



2018

# SAGUACHE COUNTY PROPERTY ASSESSMENT STUDY

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**WILDROSE**  
APPRAISAL, INCORPORATED  
**Audit Division**



September 15, 2018

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

**RE: Final Report for the 2018 Colorado Property Assessment Study**

Dear Mr. Mauer:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2018 Colorado Property Assessment Study.

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

The procedural audit examines all classes of property. It specifically looks at how the assessor develops economic areas, confirms and qualifies sales, develops time adjustments and performs periodic physical property inspections. The audit reviews the procedures for determining subdivision absorption and subdivision discounting. Valuation methodology is examined for residential properties and commercial properties. Procedures are reviewed for producing mines, oil and gas leaseholds and lands producing, producing coal mines, producing earth and stone products, severed mineral interests, and non-producing patented mining claims.

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

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

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

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

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# INTRODUCTION

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## 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.

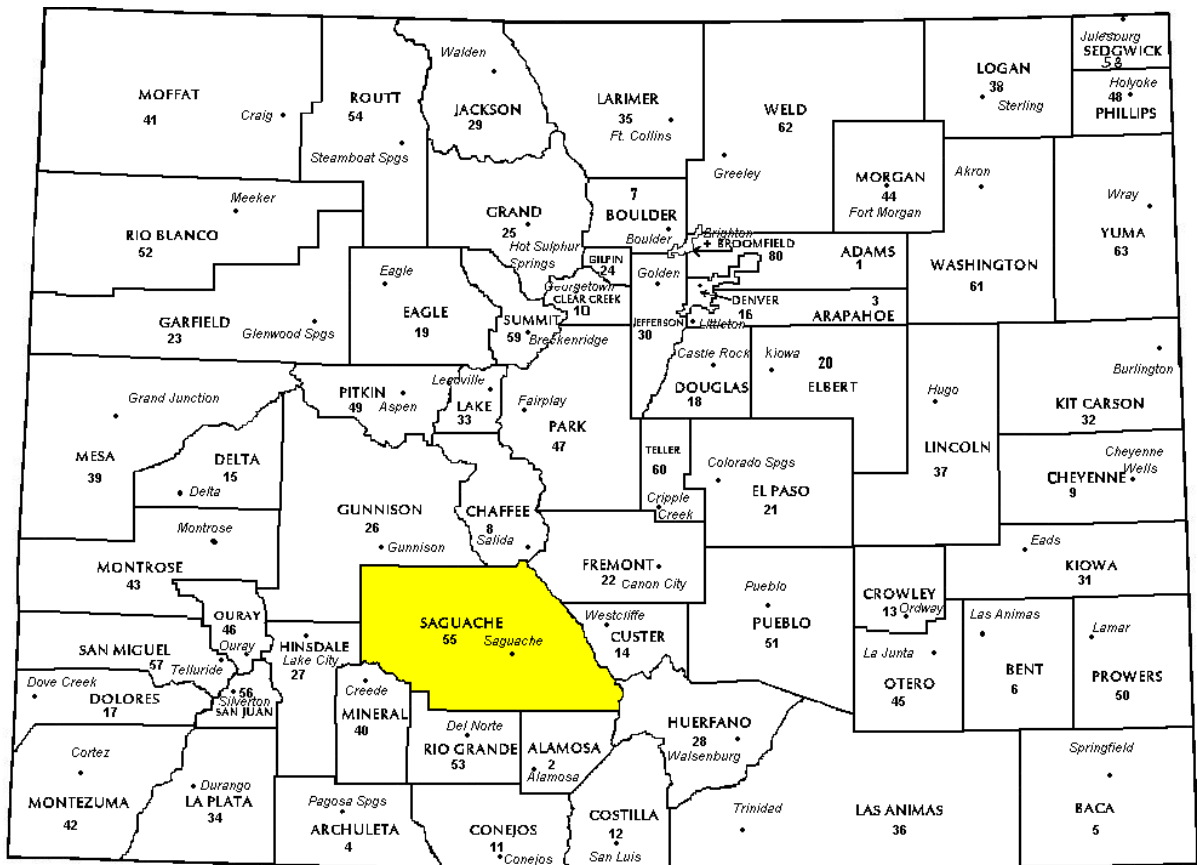
Wildrose Audit has completed the Property Assessment Study for 2018 and is pleased to report its findings for Saguache County in the following report.

