2020
ADAMS COUNTY
PROPERTY ASSESSMENT
STUDY

WILDROSE
APPRAISAL, INCORPORATED
Audit Division

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APPRAISAL, INCORPORATED
Audit Division

September 15, 2020

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

RE: Final Report for the 2020 Colorado Property Assessment Study

Dear Ms. Mullis:

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

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

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

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

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

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

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INTRODUCTION

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 Adams County in the following report.

REGIONAL/HISTORICAL SKETCH OF ADAMS COUNTY

Regional Information

Adams County is located in the Front Range region of Colorado. The Colorado Front Range is a colloquial geographic term for the populated areas of the State that are just east of the foothills of the Front Range. It includes Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, El Paso, Jefferson, Larimer, Pueblo, and Weld counties.
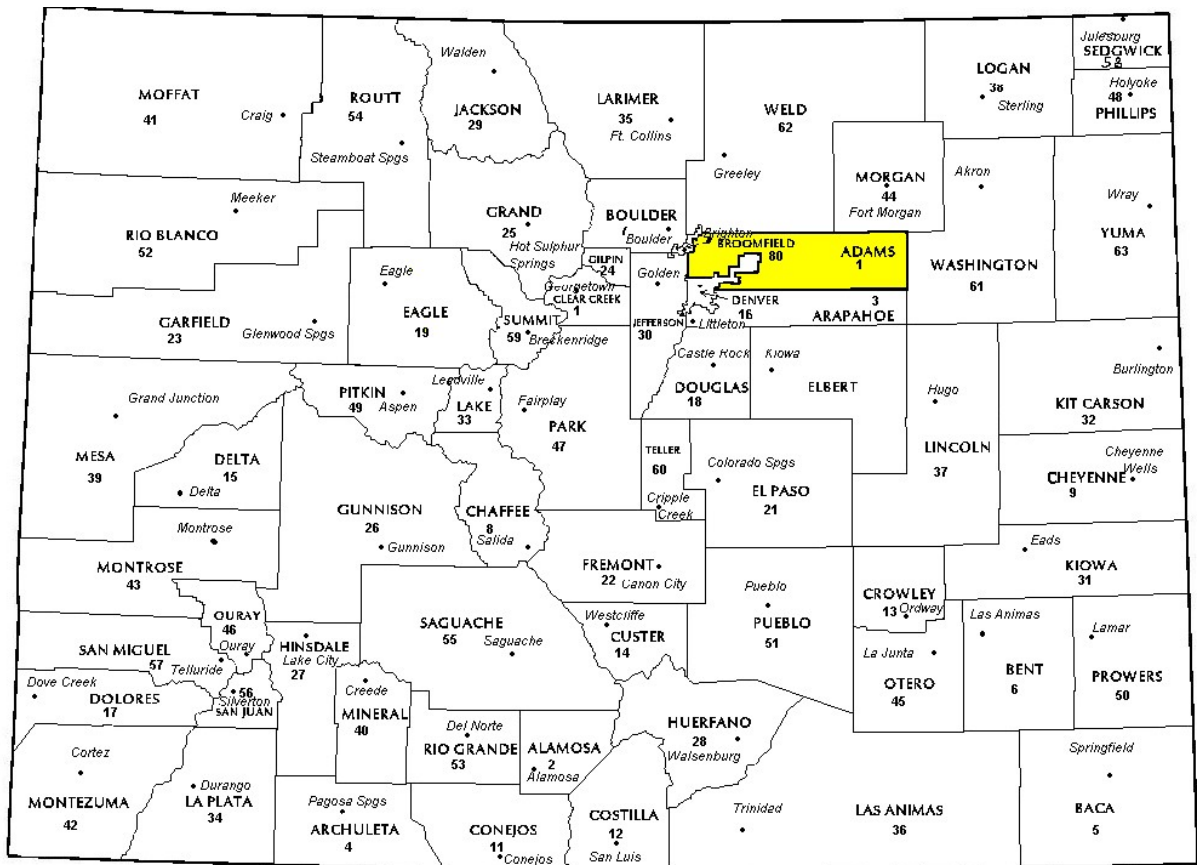
Historical Information

Adams County had an estimated population of approximately 498,187 people with 426.53 people per square mile, according to the U.S. Census Bureau's 2016 estimated census data. This represents a 12.8 percent change from April 1, 2010 to July 1, 2016.

Adams County is the fifth most populous of the 64 counties of the State of Colorado. It is named for Alva Adams, Governor of the State of Colorado 1887-1889, 1897-1899, and 1905. The county seat is Brighton.

On May 30, 1854, the Kansas-Nebraska Act created the Territory of Nebraska and Territory of Kansas, divided by the Parallel 40° North (168th Avenue in present-day Adams County). The future Adams County, Colorado, occupied a strip of northern Arapahoe County, Kansas Territory, immediately south of the Nebraska Territory.

In 1859, John D. "Colonel Jack" Henderson built a ranch, trading post, and hotel on Henderson Island in the South Platte River in Arapahoe County, Kansas Territory. Jack Henderson was the former editor and proprietor of the Leavenworth (Kansas Territory) Journal and an outspoken pro-slavery politician who had been accused of vote fraud in eastern Kansas. Henderson sold meat and provisions to gold seekers on their way up the South Platte River Trail to the gold fields during the Pike's Peak Gold Rush. Henderson Island was the first permanent settlement in the South Platte River Valley between Fort Saint Vrain in the Nebraska Territory and the Cherry Creek Diggings in the Kansas Territory. Jack Henderson eventually returned to eastern Kansas and (ironically) fought for the Union in the American Civil War. Henderson Island is today the site of the Adams County Regional Park and Fairgrounds.

The eastern portion of the Kansas Territory was admitted to the Union as the State of Kansas on January 29, 1861, and on February 28, 1861, the remaining western portion of the territory was made part of the new Colorado Territory. The Colorado Territory created Arapahoe County, on November 1, 1861, and Colorado was admitted to the Union on August 1, 1876.

In 1901, the Colorado General Assembly voted to split Arapahoe County into three parts: a new Adams County, a new consolidated City and County of Denver, and the remainder of the Arapahoe County to be renamed South Arapahoe County. A ruling by the Colorado Supreme Court, subsequent legislation, and a referendum delayed the creation of Adams County until November 15, 1902. Governor James Bradley Orman designated Brighton as the temporary Adams County Seat. Adams County originally stretched 160 miles from present-day Sheridan Boulevard to the Kansas state border. On May 12, 1903, the eastern 88 miles of Adams County was transferred to the new Washington County and the new Yuma County, reducing the length of Adams County to the present 72 miles . On November 8, 1904, Adams County voters chose Brighton as the permanent county seat.

A 1989 vote transferred 53 square miles of Adams County to the City and County of Denver for the proposed Denver International Airport, leaving the densely populated western portion of the county as two oddly-shaped peninsulas. Adams County lost the tip of its northwest corner when the consolidated City and County of Broomfield was created on November 15, 2001.
(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 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 Adams County are:

Adams County Ratio Grid					
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis
Commercial/Industrial	249	1.000	1.194	9.7	Compliant
Condominium	N/A	N/A	N/A	N/A	N/A
Single Family	19,561	0.991	1.009	4.9	Compliant
Vacant Land	130	0.987	1.038	10	Compliant

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

Recommendations

None

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

Adams 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 Adams County is reasonably treating its sold and unsold properties in the same manner.

