



2019  
SAGUACHE COUNTY  
PROPERTY ASSESSMENT  
STUDY

---



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



September 15, 2019

Ms. Natalie Mullis  
Director of Research  
Colorado Legislative Council  
Room 029, State Capitol Building  
Denver, Colorado 80203

**RE: Final Report for the 2019 Colorado Property Assessment Study**

Dear Ms. Mullis:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2019 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 2019 and is pleased to report its findings for Saguache County in the following report.





## Historical Information

Saguache County had an estimated population of approximately 6,389 people with 2.0 people per square mile, according to the U.S. Census Bureau's 2016 estimated census data. This represents a 4.6 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 property were analyzed. Sales were collected for each property class over the eighteen month period from January 1, 2017 through June 30, 2018. Property classes with less than thirty sales had the sales period extended in six month increments up to an additional forty-two months. If this extended sales period did not produce the minimum thirty qualified sales, the Audit performed supplemental appraisals to reach the minimum.

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.

All sixty-four counties were examined for compliance on the economic area level. Where there were sufficient sales data, the neighborhood and subdivision levels were tested for compliance. Although counties are determined to be in or out of compliance at the class level, non-compliant economic areas, neighborhoods and subdivisions (where applicable) were discussed with the Assessor.

**Data on the individual economic areas, neighborhoods and subdivisions are found in the STATISTICAL APPENDIX.**

## 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	109	0.950	1.032	15.9	Compliant
Vacant Land	89	0.968	1.066	20.9	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**

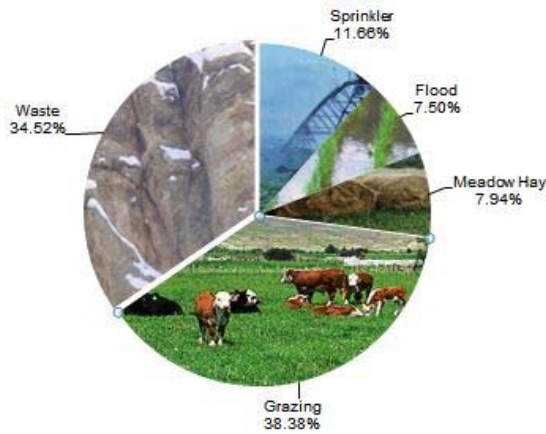
After applying the above described methodologies, it is concluded that Saguache County is reasonably treating its sold and unsold properties in the same manner.

**Recommendations**

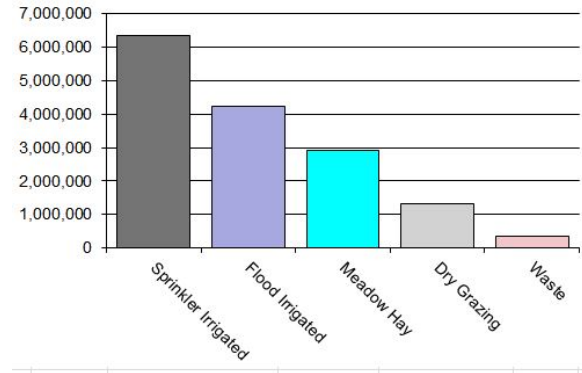
None

# 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	47,986	132.23	6,345,114	6,698,720	0.95
4117	Flood	30,875	137.44	4,243,572	4,271,461	0.99
4137	Meadow Hay	32,663	89.40	2,919,910	3,141,897	0.93
4147	Grazing	157,986	8.33	1,316,504	1,316,504	1.00
4167	Waste	142,095	2.39	339,011	339,011	1.00
<b>Total/Avg</b>		<b>411,605</b>	<b>36.84</b>	<b>15,164,111</b>	<b>15,767,594</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
- Written Correspondence other than Questionnaire
- 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
- Written Correspondence other than Questionnaire
- 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 2019 for Saguache County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 37 sales listed as unqualified.

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

For residential, commercial, and vacant land sales with considerations over \$100,000, 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 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.

