



2016  
EL PASO 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 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.

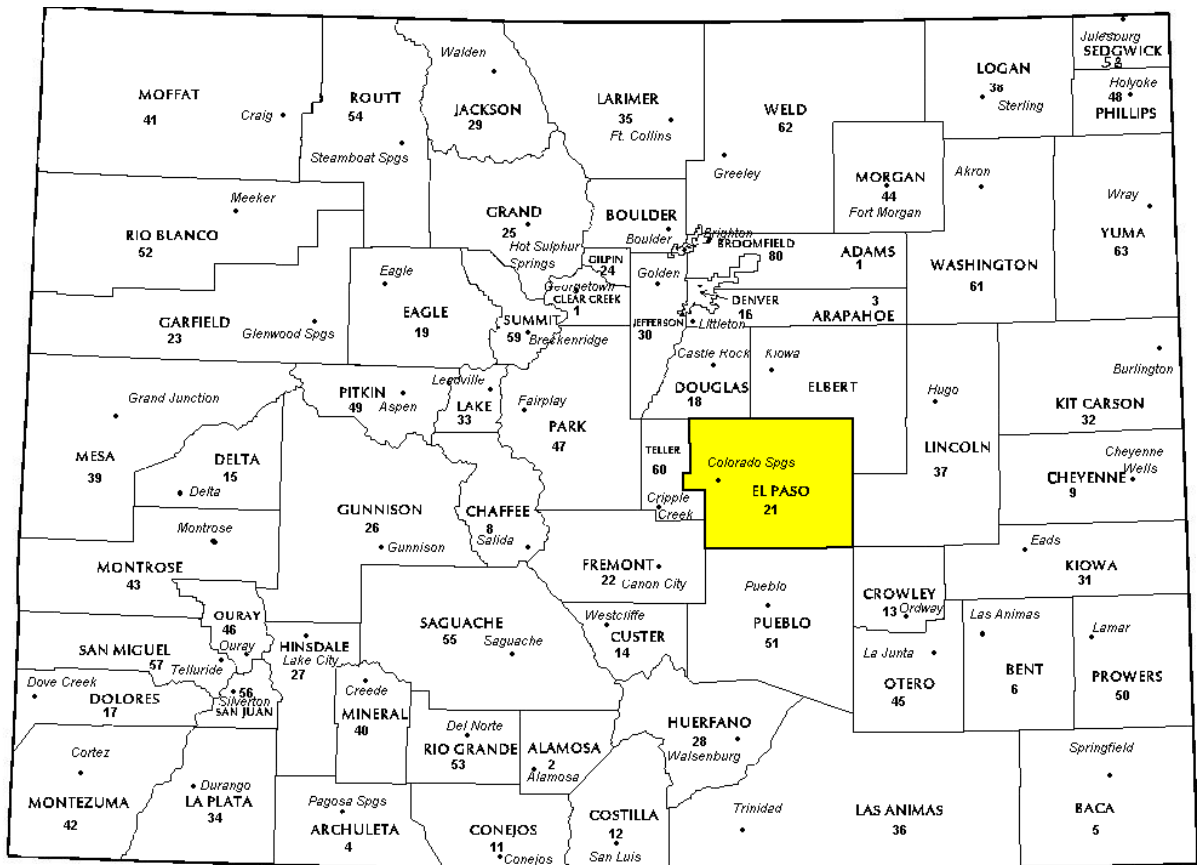
Wildrose Audit has completed the Property Assessment Study for 2016 and is pleased to report its findings for El Paso County in the following report.

# REGIONAL/HISTORICAL SKETCH OF EL PASO COUNTY

## Regional Information

El Paso 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

El Paso County had an estimated population of approximately 663,519 people with 293 people per square mile, according to the U.S. Census Bureau's 2014 estimated census data. This represents a 6.6 percent change from April 1, 2010 to July 1, 2014.

In July 1858, gold was discovered along the South Platte River in Arapahoe County, Kansas Territory. This discovery precipitated the Pike's Peak Gold Rush. Many residents of the mining region felt disconnected from the remote territorial governments of Kansas and Nebraska, so they voted to form their own Territory of Jefferson on Oct 24, 1859. The following month, the Jefferson Territorial Legislature organized 12 counties for the new territory including El Paso County. El Paso County was named for the Spanish language name for Ute Pass north of Pikes Peak. Colorado City served as the county seat of El Paso County.

The Jefferson Territory never received federal sanction, but on Feb. 2, 1861, U.S. President James Buchanan signed an act organizing the Territory of Colorado. El Paso County was

one of the original 17 counties created by the Colorado legislature on November 1, 1861. Part of its western territory was broken off to create Teller County in 1899. Originally based in Old Colorado City (now part of Colorado Springs, not today's Colorado City between Pueblo and Walsenburg), El Paso County's county seat was moved to Colorado Springs in 1873.

Colorado Springs was founded in August 1871 by General William Palmer, with the intention of creating a high quality resort community, and was soon nicknamed "Little London" because of the many English tourists who came. Nearby Pikes Peak and the Garden of the Gods made the city's location a natural choice. Colorado Springs covers 194.7 square miles, making it the most extensive municipality in Colorado. Colorado Springs was selected as the No. 1 Best Big City in "Best Places to Live" by Money magazine in 2006 and placed number one in Outside's 2009 list of America's Best Cities. The United States Air Force Academy is located in Colorado Springs.