Recommendations

None

AGRICULTURAL LAND STUDY

Acres By Subclass

Value By Subclass
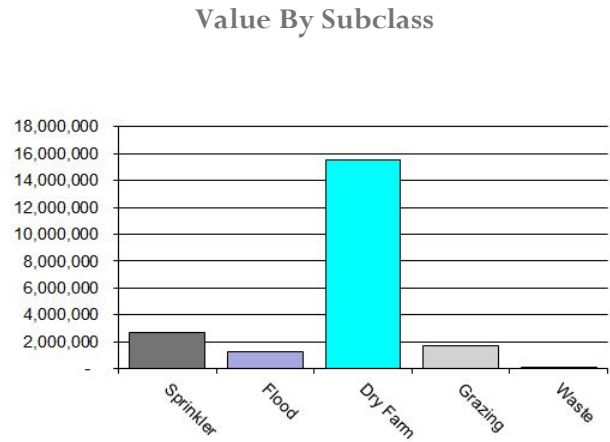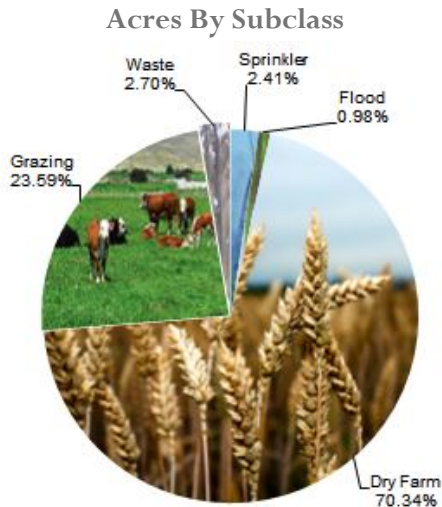
Agricultural Land

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:

Adams County Agricultural Land Ratio Grid						
Abstract Code	Land Class	Number Of Acres	County Value Per Acre	County Assessed Total Value	WRA Total Value	Ratio
4107	Sprinkler	13,494	197.71	2,667,945	2,586,907	1.03
4117	Flood	5,485	233.86	1,282,706	1,295,915	0.99
4127	Dry Farm	394,562	39.28	15,497,060	15,450,042	1.00
4147	Grazing	132,310	13.06	1,733,562	1,728,540	1.00
4167	Waste	15,123	2.32	35,086	36,082	0.97
Total/Avg		560,975	37.82	21,216,360	21,097,485	1.01

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

Adams 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

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

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

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

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

Adams 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 Adams County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 60 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

All of the sales in the unqualified sales sample had reasons that were clear and supportable.

Recommendations

None

ECONOMIC AREA REVIEW AND EVALUATION

Methodology

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

Adams 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.

Adams 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

Adams 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

Adams 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.

Adams County is compliant with the guidelines set forth in ARL Volume 5 regarding discovery procedures, using the following methods to discover personal property accounts in the county:

- Public Record Documents
- Local Telephone Directories, Newspapers or Other Local Publications
- Personal Observation, Physical Canvassing or Word of Mouth

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

Adams County submitted their personal property written audit plan and was current for the 2020 valuation period. The number and listing of businesses audited was also submitted and was in conformance with the written audit plan. The following audit triggers were used by the county to select accounts to be audited:

- Businesses in a selected area
- Accounts with obvious discrepancies
- New businesses filing for the first time
- Same business type or use
- Businesses with no deletions or additions for 2 or more years
- Non-filing Accounts - Best Information Available

Adams County's median ratio is 1.00. This is in compliance with the State Board of Equalization (SBOE) compliance requirements

which range from .90 to 1.10 with no COD requirements.

Conclusions

Adams 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

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APPENDICES

STATISTICAL COMPLIANCE REPORT
FOR ADAMS COUNTY
2020

I. OVERVIEW

Adams County is an urban county located along Colorado's Front Range. The county has a total of 156,251 real property parcels, according to data submitted by the county assessor's office in 2020. The following provides a breakdown of property classes for this county:
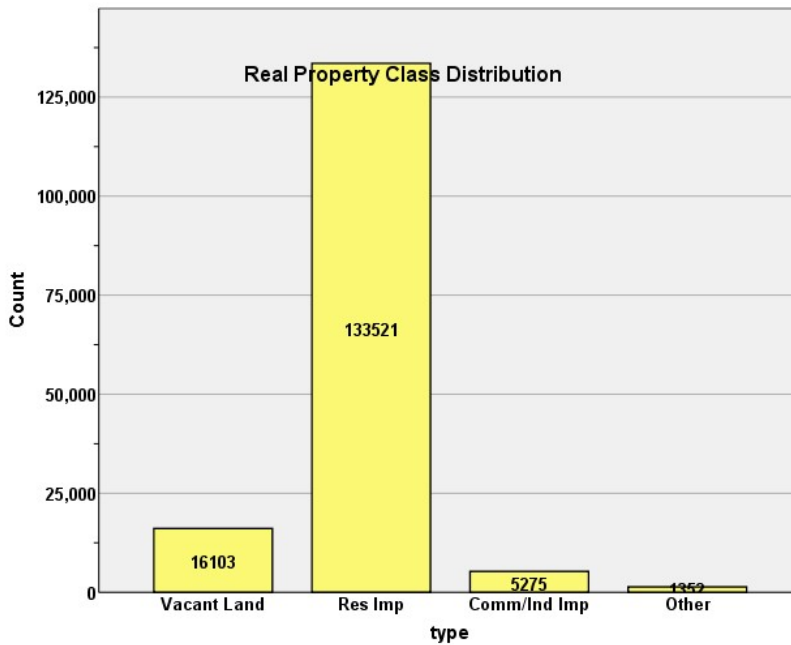
The vacant land class of properties was dominated by residential land. Residential lots (coded 100) accounted for 60.2% of all vacant land parcels.

For residential improved properties, single family properties accounted for 81.7% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial properties accounted for 3.4% 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	1,2,3,4,5,6	N	N
Neighborhood	300.N, 530.R	N	N
Subdivision		N	V

Codes
V=*Valid Geographic Level – used for modeling*
N = *Not used as Geographic Level for modeling*

Note: Residential-Above are the defined model areas used. Neighborhood and subdivision codes are used as variables within the above models, where applicable.

