.000	1.000	1.000	96.3%	.981	.950	1.012	1.035	.108	23.4%

The confidence interval for the median is constructed without any distribution assumptions. The actual coverage level may be greater than the specified level. Other confidence intervals are constructed by assuming a Normal distribution for the ratios.

Residential Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	\$25K to \$50K	4	0.5%
	\$50K to \$100K	12	1.4%
	\$100K to \$150K	69	8.0%
	\$150K to \$200K	184	21.4%
	\$200K to \$300K	337	39.2%
	\$300K to \$500K	209	24.3%
	\$500K to \$750K	42	4.9%
	\$750K to \$1,000K	2	0.2%
Overall		859	100.0%
Excluded		0	
Total		859	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
\$25K to \$50K	1.197	.916	.467	65.0%
\$50K to \$100K	1.030	.985	.258	37.6%
\$100K to \$150K	1.044	1.007	.181	26.9%
\$150K to \$200K	1.021	1.000	.089	11.9%
\$200K to \$300K	.998	1.002	.082	11.4%
\$300K to \$500K	.973	1.000	.076	10.2%
\$500K to \$750K	.996	1.002	.064	10.3%
\$750K to \$1,000K	.884	1.001	.010	1.4%
Overall	1.000	1.015	.096	15.2%

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	0	1	0.1%
	1174	1	0.1%
	1212	794	92.4%
	1214	1	0.1%
	1215	5	0.6%
	1220	1	0.1%
	1230	54	6.3%
	1894	1	0.1%
	2212	1	0.1%
Overall		859	100.0%
Excluded		0	
Total		859	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.353	1.000	.000	.
1174	1.069	1.000	.000	.
1212	1.000	1.017	.096	15.2%
1214	.983	1.000	.000	.
1215	.918	1.006	.117	18.6%
1220	.961	1.000	.000	.
1230	.998	1.001	.073	12.5%
1894	1.172	1.000	.000	.
2212	1.024	1.000	.000	.
Overall	1.000	1.015	.096	15.2%

Age

Case Processing Summary

		Count	Percent
AgeRec	.00	1	0.1%
	Over 100	46	5.4%
	75 to 100	42	4.9%
	50 to 75	128	14.9%
	25 to 50	199	23.2%
	5 to 25	413	48.1%
	5 or Newer	30	3.5%
Overall		859	100.0%
Excluded		0	
Total		859	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.00	.353	1.000	.000	.
Over 100	1.043	1.030	.137	20.3%
75 to 100	.984	1.028	.144	20.6%
50 to 75	1.000	1.021	.112	16.3%
25 to 50	1.000	1.015	.103	15.6%
5 to 25	1.000	1.012	.076	13.0%
5 or Newer	.982	.983	.080	12.6%
Overall	1.000	1.015	.096	15.2%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	.00	1	0.1%
	LE 500 sf	8	0.9%
	500 to 1,000 sf	77	9.0%
	1,000 to 1,500 sf	211	24.6%
	1,500 to 2,000 sf	222	25.8%
	2,000 to 3,000 sf	205	23.9%
	3,000 sf or Higher	135	15.7%
Overall		859	100.0%
Excluded		0	
Total		859	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.00	.353	1.000	.000	.
LE 500 sf	.919	.980	.282	39.9%
500 to 1,000 sf	1.000	1.015	.104	16.6%
1,000 to 1,500 sf	.999	1.022	.112	19.2%
1,500 to 2,000 sf	1.000	1.014	.089	13.0%
2,000 to 3,000 sf	1.000	1.017	.089	13.1%
3,000 sf or Higher	.996	1.009	.072	10.4%
Overall	1.000	1.015	.096	15.2%

Improvement Quality

Case Processing Summary

	Count	Percent
QUALITY	1	0.1%
Average	255	29.7%
Average Plus	104	12.1%
Fair	206	24.0%
Fair Plus	210	24.4%
Good	34	4.0%
Good Plus	3	0.3%
Low	9	1.0%
Low Plus	37	4.3%
Overall	859	100.0%
Excluded	0	
Total	859	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
	.353	1.000	.000	.
Average	1.000	1.010	.077	11.5%
Average Plus	1.000	1.013	.080	14.3%
Fair	1.000	1.021	.121	19.7%
Fair Plus	1.000	1.014	.092	12.9%
Good	.996	1.002	.059	9.0%
Good Plus	1.032	1.005	.077	11.6%
Low	.986	1.005	.274	39.2%
Low Plus	1.002	1.018	.122	17.0%
Overall	1.000	1.015	.096	15.2%

