



2016

RIO GRANDE 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

TABLE OF CONTENTS

Introduction	3
Regional/Historical Sketch of Rio Grande County	4
Ratio Analysis.....	6
Time Trending Verification	8
Sold/Unsold Analysis	9
Agricultural Land Study	11
<i>Agricultural Land</i>	11
<i>Agricultural Outbuildings</i>	12
<i>Agricultural Land Under Improvements</i>	13
Sales Verification.....	14
Economic Area Review and Evaluation	16
Natural Resources	17
<i>Earth and Stone Products</i>	17
Vacant Land.....	18
Possessory Interest Properties	19
Personal Property Audit	20
Wildrose Auditor Staff.....	22
Appendices.....	23

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.

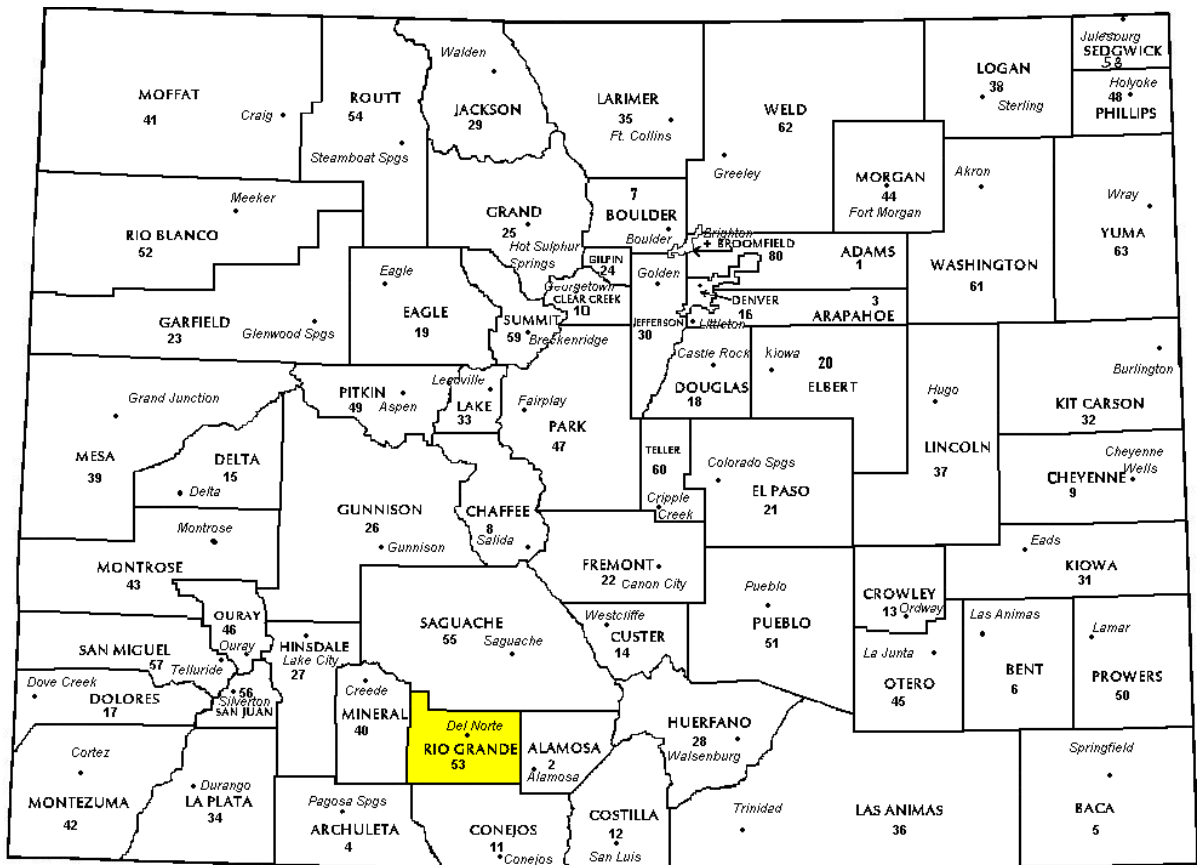
Wildrose Audit has completed the Property Assessment Study for 2016 and is pleased to report its findings for Rio Grande County in the following report.