*(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 El Paso County are:

<b>El Paso 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	313	0.959	1.069	18.5	Compliant
Condominium	N/A	N/A	N/A	N/A	N/A
Single Family	22,455	0.974	1.016	6.8	Compliant
Vacant Land	1,546	1.000	1.042	14.3	Compliant

**Ratio Statistics for CURRTOT / TASP**

<b>Group</b>	<b>Median</b>	<b>Price Related Differential</b>	<b>Coefficient of Dispersion</b>
1	.952	1.009	.056
2	.981	1.040	.077
3	.980	1.019	.109
4	.967	1.021	.081
5	.979	1.038	.089
6	.981	1.015	.085
7	.979	1.019	.081
8	.975	1.022	.075
9	.980	1.011	.068
10	.984	1.011	.063
11	.979	1.013	.076
12	.965	1.011	.050
13	.979	1.036	.067
14	.974	1.005	.053
15	.975	1.007	.059
16	.977	1.006	.061
17	.974	1.009	.085
18	.977	1.018	.095
19	.979	1.023	.099
20	.978	1.006	.056
Overall	.974	1.016	.068

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

El Paso 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**

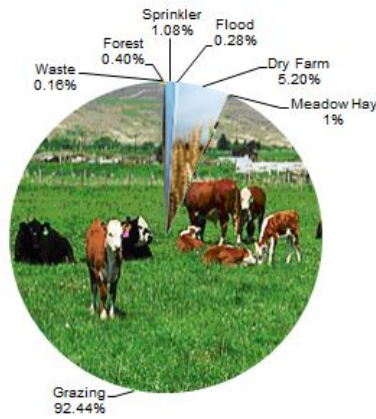
After applying the above described methodologies, it is concluded that El Paso County is reasonably treating its sold and unsold properties in the same manner.

**Recommendations**

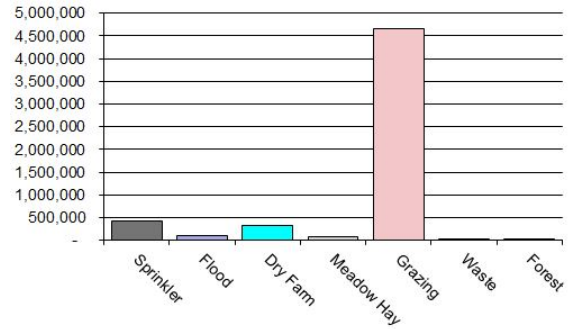
None

# 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>El Paso 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	6,047	67.14	406,024	421,906	0.96
4117	Flood	1,602	61.77	98,960	103,509	0.96
4127	Dry Farm	29,237	10.86	317,580	322,844	0.98
4137	Meadow Hay	2,506	28.49	71,402	71,402	1.00
4147	Grazing	519,624	8.99	4,669,149	4,669,149	1.00
4177	Forest	2,224	12.52	27,849	27,849	1.00
4167	Waste	897	1.99	1,782	1,782	1.00
<b>Total/Avg</b>		<b>562,137</b>	<b>9.95</b>	<b>5,592,747</b>	<b>5,618,442</b>	<b>1.00</b>

### 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.

Property Taxation for the valuation of agricultural outbuildings.

### Recommendations

None

### Conclusions

El Paso 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

El Paso 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
- Personal Knowledge of Occupants at Assessment Date
- Aerial Photography/Pictometry

- Ag lease submissions

El Paso 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.:

- Aerial Photography/Pictometry

El Paso 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 El Paso County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 58 sales listed as unqualified.

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

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

### **Recommendations**

None



# ECONOMIC AREA REVIEW AND EVALUATION

## **Methodology**

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

## VACANT LAND

### **Subdivision Discounting**

Subdivisions were reviewed in 2016 in El Paso 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**

El Paso 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.

El Paso 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

El Paso 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

El Paso 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.

El Paso 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
- Secretary of State
- Business Filing
- Volunteer Filing

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.

El Paso 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:

- Businesses in a selected area
- Accounts with obvious discrepancies
- New businesses filing for the first time
- Accounts with greater than 10% change



- 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
- Lowest or highest quartile of value per square foot
- Accounts protested with substantial disagreement

El Paso County's median ratio is .99. This is in compliance with the State Board of Equalization (SBOE) compliance requirements which range from .90 to 1.10 with no COD requirements.

