2020
COSTILLA COUNTY
PROPERTY ASSESSMENT
STUDY

WILDROSE
APPRAISAL, INCORPORATED
Audit Division

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APPRAISAL, INCORPORATED
Audit Division

September 15, 2020

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

RE: Final Report for the 2020 Colorado Property Assessment Study

Dear Ms. Mullis:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2020 Colorado Property Assessment Study.

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

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

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

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

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

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INTRODUCTION

Colorado

The State Board of Equalization (SBOE) reviews assessments for conformance to the Constitution. The SBOE will order revaluations for counties whose valuations do not reflect the proper valuation period level of value.

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

The legislative council sets forth two criteria that are the focus of the audit group:

To determine whether each county assessor is applying correctly the constitutional and statutory provisions, compliance requirements of the State Board of Equalization, and the manuals published by the State Property Tax Administrator to arrive at the actual value of each class of property.

To determine if each assessor is applying correctly the provisions of law to the actual values when arriving at valuations for assessment of all locally valued properties subject to the property tax.

The property assessment audit conducts a two-part analysis: A procedural analysis and a statistical analysis.

The procedural analysis includes all classes of property and specifically looks at how the assessor develops economic areas, confirms and qualifies sales, and develops time adjustments. The audit also examines the procedures for adequately discovering, classifying and valuing agricultural outbuildings, discovering subdivision build-out and subdivision discounting procedures. Valuation methodology for vacant land, improved residential properties and commercial properties is examined. Procedures for producing mines, oil and gas leaseholds and lands producing, producing coal mines, producing earth and stone products, severed mineral interests and non-producing patented mining claims are also reviewed.

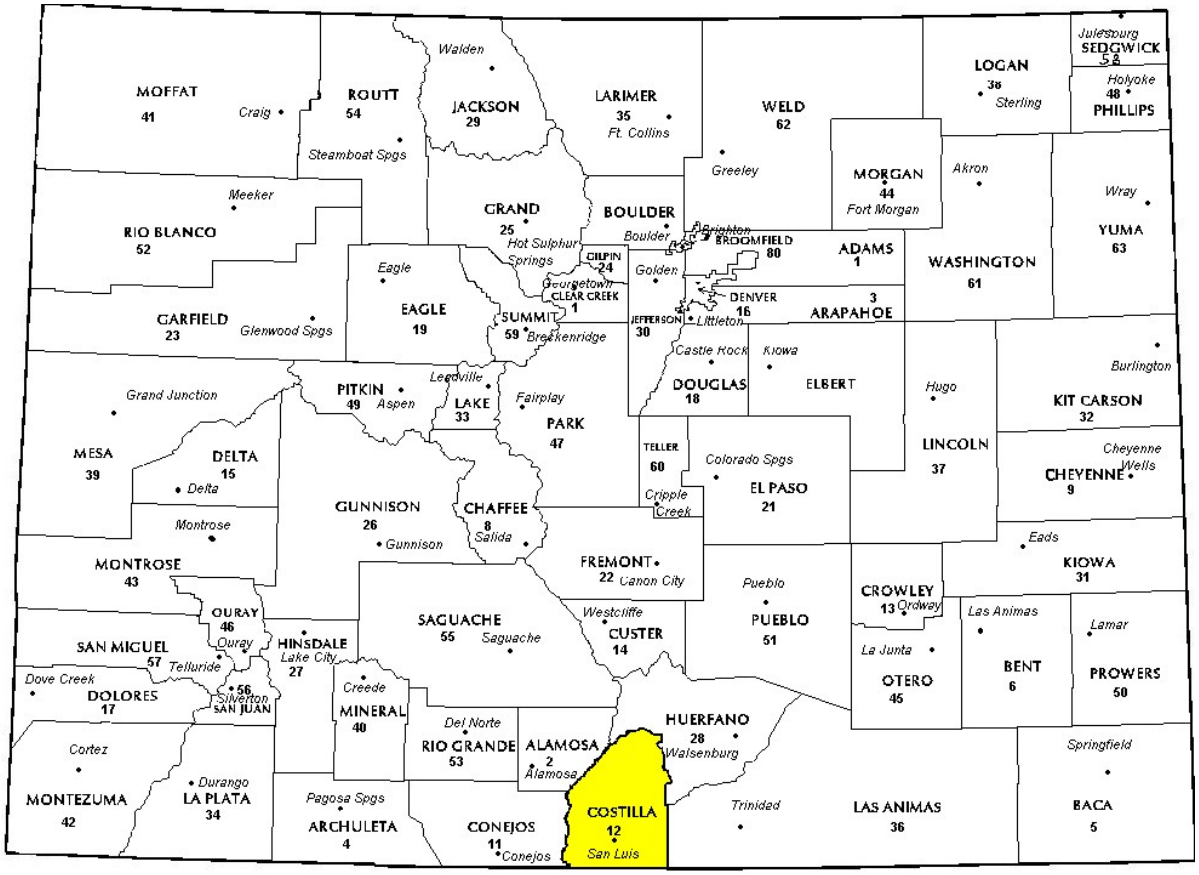
Statistical analysis is performed on vacant land, residential properties, commercial/industrial properties, agricultural land, and personal property. The statistical study results are compared with State Board of Equalization compliance requirements and the manuals published by the State Property Tax Administrator.