REGIONAL/HISTORICAL SKETCH OF RIO GRANDE COUNTY

Regional Information

Rio Grande County is located in the San Luis Valley region of Colorado. The San Luis Valley is a large, broad, alpine valley in the Rio Grande Basin of south-central Colorado. The valley is drained to the south by the Rio Grande

River which rises in the San Juan Mountains to the west of the valley. The San Luis Valley includes Alamosa, Conejos, Costilla, Mineral, Rio Grande, and Saguache counties.



Historical Information

Rio Grande County had an estimated population of approximately 11,607 people with 13.1 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.

The gateway to the San Juan Mountains, Rio Grande County is one of the highlights of the San Luis Valley. The county covers 913 square miles ranging from around 7,000 feet on valley floor to numerous 13,000-foot peaks. The scenic landscape and close community make Rio Grande County a great place to vacation, work and live. There are three municipalities within the county, Monte Vista, Del Norte, and South Fork and all have been historically developed along the rail line that follows the Rio Grande River.

Monte Vista is the county's largest community situated on the valley floor and is the center of the agricultural aspect of the county. There are numerous festivals and events that take place in

and around Monte Vista. The Monte Vista National Wildlife Refuge is a stop for migratory Sand Hill Cranes every year.

Del Norte is a quaint town with a focus on its historic past. It is the county seat, home to the Rio Grande County Museum, and maintains a historic façade on its main street. Home to many small shops and boutiques, it is a beautiful place to shop and also provides recreational activity with climbing, hiking, and fishing close by.

The newest town in Rio Grande County is South Fork. South Fork is surrounded by the Rio Grande National Forest and other public lands and has easy access to Wolf Creek Ski Area. Developed as a logging center, it has become a gem of the Valley with a booming housing market, world class 18 hole golf course, and the distinction of being the Gateway to the Silver Thread scenic byway.

(www.riograndecounty.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 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 Rio Grande County are:

Rio Grande County Ratio Grid					
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis
*Commercial/Industrial	N/A	N/A	N/A	N/A	N/A
Condominium	N/A	N/A	N/A	N/A	N/A
Single Family	419	0.976	1.024	12.6	Compliant
Vacant Land	94	1.000	1.061	20.4	Compliant

**Due to the small number of sales, a procedural audit was performed.*

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

Rio Grande 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	N/A
Condominium	N/A
Single Family	Compliant
Vacant Land	Compliant

Conclusions

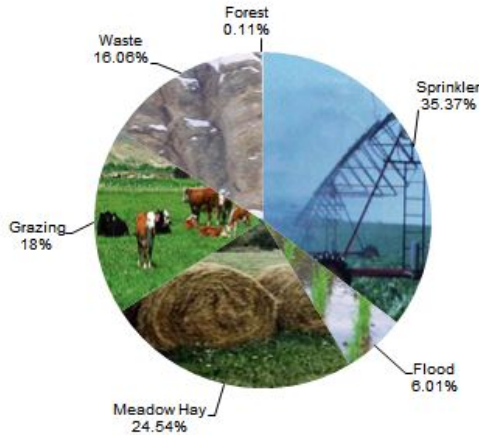
After applying the above described methodologies, it is concluded that Rio Grande County is reasonably treating its sold and unsold properties in the same manner.

Recommendations

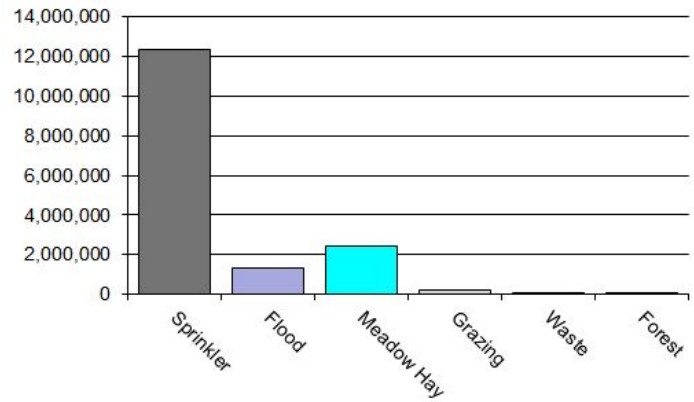
None

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:

Rio Grande 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	66,877	184.52	12,339,849	13,015,449	0.95
4117	Flood	11,362	115.36	1,310,673	1,367,047	0.96
4137	Meadow Hay	46,413	52.58	2,440,175	2,440,175	1.00
4147	Grazing	33,869	6.77	229,343	229,343	1.00
4177	Forest	204	13.67	2,789	2,789	1.00
4167	Waste	30,378	1.99	60,346	60,346	1.00
Total/Avg		189,103	86.64	16,383,175	17,115,148	0.96

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.

of Property Taxation for the valuation of agricultural outbuildings.

