



2015  
WELD COUNTY  
PROPERTY ASSESSMENT  
STUDY

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**WILDROSE**  
APPRAISAL, INCORPORATED  
Audit Division



September 15, 2015

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

**RE: Final Report for the 2015 Colorado Property Assessment Study**

Dear Mr. Mauer:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2015 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 black ink that reads "Harry J. Fuller". The signature is written in a cursive style.

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 2015 and is pleased to report its findings for Weld County in the following report.



## Historical Information

Weld County has a population of approximately 252,825 people with 63.32 people per square mile, according to the U.S. Census Bureau's 2010 census data. This represents a 39.73 percent change from the 2000 Census.

Weld County covers an area of 4,004 square miles in north central Colorado. It is bordered on the north by Wyoming and Nebraska and on the south by the Denver metropolitan area. The third largest county in Colorado, Weld County has an area greater than that of Rhode Island, Delaware and the District of Columbia combined.

Major Stephen H. Long made an expedition to the area now known as Weld County in 1821. In 1835 a government expedition came through the general area; the next year a member of that party, Lt. Lancaster Lupton, returned to establish a trading post located just north of the present town of Fort Lupton. In 1837 Colonel Ceran St. Vrain established Fort St. Vrain; Fort Vasquez was built south of Platteville about 1840. The latter was rebuilt in the 1930's by the State Historical Society.

The county seat is Greeley which began as the Union Colony, which was founded in 1869 as an experimental utopian community of "high moral standards" by Nathan C. Meeker, a newspaper reporter from New York City. Meeker purchased a site at the confluence of the Cache la Poudre and South Platte Rivers (that included the area of Latham, an Overland Trail station), halfway between Cheyenne and Denver along the tracks of the Denver Pacific Railroad formerly known as the "Island Grove Ranch." The name Union Colony was later changed to Greeley in honor of Horace Greeley, who was Meeker's editor at the New York Tribune, and popularized the phrase "Go West, young man."

Weld County's cultural assets include Centennial Village, an authentic recreation of pioneer life on the Colorado plains. The Meeker Museum in Greeley is a national historic site. Fort Vasquez in southern Weld County has an exciting history as an early Colorado trading post. The Greeley Philharmonic Orchestra is one of the oldest symphony orchestra west of the Mississippi. The University of Northern Colorado's Little Theatre of the Rockies is one of America's premier college dramatic organizations.

*([www.co.weld.co.us](http://www.co.weld.co.us), [www.wikipedia.org](http://www.wikipedia.org))*



# RATIO ANALYSIS

## Methodology

All significant classes of properties were analyzed. Sales were collected for each property class over the appropriate sale period, which was typically defined as the 18-month period between January 1, 2013 and June 30, 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 Weld County are:

<b>Weld 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	232	0.995	1.027	10.6	Compliant
Condominium	N/A	N/A	N/A	N/A	N/A
Single Family	8,554	0.974	1.011	8.1	Compliant
Vacant Land	385	0.988	1.072	15.9	Compliant

**Ratio Statistics for CURRTOT / TASP**

<b>Group</b>	<b>Median</b>	<b>Price Related Differential</b>	<b>Coefficient of Dispersion</b>
0	.976	1.005	.067
2	.974	1.006	.076
3	.972	1.007	.071
4	.970	1.024	.102
5	.980	1.032	.153
6	.974	1.026	.107
7	.970	1.003	.152
8	.975	1.019	.142
9	.980	1.018	.084
99	.974	1.006	.057
Overall	.974	1.011	.081

**NOTE: Econ Area 99 = Condominiums**

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

Weld 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.

<b>Sold/Unsold Results</b>	
<b>Property Class</b>	<b>Results</b>
Commercial/Industrial	Compliant
Condominium	N/A
Single Family	Compliant
Vacant Land	Compliant

**Conclusions**

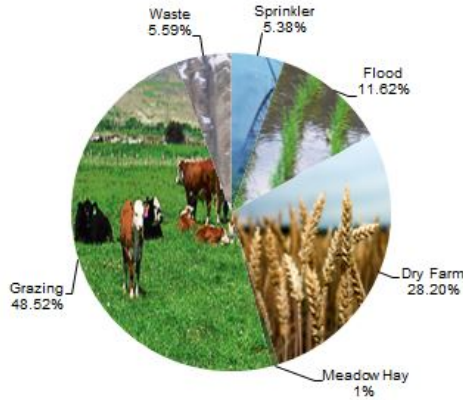
After applying the above described methodologies, it is concluded that Weld County is reasonably treating its sold and unsold properties in the same manner.

**Recommendations**

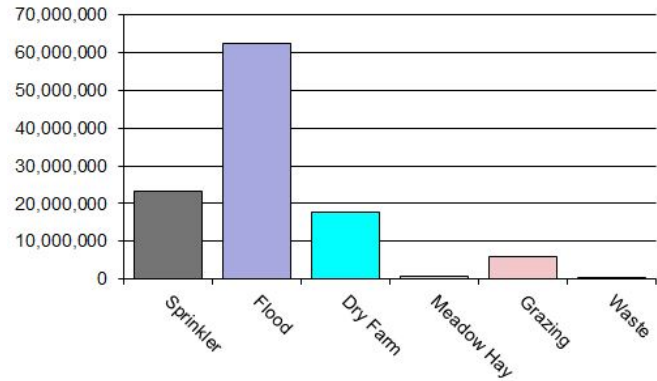
None

# 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:

<b>Weld County Agricultural Land Ratio Grid</b>						
<b>Abstract Code</b>	<b>Land Class</b>	<b>Number Of Acres</b>	<b>County Value Per Acre</b>	<b>County Assessed Total Value</b>	<b>WRA Total Value</b>	<b>Ratio</b>
4107	Sprinkler	107,506	216.34	23,258,271	23,233,771	1.00
4117	Flood	232,225	271.85	63,129,800	62,329,579	1.01
4127	Dry Farm	563,608	31.08	17,514,184	17,572,009	1.00
4137	Meadow Hay	13,632	45.38	618,613	618,613	1.00
4147	Grazing	969,638	6.12	5,930,915	5,930,915	1.00
4167	Waste	111,768	1.99	222,027	222,027	1.00
<b>Total/Avg</b>		<b>1,998,377</b>	<b>55.38</b>	<b>110,673,810</b>	<b>109,906,913</b>	<b>1.01</b>

### **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.

Property Taxation for the valuation of agricultural outbuildings.

### **Recommendations**

None

### **Conclusions**

Weld County has substantially complied with the procedures provided by the Division of

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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

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

- Questionnaires
- Field Inspections
- Phone Interviews
- In-Person Interviews with Owners/Tenants
- Written Correspondence other than Questionnaire
- Personal Knowledge of Occupants at Assessment Date

Weld 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
- Phone Interviews
- In-Person Interviews with Owners/Tenants
- Written Correspondence other than Questionnaire
- Personal Knowledge of Occupants at Assessment Date
- Aerial Photography/Pictometry

Weld 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 2015 for Weld County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 60 sales listed as unqualified.

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

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

When less than 50 percent of sales are qualified in any of the three property classes (residential, commercial, and vacant land), the contractor analyzed the reasons for disqualifying sales in any subclass that constitutes at least 20 percent of the class, either by number of properties or by value, from the prior year. 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.