# REGIONAL/HISTORICAL SKETCH OF SAGUACHE COUNTY

## Regional Information

Saguache 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

Saguache County had an estimated population of approximately 6,389 people with 2.02 people per square mile, according to the U.S. Census Bureau's 2016 estimated census data. This represents a 4.62 percent change from April 1, 2010 to July 1, 2016.

Saguache is the northern gateway to the San Luis Valley in South Central Colorado. It sits at an elevation of 7800 feet, surrounded by the Sangre de Cristo mountain range on the east and the San Juan range on the west. Many of the peaks are 14000 feet.

Saguache is a Ute Indian name pronounced Sawatch. It means Water at the Blue Earth. It was settled in 1867 by Otto Mears who started his fortune with the first toll road above Poncha Pass. Otto invested in railroads, mining, the

Mack Truck Co. and is credited with the famous Million Dollar Highway.

Ranching and farming are the main occupations in the Valley. Both cattle and sheep are raised, cattle being predominant. Farm crops include potatoes, lettuce and barley. Some logging is done on Forest Service land.

Artists and craft people are numerous in the area. Potters, authors, photographers, weavers, basket makers, and painters are but a few who live in the county. Festivals take place in the County in both summer and winter months, with the Crestone Music Festival in August, the Fall festival in September in Saguache and the Winterfest in Crestone through the Thanksgiving weekend.

*(<http://saguache.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, 2015 and June 30, 2016. Counties with less than 30 sales typically extended the sale period back up to 5 years prior to June 30, 2016 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 Saguache County are:

<b>Saguache County Ratio Grid</b>					
<b>Property Class</b>	<b>Number of Qualified Sales</b>	<b>Unweighted Median Ratio</b>	<b>Price Related Differential</b>	<b>Coefficient of Dispersion</b>	<b>Time Trend Analysis</b>
*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	128	0.992	1.031	12.3	Compliant
Vacant Land	106	1.000	1.143	20.6	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 Saguache 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 Saguache County has complied with the statutory requirements to analyze the effects of time on value in their county. Saguache 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

Saguache 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.

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

### **Conclusions**

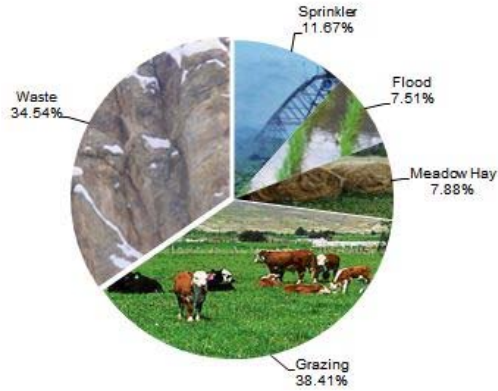
After applying the above described methodologies, it is concluded that Saguache County is reasonably treating its sold and unsold properties in the same manner.