Recommendations

None

Conclusions

Rio Grande County has substantially complied with the procedures provided by the Division

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

Rio Grande 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
- Aerial Photography/Pictometry

Rio Grande 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.:

- Property Record Card Analysis
- Questionnaires
- Field Inspections
- Aerial Photography/Pictometry

Rio Grande 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 Rio Grande County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 40 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

Rio Grande County appears to be doing a good job of verifying their sales.

Recommendations

None

ECONOMIC AREA REVIEW AND EVALUATION

Methodology

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

Rio Grande 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.

Rio Grande County has been reviewed for their procedures and adherence to guidelines when

assessing and valuing agricultural 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

Rio Grande 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

Rio Grande 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.

Rio Grande 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

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.

Rio Grande 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:

- Accounts with obvious discrepancies
- Incomplete or inconsistent declarations
- Accounts with omitted property
- Businesses with no deletions or additions for 2 or more years
- Non-filing Accounts - Best Information Available
- Accounts protested with substantial disagreement



Conclusions

Rio Grande 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*

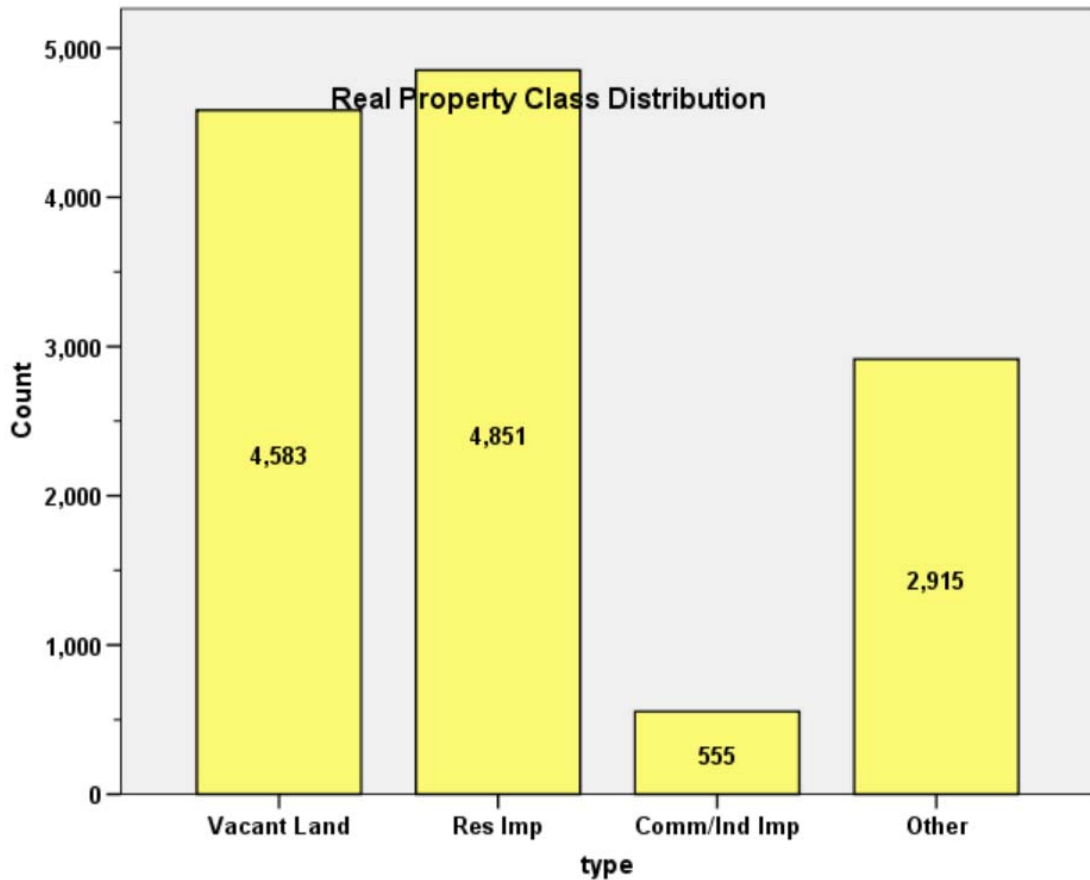
J. Andrew Rodriguez, *Field Analyst*

APPENDICES

STATISTICAL COMPLIANCE REPORT
FOR Rio Grande COUNTY
2016

I. OVERVIEW

Rio Grande County is located in south central Colorado. The county has a total of 12,904 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 land. Residential lots (coded 100) accounted for 77.6% of all vacant land parcels.

