



2016

LARIMER 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.

A handwritten signature in cursive script, reading "Harry J. Fuller".

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

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## INTRODUCTION

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### Colorado

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

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

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

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

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

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

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

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

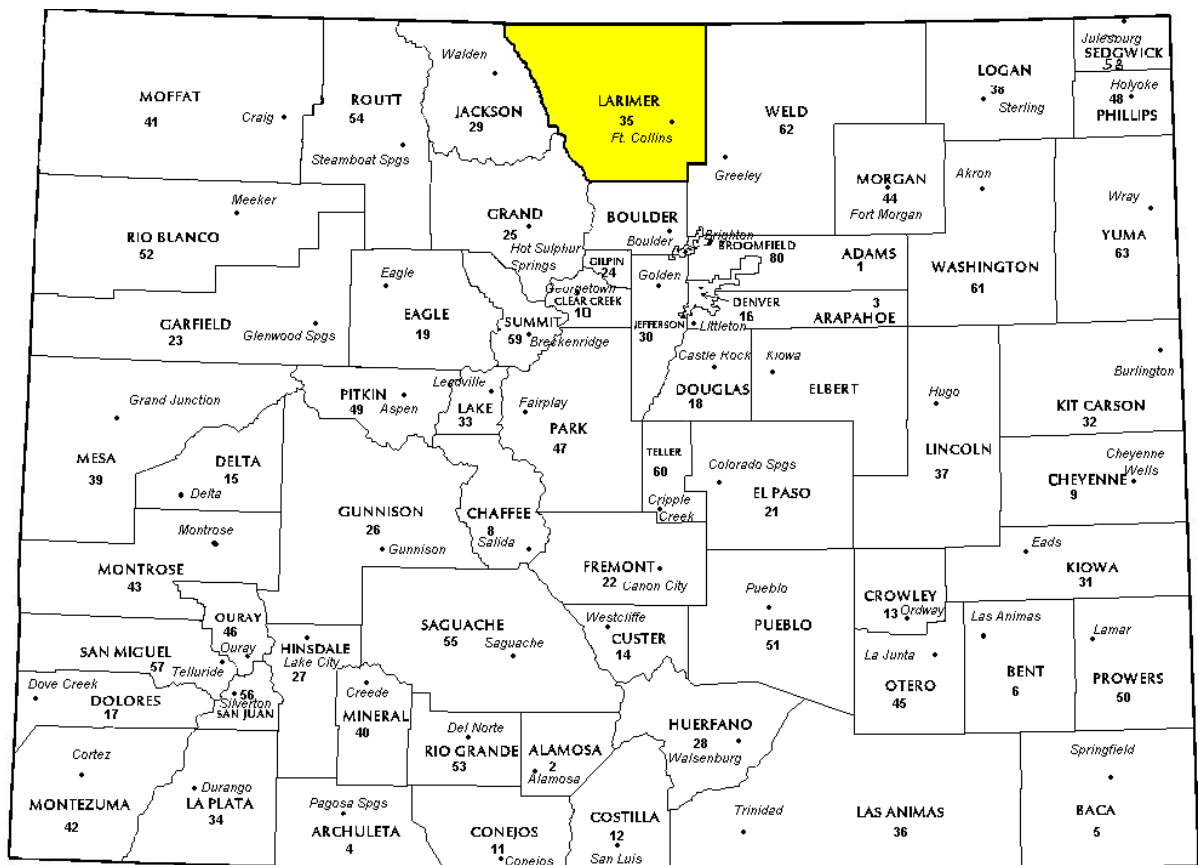
Wildrose Audit has completed the Property Assessment Study for 2016 and is pleased to report its findings for Larimer County in the following report.

# REGIONAL/HISTORICAL SKETCH OF LARIMER COUNTY

## Regional Information

Larimer 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

Larimer County had an estimated population of approximately 324,122 people with 115.4 people per square mile, according to the U.S. Census Bureau's 2014 estimated census data. This represents a 8.2 percent change from April 1, 2010 to July 1, 2014.

Larimer County was created in 1861 as one of the seventeen original counties in the Colorado Territory; however, its western boundary was disputed. Controversy existed as to whether Larimer County ended at the Medicine Bow Range or at the Continental Divide thirty miles further west. An 1886 Colorado Supreme Court decision set the boundary at the Continental Divide, although the land between the Medicine Bow Range and the divide was made part of Jackson County in 1909.

Unlike that of much of Colorado, which was founded on the mining of gold and silver, the settlement of Larimer County was based almost entirely on agriculture, an industry that few thought possible in the region during the initial days of the Colorado Gold Rush. The mining boom almost entirely passed the county by. It would take the introduction of irrigation to the region in the 1860s to bring the first widespread settlement to the area.

In 1862, the United States Army established an outpost near Laporte that was designated as Camp Collins. A devastating flood in June 1864 wiped out the outpost, forcing the Army to seek a better location. At the urging of Joseph Mason, who had settled along the Poudre in 1860, the Army relocated its post downstream adjacent to Mason's land along the Overland stage route. The site of the new post became the nucleus of the town of Fort Collins, incorporated in 1873 after the withdrawal of the Army. By that time, Mason and others had convinced the legislature of the Colorado Territorial Legislature to designate the new town as the county seat. In 1870, the legislature designated Fort Collins as the location of the state agricultural college (later Colorado State University).

Cities and towns located in Larimer County, Colorado include Berthoud, Estes Park, Fort Collins, Loveland, Timnath, Wellington, Windsor, Bellvue, Buckeye, Campion, Cherokee Park, Drake, Glendevey, Glen Haven, LaPorte, Livermore, Kinikinik, Manhattan, Masonville, Pinewood Springs, Pingree Park, Poudre Park, Feather Lakes, Rustic, Teds Place, Virginia Dale and Waverly. (*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 Larimer County are:

<b>Larimer County Ratio Grid</b>					
<b>Property Class</b>	<b>Number of Qualified Sales</b>	<b>Unweighted Median Ratio</b>	<b>Price Related Differential</b>	<b>Coefficient of Dispersion</b>	<b>Time Trend Analysis</b>
Commercial/Industrial	380	0.968	1.020	7.3	Compliant
Condominium	N/A	N/A	N/A	N/A	N/A
Single Family	25,792	0.997	1.012	6.8	Compliant
Vacant Land	1,418	0.984	1.066	17.6	Compliant

**Ratio Statistics for CURRTOT / TASP**

<b>Group</b>	<b>Median</b>	<b>Price Related Differential</b>	<b>Coefficient of Dispersion</b>
EA1	.997	1.010	.062
EA2	.998	1.013	.070
EA3	.999	1.014	.083
EA4	.977	1.047	.146
Overall	.997	1.012	.068

After applying the above described methodologies, it is concluded from the sales ratios that Larimer County is in compliance

with SBOE, DPT, and Colorado State Statute valuation guidelines.

**Recommendations**

None





# TIME TRENDING VERIFICATION

## Methodology

While we recommend that counties use the inverted ratio regression analysis method to account for market (time) trending, some counties have used other IAAO-approved methods, such as the weighted monthly median approach. We are not auditing the methods used, but rather the results of the methods used. Given this range of methodologies used to account for market trending, we concluded that the best validation method was to examine the sale ratios for each class across the appropriate sale period. To be specific, if a county has considered and adjusted correctly for market trending, then the sale ratios should remain stable (i.e. flat) across the sale period. If a residual market trend is detected, then the county may or may not have addressed market

trending adequately, and a further examination is warranted. This validation method also considers the number of sales and the length of the sale period. Counties with few sales across the sale period were carefully examined to determine if the statistical results were valid.