Wildrose Audit has completed the Property Assessment Study for 2020 and is pleased to report its findings for Costilla County in the following report.

REGIONAL/HISTORICAL SKETCH OF COSTILLA COUNTY

Regional Information

Costilla 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

Costilla County had an estimated population of approximately 3,721 people with 3.033 people per square mile, according to the U.S. Census Bureau's 2016 estimated census data. This represents a 5.59 percent change from April 1, 2010 to July 1, 2016.

Costilla County was the first area of the state of Colorado to be colonized, with recorded history dating back to 1540, the year Coronado explored the Southwest. Costilla County was one of the original 17 counties created by the Territory of Colorado on November 1, 1861. The county was named for the Costilla River. Although San Miguel was originally designated the county seat, the county government was moved to San Luis in 1863.

The county's original boundaries had the county extend over much of south-central Colorado. Much of the northern portion became part of Saguache County in 1866, and the western portions were folded into Hinsdale and Rio Grande counties in 1874. Costilla County arrived at its modern boundaries in 1913 when Alamosa County was created from its northwest portions.

Costilla County is part of the San Luis Valley, an 8,000 square mile alpine valley nicknamed the American Tibet, with an average altitude of 7800 feet above sea level. Costilla County is the home to Colorado's oldest town, San Luis, founded in 1851. Many villages of the County were the last to be established on a Spanish/Mexican land grant in this country. It is home to Colorado's oldest Christian structure (the San Acacio Mission) and the nation's newest shrine, the Stations of the Cross, with hundreds of people walking on a pilgrimage from as far as Pueblo. The state's first water rights, the San Luis Peoples Ditch, is located in Costilla County. The County has the last working Commons in America where local residents have grazed their sheep, cattle and horses on six hundred shared, unfenced acres for hundreds of years. Colorado has fifty-four peaks that exceed 14,000 feet and four of those can be accessed from Costilla County: Little Bear, Lindsay, Culebra and Blanca, which at 14,345 is higher than Pikes Peak.

(*Wikipedia.org, costillacounty-co.gov &slvguide.com)*

RATIO ANALYSIS

Methodology

All significant classes of properties were analyzed. Sales were collected for each property class over the appropriate sale period, which was typically defined as the 18-month period between January 1, 2017 and June 30, 2018. Counties with less than 30 sales typically extended the sale period back up to 5 years prior to June 30, 2018 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 Costilla County are:

Costilla 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	101	0.975	1.018	15.7	Compliant
Vacant Land	622	1.000	1.068	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 Costilla 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 Costilla County has complied with the statutory requirements to analyze the effects of time on value in their county. Costilla 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

Costilla 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

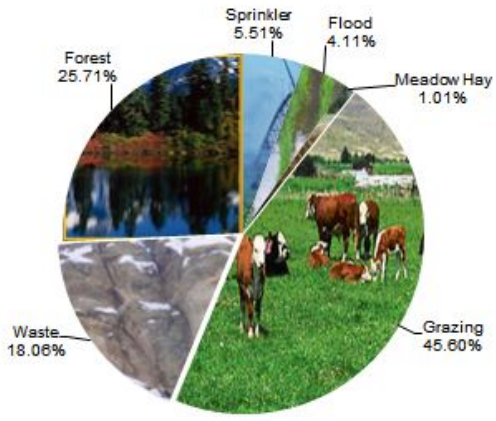
After applying the above described methodologies, it is concluded that Costilla County is reasonably treating its sold and unsold properties in the same manner.

