Routt County
Northwest Colorado

2012
ROUTT COUNTY
PROPERTY ASSESSMENT
STUDY

WILDROSE
APPRAISAL, INCORPORATED
Audit Division
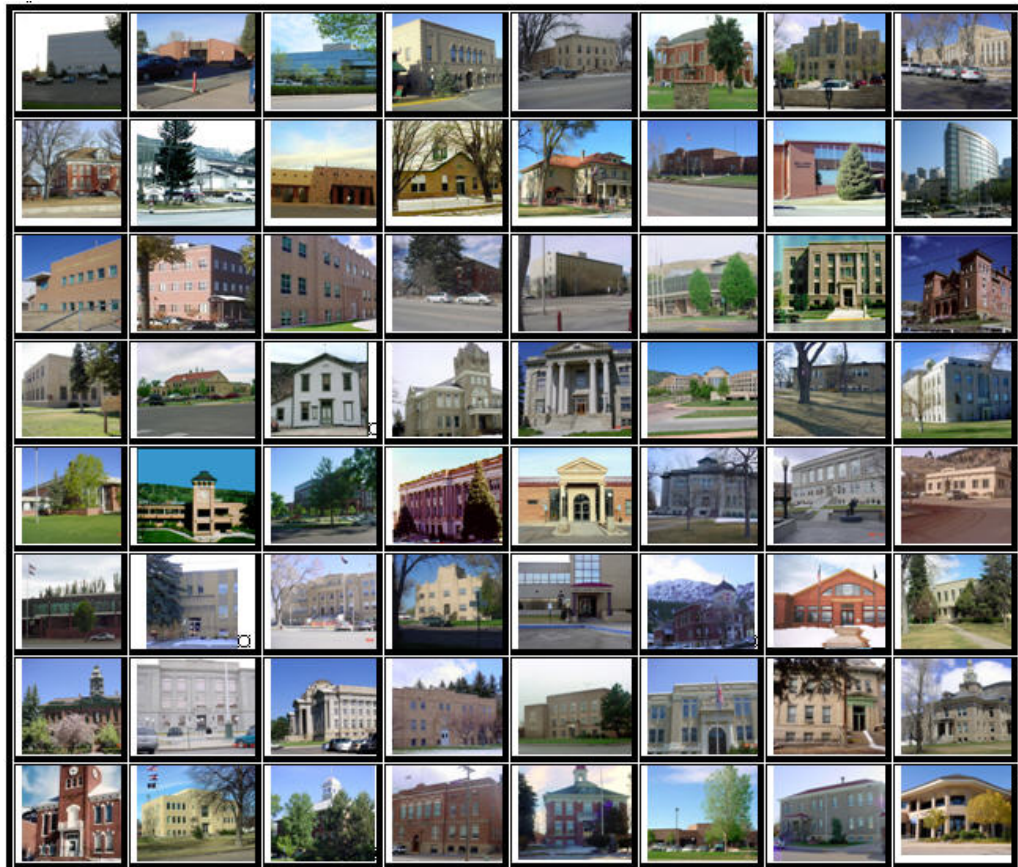
September 15, 2012

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

RE: Final Report for the 2012 Colorado Property Assessment Study

Dear Mr. Mauer:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2012 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

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

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INTRODUCTION

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 2012 and is pleased to report its findings for Routt County in the following report.

REGIONAL/HISTORICAL SKETCH OF ROUTT COUNTY

Regional Information

Routt 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

Routt County has a population of approximately 23,509 people with 9.95 people per square mile, according to the U.S. Census Bureau's 2010 census data. This represents a 19.4 percent change from the 2000 Census.

Routt County was created out of the western portion of Grand County on January 29, 1877. It was named in honor of John Long Routt, the last territorial and first state governor of Colorado. The western portion of Routt County was split off to form Moffat County on February 27, 1911.

Routt County is a diverse environment offering breathtaking mountain vistas and picturesque ranch lands. Communities located in Routt County include Clark, Hahns Peak, Milner, Phippsburg, and Toponas, the towns of Hayden, Oak Creek and Yampa, and the city of Steamboat Springs.

About 50% of the land in Routt County is publicly owned. The Medicine Bow-Routt National Forest makes up a large portion of the county. This includes the Mt Zirkel and Sarvis Creek Wilderness areas. The local State Parks are Stagecoach Reservoir, Steamboat Lake, Elkhead Reservoir and Pearl Lake. These public lands provide residents and visitors with scenic recreational areas for hiking, picnicking, boating, hunting, fishing and water-skiing.

The City of Steamboat Springs is a Home Rule Municipality that is the county seat and the most populous city of Routt County. The city known as "Steamboat," "The Boat," or "Ski Town USA" had a population of 16,818 at the U.S. Census 2010. The town is an internationally known winter resort destination. The Steamboat Springs tourism industry is highlighted by the Steamboat Ski Resort, which is on Mount Werner in the Park Range just east of the town. It also contains the much smaller Howelsen Ski Area. It is located in the upper valley of the Yampa River, along U.S. Highway 40 just west of the Continental Divide at Rabbit Ears Pass.

The area surrounding Steamboat Springs was originally inhabited by the Yampatikas Utes, who hunted in the valley during the summer. Trappers began to move into the area during the first decades of the 19th century. Ranchers soon followed, and ranching traditions are still preserved by the large ranching community.

Originally, skiing was the only method of transportation during harsh Rocky Mountain winters. In turn, the popularity of skiing as a winter pastime catalyzed development of the town and other communities all over the Rocky Mountains. In 1913, Carl Howelsen, a Norwegian, moved to town and introduced ski jumping. Howelsen built the first jump on namesake Howelsen Hill, now part of the Howelsen Ski Area. He also founded the annual Winter Carnival, a celebration still held each winter. Traditionally, the festival includes ski racing and jumping, dog sledding, and chariot events down Lincoln Avenue, the city's main street. Light shows on both Mount Werner and Howelsen Hill are highlights.

The Steamboat Ski Resort was largely established by two local men, Jim Temple and John Fetcher. Temple led the effort to develop the area. Fetcher, a local rancher, was the main designer and builder. The resort opened on what was then called Storm Mountain in 1963. *(www.co.routt.co.us, www.Wikipedia.org)*

RATIO ANALYSIS

Methodology

All significant classes of properties were analyzed. Sales were collected for each property class over the appropriate sale period, which was typically defined as the 18-month period between January 2009 and June 2010. Counties with less than 30 sales typically extended the sale period back up to 5 years prior to June 30, 2010 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 Routt County are:

Routt County Ratio Grid					
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis
Commercial/Industrial	78	0.954	1.037	15.5	Compliant
Condominium	171	0.994	1.001	4.5	Compliant
Single Family	234	0.996	1.009	8.4	Compliant
Vacant Land	74	1.000	0.951	14.6	Compliant

After applying the above described methodologies, it is concluded from the sales ratios that Routt County is in compliance with SBOE, DPT, and Colorado State Statute valuation guidelines.