Improvement Condition

Case Processing Summary

	Count	Percent
CONDITION	1	0.1%
Average	386	44.9%
Badly Worn	9	1.0%
Good	463	53.9%
Overall	859	100.0%
Excluded	0	
Total	859	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
	.353	1.000	.000	.
Average	1.000	1.020	.114	17.7%
Badly Worn	.999	1.043	.195	27.2%
Good	1.000	1.009	.077	12.1%
Overall	1.000	1.015	.096	15.2%

Commercial Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT \$25K	2	2.5%
	\$25K to \$50K	6	7.6%
	\$50K to \$100K	5	6.3%
	\$100K to \$150K	2	2.5%
	\$150K to \$200K	8	10.1%
	\$200K to \$300K	30	38.0%
	\$300K to \$500K	17	21.5%
	\$500K to \$750K	6	7.6%
	Over \$1,000K	3	3.8%
Overall	79	100.0%	
Excluded	0		
Total	79		

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT \$25K	.982	1.006	.069	9.7%
\$25K to \$50K	1.071	.985	.193	29.2%
\$50K to \$100K	.994	.985	.050	8.9%
\$100K to \$150K	.878	1.007	.082	11.6%
\$150K to \$200K	1.003	1.003	.256	37.4%
\$200K to \$300K	1.004	1.001	.157	22.0%
\$300K to \$500K	.977	.990	.162	26.1%
\$500K to \$750K	.986	.994	.107	17.3%
Over \$1,000K	.714	1.019	.190	33.5%
Overall	.996	1.041	.163	24.1%

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	1212	1	1.3%
	1701	1	1.3%
	1712	1	1.3%
	1714	1	1.3%
	2212	20	25.3%
	2215	1	1.3%
	2215	1	1.3%
	2216	3	3.8%
	2220	7	8.9%
	2221	1	1.3%
	2224	1	1.3%
	2225	3	3.8%
	2228	1	1.3%
	2230	11	13.9%
	2235	7	8.9%
	2245	14	17.7%
	3212	3	3.8%
	3215	2	2.5%
Overall		79	100.0%
Excluded		0	
Total		79	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212	.950	1.000	.000	.
1701	1.156	1.000	.000	.
1712	1.477	1.000	.000	.
1714	1.042	1.000	.000	.
2212	.994	1.016	.166	24.3%
2215	.961	1.000	.000	.
2215	.714	1.000	.000	.
2216	1.010	.989	.057	9.6%
2220	1.017	1.057	.207	33.7%
2221	.651	1.000	.000	.
2224	.941	1.000	.000	.
2225	.866	.991	.075	12.0%
2228	1.011	1.000	.000	.
2230	.924	1.001	.133	19.0%
2235	.961	1.073	.133	24.2%
2245	1.001	1.016	.173	26.6%
3212	1.418	1.006	.128	21.7%
3215	.984	1.003	.091	12.9%
Overall	.996	1.041	.163	24.1%

Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	7	8.9%
	75 to 100	1	1.3%
	50 to 75	22	27.8%
	25 to 50	23	29.1%
	5 to 25	26	32.9%
Overall		79	100.0%
Excluded		0	
Total		79	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	1.078	.982	.171	23.8%
75 to 100	1.001	1.000	.000	.
50 to 75	.976	1.001	.147	22.2%
25 to 50	.961	1.012	.140	19.1%
5 to 25	1.001	1.111	.190	29.9%
Overall	.996	1.041	.163	24.1%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	2	2.5%
	500 to 1,000 sf	9	11.4%
	1,000 to 1,500 sf	9	11.4%
	1,500 to 2,000 sf	10	12.7%
	2,000 to 3,000 sf	15	19.0%
	3,000 sf or Higher	34	43.0%
Overall		79	100.0%
Excluded		0	
Total		79	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	.892	.991	.096	13.5%
500 to 1,000 sf	.985	1.042	.062	8.1%
1,000 to 1,500 sf	1.043	1.095	.181	28.2%
1,500 to 2,000 sf	1.009	1.043	.148	21.4%
2,000 to 3,000 sf	.975	1.028	.164	27.9%
3,000 sf or Higher	1.006	1.054	.186	26.3%
Overall	.996	1.041	.163	24.1%

Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY	Average	49	62.0%
	Average Plus	1	1.3%
	Fair	12	15.2%
	Fair Plus	4	5.1%
	Good	7	8.9%
	Low	4	5.1%
	Low Plus	2	2.5%
Overall		79	100.0%
Excluded		0	
Total		79	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	.994	1.049	.160	25.0%
Average Plus	1.017	1.000	.000	.
Fair	1.013	.983	.163	23.2%
Fair Plus	.944	.958	.322	42.7%
Good	1.078	1.113	.155	21.6%
Low	.903	1.001	.079	11.1%
Low Plus	.962	.975	.071	10.0%
Overall	.996	1.041	.163	24.1%

Improvement Condition

Case Processing Summary

		Count	Percent
CONDITION	Average	43	54.4%
	Badly Worn	5	6.3%
	Comm Fair	1	1.3%
	Good	29	36.7%
	Worn Out	1	1.3%
Overall		79	100.0%
Excluded		0	
Total		79	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	.994	1.020	.143	22.0%
Badly Worn	1.074	.991	.141	24.6%
Comm Fair	1.202	1.000	.000	.
Good	.977	1.071	.190	28.2%
Worn Out	1.156	1.000	.000	.
Overall	.996	1.041	.163	24.1%

Vacant Land Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT \$25K	26	11.0%
	\$25K to \$50K	38	16.0%
	\$50K to \$100K	99	41.8%
	\$100K to \$150K	44	18.6%
	\$150K to \$200K	18	7.6%
	\$200K to \$300K	10	4.2%
	\$300K to \$500K	1	0.4%
	\$500K to \$750K	1	0.4%
Overall		237	100.0%
Excluded		0	
Total		237	

Ratio Statistics for CURRLND / VTASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT \$25K	1.000	1.043	.323	48.5%
\$25K to \$50K	1.000	1.012	.168	29.8%
\$50K to \$100K	1.000	1.002	.037	6.5%
\$100K to \$150K	.989	1.000	.085	18.7%
\$150K to \$200K	.981	.997	.116	27.0%
\$200K to \$300K	1.000	1.010	.121	33.5%
\$300K to \$500K	1.000	1.000	.000	.
\$500K to \$750K	.934	1.000	.000	.
Overall	1.000	1.035	.108	23.8%

Subclass

Case Processing Summary

		Count	Percent
ABSTRLND	100.00	98	41.4%
	200.00	3	1.3%
	300.00	1	0.4%
	400.00	6	2.5%
	510.00	6	2.5%
	520.00	3	1.3%
	530.00	1	0.4%
	550.00	2	0.8%
	1112.00	95	40.1%
	1115.00	2	0.8%
	1135.00	12	5.1%
	2112.00	1	0.4%
	2135.00	2	0.8%
	2629.50	1	0.4%
	3112.00	1	0.4%
	4142.00	1	0.4%
	4147.00	1	0.4%
9119.00	1	0.4%	
Overall		237	100.0%
Excluded		0	
Total		237	

Ratio Statistics for CURRLND / VTASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
100.00	1.000	1.017	.071	15.3%
200.00	.999	.997	.029	6.1%
300.00	1.000	1.000	.000	.
400.00	.977	1.238	.361	56.9%
510.00	1.088	1.121	.149	19.8%
520.00	1.000	1.005	.027	5.7%
530.00	.951	1.000	.000	.
550.00	.972	.999	.005	0.8%
1112.00	1.000	1.031	.106	26.3%
1115.00	.896	1.004	.024	3.4%
1135.00	.905	1.027	.187	23.0%
2112.00	.934	1.000	.000	.
2135.00	.998	1.001	.002	0.4%
2629.50	.402	1.000	.000	.
3112.00	1.007	1.000	.000	.
4142.00	.097	1.000	.000	.
4147.00	.000	1.000	.000	.
9119.00	.942	1.000	.000	.
Overall	1.000	1.035	.108	23.8%