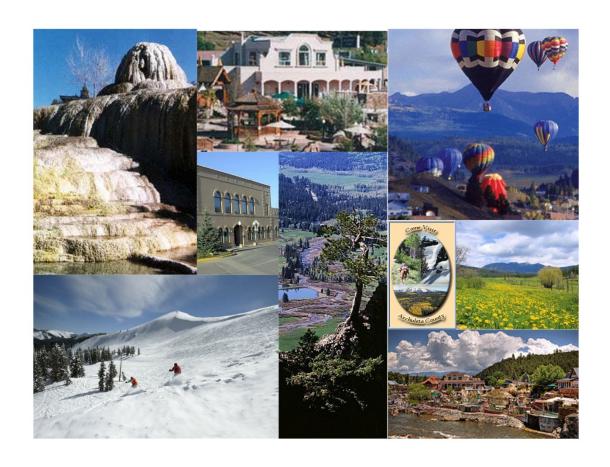


ARCHULETA COUNTY PROPERTY ASSESSMENT STUDY







September 15, 2015

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

RE: Final Report for the 2015 Colorado Property Assessment Study

Dear Mr. Mauer:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2015 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.

Harry J. Fuller Project Manager

Harry J. Zulln

Wildrose Appraisal Inc. - Audit Division



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INTRODUCTION



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 twopart 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 subdivision and discounting procedures. Valuation methodology for vacant land, improved properties commercial residential and 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.

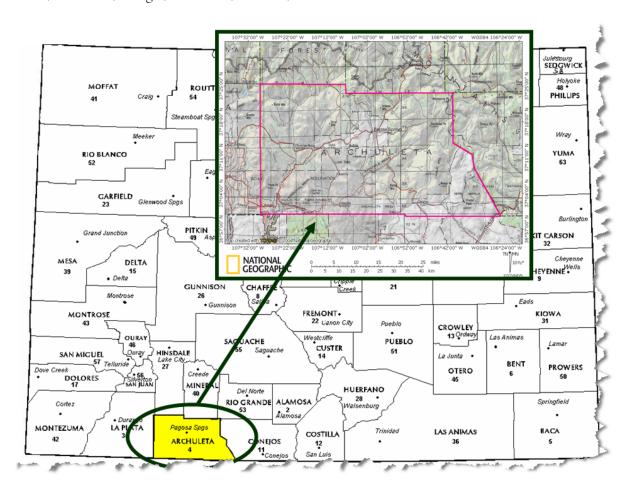
Wildrose Audit has completed the Property Assessment Study for 2015 and is pleased to report its findings for Archuleta County in the following report.



REGIONAL/HISTORICAL SKETCH OF ARCHULETA COUNTY

Regional Information

Archuleta County is located in the Western Slope region of Colorado. The Western Slope of Colorado refers to the region west of the Rocky Mountains. It includes Archuleta, Delta, Dolores, Eagle, Garfield, Grand, Gunnison, Hinsdale, Jackson, La Plata, Mesa, Moffat, Montezuma, Montrose, Ouray, Pitkin, Rio Blanco, Routt, San Juan, San Miguel, and Summit counties.





Historical Information

Archuleta County has a population of approximately 12,084 people with 8.95 people per square mile, according to the U.S. Census Bureau's 2010 census data. This represents a 22.09 percent change from the 2000 Census.

The portion of Colorado that is now Archuleta County was originally occupied by the Anasazi, then by the Ute, Navajo and Apache. This area was first claimed for Spain by the early Spanish explorers. After the Mexican revolution it was in the Territory of Northern Mexico. Upon conclusion of the war with Mexico in 1848, it became a possession of the United States and was part of the Utah Territory. While a part of the Utah Territory this area was included in Iron County and later a portion was part of Washington County. Congress recognized the Colorado Territory in 1861 and at that time it became part of Conejos County, Colorado. Archuleta County was formed April 14,1885. It was named in honor of State Senator Antonio D. Archuleta.

The Escalante Trail and later the Spanish Trail traversed this area and was a trade route between Santa Fe and California. The Spanish Trail was traveled by many now famous persons such as Pratt, Wolfskill and Carson.