II. DATA FILES

The following sales analyses were based on the requirements of the 2020 Colorado Property Assessment Study. Information was provided by the Adams 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 19,561 qualified residential sales for the 24-month period prior to June 30, 2018. The sales ratio analysis results were as follows:

Median	**0.991**
Price Related Differential	**1.009**
Coefficient of Dispersion	**4.9**

We next stratified the sale ratio analysis by economic area and neighborhood. The minimum count for the neighborhood stratification is 30 sales. The following are the results of this stratification analysis:

Economic Area
Case Processing Summary

		Count	Percent
ECONAREA	1.00	521	2.7%
	2.00	4456	22.8%
	3.00	5856	29.9%
	4.00	5849	29.9%
	5.00	1391	7.1%
	6.00	1488	7.6%
Overall		19561	100.0%
Excluded		0	
Total		19561	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1.00	1.000	1.005	.057	8.1%
2.00	.993	1.004	.042	5.8%
3.00	.988	1.005	.048	6.6%
4.00	.996	1.018	.050	6.7%
5.00	.973	1.007	.062	9.7%
6.00	.993	1.011	.055	7.7%
Overall	.991	1.009	.049	6.9%

Neighborhoods with 30 or more sale
Ratio Statistics for CURRTOT / TASP

| Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
66	**.929**	**1.002**	**.119**	**14.5%**
101	.997	1.007	.059	7.8%
102	1.000	1.003	.054	7.4%
115	.983	1.010	.076	10.3%
119	.977	1.006	.061	8.2%
122	.986	1.004	.054	7.5%
124	.989	1.004	.046	6.2%
140	1.000	1.002	.056	8.2%
150	1.002	1.004	.048	6.7%
200	.975	1.007	.053	7.5%
210	.988	1.006	.057	7.3%
220	.993	1.006	.055	7.7%
225	1.000	1.008	.062	8.3%
230	.998	1.004	.064	8.1%
240	.989	1.005	.049	6.4%
300	.990	1.004	.043	5.8%
400	.989	1.003	.049	6.4%
420	.992	1.003	.041	5.2%
425	.988	1.001	.041	5.3%
430	.987	1.002	.045	5.9%
500	.978	1.002	.064	11.8%
520	.955	1.005	.067	10.5%
530	.995	1.003	.039	5.2%
600	.994	1.013	.066	9.1%
610	.999	1.002	.040	5.1%
620	.998	1.003	.039	5.1%
Overall	.990	1.005	.049	6.7%

The above sales ratio analysis indicates that both from an overall perspective and broken down by economic area, the residential sale ratios are in compliance, with the exception of one neighborhood with 35 sales.

The following graphs describe the overall sales ratio results for Adams County:

Sales Ratio Distribution

Mean = .99
Std. Dev. = .068
N = 19,561
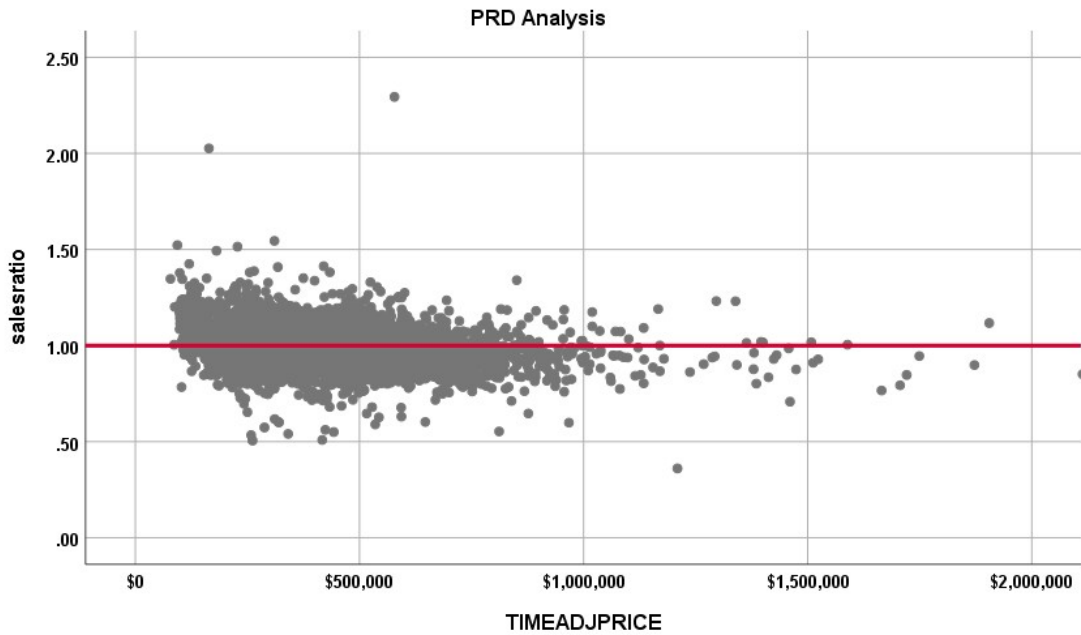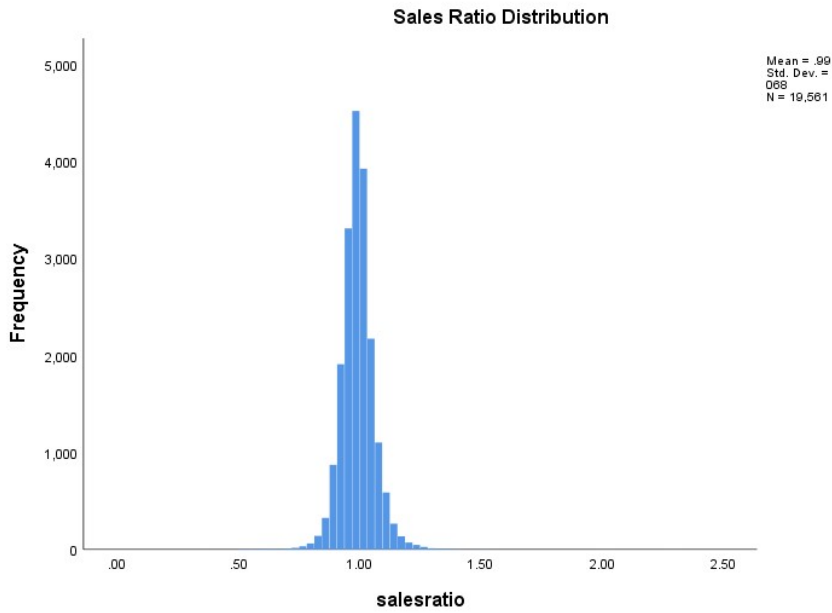
PRD Analysis

NOTE: Scale adjusted for above chart for illustration purposes.

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

Residential Market Trend Analysis

We next analyzed the residential dataset using the 24-month sale period for any residual market trending and broken down by economic area, as follows:

Coefficients[a]

ECONAREA	Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1.00	1	(Constant)	1.017	.006		159.867	.000
		SalePeriod	-.001	.000	-.069	-1.577	.115
2.00	1	(Constant)	.995	.002		613.342	.000
		SalePeriod	.000	.000	-.030	-1.983	.047
3.00	1	(Constant)	.995	.002		615.817	.000
		SalePeriod	-.001	.000	-.068	-5.251	.000
4.00	1	(Constant)	1.002	.002		594.790	.000
		SalePeriod	.000	.000	-.023	-1.726	.084
5.00	1	(Constant)	.983	.005		202.532	.000
		SalePeriod	-.001	.000	-.076	-2.838	.005
6.00	1	(Constant)	.998	.004		283.503	.000
		SalePeriod	-.001	.000	-.045	-1.734	.083

a. Dependent Variable: salesratio

There was no residual market trending present in the sale ratio data for most economic area. While several economic areas had statistically significant results, the magnitude of each trend was not significant; we therefore concluded 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. The data was analyzed both as a whole and broken down by economic area, as follows:

Report
VALSF

sold	N	Median	Mean
UNSOLD	113899	$224	$235
SOLD	19560	$223	$234

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	.033	Retain the null hypothesis.