## Conclusions

After verification and analysis, it has been determined that Larimer County has complied with the statutory requirements to analyze the effects of time on value in their county. Larimer 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

Larimer 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

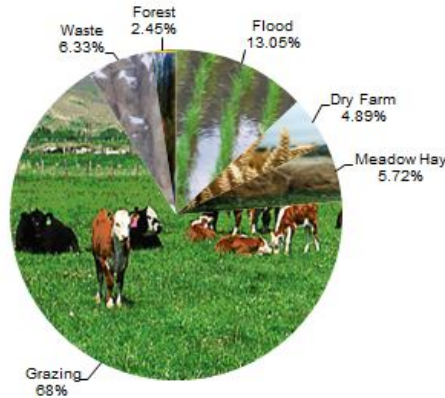
After applying the above described methodologies, it is concluded that Larimer County is reasonably treating its sold and unsold properties in the same manner.

### Recommendations

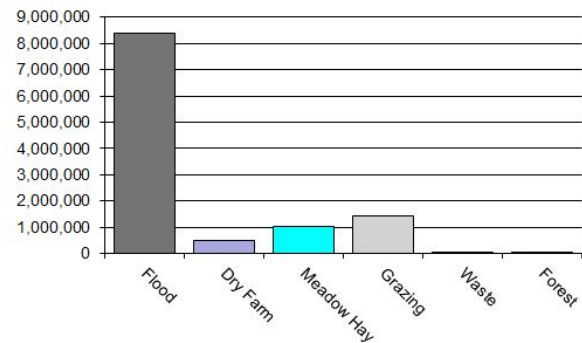
None

# 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:



Larimer County Agricultural Land Ratio Grid						
Abstract Code	Land Class	Number Of Acres	County Value Per Acre	County Assessed Total Value	WRA Total Value	Ratio
4117	Flood	51,598	154.61	7,977,514	8,405,681	0.95
4127	Dry Farm	19,360	24.87	481,504	479,099	1.01
4137	Meadow Hay	22,640	45.44	1,028,867	1,028,867	1.00
4147	Grazing	267,184	5.42	1,449,379	1,449,379	1.00
4177	Forest	9,693	6.14	59,476	59,290	1.00
4167	Waste	25,049	1.99	49,760	49,760	1.00
Total/Avg		395,524	27.93	11,046,500	11,472,075	0.96

## Recommendations

None

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## Agricultural Outbuildings

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### 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.

of Property Taxation for the valuation of agricultural outbuildings.

### Recommendations

None

### Conclusions

Larimer County has substantially complied with the procedures provided by the Division

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## Agricultural Land Under Improvements

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### 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

Larimer 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
- Aerial Photography/Pictometry

Larimer 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
- Aerial Photography/Pictometry

Larimer 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 Larimer County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 59 sales listed as unqualified.

All but two of the sales selected in the sample gave reasons that were clear and supportable. Two sales 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**

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

### **Recommendations**

None

# ECONOMIC AREA REVIEW AND EVALUATION

## **Methodology**

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

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### Earth and Stone Products

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#### 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

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### Producing Oil and Gas

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#### 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 Larimer 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**

Larimer 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.

Larimer 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

Larimer 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

Larimer 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.

Larimer 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.

Larimer 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
- 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

Larimer County's median ratio is 1.01. 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**

Larimer 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*

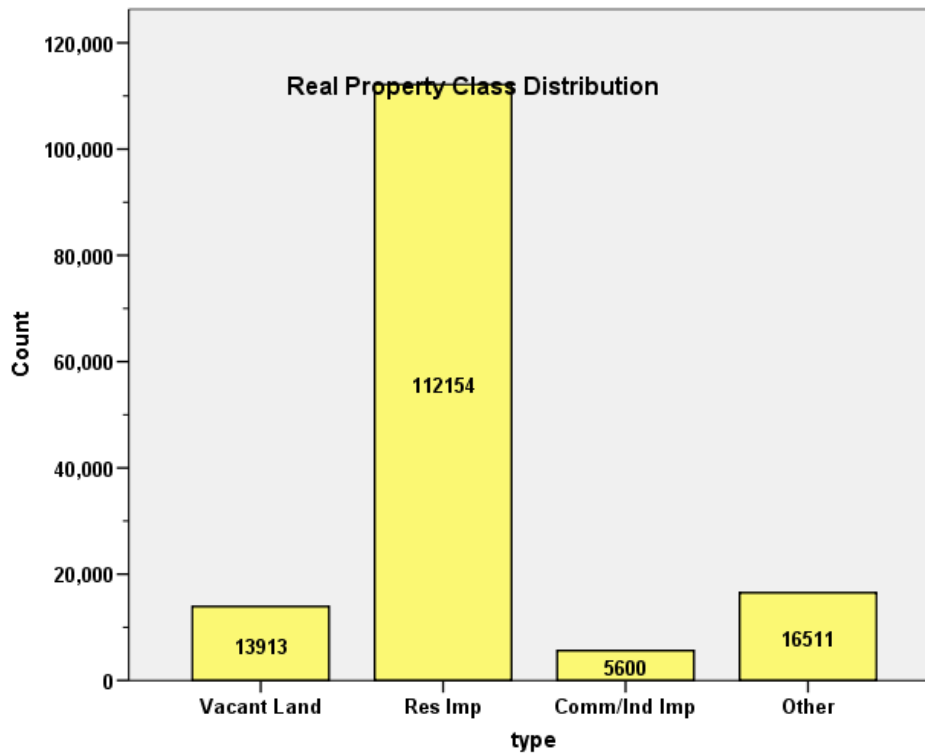
**J. Andrew Rodriguez**, *Field Analyst*

# APPENDICES

## STATISTICAL COMPLIANCE REPORT FOR LARIMER COUNTY 2016

### I. OVERVIEW

Larimer County is a northern county located along Colorado's Front Range urban corridor. The county has a total of 148,178 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 71.9% of all vacant land parcels.

For residential improved properties, single family properties accounted for 87.4% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial properties accounted for 3.8% 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 Larimer 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 25,792 qualified residential sales for the 60-month period prior to June 30, 2014. The sales ratio analysis was analyzed as follows:

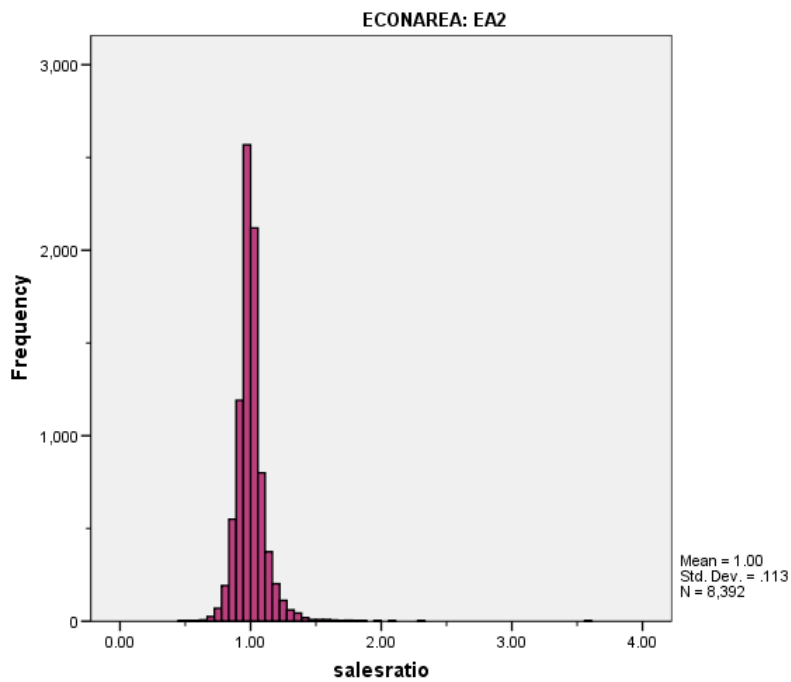
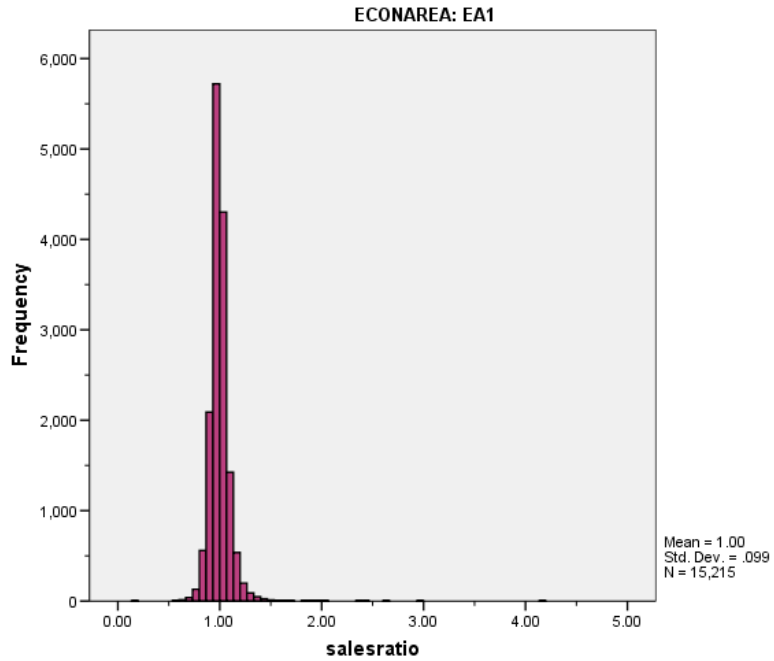
### Case Processing Summary

