# 2016
ADAMS COUNTY PROPERTY ASSESSMENT STUDY

WILDROSE
APPRAISAL, INCORPORATED
Audit Division

September 15, 2016

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

RE: **Final Report for the 2016 Colorado Property Assessment Study**

Dear Mr. Mauer:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2016 Colorado Property Assessment Study.

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

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

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

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

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

TABLE OF CONTENTS

INTRODUCTION

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 2016 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.
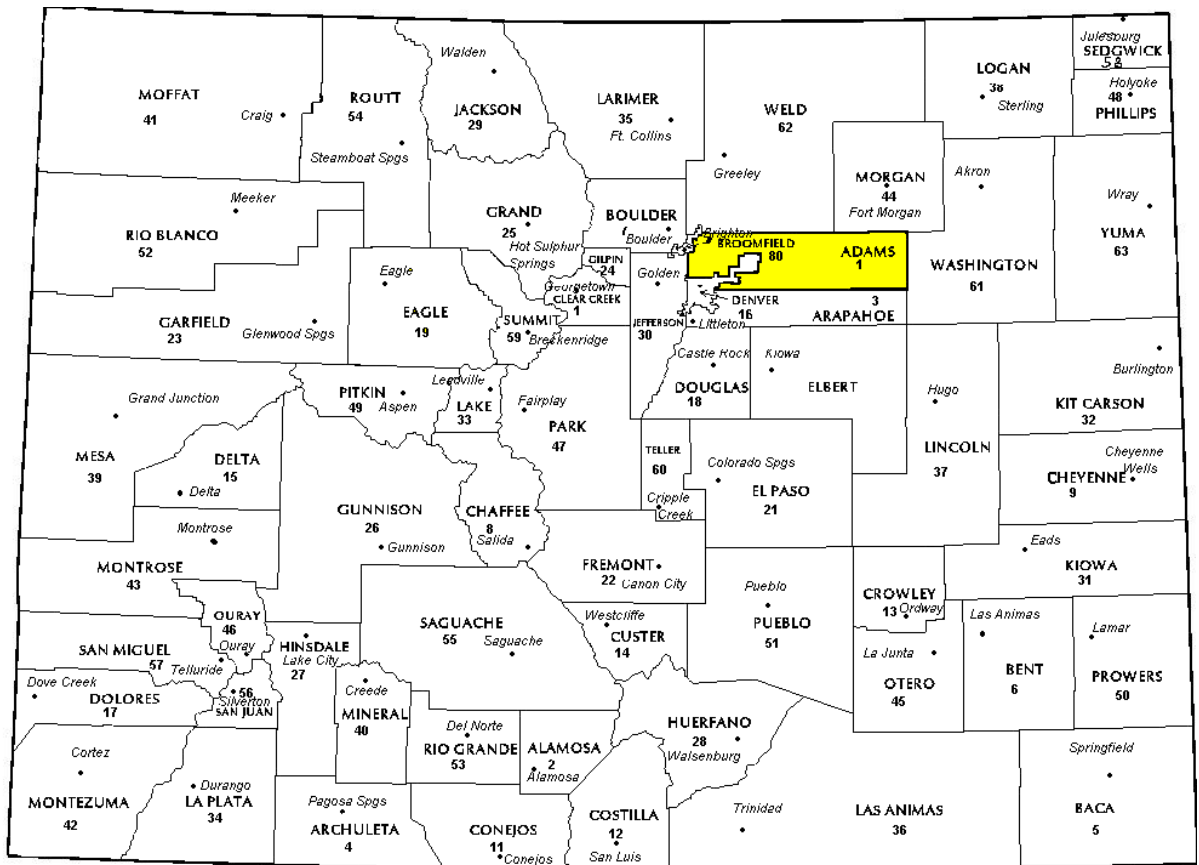
Historical Information

Adams County had an estimated population of approximately 480,718 people with 378.2 people per square mile, according to the U.S. Census Bureau's 2014 estimated census data. This represents a 8.8 percent change from April 1, 2010 to July 1, 2014.

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 2013 and June 2014. Counties with less than 30 sales typically extended the sale period back up to 5 years prior to June 30, 2014 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	231	0.976	1.078	12	Compliant
Condominium	N/A	N/A	N/A	N/A	N/A
Single Family	14,247	0.964	1.025	7.3	Compliant
Vacant Land	274	1.003	1.040	9.6	Compliant

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion
1	.963	1.004	.073
2	.959	1.002	.072
3	.964	1.002	.075
4	.970	1.007	.086
5	.968	1.001	.068
6	.948	1.005	.082
7	.957	1.021	.067
8	.969	1.167	.093
9	.974	1.001	.080
10	.973	1.004	.071
11	.979	1.007	.070
12	.978	1.016	.090
13	.976	1.006	.080
14	.915	1.046	.130
15	.995	1.069	.072
16	.952	1.118	.130
18	.975	1.225	.211
Overall	.964	1.025	.073

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
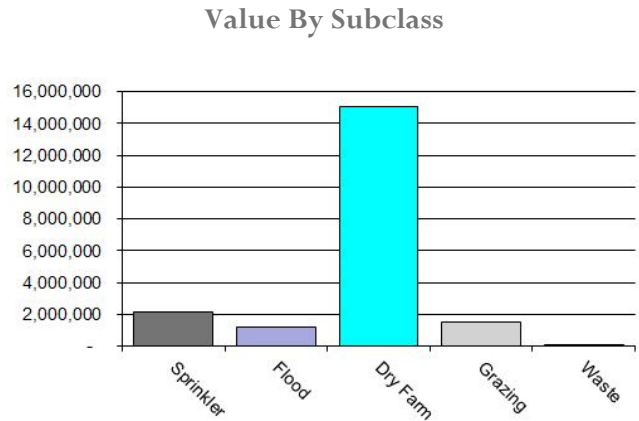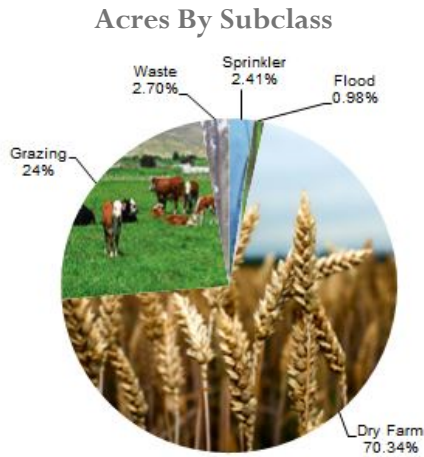
Agricultural Land