If 50 percent or more of the sales are qualified, the contractor has reviewed a statistically significant sample of

unqualified sales, excluding sales that were disqualified for obvious reasons.

Weld County did not qualify for in-depth subclass analysis.

### **Conclusions**

Weld County appears to be doing an excellent job of verifying their sales. WRA agreed with the county's reason for disqualifying each of the sales selected in the sample. There are no recommendations or suggestions.

### **Recommendations**

None

# ECONOMIC AREA REVIEW AND EVALUATION

## **Methodology**

Weld County has submitted a written narrative describing the economic areas that make up the county's market areas. Weld 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 Weld 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 2015 in Weld County. The review showed that subdivisions were discounted pursuant to the Colorado Revised Statutes in Article 39-1-103 (14). Discounting procedures were applied to all subdivisions where less than 80 percent of all sites were sold using the present worth method. The market approach was applied where 80 percent or more of the subdivision sites were sold. An absorption period was estimated for each subdivision that was discounted. An appropriate discount rate was

developed using the summation method. Subdivision land with structures was appraised at full market value.

### **Conclusions**

Weld 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.

Weld 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

Weld 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

Weld 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.

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

- Public Record Documents
- MLS Listing and/or Sold Books
- Chamber of Commerce/Economic Development Contacts
- Local Telephone Directories, Newspapers or Other Local Publications
- Personal Observation, Physical Canvassing or Word of Mouth
- Questionnaires, Letters and/or Phone Calls to Buyer, Seller and/or Realtor

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

Weld County submitted their personal property written audit plan and was current for the 2015 valuation period. The number and listing of businesses audited was also submitted and was in conformance with the written audit plan. The following audit triggers were used by the county to select accounts to be audited:

- Businesses in a selected area
- Accounts with obvious discrepancies
- New businesses filing for the first time
- Incomplete or inconsistent declarations
- Accounts with omitted property
- Same business type or use
- Businesses with no deletions or additions for 2 or more years



- Non-filing Accounts - Best Information Available
- Accounts close to the \$7,300 actual value exemption status
- Accounts protested with substantial disagreement

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

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

### **Conclusions**

Weld 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*

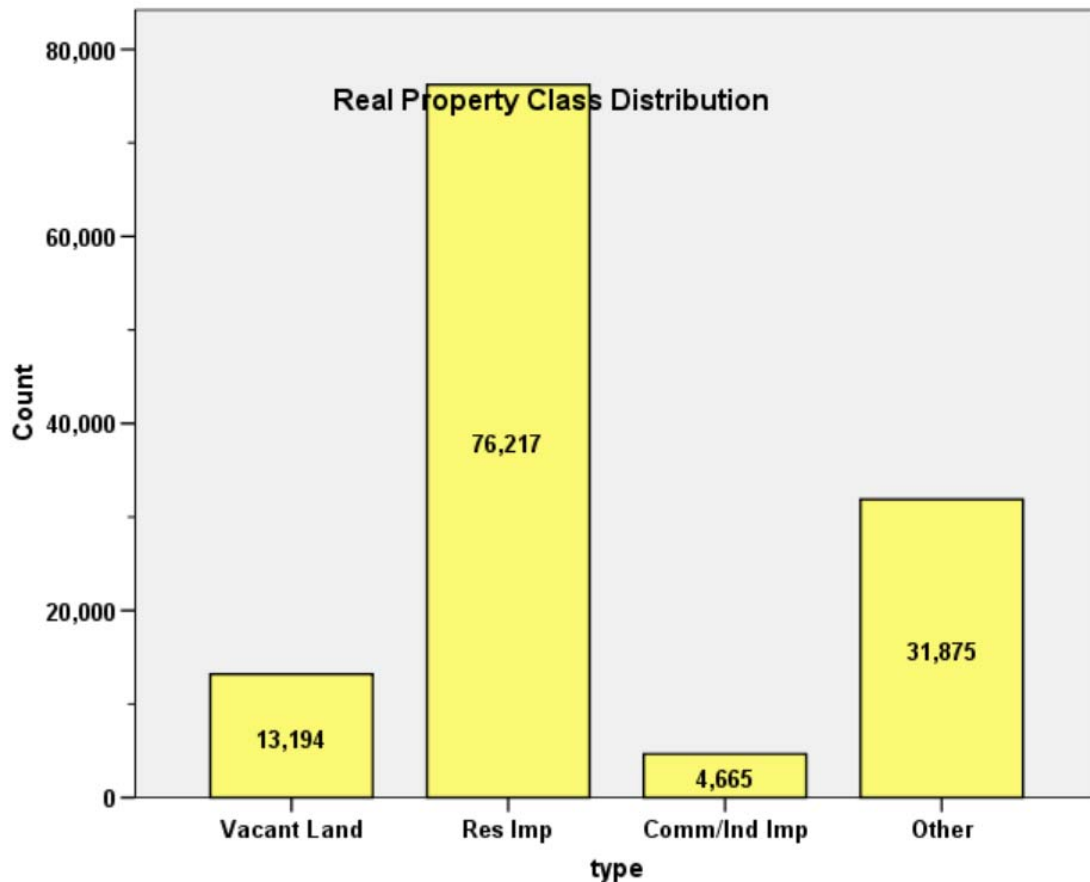
**J. Andrew Rodriguez**, *Field Analyst*

# APPENDICES

**STATISTICAL COMPLIANCE REPORT**  
**FOR WELD COUNTY**  
**2015**

**I. OVERVIEW**

Weld County is an urban county located along Colorado’s Front Range. The county has a total of 125,951 real property parcels, according to data submitted by the county assessor’s office in 2015. The following provides a breakdown of property classes for this county:



The vacant land class of properties was dominated by residential land. Residential lots (coded 100 and 1112) accounted for 80.1% of all vacant land parcels.

For residential improved properties, single family properties accounted for 92.2% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial properties accounted for 3.7% of all such properties in this county.

## **II. DATA FILES**

The following sales analyses were based on the requirements of the 2015 Colorado Property Assessment Study. Information was provided by the Weld County Assessor's Office in April 2015. The data included all 5 property record files as specified by the Auditor.

## **III. RESIDENTIAL SALES RESULTS**

There were 8,554 qualified residential sales that occurred in the 18-month sale period prior to June 30, 2014. The sales ratio analysis results were as follows:



**Case Processing Summary**

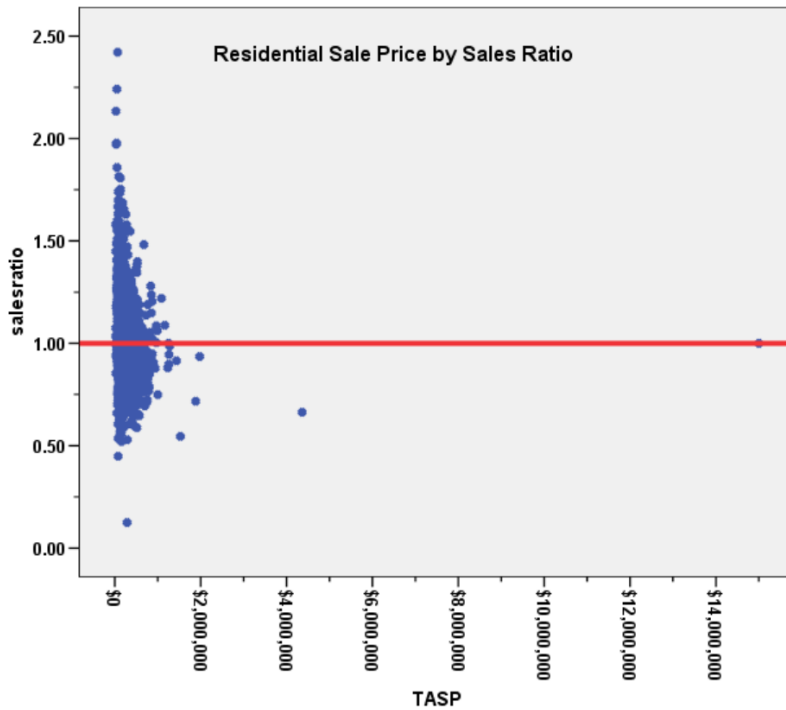
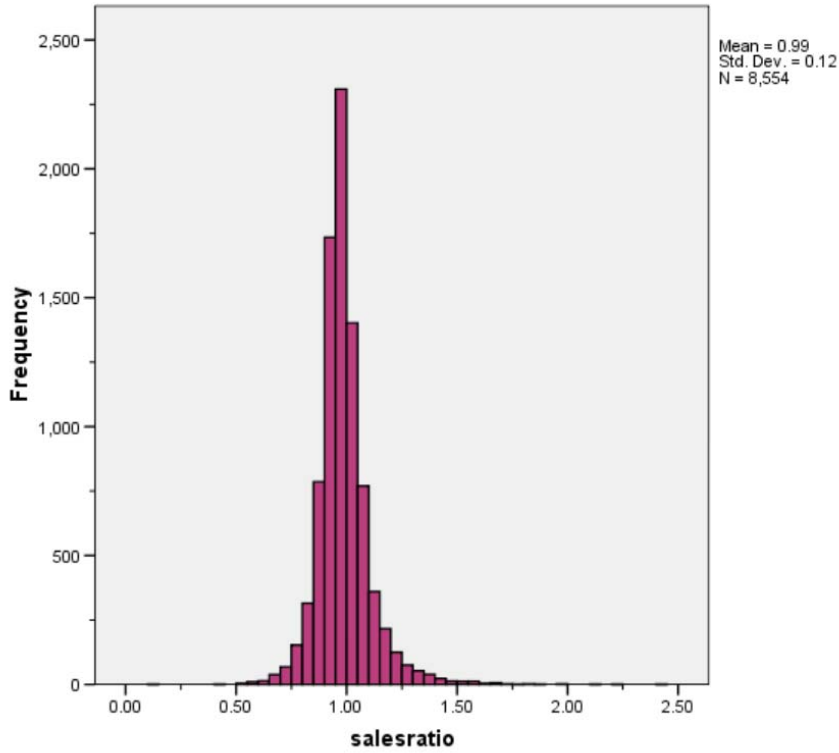
	Count	Percent
ECONAREA 0	1054	12.3%
2	2460	28.8%
3	2177	25.5%
4	428	5.0%
5	93	1.1%
6	1528	17.9%
7	50	.6%
8	29	.3%
9	295	3.4%
99	440	5.1%
Overall	8554	100.0%
Excluded	0	
Total	8554	

**Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion
0	.976	1.005	.067
2	.974	1.006	.076
3	.972	1.007	.071
4	.970	1.024	.102
5	.980	1.032	.153
6	.974	1.026	.107
7	.970	1.003	.152
8	.975	1.019	.142
9	.980	1.018	.084
99	.974	1.006	.057
Overall	.974	1.011	.081

**NOTE: Econ Area 99 = Condominiums**

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 18-month sale period for any residual market trending and broken down by economic area, as follows:

**Coefficients<sup>a</sup>**

ECONAREA	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
0	1	(Constant)	.981	.006		174.675	.000
		SalePeriod	.001	.001	.056	1.814	.070
2	1	(Constant)	.974	.004		246.735	.000
		SalePeriod	.001	.000	.063	3.131	.002
3	1	(Constant)	.969	.004		239.988	.000
		SalePeriod	.001	.000	.070	3.251	.001
4	1	(Constant)	.962	.013		72.403	.000
		SalePeriod	.003	.001	.092	1.916	.056
5	1	(Constant)	.939	.042		22.267	.000
		SalePeriod	.008	.004	.178	1.730	.087
6	1	(Constant)	.985	.007		136.547	.000
		SalePeriod	.001	.001	.043	1.666	.096
7	1	(Constant)	.930	.055		16.825	.000
		SalePeriod	.006	.006	.154	1.080	.286
8	1	(Constant)	.923	.061		15.038	.000
		SalePeriod	.008	.006	.242	1.294	.207
9	1	(Constant)	.971	.016		61.309	.000
		SalePeriod	.002	.002	.075	1.280	.201
99	1	(Constant)	.954	.008		119.999	.000
		SalePeriod	.005	.001	.248	5.350	.000

a. Dependent Variable: salesratio

There was no residual market trending present in the sale ratio data for any of the economic areas. While three 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 2015 between each group. The data was analyzed both as a whole and broken down by economic area, as follows:

Group	N	Median SPSF	Mean SPSF
Unsold	67,231	\$129	\$129
Sold	8,553	\$137	\$139

ECONAREA	Group	N	Median SPSF	Mean SPSF
0	Unsold	5,180	\$144.26	\$142.68
	Sold	1,054	\$139.32	\$141.51
2	Unsold	18,024	\$141.06	\$141.69
	Sold	2,459	\$146.77	\$148.05
3	Unsold	13,356	\$138.34	\$139.75
	Sold	2,177	\$144.20	\$151.27
4	Unsold	5,538	\$108.54	\$104.60
	Sold	428	\$119.78	\$122.49
5	Unsold	1,236	\$91.78	\$94.87
	Sold	93	\$114.09	\$109.05
6	Unsold	16,884	\$117.80	\$114.44
	Sold	1,528	\$125.67	\$123.28
7	Unsold	728	\$65.28	\$74.52
	Sold	50	\$74.46	\$92.25
8	Unsold	611	\$76.91	\$81.88
	Sold	29	\$99.40	\$98.27
9	Unsold	2,190	\$139.14	\$133.28
	Sold	295	\$149.84	\$144.42
Condo	Unsold	3,316	\$99.09	\$94.90
	Sold	434	\$105.13	\$108.14

Given the difference in values for some of the economic areas, we also examined the median and mean change in value from 2014 to 2015, both overall and by economic area, for residential sold and unsold properties, as follows:

Group	No. Sales	Median Chg Val	Mean Chg Val
Unsold	65,807	1.25	1.27
Sold	8,113	1.25	1.28

ECONAREA	Group	No. Sales	Median Chg Val	Mean Chg Val
0	Unsold	5,040	1.23	1.27
	Sold	956	1.23	1.27
2	Unsold	17,673	1.21	1.21
	Sold	2,347	1.22	1.23
3	Unsold	12,967	1.22	1.22
	Sold	2,016	1.25	1.26
4	Unsold	5,447	1.36	1.36
	Sold	420	1.42	1.41
5	Unsold	1,223	1.41	1.36
	Sold	90	1.42	1.41
6	Unsold	16,667	1.34	1.36
	Sold	1,499	1.35	1.36
7	Unsold	663	1.14	1.21
	Sold	48	1.14	1.16
8	Unsold	603	1.21	1.29
	Sold	26	1.25	1.26
9	Unsold	2,062	1.27	1.33
	Sold	274	1.27	1.30
Condo	Unsold	3,300	1.18	1.23
	Sold	431	1.20	1.24