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 Saguache County:

0100 Residential Lots  
2112 Merchandising  
2130 Special Purpose  
2212 Merchandising  
2230 Special Purpose  
2235 Warehouse/Storage

### **Conclusions**

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

### **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
- MLS Listing and/or Sold Books
- 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 2019 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 \$7,700 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*

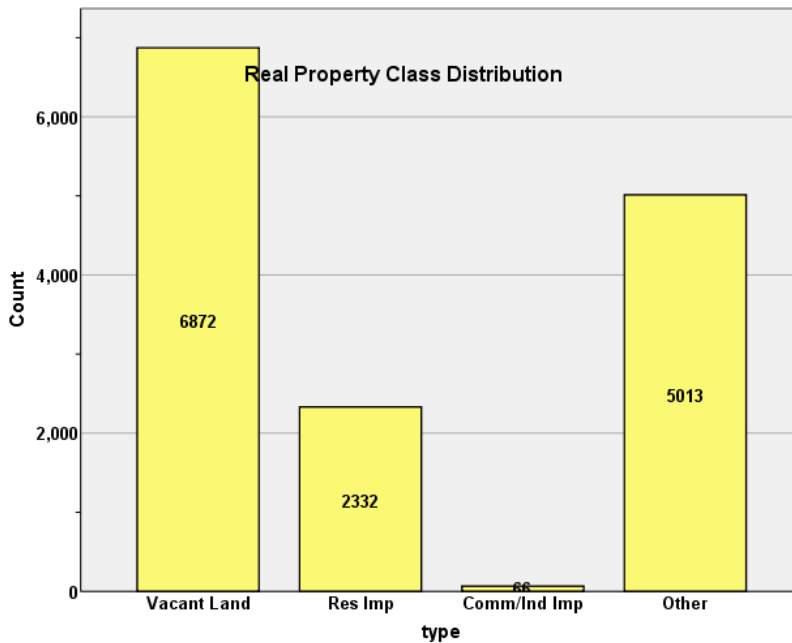
# STATISTICAL APPENDIX



**STATISTICAL COMPLIANCE REPORT  
FOR SAGUACHE COUNTY  
2019**

**I. OVERVIEW**

Saguache County is located in southern Colorado. The county has a total of 14,305 real property parcels, according to data submitted by the county assessor’s office in 2019. 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 82.6% of all vacant land parcels.

For residential improved properties, single family properties accounted for 99.1% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial properties accounted for less 0.5% of all such properties in this county.

Based on the Audit questionnaire filled out by the assessor (see below), the following geographic levels were used by the assessor to value residential, commercial and vacant land properties:

Geo Area	Residential	Comm/Ind	Vacant Land
Economic Area	V	N	V
Neighborhood	V	N	V
Subdivision	V	N	V

*Codes*

*V=Valid Geographic Level – used for modeling*

*N = Not used as Geographic Level for modeling*

**II. DATA FILES**

The following sales analyses were based on the requirements of the 2019 Colorado Property Assessment Study. Information was provided by the Saguache Assessor’s Office in June 2019.

**III. RESIDENTIAL SALES RESULTS**

There were 115 qualified residential sales in the 24 month sale period ending June 30, 2018. We trimmed 6 sales using IAAO standards, resulting in a final count of 109 qualified residential sales. The sales ratio analysis results were as follows:

Median	<b>0.95</b>
Price Related Differential	<b>1.032</b>
Coefficient of Dispersion	<b>15.9</b>

We next stratified the sale ratio analysis by economic area and by neighborhoods with at least 10 sales, as follows:

**Economic Area  
Case Processing Summary**

	Count	Percent
ECONAREA	5	4.6%
ECO AREA 1	9	8.3%
ECO AREA 2	13	11.9%
ECO AREA 3	66	60.6%
ECO AREA 4	3	2.8%
ECO AREA 5	13	11.9%
Overall	109	100.0%
Excluded	0	
Total	109	

**Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion
	.900	1.012	.168
ECO AREA 1	1.014	1.013	.113
ECO AREA 2	.984	.986	.148
ECO AREA 3	.930	1.018	.152
ECO AREA 4	.685	.945	.112
ECO AREA 5	1.024	1.072	.169
Overall	.945	1.032	.159

