2020
OURAY COUNTY
PROPERTY ASSESSMENT STUDY

WILDROSE
APPRAISAL, INCORPORATED
Audit Division

WILDROSE
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

TABLE OF CONTENTS

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.

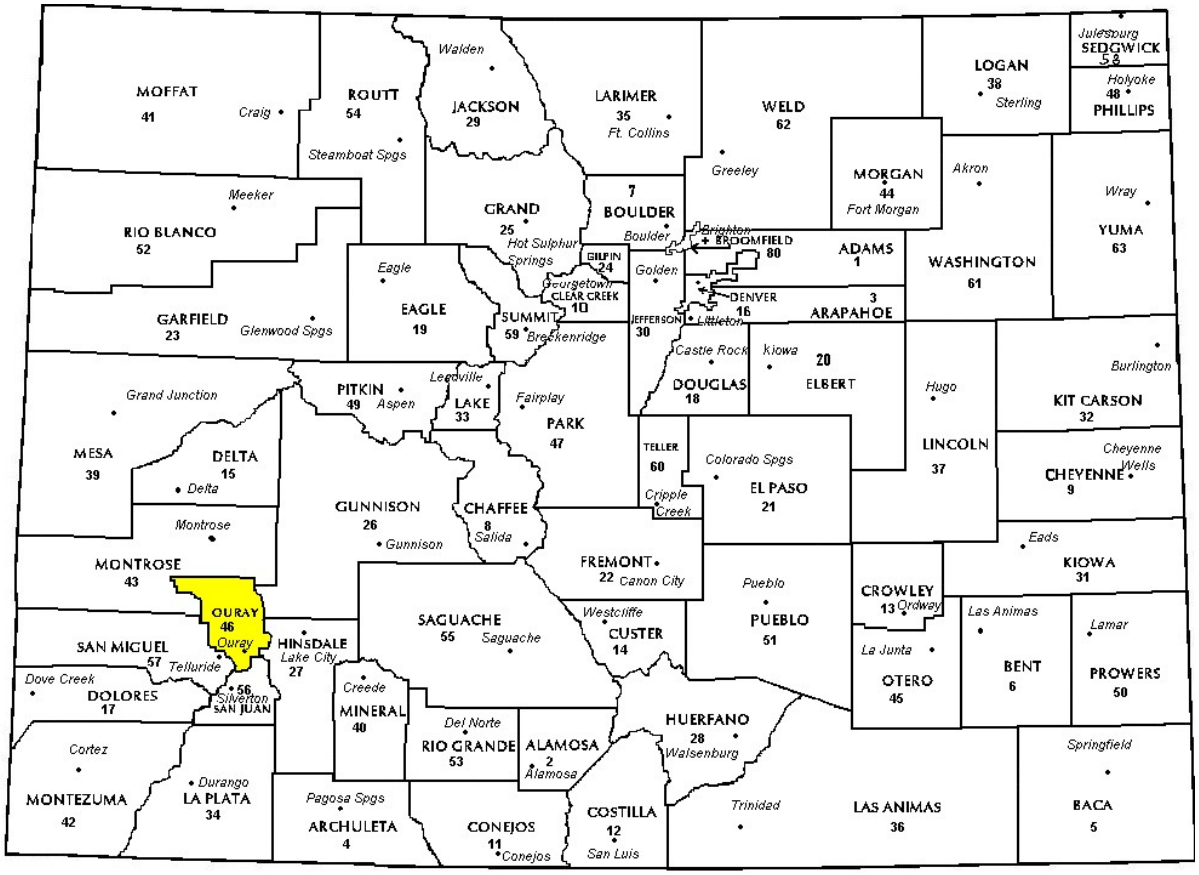
Statistical analysis is performed on vacant land, residential properties, commercial/industrial properties, agricultural land, and personal property. The statistical study results are compared with State Board of Equalization compliance requirements and the manuals published by the State Property Tax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

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

REGIONAL/HISTORICAL SKETCH OF OURAY COUNTY

Regional Information

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



Historical Information

Ouray County had an estimated population of approximately 4,857 people with 8.96 people per square mile, according to the U.S. Census Bureau's 2016 estimated census data. This represents a 9.49 percent change from April 1, 2010 to July 1, 2016.

Ouray County lies in the southwestern corner of Colorado in the heart of the San Juan mountains. Ouray County's landscape is dominated by mountain peaks with 12 peaks 13,000 ft or higher.

Ouray County was formed out of San Juan County on 18 January 1877, the first county designated by the newly formed Colorado State Legislature. It was named for Chief Ouray, a distinguished Ute Indian chief. Ouray was designated county seat on 8 March 1877. On 19 February 1881, Dolores County was formed out of Ouray County.

On February 27, 1883, Ouray County was split into San Miguel County and what is currently Ouray County. The portion that became San Miguel County almost retained the name Ouray County when the Colorado General Assembly initially renamed Ouray County as Uncompaghre County. Four days later on March 2nd, the General Assembly changed its mind and changed the name of Uncompaghre County back to Ouray County.

The county covers 542 square miles. Two municipalities lie within the county, the city of Ouray and the town of Ridgway. During the late 19th and early 20th centuries the primary industries in the county were mining and agriculture. With the decline of the mining industry, tourism increased with many drawn to Ouray County for its natural beauty and variety of outdoor activities.

The county seat is the city of Ouray which was originally established by miners chasing silver and gold in the surrounding mountains. The town at one time boasted more horses and mules than people. Prospectors arrived in the area in 1875 searching for silver and gold. At the height of the mining, Ouray had more than 30 active mines.