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	161.96	2,185,554	2,207,037	0.99
4117	Flood	5,485	212.16	1,163,661	1,182,646	0.98
4127	Dry Farm	394,562	38.16	15,057,661	14,681,354	1.03
4147	Grazing	132,310	11.65	1,541,916	1,541,916	1.00
4167	Waste	15,123	1.99	30,043	30,043	1.00
Total/Avg		560,975	35.61	19,978,836	19,642,995	1.02

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 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

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.:

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

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
- Field Inspections

Adams 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 2016 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 but one of the sales selected in the sample gave reasons that were clear and supportable. One sale had insufficient reason for disqualification.

For residential, commercial, and vacant land sales with considerations over $500, 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

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

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

N A T U R A L   R E S O U R C E S

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

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

VACANT LAND

Subdivision Discounting

Subdivisions were reviewed in 2016 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 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

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

Recommendations

None

P OSSESSORY I NTEREST P ROPERTIES

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
- Chamber of Commerce/Economic Development Contacts
- 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 2016 valuation period. The number and listing of businesses audited was also submitted and was in conformance with the written audit plan. The following audit triggers were used by the county to select accounts to be audited:

- Accounts with obvious discrepancies
- New businesses filing for the first time
- Incomplete or inconsistent declarations
- Accounts with omitted property
- Same business type or use
- Businesses with no deletions or additions for 2 or more years
- Non-filing Accounts - Best Information Available
- Accounts close to the $7,300 actual value exemption status

- Accounts protested with substantial disagreement

Adams County's median ratio is .99. 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

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 ADAMS COUNTY
2016

I. OVERVIEW

Adams County is an urban county located along Colorado's Front Range. The county has a total of 148,169 real property parcels, according to data submitted by the county assessor's office in 2016. The following provides a breakdown of property classes for this county:
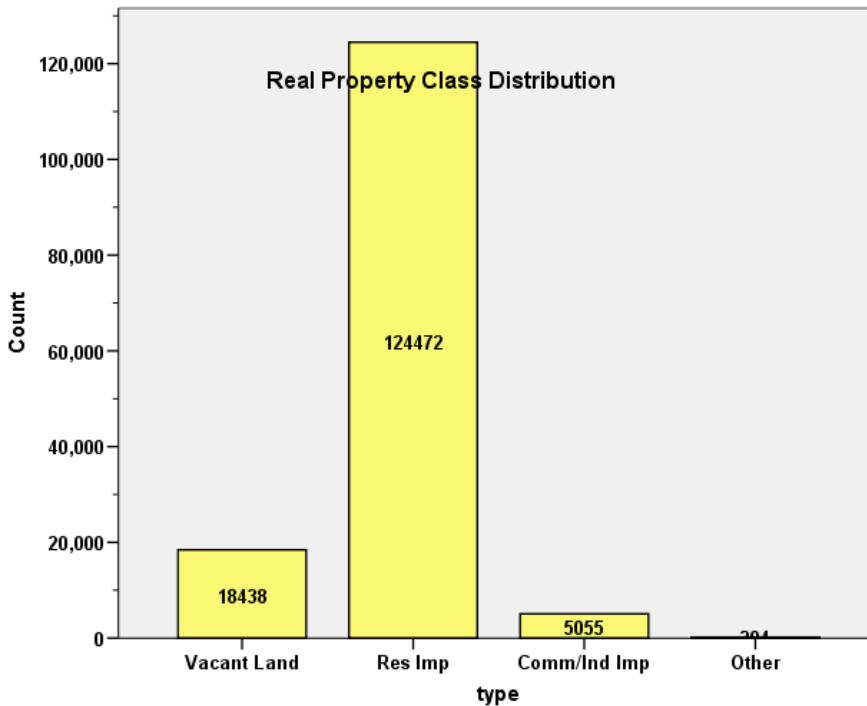
The vacant land class of properties was dominated by residential land. Residential lots (coded 100) accounted for 64.2% of all vacant land parcels.

For residential improved properties, single family properties accounted for 81.9% 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.

II. DATA FILES

The following sales analyses were based on the requirements of the 2016 Colorado Property Assessment Study. Information was provided by the Adams Assessor's Office in April 2016. The data included all 5 property record files as specified by the Auditor.

III. RESIDENTIAL SALES RESULTS

There were 14,247 qualified residential sales for the 24-month period prior to June 30, 2014. The sales ratio analysis was analyzed as follows:

Case Processing Summary

		Count	Percent
ECONAREA	1	148	1.0%
	2	2921	20.5%
	3	263	1.8%
	4	250	1.8%
	5	2093	14.7%
	6	758	5.3%
	7	3730	26.2%
	8	313	2.2%
	9	634	4.5%
	10	664	4.7%
	11	1432	10.1%
	12	606	4.3%
	13	352	2.5%
	14	36	0.3%
	15	2	0.0%
	16	43	0.3%
	18	2	0.0%
Overall		14247	100.0%
Excluded		0	
Total		14247	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion
1	.963	1.004	.073
2	.959	1.002	.072
3	.964	1.002	.075
4	.970	1.007	.086
5	.968	1.001	.068
6	.948	1.005	.082
7	.957	1.021	.067
8	.969	1.167	.093
9	.974	1.001	.080
10	.973	1.004	.071
11	.979	1.007	.070
12	.978	1.016	.090
13	.976	1.006	.080
14	.915	1.046	.130
15	.995	1.069	.072
16	.952	1.118	.130
18	.975	1.225	.211
Overall	.964	1.025	.073

Please note that the median ratio and COD totals for Economic Areas 14, 15 and 18 are not valid, based on the very low number of residential sales for those areas. In terms of the valid economic areas (1 through 13 and 16), the median ratio and COD totals were all in compliance in terms of the SBOE thresholds. Economic Area 6 is barely in compliance after rounding to 0.95.