Recommendations

None

Random Deed Analysis

An additional analysis was performed as part of the Ratio Analysis. Ten randomly selected deeds with documentary fees were obtained from the Clerk and Recorder. These deeds were for sales that occurred from January 1, 2009 through June 30, 2010. These sales were then checked for inclusion on the Assessor's qualified or unqualified database.

Conclusions

After comparing the list of randomly selected deeds with the Assessor's database, Routt County has accurately transferred sales data from the recorded deeds to the qualified or unqualified database.

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 methodology 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 Routt County has complied with the statutory requirements to analyze the effects of time on value in their county. Routt 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

Routt 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.

All qualified residential and commercial class properties were examined using the unit value method, where the actual value per square foot was compared between sold and unsold properties. A class was considered qualified if it met the criteria for the ratio analysis. The median value per square foot for both groups was compared from an appraisal and statistical perspective. If no significant difference was indicated, then we concluded that no further testing was warranted and that the county was in compliance in terms of sold/unsold consistency.

If either residential or commercial differences were significant using the unit value method, or if data limitations made the comparison invalid, then the next step was to perform a ratio analysis comparing the 2010 and 2012 actual values for each qualified class of property. All qualified vacant land classes were tested using this method. The sale property ratios were arrayed using a range of 0.8 to 1.5, which theoretically excluded changes between years that were due to other unrelated changes in the property. These ratios were also stratified at the appropriate level of analysis. Once the percent change was determined for each appropriate class and sub-class, the next step was to select the unsold sample. This sample was at least 1% of the total population of unsold properties and excluded any sale properties. The unsold sample was filtered based on the attributes of the sold dataset to closely correlate both groups. The ratio analysis was then performed on the unsold properties and stratified. The median and mean ratio distribution was then compared between the sold and unsold group. A non-parametric test such as the Mann-Whitney test for differences between independent samples was undertaken to determine whether any observed differential was significant. If this test determined that the unsold properties were treated in a manner similar to the sold properties, it was concluded that no further testing was warranted and that the county was in compliance.

If a class or sub-class of property was determined to be significantly different by this method, the final step was to perform a multi-variate mass appraisal model that developed ratio statistics from the sold properties that were then applied to the unsold sample. This test compared the measures of central tendency and confidence intervals for the sold properties with the unsold property sample. If this comparison was also determined to be significantly different, then the conclusion was that the county had treated the unsold properties in a different manner than sold properties.

These tests were supported by both tabular and chart presentations, along with saved sold and unsold sample files.

| Sold/Unsold Results	
Property Class	**Results**
Commercial/Industrial	Compliant
Condominium	Compliant
Single Family	Compliant
Vacant Land	Compliant

Conclusions

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

Recommendations

None

AGRICULTURAL LAND STUDY

Acres By Subclass	Value By Subclass

Forest 0.78%
Dry Farm 9.79%
Meadow Hay 7.34%
Grazing 82.09%
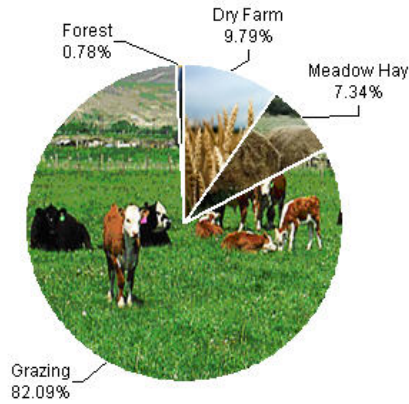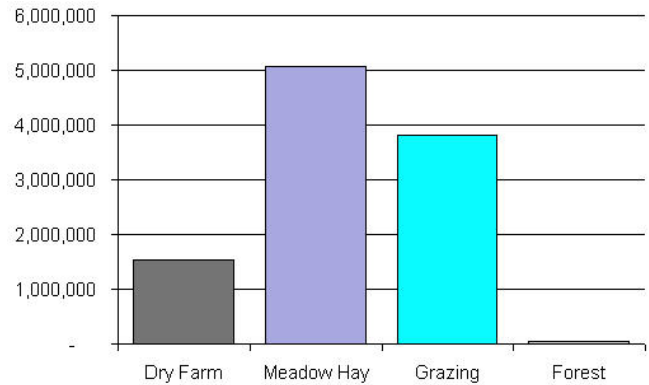
Agricultural Land

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:

Routt County Agricultural Land Ratio Grid						
Abstract Code	Land Class	Number Of Acres	County Value Per Acre	County Assessed Total Value	WRA Total Value	Ratio
4127	Dry Farm	69,702	22.00	1,539,314	1,489,585	1.03
4137	Meadow Hay	52,291	97.00	5,071,160	5,071,160	1.00
4147	Grazing	584,648	7.00	3,808,341	3,808,341	1.00
4177	Forest	5,551	9.00	52,421	52,421	1.00
Total/Avg		712,192	15.00	10,471,235	10,421,507	1.00

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

Routt County has substantially 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

Routt County has substantially complied with the procedures provided by the Division of Property Taxation for the valuation of land under residential improvements that may or may not be integral to an agricultural operation.

Recommendations

None

SALES VERIFICATION

According to Colorado Revised Statutes:

A representative body of sales is required when considering the market approach to appraisal.

(8) In any case in which sales prices of comparable properties within any class or subclass are utilized when considering the market approach to appraisal in the determination of actual value of any taxable property, the following limitations and conditions shall apply:

(a)(I) Use of the market approach shall require a representative body of sales, including sales by a lender or government, sufficient to set a pattern, and appraisals shall reflect due consideration of the degree of comparability of sales, including the extent of similarities and dissimilarities among properties that are compared for assessment purposes. In order to obtain a reasonable sample and to reduce sudden price changes or fluctuations, all sales shall be included in the sample that reasonably reflect a true or typical sales price during the period specified in section 39-1-104 (10.2). Sales of personal property exempt pursuant to the provisions of sections 39-3-102, 39-3-103, and 39-3-119 to 39-3-122 shall not be included in any such sample.

(b) Each such sale included in the sample shall be coded to indicate a typical, negotiated sale, as screened and verified by the assessor. (39-1-103, C.R.S.)

The assessor is required to use sales of real property only in the valuation process.

(8)(f) Such true and typical sales shall include only those sales which have been determined on an individual basis to reflect the selling price of the real property only or which have been adjusted on an individual basis to reflect the selling price of the real property only. (39-1-103, C.R.S.)

Part of the Property Assessment Study is the sales verification analysis. WRA has used the above-cited statutes as a guide in our study of the county's procedures and practices for verifying sales.

WRA reviewed the sales verification procedures in 2012 for Routt County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 32 sales listed as unqualified.

All but one of the sales selected in the sample gave reasons that were clear and supportable. One sale had insufficient documentation.

Conclusions

Routt County appears to be doing a good job of verifying their sales. There are no recommendations.