Other than Native Americans, the earliest inhabitants of the area were miners, fur trappers and traders seeking their fortunes. The military made several expeditions into and through the area. One expedition was led by Lt. Col. E. H. Bergman to locate a suitable spot to construct Fort Plummer. Prior to the fort's construction, however, Col. William Henry Lewis, a graduate of the U.S. Military Academy at West Point and a distinguished veteran of the Civil War Battle of Glorieta Pass was killed in a battle on the Kansas frontier. The fort was subsequently named in his honor. Fort Lewis was established near the sacred Pagosa Hot Springs in 1878. Fort Lewis was moved to Hesperus Colorado in 1881 and on January 21, 1881 the military issued a general order to change the name of the temporary camp from Fort Lewis to Pagosa Springs. The Town of Pagosa Springs, the county seat and only municipality in the county, was incorporated on March 2, 1891.

(pagosamuseum.org)



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 1, 2013 and June 30, 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 pricerelated 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 Archuleta County are:

Archuleta County Ratio Grid					
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis
Commercial/Industrial	45	0.992	0.996	9.1	Compliant
Condominium	N/A	N/A	N/A	N/A	N/A
Single Family	443	0.981	1.021	13.1	Compliant
Vacant Land	250	1.000	1.043	18.6	Compliant

After applying the above described methodologies, it is concluded from the sales ratios that Archuleta County is in compliance

with SBOE, DPT, and Colorado State Statute valuation guidelines.

Recommendations



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 Archuleta County has complied with the statutory requirements to analyze the effects of time on value in their county. Archuleta County has also satisfactorily applied the results of their time trending analysis to arrive at the time adjusted sales price (TASP).

Recommendations



SOLD/UNSOLD ANALYSIS

Methodology

Archuleta 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. 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. determines if the sold/unsold variable is statistically and empirically significant. 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 nonparametric 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 Re	esults
Property Class	Results
Commercial/Industrial	Compliant
Condominium	N/A
Single Family	Compliant
Vacant Land	Compliant

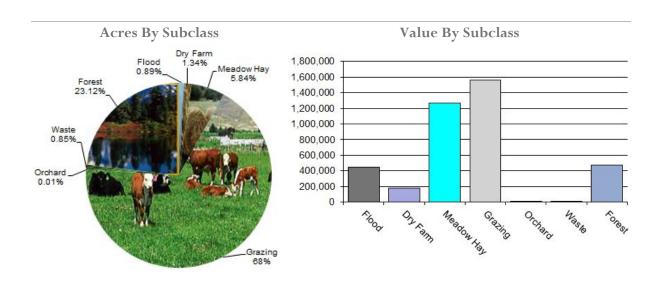
Conclusions

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

Recommendations



AGRICULTURAL LAND STUDY



Agricultural Land

County records were reviewed to determine major land categories such as irrigated farm, dry farm, meadow hay, grazing and other In addition, county records were reviewed in order to determine if: 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:



	Archuleta County Agricultural Land Ratio Grid					
Abstract Code	Land Class	Number Of Acres	County Value Per Acre	County Assessed Total Value	WRA Total Value	Ratio
4117	Flood	2,102	210.92	443,259	446,276	0.99
4127	Dry Farm	3,191	56.44	180,100	179,388	1.00
4137	Meadow Hay	13,856	91.76	1,271,371	1,271,371	1.00
4147	Grazing	161,293	9.67	1,559,704	1,559,704	1.00
4157	Orchard	33	226.00	7,548	7,548	1.00
4177	Forest	54,892	8.66	475,114	476,294	1.00
4167	Waste	2,023	1.99	4,019	4,019	1.00
Total/Avg		237,390	16.60	3,941,115	3,944,600	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.

Conclusions

Archuleta County has substantially complied with the procedures provided by the Division

of Property Taxation for the valuation of agricultural outbuildings.

Recommendations



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

Archuleta 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.:

- Personal Knowledge of Occupants at Assessment Date
- Lease documents

Archuleta 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.:

Used 2-acres

Archuleta 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



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 2015 for Archuleta County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 69 sales listed as unqualified.

All but one of the sales selected in the sample gave reasons that were clear and supportable. One sale had insufficient reason for disqualification.

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.

When less than 50 percent of sales are qualified in any of the three property classes (residential, commercial, and vacant land), the contractor analyzed the reasons for disqualifying sales in any subclass that constitutes at least 20 percent of the class, either by number



of properties or by value, from the prior year. The contractor has reviewed with the assessor any analysis that sales indicating data inadequate, fail to reflect typical properties, or have been disqualified for insufficient cause. In addition, the contractor has reviewed disqualified sales by assigned code. If there appears to be any inconsistency in the coding, the contractor has conducted further analysis determine if the sales included in that code have been assigned appropriately.

If 50 percent or more of the sales are qualified, the contractor has reviewed a

statistically significant sample of unqualified sales, excluding sales that were disqualified for obvious reasons.