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

Report

VALSF

ECONAREA	sold	N	Median	Mean
1.00	UNSOLD	3546	$207	$201
	SOLD	521	$218	$216
2.00	UNSOLD	18588	$194	$201
	SOLD	4456	$194	$200
3.00	UNSOLD	28801	$218	$223
	SOLD	5856	$226	$230
4.00	UNSOLD	43646	$237	$250
	SOLD	5848	$231	$249
5.00	UNSOLD	11559	$253	$259
	SOLD	1391	$262	$271
6.00	UNSOLD	7753	$253	$258
	SOLD	1488	$250	$258

We next stratified this analysis by neighborhoods with at least 20 sales, as follows:

Report

VALSF

NBHD	sold	N	Median	Mean
64	UNSOLD	361	$184	$182
	SOLD	29	$196	$199
66	UNSOLD	227	$184	$182
	SOLD	35	$179	$185
101	UNSOLD	613	$179	$199
	SOLD	52	$204	$197
102	UNSOLD	777	$212	$201
	SOLD	123	$231	$223
115	UNSOLD	1758	$242	$248
	SOLD	501	$251	$260
119	UNSOLD	2404	$246	$238
	SOLD	553	$258	$255
122	UNSOLD	4816	$224	$230
	SOLD	598	$229	$234
124	UNSOLD	3084	$194	$196
	SOLD	875	$198	$200
140	UNSOLD	597	$207	$209
	SOLD	88	$211	$219
150	UNSOLD	856	$223	$217
	SOLD	208	$223	$226
200	UNSOLD	3528	$269	$283
	SOLD	586	$263	$283
210	UNSOLD	5049	$290	$278
	SOLD	505	$294	$287
220	UNSOLD	4439	$301	$301
	SOLD	422	$307	$309
225	UNSOLD	2694	$292	$284
	SOLD	283	$298	$295
230	UNSOLD	431	$254	$250
	SOLD	44	$268	$261
240	UNSOLD	8072	$228	$238
	SOLD	1150	$245	$255
300	UNSOLD	7168	$275	$268
	SOLD	746	$288	$282

400	UNSOLD	5709	$253	$254
	SOLD	631	$258	$259
420	UNSOLD	8411	$217	$225
	SOLD	1198	$227	$234
425	UNSOLD	7915	$206	$210
	SOLD	1611	$203	$211
430	UNSOLD	6394	$202	$208
	SOLD	866	$213	$217
500	UNSOLD	2884	$257	$264
	SOLD	285	$262	$275
520	UNSOLD	3387	$248	$249
	SOLD	270	$266	$266
530	UNSOLD	7984	$187	$189
	SOLD	2474	$188	$193
600	UNSOLD	2816	$304	$305
	SOLD	454	$315	$321
610	UNSOLD	1362	$274	$265
	SOLD	155	$287	$277
620	UNSOLD	2522	$227	$230
	SOLD	524	$218	$224
Total	UNSOLD	96258	$229	$240
	SOLD	15266	$227	$239

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

IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

There were 249 qualified commercial and industrial sales for the 24-month period ending June 30, 2018. The sales ratio analysis had the following results:

Median	1.000
Price Related Differential	1.194
Coefficient of Dispersion	9.7

The above table indicates that the Adams 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 Sale Price by Sales Ratio
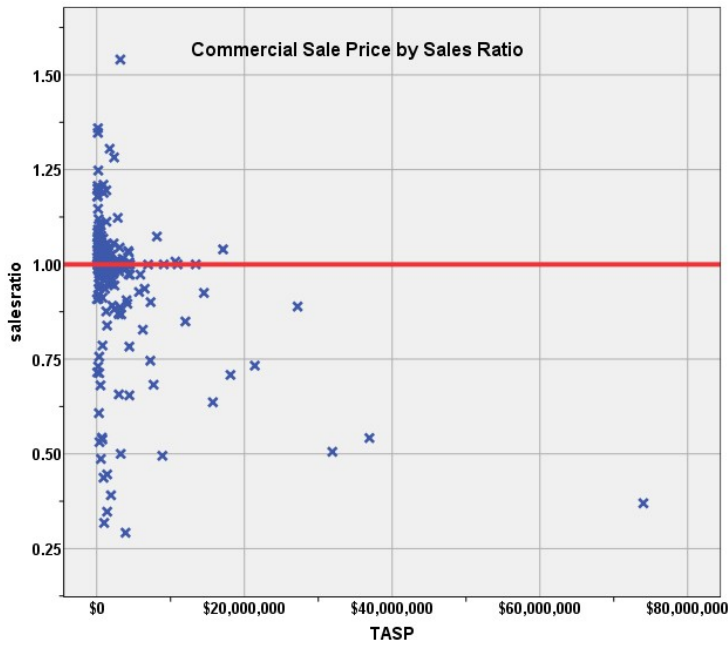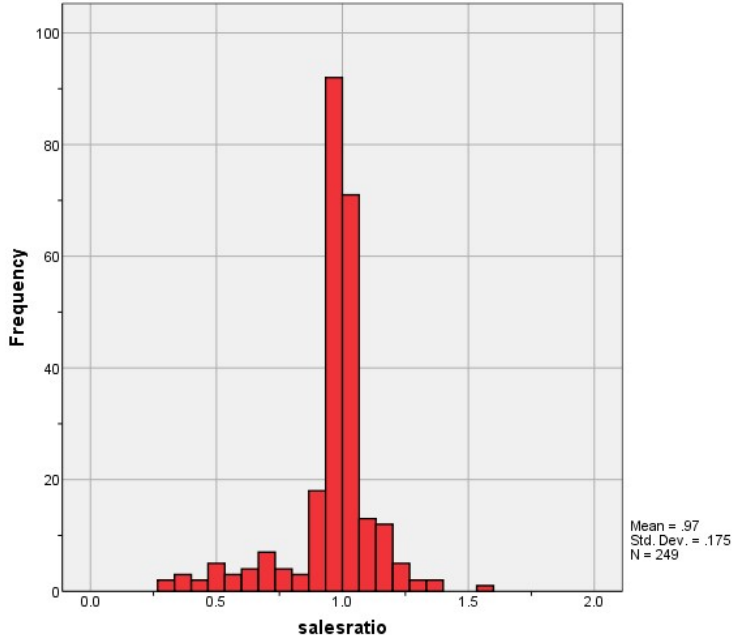
Commercial/Industrial Market Trend Analysis

The commercial/industrial sales were next 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)	.929	.021		43.726	.000

SalePeriod	.003	.002	.131	2.079	.039

a. Dependent Variable: salesratio
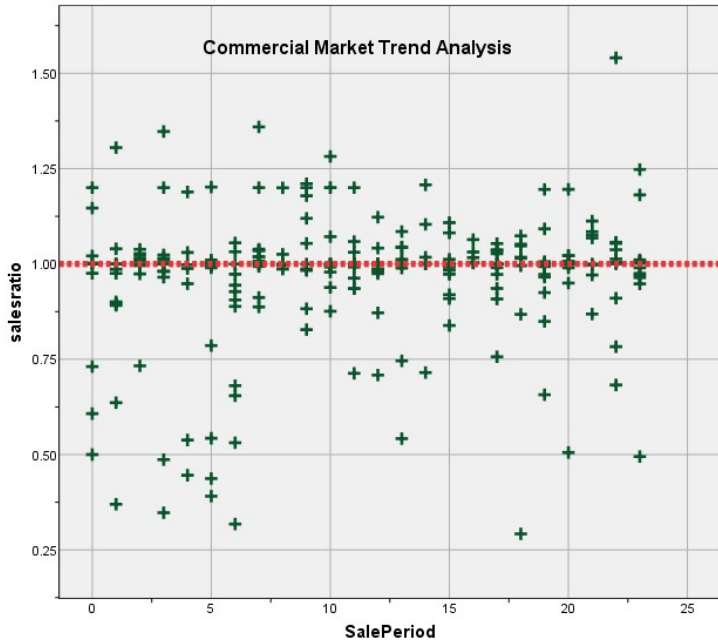
There was no residual market trending present in the commercial/industrial sale ratios. We concluded that the assessor has adequately considered market trending adjustments as part of the commercial/industrial valuation.