Recommendations

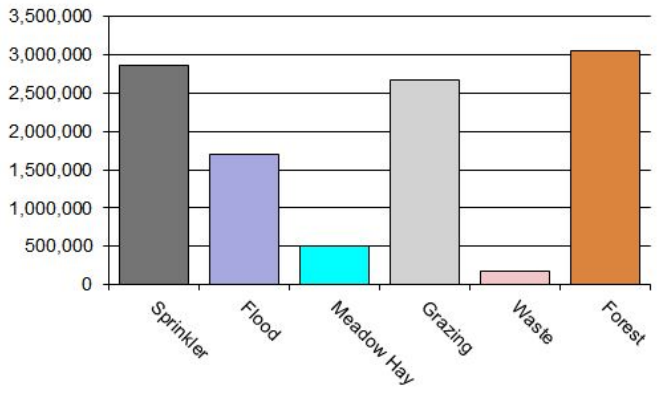
None

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:

Costilla 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	23,573	121.74	2,869,679	2,933,830	0.98
4117	Flood	17,604	96.33	1,695,743	1,694,362	1.00
4137	Meadow Hay	4,338	116.71	506,281	506,281	1.00
4147	Grazing	195,197	13.69	2,672,742	2,672,742	1.00
4177	Forest	110,046	27.80	3,059,753	3,059,753	1.00
4167	Waste	77,309	2.39	184,444	184,444	1.00
Total/Avg		**428,067**	**25.67**	**10,988,642**	**11,051,413**	**0.99**

Recommendations

None

Agricultural Outbuildings

Methodology

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

Conclusions

Costilla County has complied with the procedures provided by the Division of Property Taxation for the valuation of agricultural outbuildings.

Recommendations

None

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

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

- Personal Knowledge of Occupants at Assessment Date
- Aerial Photography/Pictometry

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

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

Costilla County has 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 2020 for Costilla County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 35 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 $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.

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

Costilla 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

Costilla County has submitted a written narrative describing the economic areas that make up the county's market areas. Costilla 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 Costilla 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 2020 in Costilla 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 can be 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

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

Recommendations

None

POSSESSORY INTEREST PROPERTIES

Costilla County is exempt from the Possessory Interest Study.

PERSONAL PROPERTY AUDIT

Costilla 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.

Costilla 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
- 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.

Costilla County submitted their personal property written audit plan and was current for the 2020 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
- Same business type or use
- Businesses with no deletions or additions for 2 or more years
- Accounts close to the $7,700 actual value exemption status
- Accounts protested with substantial disagreement

Conclusions

Costilla 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*

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Steve Kane, *Audit Statistician*