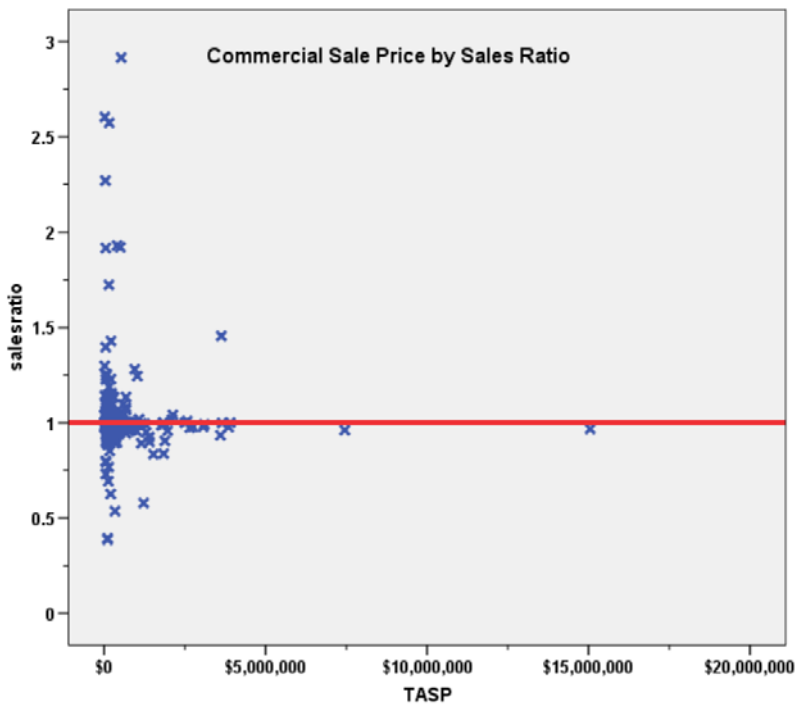
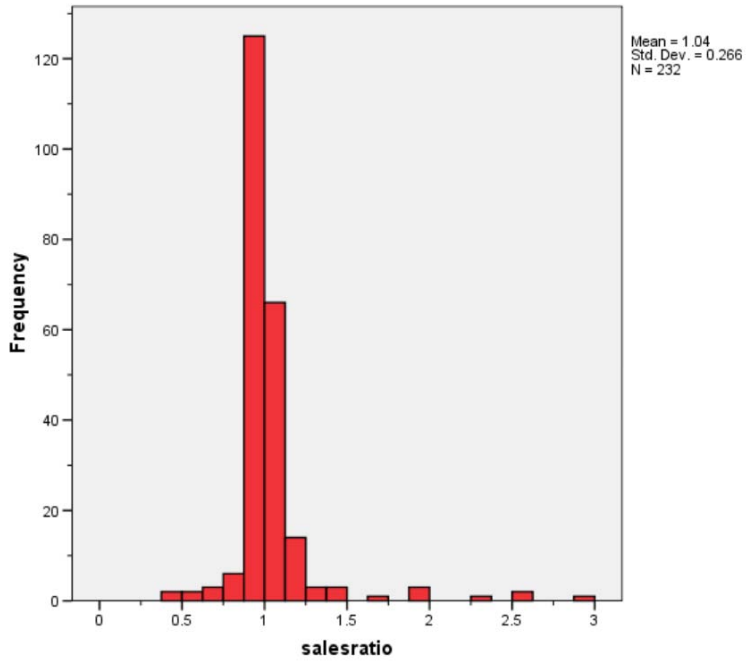
The above results indicate that sold and unsold residential properties were valued in a consistent manner.

#### IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

There were 232 qualified commercial/industrial sales that occurred in the 18 month sale period prior to June 30, 2014. The sales ratio analysis results were as follows:

Median	<b>0.995</b>
Price Related Differential	<b>1.027</b>
Coefficient of Dispersion	<b>10.6</b>

The above table indicates that the Weld 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

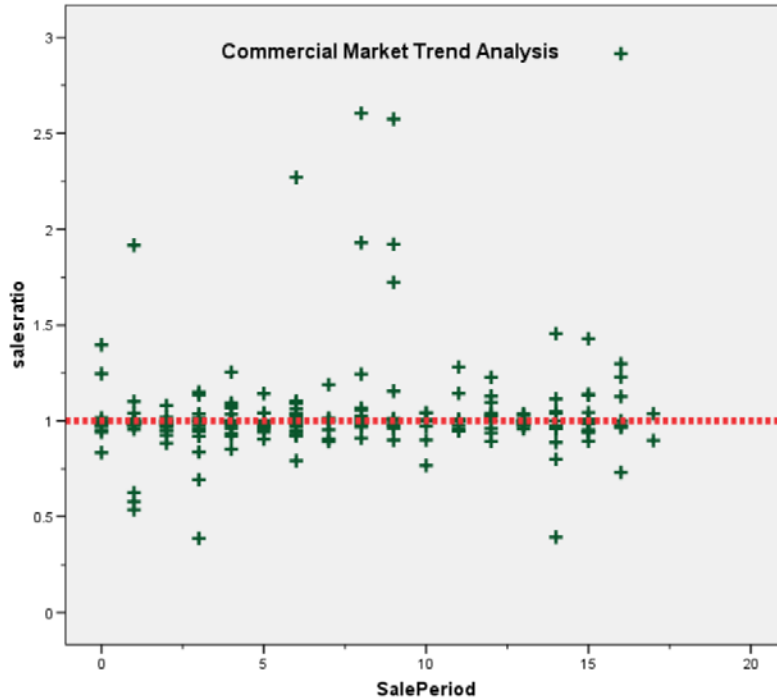
The 232 commercial/industrial sales were next analyzed, examining the sale ratios across the 18 month sale period with the following results:



**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.995	.031		32.194	.000
	SalePeriod	.005	.003	.103	1.564	.119

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 commercial/industrial land valuation.

**Sold/Unsold Analysis**

We compared the median actual value per square foot for 2015 between sold and unsold groups to determine if sold and unsold properties were valued consistently. Based on the amount of subclasses for commercial and industrial properties, we chose only major subclasses with at least 10 sales for this analysis: i.e. those with improved abstract codes of 2212, 2220, 2230, 2235, 2245, and 3215. The following analysis was then performed:

Group	No. Props	Median Val/SF	Mean Val/SF
Unsold	3,323	\$61	\$80
Sold	200	\$75	\$89

Sub Class	Group	No. Props	Median Val/SF	Mean Val/SF
2212	Unsold	615	\$60.00	\$86.52
	Sold	33	\$92.63	\$108.25
2220	Unsold	346	\$80.00	\$93.53
	Sold	19	\$100.00	\$120.98
2230	Unsold	727	\$70.00	\$104.02
	Sold	41	\$78.67	\$118.03
2235	Unsold	604	\$40.00	\$49.11
	Sold	36	\$42.51	\$48.41
2245	Unsold	816	\$73.04	\$79.30
	Sold	61	\$75.00	\$76.02
3215	Unsold	215	\$50.00	\$50.76
	Sold	10	\$76.50	\$74.66

### Hypothesis Test Summary

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

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

Given that there was a statistically significant difference using the non-parametric Mann Whitney U test, we next compared the percent change in value between 2014 and 2015 for sold and unsold commercial properties in Weld County, as follows:

Group	N	Median Chg Val	Mean Chg Val
Unsold	3,566	1.000	1.022
Sold	178	1.058	1.117

### 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.

Given that both of these comparisons indicated a statistical difference between sold and unsold commercial/industrial properties, we next developed an econometric model that used the assessor’s actual value as the predicted variable. A total of 3,253 commercial/industrial properties were analyzed. Commercial/industrial property subclasses included the following:

#### ABSTRIMP

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 2212	648	18.4	18.4	18.4
2220	365	10.4	10.4	28.8
2230	768	21.8	21.8	50.6
2235	640	18.2	18.2	68.7
2245	877	24.9	24.9	93.6
3215	225	6.4	6.4	100.0
Total	3523	100.0	100.0	

We developed a stepwise regression model to test whether sold and unsold properties were valued differently by the assessor.