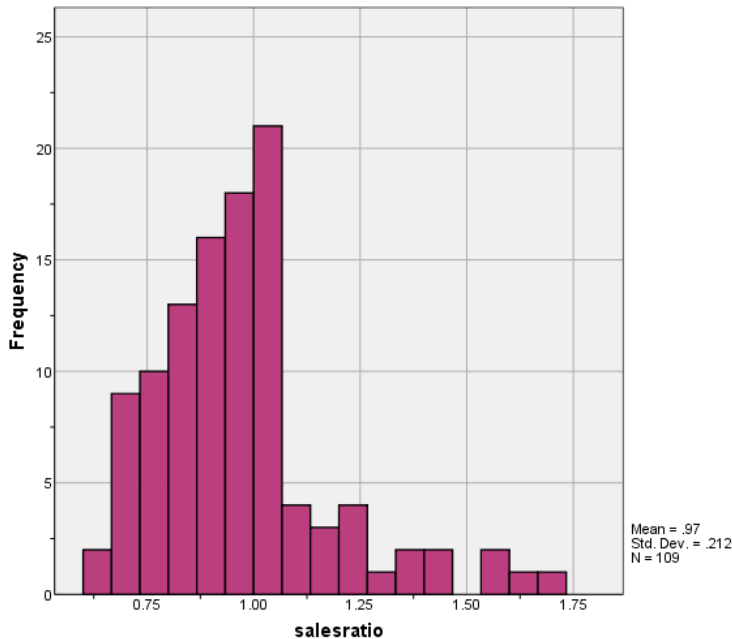
EA3 had a median ratio below the 0.95 SBOE lower limit, while EA 5 had a COD over the 15.9 limit. We will contact the assessor to discuss this result.

**Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion
90511	.911	1.008	.139
90512	1.009	1.040	.165

As with the economic area stratification, the neighborhood with the greatest number of sales (90511) had a median ratio below the 0.95 SBOE lower limit. The other neighborhood had a COD above the SBOE limit for maximum COS. These will also be discussed with the assessor.

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





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

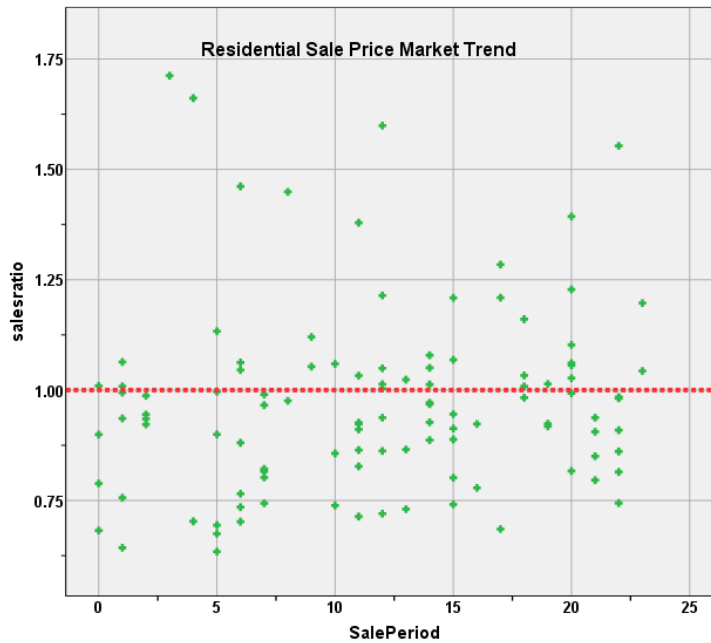
### Residential Market Trend Analysis

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

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

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.929	.041		22.780	.000
	SalePeriod	.004	.003	.117	1.220	.225

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 2019 median value per square foot for each group, as follows:

#### Report

VALSF			
sold	N	Median	Mean
UNSOLD	2221	\$48	\$88
SOLD	103	\$81	\$84

### 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 .01.

Due to the statistically significant difference between sold and unsold residential properties, we next compared the median and mean change in actual value for taxable years 2018 and 2019 for sold and unsold residential properties in Saguache County. This analysis was stratified by class, economic area and neighborhoods with at least 10 sales, with the following results:

**Class**

**Report**

DIFF				
DIFF	sold	N	Median	Mean
UNSOLD		2218	1.02	1.18
SOLD		109	1.02	1.21

**Economic Area**

**Report**

DIFF				
ECONAREA	sold	N	Median	Mean
ECO AREA 1	UNSOLD	220	1.02	.97
	SOLD	9	1.35	1.58
ECO AREA 2	UNSOLD	471	1.05	.96
	SOLD	13	1.05	1.30
ECO AREA 3	UNSOLD	618	1.00	1.45
	SOLD	66	1.02	1.20
ECO AREA 4	UNSOLD	175	1.01	1.09
	SOLD	3	1.02	.94
ECO AREA 5	UNSOLD	656	1.02	1.10
	SOLD	13	1.02	1.03

**Neighborhoods with at least 10 sales**

**Report**

DIFF				
NBHD	sold	N	Median	Mean
90511	UNSOLD	332	1.00	1.29
	SOLD	39	1.00	1.19
90512	UNSOLD	133	1.05	1.23
	SOLD	17	1.05	1.11

Based on the overall consistency in the above comparison analysis at the class level for most economic areas and larger neighborhoods, we concluded that the assessor has valued sold and unsold residential properties consistently. We will discuss with the assessor possible reasons for discrepancies seen for several economic areas.