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

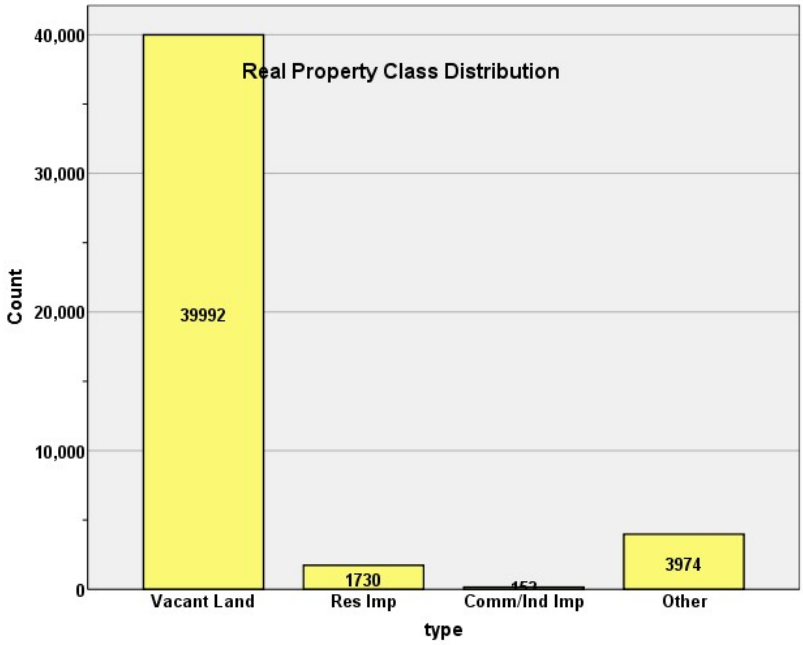
J. Andrew Rodriguez, *Field Analyst*

APPENDICES

STATISTICAL COMPLIANCE REPORT
FOR COSTILLA COUNTY
2020

I. OVERVIEW

Costilla County is located in south central Colorado. The county has a total of 45,849 real property parcels, according to data submitted by the county assessor's office in 2020. 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 95.4% of all vacant land parcels.

For residential improved properties, single family properties accounted for over 98.7% of all residential real property.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial properties accounted for 0.3% 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:

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Geo Area	Residential	Comm/Ind	Vacant Land
Economic Area	*V*	*V*	*N*
Neighborhood	*V*	*N*	*V*
Subdivision	*N*	*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 2020 Colorado Property Assessment Study. Information was provided by the Costilla Assessor's Office in April 2020. The data included all 5 property record files as specified by the Auditor.

Due to the aftermath of wildfire damage to several neighborhoods in Costilla County in 2019, we have excluded Neighborhoods 701 and 723 from compliance analysis for 2020.

III. RESIDENTIAL SALES RESULTS

There were 107 qualified sales; 6 sales were trimmed using IAAO standards, resulting in a final count of 101 qualified sales. The sale period used in this analysis was the 60-month period ending June 30, 2018. The following are the results from the sales ratio analysis:

Median	**0.975**
Price Related Differential	**1.018**
Coefficient of Dispersion	**15.7**