For residential improved properties, single family properties accounted for 95.9% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial sales accounted for 4.3% of all such properties in this county.

II. DATA FILES

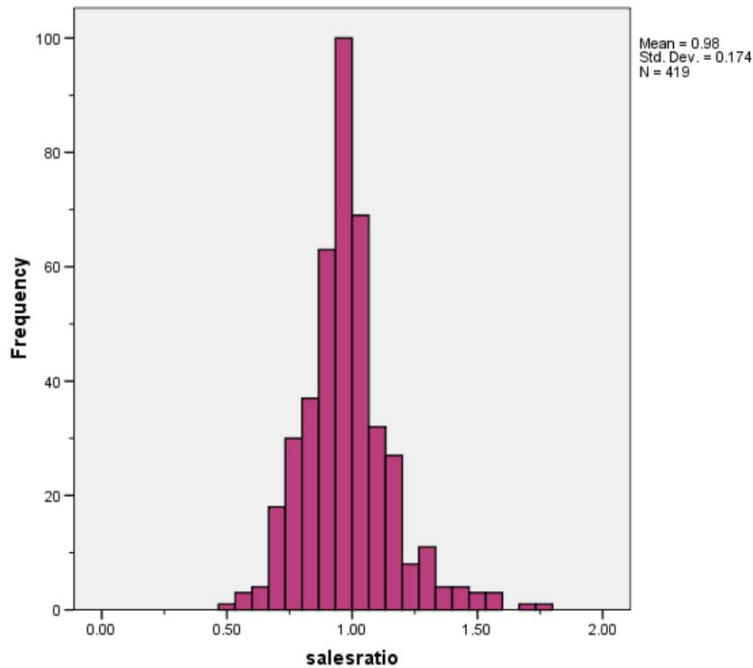
The following sales analyses were based on the requirements of the 2016 Colorado Property Assessment Study. Information was provided by the Rio Grande Assessor’s Office in March 2016. The data included all 5 property record files as specified by the Auditor.

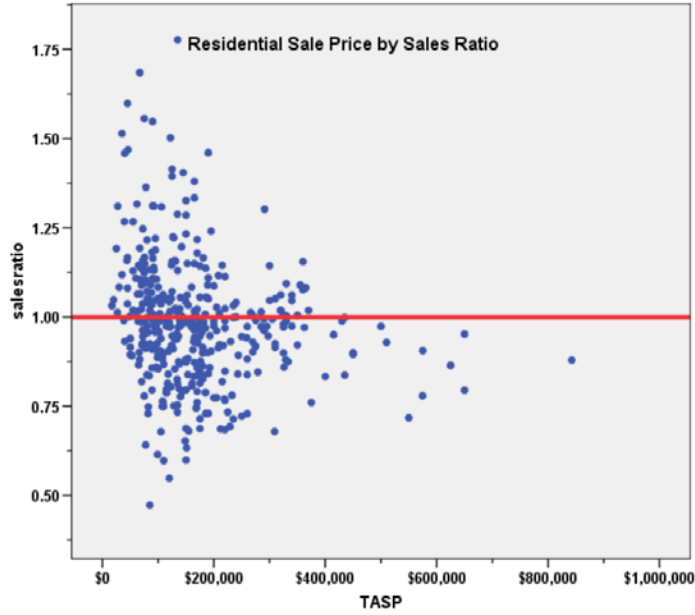
III. RESIDENTIAL SALES RESULTS

There were 419 qualified residential sales for the 60 month period prior to June 30, 2014. These sales were analyzed as follows:

Median	0.976
Price Related Differential	1.024
Coefficient of Dispersion	.126

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.