Recommendations

None

ECONOMIC AREA REVIEW AND EVALUATION

Methodology

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

Producing Oil and Gas Procedures

Methodology

Assessors Reference Library (ARL) Volume 3, Chapter 6: Valuation of Natural Resources

STATUTORY REFERENCES

Section § 39-1-103, C.R.S., specifies that producing oil or gas leaseholds and lands are valued according to article 7 of title 39, C.R.S.

Actual value determined – when.

(2) The valuation for assessment of leaseholds and lands producing oil or gas shall be determined as provided in article 7 of this title.
§ 39-1-103, C.R.S.
Article 7 covers the listing, valuation, and assessment of producing oil and gas leaseholds and lands.

Valuation:
Valuation for assessment.

(1) Except as provided in subsection (2) of this section, on the basis of the information contained in such statement, the assessor shall value such oil and gas leaseholds and lands for assessment, as real property, at an amount equal to eighty-seven and one-half percent of:

(a) The selling price of the oil or gas sold there from during the preceding calendar year, after excluding the selling price of all oil or gas delivered to the United States government or any agency thereof, the state of Colorado or any agency thereof, or any political subdivision of the state as royalty during the preceding calendar year;

(b) The selling price of oil or gas sold in the same field area for oil or gas transported from the premises which is not sold during the preceding calendar year, after excluding the selling price of all oil or gas delivered to the United States government or any agency thereof, the state of Colorado or any agency thereof, or any political subdivision of the state as royalty during the preceding calendar year.
§ 39-7-102, C.R.S.

Conclusions

The county applied approved appraisal procedures in the valuation of oil and gas.

Recommendations

None

Producing Coal Mines

Methodology

Under the guidelines of the Assessor's Reference Library (ARL), Volume 3, Section 6, Valuation of Producing Coal Leaseholds and Lands, the income approach is the primary method applied to find value for the valuation of coalmines. This methodology estimates annual economic royalty income based on previous year's production, then capitalizes that income to value using a Hoskold factor to estimate the present worth of the permitted acres. The operator provides production data and the life of the leases.

Conclusions

County has applied the correct formulas and state guidelines to coal mine valuation.

Recommendations

None

VACANT LAND

Subdivision Discounting

Subdivisions were reviewed in 2012 in Routt County. The review showed that subdivisions were discounted pursuant to the Colorado Revised Statutes in Article 39-1-103 (14) and by applying the recommended methodology in ARL Vol 3, Chap 4. Subdivision Discounting in the intervening year was accomplished by reducing the absorption period by one year. In instances where the number of sales within an approved plat was less than the absorption rate per year calculated for the plat, the absorption period was left unchanged.

Conclusions

Routt 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.

Routt County has been reviewed for their procedures and adherence to guidelines when assessing and valuing agricultural, commercial and ski area 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

Routt 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

Routt 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.

Routt 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
- Internet Listings
- Craig's List
- VRBO

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.

Routt County submitted their personal property written audit plan and was current for the 2012 valuation period. The number and listing of businesses audited was also submitted and was in conformance with the written audit plan. The following audit triggers were used by the county to select accounts to be audited:

- Businesses in a selected area
- Accounts with obvious discrepancies
- New businesses filing for the first time
- Incomplete or inconsistent declarations
- Accounts with omitted property

- Same business type or use
- Businesses with no deletions or additions for 2 or more years
- Non-filing Accounts - Best Information Available
- Accounts close to the $5,500 actual value exemption status
- Accounts protested with substantial disagreement

Conclusions

Routt 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

W I L D R O S E   A U D I T O R   S T A F F

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 ROUTT COUNTY
2012

I. OVERVIEW

Routt County is located in northwestern Colorado. The county has a total of 24,796 real property parcels, according to data submitted by the county assessor's office in 2012. The following provides a breakdown of property classes for this county:
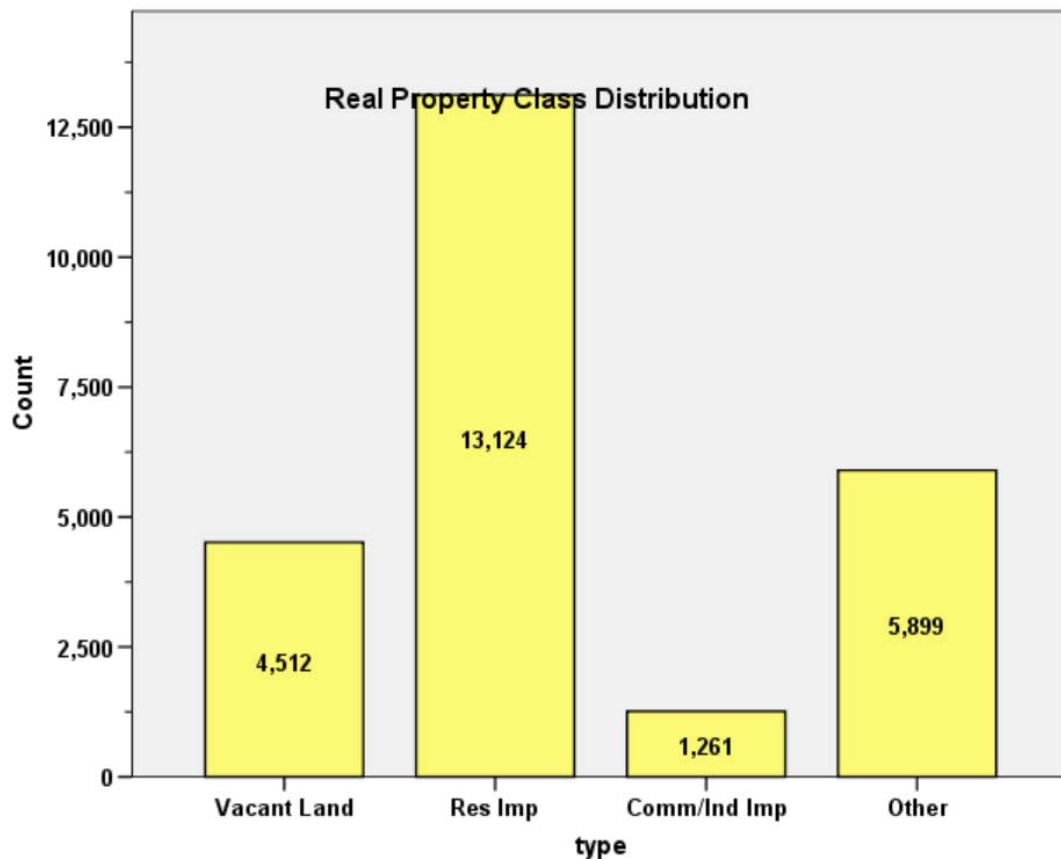
The vacant land class of properties was dominated by residential land. Residential lots (coded 100) accounted for 85.7% of all vacant land parcels.