To do this, we included a binary variable for sold/unsold status. For the model, sold properties were coded “1” and unsold properties were coded “0.” Other variables tested included improved area, age, economic area, and commercial/industrial subclass. The stepwise regression analysis adds variables to the model based on their contributory strength, as measured by their t or p values (depending on the test). Due to the number of sales, we used a p value of 0.02 and the tolerance threshold. At each step, a variable is added, and variables already in the model are re-evaluated to determine if they should remain in the model. After it is determined that adding additional variables will not improve the model’s predicative or explanatory power, the process stops. Variables not included at this point are determined to not be significant. In this analysis, our primary focus was the sold/unsold variable previously described.

After 8 iterations, the following results were generated by the model:

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.885 <sup>a</sup>	.783	.782	875134.228
2	.888 <sup>b</sup>	.788	.788	864061.240
3	.889 <sup>c</sup>	.791	.791	857779.900
4	.891 <sup>d</sup>	.794	.794	852561.381
5	.893 <sup>e</sup>	.797	.796	846876.026
6	.893 <sup>f</sup>	.797	.797	845225.860
7	.893 <sup>g</sup>	.798	.798	843570.397
8	.894 <sup>h</sup>	.799	.798	842772.676

- a. Predictors: (Constant), LIVEAREA
- b. Predictors: (Constant), LIVEAREA, ECON2
- c. Predictors: (Constant), LIVEAREA, ECON2, T2235
- d. Predictors: (Constant), LIVEAREA, ECON2, T2235, T3215
- e. Predictors: (Constant), LIVEAREA, ECON2, T2235, T3215, ECON3
- f. Predictors: (Constant), LIVEAREA, ECON2, T2235, T3215, ECON3, AGE
- g. Predictors: (Constant), LIVEAREA, ECON2, T2235, T3215, ECON3, AGE, ECON4
- h. Predictors: (Constant), LIVEAREA, ECON2, T2235, T3215, ECON3, AGE, ECON4, T2220

The following coefficients were included in the model at Step 8:

8	(Constant)	61225.988	21575.336		2.838	.005
	LIVEAREA	60.972	.546	.886	111.610	.000
	ECON2	420243.997	45611.119	.073	9.214	.000
	T2235	-313730.708	37969.989	-.064	-8.263	.000
	T3215	-497881.757	62536.326	-.065	-7.961	.000
	ECON3	328846.023	47059.294	.056	6.988	.000
	AGE	-1093.551	258.827	-.032	-4.225	.000
	ECON4	217895.371	58742.967	.029	3.709	.000
	T2220	134141.404	48475.653	.022	2.767	.006

a. Dependent Variable: CURRTOT

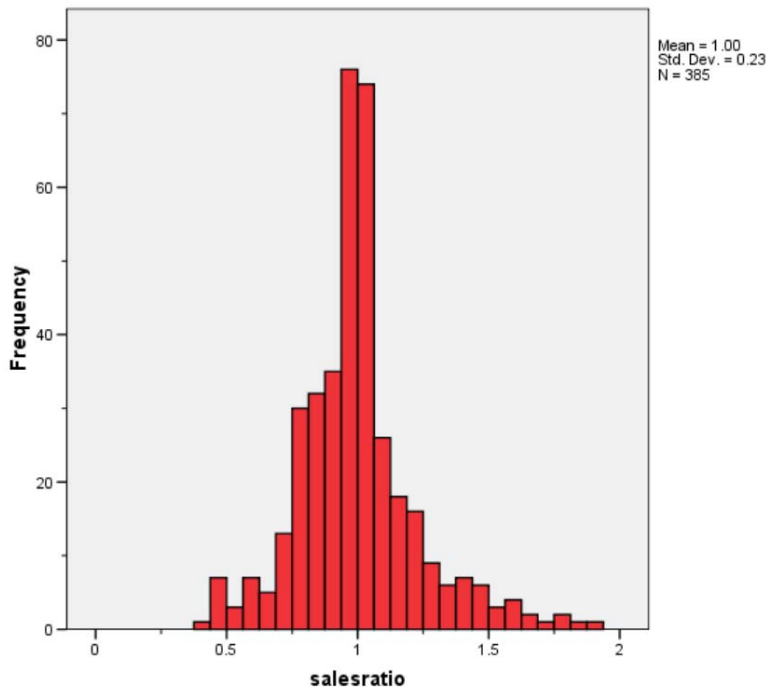
The model at Step 8 did not include the Sold/Unsold variable, indicating that it did not make a significant difference in the model whether the properties were sold or unsold. Based on this finding, we concluded that the assessor valued sold and unsold residential properties consistently in 2015.

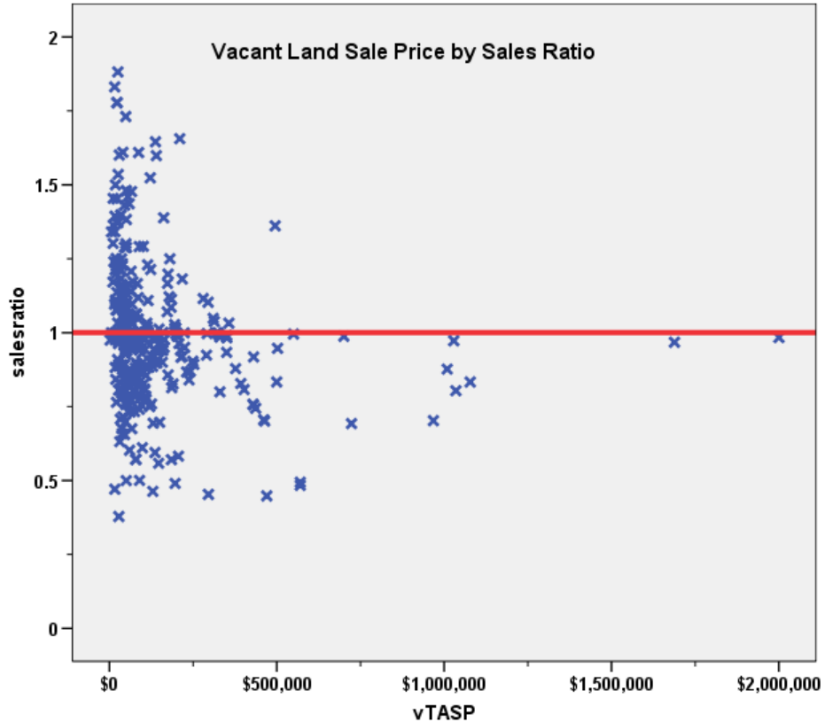
## V. VACANT LAND SALE RESULTS

There were 385 qualified residential sales that occurred in the 18 month sale period prior to June 30, 2014. The sales ratio analysis results were as follows:

<b>Median</b>	<b>0.988</b>
<b>Price Related Differential</b>	<b>1.072</b>
<b>Coefficient of Dispersion</b>	<b>15.9</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 all of these properties:





The above histogram indicates that the distribution of the vacant land sale ratios was within state mandated limits. No sales were trimmed.