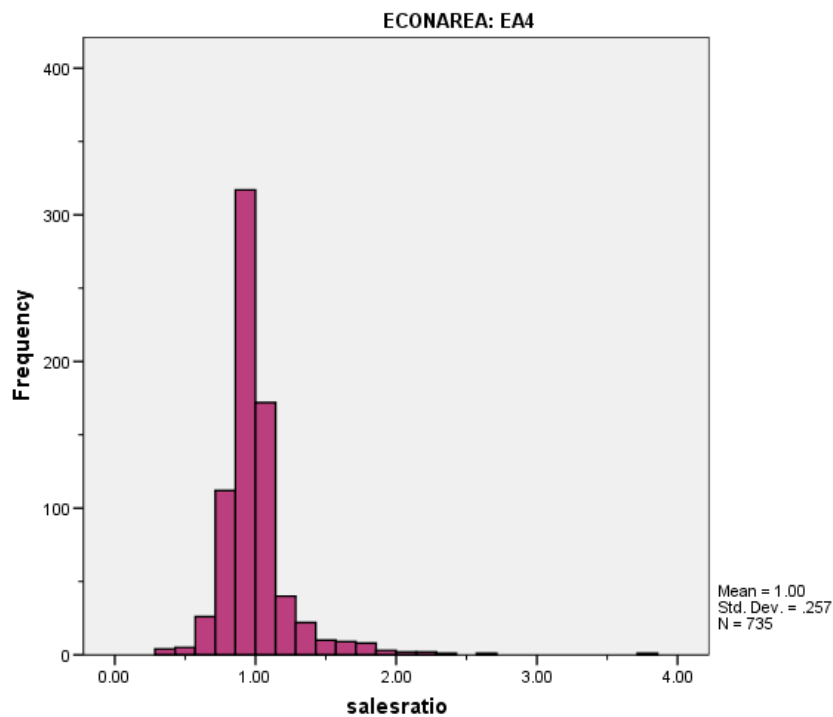
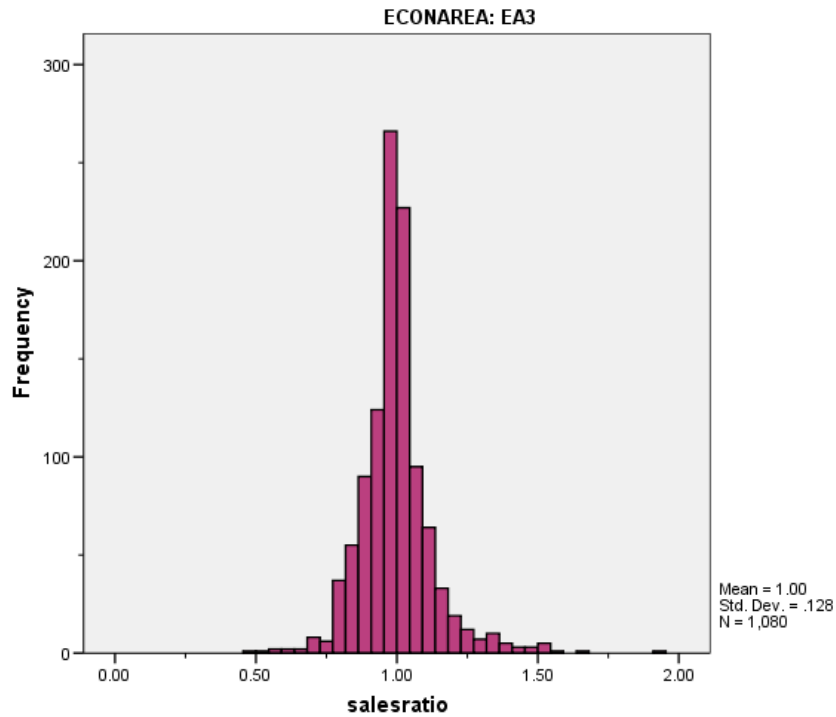
		Count	Percent
ECONAREA	EA1	15215	59.8%
	EA2	8392	33.0%
	EA3	1080	4.2%
	EA4	735	2.9%
Overall		25422	100.0%
Excluded		0	
Total		25422	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion
EA1	.997	1.010	.062
EA2	.998	1.013	.070
EA3	.999	1.014	.083
EA4	.977	1.047	.146
Overall	.997	1.012	.068

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





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

## Residential Market Trend Analysis

We next analyzed the residential dataset using the 60-month sale period for any residual market trending and broken down by economic area, as follows:

ECONAREA	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
EA1	1	(Constant)	.996	.001		708.824	.000
		SalePeriod	.000	.000	.018	2.241	.025
EA2	1	(Constant)	.996	.002		462.759	.000
		SalePeriod	.000	.000	.031	2.879	.004
EA3	1	(Constant)	.998	.007		139.319	.000
		SalePeriod	4.609E-5	.000	.006	.201	.841
EA4	1	(Constant)	1.012	.017		57.989	.000
		SalePeriod	.000	.001	-.030	-.822	.411

a. Dependent Variable: salesratio

There was no residual market trending present in the sale ratio data for any of the economic areas; in Economic Areas 1 and 2, where marginally statistical significant trends were present, the magnitude of those trends (each at less than 0.01% per month) 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 broken down by economic area, as follows:

### Report

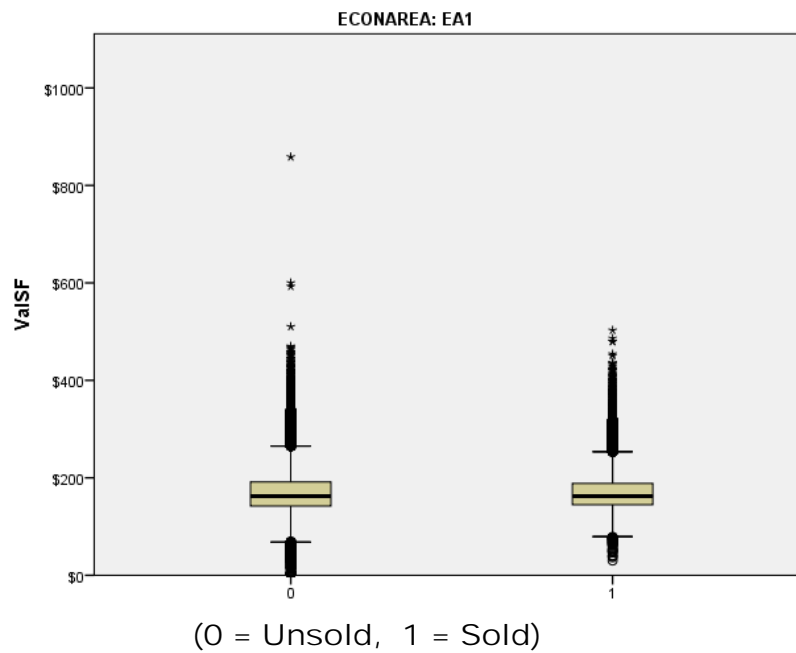
ValSF			
sold	N	Median	Mean
UNSOLD	85,924	\$160.45	\$167.52
SOLD	25,421	\$162.37	\$172.11