### **Conclusions**

El Paso 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*

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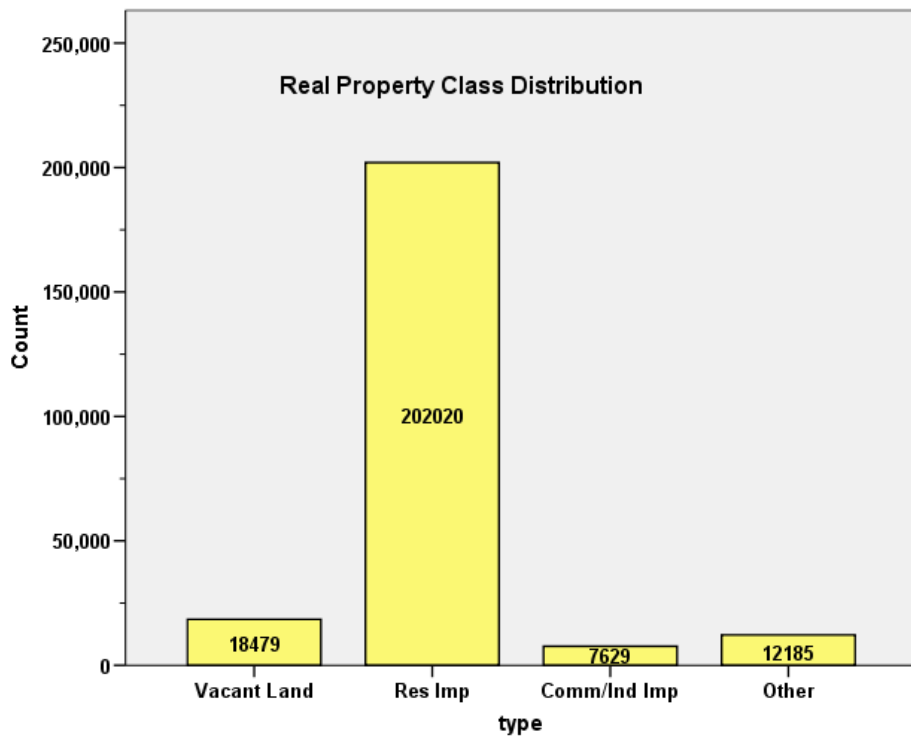
# APPENDICES



**STATISTICAL COMPLIANCE REPORT**  
**FOR EL PASO COUNTY**  
**2016**

**I. OVERVIEW**

El Paso County is an urban county located along Colorado’s Front Range. The county has a total of 240,313 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 and 1112) accounted for 75.4% of all vacant land parcels.

For residential improved properties, single family properties accounted for 93.8% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial properties accounted for 3.2% 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 El Paso Assessor's Office in May 2016. The data included all 5 property record files as specified by the Auditor.

## III. RESIDENTIAL SALES RESULTS

There were 22,455 qualified residential sales over the 24-month period ending on June 30, 2014. The sales ratio analysis was analyzed as follows:

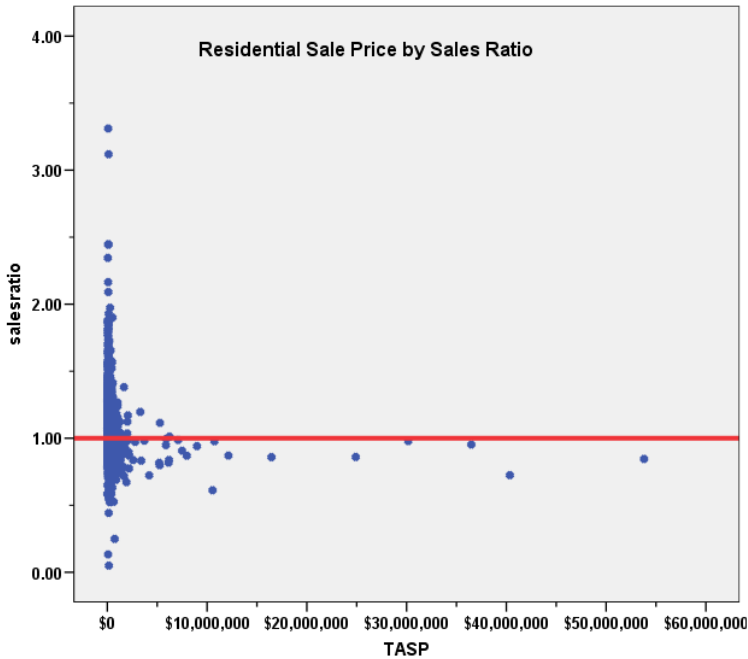
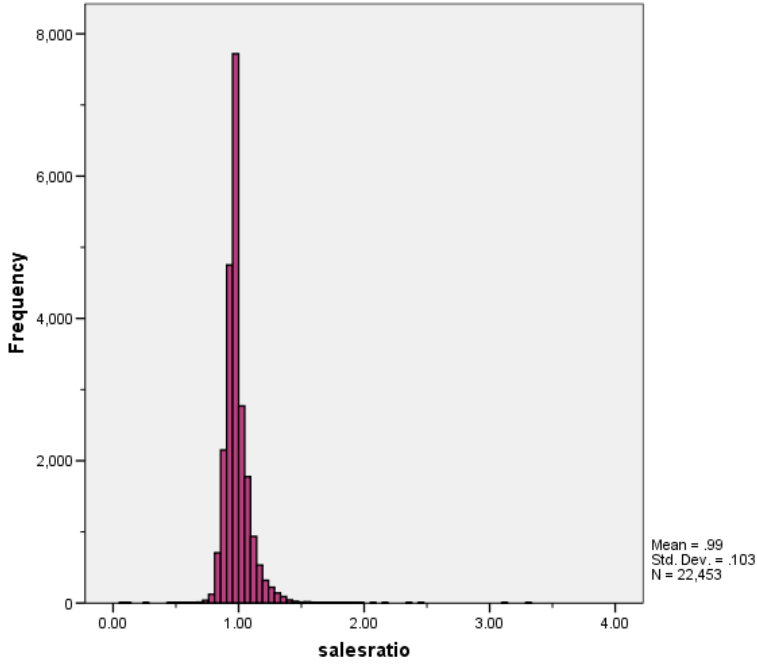
### Case Processing Summary