For residential improved properties, single family properties accounted for 45.0% of all residential properties. Residential condominiums, coded as 1230, accounted for 34.7% of all residential properties. Based on the guidelines of the 2012 audit, we will analyze residential condominiums separately in the following analysis.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial sales accounted for 5.1% of all such properties in this county.

II. DATA FILES

The following sales analyses were based on the requirements of the 2012 Colorado Property Assessment Study. Information was provided by the Routt Assessor's Office in June 2012. The data included all 5 property record files as specified by the Auditor.

III. RESIDENTIAL SALES RESULTS

The following steps were taken to analyze the residential sales:

1. Total sales	1,478
2. Selected qualified sales	724
3. Select improved sales (non-duplicate)	643
4. Select residential sales only	560
5. Sales between January 1, 2009 and June 30, 2010	409

We stratified our sales ratio analysis by residential non-condominiums and condominiums. The sales ratio analysis results were as follows:

Residential Non-Condo = 237

Median	0.996
Price Related Differential	1.009
Coefficient of Dispersion	.084

Residential Condo = 171

Median	0.994
Price Related Differential	1.001
Coefficient of Dispersion	.045

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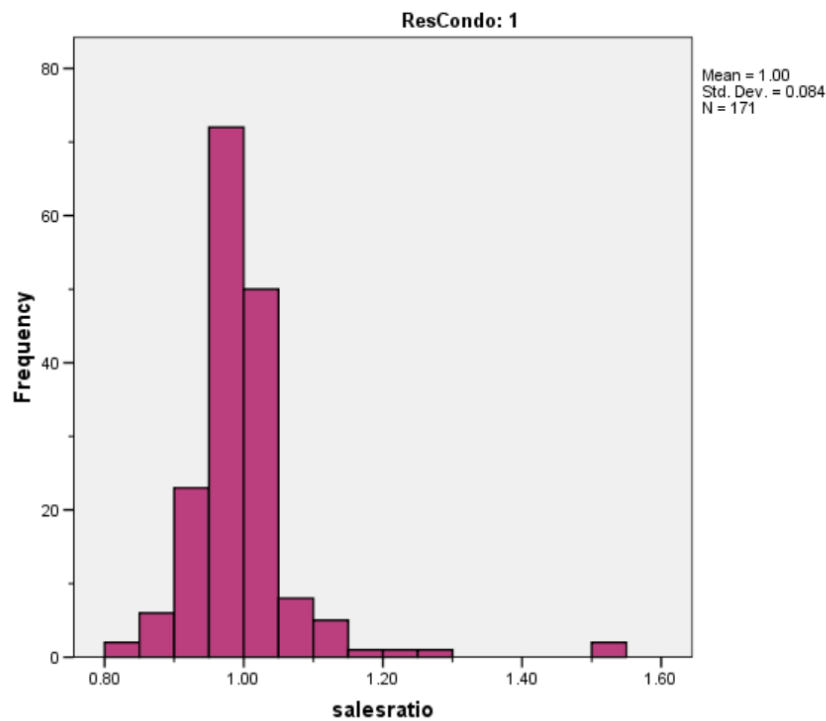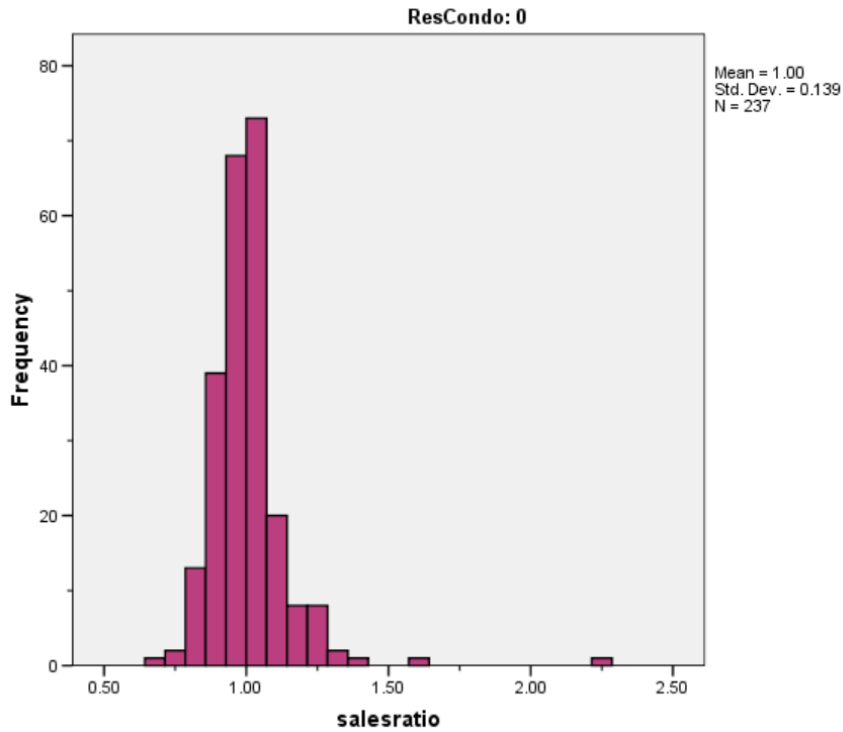
The above graphs indicate that the distribution of the sale ratios was within state mandated limits. No sales were trimmed.

Residential Market Trend Analysis

We next analyzed the residential dataset using the 18-month sale period for any residual market trending. We again stratified the analysis between residential non-condominiums and condominiums, with the following results:

Coefficients[a]

ResCondo	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
0	1	(Constant)	.994	.016		60.556	.000
		SalePeriod	.001	.002	.051	.776	.439
1	1	(Constant)	.996	.011		86.721	.000
		SalePeriod	.000	.001	.007	.094	.925