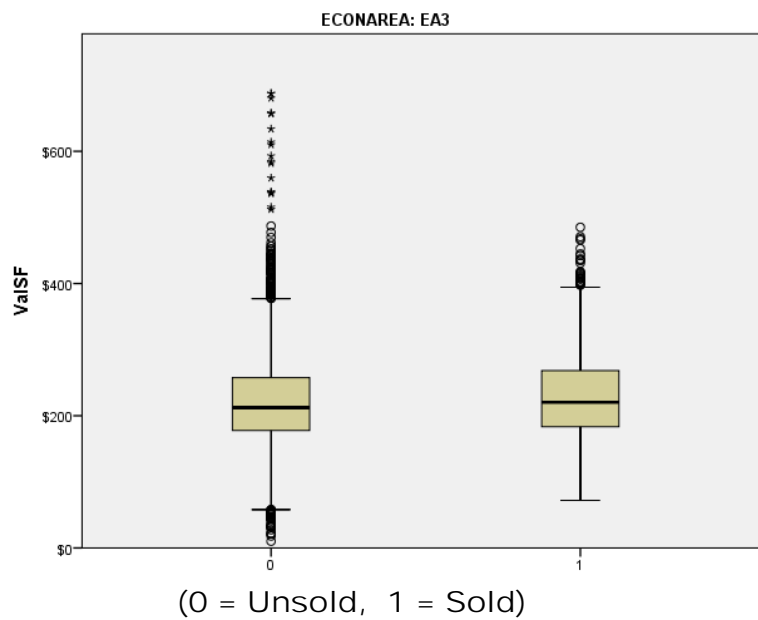
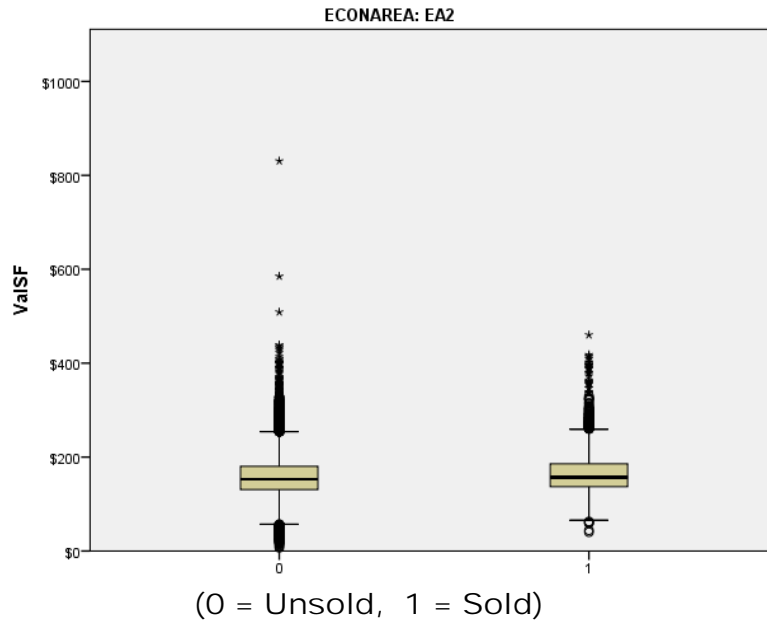


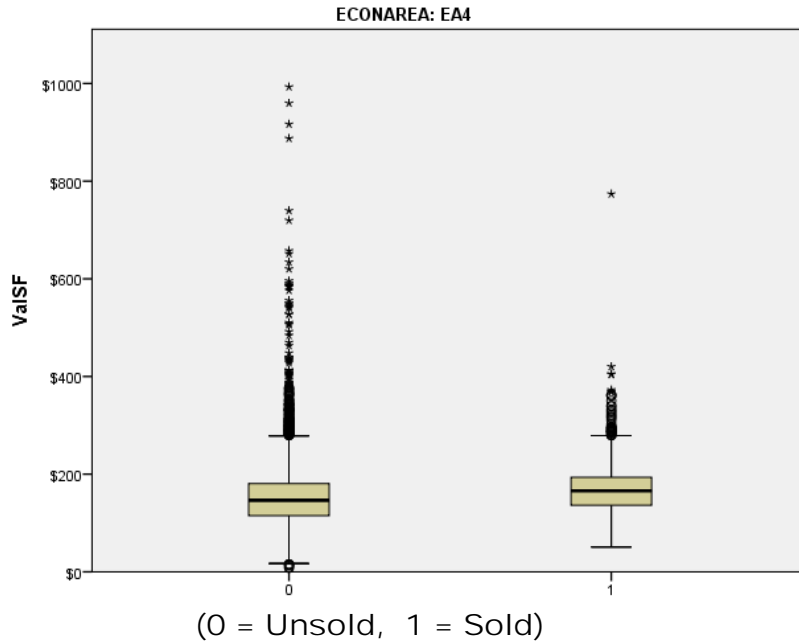
## Report

ValSF

ECONAREA	sold	N	Median	Mean
EA1	UNSOLD	45,532	\$162.28	\$169.83
	SOLD	15,214	\$162.27	\$171.93
EA2	UNSOLD	28,346	\$152.97	\$157.15
	SOLD	8,392	\$157.02	\$164.54
EA3	UNSOLD	5,464	\$212.34	\$221.47
	SOLD	1,080	\$220.32	\$232.92
EA4	UNSOLD	6,333	\$146.49	\$153.82
	SOLD	735	\$165.79	\$172.84







We next checked the median and mean change in value from 2014 to 2016 for sold and unsold residential properties by economic area, as follows:

### Report

DIFF				
ECONAREA	sold	N	Median	Mean
EA1	UNSOLD	43,827	1.15	1.15
	SOLD	14,920	1.15	1.16
EA2	UNSOLD	27,017	1.17	1.17
	SOLD	8,253	1.17	1.17
EA3	UNSOLD	5,384	1.10	1.11
	SOLD	1,074	1.11	1.11
EA4	UNSOLD	6,006	1.17	1.20
	SOLD	713	1.17	1.18

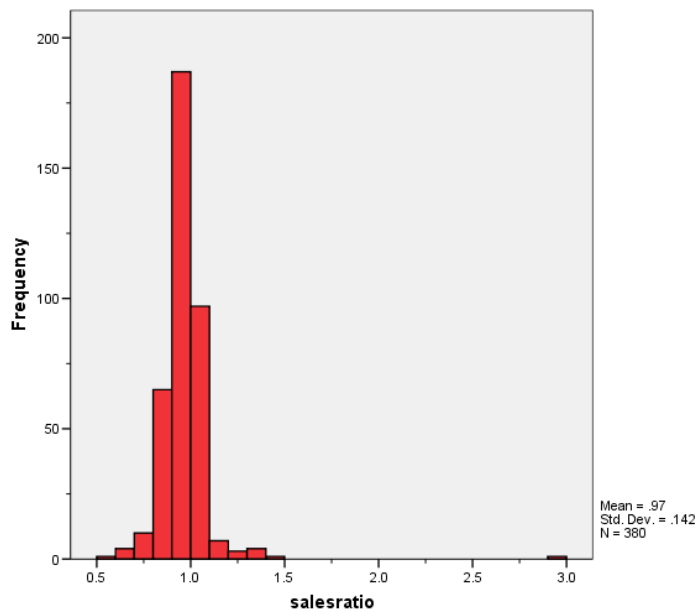
The above results indicate that sold and unsold residential properties were valued in a consistent manner. Some sales were trimmed due to extreme values.