		Count	Percent
econ	1	3389	15.1%
	2	859	3.8%
	3	364	1.6%
	4	1485	6.6%
	5	1127	5.0%
	6	562	2.5%
	7	959	4.3%
	8	693	3.1%
	9	533	2.4%
	10	574	2.6%
	11	1094	4.9%
	12	2762	12.3%
	13	1550	6.9%
	14	2140	9.5%
	15	1577	7.0%
	16	254	1.1%
	17	612	2.7%
	18	594	2.6%
	19	94	0.4%
	20	1233	5.5%
Overall		22455	100.0%
Excluded		0	
Total		22455	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion
1	.952	1.009	.056
2	.981	1.040	.077
3	.980	1.019	.109
4	.967	1.021	.081
5	.979	1.038	.089
6	.981	1.015	.085
7	.979	1.019	.081
8	.975	1.022	.075
9	.980	1.011	.068
10	.984	1.011	.063
11	.979	1.013	.076
12	.965	1.011	.050
13	.979	1.036	.067
14	.974	1.005	.053
15	.975	1.007	.059
16	.977	1.006	.061
17	.974	1.009	.085
18	.977	1.018	.095
19	.979	1.023	.099
20	.978	1.006	.056
Overall	.974	1.016	.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 and broken down by economic area. The following graphs describe further the sales ratio distribution for these properties:



NOTE: SALES RATIO AND TASP TRIMMED FOR EXTREME VALUE

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

### Residential Market Trend Analysis

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

Coefficients <sup>a</sup>							
econ	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
1	1	(Constant)	.981	.003		356.984	.000
		SalePeriod	-.001	.000	-.083	-4.829	.000
2	1	(Constant)	.994	.007		134.788	.000
		SalePeriod	.001	.001	.047	1.391	.165
3	1	(Constant)	1.022	.016		63.309	.000
		SalePeriod	.001	.001	.048	.915	.361
4	1	(Constant)	.985	.006		178.702	.000
		SalePeriod	.001	.000	.034	1.300	.194
5	1	(Constant)	1.011	.008		129.943	.000
		SalePeriod	-.001	.001	-.043	-1.453	.146
6	1	(Constant)	1.023	.010		103.677	.000
		SalePeriod	.000	.001	-.015	-.362	.717
7	1	(Constant)	1.002	.007		141.395	.000
		SalePeriod	.00009940	.001	.006	.181	.857
8	1	(Constant)	.962	.007		139.273	.000
		SalePeriod	.002	.001	.129	3.406	.001
9	1	(Constant)	1.000	.008		126.607	.000
		SalePeriod	.000	.001	-.017	-.382	.703
10	1	(Constant)	.990	.008		124.960	.000
		SalePeriod	.001	.001	.070	1.671	.095
11	1	(Constant)	.994	.006		169.461	.000
		SalePeriod	.000	.000	.031	1.021	.307
12	1	(Constant)	.966	.002		395.239	.000
		SalePeriod	.001	.000	.052	2.762	.006
13	1	(Constant)	.980	.005		212.569	.000
		SalePeriod	.001	.000	.097	3.839	.000
14	1	(Constant)	.972	.003		295.064	.000
		SalePeriod	.001	.000	.066	3.078	.002
15	1	(Constant)	.974	.004		241.834	.000
		SalePeriod	.001	.000	.047	1.872	.061
16	1	(Constant)	.987	.012		85.337	.000
		SalePeriod	.000	.001	.015	.237	.813
17	1	(Constant)	.971	.010		100.604	.000
		SalePeriod	.000048	.001	.003	.063	.950
18	1	(Constant)	1.022	.014		74.022	.000
		SalePeriod	-.00002228	.001	-.001	-.020	.984
19	1	(Constant)	1.085	.049		22.202	.000
		SalePeriod	-.006	.004	-.158	-1.531	.129
20	1	(Constant)	.982	.005		207.845	.000
		SalePeriod	.001	.000	.071	2.504	.012

a. Dependent Variable: salesratio

There was no residual market trending present in the sale ratio data for most of the economic areas; those with statistically trends were not significant in terms of magnitude. 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 as follows:

Group	No. Props	Median Val/SF	Mean Val/SF
Unsold	179,305	\$128	\$133
Sold	22,440	\$133	\$141

We also examined this comparison by economic area, as follows:

### Report

VALSF				
econ	sold	N	Median	Mean
1	.00	24045	114.2674	115.6644
	1.00	3386	119.6087	123.6095
	Total	27431	115.0449	116.6451
2	.00	8225	160.8714	171.5135
	1.00	859	168.7360	182.5026
	Total	9084	161.6996	172.5527
3	.00	4240	112.4785	116.8171
	1.00	364	122.5604	129.4167
	Total	4604	113.1498	117.8133
4	.00	14712	105.5323	105.1347
	1.00	1480	109.4657	108.9385
	Total	16192	105.8271	105.4823
5	.00	12083	146.1575	149.1572
	1.00	1125	153.2738	158.7055
	Total	13208	146.9232	149.9704
6	.00	5019	164.3846	163.5034
	1.00	562	172.6541	177.5505
	Total	5581	165.2988	164.9179
7	.00	10052	126.6673	124.1934
	1.00	959	131.4121	130.6100
	Total	11011	127.0650	124.7522
8	.00	5925	142.1783	150.5668
	1.00	693	150.2196	160.6739
	Total	6618	142.8907	151.6252
9	.00	5338	138.3472	145.7498
	1.00	533	140.3710	146.8606
	Total	5871	138.5226	145.8506
10	.00	5007	126.6731	131.8916
	1.00	574	112.9707	125.7051
	Total	5581	125.5198	131.2554
11	.00	11439	119.9817	122.4303
	1.00	1094	124.2209	125.7094
	Total	12533	120.3771	122.7165