a. Dependent Variable: salesratio

ResCondo: 0
Residential Sale Price Market Trend

ResCondo: 1
Residential Sale Price Market Trend
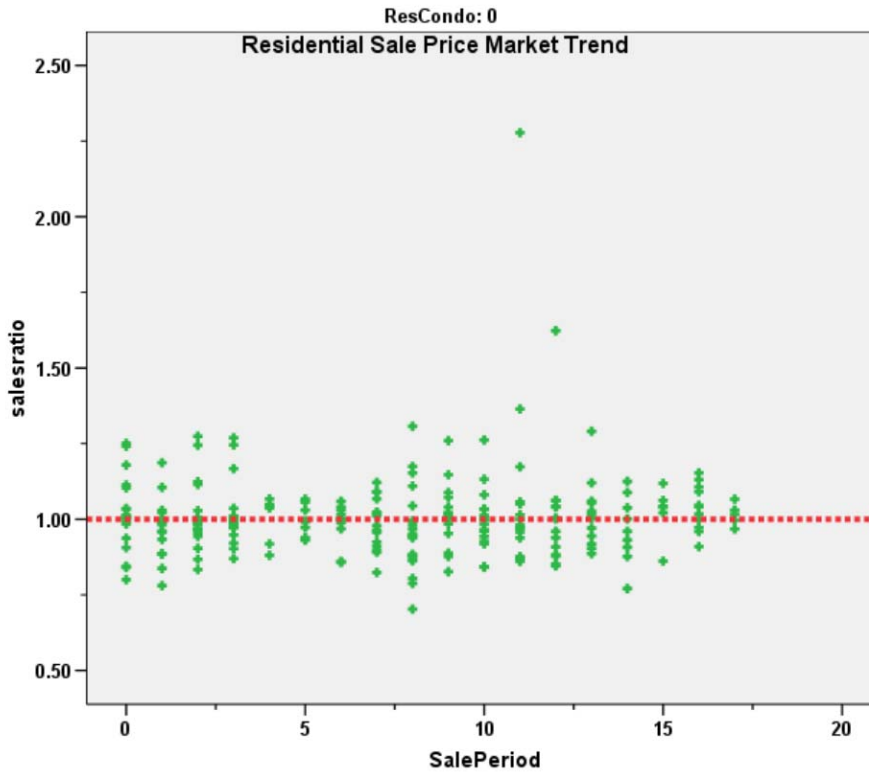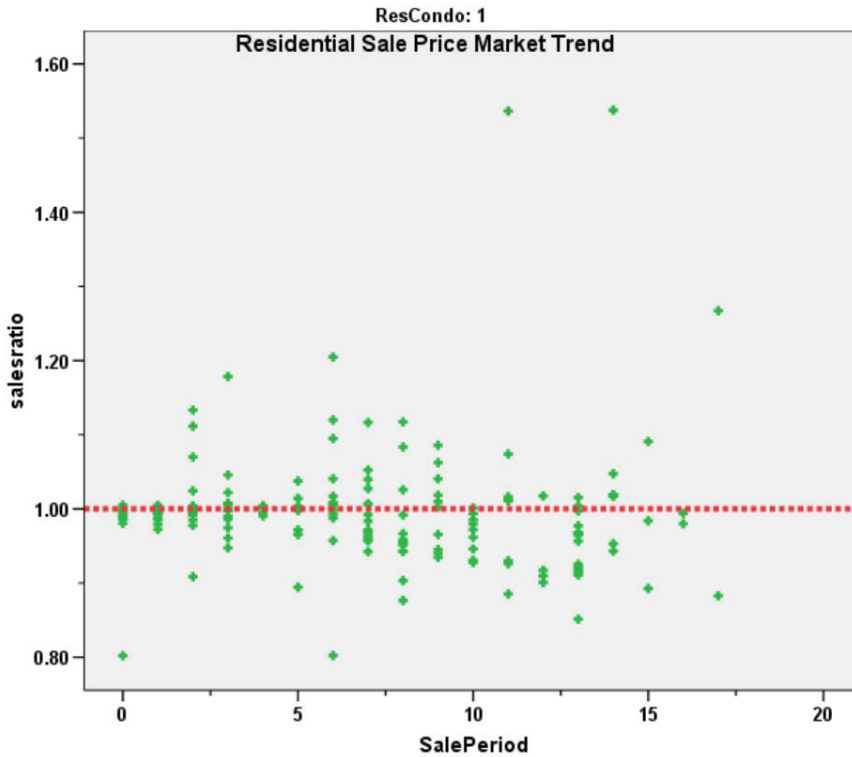
With no significant market trend evident in the sales ratio data, the above analysis indicated that the assessor has adequately addressed market trending in the valuation of residential properties.

Sold/Unsold Analysis

In terms of the valuation consistency between sold and unsold residential properties, we compared the median actual value per square foot for 2012 between each group stratified by residential non-condominium and condominiums, as follows:

Residential Non-Condos			
Group	**No.**	**Median**	**Mean**
Unsold	8,337	$240.26	$251.77
Sold	237	$246.18	$261.52

Residential Condos			
Group	**No.**	**Median**	**Mean**
Unsold	4,380	$285.00	$337.22
Sold	170	$290.00	$362.42

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

IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

1. Total sales   1,478
2. Selected qualified sales   724
3. Select improved sales (non-duplicate)   643
4. Select commercial/industrial sales   78

The sales ratio analysis resulted in the following ratio statistics:

Median	**0.954**
Price Related Differential	**1.037**
Coefficient of Dispersion	**.155**

The above table indicates that the Routt County commercial/industrial sale ratios were in compliance with the SBOE standards. The following histogram and scatter plot describe the sales ratio distribution further:
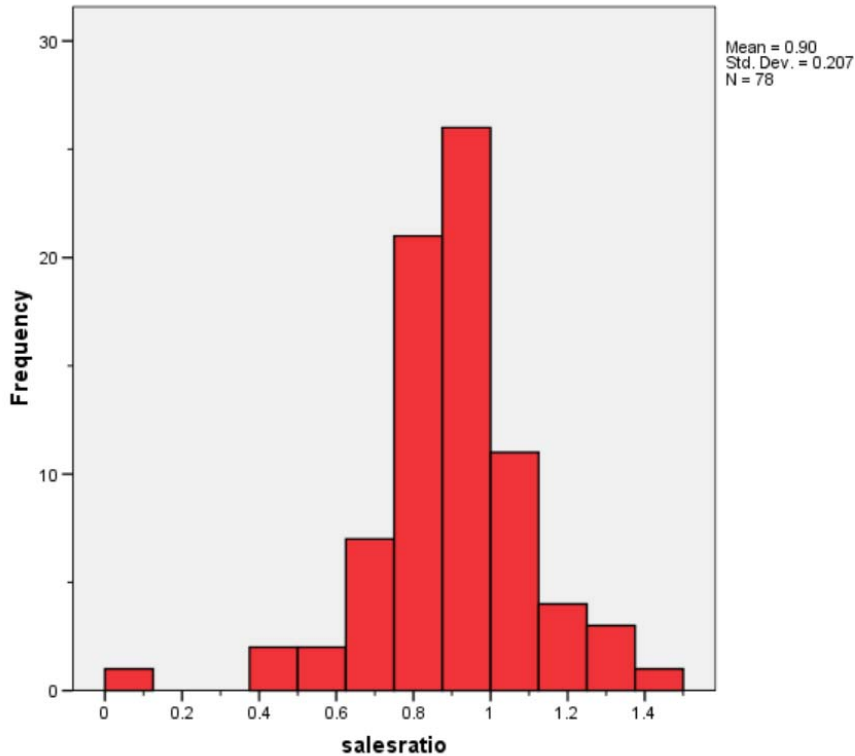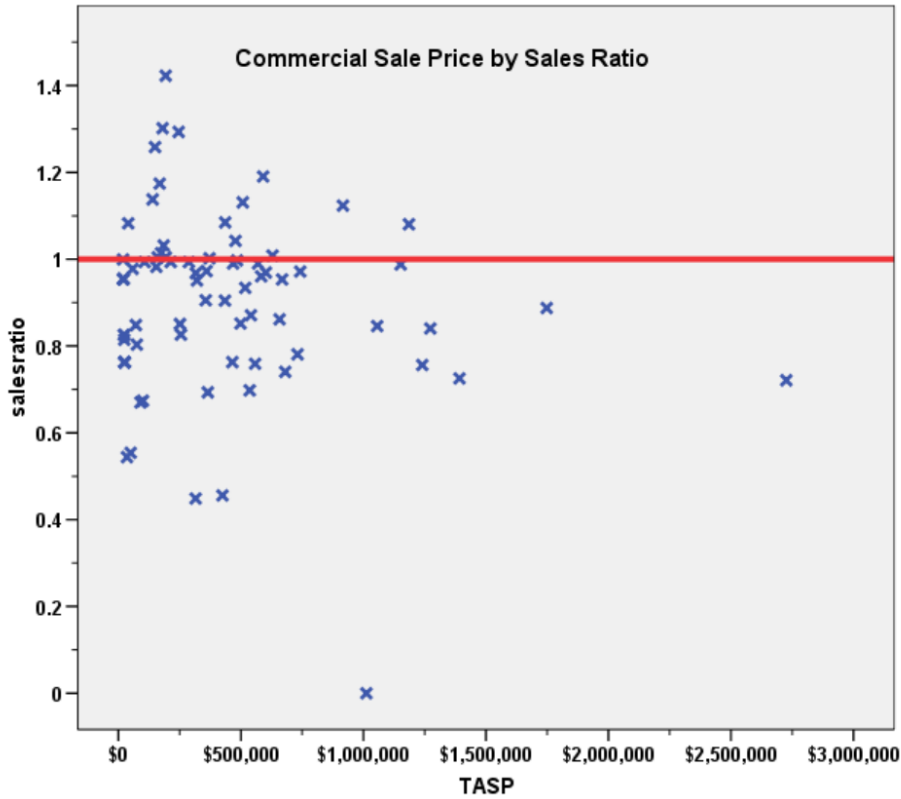
Commercial Market Trend Analysis