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

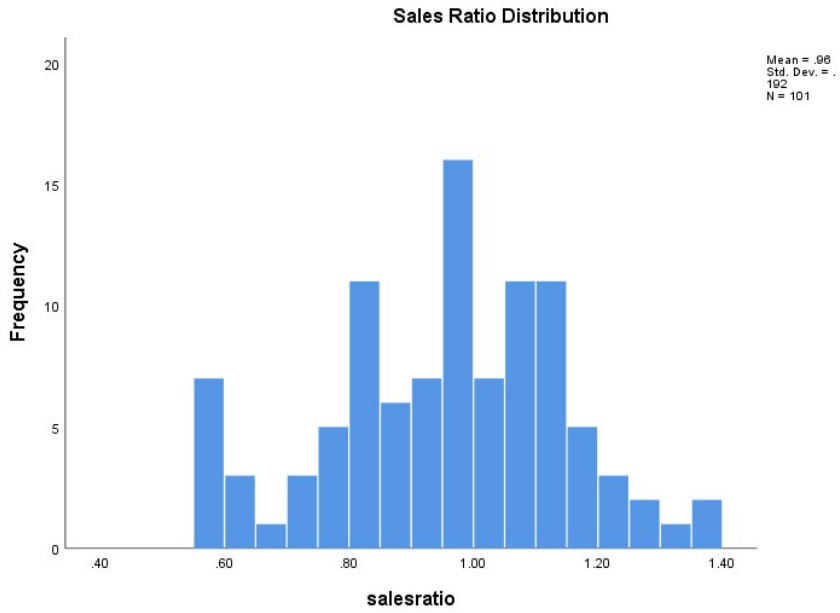
Case Processing Summary

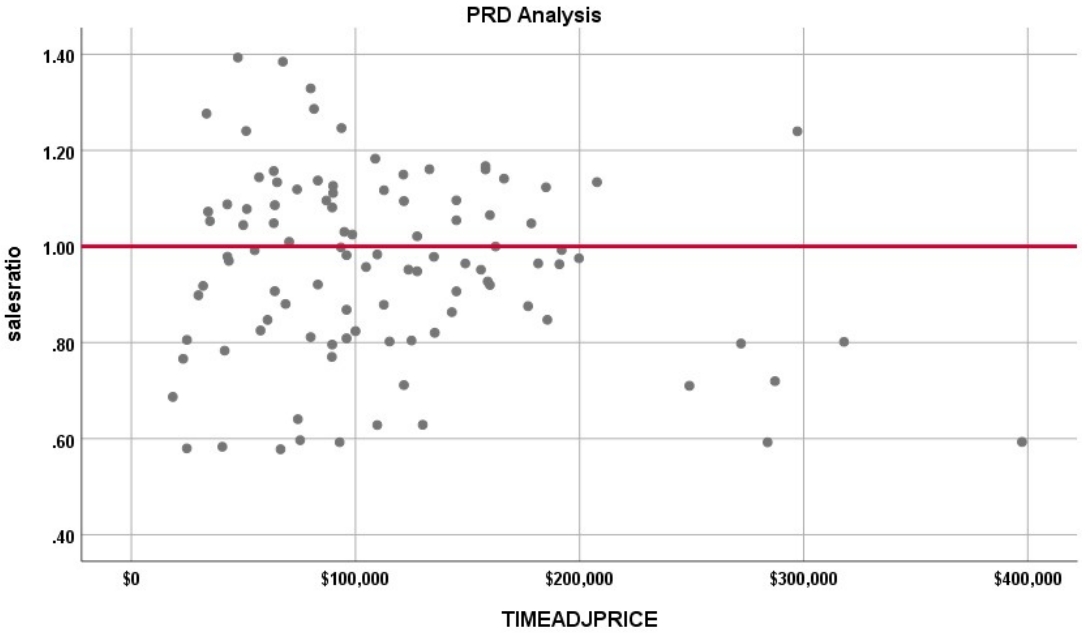
		Count	Percent
NBHD	200	11	16.4%
	702	42	62.7%
	703	14	20.9%
Overall		67	100.0%
Excluded		0	
Total		67	

Ratio Statistics for CURRTOT / TASP

Group	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
200	1.021	.126	17.6%
702	1.025	.137	17.6%
703	1.032	.232	26.8%
Overall	1.019	.153	19.5%

The last neighborhood (NBHD 703) had 14 sales and was below the minimum threshold for the sales ratio and over the COD limit, both defined by the Colorado State Board of Equalization. The overall ratio statistics were in compliance with the standards set forth by the Colorado State Board of Equalization (SBOE) for the overall residential sales. The following graphs describe further the sales ratio distribution for these properties:





The above graphs indicate that the distribution of the sale ratios was within state mandated limits. No sales were trimmed.