### **Recommendations**

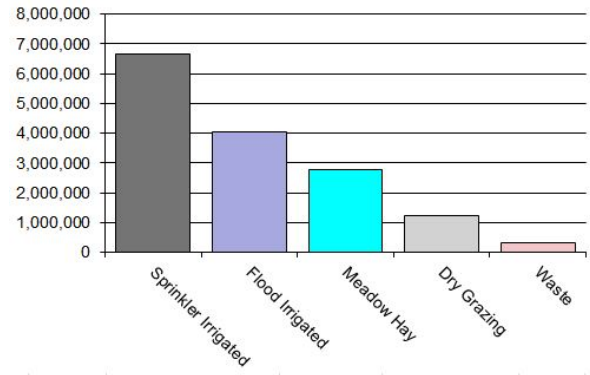
None

# 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:

<b>Saguache County Agricultural Land Ratio Grid</b>						
<b>Abstract Code</b>	<b>Land Class</b>	<b>Number Of Acres</b>	<b>County Value Per Acre</b>	<b>County Assessed Total Value</b>	<b>WRA Total Value</b>	<b>Ratio</b>
4107	Sprinkler	47,985	139.14	6,676,690	7,044,282	0.95
4117	Flood	30,888	131.57	4,063,945	4,273,600	0.95
4137	Meadow Hay	32,402	86.20	2,793,122	2,792,953	1.00
4147	Grazing	157,986	7.93	1,253,618	1,253,618	1.00
4167	Waste	142,095	2.22	315,713	315,713	1.00
<b>Total/Avg</b>		<b>411,356</b>	<b>36.72</b>	<b>15,103,087</b>	<b>15,680,165</b>	<b>0.96</b>

### **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**

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

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## Agricultural Land Under Improvements

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### 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

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

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

Saguache 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
- Phone Interviews
- In-Person Interviews with Owners/Tenants
- Personal Knowledge of Occupants at Assessment Date
- Aerial Photography/Pictometry

Saguache 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 2018 for Saguache County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 32 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**

Saguache County appears to be doing a good job of verifying their sales. WRA agreed with

the county's reason for disqualifying each of the sales selected in the sample. There are no recommendations or suggestions.

### **Recommendations**

None



# ECONOMIC AREA REVIEW AND EVALUATION

## **Methodology**

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

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Saguache County is exempt from the Natural Resources Study.

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## VACANT LAND

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**Saguache County is exempt from the Vacant Land Subdivision  
Discount Study.**

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# 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.

Saguache 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

Saguache 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

Saguache 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.

Saguache 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
- Questionnaires, Letters and/or Phone Calls to Buyer, Seller and/or Realtor

The county uses the Division of Property Taxation (DPT) recommended classification and documentation procedures. The DPT's recommended cost factor tables, depreciation tables and level of value adjustment factor tables are also used.

Saguache County submitted their personal property written audit plan and was current for the 2018 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
- Accounts with omitted property
- Same business type or use



- Businesses with no deletions or additions for 2 or more years
- Non-filing Accounts - Best Information Available
- Accounts close to the \$7,400 actual value exemption status
- Lowest or highest quartile of value per square foot
- Accounts protested with substantial disagreement

### **Conclusions**

Saguache 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*

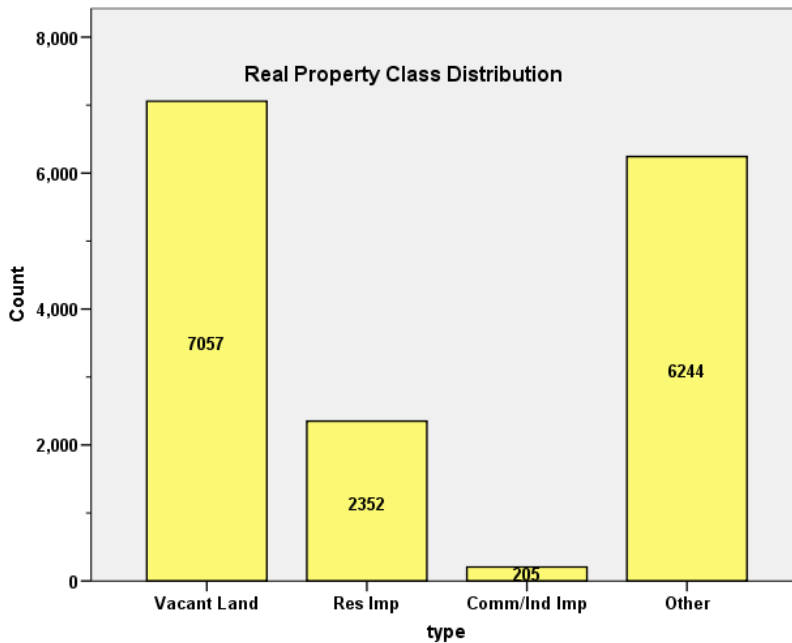
# APPENDICES



**STATISTICAL COMPLIANCE REPORT  
FOR SAGUACHE COUNTY  
2018**

**I. OVERVIEW**

Saguache County is located in southern Colorado. The county has a total of 15,858 real property parcels, according to data submitted by the county assessor’s office in 2018. 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 87.6% of all vacant land parcels.