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

Residential Sale Price by Sales Ratio

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	1	(Constant)	.982	.014		71.861	.000
		SalePeriod	-.001	.001	-.075	-.904	.368
2	1	(Constant)	.948	.003		315.058	.000
		SalePeriod	.002	.000	.120	6.506	.000
3	1	(Constant)	.950	.011		88.975	.000
		SalePeriod	.002	.001	.157	2.570	.011
4	1	(Constant)	.946	.014		67.608	.000
		SalePeriod	.003	.001	.164	2.614	.009
5	1	(Constant)	.947	.003		272.252	.000
		SalePeriod	.002	.000	.167	7.764	.000
6	1	(Constant)	.950	.007		135.085	.000
		SalePeriod	.001	.001	.037	1.027	.305
7	1	(Constant)	.950	.003		368.762	.000
		SalePeriod	.001	.000	.097	5.945	.000
8	1	(Constant)	.956	.013		73.760	.000
		SalePeriod	.001	.001	.058	1.023	.307
9	1	(Constant)	.975	.007		135.646	.000
		SalePeriod	.000	.001	.012	.290	.772
10	1	(Constant)	.967	.007		144.280	.000
		SalePeriod	.000	.001	.024	.615	.539
11	1	(Constant)	.967	.004		220.024	.000
		SalePeriod	.002	.000	.174	6.697	.000
12	1	(Constant)	.973	.009		106.909	.000
		SalePeriod	.002	.001	.130	3.231	.001
13	1	(Constant)	.931	.010		94.838	.000
		SalePeriod	.006	.001	.342	6.806	.000
14	1	(Constant)	.895	.056		16.053	.000
		SalePeriod	.002	.004	.098	.572	.571
15	1	(Constant)	.443	.000		.	.
		SalePeriod	.048	.000	1.000	.	.
16	1	(Constant)	.905	.054		16.646	.000
		SalePeriod	.004	.004	.145	.937	.354

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 2016 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	110,167	$137.52	$140.67
SOLD	14,240	$138.26	$143.57

Given that there were minor indications that the value per square foot was higher for sold properties than unsold properties, we also examined the percent change in value from 2014 to 2016 for residential properties, again by class and by economic area, as follows:

Report

DIFF

sold	N	Median	Mean
UNSOLD	107,338	1.16	1.19
SOLD	13,996	1.19	1.23

Report

DIFF ECONAREA	sold	N	Median	Mean
1	UNSOLD	1,480	1.14	1.15
	SOL,D	145	1.11	1.15
		1,625	1.14	1.15
2	UNSOLD	13,959	1.18	1.17
	SOL,D	2,811	1.19	1.21
		16,770	1.18	1.18
3	UNSOLD	1,846	1.19	1.22
	SOL,D	255	1.31	1.30
4	UNSOLD	2,210	1.10	1.12
	SOL,D	211	1.17	1.23
5	UNSOLD	21,880	1.10	1.12
	SOL,D	2,087	1.15	1.18
6	UNSOLD	7,919	1.16	1.16
	SOL,D	758	1.18	1.18
7	UNSOLD	26,869	1.15	1.17
	SOL,D	3,710	1.16	1.19
8	UNSOLD	6,170	1.20	1.21
	SOL,D	306	1.30	1.32
9	UNSOLD	6,739	1.21	1.21
	SOL,D	618	1.24	1.27
10	UNSOLD	2,918	1.11	1.13
	SOL,D	639	1.14	1.17
11	UNSOLD	8,225	1.31	1.32
	SOL,D	1,423	1.31	1.31
12	UNSOLD	4,292	1.51	1.49
	SOL,D	605	1.53	1.50
13	UNSOLD	1,962	1.49	1.44
	SOL,D	348	1.51	1.47
14	UNSOLD	280	1.01	1.05
	SOL,D	36	1.04	1.12
15	UNSOLD	107	1.13	1.15
	SOL,D	2	1.07	1.07
16	UNSOLD	397	1.18	1.28
	SOL,D	41	1.17	1.20

As a final check, we compared sold and unsold residential properties by major subclass, as follows:

Report

Variables ValSF

ABSTRIMP	sold	N	Median	Mean
1212	UNSOLD	90,533	$142.20	$146.57
	SOLD	11,412	$142.51	$149.34
1214	UNSOLD	7,326	$127.06	$127.75
	SOLD	1,226	$130.12	$131.39
1215	UNSOLD	1,630	$100.15	$104.49
	SOLD	146	$103.36	$108.64
1215	UNSOLD	988	$106.01	$110.74
	SOLD	94	$110.73	$120.97
1230	UNSOLD	7,723	$111.17	$110.99
	SOLD	1,226	$113.35	$114.71

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

IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

There were 231 qualified commercial and industrial sales for the 24-month period prior to June 30, 2014. The sales ratio analysis was analyzed as follows:

Median	0.976
Price Related Differential	1.078
Coefficient of Dispersion	12.0

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:

Mean = .96
Std. Dev. = .265
N = 231

Commercial Sale Price by Sales Ratio
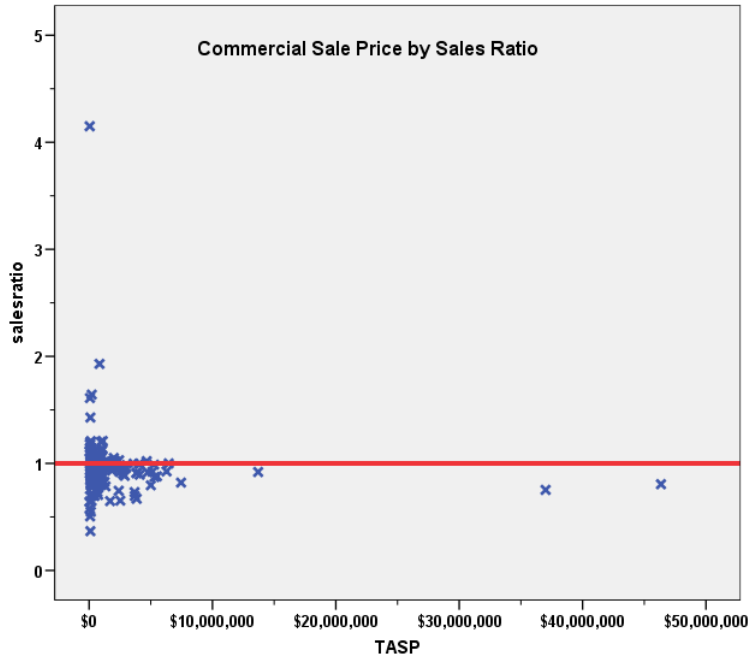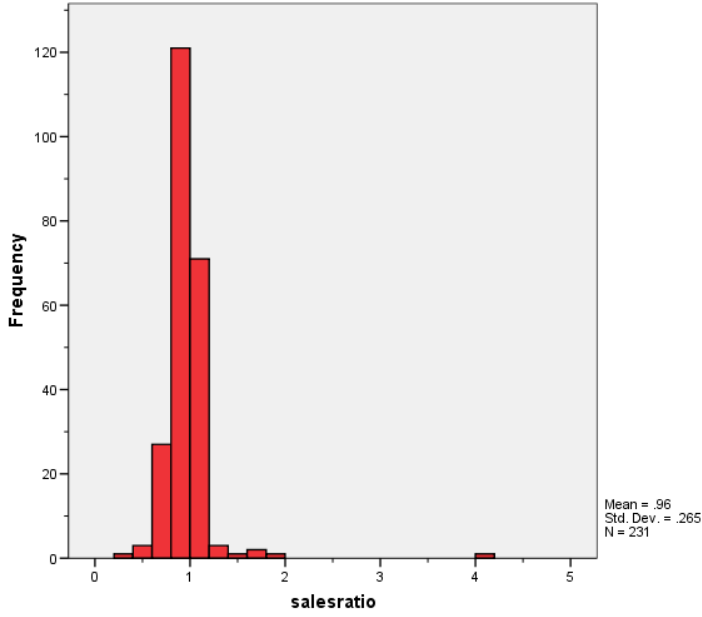
Commercial/Industrial Market Trend Analysis

The 231 commercial/industrial sales were next analyzed by examining the sale ratios across the 24-month sale period. The purpose was to check for any residual market trending. The results were as follows:

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.950	.032		30.139	.000
	SalePeriod	.001	.003	.033	.500	.618

a. Dependent Variable: salesratio

Commercial Market Trend Analysis
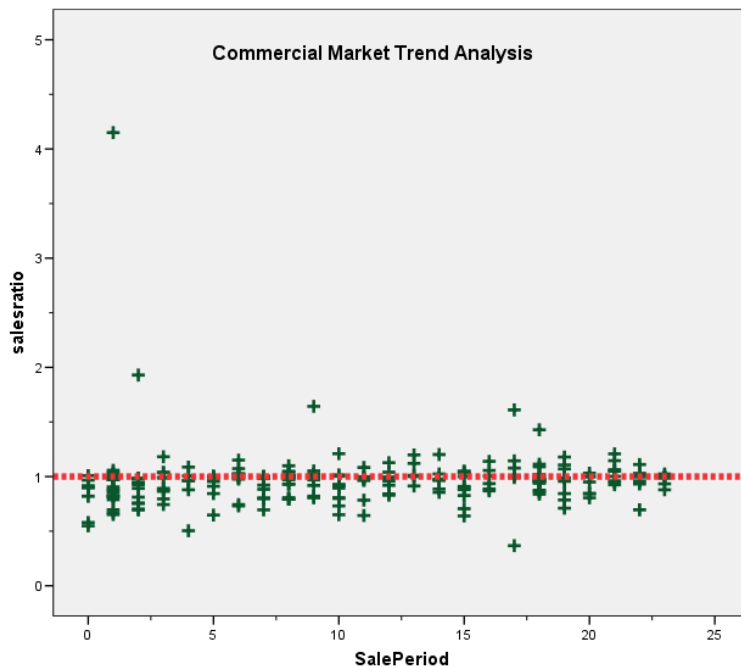
While there was marginal statistical significance in the residual market trend, the magnitude at 0.2% per month was not. We concluded that the assessor has adequately considered market trending adjustments as part of the commercial/industrial valuation.

Sold/Unsold Analysis

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

Report

ValSF

sold	N	Median	Mean
UNSOLD	3,713	$70.88	$99.88
SOLD	188	$80.17	$113.35

We next stratified this comparison by subclass. The following table compared sold and unsold commercial/industrial properties for subclasses with at least 3 sales:

Report

ValSF

ABSTRIMP	sold	N	Median	Mean
2212	UNSOLD	1,222	$83.53	$111.48
	SOLD	58	$125.20	$146.18
2220	UNSOLD	295	$87.96	$105.25
	SOLD	21	$77.51	$101.67
2230	UNSOLD	724	$108.98	$147.88
	SOLD	30	$121.30	$171.04
2230	UNSOLD	1	$111.29	$111.29
2235	UNSOLD	1,039	$51.21	$60.11
	SOLD	53	$64.13	$70.62
3215	UNSOLD	69	$45.56	$55.52
	SOLD	10	$48.20	$50.71

The above comparison indicates that when stratified by subclass, there were instances where the sold property had a greater value per square foot, where the unsold properties had a greater value per square foot, and instances where there was little difference. Based on this pattern, we concluded that there was no evidence that sold commercial/industrial properties were values consistently higher than unsold properties. We are following up with the assessor; however, to follow up on several subclasses with significantly higher units values for sold properties as compared to unsold properties.