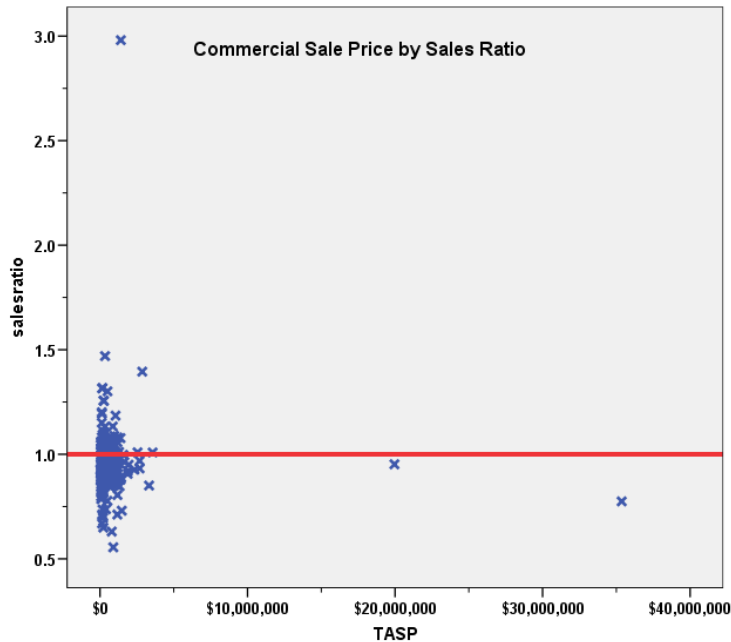
#### IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

There were 380 qualified commercial and industrial sales for the 60-month period prior to June 30, 2014. The sales ratio analysis was analyzed as follows:

Median	<b>0.968</b>
Price Related Differential	<b>1.020</b>
Coefficient of Dispersion	<b>7.3</b>

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



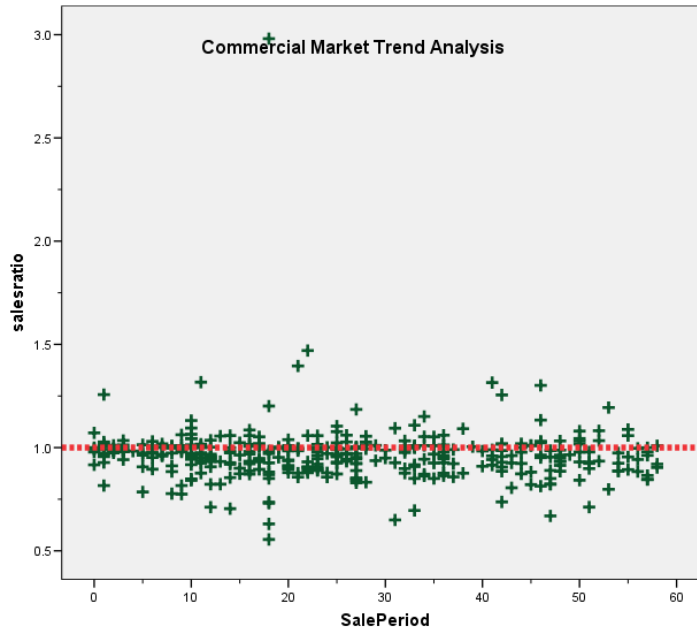


### Commercial/Industrial Market Trend Analysis

The assessor did apply market trend adjustments to the vacant land dataset. The commercial/industrial sales were analyzed, examining the sale ratios across the 60-month sale period with the following results:

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	.979	.014	71.950	.000
	SalePeriod	-.001	.000	-.060	.246

a. Dependent Variable: salesratio



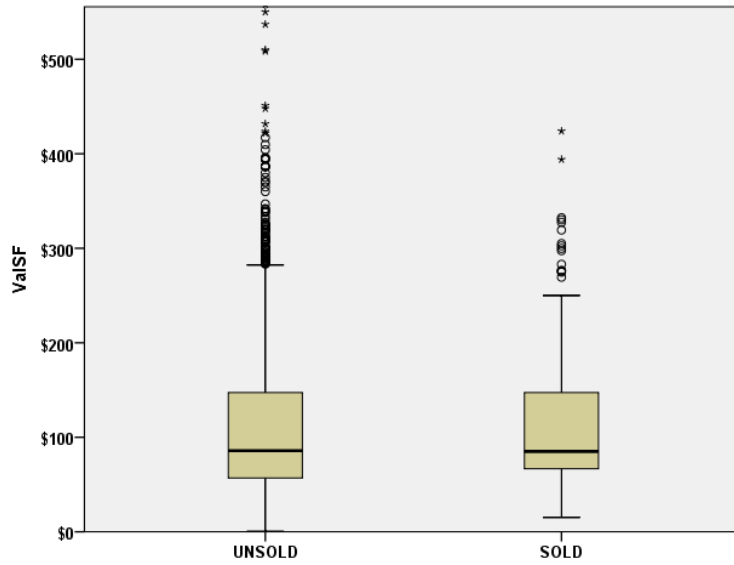
There was no residual market trending present in the commercial sale ratios. We concluded that the assessor has adequately considered market trending adjustments as part of the vacant land valuation.

### Sold/Unsold Analysis

We compared the median value per square feet between sold and unsold properties to determine if both groups were valued consistently, as follows:

#### Report

ValSF			
sold	N	Median	Mean
UNSOLD	5,085	\$85.77	\$110.96
SOLD	379	\$85.00	\$111.43



### 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	.065	Retain the null hypothesis.

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



## Report

ValSF				
ABSTRIMP	sold	N	Median	Mean
2212	UNSOLD	671	\$99.49	\$125.84
	SOLD	36	\$101.17	\$110.94
2220	UNSOLD	474	\$130.71	\$133.25
	SOLD	33	\$134.12	\$140.98
2225	UNSOLD	67	\$81.03	\$129.84
	SOLD	3	\$60.01	\$64.51
2228	UNSOLD	27	\$43.75	\$49.54
	SOLD	5	\$61.50	\$73.08
2230	UNSOLD	974	\$118.97	\$141.45
	SOLD	51	\$117.05	\$126.96
2235	UNSOLD	590	\$54.47	\$62.11
	SOLD	44	\$64.00	\$64.94
2245	UNSOLD	1,734	\$91.00	\$111.39
	SOLD	175	\$83.82	\$121.62

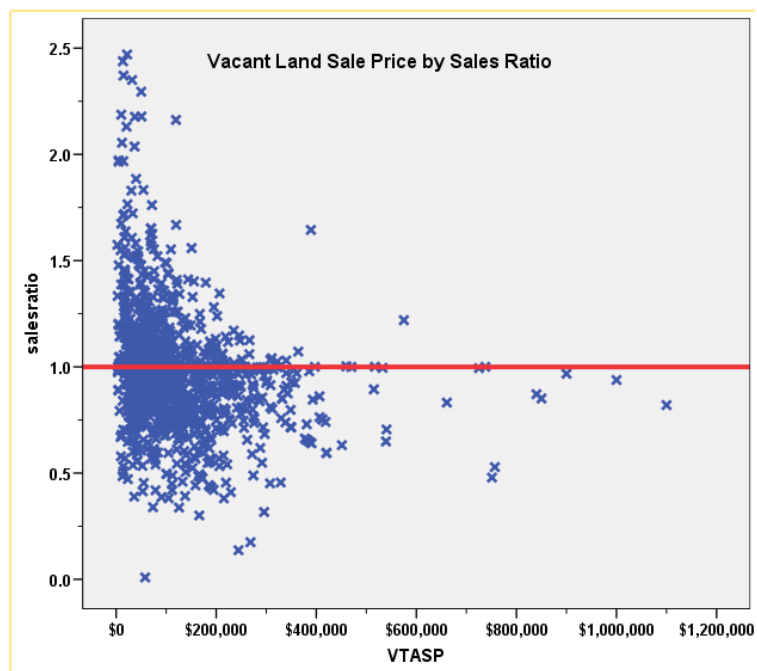
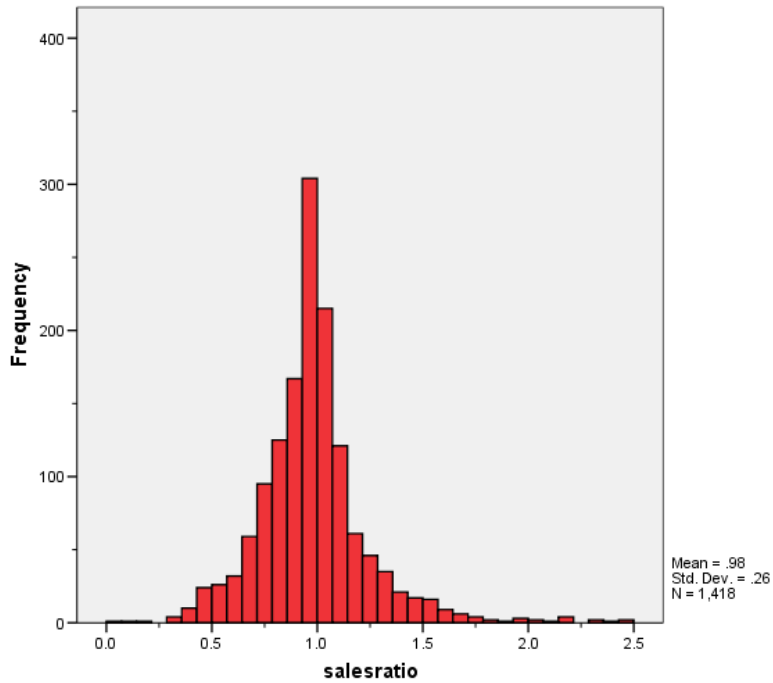
The above results indicated that sold and unsold vacant land properties were valued consistently.