For residential improved properties, single family properties accounted for 97.5% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial sales accounted for less 1.3% of all such properties in this county.

**II. DATA FILES**

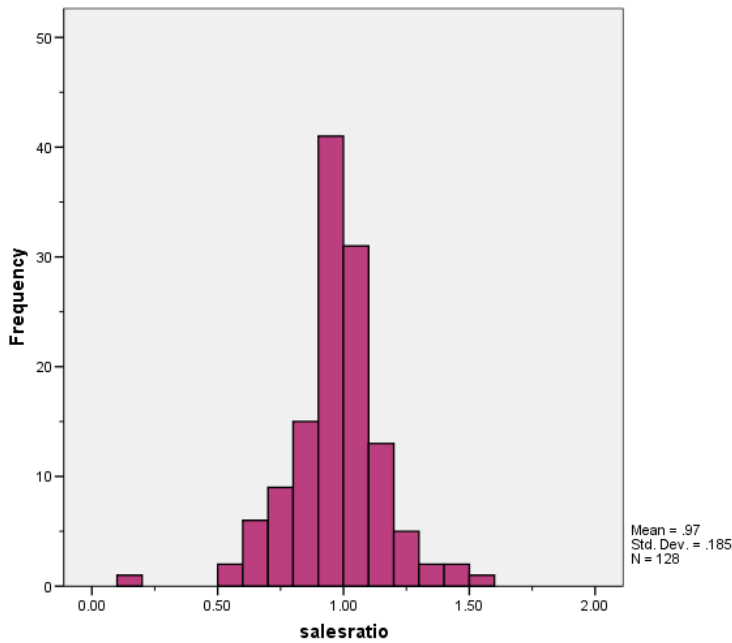
The following sales analyses were based on the requirements of the 2018 Colorado Property Assessment Study. Information was provided by the Saguache Assessor’s Office in June 2018.

### III. RESIDENTIAL SALES RESULTS

There were 128 qualified residential sales in the 24 month sale period ending June 30, 2016. No sales were trimmed. The sales ratio analysis results were as follows:

Median	<b>0.992</b>
Price Related Differential	<b>1.031</b>
Coefficient of Dispersion	<b>12.3</b>

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.

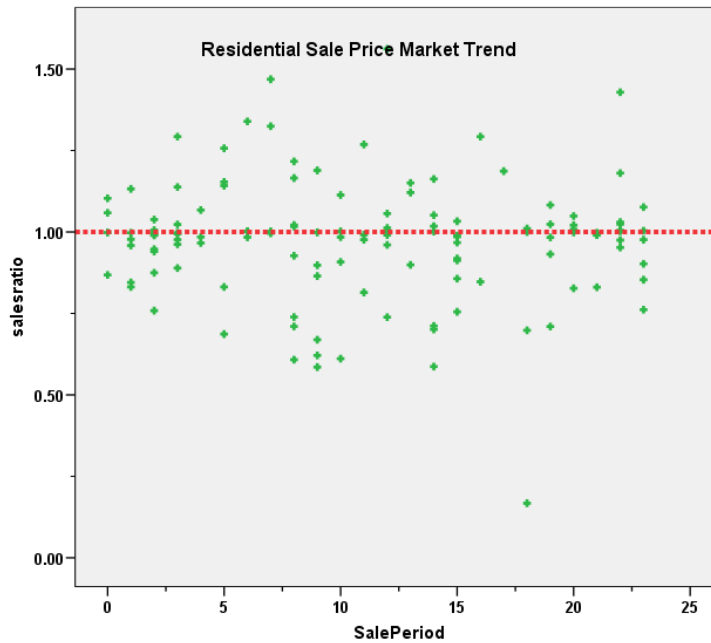
### Residential Market Trend Analysis

We next analyzed the residential dataset using a 24-month sale period (July 2014 to June 2016) for any residential market trending, with the following results:

#### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	.990	.031		32.297	.000
	SalePeriod	-.001	.002	-.057	-.636	.526

a. Dependent Variable: salesratio



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

### Sold/Unsold Analysis

In terms of the valuation consistency between sold and unsold residential properties, we compared the median and mean change in actual value for taxable years 2016 and 2018 for sold and unsold residential properties in Saguache County, with the following results:

#### Report

DIFF	N	Median	Mean
UNSOLD	2,224	1.00	1.01
SOLD	128	1.00	.99

#### Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The medians of DIFF are the same across categories of sold.	Independent-Samples Median Test	.843	Retain the null hypothesis.