The following subclasses were analyzed for Archuleta County:

0100 Residential Lots

Conclusions

Archuleta County appears to be doing a good job of verifying their sales. There are no recommendations.

Recommendations



ECONOMIC AREA REVIEW AND EVALUATION

Methodology

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



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

Producing Oil and Gas

Methodology

Assessors Reference Library (ARL) Volume 3, Chapter 6: Valuation of Natural Resources

STATUTORY REFERENCES

Section § 39-1-103, C.R.S., specifies that producing oil or gas leaseholds and lands are valued according to article 7 of title 39, C.R.S.

Actual value determined - when.

(2) The valuation for assessment of leaseholds and lands producing oil or gas shall be determined as provided in article 7 of this title. § 39-1-103, C.R.S.

Article 7 covers the listing, valuation, and assessment of producing oil and gas leaseholds and lands.

Valuation:

Valuation for assessment.

- (1) Except as provided in subsection (2) of this section, on the basis of the information contained in such statement, the assessor shall value such oil and gas leaseholds and lands for assessment, as real property, at an amount equal to eighty-seven and one-half percent of:
- (a) The selling price of the oil or gas sold there from during the preceding calendar year, after excluding the selling price of all oil or gas delivered to the United States government or any agency thereof, the state of Colorado or any agency thereof, or any political subdivision of the state as royalty during the preceding calendar year;
- (b) The selling price of oil or gas sold in the same field area for oil or gas transported from the premises which is not sold during the preceding calendar year, after excluding the selling price of all oil or gas delivered to the United States government or any agency thereof, the state of Colorado or any agency thereof, or any political subdivision of the state as royalty during the preceding calendar year.

§ 39-7-102, C.R.S.

Conclusions

The county applied approved appraisal procedures in the valuation of oil and gas.

Recommendations



VACANT LAND

Subdivision Discounting

Subdivisions were reviewed in 2015 in Archuleta County. The review showed that subdivisions were discounted pursuant to the Colorado Revised Statutes in Article 39-1-103 (14). Discounting procedures were applied to all subdivisions where less than 80 percent of all sites were sold using the present worth method. The market approach was applied where 80 percent or more of the subdivision sites were sold. An absorption period was estimated for each subdivision that was discounted. An appropriate discount rate was

developed using the summation method. Subdivision land with structures was appraised at full market value.

Conclusions

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

Recommendations



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 under lease, permit, concession, contract, or other agreement.

Archuleta County has been reviewed for their procedures and adherence to guidelines when assessing and valuing agricultural and

commercial 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

Archuleta 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



PERSONAL PROPERTY AUDIT

Archuleta 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.

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

- Public Record Documents
- Chamber of Commerce/Economic Development Contacts
- Local Telephone Directories, Newspapers or Other Local Publications
- Personal Observation, Physical Canvassing or Word of Mouth
- VRBO Website
- Facebook
- Google

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.

Archuleta County submitted their personal property written audit plan and was current for the 2015 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
- Accounts with greater than 10% change
- Incomplete or inconsistent declarations
- Businesses with no deletions or additions for 2 or more years



- Non-filing Accounts Best Information Available
- Accounts protested with substantial disagreement

Conclusions

Archuleta 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



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



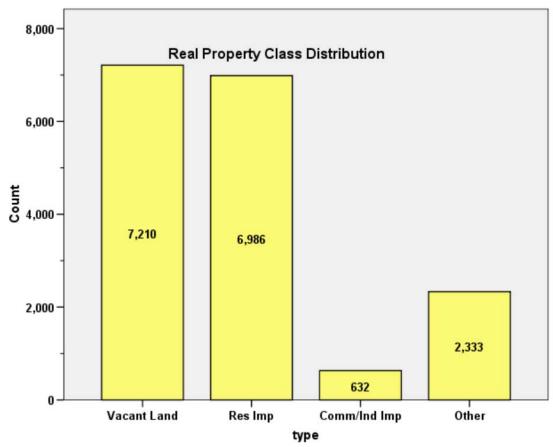
APPENDICES



STATISTICAL COMPLIANCE REPORT FOR ARCHULETA COUNTY 2015

I. OVERVIEW

Archuleta County is located in southwestern Colorado. The county has a total of 17,161 real property parcels, according to data submitted by the county assessor's office in 2015. The following provides a breakdown of property classes for this county:



The vacant land class of properties was dominated by residential land. Residential lots (coded 100 and 1112) accounted for 85.0% of all vacant land parcels.