### V. VACANT LAND SALE RESULTS

There were 1,418 qualified vacant land sales for the 60-month period prior to June 30, 2014. The sales ratio analysis was analyzed as follows:

Median	<b>0.984</b>
Price Related Differential	<b>1.066</b>
Coefficient of Dispersion	<b>17.6</b>

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 these properties:



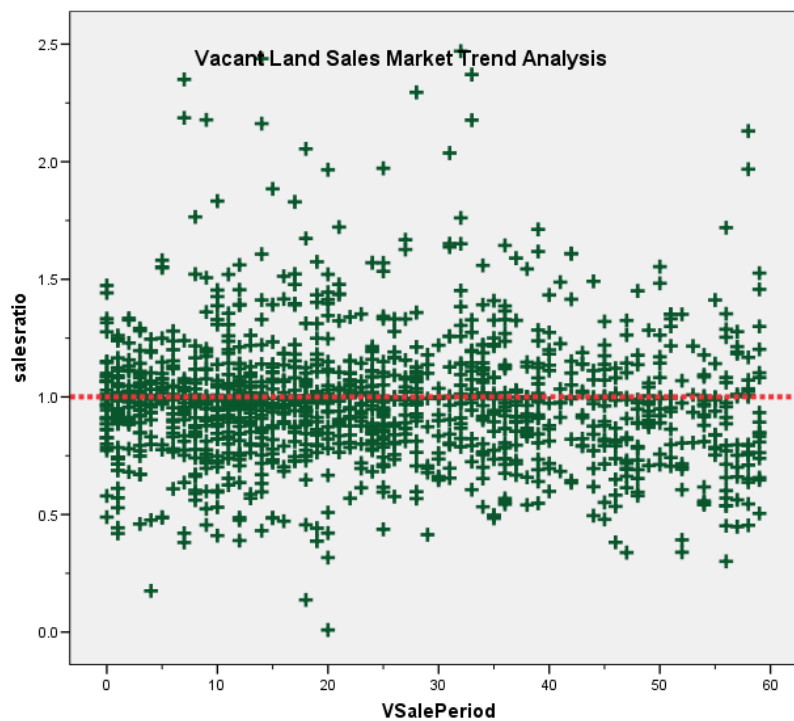
The above histogram indicates that the distribution of the vacant land sale ratios was within state mandated limits, while the above scatter plot indicated that there was no price related differential issues. No sales were trimmed.

## Vacant Land Market Trend Analysis

We next analyzed the vacant land dataset using the 60-month sale period and stratified by economic area, with the following results:

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	.994	.012	83.829	.000
	VSalePeriod	-.001	.000	-.041	.122

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 value for 2014 and 2016 between each group, as follows:

### Report

DIFF			
sold	N	Median	Mean
UNSOLD	9,259	1.00	1.05
SOLD	1,359	1.09	1.13

We next examined sold and unsold properties with at least 10 sales to determine if sold and unsold properties were valued differently, as follows:

### Report

DIFF

SUBDIVNO	sold	N	Median	Mean
0271		31	1.00	1.00
		11	1.00	1.00
0272120		107	1.05	1.06
		23	1.05	1.04
0272150		61	1.00	1.01
		14	1.00	1.02
0327120		124	1.00	1.00
		12	.82	.89
2743		6	1.32	1.24
		11	1.38	1.20
2748		18	1.35	1.35
		12	1.35	1.35
2792001000		21	1.29	1.22
		16	1.09	1.15
2803001000		9	1.00	1.05
		10	1.49	1.49
5006		10	1.00	.97
		18	.83	.93
5006002000		48	1.00	1.00
		34	1.00	.97
5010001000		50	1.44	1.41
		17	1.44	1.44
5013001001		6	1.03	1.06
		20	1.08	1.06
5510		20	1.28	1.20
		71	1.28	1.28
5513		15	1.00	1.03
		17	1.15	1.12
5514		84	1.41	1.40
		60	1.41	1.41
5803		3	1.75	1.63
		12	1.75	1.75
6034		16	1.41	1.30
		25	1.41	1.40
6043		6	1.35	1.35
		14	1.35	1.30
7003390		32	1.42	1.34
		12	.92	1.04

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

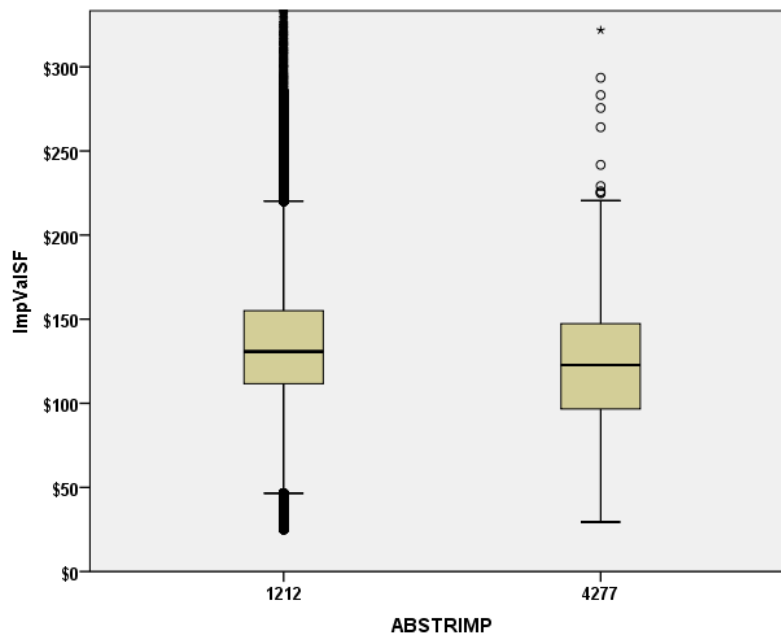
## V. AGRICULTURAL IMPROVEMENTS ANALYSIS

The final verification concerned the assigned actual values for agricultural residential improvements. We compared the median improved value per square foot rate for this subclass and compared it to the median improved value per square foot for residential single family improvements in Larimer County.

The following indicates that both groups were valued in essentially the same manner:

### Report

ImpValSF			
ABSTRIMP	N	Median	Mean
1212	96,803	\$130.74	\$135.35
4277	554	\$122.97	\$126.86



## VI. CONCLUSIONS

Based on this 2016 audit statistical analysis for Larimer County, residential, commercial/industrial, vacant land and agricultural residential properties were found to be in compliance with state guidelines.