The 78 commercial/industrial sales were next analyzed by subclass for any residual market trending, examining the sale ratios across the 18-month sale period with the following results:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.944	.045		20.916	.000
	SalePeriod	-.004	.003	-.125	-1.094	.277

a. Dependent Variable: salesratio

Commercial Market Trend Analysis
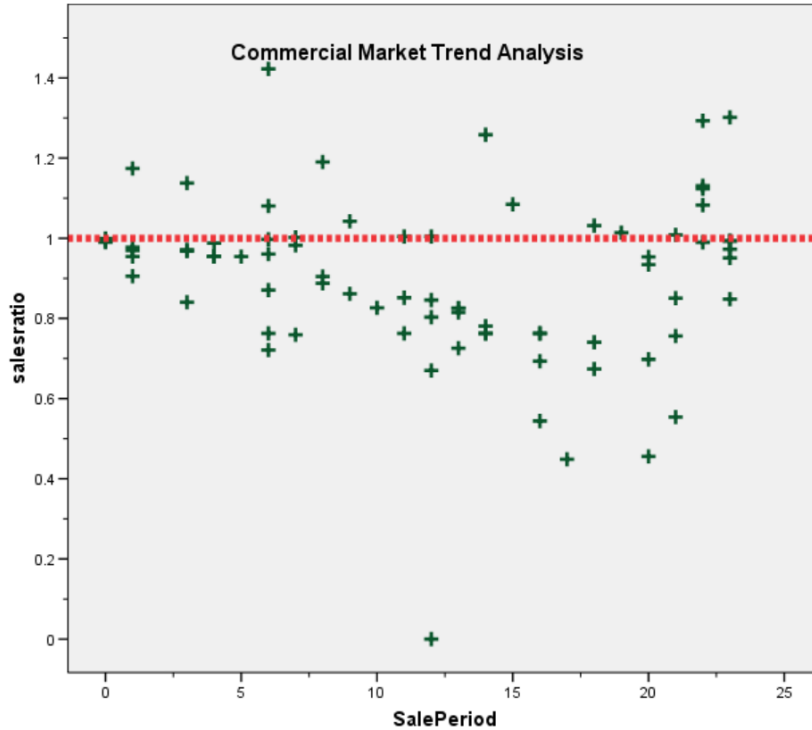
While the market trend was marginally significant, the magnitude of that trend was not. We concluded that the assessor adequately considered market trending in their valuation of commercial/industrial properties.

Sold/Unsold Analysis

We compared the median actual value per square foot between sold and unsold commercial properties to determine if the assessor was valuing each group consistently, as follows:

Group	No. Props	Median Val SF	Mean Val SF
Unsold	1,184	$144	$215
Sold	78	$189	$191

Based on the results of these comparisons, we concluded that the Routt County assessor was valuing sold and unsold commercial properties consistently.

V. VACANT LAND SALE RESULTS

We were provided a separate vacant land sales file to analyze. The sales ratio analysis resulted in the following ratio statistics:

Median	**1.000**
Price Related Differential	**0.951**
Coefficient of Dispersion	**.146**

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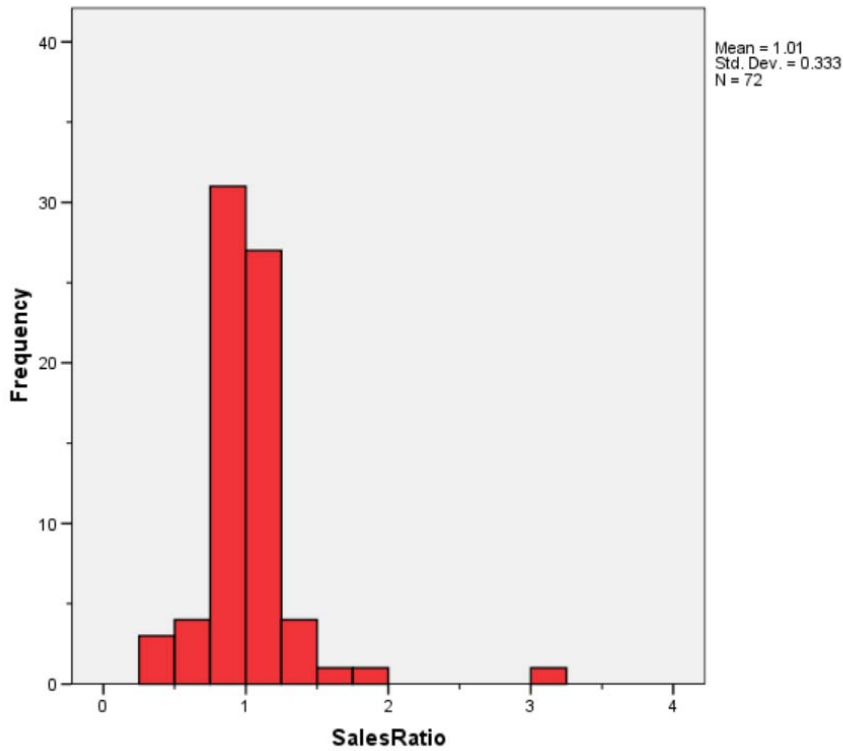
Vacant Land Market Trend Analysis