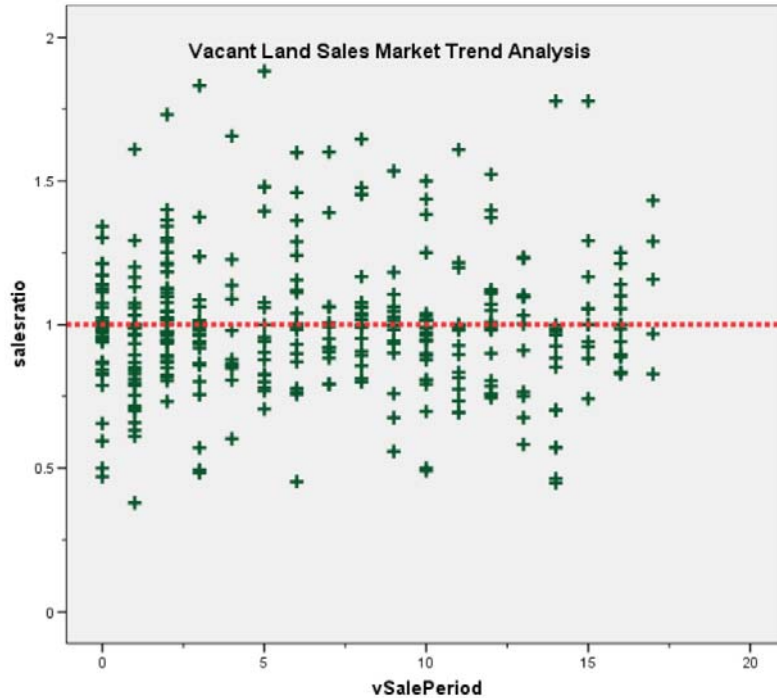
### Vacant Land Market Trend Analysis

We next analyzed the 385 vacant land dataset using the 18-month sale period, with the following results:

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	.993	.019		53.402	.000
	vSalePeriod	.000	.002	.010	.192	.848

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 from 2014 to 2015 between each group. We stratified the vacant land properties by subdivision and found overall consistency. The following results present the overall comparison results:

Subdivno	Group	No.	Median	Mean
TOTAL	Unsold	7,673	1.00	1.07
	Sold	261	1.11	1.11

We also compared sold and unsold changes in value by reported neighborhoods, as follows:

NBHD	sold	N	Median	Mean
171	Unsold	3	1.6667	1.4444
	Sold	6	1.6667	1.7056
	Total	9	1.6667	1.6185
174	Unsold	1	1.3333	1.3333
	Sold	2	1.2990	1.2990
	Total	3	1.3333	1.3105
901	Unsold	9	1.0000	1.0234
	Sold	2	1.2105	1.2105
	Total	11	1.0000	1.0574

911	Unsold	11	1.1667	1.1561
	Sold	4	1.1667	1.1875
	Total	15	1.1667	1.1645
2011	Unsold	6	1.5111	1.4741
	Sold	8	1.6664	1.5738
	Total	14	1.5111	1.5311
2201	Unsold	1	1.0000	1.0000
	Sold	2	1.2271	1.2271
	Total	3	1.1208	1.1514
2901	Unsold	12	1.0000	.8941
	Sold	3	1.0256	1.0752
	Total	15	1.0000	.9303
2903	Unsold	7	1.0000	1.0017
	Sold	4	1.1875	1.1875
	Total	11	1.0000	1.0692
3001	Unsold	8	.9615	.9339
	Sold	2	.9183	.9183
	Total	10	.9615	.9308
3026	Unsold	2	1.1667	1.1667
	Sold	3	1.0000	1.0000
	Total	5	1.0000	1.0667
3033	Unsold	3	1.4000	1.5815
	Sold	8	1.2687	1.2117
	Total	11	1.2687	1.3126
3801	Unsold	6	1.1192	1.1765
	Sold	2	1.5476	1.5476
	Total	8	1.1429	1.2692
3905	Unsold	20	1.0000	.9555
	Sold	5	1.0000	1.0005
	Total	25	1.0000	.9645
3911	Unsold	2	1.0000	1.0000
	Sold	3	1.0000	1.0000
	Total	5	1.0000	1.0000
6903	Unsold	77	1.0000	1.0000
	Sold	2	.7367	.7367
	Total	79	1.0000	.9933
6905	Unsold	19	1.0000	1.0060
	Sold	2	.8125	.8125
	Total	21	1.0000	.9876
6915	Unsold	1	1.0000	1.0000
	Sold	2	1.1930	1.1930
	Total	3	1.0526	1.1287
9010	Unsold	13	1.2000	1.1906
	Sold	4	1.0779	1.0779
	Total	17	1.2000	1.1641

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



## V. AGRICULTURAL IMPROVEMENTS ANALYSIS

The final statistical verification concerned the assigned actual values for agricultural residential improvements. We compared the 2015 median improved value per square foot for this group and compared it to the 2015 median improved value per square foot for residential single family improvements in Weld County.

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

Descriptives			Statistic	Std. Error
<b>ABSTRIMP</b>				
<b>ImpValSFR</b>	<b>SFR</b>	Mean	\$106.44	\$5.222
		95% Confidence Interval for Lower Bound	\$96.20	
		Mean Upper Bound	\$116.67	
		5% Trimmed Mean	\$97.07	
		Median	\$99.08	
		Variance	461460.515	
		Std. Deviation	\$679.309	
		Minimum	\$0	
		Maximum	\$67,990	
		Range	\$67,990	
		Interquartile Range	\$36	
		Skewness	84.425	.019
		Kurtosis	7649.672	.038
<b>Ag Res</b>	<b>Ag</b>	Mean	\$105.93	\$2.704
		95% Confidence Interval for Lower Bound	\$100.63	
		Mean Upper Bound	\$111.24	
		5% Trimmed Mean	\$99.28	
		Median	\$95.86	
		Variance	8487.296	
		Std. Deviation	\$92.127	
		Minimum	\$0	
		Maximum	\$2,142	
		Range	\$2,142	
		Interquartile Range	\$61	
		Skewness	11.682	.072
		Kurtosis	225.700	.143

## VI. CONCLUSIONS

Based on this 2015 audit statistical analysis, residential, commercial and vacant land properties were found to be in compliance with state guidelines.