**IV. COMMERCIAL/INDUSTRIAL SALE RESULTS**

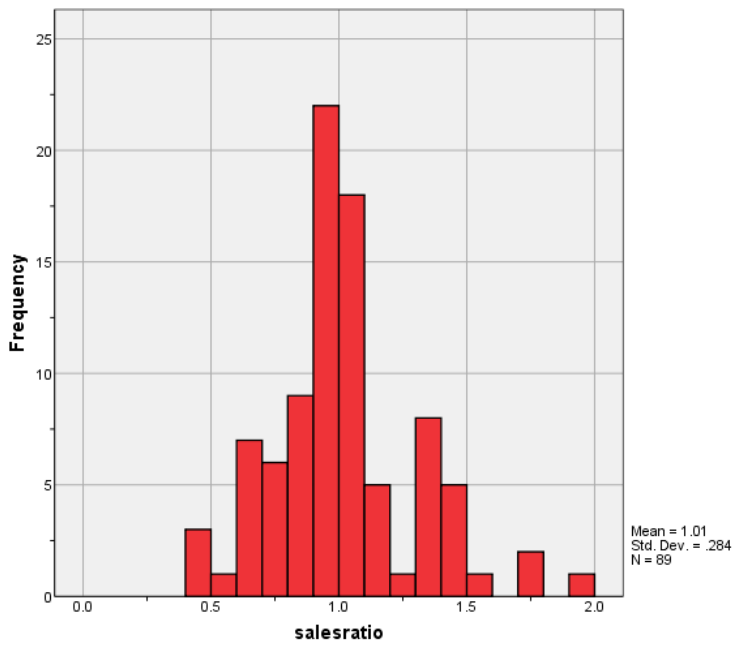
The County did not have enough qualified commercial/industrial sales to be statistically significant. A procedural audit was completed for taxable year 2019. This analysis reviewed all qualified commercial sales. Information was gathered concerning class of property, year built, improvement size, type and quality of construction, condition at the time of sale, sale date and amount and the Assessor value. The audit then determined sale price per square foot and the sales ratio. The audit concluded that the County is in compliance due to the lack of substantive data to support a revaluation decision.

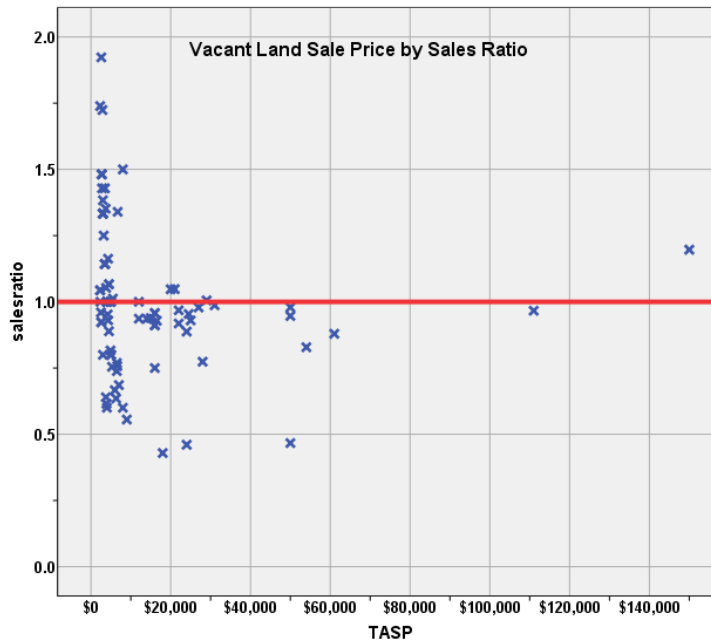
## V. VACANT LAND SALE RESULTS

There were 89 qualified vacant land sales in the 18-month sale period ending June 30, 2018. The sales ratio analysis results were as follows:

Median	<b>0.968</b>
Price Related Differential	<b>1.066</b>
Coefficient of Dispersion	<b>20.9</b>