12	.00	17218	123.4272	125.3118
	1.00	2762	124.0290	128.2733
	Total	19980	123.5339	125.7212
13	.00	12604	130.5963	134.5050
	1.00	1550	133.0966	136.4542
	Total	14154	130.8440	134.7184
14	.00	13200	138.9234	148.9467
	1.00	2140	146.1165	156.9881
	Total	15340	139.7704	150.0685
15	.00	8703	151.2283	161.1214
	1.00	1577	163.1694	173.6291
	Total	10280	152.6335	163.0401
16	.00	2606	144.1911	150.3505
	1.00	254	147.6712	156.1910
	Total	2860	144.4940	150.8692
17	.00	6775	153.3742	157.4638
	1.00	612	165.3403	172.9213
	Total	7387	154.3905	158.7444
18	.00	5836	87.6372	96.6426
	1.00	589	97.4811	108.3524
	Total	6425	88.6805	97.7161
19	.00	1194	65.8308	80.8039
	1.00	94	91.0902	105.0850
	Total	1288	67.5886	82.5760
20	.00	5064	127.8026	131.3277
	1.00	1233	132.4086	139.6000
	Total	6297	128.5317	132.9475
Total	.00	179285	128.0537	132.9814
	1.00	22440	133.1515	140.5268
	Total	201725	128.6175	133.8208

Although the overall comparison indicated consistency in the valuation of sold and unsold properties by economic area, we also examined the percent change in value from 2014 to 2016 for sold and unsold residential properties, both overall and by economic area:

DIFF			
	N	Median	Mean
UNSOLD	173,986	1.0700	1.0758
SOLD	22,357	1.0739	1.1065

## Report

DIFF				
econ	sold	N	Median	Mean
1	.00	22932	1.0768	1.0787
	1.00	3360	1.0579	1.0966
	Total	26292	1.0757	1.0810
2	.00	8182	1.0600	1.0523
	1.00	859	1.0600	1.0868
	Total	9041	1.0600	1.0556
3	.00	4277	1.0600	1.0614
	1.00	364	1.0700	1.1372
	Total	4641	1.0600	1.0674
4	.00	14619	1.0732	1.0694
	1.00	1484	1.0957	1.1058
	Total	16103	1.0742	1.0727

5	.00	11905	1.0900	1.0747
	1.00	1124	1.0900	1.1340
	Total	13029	1.0900	1.0799
6	.00	5008	1.0700	1.0738
	1.00	561	1.0800	1.1381
	Total	5569	1.0700	1.0803
7	.00	10022	1.0700	1.0702
	1.00	959	1.0700	1.1108
	Total	10981	1.0700	1.0738
8	.00	5821	1.0700	1.0789
	1.00	690	1.0700	1.1095
	Total	6511	1.0700	1.0822
9	.00	5307	1.0700	1.0643
	1.00	531	1.0700	1.0880
	Total	5838	1.0700	1.0665
10	.00	4938	1.0600	1.0600
	1.00	574	1.0715	1.0920
	Total	5512	1.0600	1.0633
11	.00	11374	1.0800	1.0732
	1.00	1090	1.0800	1.0906
	Total	12464	1.0800	1.0747
12	.00	16658	1.0859	1.0963
	1.00	2754	1.0766	1.0917
	Total	19412	1.0847	1.0956
13	.00	12454	1.1000	1.0903
	1.00	1548	1.1000	1.1196
	Total	14002	1.1000	1.0935
14	.00	12246	1.0700	1.0680
	1.00	2127	1.0600	1.0764
	Total	14373	1.0700	1.0692
15	.00	8042	1.0753	1.0845
	1.00	1560	1.0700	1.1260
	Total	9602	1.0742	1.0913
16	.00	2520	1.1000	1.0853
	1.00	254	1.1000	1.1407
	Total	2774	1.1000	1.0903
17	.00	6391	1.0000	1.0499
	1.00	611	1.0500	1.0977
	Total	7002	1.0002	1.0540
18	.00	5746	1.0800	1.0905
	1.00	594	1.1000	1.1783
	Total	6340	1.0800	1.0987
19	.00	1188	1.0500	1.0563
	1.00	93	1.0500	1.1956
	Total	1281	1.0500	1.0664
20	.00	4356	1.1000	1.0957
	1.00	1220	1.0900	1.1238
	Total	5576	1.1000	1.1018
Total	.00	173986	1.0700	1.0758
	1.00	22357	1.0739	1.1065
	Total	196343	1.0700	1.0793