## STATISTICAL ABSTRACT

### Residential

Ratio Statistics for CURRTOT / TASP

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			
0	.989	.983	.995	.976	.974	.982	95.5%	.984	.978	.990	1.005	.067	10.3%
2	.984	.980	.988	.974	.971	.977	95.4%	.979	.974	.983	1.006	.076	10.8%
3	.980	.975	.984	.972	.969	.975	95.1%	.973	.968	.977	1.007	.071	10.3%
4	.983	.968	.998	.970	.958	.977	95.3%	.960	.948	.973	1.024	.102	15.7%
5	1.002	.958	1.045	.980	.953	1.012	96.2%	.971	.938	1.003	1.032	.153	21.1%
6	.995	.988	1.003	.974	.969	.980	95.1%	.970	.957	.984	1.026	.107	15.1%
7	.983	.929	1.036	.970	.889	1.018	96.7%	.980	.920	1.040	1.003	.152	19.0%
8	.989	.918	1.060	.975	.925	1.046	97.6%	.970	.903	1.037	1.019	.142	18.9%
9	.989	.972	1.005	.980	.971	.990	95.2%	.972	.959	.984	1.018	.084	14.3%
99	.989	.980	.999	.974	.971	.977	96.0%	.983	.976	.991	1.006	.057	9.9%

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

Ratio Statistics for CURRTOT / TASP

Mean	95% Confidence Interval for Mean		Median	95% Confidence Interval for Median			Weighted Mean	95% Confidence Interval for Weighted Mean		Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			
1.035	1.001	1.070	.995	.990	.999	95.8%	1.008	.976	1.040	1.027	.106	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.

### Vacant Land

Ratio Statistics for CURRLND / vTASP

Mean	95% Confidence Interval for Mean		Median	95% Confidence Interval for Median			Weighted Mean	95% Confidence Interval for Weighted Mean		Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			
.996	.973	1.019	.988	.976	1.000	95.9%	.929	.899	.959	1.072	.159	23.1%

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

**Residential Median Ratio Stratification**

**Sale Price**

**Case Processing Summary**

		Count	Percent
SPRec	LT \$25K	6	.1%
	\$25K to \$50K	22	.3%
	\$50K to \$100K	285	3.3%
	\$100K to \$150K	1041	12.2%
	\$150K to \$200K	1858	21.7%
	\$200K to \$300K	3200	37.4%
	\$300K to \$500K	1912	22.4%
	\$500K to \$750K	188	2.2%
	\$750K to \$1,000K	29	.3%
	Over \$1,000K	13	.2%
Overall		8554	100.0%
Excluded		0	
Total		8554	

**Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
LT \$25K	1.055	1.016	.202	29.5%
\$25K to \$50K	1.263	1.018	.248	34.8%
\$50K to \$100K	1.065	1.002	.161	22.0%
\$100K to \$150K	.987	1.001	.110	15.4%
\$150K to \$200K	.977	1.000	.081	11.8%
\$200K to \$300K	.975	1.000	.064	9.2%
\$300K to \$500K	.960	1.001	.069	9.4%
\$500K to \$750K	.924	1.001	.098	13.6%
\$750K to \$1,000K	.916	.997	.137	17.6%
Over \$1,000K	.935	.992	.133	19.4%
Overall	.974	1.011	.081	12.3%

Subclass

**Case Processing Summary**

	Count	Percent
ABSTRIMP 1212	7949	92.9%
1213	1	.0%
1214	1	.0%
1214	2	.0%
1214	1	.0%
1215	108	1.3%
1216	2	.0%
1217	1	.0%
1218	1	.0%
1220	33	.4%
1223	1	.0%
1225	14	.2%
1230	434	5.1%
1979	1	.0%
2235	1	.0%
2746	3	.0%
9240	1	.0%
Overall	8554	100.0%
Excluded	0	
Total	8554	

**Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
1212	.974	1.010	.082	12.4%
1213	1.227	1.000	.000	.%
1214	1.553	1.000	.000	.%
1214	.995	.997	.073	10.3%
1214	1.651	1.000	.000	.%
1215	.993	1.010	.101	13.3%
1216	.868	1.004	.013	1.8%
1217	.990	1.000	.000	.%
1218	.976	1.000	.000	.%
1220	.973	1.017	.098	15.2%
1223	.881	1.000	.000	.%
1225	.853	.971	.157	19.8%
1230	.974	1.006	.054	9.6%
1979	.632	1.000	.000	.%
2235	1.027	1.000	.000	.%
2746	.948	.976	.055	10.3%
9240	1.182	1.000	.000	.%
Overall	.974	1.011	.081	12.3%

## Age

### Case Processing Summary

		Count	Percent
AgeRec	Over 100	188	2.2%
	75 to 100	196	2.3%
	50 to 75	579	6.8%
	25 to 50	1201	14.0%
	5 to 25	4375	51.1%
	5 or Newer	2015	23.6%
Overall		8554	100.0%
Excluded		0	
Total		8554	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
Over 100	.976	1.034	.176	24.4%
75 to 100	.967	1.031	.171	23.5%
50 to 75	.972	1.019	.133	19.1%
25 to 50	.976	1.025	.108	16.0%
5 to 25	.979	1.007	.070	10.0%
5 or Newer	.963	1.004	.055	7.7%
Overall	.974	1.011	.081	12.3%

## Improved Area

### Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	8	.1%
	500 to 1,000 sf	683	8.0%
	1,000 to 1,500 sf	2873	33.6%
	1,500 to 2,000 sf	2642	30.9%
	2,000 to 3,000 sf	1833	21.4%
	3,000 sf or Higher	515	6.0%
Overall		8554	100.0%
Excluded		0	
Total		8554	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
LE 500 sf	.895	1.518	.392	51.3%
500 to 1,000 sf	.958	1.024	.131	19.6%
1,000 to 1,500 sf	.975	1.009	.078	11.9%
1,500 to 2,000 sf	.975	1.009	.070	10.5%
2,000 to 3,000 sf	.976	1.009	.074	10.7%
3,000 sf or Higher	.973	1.019	.106	15.4%
Overall	.974	1.011	.081	12.3%

## Improvement Quality

### Case Processing Summary

		Count	Percent
QUALITY	1	175	2.0%
	2	2111	24.7%
	3	5646	66.0%
	4	574	6.7%
	5	40	.5%
	6	7	.1%
Overall		8553	100.0%
Excluded		1	
Total		8554	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
1	.954	1.018	.176	23.0%
2	.975	1.018	.109	16.5%
3	.974	1.008	.067	9.9%
4	.972	1.010	.083	11.2%
5	.990	1.012	.088	11.5%
6	1.054	1.018	.091	12.1%
Overall	.974	1.011	.081	12.3%



## Improvement Condition

### Case Processing Summary

		Count	Percent
CONDITION	1	9	.1%
	2	78	.9%
	3	8451	98.8%
	4	15	.2%
Overall		8553	100.0%
Excluded		1	
Total		8554	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
1	1.046	1.012	.203	25.8%
2	.991	1.064	.183	25.3%
3	.974	1.011	.080	12.1%
4	.962	.977	.078	11.7%
Overall	.974	1.011	.081	12.3%

**Commercial Median Ratio Stratification**

**Sale Price**

**Case Processing Summary**

		Count	Percent
SPRec	LT \$25K	10	4.3%
	\$25K to \$50K	6	2.6%
	\$50K to \$100K	33	14.2%
	\$100K to \$150K	41	17.7%
	\$150K to \$200K	17	7.3%
	\$200K to \$300K	27	11.6%
	\$300K to \$500K	31	13.4%
	\$500K to \$750K	21	9.1%
	\$750K to \$1,000K	12	5.2%
	Over \$1,000K	34	14.7%
Overall		232	100.0%
Excluded		0	
Total		232	

**Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
LT \$25K	1.038	.975	.207	51.2%
\$25K to \$50K	1.249	1.027	.394	50.7%
\$50K to \$100K	.998	1.001	.071	10.4%
\$100K to \$150K	.984	.992	.097	19.8%
\$150K to \$200K	.990	1.014	.150	41.5%
\$200K to \$300K	.999	1.005	.060	11.1%
\$300K to \$500K	.989	.990	.108	26.3%
\$500K to \$750K	1.007	1.013	.123	42.7%
\$750K to \$1,000K	.994	.998	.036	8.9%
Over \$1,000K	.988	.991	.066	12.9%
Overall	.995	1.027	.106	27.1%

Subclass

**Case Processing Summary**

	Count	Percent
ABSTRIMP 1718	1	.4%
2212	36	15.5%
2215	3	1.3%
2220	19	8.2%
2221	2	.9%
2223	1	.4%
2225	2	.9%
2228	5	2.2%
2230	41	17.7%
2233	2	.9%
2235	37	15.9%
2245	61	26.3%
2718	1	.4%
2725	1	.4%
2901	1	.4%
2966	1	.4%
3049	1	.4%
3050	1	.4%
3212	4	1.7%
3215	10	4.3%
9259	1	.4%
9279	1	.4%
Overall	232	100.0%
Excluded	0	
Total	232	

**Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
1718	.982	1.000	.000	.%
2212	.990	1.022	.084	18.1%
2215	.977	.978	.049	10.3%
2220	.981	1.075	.128	38.9%
2221	.752	.985	.231	32.7%
2223	1.281	1.000	.000	.%
2225	1.149	1.132	.130	18.4%
2228	1.019	.865	.145	24.3%
2230	.998	1.114	.172	47.1%
2233	1.020	1.010	.015	2.1%
2235	.998	.997	.035	8.5%
2245	.984	1.001	.131	23.4%
2718	1.000	1.000	.000	.%
2725	1.047	1.000	.000	.%
2901	.961	1.000	.000	.%
2966	1.000	1.000	.000	.%
3049	1.254	1.000	.000	.%
3050	1.091	1.000	.000	.%
3212	.997	.997	.020	4.1%
3215	1.000	1.011	.018	3.5%
9259	.992	1.000	.000	.%
9279	.960	1.000	.000	.%
Overall	.995	1.027	.106	27.1%

## Age

### Case Processing Summary

		Count	Percent
AgeRec	Over 100	7	3.0%
	75 to 100	19	8.2%
	50 to 75	23	9.9%
	25 to 50	62	26.7%
	5 to 25	114	49.1%
	5 or Newer	7	3.0%
Overall		232	100.0%
Excluded		0	
Total		232	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
Over 100	1.000	1.019	.052	7.5%
75 to 100	.976	1.134	.213	51.3%
50 to 75	1.003	1.054	.050	7.8%
25 to 50	.998	1.019	.076	22.4%
5 to 25	.993	1.017	.089	18.5%
5 or Newer	.984	.879	.600	95.8%
Overall	.995	1.027	.106	27.1%

## Improved Area

### Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	8	3.4%
	500 to 1,000 sf	19	8.2%
	1,000 to 1,500 sf	19	8.2%
	1,500 to 2,000 sf	23	9.9%
	2,000 to 3,000 sf	36	15.5%
	3,000 sf or Higher	127	54.7%
Overall		232	100.0%
Excluded		0	
Total		232	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
LE 500 sf	.995	.991	.055	9.6%
500 to 1,000 sf	.975	1.004	.082	11.4%
1,000 to 1,500 sf	.982	1.031	.154	24.9%
1,500 to 2,000 sf	.990	1.045	.100	28.7%
2,000 to 3,000 sf	.999	1.067	.156	35.8%
3,000 sf or Higher	.995	1.028	.093	27.0%
Overall	.995	1.027	.106	27.1%

## Improvement Quality

### Case Processing Summary

	Count	Percent
QUALITY 1	12	5.2%
2	23	9.9%
3	165	71.1%
4	31	13.4%
5	1	.4%
Overall	232	100.0%
Excluded	0	
Total	232	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
1	.988	1.140	.190	50.4%
2	.990	1.047	.103	16.1%
3	.998	1.014	.085	21.7%
4	.984	1.080	.183	44.7%
5	1.244	1.000	.000	.%
Overall	.995	1.027	.106	27.1%

## Improvement Condition

### Case Processing Summary

		Count	Percent
CONDITION	2	10	4.3%
	3	220	94.8%
	4	2	.9%
Overall		232	100.0%
Excluded		0	
Total		232	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
2	.989	.951	.120	17.2%
3	.995	1.028	.106	27.6%
4	1.008	1.013	.120	16.9%
Overall	.995	1.027	.106	27.1%



**Vacant Land Median Ratio Stratification**

**Sale Price**

**Case Processing Summary**

		Count	Percent
SPRec	LT \$25K	45	11.7%
	\$25K to \$50K	120	31.2%
	\$50K to \$100K	91	23.6%
	\$100K to \$150K	47	12.2%
	\$150K to \$200K	26	6.8%
	\$200K to \$300K	20	5.2%
	\$300K to \$500K	23	6.0%
	\$500K to \$750K	6	1.6%
	\$750K to \$1,000K	1	.3%
	Over \$1,000K	6	1.6%
Overall		385	100.0%
Excluded		0	
Total		385	

**Ratio Statistics for CURRLND /vTASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
LT \$25K	1.111	1.000	.193	26.3%
\$25K to \$50K	1.001	1.000	.145	21.4%
\$50K to \$100K	.947	1.006	.146	20.4%
\$100K to \$150K	.944	1.001	.159	24.4%
\$150K to \$200K	1.012	1.003	.121	18.5%
\$200K to \$300K	.932	1.006	.146	25.0%
\$300K to \$500K	.918	1.012	.147	19.6%
\$500K to \$750K	.820	1.000	.256	30.4%
\$750K to \$1,000K	.702	1.000	.000	.%
Over \$1,000K	.922	.984	.074	8.7%
Overall	.988	1.072	.159	23.3%

**Subclass**

**Case Processing Summary**

	Count	Percent
ABSTRLND 100	170	44.2%
200	14	3.6%
300	7	1.8%
400	4	1.0%
520	4	1.0%
530	2	.5%
540	1	.3%
550	1	.3%
1112	149	38.7%
2112	10	2.6%
2120	4	1.0%
2130	9	2.3%
2135	6	1.6%
3115	2	.5%
9140	1	.3%
9159	1	.3%
Overall	385	100.0%
Excluded	0	
Total	385	

**Ratio Statistics for CURRLND /vTASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation	
				Median Centered	
100	.995	1.078	.153		23.0%
200	1.007	1.222	.278		35.8%
300	.900	1.080	.179		26.8%
400	1.010	.987	.077		16.1%
520	.812	1.009	.233		27.4%
530	.852	1.108	.424		60.0%
540	1.646	1.000	.000	.%	
550	.984	1.000	.000	.%	
1112	.986	1.039	.138		20.5%
2112	.968	1.067	.176		24.7%
2120	1.327	.999	.080		11.3%
2130	.934	.988	.107		16.2%
2135	.959	1.037	.198		32.4%
3115	.694	.887	.332		46.9%
9140	.602	1.000	.000	.%	
9159	1.229	1.000	.000	.%	
Overall	.988	1.072	.159		23.3%