The above tables indicate 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

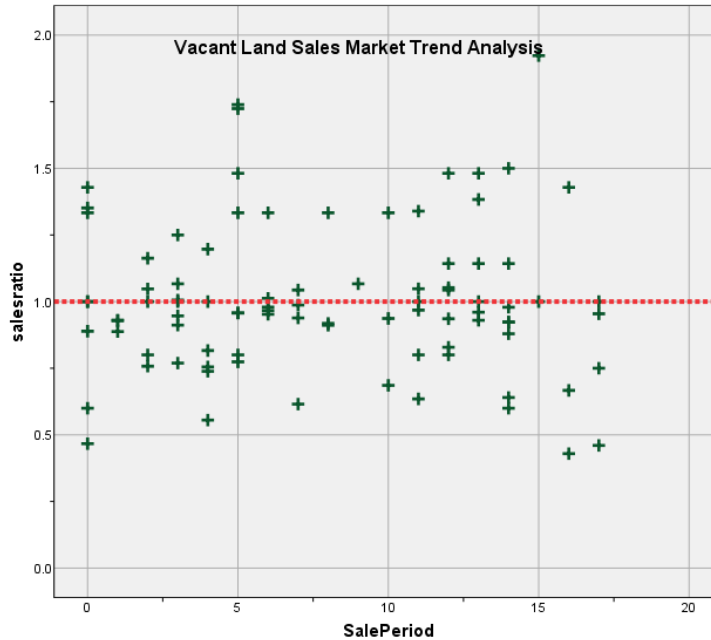
We analyzed the sales ratios for vacant land sales, based on the time adjusted sale price (TASP) and the actual land value to determine if there was any residual time trending in the vacant land valuations. The vacant land sales were analyzed, examining the sales ratios across the 18 month sale period with the following results:

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

Model	Unstandardized Coefficients		Standardized	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	1.010	.055		18.356	.000
	SalePeriod	.000	.006	-.008	-.076	.940

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 2018 and 2019 for vacant land properties to determine if sold and unsold properties were valued consistently, as follows:

#### Report

DIFF				
	DIFF	N	Median	Mean
UNSOLD	6732	1.00	1.10	
SOLD	82	1.20	1.24	

We next stratified this analysis by subdivisions with at least 4 sales, as follows:

#### Report

DIFF				
SUBDIVNO	DIFF	N	Median	Mean
150	UNSOLD	677	1.71	1.57
	SOLD	22	1.71	1.54
160	UNSOLD	110	1.33	1.32
	SOLD	5	1.33	1.33
2042	UNSOLD	139	1.02	1.02
	SOLD	5	1.39	1.36
510	UNSOLD	984	1.12	1.10
	SOLD	10	1.12	1.07
520	UNSOLD	656	1.20	1.21
	SOLD	10	1.20	1.20
540	UNSOLD	479	1.00	1.03
	SOLD	10	1.00	1.00

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

## **V. CONCLUSIONS**

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

## **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			
.972	.932	1.012	.945	.918	.993	96.5%	.942	.908	.976	1.032	.159	21.8%

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.

### **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			
1.006	.946	1.066	.968	.936	1.000	96.7%	.944	.864	1.024	1.066	.209	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**

		Count	Percent
SPRec	LT \$25K	1	0.9%
	\$25K to \$50K	9	8.3%
	\$50K to \$100K	24	22.0%
	\$100K to \$150K	18	16.5%
	\$150K to \$200K	32	29.4%
	\$200K to \$300K	22	20.2%
	\$300K to \$500K	2	1.8%
	\$500K to \$750K	1	0.9%
Overall		109	100.0%
Excluded		0	
Total		109	

**Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT \$25K	.861	1.000	.000	.
\$25K to \$50K	.924	1.018	.200	35.9%
\$50K to \$100K	1.018	1.015	.201	28.3%
\$100K to \$150K	.984	1.000	.121	17.4%
\$150K to \$200K	.956	.995	.137	17.9%
\$200K to \$300K	.893	.996	.118	14.2%
\$300K to \$500K	.765	.996	.067	9.5%
\$500K to \$750K	.990	1.000	.000	.
Overall	.945	1.032	.159	22.6%

**Subclass**

**Case Processing Summary**

		Count	Percent
ABSTRIMP	.00	6	5.5%
	1212.00	103	94.5%
Overall		109	100.0%
Excluded		0	
Total		109	

**Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.00	.983	.986	.038	5.4%
1212.00	.937	1.037	.166	23.5%
Overall	.945	1.032	.159	22.6%