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

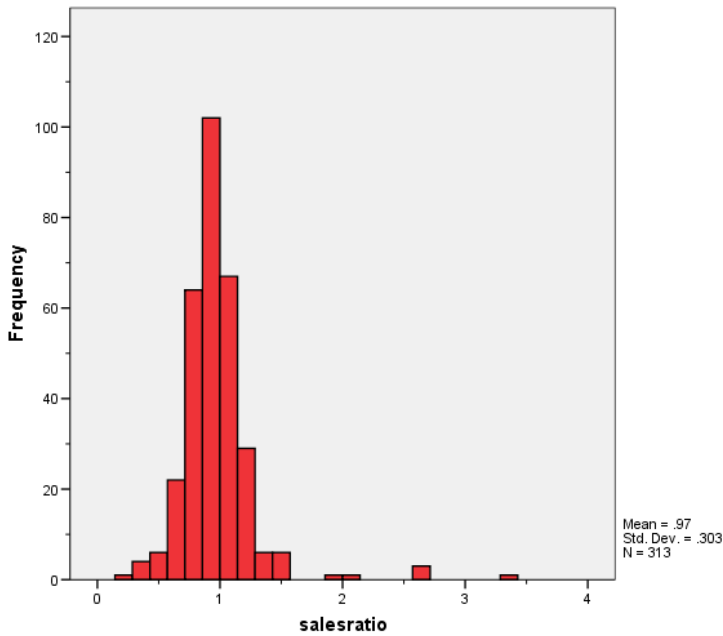


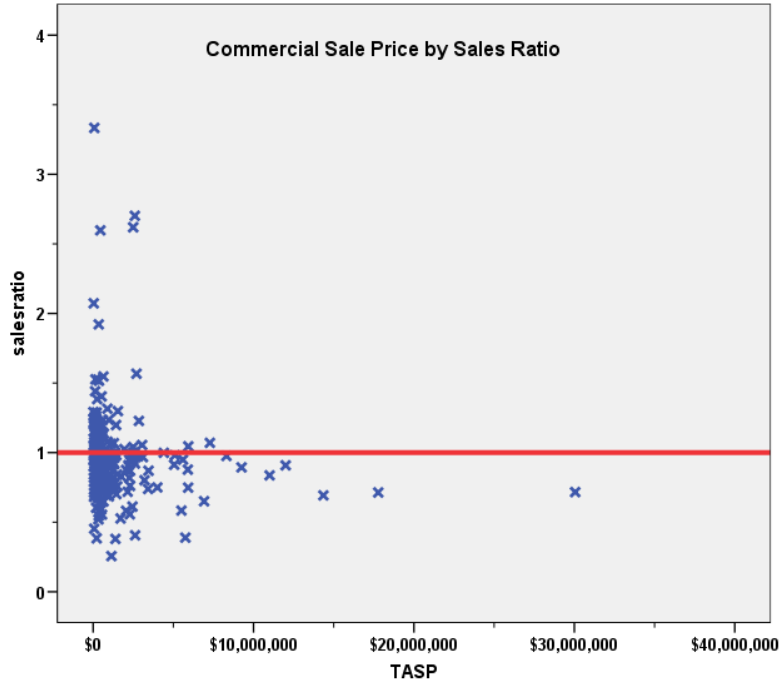
#### IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

There were 313 qualified commercial/industrial sales over the 24-month period ending on June 30, 2014 that were analyzed, with the following results:

Median	<b>.959</b>
Price Related Differential	<b>1.069</b>
Coefficient of Dispersion	<b>18.5</b>

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



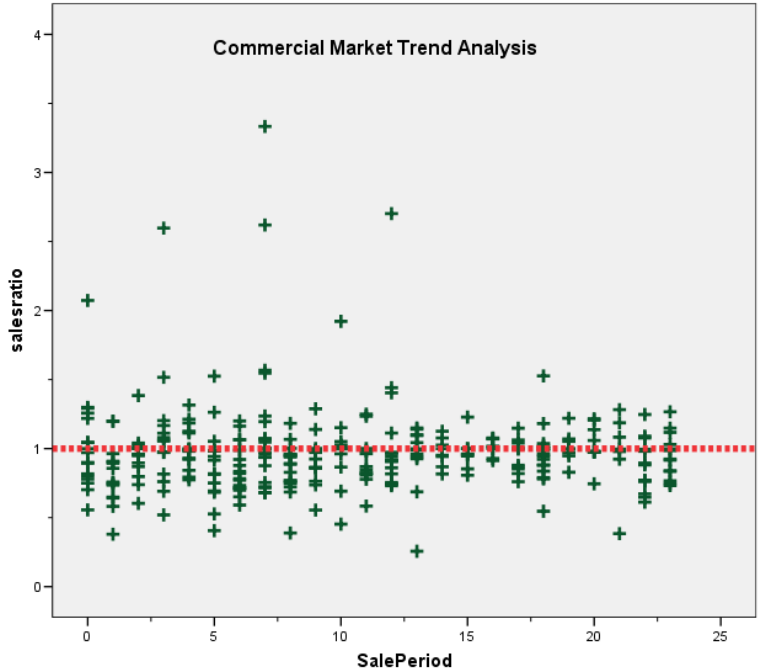


### Commercial/Industrial Market Trend Analysis

The 313 commercial/industrial sales were analyzed, examining the sale ratios across the 24-month sale period with the following results:

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.972	.031		31.119	.000
	SalePeriod	.000	.003	-.010	-.171	.864

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 valuation.