The 74 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)	.991	.016		62.902	.000
	VSalePeriod	.000	.001	-.022	-.168	.868

a. Dependent Variable: SalesRatio
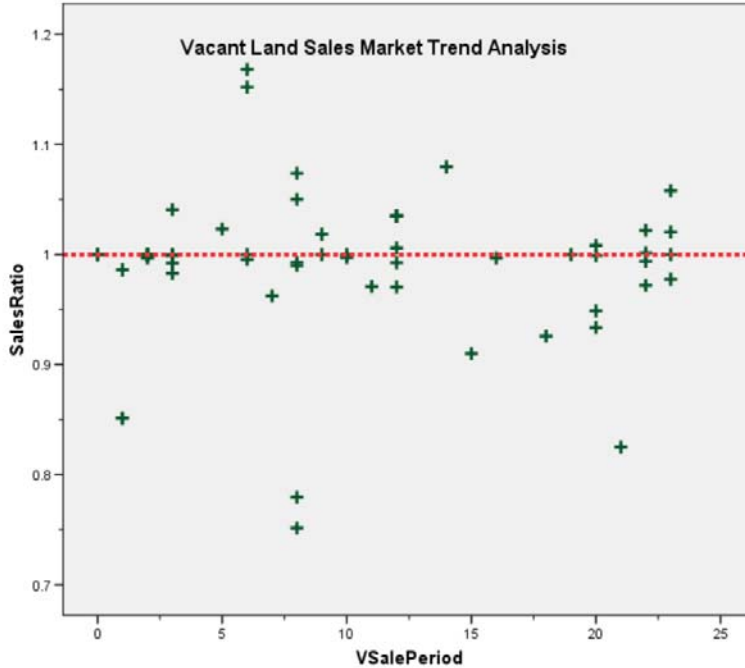
The market trend results indicated no statistically significant trend. We concluded that the assessor has adequately considered market tending in Routt County's vacant land valuation for 2012.

Sold/Unsold Analysis

We compared the median change in actual value between 2010 and 2012 for vacant land properties to determine if sold and unsold properties were valued consistently, as follows:

Group	No. Props	Median Chg Val	Mean ChgVal
Unsold	4,374	0.515	0.557
Sold	72	0.542	0.504

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

V. AGRICULTURAL IMPROVEMENTS ANALYSIS

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

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

Descriptives					Statistic	Std. Error
ImpValSF	**SFR**	Mean			$148.70	$.921
		95% Confidence Interval for Mean	Lower Bound		$146.90	
			Upper Bound		$150.51	
		5% Trimmed Mean			$143.59	
		Median			$137.18	
		Variance			5014.575	
		Std. Deviation			$70.814	
		Minimum			$0	
		Maximum			$694	
		Range			$694	
		Interquartile Range			$70	
		Skewness			1.462	.032
		Kurtosis			4.000	.064
	Ag Res	Mean			$142.03	$3.501
		95% Confidence Interval for Mean	Lower Bound		$135.15	
			Upper Bound		$148.90	
		5% Trimmed Mean			$135.61	
		Median			$137.12	
		Variance			8970.171	
		Std. Deviation			$94.711	
		Minimum			$0	
		Maximum			$690	
		Range			$690	
		Interquartile Range			$117	
		Skewness			1.131	.090
		Kurtosis			2.807	.180

VI. CONCLUSIONS

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

STATISTICAL ABSTRACT
Residential

Ratio Statistics for CURRTOT / TASP

ResCondo	Mean	95% Confidence Interval for Mean		Median	95% Confidence Interval for Median			Weighted Mean	95% Confidence Interval for Weighted Mean		Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
		Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			Mean Centered
0	1.004	.987	1.022	.996	.984	1.004	96.3%	.995	.979	1.012	1.009	.084	13.8%
1	.997	.984	1.009	.994	.990	.998	95.4%	.996	.984	1.008	1.001	.045	8.4%

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/Industrial

Ratio Statistics for CURRTOT / TASP

Mean	95% Confidence Interval for Mean		Median	95% Confidence Interval for Median			Weighted Mean	95% Confidence Interval for Weighted Mean		Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			Mean Centered
.901	.855	.948	.954	.851	.973	96.9%	.869	.798	.941	1.037	.155	23.0%

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 / VTASP

Mean	95% Confidence Interval for Mean		Median	95% Confidence Interval for Median			Weighted Mean	95% Confidence Interval for Weighted Mean		Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			Mean Centered
.989	.971	1.008	1.000	.996	1.000	95.2%	1.005	.987	1.023	.984	.039	7.1%

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

Residential Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT $25K	1	.2%
	$50K to $100K	2	.5%
	$100K to $150K	17	4.2%
	$150K to $200K	35	8.6%
	$200K to $300K	96	23.5%
	$300K to $500K	95	23.3%
	$500K to $750K	58	14.2%
	$750K to $1,000K	44	10.8%
	Over $1,000K	60	14.7%
Overall		408	100.0%
Excluded		0	
Total		408	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT $25K	1.538	1.000	.000	.%
$50K to $100K	.999	1.000	.001	.1%
$100K to $150K	.992	1.001	.030	5.4%
$150K to $200K	.988	.999	.066	9.1%
$200K to $300K	.992	.999	.078	11.3%
$300K to $500K	1.000	.997	.077	16.9%
$500K to $750K	.997	.999	.059	9.1%
$750K to $1,000K	.992	.999	.053	7.8%
Over $1,000K	.996	1.003	.059	9.2%
Overall	.995	1.006	.067	12.0%

Subclass

Case Processing Summary

		Count	Percent
abstrimp	0	1	.2%
	1212	154	37.7%
	1215	1	.2%
	1218	79	19.4%
	1220	2	.5%
	1230	170	41.7%
	1277	1	.2%
Overall		408	100.0%
Excluded		0	
Total		408	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	1.538	1.000	.000	.%
1212	1.000	1.010	.086	14.8%
1215	1.016	1.000	.000	.%
1218	.989	1.006	.079	12.6%
1220	1.001	1.000	.001	.2%
1230	.994	.998	.042	7.3%
1277	.841	1.000	.000	.%
Overall	.995	1.006	.067	12.0%