## Age

### Case Processing Summary

		Count	Percent
AgeRec	0	8	7.3%
	Over 100	4	3.7%
	75 to 100	8	7.3%
	50 to 75	6	5.5%
	25 to 50	16	14.7%
	5 to 25	59	54.1%
	5 or Newer	8	7.3%
Overall		109	100.0%
Excluded		0	
Total		109	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.992	1.040	.100	18.5%
Over 100	1.004	.991	.043	5.5%
75 to 100	.998	.989	.133	24.3%
50 to 75	1.009	1.014	.159	31.7%
25 to 50	.917	1.014	.142	17.7%
5 to 25	.926	1.032	.170	22.8%
5 or Newer	.893	1.041	.198	32.1%
Overall	.945	1.032	.159	22.6%

## Improved Area

### Case Processing Summary

		Count	Percent
ImpSFRec	0	6	5.5%
	500 to 1,000 sf	12	11.0%
	1,000 to 1,500 sf	34	31.2%
	1,500 to 2,000 sf	31	28.4%
	2,000 to 3,000 sf	17	15.6%
	3,000 sf or Higher	9	8.3%
Overall		109	100.0%
Excluded		0	
Total		109	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.983	.986	.038	5.4%
500 to 1,000 sf	.990	1.028	.193	29.3%
1,000 to 1,500 sf	.894	1.034	.177	25.2%
1,500 to 2,000 sf	.983	1.036	.128	17.5%
2,000 to 3,000 sf	.968	1.025	.115	17.2%
3,000 sf or Higher	1.062	1.100	.205	27.1%
Overall	.945	1.032	.159	22.6%

## Improvement Quality

### Case Processing Summary

	Count	Percent
QUALITY	7	6.4%
AVERAGE	35	32.1%
EXCELLENT	8	7.3%
FAIR	14	12.8%
GOOD	40	36.7%
POOR	5	4.6%
Overall	109	100.0%
Excluded	0	
Total	109	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
	.990	1.001	.049	6.9%
AVERAGE	.945	1.058	.184	25.1%
EXCELLENT	.990	1.006	.097	13.6%
FAIR	.923	.969	.138	20.8%
GOOD	.930	1.009	.128	15.9%
POOR	1.462	.977	.181	25.3%
Overall	.945	1.032	.159	22.6%

### Vacant Land Median Ratio Stratification

#### Sale Price

### Case Processing Summary

	Count	Percent
SPRec LT \$25K	78	87.6%
\$25K to \$50K	7	7.9%
\$50K to \$100K	2	2.2%
\$100K to \$150K	2	2.2%
Overall	89	100.0%
Excluded	0	
Total	89	

### Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT \$25K	.984	1.095	.218	30.1%
\$25K to \$50K	.979	1.021	.115	23.1%
\$50K to \$100K	.854	.998	.030	4.2%
\$100K to \$150K	1.082	.984	.106	15.1%
Overall	.968	1.066	.209	29.6%

## Subclass

### Case Processing Summary

		Count	Percent
ABSTRLND	.00	10	11.2%
	100.00	61	68.5%
	540.00	3	3.4%
	550.00	14	15.7%
	560.00	1	1.1%
Overall		89	100.0%
Excluded		0	
Total		89	

### Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.00	.944	1.022	.211	27.1%
100.00	1.000	1.191	.247	32.8%
540.00	.912	.991	.025	5.2%
550.00	.950	.999	.025	3.3%
560.00	1.197	1.000	.000	.
Overall	.968	1.066	.209	29.6%

## Neighborhood

### Case Processing Summary

		Count	Percent
NBHD	20420	8	10.1%
	30030	1	1.3%
	30230	1	1.3%
	40230	1	1.3%
	40420	1	1.3%
	50051	5	6.3%
	50054	1	1.3%
	50710	1	1.3%
	51200	22	27.8%
	51710	2	2.5%
	51920	1	1.3%
	52802	1	1.3%
	52803	2	2.5%
	52804	1	1.3%
	90511	10	12.7%
	90512	10	12.7%
	90513	1	1.3%
	90514	10	12.7%
Overall		79	100.0%
Excluded		10	
Total		89	

### Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion
20420	.943	.998	.013
30030	.918	1.000	.000
30230	1.197	1.000	.000
40230	.987	1.000	.000
40420	.966	1.000	.000
50051	.888	1.096	.175
50054	.429	1.000	.000
50710	.829	1.000	.000
51200	1.006	1.023	.210
51710	.945	.991	.036
51920	.460	1.000	.000
52802	1.006	1.000	.000
52803	.929	1.005	.054
52804	.930	1.000	.000
90511	.968	1.023	.199
90512	1.081	1.146	.324
90513	1.383	1.000	.000
90514	1.167	1.050	.201
Overall	.968	1.070	.209