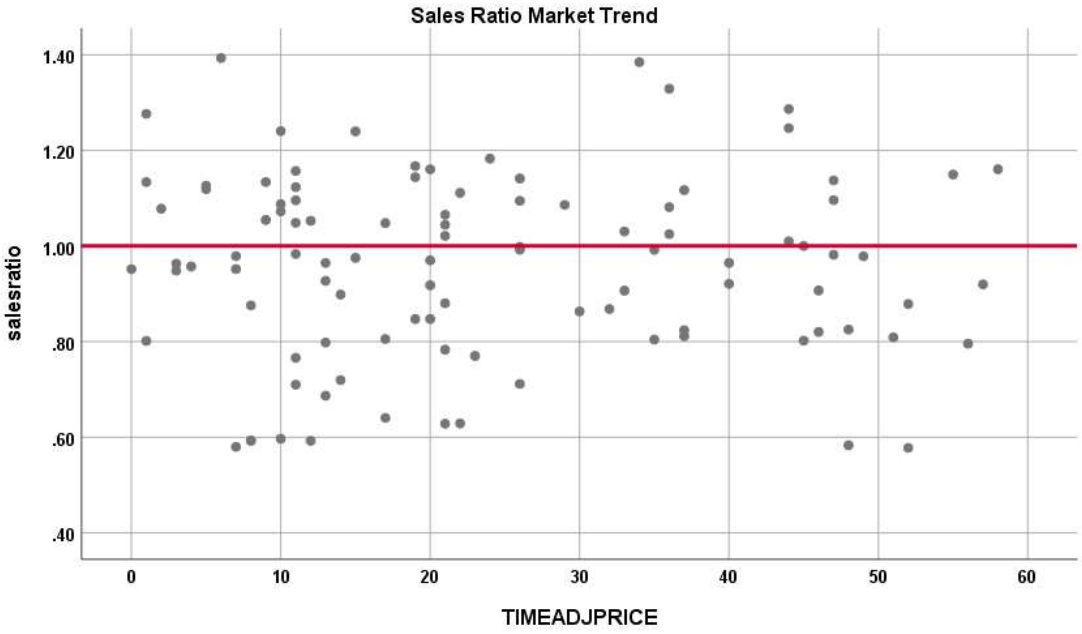
Residential Market Trend Analysis

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

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.961	.035		27.741	.000
	SalePeriod	.000	.001	-.009	-.090	.928

a. Dependent Variable: salesratio



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

Sold/Unsold Analysis

In terms of the valuation consistency between sold and unsold residential properties, we compared the 2020 median actual value per square foot between both groups, as follows:

Report
VALSF

sold	N	Median	Mean
UNSOLD	1397	$51	$59
SOLD	101	$54	$58

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	.493	Retain the null hypothesis.

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

We next stratified this comparison test by neighborhoods with at least 10 sales, as follows:

Report
VALSF

NBHD	sold	N	Median	Mean
200	UNSOLD	221	$37	$38
	SOLD	11	$34	$38
702	UNSOLD	340	$64	$73
	SOLD	42	$62	$65
703	UNSOLD	118	$64	$67
	SOLD	14	$57	$52

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

IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

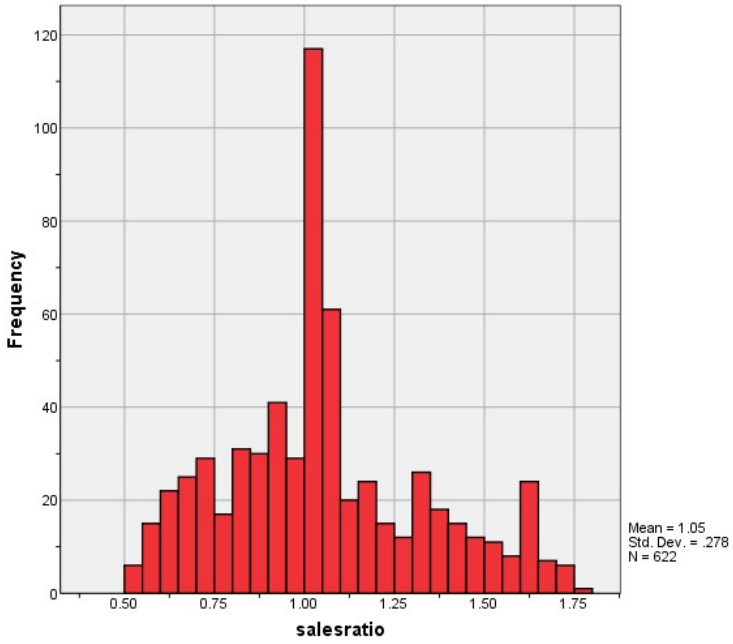
The County had less than ten qualified commercial sales for the June 30, 2018 valuation date. Consequently, a procedural analysis was performed by Wildrose staff for taxable year 2019. That procedural analysis is in effect for taxable year 2020. No other commercial analysis is required.

V. VACANT LAND SALE RESULTS

There were 637 qualified sales used in this analysis that for the 24-month period ending June 30, 2018. 15 sales were trimmed based on IAAO standards. The remaining 622 sales were analyzed as follows:

Median	**1.000**
Price Related Differential	**1.068**
Coefficient of Dispersion	**20.9**

The above tables indicate that the Costilla 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