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

Based on the overall consistency in the above comparison analysis, we concluded that the assessor has valued sold and unsold residential properties consistently.

#### IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

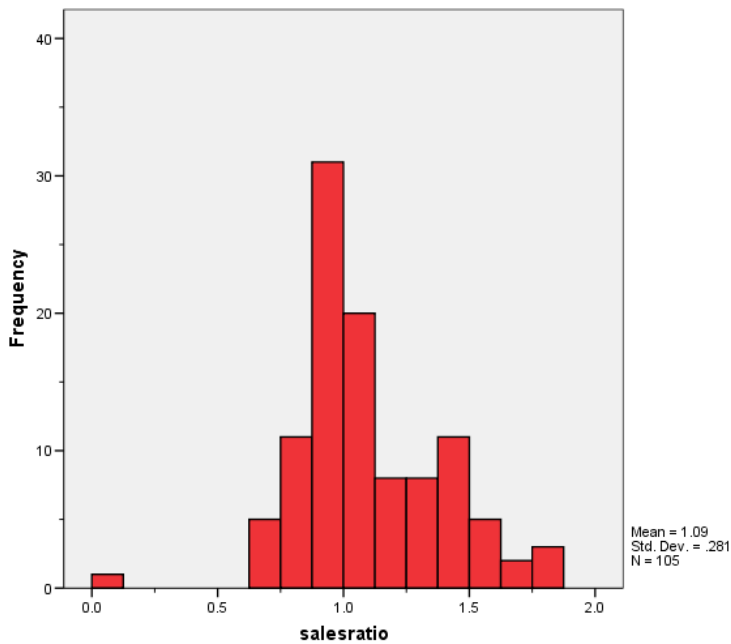
Due to the fact that there were less than 10 commercial/industrial sales in this County between July 1 2011 and June 30 2016, this class of properties was not analyzed for sales ratio compliance.

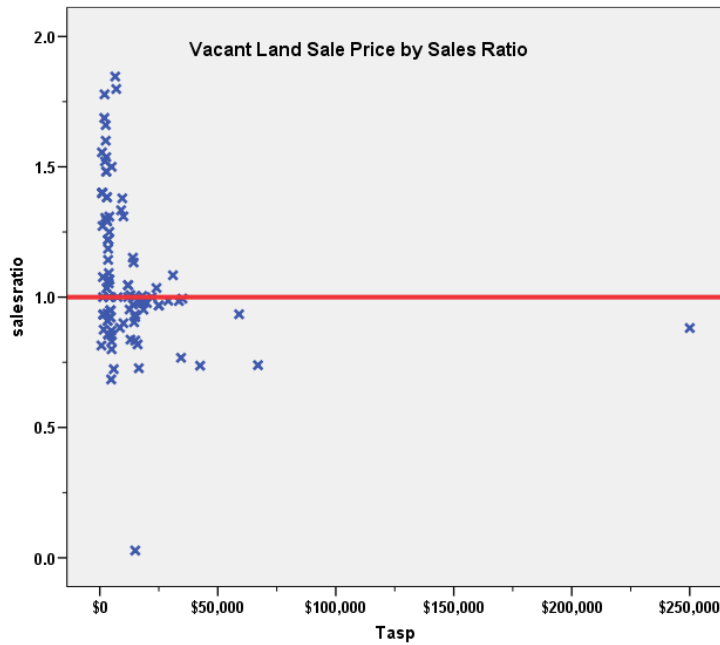
#### V. VACANT LAND SALE RESULTS

There were 106 qualified vacant land sales in the 24 month sale period ending June 30, 2016. One sale was trimmed. These sales were analyzed as follows:

Median	<b>1.000</b>
Price Related Differential	<b>1.143</b>
Coefficient of Dispersion	<b>20.6</b>

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





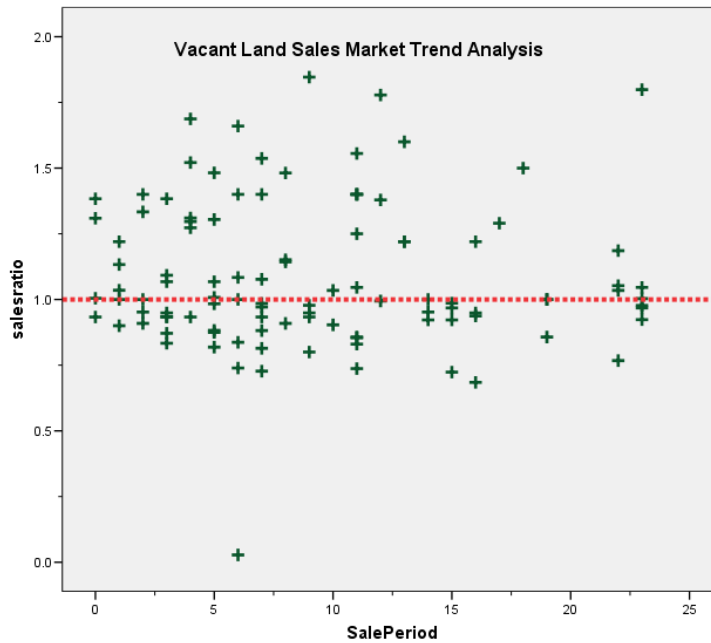
### Vacant Land Market Trend Analysis

We analyzed the sales ratios for vacant land sales, based on the time adjusted sale price (TASP) and the actual land value to determine if there was any residual time trending in the vacant land valuations. The 105 vacant land sales were analyzed, examining the sales ratios across the 24 month sale period with the following results:

#### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.102	.048		22.879	.000
	SalePeriod	-.001	.004	-.031	-.312	.755

a. Dependent Variable: salesratio



The market trend analysis indicated no statistically significant trend. Based on these results, we concluded that the assessor has adequately considered market trending in their vacant land valuations.

### Sold/Unsold Analysis

We compared the median change in actual value for taxable years 2016 and 2018 for vacant land properties to determine if sold and unsold properties were valued consistently, as follows:

#### Report

DIFF			
DIFF	N	Median	Mean
UNSOLD	6,947	1.00	1.00
SOLD	105	1.00	.99

#### Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The medians of DIFF are the same across categories of sold.	Independent-Samples Median Test	.030	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .02.

The above results indicated that sold vacant land properties were valued consistently with unsold vacant land properties for Saguache County.

## VI. AGRICULTURAL IMPROVEMENTS ANALYSIS

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

The following indicates that both groups were valued in essentially the same manner:

### Report

IMPVALSF	N	Median	Mean
1212.00	139	\$67.09	\$88.60
4277.00	171	\$63.08	\$79.13

### Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of IMPVALSF is the same across categories of ABSTRIMP.	Independent-Samples Mann-Whitney U Test	.180	Retain the null hypothesis.

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

## VII. CONCLUSIONS

Based on this statistical analysis, Saguache County was found to be in compliance for the 2018 reappraisal year.



**STATISTICAL ABSTRACT**

**Residential**

**Ratio Statistics for CURRTOT / Adjusted Sale Price**

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			
.974	.941	1.006	.992	.983	1.001	95.8%	.944	.911	.978	1.031	.123	19.0%

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.