Sold/Unsold Analysis

We compared the 2020 median and mean value per square feet for sold and unsold commercial/industrial properties, as follows:

Report

VALSF

sold	N	Median	Mean
UNSOLD	4467	$78	$109
SOLD	233	$104	$123

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of VALSF is the same across categories of sold.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.

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

Given that there was a marginally significant difference between sold and unsold properties, we next stratified this comparison by subclass. The following table compared sold and unsold commercial/industrial properties for major subclasses:

Report
VALSF

ABSTRIMP	sold	N	Median	Mean
2212.00	.00	1300	$113	$147
	1.00	71	$152	$165
2220.00	.00	302	$122	$149
	1.00	21	$142	$149
2230.00	.00	832	$154	$193
	1.00	28	$145	$187
2235.00	.00	1156	$68	$74
	1.00	55	$101	$112
2245.00	.00	770	$5	$13
	1.00	44	$15	$22
3212.00	.00	118	$64	$75
	1.00	14	$89	$113
3215.00	.00	92	$57	$66
	1.00	5	$87	$93

Clustered Boxplot of VALSF by ABSTRIMP by sold
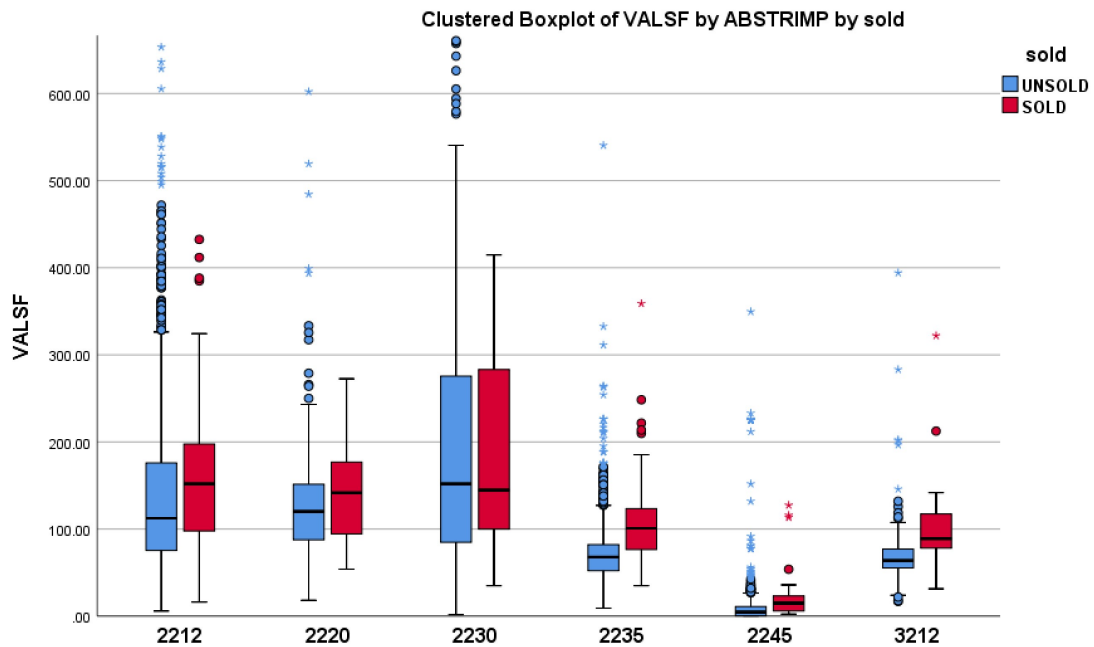
The above tabular and graphic comparison indicates that when stratified by subclass, there were instances where the sold property had a greater value per square foot, although for most subclasses there was significant overlap. **Based on this pattern, we will meet with the assessor's staff to further analyze the valuation of sold and unsold commercial properties in Adams County.**

V. VACANT LAND SALE RESULTS

There were 130 qualified vacant land sales for the 24-month period ending June 30, 2018. The sales ratio analysis results were as follows:

Median	0.987
Price Related Differential	1.038
Coefficient of Dispersion	10.0

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

Mean = .97
Std. Dev. = .193
N = 130

Vacant Land Sale Price by Sales Ratio
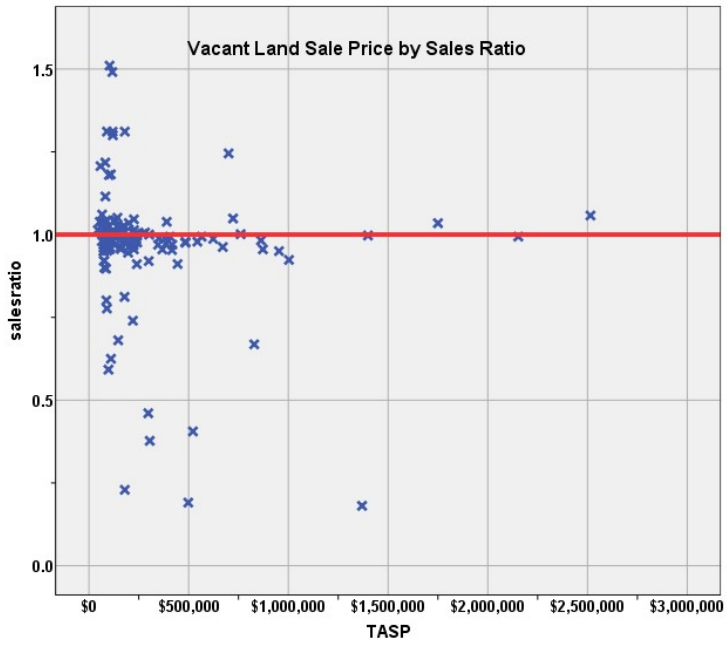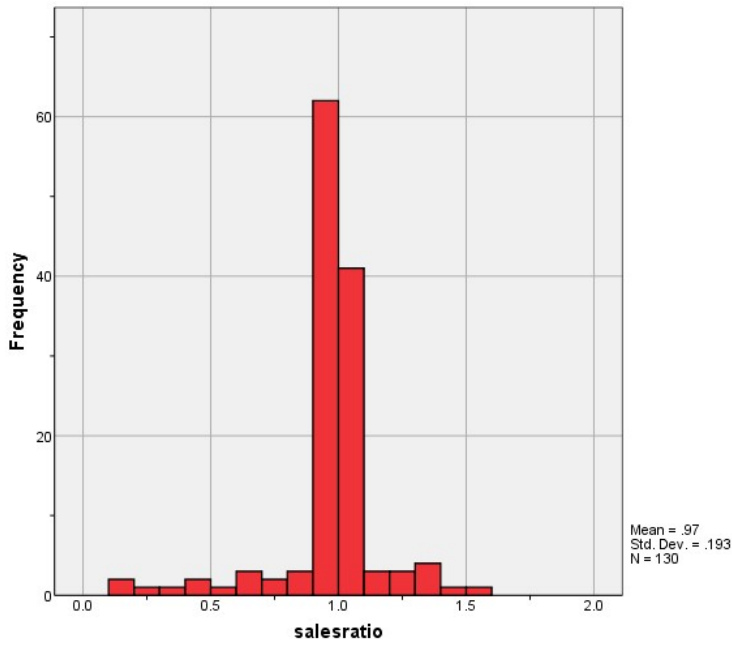
The above histogram indicates that the distribution of the vacant land sale ratios was within state mandated limits. No sales were trimmed.