For residential improved properties, single family properties accounted for 88.5% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial sales accounted for 3.7% of all such properties in this county.



II. DATA FILES

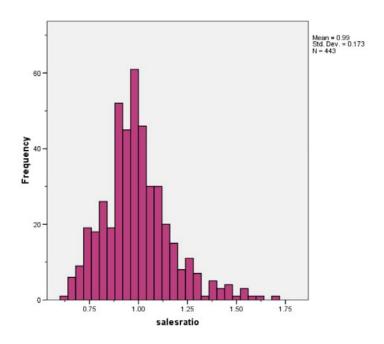
The following sales analyses were based on the requirements of the 2015 Colorado Property Assessment Study. Information was provided by the Archuleta Assessor's Office in May 2015. The data included all 5 property record files as specified by the Auditor.

III. RESIDENTIAL SALES RESULTS

There were 443 qualified residential sales for the 24 month period prior to June 2014. The sales ratio analysis results were as follows:

Median	0.981
Price Related Differential	1.021
Coefficient of Dispersion	13.1

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. No sales were trimmed.

Residential Market Trend Analysis

We next analyzed the residential dataset using the 24-month sale period for any residual market trending, with the following results:

Coefficients^a

Mod	el	Unstandardize	d Coefficients	Standardized Coefficients		
		В	Std. Error	Beta	t	Sig.
1	(Constant)	.970	.016		60.637	.000
	SalePeriod	.002	.001	.078	1.639	.102

a. Dependent Variable: salesratio





With no significant statistical trend evident in the sales ratio data, 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 value per square feet between each group, as follows:

Group	No.	Median Val/SF	Mean Val/SF
Unsold	6,542	\$103	\$108
Sold	443	\$109	\$110

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	.008	Reject the null hypothesis.

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



Given that the Mann-Whitney test indicated a marginally significant difference between sold and unsold residential properties based on this metric, we next compared the median percent change in value from 2014 to 2015 for sold and unsold residential properties, as follows:

Group	No.	Median Chg Val	Mean Chg Val
Unsold	6,530	1.07	1.28
Sold	443	1.09	1.12

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	.030	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .01.

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

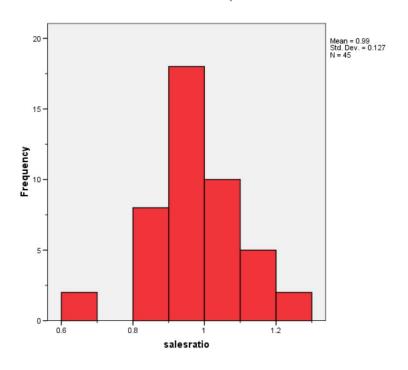
IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

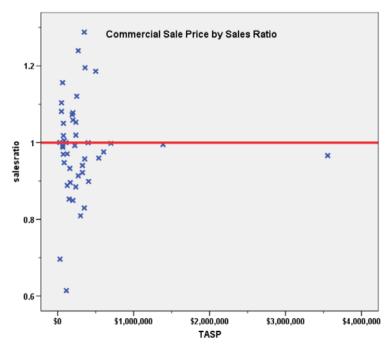
There were 45 qualified commercial/industrial sales for the 36 month period prior to June 2014. The sales ratio analysis results were as follows:

Median	0.992
Price Related Differential	0.996
Coefficient of Dispersion	9.1

The above tables indicate that the Archuleta 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

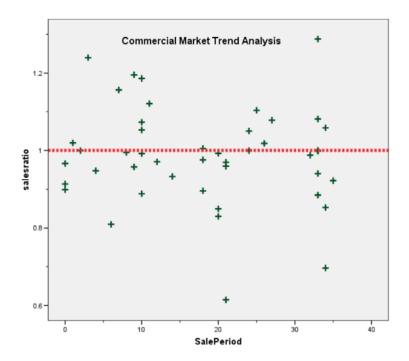
The 45 commercial/industrial sales were next analyzed by subclass for any residual market trending, examining the sale ratios across the 36-month sale period with the following results:



Coefficients^a

Model		Unstandardize	d Coefficients	Standardized Coefficients		
		В	Std. Error	Beta	t	Sig.
1	(Constant)	1.008	.036		28.304	.000
	SalePeriod	001	.002	109	718	.477

a. Dependent Variable: salesratio



Based on a lack of a residual market trend, we concluded that the assessor adequately considered market trending in their valuation of commercial and industrial properties.