V. VACANT LAND SALE RESULTS

There were 274 qualified vacant land sales for the 24-month period prior to June 30, 2014. The sales ratio analysis was analyzed as follows:

Median	1.003
Price Related Differential	1.040
Coefficient of Dispersion	9.6

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 = 1.07
Std. Dev. = .26
N = 274
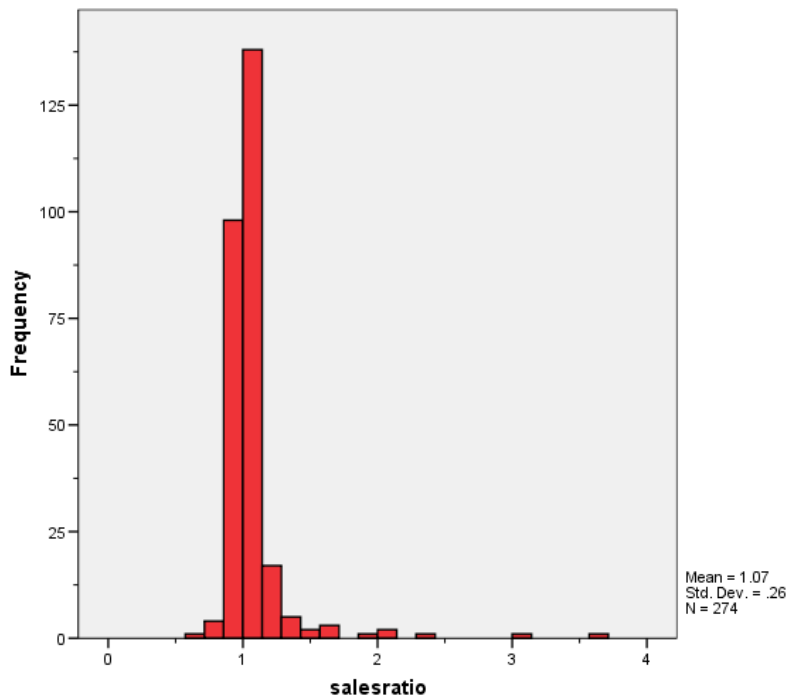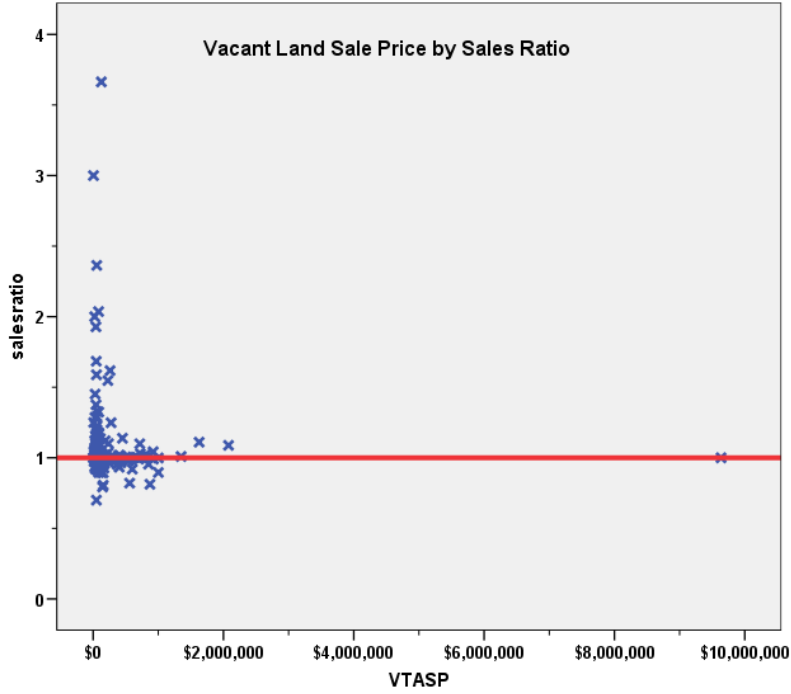
The above histogram indicates that the distribution of the vacant land sale ratios was within state mandated limits. No sales were trimmed.

Vacant Land Market Trend Analysis

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

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.054	.027		38.891	.000
	VSalePeriod	.001	.002	.034	.558	.577

a. Dependent Variable: salesratio

Vacant Land Sales Market Trend Analysis
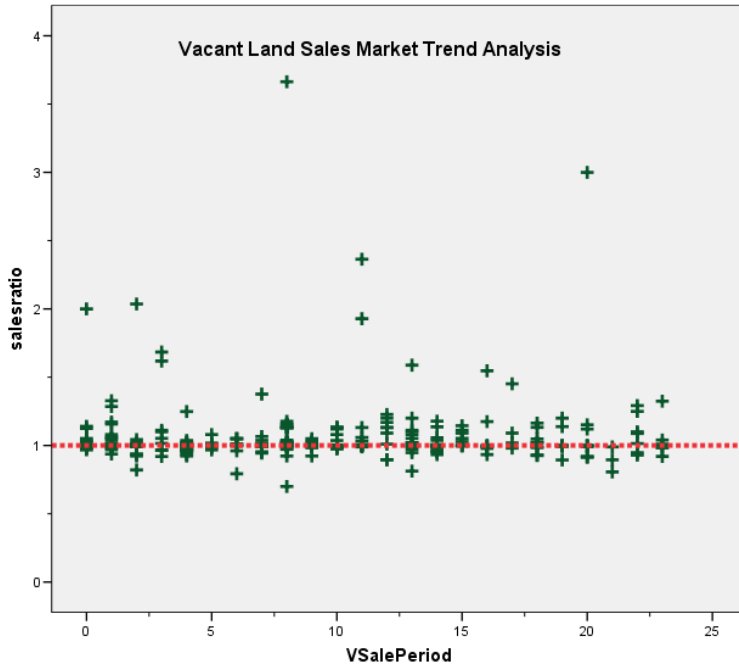
The above analysis indicated that no significant market trending was present in the vacant land sale data. We concluded that the assessor has adequately dealt with market trending for vacant land properties.

Sold/Unsold Analysis

In terms of the valuation consistency between sold and unsold vacant land properties, we compared the median change in value for 2014 and 2016 between each group, as follows:

Report

DIFF

sold	N	Median	Mean
UNSOLD	12,786	1.0000	1.0828
SOLD	265	1.0909	1.2330

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.