Today, the entirety of Main St. is registered as a National Historic District with most of the buildings dating back to the late nineteenth century. The Beaumont Hotel and the Ouray City Hall and Walsh Library are listed on the National Register of Historic Places individually, while the Ouray County Courthouse, St. Elmo Hotel, St. Joseph's Miners' Hospital (currently housing the Ouray County Historical Society and Museum), Western Hotel, and Wright's Opera House are included in the historic district.
(www.Wikipedia.org, ouraycountyco.gov)

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 Ouray County are:

Ouray County Ratio Grid					
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis
*Commercial/Industrial	25	1.008	1.034	6.2	Compliant
Condominium	N/A	N/A	N/A	N/A	N/A
Single Family	222	0.991	1.010	4	Compliant
Vacant Land	185	1.013	1.072	19.8	Compliant

**County Sales File augmented by seven supplemental appraisals*

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

Ouray 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	Compliant
Condominium	N/A
Single Family	Compliant
Vacant Land	Compliant

Conclusions

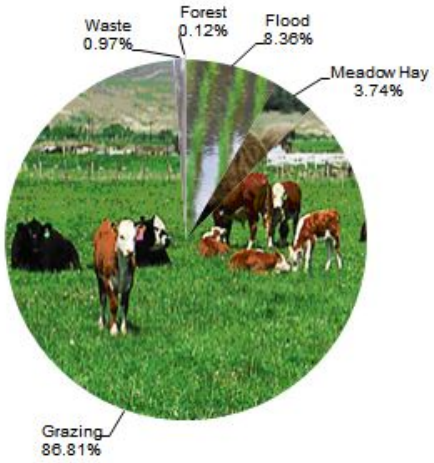
After applying the above described methodologies, it is concluded that Ouray County is reasonably treating its sold and unsold properties in the same manner.

Recommendations

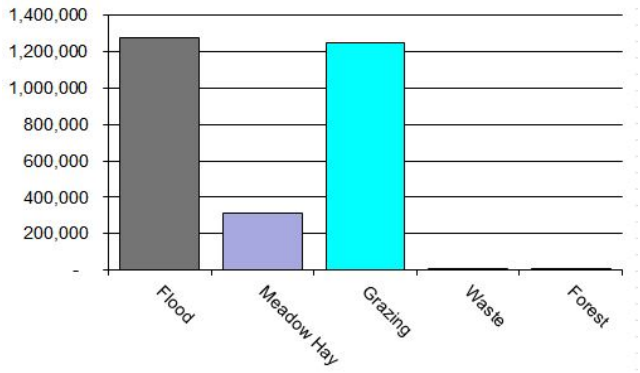
None

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:

Ouray County Agricultural Land Ratio Grid						
Abstract Code	Land Class	Number Of Acres	County Value Per Acre	County Assessed Total Value	WRA Total Value	Ratio
4117	Flood	11,096	114.86	1,274,480	1,309,462	0.97
4137	Meadow Hay	4,972	62.84	312,418	312,418	1.00
4147	Grazing	115,258	10.82	1,247,331	1,247,331	1.00
4177	Forest	159	3.22	513	513	1.00
4167	Waste	1,291	2.39	3,080	3,080	1.00
Total/Avg		**132,776**	**21.37**	**2,837,822**	**2,872,803**	**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

Ouray 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

Ouray 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

Ouray 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.:

- Aerial Photography/Pictometry

Ouray 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 Ouray County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 41 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

Ouray 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

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

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

Recommendations

None

POSSESSORY INTEREST PROPERTIES

Possessory Interest

Possessory interest property discovery and valuation is described in the Assessor's Reference Library (ARL) Volume 3 section 7 in accordance with the requirements of Chapter 39-1-103 (17)(a) (II) C.R.S. Possessory Interest is defined by the Property Tax Administrator's Publication ARL Volume 3, Chapter 7: A private property interest in government-owned property or the right to the occupancy and use of any benefit in government-owned property that has been granted under lease, permit, license, concession, contract, or other agreement.

Ouray County has been reviewed for their procedures and adherence to guidelines when assessing and valuing agricultural and commercial possessory interest properties. The county has also been queried as to their confidence that the possessory interest properties have been discovered and placed on the tax rolls.

Conclusions

Ouray 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

Ouray 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.

Ouray 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.

Ouray 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:

- Accounts with obvious discrepancies
- New businesses filing for the first time
- Incomplete or inconsistent declarations
- Accounts with omitted property
- Non-filing Accounts - Best Information Available
- Accounts protested with substantial disagreement

Conclusions

Ouray 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 OURAY COUNTY
2020

I. OVERVIEW

Ouray County is located in southwestern Colorado. The county has a total of 5,276 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 and 1112) accounted for 59.8% of all vacant land parcels.

For residential improved properties, single family properties accounted for 88.6% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial properties accounted for 5.9% 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*	*V*	*V*
Neighborhood	*V*	*N*	*V*
Subdivision	*N*	*N*	*N*

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 Ouray Assessor's Office in May 2020. The data included all 5 property record files as specified by the Auditor.