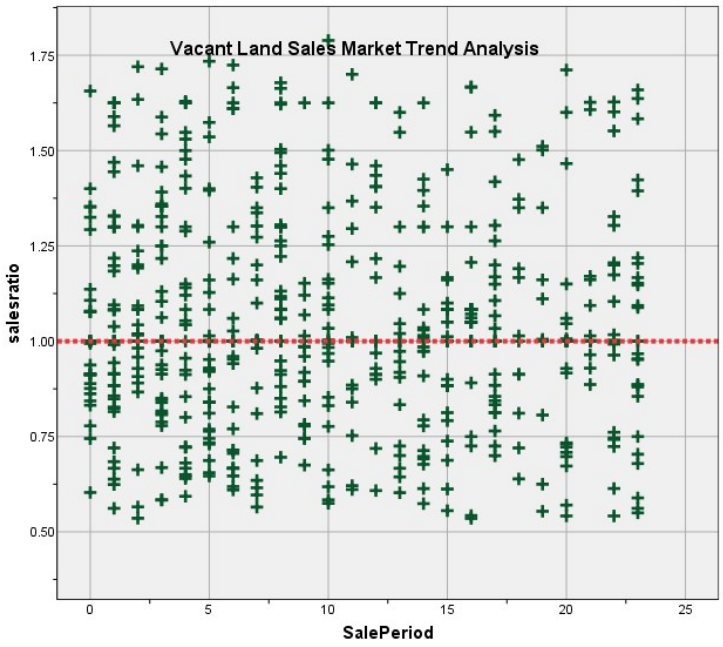
The vacant land sales were analyzed, examining the sale ratios across the 24 month sale period with the following results:

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.058	.020		53.760	.000

	SalePeriod	-.001	.002	-.027	-.681	.496

a. Dependent Variable: salesratio



The market trend results indicated no statistically significant trend. We concluded that the assessor has adequately addressed market trending for vacant land in Costilla County.

Sold/Unsold Analysis

We compared the median change in actual value between taxable years 2018 and 2020 for vacant land properties to determine if sold and unsold properties were valued consistently, as follows:

Report

DIFF

sold	N	Median	Mean
UNSOLD	36002	1.0000	1.1713
SOLD	622	1.0097	1.0893

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	.001	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .00.

We also stratified this analysis by subdivisions with at least 10 sales, as follows:

Report
DIFF

SUBDIVNO	sold	N	Median	Mean
702	UNSOLD	7204	1.0000	1.1009
	SOLD	188	1.0690	1.1320
703	UNSOLD	9398	1.0097	1.0394
	SOLD	130	1.0097	1.0116
704	UNSOLD	634	1.5431	1.5404
	SOLD	8	1.5431	1.5431
705	UNSOLD	556	.8000	.8019
	SOLD	8	.8000	.8000
706	UNSOLD	558	1.2072	8.1269
	SOLD	5	1.2072	1.2072
707	UNSOLD	1037	1.0135	1.0119
	SOLD	8	1.0135	1.0135
708	UNSOLD	550	1.1500	1.1454
	SOLD	9	1.1500	1.1500
712	UNSOLD	3179	.7727	.6126
	SOLD	28	.9114	.6421
715	UNSOLD	7124	1.0000	1.0653
	SOLD	138	1.0000	1.1628
719	UNSOLD	472	1.0000	.9954
	SOLD	20	1.0000	1.0000

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

V. CONCLUSIONS

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

STATISTICAL ABSTRACT

Residential

Ratio Statistics for CURRTOT / TASP

	95% Confidence Interval for Mean			95% Confidence Interval for Median				95% Confidence Interval for Weighted Mean				Coefficient of Variation
Mean	Lower Bound	Upper Bound	Median	Lower Bound	Upper Bound	Actual Coverage	Weighted Mean	Lower Bound	Upper Bound	Price Related Differential	Coefficient of Dispersion	Mean Centered
.959	.921	.996	.975	.921	1.021	95.4%	.942	.894	.989	1.018	.157	20.0%

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

	95% Confidence Interval for Mean			95% Confidence Interval for Median				95% Confidence Interval for Weighted Mean				Coefficient of Variation
Mean	Lower Bound	Upper Bound	Median	Lower Bound	Upper Bound	Actual Coverage	Weighted Mean	Lower Bound	Upper Bound	Price Related Differential	Coefficient of Dispersion	Mean Centered
1.047	1.025	1.069	1.000	1.000	1.003	95.1%	.980	.952	1.008	1.068	.209	26.5%