## **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 Mean Centered
		Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			
EA1	.999	.997	1.000	.997	.997	.998	95.0%	.988	.986	.991	1.010	.062	9.9%
EA2	1.001	.999	1.004	.998	.997	.999	95.2%	.989	.985	.992	1.013	.070	11.3%
EA3	.999	.992	1.007	.999	.997	1.000	95.2%	.985	.974	.996	1.014	.083	12.8%
EA4	1.000	.982	1.019	.977	.976	.984	95.4%	.956	.937	.974	1.047	.146	25.7%

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**

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 Mean Centered
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			
.966	.951	.980	.968	.960	.976	95.5%	.947	.888	1.005	1.020	.073	14.7%

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.

### **Vacant 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 Mean Centered
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			
.979	.966	.993	.984	.974	.991	95.4%	.919	.905	.934	1.066	.176	26.6%

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

## Residential Median Ratio Stratification

### Sale Price

#### Case Processing Summary

		Count	Percent
SPRec	LT \$25K	2	0.0%
	\$25K to \$50K	11	0.0%
	\$50K to \$100K	300	1.2%
	\$100K to \$150K	1536	6.0%
	\$150K to \$200K	4135	16.3%
	\$200K to \$300K	10899	42.9%
	\$300K to \$500K	6744	26.5%
	\$500K to \$750K	1456	5.7%
	\$750K to \$1,000K	225	0.9%
	Over \$1,000K	114	0.4%
Overall		25422	100.0%
Excluded		0	
Total		25422	

#### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT \$25K	.872	1.090	.248	35.1%
\$25K to \$50K	1.337	.995	.391	62.8%
\$50K to \$100K	1.044	1.010	.180	31.6%
\$100K to \$150K	1.003	1.001	.100	18.5%
\$150K to \$200K	1.001	1.000	.075	11.7%
\$200K to \$300K	.998	1.001	.058	8.9%
\$300K to \$500K	.991	1.001	.062	9.0%
\$500K to \$750K	.968	1.000	.074	10.7%
\$750K to \$1,000K	.966	1.001	.086	12.1%
Over \$1,000K	.926	.988	.110	14.4%
Overall	.997	1.012	.068	11.3%



## Subclass

### Case Processing Summary

		Count	Percent
ABSTRIMP	0	1	0.0%
	1212	21745	85.5%
	1214	1	0.0%
	1215	294	1.2%
	1216	1	0.0%
	1217	1	0.0%
	1220	120	0.5%
	1225	1	0.0%
	1225	14	0.1%
	1230	3225	12.7%
	1382	1	0.0%
	1545	2	0.0%
	1712	2	0.0%
	1714	2	0.0%
	1716	4	0.0%
	1721	2	0.0%
	1889	1	0.0%
	2090	1	0.0%
	2124	1	0.0%
	2220	1	0.0%
	9250	2	0.0%
Overall		25422	100.0%
Excluded		0	
Total		25422	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.181	1.000	.000	.
1212	.998	1.011	.070	11.6%
1214	.977	1.000	.000	.
1215	1.000	1.006	.041	7.6%
1216	.999	1.000	.000	.
1217	.960	1.000	.000	.
1220	.967	1.014	.065	10.1%
1225	.852	1.000	.000	.
1225	.957	.983	.049	5.5%
1230	.998	1.009	.058	8.9%
1382	.859	1.000	.000	.
1545	.957	1.016	.100	14.2%
1712	.997	.998	.031	4.4%
1714	.942	1.057	.075	10.6%
1716	.956	1.004	.148	27.0%
1721	.963	1.019	.068	9.6%
1889	1.000	1.000	.000	.
2090	.900	1.000	.000	.
2124	.901	1.000	.000	.
2220	2.364	1.000	.000	.
9250	.842	.969	.117	16.6%
Overall	.997	1.012	.068	11.3%

## Age

### Case Processing Summary

		Count	Percent
AgeRec	0	1	0.0%
	Over 100	482	1.9%
	75 to 100	436	1.7%
	50 to 75	1575	6.2%
	25 to 50	7625	30.0%
	5 to 25	11437	45.0%
	5 or Newer	3866	15.2%
	Overall	25422	100.0%
Excluded		0	
Total		25422	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.181	1.000	.000	.
Over 100	.999	1.023	.110	22.8%
75 to 100	.992	1.023	.105	16.0%
50 to 75	.998	1.014	.091	14.6%
25 to 50	.999	1.014	.076	12.7%
5 to 25	.998	1.011	.063	9.7%
5 or Newer	.995	1.005	.048	7.3%
Overall	.997	1.012	.068	11.3%

## Improved Area

### Case Processing Summary

		Count	Percent
ImpSFRec	0	1	0.0%
	LE 500 sf	48	0.2%
	500 to 1,000 sf	2736	10.8%
	1,000 to 1,500 sf	8517	33.5%
	1,500 to 2,000 sf	7837	30.8%
	2,000 to 3,000 sf	5332	21.0%
	3,000 sf or Higher	951	3.7%
Overall		25422	100.0%
Excluded		0	
Total		25422	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.181	1.000	.000	.
LE 500 sf	.942	1.032	.135	19.8%
500 to 1,000 sf	.987	1.015	.085	13.7%
1,000 to 1,500 sf	.996	1.010	.067	10.9%
1,500 to 2,000 sf	.998	1.010	.062	9.6%
2,000 to 3,000 sf	1.000	1.013	.066	10.8%
3,000 sf or Higher	.999	1.034	.083	18.9%
Overall	.997	1.012	.068	11.3%

## Improvement Quality

### Case Processing Summary

	Count	Percent
QUALITY	1	0.0%
Average	20016	78.7%
Average Plus	3416	13.4%
Excellent	6	0.0%
Fair	889	3.5%
Good	847	3.3%
Good Plus	168	0.7%
Low	16	0.1%
Very Good	63	0.2%
Overall	25422	100.0%
Excluded	0	
Total	25422	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
	.181	1.000	.000	.
Average	.998	1.008	.065	10.7%
Average Plus	.997	1.013	.070	11.2%
Excellent	.990	.989	.032	5.0%
Fair	.996	1.020	.104	17.5%
Good	.996	1.017	.076	13.8%
Good Plus	.993	1.017	.086	13.5%
Low	1.017	1.105	.222	33.6%
Very Good	1.000	1.044	.107	17.6%
Overall	.997	1.012	.068	11.3%

## Improvement Condition

### Case Processing Summary

		Count	Percent
CONDITION		1	0.0%
	Average	25382	99.8%
	Badly Worn	4	0.0%
	Good	30	0.1%
	Very Good	2	0.0%
	Worn Out	3	0.0%
Overall		25422	100.0%
Excluded		0	
Total		25422	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
	.181	1.000	.000	.
Average	.998	1.012	.068	11.2%
Badly Worn	1.010	1.019	.120	16.4%
Good	.964	1.095	.104	28.0%
Very Good	.877	1.056	.120	17.0%
Worn Out	.875	1.275	.433	85.4%
Overall	.997	1.012	.068	11.3%

## Commercial Median Ratio Stratification

### Sale Price

#### Case Processing Summary

		Count	Percent
SPRec	\$25K to \$50K	3	0.8%
	\$50K to \$100K	32	8.4%
	\$100K to \$150K	47	12.4%
	\$150K to \$200K	60	15.8%
	\$200K to \$300K	58	15.3%
	\$300K to \$500K	52	13.7%
	\$500K to \$750K	52	13.7%
	\$750K to \$1,000K	32	8.4%
	Over \$1,000K	44	11.6%
Overall		380	100.0%
Excluded		0	
Total		380	

#### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
\$25K to \$50K	.925	.998	.062	9.9%
\$50K to \$100K	.922	1.001	.065	8.3%
\$100K to \$150K	.972	.999	.078	11.5%
\$150K to \$200K	.970	1.001	.059	8.8%
\$200K to \$300K	.961	.998	.074	10.9%
\$300K to \$500K	.977	1.003	.054	9.6%
\$500K to \$750K	.982	1.001	.055	8.1%
\$750K to \$1,000K	.987	.999	.060	11.4%
Over \$1,000K	.941	1.070	.133	35.2%
Overall	.968	1.020	.073	14.7%