Sold/Unsold Analysis

We compared the median values per square feet between sold and unsold commercial properties to determine if the assessor was valuing each group consistently, as follows:

Group	N	Median Val/SF	Mean Val/SF
Unsold	588	\$84	\$124
Sold	41	\$91	\$102

We also performed the comparison by commercial subclasses with at least three sales as follows:



Subclass	GROUP	NO. PROPS	Median Val/SF	Mean Val/SF
2212	Unsold	64	\$75.14	\$81.00
	Sold	11	\$51.33	\$65.62
2220	Unsold	33	\$86.42	\$88.11
	Sold	8	\$98.64	\$111.07
2230	Unsold	133	\$37.31	\$58.07
	Sold	6	\$144.31	\$129.64
2245	Unsold	159	\$54.29	\$63.35
	Sold	16	\$85.61	\$83.81

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	.000	Reject the null hypothesis.

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

Because there was a significant difference between sold and unsold groups using this metric, we also examined the median change in value from 2014 to 2015 for commercial properties using the same breakdowns and test, as follows:

Group	No. Props	Median Chg Val	Mean Chg Val
Unsold	578	1.00	1.02
Sold	45	1.00	1.23

Subclass	GROUP	NO. PROPS	Median Val/SF	Mean Val/SF
2212	Unsold	62	1.00	1.04
	Sold	11	1.00	1.04
2220	Unsold	32	1.00	.99
	Sold	8	1.09	1.11
2230	Unsold	130	1.00	1.05
	Sold	6	1.04	1.95
2245	Unsold	155	1.00	.97
	Sold	16	1.00	1.01



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	.105	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .01.

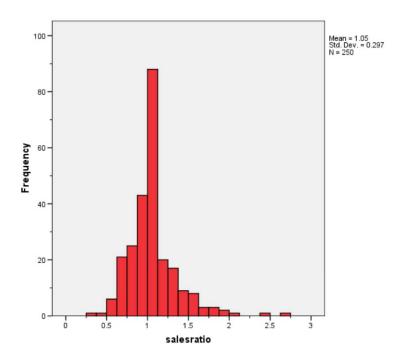
Based on the above results, we concluded that the Archuleta County assessor was valuing commercial sold properties consistently with unsold commercial properties of the same subclass.

V. VACANT LAND SALE RESULTS

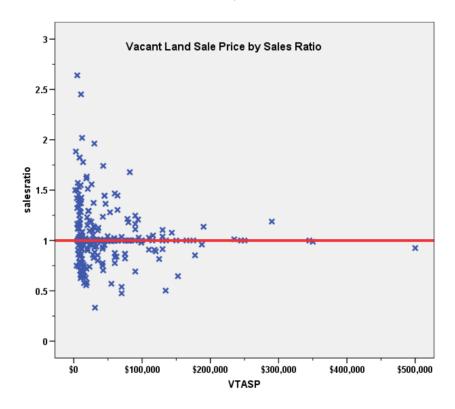
There were 250 qualified vacant land sales initially in our analysis for the 24 month period prior to June 2014. The vacant land sales were analyzed as follows:

Median	1.000
Price Related Differential	1.043
Coefficient of Dispersion	18.6

The above tables indicate that the Archuleta 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

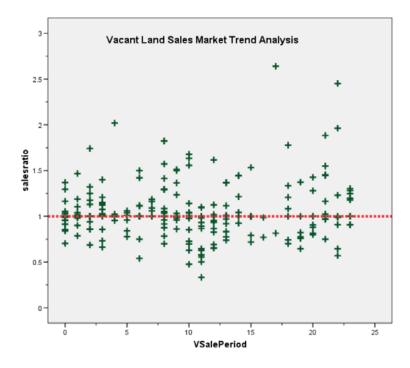
The 250 vacant land sales were analyzed for residual market trending, examining the sale ratios across the 24 month sale period with the following results:

Coefficients^a

Mo	odel	Unstandardize	d Coefficients	Standardized Coefficients		
		В	Std. Error	Beta	t	Sig.
1	(Constant)	1.017	.034		30.295	.000
L	VSalePeriod	.003	.003	.076	1.196	.233

a. Dependent Variable: salesratio





With no significant statistical trend evident in the sales ratio data, the above analysis indicated that the assessor has adequately addressed market trending in the valuation of vacant land properties.

Sold/Unsold Analysis

We compared the median change in actual value between 2014 and 2015 for vacant land properties to determine if sold and unsold properties were valued consistently, as follows:

Group	N	Median	Mean
Unsold	6,787	1.00	1.09
Sold	250	1.00	1.03

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	.974	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .01.