Improvement Age

Case Processing Summary

		Count	Percent
AgeRec	0	3	.7%
	Over 100	2	.5%
	75 to 100	8	2.0%
	50 to 75	5	1.2%
	25 to 50	127	31.1%
	5 to 25	183	44.9%
	5 or Newer	80	19.6%
Overall		408	100.0%
Excluded		0	
Total		408	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	1.002	1.165	.179	37.8%
Over 100	.931	1.039	.069	9.8%
75 to 100	.979	1.022	.113	14.2%
50 to 75	1.003	1.001	.054	8.5%
25 to 50	.988	.999	.059	8.7%
5 to 25	.999	1.011	.070	11.0%
5 or Newer	.996	1.010	.066	16.5%
Overall	.995	1.006	.067	12.0%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	0	1	.2%
	LE 500 sf	6	1.5%
	500 to 1,000 sf	70	17.2%
	1,000 to 1,500 sf	121	29.7%
	1,500 to 2,000 sf	76	18.6%
	2,000 to 3,000 sf	76	18.6%
	3,000 sf or Higher	58	14.2%
Overall		408	100.0%
Excluded		0	
Total		408	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	1.538	1.000	.000	.%
LE 500 sf	.999	.998	.009	1.5%
500 to 1,000 sf	.987	1.002	.052	7.1%
1,000 to 1,500 sf	.993	.998	.054	8.6%
1,500 to 2,000 sf	.996	1.008	.066	9.8%
2,000 to 3,000 sf	.995	1.032	.101	19.7%
3,000 sf or Higher	1.000	1.011	.068	10.5%
Overall	.995	1.006	.067	12.0%

Improvement Quality

Case Processing Summary

		Count	Percent
quality	2	1	.2%
	3	1	.2%
	10	2	.5%
	20	30	7.4%
	30	169	41.5%
	40	79	19.4%
	50	96	23.6%
	55	2	.5%
	60	26	6.4%
	70	1	.2%
Overall		407	100.0%
Excluded		1	
Total		408	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
2	1.000	1.000	.000	.%
3	1.002	1.000	.000	.%
10	1.008	1.002	.022	3.1%
20	.995	.995	.068	9.3%
30	.992	1.002	.067	9.4%
40	.997	1.013	.093	19.6%
50	.995	1.002	.047	7.1%
55	.984	1.006	.029	4.1%
60	1.000	1.005	.058	10.5%
70	.985	1.000	.000	.%
Overall	.995	1.004	.066	11.7%

Improvement Condition

Case Processing Summary

		Count	Percent
condition	1	1	.2%
	2	2	.5%
	3	14	3.4%
	4	356	87.5%
	5	30	7.4%
	6	4	1.0%
Overall		407	100.0%
Excluded		1	
Total		408	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1	.980	1.000	.000	.%
2	.953	1.007	.048	6.7%
3	.996	.991	.069	10.2%
4	.996	1.005	.066	11.9%
5	.983	.998	.069	9.8%
6	.983	.982	.054	10.7%
Overall	.995	1.004	.066	11.7%

Commercial Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT $25K	14	17.9%
	$25K to $50K	3	3.8%
	$50K to $100K	5	6.4%
	$100K to $150K	3	3.8%
	$150K to $200K	8	10.3%
	$200K to $300K	5	6.4%
	$300K to $500K	15	19.2%
	$500K to $750K	15	19.2%
	$750K to $1,000K	1	1.3%
	Over $1,000K	9	11.5%
Overall		78	100.0%
Excluded		0	
Total		78	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT $25K	.826	1.011	.099	12.2%
$25K to $50K	.554	1.009	.324	67.5%
$50K to $100K	.803	1.027	.120	16.1%
$100K to $150K	1.138	.987	.078	11.7%
$150K to $200K	1.023	.995	.113	19.0%
$200K to $300K	.994	1.002	.123	18.7%
$300K to $500K	.951	.992	.143	22.6%
$500K to $750K	.954	1.003	.110	15.0%
$750K to $1,000K	1.124	1.000	.000	.%
Over $1,000K	.840	.987	.211	38.2%
Overall	.954	1.037	.155	22.4%

Subclass

Case Processing Summary

		Count	Percent
abstrimp	0	1	1.3%
	1230	1	1.3%
	2212	5	6.4%
	2220	5	6.4%
	2225	1	1.3%
	2230	7	9.0%
	2235	1	1.3%
	2241	1	1.3%
	2242	2	2.6%
	2245	7	9.0%
	2245	47	60.3%
Overall		78	100.0%
Excluded		0	
Total		78	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation — Median Centered
0	.000	.	.	.%
1230	.983	1.000	.000	.%
2212	.781	1.033	.276	38.5%
2220	.972	1.073	.062	12.8%
2225	1.191	1.000	.000	.%
2230	.862	1.062	.070	10.2%
2235	.674	1.000	.000	.%
2241	1.080	1.000	.000	.%
2242	1.153	.992	.129	18.2%
2245	.934	.996	.062	8.8%
2245	.954	.985	.152	20.5%
Overall	.954	1.037	.155	22.4%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	0	1	1.3%
	LE 500 sf	17	21.8%
	500 to 1,000 sf	14	17.9%
	1,000 to 1,500 sf	8	10.3%
	1,500 to 2,000 sf	11	14.1%
	2,000 to 3,000 sf	15	19.2%
	3,000 sf or Higher	12	15.4%
Overall		78	100.0%
Excluded		0	
Total		78	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.000	.	.	.%
LE 500 sf	.815	1.255	.149	19.9%
500 to 1,000 sf	.850	1.064	.185	24.4%
1,000 to 1,500 sf	.998	1.064	.132	21.1%
1,500 to 2,000 sf	.862	1.070	.161	20.9%
2,000 to 3,000 sf	.969	1.013	.073	11.6%
3,000 sf or Higher	.989	1.078	.127	15.8%
Overall	.954	1.037	.155	22.4%

Improvement Quality

Case Processing Summary

		Count	Percent
quality	2	2	11.8%
	3	9	52.9%
	4	4	23.5%
	20	1	5.9%
	30	1	5.9%
Overall		17	100.0%
Excluded		61	
Total		78	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
2	.866	1.040	.098	13.9%
3	1.032	1.105	.151	20.3%
4	.864	1.014	.085	11.9%
20	1.080	1.000	.000	.%
30	.983	1.000	.000	.%
Overall	.972	1.088	.139	19.0%

Improvement Condition

Case Processing Summary

		Count	Percent
condition	3	3	20.0%
	4	7	46.7%
	5	5	33.3%
Overall		15	100.0%
Excluded		63	
Total		78	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
3	1.080	1.022	.110	20.0%
4	1.032	1.075	.154	21.8%
5	.951	1.066	.082	13.3%
Overall	.983	1.091	.141	19.5%

Vacant Land Median Ratio Stratification

Case Processing Summary

		Count	Percent
abstrlnd	100	51	87.9%
	520	1	1.7%
	530	1	1.7%
	1112	5	8.6%
Overall		58	100.0%
Excluded		0	
Total		58	

Ratio Statistics for CURRLND / VTASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
100	1.000	.984	.035	6.4%
520	1.058	1.000	.000	.%
530	.910	1.000	.000	.%
1112	.997	.974	.070	13.0%
Overall	1.000	.984	.039	7.1%