## Subclass

### Case Processing Summary

		Count	Percent
ABSTRIMP	0	1	0.3%
	1712	1	0.3%
	1714	2	0.5%
	1716	1	0.3%
	1721	2	0.5%
	1738	1	0.3%
	1879	1	0.3%
	1891	1	0.3%
	2212	36	9.5%
	2215	1	0.3%
	2216	1	0.3%
	2220	1	0.3%
	2220	33	8.7%
	2224	1	0.3%
	2225	3	0.8%
	2228	5	1.3%
	2230	51	13.4%
	2232	1	0.3%
	2233	2	0.5%
	2235	44	11.6%
	2240	2	0.5%
	2245	175	46.1%
	3215	5	1.3%
	3230	4	1.1%
	5265	1	0.3%
	5775	1	0.3%
	9279	3	0.8%
Overall		380	100.0%
Excluded		0	
Total		380	



### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.920	1.000	.000	.
1712	1.001	1.000	.000	.
1714	1.049	1.004	.035	4.9%
1716	.849	1.000	.000	.
1721	.929	.983	.047	6.6%
1738	.886	1.000	.000	.
1879	.990	1.000	.000	.
1891	.956	1.000	.000	.
2212	.960	1.046	.088	13.9%
2215	.952	1.000	.000	.
2216	.777	1.000	.000	.
2220	.960	1.000	.000	.
2220	.978	1.032	.060	9.4%
2224	1.052	1.000	.000	.
2225	1.006	1.004	.019	3.7%
2228	.889	1.027	.044	5.9%
2230	.984	1.115	.098	30.5%
2232	.943	1.000	.000	.
2233	.941	1.024	.040	5.6%
2235	.988	.994	.041	5.9%
2240	1.038	.994	.019	2.8%
2245	.950	.994	.073	10.0%
3215	.992	1.026	.027	3.8%
3230	.979	1.011	.030	3.6%
5265	1.011	1.000	.000	.
5775	1.395	1.000	.000	.
9279	.872	.997	.069	11.4%
Overall	.968	1.020	.073	14.7%

## Age

### Case Processing Summary

		Count	Percent
AgeRec	0	1	0.3%
	Over 100	28	7.4%
	75 to 100	12	3.2%
	50 to 75	28	7.4%
	25 to 50	109	28.7%
	5 to 25	198	52.1%
	5 or Newer	4	1.1%
Overall		380	100.0%
Excluded		0	
Total		380	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.920	1.000	.000	.
Over 100	.981	1.032	.079	13.8%
75 to 100	.937	1.029	.054	8.1%
50 to 75	.968	.983	.074	10.6%
25 to 50	.982	.955	.072	21.7%
5 to 25	.955	1.056	.073	9.8%
5 or Newer	.954	1.026	.034	7.4%
Overall	.968	1.020	.073	14.7%

## Improved Area

### Case Processing Summary

		Count	Percent
ImpSFRec	0	1	0.3%
	LE 500 sf	4	1.1%
	500 to 1,000 sf	40	10.5%
	1,000 to 1,500 sf	69	18.2%
	1,500 to 2,000 sf	41	10.8%
	2,000 to 3,000 sf	47	12.4%
	3,000 sf or Higher	178	46.8%
Overall		380	100.0%
Excluded		0	
Total		380	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.920	1.000	.000	.
LE 500 sf	.905	.994	.045	6.4%
500 to 1,000 sf	.942	.988	.080	11.0%
1,000 to 1,500 sf	.944	1.002	.073	10.0%
1,500 to 2,000 sf	.964	1.006	.065	9.9%
2,000 to 3,000 sf	.959	1.030	.076	12.4%
3,000 sf or Higher	.982	1.040	.071	17.9%
Overall	.968	1.020	.073	14.7%

## Improvement Quality

### Case Processing Summary

	Count	Percent
QUALITY	1	0.3%
Average	302	79.5%
Average Plus	23	6.1%
Fair	15	3.9%
Good	38	10.0%
Very Good	1	0.3%
Overall	380	100.0%
Excluded	0	
Total	380	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
	.920	1.000	.000	.
Average	.972	.981	.073	15.4%
Average Plus	.951	1.005	.081	13.1%
Fair	.955	1.006	.073	11.6%
Good	.974	1.141	.067	10.0%
Very Good	.884	1.000	.000	.
Overall	.968	1.020	.073	14.7%

## Improvement Condition

### Case Processing Summary

		Count	Percent
CONDITION		1	0.3%
	Average	345	90.8%
	Badly Worn	2	0.5%
	Good	20	5.3%
	Very Good	12	3.2%
Overall		380	100.0%
Excluded		0	
Total		380	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
	.920	1.000	.000	.
Average	.969	1.023	.072	14.9%
Badly Worn	.976	.983	.022	3.1%
Good	.944	.990	.119	15.5%
Very Good	.940	.996	.057	9.3%
Overall	.968	1.020	.073	14.7%

## Vacant Land Median Ratio Stratification

### Sale Price

#### Case Processing Summary

		Count	Percent
SPRec	LT \$25K	125	8.8%
	\$25K to \$50K	208	14.7%
	\$50K to \$100K	451	31.8%
	\$100K to \$150K	280	19.7%
	\$150K to \$200K	160	11.3%
	\$200K to \$300K	127	9.0%
	\$300K to \$500K	51	3.6%
	\$500K to \$750K	9	0.6%
	\$750K to \$1,000K	6	0.4%
	Over \$1,000K	1	0.1%
	Overall	1418	100.0%
Excluded		0	
Total		1418	

#### Ratio Statistics for CURRLND / VTASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT \$25K	1.140	1.010	.251	34.8%
\$25K to \$50K	.992	.998	.175	27.5%
\$50K to \$100K	.997	1.006	.151	22.5%
\$100K to \$150K	.969	1.005	.161	22.8%
\$150K to \$200K	.909	1.000	.181	23.8%
\$200K to \$300K	.912	1.005	.150	21.7%
\$300K to \$500K	.851	1.003	.172	22.8%
\$500K to \$750K	.994	.995	.127	19.1%
\$750K to \$1,000K	.861	.979	.178	27.2%
Over \$1,000K	.820	1.000	.000	.
Overall	.984	1.066	.176	26.5%

## Subclass

### Case Processing Summary

		Count	Percent
ABSTRLND	100	344	24.3%
	200	27	1.9%
	400	80	5.6%
	510	4	0.3%
	520	11	0.8%
	530	8	0.6%
	540	11	0.8%
	550	47	3.3%
	1112	857	60.4%
	1624	1	0.1%
	2112	5	0.4%
	2120	1	0.1%
	2121	1	0.1%
	2124	1	0.1%
	2130	9	0.6%
	2135	5	0.4%
	2140	2	0.1%
	3115	1	0.1%
	4147	1	0.1%
	9149	1	0.1%
	9170	1	0.1%
Overall		1418	100.0%
Excluded		0	
Total		1418	

### Ratio Statistics for CURRLND / VTASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
100	.988	1.081	.194	30.3%
200	.974	1.015	.058	8.1%
400	.991	1.110	.172	24.4%
510	.983	1.098	.104	19.0%
520	1.000	1.043	.108	26.9%
530	.982	1.165	.186	28.6%
540	.994	1.073	.186	30.3%
550	.992	1.049	.110	18.5%
1112	.975	1.063	.178	25.4%
1624	1.644	1.000	.000	.
2112	.898	.986	.102	18.5%
2120	.820	1.000	.000	.
2121	1.000	1.000	.000	.
2124	.894	1.000	.000	.
2130	.980	1.036	.075	11.9%
2135	1.001	.998	.014	2.4%
2140	1.599	1.005	.353	49.9%
3115	.968	1.000	.000	.
4147	.009	1.000	.000	.
9149	.137	1.000	.000	.
9170	.725	1.000	.000	.
Overall	.984	1.066	.176	26.5%