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 median actual value for this group and compared it to the median actual value for residential single family improvements in Archuleta County in selected neighborhoods.

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

		Descri	ptives		
	ABST	RIMP		Statistic	Std. Error
<u>ImpValSF</u>	SFR	Mean		\$87.73	\$.412
		95% Confidence Interval for	Lower Bound	\$86.92	
		Mean	Upper Bound	\$88.53	
		5% Trimmed Mean		\$87.55	
		Median		\$90.31	
		Variance		1051.387	
		Std. Deviation		\$32.425	
		Minimum		\$0	
		Maximum		\$269	
		Range		\$269	
		Interquartile Range		\$39	
		Skewness		.079	.031
		Kurtosis		.741	.062
	Ag	Mean		\$80.41	\$3.690
	Res	95% Confidence Interval for	Lower Bound	\$73.10	
		Mean	Upper Bound	\$87.73	
		5% Trimmed Mean		\$79.69	
		Median		\$83.36	
		Variance		1470.221	
		Std. Deviation		\$38.343	
		Minimum		\$4	
		Maximum		\$189	
		Range		\$185	
		Interquartile Range		\$57	
		Skewness		.199	.233
		Kurtosis		006	.461

VI. CONCLUSIONS

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



STATISTICAL ABSTRACT Residential

Ratio Statistics for CURRTOT / TASP

	95% Confiden Me			95% Con	fidence Interval fo	or Median		95% Confiden Weighte				Coefficient of Variation
Mean	Lower Bound	Upper Bound	Median	Lower Bound	Upper Bound	Actual Coverage	Weighted Mean	Lower Bound	Upper Bound	Price Related Differential	Coefficient of Dispersion	Mean Centered
.993	.977	1.009	.981	.964	.991	95.4%	.973	.956	.990	1.021	.131	17.5%

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.

Commercial/Industrial

Ratio Statistics for CURRTOT / TASP

	95% Confiden Me	ce Interval for an		95% Con	fidence Interval fo	or Median		95% Confiden Weighte				Coefficient of Variation
Mean	Lower Bound	Upper Bound	Median	Lower Bound	Upper Bound	Actual Coverage	Weighted Mean	Lower Bound	Upper Bound	Price Related Differential	Coefficient of Dispersion	Mean Centered
.986	.948	1.024	.992	.957	1.005	96.4%	.990	.958	1.022	.996	.091	12.9%

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

	95% Confiden Me	ice Interval for an		95% Con	fidence Interval fo	r Median		95% Confiden Weighte				Coefficient of Variation
Mean	Lower Bound	Upper Bound	Median	Lower Bound	Upper Bound	Actual Coverage	Weighted Mean	Lower Bound	Upper Bound	Price Related Differential	Coefficient of Dispersion	Mean Centered
1.051	1.014	1.088	1.000	1.000	1.000	95.0%	1.007	.977	1.037	1.043	.186	28.3%

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

$\overline{}$			
		Count	Percent
SPRec	LT \$25K	1	.2%
	\$25K to \$50K	14	3.2%
	\$50K to \$100K	47	10.6%
	\$100K to \$150K	89	20.1%
	\$150K to \$200K	68	15.3%
	\$200K to \$300K	123	27.8%
	\$300K to \$500K	79	17.8%
	\$500K to \$750K	16	3.6%
	\$750K to \$1,000K	3	.7%
	Over \$1,000K	3	.7%
Overall		443	100.0%
Excluded	i	0	
Total		443	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
LT \$25K	1.255	1.000	.000	.%
\$25K to \$50K	1.077	1.010	.166	24.1%
\$50K to \$100K	1.038	.997	.127	18.3%
\$100K to \$150K	.997	1.004	.147	19.0%
\$150K to \$200K	.993	.998	.144	19.5%
\$200K to \$300K	.942	.999	.105	13.8%
\$300K to \$500K	.964	.999	.115	16.3%
\$500K to \$750K	.954	1.000	.117	14.2%
\$750K to \$1,000K	.940	1.000	.028	4.9%
Over \$1,000K	.813	1.012	.087	15.5%
Overall	.981	1.021	.131	17.7%



Sub Class

Case Processing Summary

		Count	Percent
ABSTRIMP	1212	387	87.4%
	1215	4	.9%
	1220	1	.2%
	1230	51	11.5%
Overall		443	100.0%
Excluded		0	
Total		443	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
1212	.976	1.020	.136	18.3%
1215	.943	1.036	.117	16.3%
1220	.995	1.000	.000	.%
1230	.992	1.016	.096	13.6%
Overall	.981	1.021	.131	17.7%



Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	2	.5%
	75 to 100	2	.5%
	50 to 75	3	.7%
	25 to 50	130	29.3%
	5 to 25	292	65.9%
	5 or Newer	14	3.2%
Overall		443	100.0%
Excluded		0	
Total		443	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
Over 100	1.011	1.078	.185	26.1%
75 to 100	.907	1.042	.224	31.7%
50 to 75	1.058	.993	.029	4.5%
25 to 50	.991	1.035	.145	19.2%
5 to 25	.969	1.009	.125	17.4%
5 or Newer	.924	1.067	.110	14.5%
Overall	.981	1.021	.131	17.7%



Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	3	.7%
	500 to 1,000 sf	26	5.9%
	1,000 to 1,500 sf	117	26.4%
	1,500 to 2,000 sf	117	26.4%
	2,000 to 3,000 sf	121	27.3%
	3,000 sf or Higher	59	13.3%
Overall		443	100.0%
Excluded		0	
Total		443	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
LE 500 sf	.925	.993	.127	19.1%
500 to 1,000 sf	.980	1.039	.106	15.5%
1,000 to 1,500 sf	1.004	1.023	.147	19.6%
1,500 to 2,000 sf	.948	1.019	.124	16.9%
2,000 to 3,000 sf	.969	1.020	.124	16.9%
3,000 sf or Higher	.999	1.036	.126	17.8%
Overall	.981	1.021	.131	17.7%



Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY	2	9	2.0%
	3	382	86.2%
	4	4	.9%
	5	1	.2%
	6	5	1.1%
	7	14	3.2%
	8	6	1.4%
	9	1	.2%
	10	2	.5%
	11	8	1.8%
	12	4	.9%
	13	5	1.1%
	14	2	.5%
Overall		443	100.0%
Excluded		0	
Total		443	



Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
2	1.001	.998	.101	13.8%
3	.981	1.020	.127	17.2%
4	1.235	.995	.082	13.4%
5	.720	1.000	.000	.%
6	.948	.971	.122	18.1%
7	.963	1.014	.099	13.5%
8	.919	.985	.168	24.0%
9	.750	1.000	.000	.%
10	1.364	.974	.080	11.3%
11	1.012	1.051	.189	29.8%
12	.888	1.028	.126	15.7%
13	1.055	1.034	.140	22.3%
14	.900	1.005	.015	2.1%
Overall	.981	1.021	.131	17.7%



Improvement Condition

Case Processing Summary

		Count	Percent
CONDITION	1	5	1.1%
	2	13	3.0%
	3	417	95.2%
	4	3	.7%
Overall		438	100.0%
Excluded		5	
Total		443	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
1	1.001	1.007	.081	12.7%
2	1.159	1.007	.140	18.3%
3	.978	1.020	.130	17.7%
4	.808	1.012	.090	15.0%
Overall	.981	1.020	.131	17.8%



Commercial Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	\$25K to \$50K	4	8.9%
	\$50K to \$100K	8	17.8%
	\$100K to \$150K	5	11.1%
	\$150K to \$200K	6	13.3%
	\$200K to \$300K	8	17.8%
	\$300K to \$500K	9	20.0%
	\$500K to \$750K	3	6.7%
	Over \$1,000K	2	4.4%
Overall		45	100.0%
Excluded	1	0	
Total		45	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
\$25K to \$50K	1.041	.970	.117	19.7%
\$50K to \$100K	.999	1.003	.042	6.7%
\$100K to \$150K	.888	.999	.113	17.4%
\$150K to \$200K	.996	.996	.089	10.3%
\$200K to \$300K	1.006	1.003	.103	13.7%
\$300K to \$500K	.957	.994	.125	18.1%
\$500K to \$750K	.976	.998	.013	2.0%
Over \$1,000K	.981	1.006	.015	2.1%
Overall	.992	.996	.091	12.8%



Sub Class

Case Processing Summary

		Count	Percent
ABSTRIMP	1712	1	2.2%
	2212	11	24.4%
	2215	1	2.2%
	2220	8	17.8%
	2230	6	13.3%
	2235	1	2.2%
	2245	16	35.6%
	3212	1	2.2%
Overall		45	100.0%
Excluded		0	
Total		45	