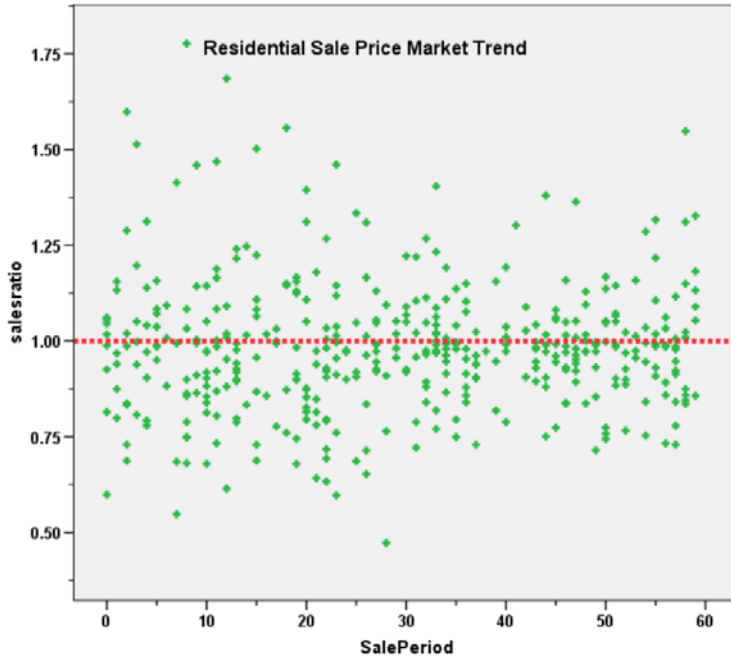
Residential Market Trend Analysis

We next analyzed the residential dataset using the 60-month sale period for any residual market trending, with the following results:

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.979	.017		58.902	.000
SalePeriod	.000	.000	.014	.278	.781

a. Dependent Variable: salesratio

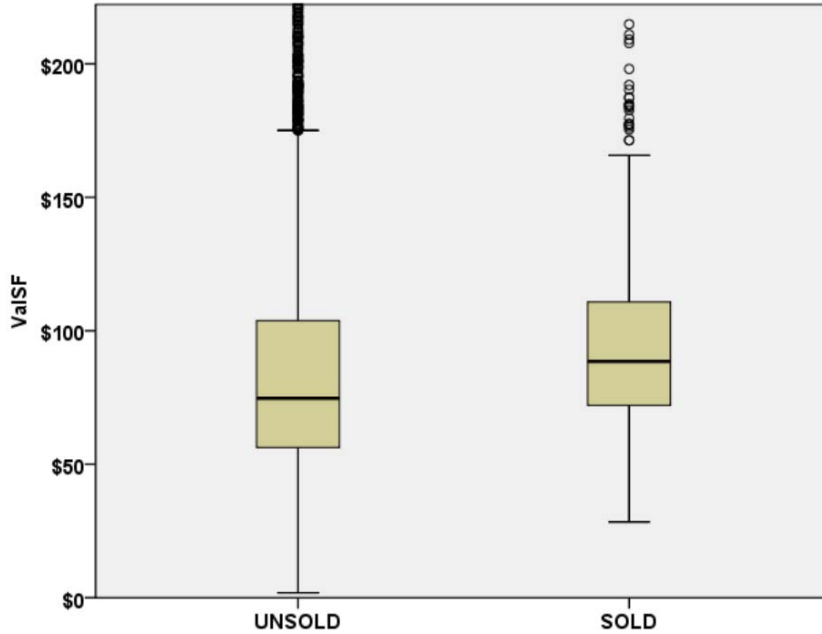


The above analysis indicated that the assessor has adequately addressed market trending in the valuation of residential properties.

Sold/Unsold Analysis

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

Group	No. Props	Median Val/SF	Mean Cal/SF
Unsold	4,183	\$75	\$85
Sold	419	\$89	\$98



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.

Given that the Mann-Whitney test indicated a significant difference statistically between sold and unsold single family residences, we next compared the mean and median change in value from 2014 to 2016 for sold and unsold residential properties:

Group	No. Props	Median Chg Val	Mean Chg Val
Unsold	4,396	0.99	1.05
Sold	419	0.99	1.00

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	.010	Retain the null hypothesis.

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

Based on the results from the change in value comparison, we concluded that Rio Grande County has valued sold and unsold residential properties consistently.

IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

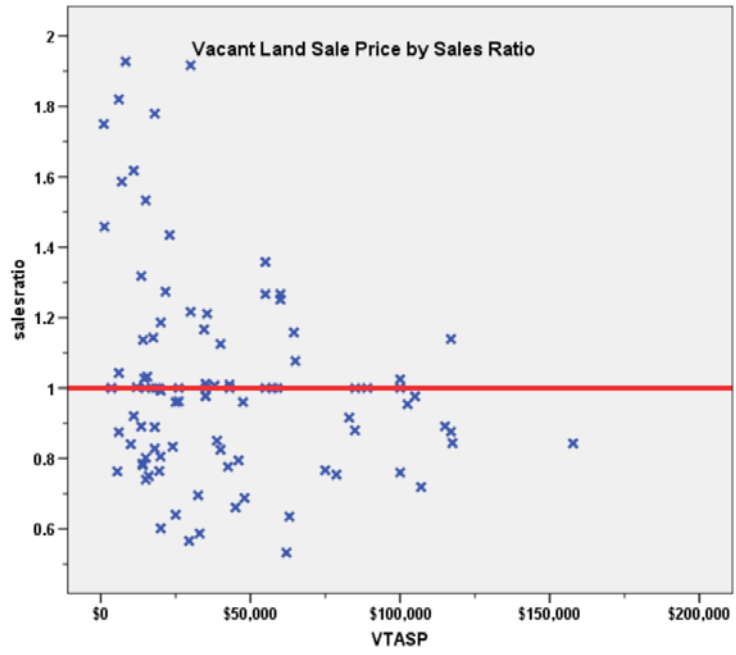
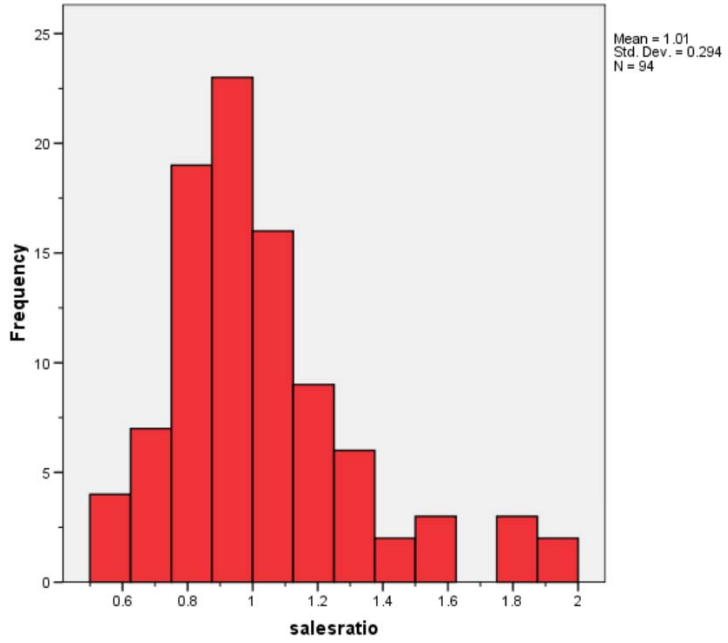
Due to the fact that there were less than 10 commercial/industrial sales in this County between July 2009 and June 2014, this class of properties was not analyzed for sales ratio compliance.

V. VACANT LAND SALE RESULTS

There were 97 qualified vacant land sales for the 60 month period prior to June 30, 2014. We trimmed 3 sales with extreme ratios, resulting in a final set of 94 sales. These sales were analyzed as follows:

Median	1.000
Price Related Differential	1.061
Coefficient of Dispersion	.204

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



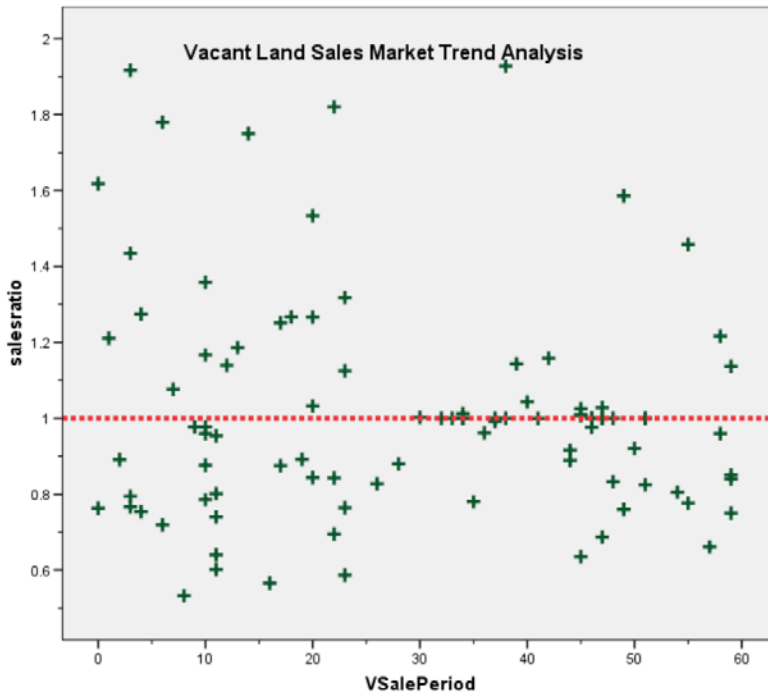
Vacant Land Market Trend Analysis

The assessor did not apply any market trend adjustment to the vacant land dataset. The 94 vacant land sales were analyzed, examining the sale ratios across the 60 month sale period with the following results:

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.073	.057		18.859	.000
	VSalePeriod	-.002	.002	-.124	-1.202	.232

a. Dependent Variable: salesratio



The market trend results indicated no statistically significant trend. We concur that no market trend adjustments were warranted for properties in this class for Rio Grande County.

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:

Group	N	Median	Mean
Unsold	4,483	1.00	0.96
Sold	94	1.00	.096

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	.483	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 actual value per square foot rate for this group and compared it to rates assigned to residential single family improvements in Rio Grande County.

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

Descriptives

<u>ABSTRIMP</u>			Statistic	Std. Error
<u>ImpValSFR</u>	Mean		\$71.30	\$.516
	95% Confidence Interval for	Lower Bound	\$70.28	
	Mean	Upper Bound	\$72.31	
	5% Trimmed Mean		\$69.01	
	Median		\$65.36	
	Variance		1176.663	
	Std. Deviation		\$34.303	
	Minimum		\$4	
	Maximum		\$286	
	Range		\$281	
	Interquartile Range		\$37	
	Skewness		1.181	.037
	Kurtosis		2.323	.074
	<u>Ag Res</u>	Mean		\$72.65
95% Confidence Interval for		Lower Bound	\$67.15	
Mean		Upper Bound	\$78.15	
5% Trimmed Mean			\$70.37	
Median			\$66.10	
Variance			1296.838	
Std. Deviation			\$36.012	
Minimum			\$6	
Maximum			\$224	
Range			\$218	
Interquartile Range			\$44	
Skewness			1.110	.188
Kurtosis			2.098	.374

VI. CONCLUSIONS

The results from the early reporting analysis indicate that residential, vacant land and agricultural residential properties in Rio Grande County were compliant with Colorado State Audit guidelines.

STATISTICAL ABSTRACT

Residential

Ratio Statistics for CURRTOT / TASP

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			
.983	.966	.999	.976	.969	.989	96.0%	.960	.944	.975	1.024	.126	17.7%

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

Ratio Statistics for CURRLND / VTASP

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	.955	1.075	1.000	.920	1.000	95.1%	.956	.909	1.003	1.061	.204	29.0%

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.

Residential Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT \$25K	3	.7%
	\$25K to \$50K	19	4.5%
	\$50K to \$100K	106	25.3%
	\$100K to \$150K	103	24.6%
	\$150K to \$200K	87	20.8%
	\$200K to \$300K	55	13.1%
	\$300K to \$500K	38	9.1%
	\$500K to \$750K	7	1.7%
	\$750K to \$1,000K	1	.2%
Overall		419	100.0%
Excluded		0	
Total		419	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
LT \$25K	1.048	.990	.051	9.8%
\$25K to \$50K	1.083	1.007	.158	21.4%
\$50K to \$100K	1.017	1.004	.122	17.3%
\$100K to \$150K	.974	.997	.143	20.2%
\$150K to \$200K	.956	.999	.119	16.0%
\$200K to \$300K	.947	.995	.104	13.8%
\$300K to \$500K	.984	1.002	.074	10.0%
\$500K to \$750K	.864	.999	.082	10.3%
\$750K to \$1,000K	.879	1.000	.000	.%
Overall	.976	1.024	.126	17.8%