Vacant Land Market Trend Analysis

We next analyzed the vacant land dataset using the 24-month sale period, with the following results:

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.985	.030		32.468	.000
	SalePeriod	-.002	.002	-.066	-.746	.457

a. Dependent Variable: salesratio
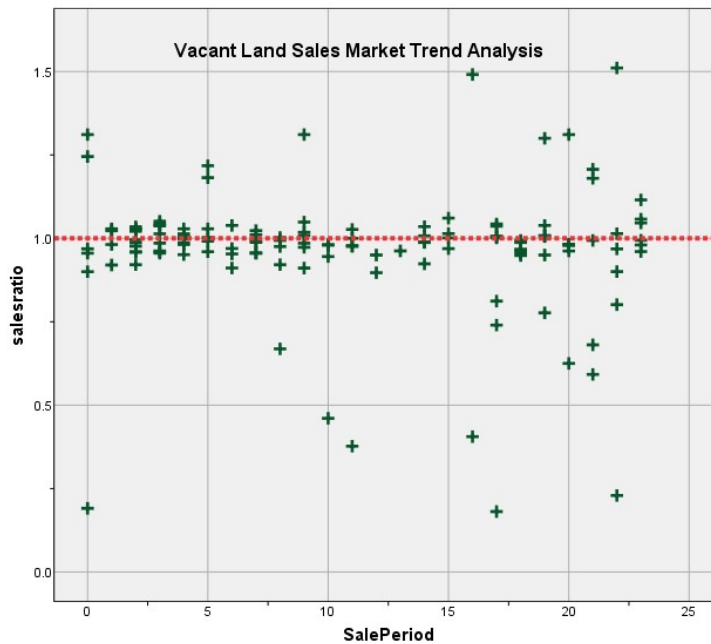
The above analysis indicated that no significant market trending was present in the vacant land sale data. We concluded that the assessor has adequately dealt with market trending for vacant land properties.

Sold/Unsold Analysis

In terms of the valuation consistency between sold and unsold vacant land properties, we compared the median change in actual value for taxable years 2018 and 2020 between each group, as follows:

Report

DIFF

sold	N	Median	Mean
UNSOLD	7720	1.0000	1.0649
SOLD	92	1.2230	1.3137

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	.000	Reject the null hypothesis.

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

Although there was a significant difference in the above comparison, when broken down by subdivisions with at least 1 sale, there was no pattern of sold properties being consistently adjusted at a greater rate than unsold vacant land properties:

Report

DIFF

SUBDIVNO	sold	N	Median	Mean
000NS	UNSOLD	129	1.1111	1.1010
	SOLD	3	1.1111	1.1037
020BB	UNSOLD	14	.9579	.9579
	SOLD	1	.9579	.9579
040WB	UNSOLD	2	1.4815	1.4815
	SOLD	2	1.3457	1.3457
055NA	UNSOLD	5	1.6667	1.5667
	SOLD	1	1.3726	1.3726
079VA	UNSOLD	1	1.5862	1.5862
	SOLD	1	1.5862	1.5862
080IA	UNSOLD	55	1.0000	1.0152
	SOLD	1	1.1538	1.1538
086CB	UNSOLD	46	1.1290	1.1154
	SOLD	5	1.3831	1.2882
089CB	UNSOLD	4	1.2652	1.2656
	SOLD	1	1.2090	1.2090
135MB	UNSOLD	104	1.0769	1.0755
	SOLD	1	.9333	.9333
152MA	UNSOLD	1	1.1875	1.1875
	SOLD	1	1.1875	1.1875
160FA	UNSOLD	37	1.0000	1.0000
	SOLD	2	1.0000	1.0000
170CA	UNSOLD	1	1.0222	1.0222
	SOLD	1	1.0222	1.0222
180KA	UNSOLD	31	1.0897	1.1276
	SOLD	1	1.1500	1.1500
195BB	UNSOLD	20	1.0739	1.0592
	SOLD	1	1.1479	1.1479
255HA	UNSOLD	3	1.6883	1.6883
	SOLD	2	1.6883	1.6883
268BA	UNSOLD	1	1.2353	1.2353
	SOLD	1	1.2353	1.2353

270BB	UNSOLD	2	1.4692	1.4692
	SOLD	1	1.1754	1.1754
275AA	UNSOLD	2	1.1333	1.1333
	SOLD	2	1.3458	1.3458
293MA	UNSOLD	2	1.0000	1.0000
	SOLD	3	1.1571	1.1571
310WA	UNSOLD	9	1.1154	1.0596
	SOLD	1	1.1154	1.1154
320DA	UNSOLD	5	1.1818	1.2653
	SOLD	1	.9037	.9037
339GA	UNSOLD	7	1.8333	1.8905
	SOLD	5	1.9667	1.8613
365AA	UNSOLD	2	1.1667	1.1667
	SOLD	1	1.4974	1.4974
365CA	UNSOLD	11	1.0000	1.0000
	SOLD	1	1.0000	1.0000
375SB	UNSOLD	4	1.0000	1.0000
	SOLD	1	1.5385	1.5385
377RA	UNSOLD	1	1.0769	1.0769
	SOLD	1	1.2670	1.2670
390SB	UNSOLD	11	1.6667	1.4343
	SOLD	1	1.4167	1.4167
397AA	UNSOLD	2	1.0000	1.0000
	SOLD	1	1.0000	1.0000
465BA	UNSOLD	39	1.3111	1.2568
	SOLD	1	1.3111	1.3111
556CA	UNSOLD	16	1.4286	1.3214
	SOLD	1	1.4286	1.4286
605NA	UNSOLD	1	1.0000	1.0000
	SOLD	1	1.0000	1.0000
632RA	UNSOLD	3	1.9780	1.9780
	SOLD	1	1.8461	1.8461
640GA	UNSOLD	3	1.8455	1.4182
	SOLD	1	1.9545	1.9545
645NA	UNSOLD	9	1.3714	1.2149
	SOLD	1	1.8266	1.8266
652SA	UNSOLD	5	1.1429	1.2286
	SOLD	1	1.4000	1.4000
715AA	UNSOLD	23	1.2833	1.2188
	SOLD	3	1.4380	1.4582
715RA	UNSOLD	20	1.0207	1.0962
	SOLD	1	1.9904	1.9904
741PA	UNSOLD	1	1.0000	1.0000
	SOLD	1	1.1765	1.1765
747BA	UNSOLD	9	1.3143	1.3143
	SOLD	10	1.0000	1.0314
750BA	UNSOLD	3	1.0000	1.3008
	SOLD	3	1.9024	1.9024
802HA	UNSOLD	2	1.0000	1.0000
	SOLD	1	1.2500	1.2500
805CA	UNSOLD	5	1.2609	1.2803
	SOLD	1	1.5761	1.5761
877WA	UNSOLD	1	1.0000	1.0000
	SOLD	1	1.0000	1.0000
923SA	UNSOLD	1	1.0000	1.0000
	SOLD	1	.9087	.9087
930MA	UNSOLD	5	1.4074	1.4074

	SOLD	1	.8444	.8444
987SA	UNSOLD	2	1.0051	1.0051
	SOLD	1	1.2792	1.2792
T1R68	UNSOLD	15	1.0312	1.1796
	SOLD	1	1.0313	1.0313

Overall, we concluded that the county assessor valued sold and unsold vacant properties consistently.