III. RESIDENTIAL SALES RESULTS

There were 222 qualified residential sales for the 24 month sale period ending June 30, 2018. The sales ratio analysis results were as follows:

Median	**0.991**
Price Related Differential	**1.010**
Coefficient of Dispersion	**4.0**

We next stratified the sale ratio analysis by economic area, as follows:

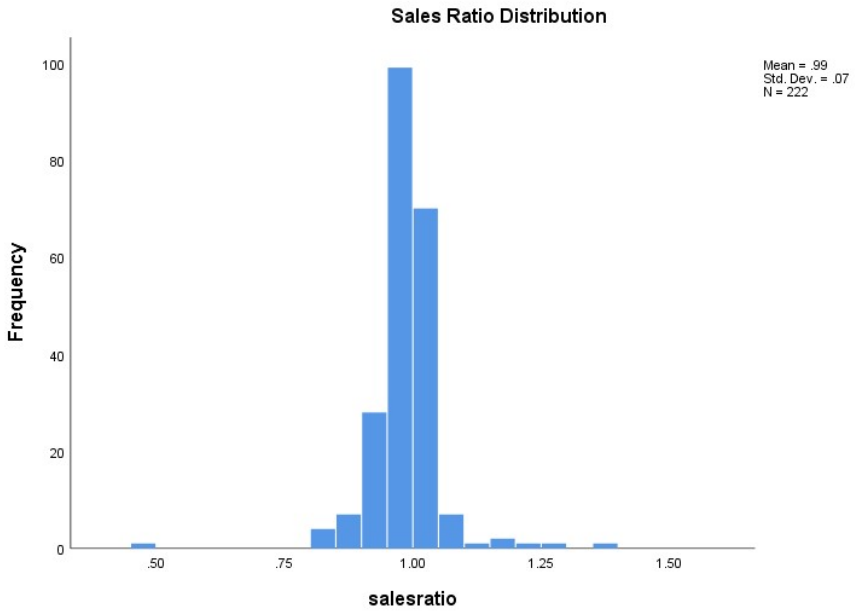
Case Processing Summary

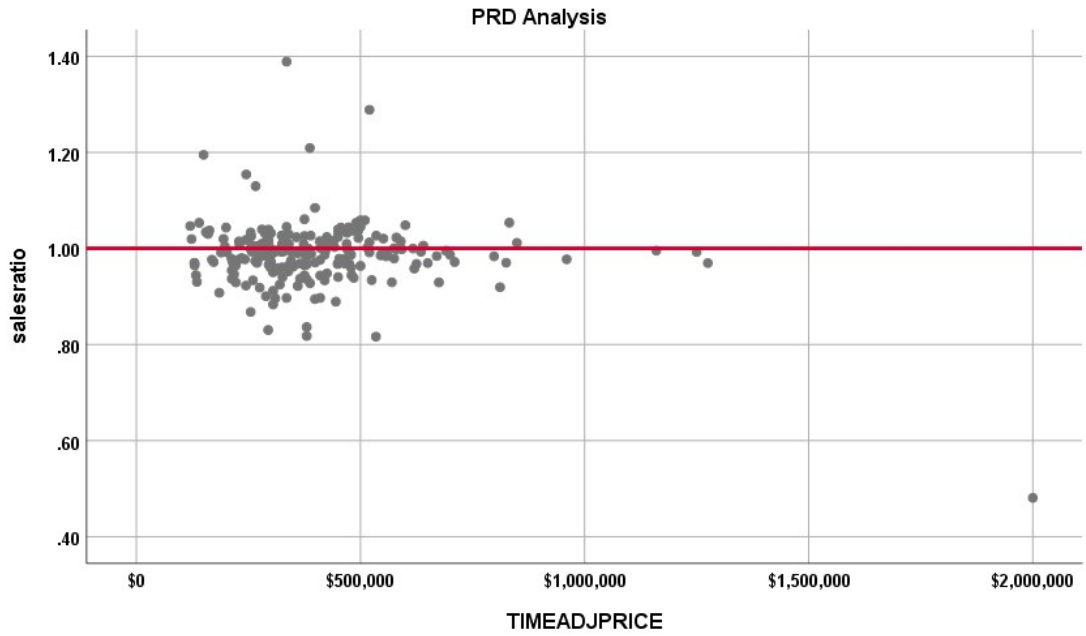
		Count	Percent
ECONAREA	1.00	55	29.4%
	2.00	65	34.8%
	3.00	3	1.6%
	5.00	5	2.7%
	6.00	44	23.5%
	7.00	15	8.0%
Overall		187	100.0%
Excluded		35	
Total		222	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion
1.00	.987	1.004	.039
2.00	.991	1.002	.038
3.00	.995	1.000	.004
5.00	1.044	1.223	.126
6.00	1.001	.999	.045
7.00	.987	1.000	.038
Overall	.991	1.011	.043