Sub-Class

Case Processing Summary

		Count	Percent
ABSTRIMP	1212	411	98.1%
	1215	2	.5%
	1230	6	1.4%
Overall		419	100.0%
Excluded		0	
Total		419	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
1212	.976	1.024	.126	17.8%
1215	1.231	1.017	.066	9.3%
1230	.945	1.026	.108	18.3%
Overall	.976	1.024	.126	17.8%

Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	51	12.2%
	75 to 100	46	11.0%
	50 to 75	69	16.5%
	25 to 50	88	21.0%
	5 to 25	160	38.2%
	5 or Newer	5	1.2%
Overall		419	100.0%
Excluded		0	
Total		419	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
Over 100	.915	1.044	.140	20.2%
75 to 100	.976	1.042	.130	18.1%
50 to 75	.992	1.036	.130	16.5%
25 to 50	.981	1.012	.153	22.2%
5 to 25	.986	1.023	.098	14.6%
5 or Newer	.733	1.015	.120	19.0%
Overall	.976	1.024	.126	17.8%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	5	1.2%
	500 to 1,000 sf	53	12.6%
	1,000 to 1,500 sf	151	36.0%
	1,500 to 2,000 sf	118	28.2%
	2,000 to 3,000 sf	79	18.9%
	3,000 sf or Higher	13	3.1%
Overall		419	100.0%
Excluded		0	
Total		419	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
LE 500 sf	1.017	1.012	.084	13.0%
500 to 1,000 sf	.922	1.051	.160	23.3%
1,000 to 1,500 sf	.989	1.033	.126	17.5%
1,500 to 2,000 sf	.973	1.021	.125	18.1%
2,000 to 3,000 sf	.986	1.017	.107	15.4%
3,000 sf or Higher	.974	1.039	.096	13.1%
Overall	.976	1.024	.126	17.8%

Improvement Quality

Case Processing Summary

	Count	Percent
QUALITY 0	15	3.6%
1	212	50.6%
2	155	37.0%
3	33	7.9%
4	4	1.0%
Overall	419	100.0%
Excluded	0	
Total	419	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
0	.932	1.111	.188	24.9%
1	.985	1.027	.134	18.6%
2	.974	1.011	.118	17.1%
3	.973	1.019	.087	11.4%
4	.892	1.001	.032	4.4%
Overall	.976	1.024	.126	17.8%

Improvement Condition

Case Processing Summary

	Count	Percent
CONDITION 0	15	3.6%
1	212	50.6%
2	155	37.0%
3	33	7.9%
4	4	1.0%
Overall	419	100.0%
Excluded	0	
Total	419	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
0	.932	1.111	.188	24.9%
1	.985	1.027	.134	18.6%
2	.974	1.011	.118	17.1%
3	.973	1.019	.087	11.4%
4	.892	1.001	.032	4.4%
Overall	.976	1.024	.126	17.8%

Vacant Land Median Ratio Stratification

Sale Price

Case Processing Summary

	Count	Percent
SPRec LT \$25K	42	44.7%
\$25K to \$50K	24	25.5%
\$50K to \$100K	20	21.3%
\$100K to \$150K	7	7.4%
\$150K to \$200K	1	1.1%
Overall	94	100.0%
Excluded	0	
Total	94	

Ratio Statistics for CURRLND /VTASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
LT \$25K	1.000	1.053	.253	35.6%
\$25K to \$50K	.977	1.014	.183	28.3%
\$50K to \$100K	1.000	1.015	.158	21.9%
\$100K to \$150K	.891	.999	.101	14.8%
\$150K to \$200K	.843	1.000	.000	.%
Overall	1.000	1.061	.204	29.5%

Subclass

Case Processing Summary

	Count	Percent
ABSTR LND 100	81	86.2%
200	2	2.1%
520	1	1.1%
530	1	1.1%
1112	8	8.5%
1135	1	1.1%
Overall	94	100.0%
Excluded	0	
Total	94	

Ratio Statistics for CURRLND /VTASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
100	1.000	1.066	.219	31.2%
200	.915	1.017	.176	25.0%
520	.962	1.000	.000	.%
530	1.043	1.000	.000	.%
1112	.977	1.048	.121	19.8%
1135	1.009	1.000	.000	.%
Overall	1.000	1.061	.204	29.5%