V. CONCLUSOINS

Based on the results of these analyses, we concluded that there were no significant compliance issues with Adams County, with the possible exception of commercial sold and unsold consistency.

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
ECONAREA	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
1.00	1.009	1.002	1.016	1.000	.998	1.005	95.6%	1.004	.997	1.011	1.005	.057	8.0%
2.00	.992	.991	.994	.993	.991	.994	95.0%	.988	.985	.991	1.004	.042	5.8%
3.00	.987	.986	.989	.988	.986	.989	95.2%	.983	.980	.985	1.005	.048	6.6%
4.00	.999	.998	1.001	.996	.994	.998	95.0%	.981	.972	.990	1.018	.050	6.7%
5.00	.971	.966	.976	.973	.969	.978	95.3%	.964	.958	.971	1.007	.062	9.7%
6.00	.993	.989	.997	.993	.988	.997	95.4%	.982	.975	.989	1.011	.055	7.7%

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
.967	.945	.988	1.000	.998	1.000	95.8%	.810	.698	.921	1.194	.097	18.1%

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.

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
.967	.933	1.000	.987	.979	.997	95.7%	.931	.863	.999	1.038	.100	19.9%

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	$50K to $100K	11	0.1%
	$100K to $150K	146	0.7%
	$150K to $200K	366	1.9%
	$200K to $300K	3452	17.6%
	$300K to $500K	12657	64.7%
	$500K to $750K	2589	13.2%
	$750K to $1,000K	252	1.3%
	Over $1,000K	88	0.4%
Overall		19561	100.0%
Excluded		0	
Total		19561	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
$50K to $100K	1.173	1.001	.090	13.1%
$100K to $150K	1.088	1.001	.076	9.8%
$150K to $200K	1.026	1.000	.059	9.3%
$200K to $300K	1.001	1.001	.053	7.4%
$300K to $500K	.990	1.001	.044	5.9%
$500K to $750K	.974	1.001	.055	7.8%
$750K to $1,000K	.942	1.000	.074	10.2%
Over $1,000K	.929	1.017	.095	13.5%
Overall	.991	1.009	.049	6.9%

Sub-Class

Case Processing Summary

		Count	Percent
ABSTRIMP	1212.00	15153	77.5%
	1213.00	2	0.0%
	1213.50	2	0.0%
	1213.67	2	0.0%
	1214.00	2085	10.7%
	1214.50	144	0.7%
	1215.00	84	0.4%
	1215.33	18	0.1%
	1215.75	3	0.0%
	1216.00	1	0.0%
	1217.00	2	0.0%
	1220.00	45	0.2%
	1225.00	25	0.1%
	1225.04	1	0.0%
	1225.05	1	0.0%
	1225.10	2	0.0%
	1225.11	1	0.0%

	1230.00	1985	10.1%
	2091.14	1	0.0%
	2236.00	2	0.0%
	2745.50	1	0.0%
	3256.67	1	0.0%
Overall		19561	100.0%
Excluded		0	
Total		19561	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212.00	.990	1.004	.048	6.5%
1213.00	.835	.999	.003	0.4%
1213.50	.983	.999	.057	8.1%
1213.67	.864	.972	.100	14.1%
1214.00	.989	1.003	.048	6.7%
1214.50	.973	1.007	.072	10.8%
1215.00	1.001	1.025	.126	22.8%
1215.33	.936	1.056	.144	18.8%
1215.75	.932	.999	.055	8.3%
1216.00	1.071	1.000	.000	.
1217.00	.895	.942	.192	27.2%
1220.00	1.000	1.013	.117	15.0%
1225.00	.900	1.019	.117	15.7%
1225.04	.871	1.000	.000	.
1225.05	.949	1.000	.000	.
1225.10	.917	.998	.005	0.7%
1225.11	.842	1.000	.000	.
1230.00	1.001	1.009	.051	7.3%
2091.14	.875	1.000	.000	.
2236.00	1.027	.991	.072	10.2%
2745.50	1.100	1.000	.000	.
3256.67	1.048	1.000	.000	.
Overall	.991	1.009	.049	6.9%

Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	33	0.2%
	75 to 100	183	0.9%
	50 to 75	2975	15.2%
	25 to 50	3867	19.8%
	5 to 25	7502	38.4%
	5 or Newer	5001	25.6%
Overall		19561	100.0%
Excluded		0	
Total		19561	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	.968	1.040	.120	23.0%
75 to 100	.991	1.022	.089	12.5%
50 to 75	.987	1.007	.057	8.0%
25 to 50	.997	1.023	.056	7.8%
5 to 25	.990	1.006	.041	5.6%
5 or Newer	.991	1.004	.050	6.7%
Overall	.991	1.009	.049	6.9%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	13	0.1%
	500 to 1,000 sf	2324	11.9%
	1,000 to 1,500 sf	5924	30.3%
	1,500 to 2,000 sf	5541	28.3%
	2,000 to 3,000 sf	4762	24.3%
	3,000 sf or Higher	997	5.1%
Overall		19561	100.0%
Excluded		0	
Total		19561	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	1.004	1.007	.060	8.3%
500 to 1,000 sf	.995	1.009	.060	8.3%
1,000 to 1,500 sf	.989	1.004	.048	6.6%
1,500 to 2,000 sf	.990	1.004	.046	6.5%
2,000 to 3,000 sf	.994	1.004	.046	6.2%
3,000 sf or Higher	.987	1.037	.065	9.8%
Overall	.991	1.009	.049	6.9%

Quality

Case Processing Summary

		Count	Percent
QUALITY	Average	9665	49.4%
	Excellent	52	0.3%
	Fair	5271	26.9%
	Good	4178	21.4%
	Low	121	0.6%
	Very Good	274	1.4%
Overall		19561	100.0%
Excluded		0	
Total		19561	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	.991	1.008	.044	6.2%
Excellent	.980	1.015	.091	12.0%
Fair	.993	1.008	.056	7.8%
Good	.991	1.009	.050	6.7%
Low	1.060	1.029	.093	13.0%
Very Good	.991	1.007	.059	7.8%
Overall	.991	1.009	.049	6.9%