Group				Coefficient of Variation		
	Median	Price Related Differential	Coefficient of Dispersion		edian ntered	
1712	.933	1.000	.000	.%		
2212	1.000	1.005	.096		14.3%	
2215	1.078	1.000	.000	.%		
2220	.976	1.007	.058		6.9%	
2230	.887	.969	.090		13.1%	
2235	.976	1.000	.000	.%		
2245	.996	.975	.098		15.5%	
3212	.885	1.000	.000	.%		
Overall	.992	.996	.091		12.8%	



Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	5	11.1%
	75 to 100	1	2.2%
	50 to 75	4	8.9%
	25 to 50	10	22.2%
	5 to 25	23	51.1%
	5 or Newer	2	4.4%
Overall		45	100.0%
Excluded		0	
Total		45	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
Over 100	.853	.958	.064	10.3%
75 to 100	1.020	1.000	.000	.%
50 to 75	.927	1.024	.064	9.4%
25 to 50	1.026	.997	.067	8.3%
5 to 25	.998	.992	.096	14.2%
5 or Newer	.981	1.006	.015	2.1%
Overall	.992	.996	.091	12.8%



Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	1	2.2%
	500 to 1,000 sf	11	24.4%
	1,000 to 1,500 sf	5	11.1%
	1,500 to 2,000 sf	5	11.1%
	2,000 to 3,000 sf	6	13.3%
	3,000 sf or Higher	17	37.8%
Overall		45	100.0%
Excluded		0	
Total		45	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
LE 500 sf	.696	1.000	.000	.%
500 to 1,000 sf	.992	1.029	.064	9.0%
1,000 to 1,500 sf	1.000	1.013	.065	9.5%
1,500 to 2,000 sf	.933	.994	.129	19.6%
2,000 to 3,000 sf	.953	1.019	.065	7.6%
3,000 sf or Higher	.998	1.030	.096	13.5%
Overall	.992	.996	.091	12.8%



Improvement Quality

Case Processing Summary

	Count	Percent
QUALITY 2	1	2.2%
3	43	95.6%
4	1	2.2%
Overall	45	100.0%
Excluded	0	
Total	45	

Group					ficient of riation
	Median	Price Related Differential	Coefficient of Dispersion		edian ntered
2	.998	1.000	.000	.%	
3	.992	.996	.094		13.1%
4	.960	1.000	.000	.%	
Overall	.992	.996	.091		12.8%



Improvement Condition

Case Processing Summary

		Count	Percent
CONDITION	2	2	4.5%
	3	32	72.7%
	4	5	11.4%
	5	1	2.3%
	7	3	6.8%
	8	1	2.3%
Overall		44	100.0%
Excluded		1	
Total		45	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
2	1.237	1.007	.041	5.8%
3	.992	.995	.098	13.4%
4	.960	.990	.051	7.2%
5	.966	1.000	.000	.%
7	.988	.983	.027	5.3%
8	1.000	1.000	.000	.%
Overall	.990	.996	.092	13.0%



Vacant Land Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT \$25K	129	51.6%
	\$25K to \$50K	45	18.0%
	\$50K to \$100K	48	19.2%
	\$100K to \$150K	15	6.0%
	\$150K to \$200K	6	2.4%
	\$200K to \$300K	4	1.6%
	\$300K to \$500K	3	1.2%
Overall		250	100.0%
Excluded		0	
Total		250	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
LT \$25K	1.000	1.028	.236	35.8%
\$25K to \$50K	1.000	1.000	.168	27.8%
\$50K to \$100K	1.000	.995	.131	21.8%
\$100K to \$150K	1.000	1.000	.091	15.6%
\$150K to \$200K	.980	.991	.115	17.9%
\$200K to \$300K	1.006	.994	.050	10.5%
\$300K to \$500K	.988	1.006	.025	4.6%
Overall	1.000	1.043	.186	30.1%



Sub Class

Case Processing Summary

		Count	Percent
ABSTRLND	100	188	75.2%
	200	4	1.6%
	300	2	.8%
	530	1	.4%
	540	1	.4%
	550	5	2.0%
	1112	47	18.8%
	1135	2	.8%
Overall		250	100.0%
Excluded		0	
Total		250	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
100	1.000	1.048	.190	31.2%
200	1.058	1.026	.049	6.8%
300	.930	1.006	.082	11.6%
530	.833	1.000	.000	.%
540	1.029	1.000	.000	.%
550	1.011	1.085	.130	22.8%
1112	1.000	1.017	.174	25.4%
1135	1.332	1.011	.516	73.0%
Overall	1.000	1.043	.186	30.1%