**Vacant Land**

**Ratio Statistics for CURRLND / 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			
1.090	1.035	1.144	1.000	.971	1.068	96.9%	.953	.901	1.005	1.143	.206	25.8%

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	2	1.6%
	\$25K to \$50K	9	7.0%
	\$50K to \$100K	40	31.3%
	\$100K to \$150K	31	24.2%
	\$150K to \$200K	25	19.5%
	\$200K to \$300K	17	13.3%
	\$300K to \$500K	4	3.1%
Overall		128	100.0%
Excluded		0	
Total		128	

**Ratio Statistics for CURRTOT / Adjusted Sale Price**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT \$25K	.674	1.016	.751	106.3%
\$25K to \$50K	1.056	1.012	.140	22.1%
\$50K to \$100K	.999	1.000	.094	14.4%
\$100K to \$150K	.999	1.008	.104	16.6%
\$150K to \$200K	.975	.999	.125	17.9%
\$200K to \$300K	.912	1.003	.138	16.9%
\$300K to \$500K	.915	.995	.121	21.4%
Overall	.992	1.031	.123	18.8%

**Subclass**

**Case Processing Summary**

		Count	Percent
ABSTRIMP	1212.00	128	100.0%
Overall		128	100.0%
Excluded		0	
Total		128	

**Ratio Statistics for CURRTOT / Adjusted Sale Price**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212.00	.992	1.031	.123	18.8%
Overall	.992	1.031	.123	18.8%

## Age

### Case Processing Summary

		Count	Percent
AgeRec	Over 100	9	7.0%
	75 to 100	6	4.7%
	50 to 75	10	7.8%
	25 to 50	28	21.9%
	5 to 25	71	55.5%
	5 or Newer	4	3.1%
Overall		128	100.0%
Excluded		0	
Total		128	

### Ratio Statistics for CURRTOT / Adjusted Sale Price

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	.997	.970	.222	35.2%
75 to 100	.979	1.008	.082	13.5%
50 to 75	1.001	1.078	.134	22.8%
25 to 50	.997	1.028	.124	18.5%
5 to 25	.990	1.035	.115	16.7%
5 or Newer	.995	1.003	.044	9.5%
Overall	.992	1.031	.123	18.8%

## Improved Area

### Case Processing Summary

		Count	Percent
ImpSFRec	0	2	1.6%
	LE 500 sf	3	2.3%
	500 to 1,000 sf	28	21.9%
	1,000 to 1,500 sf	46	35.9%
	1,500 to 2,000 sf	29	22.7%
	2,000 to 3,000 sf	16	12.5%
	3,000 sf or Higher	4	3.1%
Overall		128	100.0%
Excluded		0	
Total		128	

**Ratio Statistics for CURRTOT / Adjusted Sale Price**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.958	1.009	.041	5.8%
LE 500 sf	.853	1.077	.125	18.8%
500 to 1,000 sf	.989	.992	.162	24.9%
1,000 to 1,500 sf	.997	1.062	.122	18.5%
1,500 to 2,000 sf	1.000	1.024	.115	16.8%
2,000 to 3,000 sf	.996	1.028	.086	14.6%
3,000 sf or Higher	.958	1.015	.043	5.3%
Overall	.992	1.031	.123	18.8%

**Improvement Quality**

**Case Processing Summary**

	Count	Percent
QUALITY 0	2	1.6%
1	22	17.5%
2	51	40.5%
3	39	31.0%
4	12	9.5%
Overall	126	100.0%
Excluded	2	
Total	128	

**Ratio Statistics for CURRTOT / Adjusted Sale Price**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	1.255	1.012	.030	4.3%
1	1.027	.998	.149	24.4%
2	1.001	1.009	.106	16.8%
3	.984	1.005	.106	14.9%
4	.908	1.017	.166	21.2%
Overall	.992	1.032	.124	18.9%