Condition

Case Processing Summary

		Count	Percent
CONDITION	Average	14821	75.8%
	Fair	232	1.2%
	Good	4497	23.0%
	Low	9	0.0%
	Very Good	2	0.0%
Overall		19561	100.0%
Excluded		0	
Total		19561	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	.991	1.007	.048	6.7%
Fair	1.003	1.082	.099	14.2%
Good	.991	1.012	.049	6.7%
Low	1.103	1.027	.255	32.9%
Very Good	1.012	1.033	.064	9.1%
Overall	.991	1.009	.049	6.9%

Commercial Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	$25K to $50K	1	0.4%
	$50K to $100K	5	2.0%
	$100K to $150K	5	2.0%
	$150K to $200K	17	6.8%
	$200K to $300K	32	12.9%
	$300K to $500K	37	14.9%
	$500K to $750K	19	7.6%
	$750K to $1,000K	18	7.2%
	Over $1,000K	115	46.2%
Overall		249	100.0%
Excluded		0	
Total		249	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
$25K to $50K	.908	1.000	.000	.
$50K to $100K	1.054	.992	.101	17.3%
$100K to $150K	1.057	1.003	.078	10.6%
$150K to $200K	1.037	1.005	.102	14.9%
$200K to $300K	1.003	1.002	.077	12.6%
$300K to $500K	1.000	.996	.052	11.1%
$500K to $750K	1.004	1.000	.088	18.2%
$750K to $1,000K	.998	.999	.141	25.8%
Over $1,000K	.990	1.171	.108	19.8%
Overall	1.000	1.194	.097	17.8%

Sub-Class

Case Processing Summary

		Count	Percent
ABSTRIMP	1212.00	1	0.4%
	2212.00	71	28.5%
	2215.00	1	0.4%
	2220.00	21	8.4%
	2221.00	1	0.4%
	2223.50	2	0.8%
	2225.00	1	0.4%
	2230.00	28	11.2%
	2232.50	2	0.8%
	2235.00	55	22.1%
	2245.00	44	17.7%
	2476.25	1	0.4%
	3013.60	1	0.4%
	3212.00	14	5.6%
	3215.00	5	2.0%

	4279.00	1	0.4%
Overall		249	100.0%
Excluded		0	
Total		249	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212.00	.681	1.000	.000	.
2212.00	1.000	1.029	.089	16.3%
2215.00	.682	1.000	.000	.
2220.00	1.000	.993	.037	8.6%
2221.00	.391	1.000	.000	.
2223.50	.989	1.004	.011	1.5%
2225.00	1.000	1.000	.000	.
2230.00	.996	1.272	.108	19.0%
2232.50	1.095	1.061	.096	13.6%
2235.00	.973	1.121	.087	16.4%
2245.00	1.023	1.013	.065	10.3%
2476.25	1.305	1.000	.000	.
3013.60	1.000	1.000	.000	.
3212.00	.861	1.271	.301	39.7%
3215.00	.990	1.025	.017	3.4%
4279.00	.828	1.000	.000	.
Overall	1.000	1.194	.097	17.8%

Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	5	2.0%
	75 to 100	7	2.8%
	50 to 75	39	15.7%
	25 to 50	93	37.3%
	5 to 25	86	34.5%
	5 or Newer	19	7.6%
Overall		249	100.0%
Excluded		0	
Total		249	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	1.000	.985	.039	5.5%
75 to 100	.935	1.295	.280	39.2%
50 to 75	1.000	1.005	.079	14.3%
25 to 50	1.000	1.045	.089	17.4%
5 to 25	1.000	1.074	.082	14.6%
5 or Newer	.906	1.449	.196	26.1%
Overall	1.000	1.194	.097	17.8%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	500 to 1,000 sf	8	3.2%
	1,000 to 1,500 sf	12	4.8%
	1,500 to 2,000 sf	8	3.2%
	2,000 to 3,000 sf	23	9.2%
	3,000 sf or Higher	198	79.5%
Overall		249	100.0%
Excluded		0	
Total		249	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
500 to 1,000 sf	.964	1.051	.167	22.5%
1,000 to 1,500 sf	.998	1.202	.130	25.7%
1,500 to 2,000 sf	.988	1.312	.158	26.5%
2,000 to 3,000 sf	1.000	1.043	.095	17.4%
3,000 sf or Higher	1.000	1.204	.090	16.9%
Overall	1.000	1.194	.097	17.8%

Quality

Case Processing Summary

		Count	Percent
QUALITY	Average	211	84.7%
	Fair	4	1.6%
	Good	29	11.6%
	Low	5	2.0%
Overall		249	100.0%
Excluded		0	
Total		249	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	1.000	1.212	.103	18.6%
Fair	.999	.957	.062	12.4%
Good	1.002	1.093	.071	14.2%
Low	.997	.993	.022	3.5%
Overall	1.000	1.194	.097	17.8%

Condition

Case Processing Summary

		Count	Percent
CONDITION	Average	218	87.6%
	Fair	3	1.2%
	Good	25	10.0%
	Low	3	1.2%
Overall		249	100.0%
Excluded		0	
Total		249	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	1.000	1.218	.100	18.2%
Fair	.998	.981	.071	15.0%
Good	1.005	1.056	.062	12.4%
Low	.966	1.189	.176	35.1%
Overall	1.000	1.194	.097	17.8%

Vacant Land Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	$25K to $50K	1	0.8%
	$50K to $100K	42	32.3%
	$100K to $150K	23	17.7%
	$150K to $200K	14	10.8%
	$200K to $300K	17	13.1%
	$300K to $500K	15	11.5%
	$500K to $750K	7	5.4%
	$750K to $1,000K	5	3.8%
	Over $1,000K	6	4.6%
Overall		130	100.0%
Excluded		0	
Total		130	

Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
$25K to $50K	1.014	1.000	.000	.
$50K to $100K	.990	1.004	.077	11.8%
$100K to $150K	1.005	1.005	.124	20.8%
$150K to $200K	.994	1.001	.111	23.8%
$200K to $300K	.980	1.008	.070	15.0%
$300K to $500K	.973	1.005	.112	27.2%
$500K to $750K	.987	.980	.136	26.5%
$750K to $1,000K	.955	.999	.076	15.3%
Over $1,000K	.996	.960	.166	36.9%
Overall	.987	1.038	.100	19.6%

Subclass

Case Processing Summary

		Count	Percent
ABSTRLND	100.00	54	41.5%
	200.00	21	16.2%
	300.00	5	3.8%
	510.00	1	0.8%
	520.00	3	2.3%
	530.00	2	1.5%
	540.00	1	0.8%
	700.00	1	0.8%
	800.00	1	0.8%
	1112.00	37	28.5%
	2112.00	2	1.5%
	2130.00	1	0.8%
	2135.00	1	0.8%
Overall		130	100.0%
Excluded		0	
Total		130	

Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
100.00	.995	1.020	.061	12.3%
200.00	.982	.989	.051	10.5%
300.00	.979	.993	.011	1.6%
510.00	1.051	1.000	.000	.
520.00	.377	.978	.603	103.9%
530.00	.591	1.247	.694	98.1%
540.00	1.035	1.000	.000	.
700.00	1.180	1.000	.000	.
800.00	.978	1.000	.000	.
1112.00	.981	1.112	.143	23.2%
2112.00	.963	1.009	.018	2.5%
2130.00	1.049	1.000	.000	.
2135.00	.460	1.000	.000	.
Overall	.987	1.038	.100	19.6%