Due to the significant difference between sold and unsold vacant land properties, we performed the same comparison analysis for subdivisions with 5 or more sales, as follows:

Report

DIFF

SUBDIVNO	sold	N	Median	Mean
005EA	UNSOLD	9	1.0909	1.5758
	SOLD	27	1.0909	1.1663
195BB	UNSOLD	26	1.1000	1.0808
	SOLD	11	1.1880	1.2880
268BA	UNSOLD	109	.8472	.8472
	SOLD	13	.8472	.8521
280BA	SOLD	27	1.0139	1.0139
339GA	UNSOLD	23	1.1549	1.1348
	SOLD	9	1.1549	1.1498
747BA	UNSOLD	44	1.1667	1.1667
	SOLD	7	1.0000	1.0000
890WA	UNSOLD	31	1.0857	1.0761
	SOLD	6	2.1333	2.4980
Total	UNSOLD	242	1.0333	1.0141
	SOLD	100	1.0909	1.1645
		342	1.0762	1.0581

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The medians of DIFF are the same across categories of sold.	Independent-Samples Median Test	.721	Retain the null hypothesis.

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

Based on the second analysis, we concluded that the county assessor valued sold and unsold vacant properties consistently.

V. AGRICULTURAL IMPROVEMENTS ANALYSIS

Based on the parameters of the state audit analysis, this county was exempt from this analysis for 2016.

VI. CONCLUSIONS

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

STATISTICAL ABSTRACT
Residential

ECONAREA	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
1	.972	.957	.987	.963	.948	.986	96.0%	.968	.953	.983	1.004	.073	9.5%
2	.964	.961	.968	.959	.956	.963	95.0%	.962	.959	.965	1.002	.072	9.5%
3	.973	.961	.985	.964	.952	.977	95.2%	.971	.958	.984	1.002	.075	9.9%
4	.974	.957	.992	.970	.959	.983	95.0%	.968	.955	.980	1.007	.086	14.2%
5	.970	.966	.974	.968	.963	.972	95.1%	.969	.966	.973	1.001	.068	8.7%
6	.956	.949	.964	.948	.940	.955	95.4%	.951	.945	.958	1.005	.082	10.5%
7	.963	.960	.965	.957	.955	.961	95.2%	.943	.917	.969	1.021	.067	8.8%
8	.968	.955	.981	.969	.954	.985	95.8%	.829	.730	.928	1.167	.093	12.2%
9	.977	.969	.984	.974	.962	.980	95.7%	.975	.968	.983	1.001	.080	10.5%
10	.971	.964	.977	.973	.964	.981	95.2%	.967	.960	.974	1.004	.071	9.1%
11	.991	.986	.996	.979	.974	.983	95.3%	.984	.979	.988	1.007	.070	9.8%
12	.998	.988	1.008	.978	.973	.987	95.4%	.982	.973	.991	1.016	.090	12.5%
13	.986	.974	.998	.976	.968	.987	95.2%	.980	.970	.991	1.006	.080	11.3%
14	.923	.869	.976	.915	.840	.952	97.1%	.882	.820	.945	1.046	.130	17.1%
15	.995	.080	1.910	.995	.923	1.067	100.0%	.931	.736	1.127	1.069	.072	10.2%
16	.948	.892	1.005	.952	.876	.979	96.8%	.848	.784	.912	1.118	.130	19.3%
18	.975	-1.641	3.590	.975	.769	1.180	100.0%	.796	.158	1.434	1.225	.211	29.9%

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.

Commercial Land

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
.964	.929	.998	.976	.961	.985	95.2%	.895	.852	.938	1.076	.120	27.5%

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

Vacant Land

	95% Confidence Interval for Mean			95% Confidence Interval for Median				95% Confidence Interval for Weighted Mean					Coefficient of Variation
Mean	Lower Bound	Upper Bound	Median	Lower Bound	Upper Bound	Actual Coverage	Weighted Mean	Lower Bound	Upper Bound	Price Related Differential	Coefficient of Dispersion	Mean Centered
1.066	1.035	1.097	1.003	1.000	1.009	95.4%	1.025	1.003	1.047	1.040	.096	24.4%

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.

Residential Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	$25K to $50K	47	0.3%
	$50K to $100K	347	2.4%
	$100K to $150K	1310	9.2%
	$150K to $200K	3360	23.6%
	$200K to $300K	5712	40.1%
	$300K to $500K	3015	21.2%
	$500K to $750K	368	2.6%
	$750K to $1,000K	49	0.3%
	Over $1,000K	39	0.3%
Overall		14247	100.0%
Excluded		0	
Total		14247	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
$25K to $50K	1.037	1.008	.154	20.0%
$50K to $100K	1.002	1.003	.119	17.1%
$100K to $150K	.994	1.001	.097	12.9%
$150K to $200K	.972	1.000	.076	10.1%
$200K to $300K	.958	1.000	.066	8.5%
$300K to $500K	.957	1.001	.062	8.0%
$500K to $750K	.957	1.000	.077	10.4%
$750K to $1,000K	.989	1.002	.048	6.8%
Over $1,000K	.900	1.055	.125	16.6%
Overall	.964	1.025	.073	9.9%