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





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

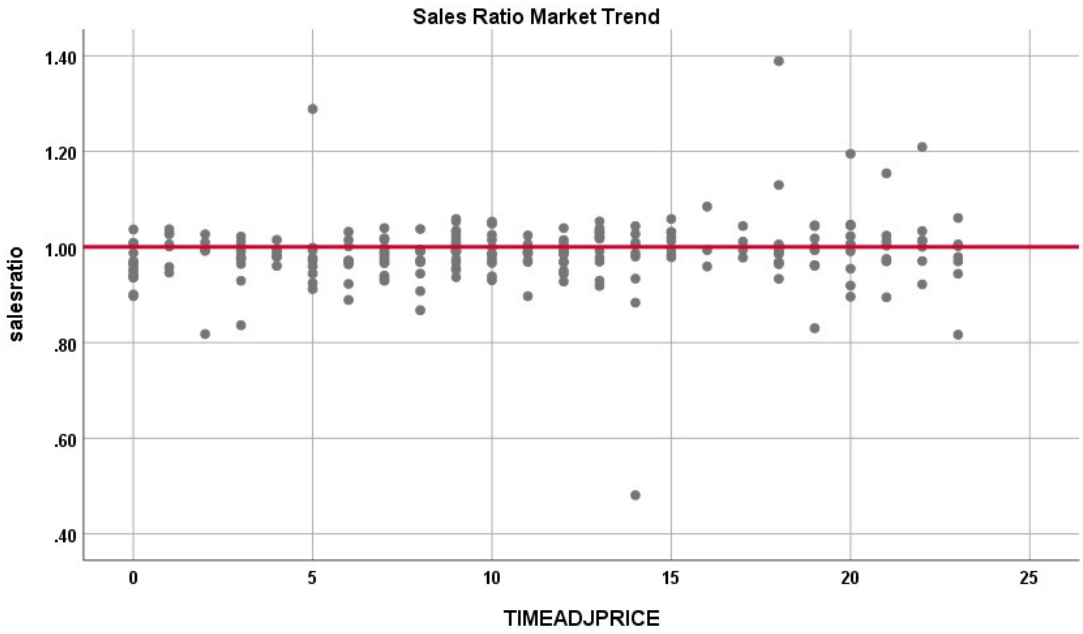
Residential Market Trend Analysis

We next analyzed the residential dataset using the 24-month sale period used by the county to analyze market trending) 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)	.972	.009		108.558	.000
	SalePeriod	.001	.001	.137	2.054	.041

a. Dependent Variable: salesratio



Although the statistical analysis indicates a significant trend, the magnitude of that trend is not significant at 0.1 percent per month. We therefore conclude 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 actual value per square foot for 2020 between each group, as follows:

Report

VALSF

sold	N	Median	Mean
UNSOLD	2338	$192	$197
SOLD	222	$190	$192

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	.285	Retain the null hypothesis.

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

We stratified this analysis by economic area with at least 15 sales, as follows:

Report
VALSF

ECONAREA	sold	N	Median	M
1.00	UNSOLD	631	$181	$
	SOLD	55	$179	$
2.00	UNSOLD	876	$202	$
	SOLD	65	$198	$
6.00	UNSOLD	472	$192	$
	SOLD	44	$165	$
7.00	UNSOLD	88	$180	$
	SOLD	15	$196	$

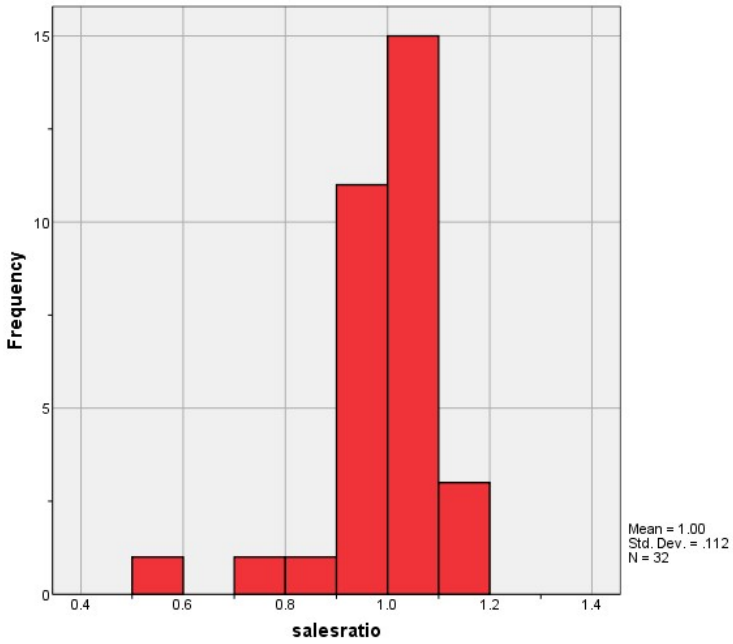
The above results indicate that sold and unsold residential properties were valued in a consistent manner.

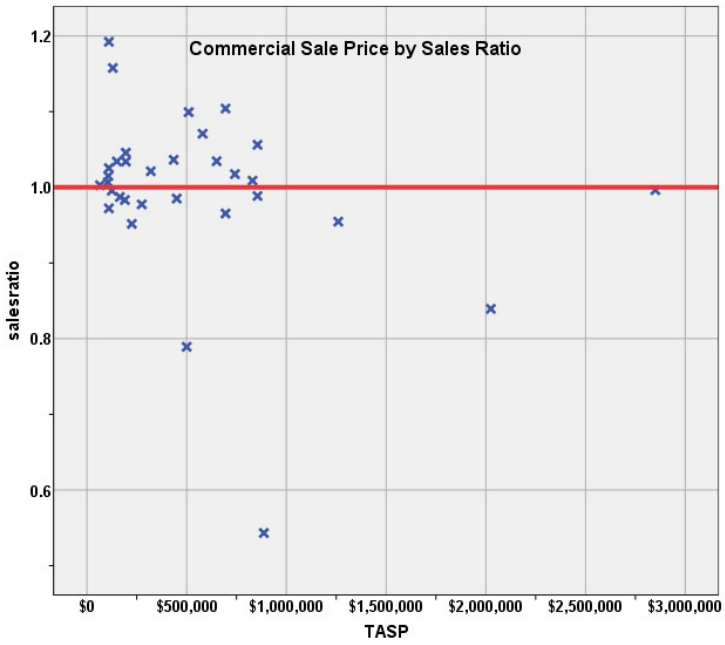
IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

There were 25 qualified commercial/industrial sales for the 60 month sale period ending June 30, 2018. We therefore augmented these sales with 7 supplemental appraisals, bringing the total to 32 sales. We used the sales and supplemental appraisals to perform the sales ratio analysis, and the 25 sales to perform the market trending and sold/unsold analyses. The sales ratio analysis was analyzed as follows:

Median	**1.008**
Price Related Differential	**1.034**
Coefficient of Dispersion	**6.2**

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.