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

Residential Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT $25K	4	4.0%
	$25K to $50K	12	11.9%
	$50K to $100K	38	37.6%
	$100K to $150K	23	22.8%
	$150K to $200K	16	15.8%
	$200K to $300K	6	5.9%
	$300K to $500K	2	2.0%
Overall		101	100.0%
Excluded		0	
Total		101	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT $25K	.726	.999	.105	14.0%
$25K to $50K	1.012	.996	.148	20.8%
$50K to $100K	1.017	1.006	.161	20.3%
$100K to $150K	.957	.999	.130	16.8%
$150K to $200K	.984	1.002	.081	10.5%
$200K to $300K	.759	1.007	.253	37.5%
$300K to $500K	.697	1.017	.149	21.1%
Overall	.975	1.018	.157	19.7%

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	1212.00	101	100.0%
Overall		101	100.0%
Excluded		0	
Total		101	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212.00	.975	1.018	.157	19.7%
Overall	.975	1.018	.157	19.7%

Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	3	3.0%
	75 to 100	3	3.0%
	50 to 75	5	5.0%
	25 to 50	33	32.7%
	5 to 25	47	46.5%
	5 or Newer	10	9.9%
Overall		101	100.0%
Excluded		0	
Total		101	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	.879	.945	.214	32.2%
75 to 100	.847	.973	.152	23.8%
50 to 75	.783	1.048	.221	28.6%
25 to 50	.992	1.027	.133	17.0%
5 to 25	.963	1.021	.165	20.6%
5 or Newer	.981	1.002	.134	17.6%
Overall	.975	1.018	.157	19.7%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	2	2.0%
	500 to 1,000 sf	17	16.8%
	1,000 to 1,500 sf	22	21.8%
	1,500 to 2,000 sf	17	16.8%
	2,000 to 3,000 sf	25	24.8%
	3,000 sf or Higher	18	17.8%
Overall		101	100.0%
Excluded		0	
Total		101	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	.694	1.040	.160	22.7%
500 to 1,000 sf	.863	1.000	.186	24.2%
1,000 to 1,500 sf	.980	1.010	.148	20.6%
1,500 to 2,000 sf	.952	1.011	.135	18.2%
2,000 to 3,000 sf	1.021	1.039	.131	16.8%
3,000 sf or Higher	.996	1.029	.167	21.5%
Overall	.975	1.018	.157	19.7%

Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY	0 - Low	5	5.0%
	1 - Fair	26	25.7%
	2 - Average	66	65.3%
	3 - Good	4	4.0%
Overall		101	100.0%
Excluded		0	
Total		101	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0 - Low	.583	1.013	.107	19.3%
1 - Fair	.929	1.022	.172	21.0%
2 - Average	.992	1.036	.136	17.4%
3 - Good	.925	1.038	.179	21.3%
Overall	.975	1.018	.157	19.7%

Vacant Land Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT $25K	601	96.6%
	$25K to $50K	20	3.2%
	$50K to $100K	1	0.2%
Overall		622	100.0%
Excluded		0	
Total		622	

Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT $25K	1.000	1.065	.211	28.3%
$25K to $50K	1.000	1.004	.156	22.8%
$50K to $100K	.807	1.000	.000	.
Overall	1.000	1.068	.209	28.2%

Sub-Class

Case Processing Summary

		Count	Percent
ABSTRLND	100.00	569	91.5%
	510.00	5	0.8%
	520.00	1	0.2%
	530.00	1	0.2%
	540.00	13	2.1%
	550.00	24	3.9%
	560.00	4	0.6%
	1112.00	2	0.3%
	1135.00	2	0.3%
	1868.33	1	0.2%
Overall		622	100.0%
Excluded		0	
Total		622	

Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
100.00	1.000	1.081	.206	27.9%
510.00	1.000	1.051	.076	13.8%
520.00	1.000	1.000	.000	.
530.00	.655	1.000	.000	.
540.00	.960	1.118	.359	44.2%
550.00	1.005	1.055	.243	29.6%
560.00	1.199	.997	.223	26.6%
1112.00	.960	1.015	.077	10.8%
1135.00	.935	1.122	.198	28.0%
1868.33	1.020	1.000	.000	.
Overall	1.000	1.068	.209	28.2%