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	0	1	0.0%
	1010	1	0.0%
	1212	11412	80.1%
	1214	1	0.0%
	1214	1	0.0%
	1214	1226	8.6%
	1215	146	1.0%
	1215	94	0.7%
	1215	22	0.2%
	1216	5	0.0%
	1216	1	0.0%
	1217	1	0.0%
	1220	49	0.3%
	1225	19	0.1%
	1225	1	0.0%
	1225	1	0.0%
	1225	1	0.0%
	1225	1	0.0%
	1225	2	0.0%
	1225	1	0.0%
	1225	2	0.0%
	1225	1	0.0%
	1225	1	0.0%
	1225	1	0.0%
	1225	1	0.0%
	1226	1	0.0%
	1230	1226	8.6%
	1236	21	0.1%
	1240	4	0.0%
	2215	1	0.0%
	2220	1	0.0%
	2746	1	0.0%
Overall		14247	100.0%
Excluded		0	
Total		14247	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.316	1.000	.000	.
1010	1.046	1.000	.000	.
1212	.962	1.002	.071	9.4%
1214	.781	1.000	.000	.
1214	.929	1.000	.000	.
1214	.980	1.007	.068	9.7%
1215	.954	1.004	.078	10.5%
1215	.952	1.010	.090	12.1%
1215	.920	1.009	.089	11.9%
1216	.944	1.014	.070	10.2%
1216	.974	1.000	.000	.
1217	.720	1.000	.000	.
1220	.950	1.006	.108	15.0%
1225	.853	1.213	.170	21.6%
1225	.902	1.000	.000	.
1225	1.002	1.000	.000	.
1225	.780	1.000	.000	.
1225	.955	1.000	.000	.
1225	.867	1.000	.011	1.5%
1225	.785	1.000	.000	.
1225	.695	1.012	.097	13.7%
1225	.697	1.000	.000	.
1225	.928	1.000	.000	.
1225	.786	1.000	.000	.
1225	.923	1.000	.000	.
1226	.592	1.000	.000	.
1230	.975	1.014	.085	12.3%
1236	.870	1.022	.139	18.3%
1240	.755	.971	.171	27.2%
2215	1.636	1.000	.000	.
2220	.769	1.000	.000	.
2746	1.055	1.000	.000	.
Overall	.964	1.025	.073	9.9%

Age

Case Processing Summary

		Count	Percent
AgeRec	.00	1	0.0%
	Over 100	21	0.1%
	75 to 100	109	0.8%
	50 to 75	2164	15.2%
	25 to 50	3013	21.1%
	5 to 25	6973	48.9%
	5 or Newer	1966	13.8%
Overall		14247	100.0%
Excluded		0	
Total		14247	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.00	.316	1.000	.000	.
Over 100	.899	.995	.118	14.5%
75 to 100	.900	.990	.122	15.1%
50 to 75	.956	1.010	.090	11.9%
25 to 50	.957	1.066	.083	11.2%
5 to 25	.969	1.022	.066	9.0%
5 or Newer	.965	1.005	.062	8.0%
Overall	.964	1.025	.073	9.9%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	.00	1	0.0%
	LE 500 sf	7	0.0%
	500 to 1,000 sf	1831	12.9%
	1,000 to 1,500 sf	4604	32.3%
	1,500 to 2,000 sf	3620	25.4%
	2,000 to 3,000 sf	3394	23.8%
	3,000 sf or Higher	790	5.5%
Overall		14247	100.0%
Excluded		0	
Total		14247	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.00	.316	1.000	.000	.
LE 500 sf	.832	1.893	.211	37.5%
500 to 1,000 sf	.947	1.011	.095	12.7%
1,000 to 1,500 sf	.966	1.008	.078	10.7%
1,500 to 2,000 sf	.962	1.007	.067	8.7%
2,000 to 3,000 sf	.969	1.005	.061	8.0%
3,000 sf or Higher	.977	1.105	.075	10.1%
Overall	.964	1.025	.073	9.9%

Quality

Case Processing Summary

		Count	Percent
QUALITY		1	0.0%
	Average	10451	73.4%
	Average Plus	2568	18.0%
	Excellent	21	0.1%
	Fair	42	0.3%
	Fair Plus	27	0.2%
	Good	676	4.7%
	Good Plus	160	1.1%
	Low	34	0.2%
	Very Good	218	1.5%
	Very Good Plus	49	0.3%
Overall		14247	100.0%
Excluded		0	
Total		14247	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
	.316	1.000	.000	.
Average	.959	1.025	.076	10.3%
Average Plus	.981	1.023	.063	8.6%
Excellent	.977	1.005	.049	6.7%
Fair	.905	1.113	.098	12.9%
Fair Plus	.952	1.408	.120	15.3%
Good	.968	1.027	.067	8.8%
Good Plus	.974	.998	.058	7.6%
Low	.929	.999	.134	17.3%
Very Good	.981	1.001	.057	7.5%
Very Good Plus	1.006	1.002	.049	6.7%
Overall	.964	1.025	.073	9.9%

Condition

Case Processing Summary

		Count	Percent
CONDITION		2	0.0%
	Average	9221	64.7%
	Badly Worn	99	0.7%
	Excellent	74	0.5%
	Good	4686	32.9%
	Very Good	149	1.0%
	Worn Out	16	0.1%
Overall		14247	100.0%
Excluded		0	
Total		14247	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
	.559	.701	.435	61.5%
Average	.967	1.035	.074	10.1%
Badly Worn	.993	1.009	.116	15.5%
Excellent	.967	1.013	.067	8.9%
Good	.958	1.006	.070	9.3%
Very Good	.978	1.002	.071	9.8%
Worn Out	.982	1.000	.065	10.1%
Overall	.964	1.025	.073	9.9%

Commercial Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	$25K to $50K	3	1.3%
	$50K to $100K	14	6.1%
	$100K to $150K	19	8.2%
	$150K to $200K	10	4.3%
	$200K to $300K	24	10.4%
	$300K to $500K	37	16.0%
	$500K to $750K	33	14.3%
	$750K to $1,000K	22	9.5%
	Over $1,000K	69	29.9%
Overall		231	100.0%
Excluded		0	
Total		231	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
$25K to $50K	.644	1.045	.275	51.8%
$50K to $100K	1.094	1.066	.395	82.1%
$100K to $150K	.979	.999	.156	23.5%
$150K to $200K	.813	.999	.147	19.5%
$200K to $300K	.987	1.008	.111	17.9%
$300K to $500K	.954	1.001	.080	10.4%
$500K to $750K	.976	1.000	.071	10.7%
$750K to $1,000K	.999	.998	.086	21.7%
Over $1,000K	.964	1.062	.084	12.0%
Overall	.976	1.076	.120	27.2%