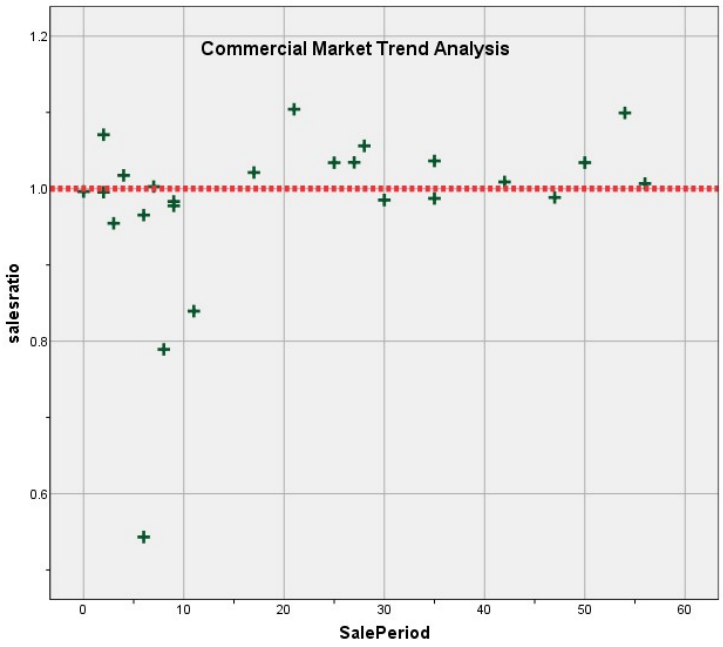
Commercial Market Trend Analysis

We next analyzed the 25 commercial sales qualified by the county to analyze market trending) 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)	.935	.034		27.398	.000
	SalePeriod	.002	.001	.343	1.752	.093

a. Dependent Variable: salesratio



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

Sold/Unsold Analysis

In terms of the valuation consistency between sold and unsold commercial properties, we compared the median actual value per square foot for 2020 between each group, as follows:

Report
VALSF

sold	N	Median	Mean
UNSOLD	274	$167	$179
SOLD	25	$189	$176

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	.471	Retain the null hypothesis.

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

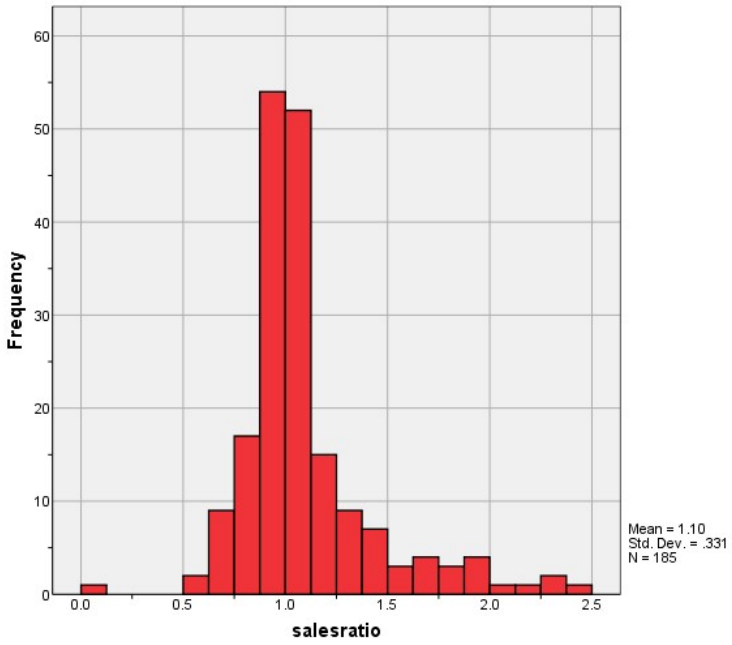
The above results indicate that there was no supportable evidence statistically that sold and unsold commercial/industrial properties were valued differently.

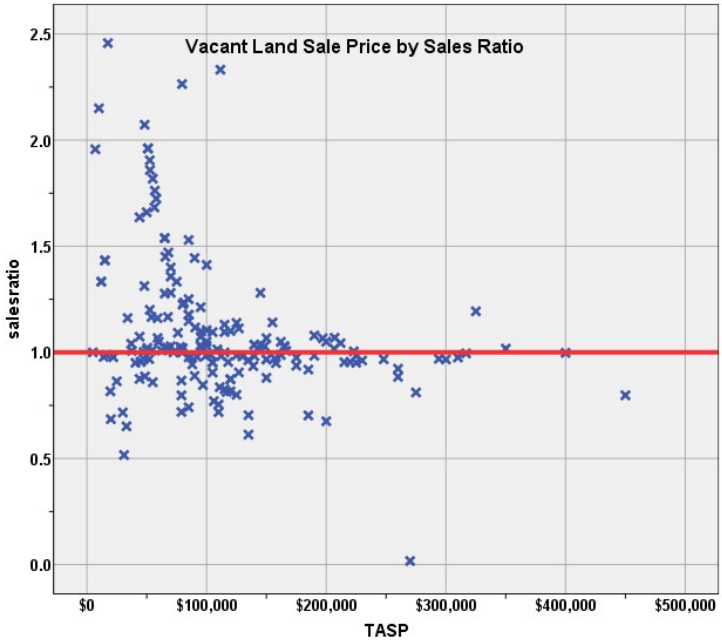
V. VACANT LAND SALE RESULTS

There were 185 qualified vacant land sales for the 24 month sale period ending June 30, 2018. The sales ratio analysis results were as follows:

Median	**1.013**
Price Related Differential	**1.072**
Coefficient of Dispersion	**19.8**

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





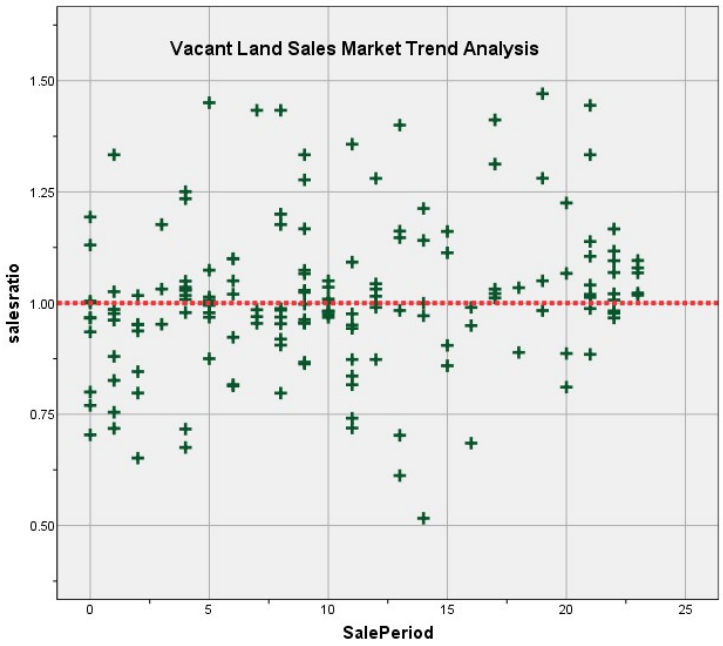
Vacant Land Market Trend Analysis

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		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.959	.023		41.250	.000
	SalePeriod	.005	.002	.208	2.715	.007

a. Dependent Variable: salesratio



The market trend results indicated a statistically significant trend. We will contact the assessor to determine if this is an anomaly or if there is a market trend in this county.

Sold/Unsold Analysis

We compared the median change in actual value for 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	1016	1.0500	1.0885
SOLD	160	1.0873	1.1433

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	.011	Retain the null hypothesis.

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

We next stratified the analysis by subdivision with at least 5 sales, as follows:

Report
DIFF

SUBDIVNO	sold	N	Median	Mean
	UNSOLD	110	1.3011	1.3059
	SOLD	20	1.3012	1.3094
1377	UNSOLD	62	1.1000	1.1267
	SOLD	12	1.1875	1.1427
1379	UNSOLD	27	1.1818	1.1990
	SOLD	4	1.1159	1.1159
152894	UNSOLD	33	.8600	.8922
	SOLD	6	.9143	.9031
1564	UNSOLD	5	1.1802	1.3564
	SOLD	5	1.4412	1.5285
1650	UNSOLD	10	1.0380	1.1752
	SOLD	3	1.0759	1.2031
991	UNSOLD	34	1.1263	1.1634
	SOLD	9	1.3623	1.3530

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 significant compliance issues concluded for Ouray County as of the date of this report. The assessor will be contacted regarding the significant market trend observed in the vacant land sales analysis.

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
.988	.979	.997	.991	.986	.994	96.3%	.979	.955	1.002	1.010	.040	7.0%

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.

Commercial Land

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
.997	.956	1.037	1.008	.985	1.034	98.0%	.964	.904	1.024	1.034	.062	11.2%

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
1.095	1.047	1.144	1.013	.990	1.029	96.1%	1.022	.981	1.064	1.072	.198	30.2%

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	$100K to $150K	9	4.1%
	$150K to $200K	10	4.5%
	$200K to $300K	55	24.8%
	$300K to $500K	104	46.8%
	$500K to $750K	34	15.3%
	$750K to $1,000K	6	2.7%
	Over $1,000K	4	1.8%
Overall		222	100.0%
Excluded		0	
Total		222	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
$100K to $150K	.970	.997	.058	9.5%
$150K to $200K	1.012	1.001	.031	4.3%
$200K to $300K	.992	.999	.034	5.1%
$300K to $500K	.991	.999	.042	6.6%
$500K to $750K	.991	1.001	.033	6.7%
$750K to $1,000K	.981	1.000	.031	4.6%
Over $1,000K	.981	1.064	.137	29.5%
Overall	.991	1.010	.040	7.0%

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	1212.00	186	83.8%
	1220.00	1	0.5%
	1221.00	1	0.5%
	1230.00	34	15.3%
Overall		222	100.0%
Excluded		0	
Total		222	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212.00	.991	1.010	.042	7.4%
1220.00	1.209	1.000	.000	.
1221.00	1.002	1.000	.000	.
1230.00	.987	1.000	.029	3.5%
Overall	.991	1.010	.040	7.0%

Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	22	9.9%
	75 to 100	1	0.5%
	50 to 75	1	0.5%
	25 to 50	42	18.9%
	5 to 25	153	68.9%
	5 or Newer	3	1.4%
Overall		222	100.0%
Excluded		0	
Total		222	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	.987	1.002	.040	5.8%
75 to 100	1.031	1.000	.000	.
50 to 75	.965	1.000	.000	.
25 to 50	.987	1.002	.041	6.7%
5 to 25	.993	1.013	.040	7.4%
5 or Newer	1.002	.992	.041	6.3%
Overall	.991	1.010	.040	7.0%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	500 to 1,000 sf	19	8.6%
	1,000 to 1,500 sf	38	17.1%
	1,500 to 2,000 sf	59	26.6%
	2,000 to 3,000 sf	66	29.7%
	3,000 sf or Higher	40	18.0%
Overall		222	100.0%
Excluded		0	
Total		222	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
500 to 1,000 sf	.974	1.008	.037	5.4%
1,000 to 1,500 sf	.984	1.001	.037	5.5%
1,500 to 2,000 sf	.993	1.003	.038	5.4%
2,000 to 3,000 sf	.990	1.002	.036	6.7%
3,000 sf or Higher	.995	1.034	.054	10.9%
Overall	.991	1.010	.040	7.0%

Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY	121203 - Q5	6	2.7%
	121204 - Q4	50	22.5%
	121205 - Q3	51	23.0%
	121206 - Q2	11	5.0%
	121209 - Q1B	1	0.5%
	121212 - Manufactured Homes Q4	7	3.2%
	121213 - Manufactured Homes Q5	1	0.5%
	121216 - RIDGWAY Q4 AVERAGE	10	4.5%
	121217 - RIDGWAY Q3 GOOD	11	5.0%
	121218 - FAIRWAY PINES Q3	6	2.7%
	121219 - FAIRWAY PINES Q2	7	3.2%
	121503 - Townhomes Q5 Fair	2	0.9%
	121504 - Townhomes Q4 Average	12	5.4%
	121505 - Townhomes Q3 Good	12	5.4%
	124002 - CONDOTEL CONDO	2	0.9%
	124003 - FAIR CONDO	5	2.3%
	124004 - AVG CONDO	10	4.5%
	124005 - GOOD CONDO	6	2.7%
	124008 - CONDOTEL CONDO LARGE	1	0.5%
	124011 - ONE BEDROOM CONDO FAIR	7	3.2%
	124016 - CONDO OVER 1500SF	4	1.8%
Overall		222	100.0%
Excluded		0	
Total		222	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
121203 - Q5	.999	.999	.016	2.1%
121204 - Q4	.994	.999	.035	5.4%
121205 - Q3	.985	.999	.033	4.7%
121206 - Q2	.999	1.006	.028	3.7%
121209 - Q1B	.481	1.000	.000	.
121212 - Manufactured Homes Q4	1.005	.999	.033	4.8%
121213 - Manufactured Homes Q5	.908	1.000	.000	.

121216 - RIDGWAY Q4 AVERAGE	1.011	.998	.086	14.3%
121217 - RIDGWAY Q3 GOOD	.993	1.000	.031	3.9%
121218 - FAIRWAY PINES Q3	.984	.995	.078	14.3%
121219 - FAIRWAY PINES Q2	.987	1.001	.013	1.6%
121503 - Townhomes Q5 Fair	1.007	1.001	.036	5.1%
121504 - Townhomes Q4 Average	1.007	1.010	.071	10.2%
121505 - Townhomes Q3 Good	.978	1.003	.037	5.9%
124002 - CONDOTEL CONDO	.985	1.008	.049	7.0%
124003 - FAIR CONDO	.988	1.001	.020	2.9%
124004 - AVG CONDO	.976	1.005	.029	4.1%
124005 - GOOD CONDO	1.007	.999	.017	2.6%
124008 - CONDOTEL CONDO LARGE	.999	1.000	.000	.
124011 - ONE BEDROOM CONDO FAIR	.970	1.001	.029	4.3%
124016 - CONDO OVER 1500SF	.991	1.002	.021	3.3%
Overall	.991	1.010	.040	7.0%

Improvement Condition

Case Processing Summary

		Count	Percent
CONDITION	2 - C-5	3	1.4%
	3 - C-4	72	32.4%
	4 - C-3	127	57.2%
	5 - C-2	20	9.0%
Overall		222	100.0%
Excluded		0	
Total		222	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
2 - C-5	1.007	1.007	.041	8.7%
3 - C-4	.997	1.001	.041	6.7%
4 - C-3	.987	1.001	.036	5.8%
5 - C-2	.983	1.066	.064	12.9%
Overall	.991	1.010	.040	7.0%

Commercial Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	$50K to $100K	1	3.1%
	$100K to $150K	8	25.0%
	$150K to $200K	4	12.5%
	$200K to $300K	2	6.3%
	$300K to $500K	4	12.5%
	$500K to $750K	6	18.8%
	$750K to $1,000K	4	12.5%
	Over $1,000K	3	9.4%
Overall		32	100.0%
Excluded		0	
Total		32	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
$50K to $100K	1.003	1.000	.000	.
$100K to $150K	1.020	.999	.052	8.4%
$150K to $200K	1.011	.999	.027	3.2%
$200K to $300K	.965	.999	.013	1.9%
$300K to $500K	1.003	1.011	.071	12.5%
$500K to $750K	1.053	1.003	.041	5.1%
$750K to $1,000K	.999	1.005	.133	26.6%
Over $1,000K	.955	.994	.055	9.1%
Overall	1.008	1.034	.062	11.1%