## Neighborhood

### Case Processing Summary

		Count	Percent
NBHD	1 SF/SHD	3	2.3%
	1 W/SF/WCD	6	4.7%
	1ST ADD CE	1	0.8%
	22 W0/FD	2	1.6%
	26 CF,W,RG	4	3.1%
	26 W/SFPD	1	0.8%
	7	2	1.6%
	AG LAND	1	0.8%
	ANTELOPE MEADOWS	2	1.6%
	B G CH I	32	25.0%
	B G CHA II	15	11.7%
	B G MHE	2	1.6%
	BACA GRAN	1	0.8%
	BASSETTS	1	0.8%
	BG CHA III	2	1.6%
	BG GRANTS	8	6.3%
	BG RANCHTS	1	0.8%
	CENTER	1	0.8%
	CENTER VW	1	0.8%
	COMM SM TN	1	0.8%
	CR ACRES	1	0.8%
	CRESTONE	5	3.9%
	DAGEFORDE	2	1.6%
	EDWARDS TR	1	0.8%
	EWING	1	0.8%
	GOLD BASIN	1	0.8%
	JONES CENT	5	3.9%
	LAZY KV ESTATES	5	3.9%
	LINDFR END	1	0.8%
	MEARS SAG	1	0.8%
	MIN HOT SP	1	0.8%
	MOFFAT	1	0.8%
	S & B CENT	2	1.6%
	SAGUACHE E	5	3.9%
	SAGUACHE W	1	0.8%
	SARGENTS	4	3.1%
	SETTLES SG	1	0.8%
	VALL VISTA	3	2.3%
Overall		128	100.0%
Excluded		0	
Total		128	

**Ratio Statistics for CURRTOT / Adjusted Sale Price**

Group	Median	Price Related Differential	Coefficient of Dispersion
1 SF/SHD	.991	1.015	.119
1 W/SF/WCD	1.061	.980	.078
1ST ADD CE	1.059	1.000	.000
22 W0/FD	1.098	.957	.144
26 CF,W,RG	.896	.852	.261
26 W/SFPD	1.000	1.000	.000
7	.981	1.007	.154
AG LAND	.898	1.000	.000
ANTELOPE MEADOWS	.908	.994	.060
B G CH I	.985	1.017	.109
B G CHA II	1.004	.995	.054
B G MHE	1.176	1.000	.009
BACA GRAN	1.269	1.000	.000
BASSETTS	1.293	1.000	.000
BG CHA III	.962	1.011	.109
BG GRANTS	.906	1.018	.124
BG RANCHTS	.998	1.000	.000
CENTER	.966	1.000	.000
CENTER VW	1.052	1.000	.000
COMM SM TN	1.021	1.000	.000
CR ACRES	.608	1.000	.000
CRESTONE	.992	1.087	.245
DAGEFORDE	.794	1.040	.120
EDWARDS TR	.992	1.000	.000
EWING	1.012	1.000	.000
GOLD BASIN	.585	1.000	.000
JONES CENT	1.056	1.076	.126
LAZY KV ESTATES	.990	.998	.018
LINDFR END	.932	1.000	.000
MEARS SAG	1.142	1.000	.000
MIN HOT SP	.927	1.000	.000
MOFFAT	.868	1.000	.000
S & B CENT	1.017	1.003	.020
SAGUACHE E	1.150	.994	.167
SAGUACHE W	1.325	1.000	.000
SARGENTS	.925	1.003	.132
SETTLES SG	.908	1.000	.000
VALL VISTA	1.033	.998	.038
Overall	.992	1.031	.123

**Vacant Land Median Ratio Stratification**

**Sale Price**

**Case Processing Summary**

		Count	Percent
SPRec	LT \$25K	96	91.4%
	\$25K to \$50K	6	5.7%
	\$50K to \$100K	2	1.9%
	\$200K to \$300K	1	1.0%
Overall		105	100.0%
Excluded		0	
Total		105	

**Ratio Statistics for CURRLND / Tasp**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT \$25K	1.006	1.092	.212	30.1%
\$25K to \$50K	.986	1.013	.097	15.7%
\$50K to \$100K	.837	1.007	.117	16.5%
\$200K to \$300K	.882	1.000	.000	.
Overall	1.000	1.143	.206	29.5%

**Subclass**

**Case Processing Summary**

		Count	Percent
ABSTRRLND	100.00	89	84.8%
	540.00	1	1.0%
	550.00	14	13.3%
	560.00	1	1.0%
Overall		105	100.0%
Excluded		0	
Total		105	

**Ratio Statistics for CURRLND / Tasp**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
100.00	1.046	1.121	.210	27.3%
540.00	.977	1.000	.000	.
550.00	.968	.989	.102	27.3%
560.00	.767	1.000	.000	.
Overall	1.000	1.143	.206	29.5%