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	1212	1	0.4%
	1223	1	0.4%
	2212	58	25.1%
	2215	3	1.3%
	2216	2	0.9%
	2220	21	9.1%
	2221	1	0.4%
	2224	1	0.4%
	2225	1	0.4%
	2230	30	13.0%
	2233	1	0.4%
	2235	54	23.4%
	2245	41	17.7%
	2724	1	0.4%
	3212	3	1.3%
	3215	12	5.2%
Overall		231	100.0%
Excluded		0	
Total		231	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212	4.150	1.000	.000	.
1223	1.016	1.000	.000	.
2212	.983	1.019	.087	17.1%
2215	.879	1.004	.043	7.2%
2216	.883	1.018	.158	22.3%
2220	.993	1.042	.086	17.2%
2221	.972	1.000	.000	.
2224	.806	1.000	.000	.
2225	1.005	1.000	.000	.
2230	.981	1.071	.114	17.4%
2233	.873	1.000	.000	.
2235	.965	1.053	.113	17.1%
2245	.911	1.049	.157	19.4%
2724	.989	1.000	.000	.
3212	.967	1.010	.038	7.5%
3215	.973	.998	.038	5.0%
Overall	.976	1.076	.120	27.2%

Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	3	1.3%
	75 to 100	7	3.0%
	50 to 75	26	11.3%
	25 to 50	105	45.5%
	5 to 25	86	37.2%
	5 or Newer	4	1.7%
Overall		231	100.0%
Excluded		0	
Total		231	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	1.001	1.000	.000	0.1%
75 to 100	.979	.976	.059	11.8%
50 to 75	.984	1.101	.242	67.5%
25 to 50	.976	1.043	.092	14.1%
5 to 25	.929	1.036	.120	15.6%
5 or Newer	.983	1.409	.294	56.5%
Overall	.976	1.076	.120	27.2%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	1	0.4%
	500 to 1,000 sf	4	1.7%
	1,000 to 1,500 sf	8	3.5%
	1,500 to 2,000 sf	12	5.2%
	2,000 to 3,000 sf	18	7.8%
	3,000 sf or Higher	188	81.4%
Overall		231	100.0%
Excluded		0	
Total		231	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	.504	1.000	.000	.
500 to 1,000 sf	.804	1.044	.196	24.5%
1,000 to 1,500 sf	1.020	.950	.150	22.7%
1,500 to 2,000 sf	.993	1.268	.346	97.8%
2,000 to 3,000 sf	.893	1.026	.128	19.2%
3,000 sf or Higher	.974	1.071	.099	15.3%
Overall	.976	1.076	.120	27.2%

Quality

Case Processing Summary

		Count	Percent
QUALITY	Average	198	85.7%
	Average Plus	6	2.6%
	Fair	3	1.3%
	Good	14	6.1%
	Good Plus	3	1.3%
	Low	4	1.7%
	Low Plus	1	0.4%
	Very Good	2	0.9%
Overall		231	100.0%
Excluded		0	
Total		231	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	.976	1.058	.114	27.5%
Average Plus	.942	1.116	.118	16.5%
Fair	1.002	1.002	.004	0.7%
Good	.923	1.051	.217	35.0%
Good Plus	.988	1.014	.021	4.4%
Low	.979	1.139	.208	38.0%
Low Plus	1.051	1.000	.000	.
Very Good	.881	1.149	.170	24.0%
Overall	.976	1.076	.120	27.2%

Condition

Case Processing Summary

		Count	Percent
CONDITION	Average	205	88.7%
	Badly Worn	3	1.3%
	Good	22	9.5%
	Very Good	1	0.4%
Overall		231	100.0%
Excluded		0	
Total		231	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	.976	1.085	.114	27.1%
Badly Worn	1.051	1.125	.235	39.6%
Good	.945	1.009	.160	27.3%
Very Good	1.073	1.000	.000	.
Overall	.976	1.076	.120	27.2%

Vacant Land Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT $25K	13	4.7%
	$25K to $50K	42	15.3%
	$50K to $100K	136	49.6%
	$100K to $150K	25	9.1%
	$150K to $200K	9	3.3%
	$200K to $300K	12	4.4%
	$300K to $500K	13	4.7%
	$500K to $750K	11	4.0%
	$750K to $1,000K	9	3.3%
	Over $1,000K	4	1.5%
Overall		274	100.0%
Excluded		0	
Total		274	

Ratio Statistics for CURRLND / VTASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT $25K	1.025	1.067	.268	62.5%
$25K to $50K	1.030	.998	.111	20.8%
$50K to $100K	1.003	1.003	.077	17.8%
$100K to $150K	.997	.999	.137	54.9%
$150K to $200K	.986	.995	.060	9.1%
$200K to $300K	1.007	1.005	.133	25.7%
$300K to $500K	.997	.999	.026	4.8%
$500K to $750K	.998	.996	.040	7.1%
$750K to $1,000K	.999	1.001	.047	7.9%
Over $1,000K	1.049	1.026	.045	5.3%
Overall	1.003	1.040	.096	26.7%

Subclass

Case Processing Summary

		Count	Percent
ABSTRLND	100	66	24.1%
	200	22	8.0%
	300	10	3.6%
	520	1	0.4%
	530	1	0.4%
	540	1	0.4%
	700	3	1.1%
	1112	140	51.1%
	1120	1	0.4%
	1135	1	0.4%
	2112	15	5.5%
	2130	8	2.9%
	2135	4	1.5%
	9172	1	0.4%
Overall		274	100.0%
Excluded		0	
Total		274	

Ratio Statistics for CURRLND / VTASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
100	1.010	1.027	.149	46.3%
200	.990	1.007	.067	15.0%
300	.995	.999	.017	2.8%
520	.894	1.000	.000	.
530	.997	1.000	.000	.
540	.955	1.000	.000	.
700	.976	1.025	.027	4.8%
1112	1.006	1.023	.087	17.3%
1120	1.151	1.000	.000	.
1135	.984	1.000	.000	.
2112	.998	1.000	.061	9.5%
2130	1.001	1.013	.018	3.9%
2135	1.056	1.074	.189	30.1%
9172	1.020	1.000	.000	.
Overall	1.003	1.040	.096	26.7%