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	1230.00	1	3.1%
	1712.00	1	3.1%
	1713.50	1	3.1%
	1882.33	1	3.1%
	1968.00	1	3.1%
	2014.40	2	6.3%
	2212.00	5	15.6%
	2213.50	1	3.1%
	2215.00	2	6.3%
	2220.00	1	3.1%
	2225.67	1	3.1%
	2245.00	12	37.5%
	3230.00	2	6.3%
	9279.00	1	3.1%
Overall		32	100.0%
Excluded		0	
Total		32	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1230.00	.983	1.000	.000	.
1712.00	1.034	1.000	.000	.
1713.50	.955	1.000	.000	.
1882.33	1.056	1.000	.000	.
1968.00	.989	1.000	.000	.
2014.40	.955	1.072	.121	17.1%
2212.00	1.007	1.014	.071	11.9%
2213.50	1.009	1.000	.000	.
2215.00	.770	.866	.294	41.6%
2220.00	1.104	1.000	.000	.
2225.67	1.017	1.000	.000	.
2245.00	1.009	1.021	.048	7.6%
3230.00	.999	1.000	.027	3.8%
9279.00	1.036	1.000	.000	.
Overall	1.008	1.034	.062	11.1%

Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	5	15.6%
	75 to 100	1	3.1%
	50 to 75	3	9.4%
	25 to 50	6	18.8%
	5 to 25	15	46.9%
	5 or Newer	2	6.3%
Overall		32	100.0%
Excluded		0	
Total		32	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	.989	1.001	.015	1.9%
75 to 100	1.104	1.000	.000	.
50 to 75	1.034	1.071	.070	13.4%
25 to 50	1.025	1.011	.042	5.6%
5 to 25	.996	1.051	.080	15.1%
5 or Newer	1.054	.998	.016	2.3%
Overall	1.008	1.034	.062	11.1%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	2	6.3%
	500 to 1,000 sf	9	28.1%
	1,000 to 1,500 sf	4	12.5%
	1,500 to 2,000 sf	2	6.3%
	2,000 to 3,000 sf	4	12.5%
	3,000 sf or Higher	11	34.4%
Overall		32	100.0%
Excluded		0	
Total		32	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	1.005	1.000	.002	0.3%
500 to 1,000 sf	1.015	1.005	.052	8.3%
1,000 to 1,500 sf	1.010	1.008	.029	3.4%
1,500 to 2,000 sf	.747	1.194	.273	38.6%
2,000 to 3,000 sf	1.029	1.005	.079	14.0%
3,000 sf or Higher	1.009	1.022	.049	7.0%
Overall	1.008	1.034	.062	11.1%

Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY		16	50.0%
	0 - N/A	1	3.1%
	121204 - Q4	1	3.1%
	121504 - Townhomes Q4 Average	1	3.1%
	124001 - ONE BEDROOM CONDO AVG	1	3.1%
	2 - AVERAGE	12	37.5%
Overall		32	100.0%
Excluded		0	
Total		32	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
	1.011	1.023	.062	12.7%
0 - N/A	1.009	1.000	.000	.
121204 - Q4	1.071	1.000	.000	.
121504 - Townhomes Q4 Average	1.034	1.000	.000	.
124001 - ONE BEDROOM CONDO AVG	.983	1.000	.000	.
2 - AVERAGE	1.000	1.059	.074	11.2%
Overall	1.008	1.034	.062	11.1%

Improvement Condition

Case Processing Summary

		Count	Percent
CONDITION	2 - VERY GOOD	1	3.1%
	3 - C-4	2	6.3%
	3 - GOOD	9	28.1%
	4 - AVERAGE	19	59.4%
	4 - C-3	1	3.1%
Overall		32	100.0%
Excluded		0	
Total		32	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
2 - VERY GOOD	.977	1.000	.000	.
3 - C-4	1.053	1.001	.017	2.4%
3 - GOOD	.995	1.079	.032	5.9%
4 - AVERAGE	1.017	1.029	.079	13.8%
4 - C-3	.983	1.000	.000	.
Overall	1.008	1.034	.062	11.1%

Vacant Land Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT $25K	14	7.6%
	$25K to $50K	19	10.3%
	$50K to $100K	69	37.3%
	$100K to $150K	44	23.8%
	$150K to $200K	17	9.2%
	$200K to $300K	16	8.6%
	$300K to $500K	6	3.2%
Overall		185	100.0%
Excluded		0	
Total		185	

Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT $25K	1.167	1.060	.354	47.7%
$25K to $50K	1.001	.973	.236	37.9%
$50K to $100K	1.099	1.023	.213	31.2%
$100K to $150K	.974	1.000	.132	25.3%
$150K to $200K	.988	1.004	.079	12.3%
$200K to $300K	.964	1.012	.101	26.1%
$300K to $500K	.996	1.011	.074	12.6%
Overall	1.013	1.072	.198	33.7%

Subclass

Case Processing Summary

		Count	Percent
ABSTRLND	100.00	83	44.9%
	200.00	10	5.4%
	400.00	9	4.9%
	520.00	1	0.5%
	540.00	2	1.1%
	550.00	17	9.2%
	560.00	1	0.5%
	1112.00	60	32.4%
	1621.00	1	0.5%
	4147.00	1	0.5%
Overall		185	100.0%
Excluded		0	
Total		185	

Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
100.00	1.017	1.073	.228	36.9%
200.00	.980	.994	.058	8.0%
400.00	.990	1.046	.123	25.2%
520.00	.968	1.000	.000	.
540.00	1.436	.998	.326	46.1%
550.00	1.012	1.071	.176	27.5%
560.00	1.193	1.000	.000	.
1112.00	1.022	1.046	.174	31.6%
1621.00	.846	1.000	.000	.
4147.00	.017	1.000	.000	.
Overall	1.013	1.072	.198	33.7%