**Sold/Unsold Analysis**

We compared the actual value per square foot between sold and unsold commercial/industrial properties to determine if sold and unsold properties were valued consistently, as follows:

Group	N	Median Val/SF	Mean Val/SF
Unsold	7,320	\$69	\$98
Sold	313	\$72	\$94

## Report

VALSF				
ABSTRIMP	sold	N	Median	Mean
2212	UNSOLD	1,416	\$77	\$102
	SOLD	52	\$112	\$121
2215	UNSOLD	118	\$49	\$60
	SOLD	4	\$66	\$70
2220	UNSOLD	950	\$73	\$84
	SOLD	67	\$72	\$80
2225	UNSOLD	105	\$69	\$180
	SOLD	1	\$466	\$466
2230	UNSOLD	1,670	\$99	\$134
	SOLD	56	\$103	\$140
2235	UNSOLD	1,847	\$50	\$82
	SOLD	78	\$57	\$62
2245	UNSOLD	791	\$77	\$86
	SOLD	29	\$71	\$84
2250	UNSOLD	21	\$63	\$74
	SOLD	2	\$40	\$40
3215	UNSOLD	191	\$43	\$53
	SOLD	8	\$51	\$54
3230	UNSOLD	211	\$61	\$60
	SOLD	9	\$92	\$86
Total	UNSOLD	7,320	\$69	\$98
	SOLD	313	\$72	\$94

## 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	.042	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .04.

We also examined the median and mean percent change in value from 2014 to 2016 for commercial/industrial properties as follows:

## Report

DIFF			
sold	N	Median	Mean
UNSOLD	7,175	1.0000	1.0059
SOLD	309	1.0000	1.1226

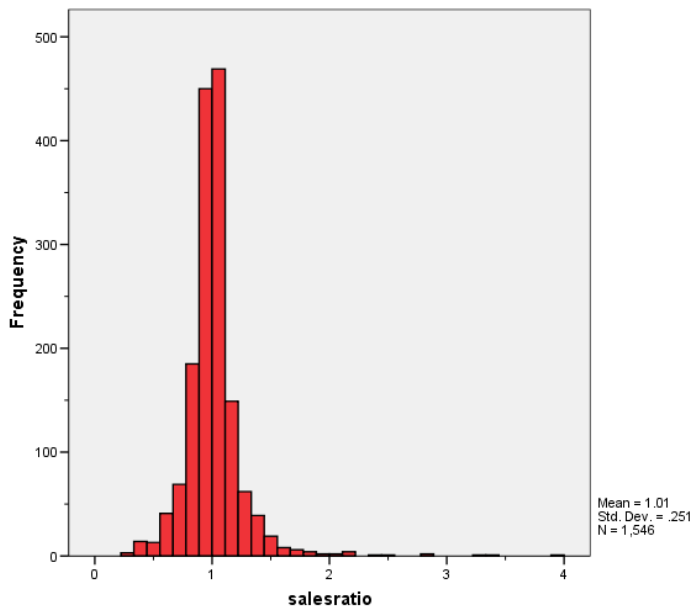
The above results indicated that sold and unsold vacant land properties were valued consistently.

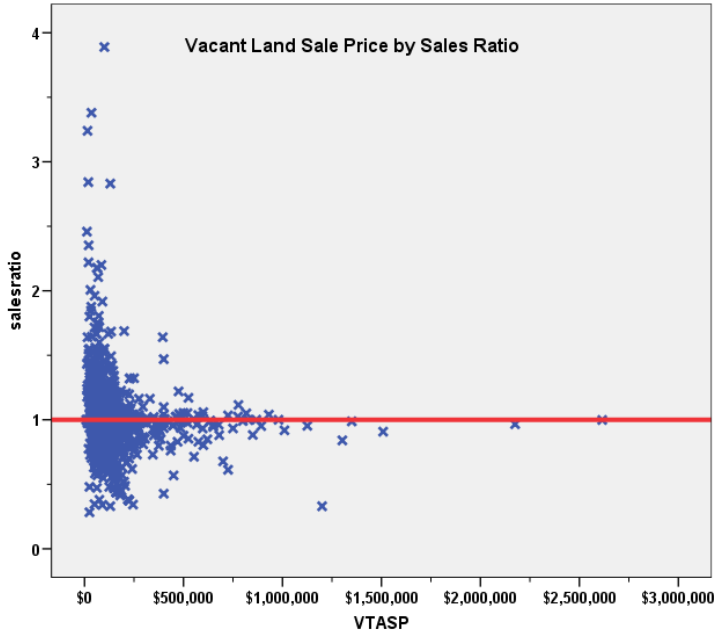
### V. VACANT LAND SALE RESULTS

There were 1,546 qualified commercial/industrial sales over the 24-month period ending on June 30, 2014. The sales ratio analysis was analyzed as follows:

Ratio Statistics for currInd / Vtasp	
<b>Median</b>	<b>1.000</b>
<b>Price Related Differential</b>	<b>1.042</b>
<b>Coefficient of Dispersion</b>	<b>14.3</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:





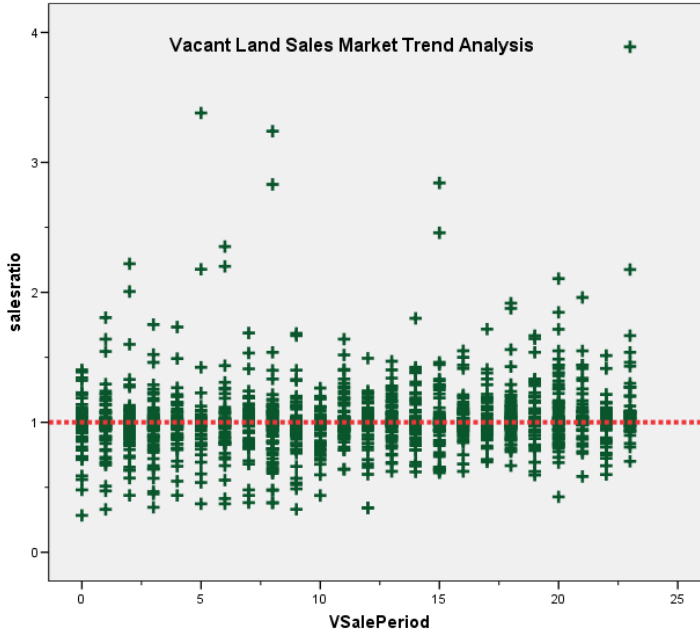
The above histogram indicates that the distribution of the vacant land sale ratios was within state mandated limits, while the above scatter plot indicated that there was no price related differential issues. No sales were trimmed.

### Vacant Land Market Trend Analysis

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

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	.960	.012		78.123	.000
	VSalePeriod	.005	.001	.127	5.015	.000

a. Dependent Variable: salesratio



Although the sale ratio trend was statistically significant, the magnitude of the trend at 0.5% per month was marginal. We therefore 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 and mean change in value between 2014 and 2016 for each group. The following results present the comparison results for sold and unsold properties:

Group	No.	Median Val Chg	Mean Val Chg
Unsold	12,015	1.00	0.89
Sold	1,451	1.05	1.15

Given the difference in the overall comparison analysis, we next examined sold and unsold properties by subdivision with at least three sales. This breakdown indicated that sold and unsold properties were valued consistently. Due to the number of these subdivisions with at least three sales, we developed the following table with subdivision with at least ten sales, which indicates the same overall value consistency between sold and unsold properties:

### Report

DIFF				
SUBDMNO		N	Median	Mean
11269	UNSOLD	7	1.1667	1.1483
	SOLD	11	1.1667	1.0972
11982	UNSOLD	20	.8261	.6522
	SOLD	11	.8333	.8419
12169	UNSOLD	4	1.1667	1.1667
	SOLD	22	1.1667	1.1402
12240	UNSOLD	6	1.8560	1.2373
	SOLD	10	1.2832	1.3824
12350	UNSOLD	5	1.3588	1.2153
	SOLD	21	1.0000	1.0209
12390	UNSOLD	12	1.1520	1.1521
	SOLD	11	1.1520	1.1031
12416	UNSOLD	10	.7222	.7167
	SOLD	13	.7222	.7222
12428	UNSOLD	3	1.3191	.8794
	SOLD	14	.9167	1.0029
12510	UNSOLD	6	1.0988	1.0988
	SOLD	19	1.0988	1.0988
12536	UNSOLD	15	.8324	.6160
	SOLD	26	.6898	.7659
12646	UNSOLD	23	1.0938	1.1930
	SOLD	23	1.0938	1.1930
13027	UNSOLD	4	1.2814	1.2814
	SOLD	12	1.0000	1.0234
13200	UNSOLD	5	1.0000	1.2087
	SOLD	11	1.0000	1.1423
13208	UNSOLD	5	1.6667	1.6458
	SOLD	13	1.0000	1.2141
13224	UNSOLD	5	1.0000	.7435
	SOLD	10	1.0000	1.0359
13263	UNSOLD	17	2.2760	1.4727
	SOLD	22	1.0469	1.4197
13272	UNSOLD	1	1.1000	1.1000
	SOLD	12	1.1281	1.5231
13355	UNSOLD	7	2.0682	2.0682
	SOLD	11	2.0682	1.5590

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



## **V. AGRICULTURAL IMPROVEMENTS ANALYSIS**

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

## **VI. CONCLUSIONS**

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

**STATISTICAL ABSTRACT**  
**Residential**

econ	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			
1	.970	.967	.973	.952	.950	.954	95.4%	.961	.959	.963	1.009	.056	8.6%
2	1.003	.995	1.010	.981	.979	.983	95.2%	.964	.917	1.011	1.040	.077	11.5%
3	1.035	1.017	1.052	.980	.978	.982	95.9%	1.015	.999	1.031	1.019	.109	16.7%
4	.991	.985	.996	.967	.962	.971	95.1%	.970	.959	.982	1.021	.081	11.5%
5	1.002	.994	1.009	.979	.977	.980	95.4%	.974	.961	.986	1.029	.079	13.5%
6	1.020	1.010	1.030	.981	.979	.983	95.3%	1.005	.996	1.014	1.015	.085	12.1%
7	1.003	.995	1.010	.979	.977	.981	95.5%	.984	.975	.994	1.019	.081	11.8%
8	.982	.974	.989	.975	.972	.978	95.6%	.965	.948	.982	1.017	.069	10.0%
9	.998	.990	1.006	.980	.976	.983	95.4%	.987	.979	.995	1.011	.068	9.8%
10	1.002	.994	1.009	.984	.981	.988	95.0%	.990	.982	.999	1.011	.063	9.4%
11	.999	.993	1.006	.979	.976	.981	95.1%	.987	.981	.993	1.013	.076	10.6%
12	.972	.970	.975	.965	.963	.967	95.0%	.961	.949	.973	1.011	.050	7.0%
13	.995	.990	1.000	.979	.977	.981	95.5%	.960	.931	.988	1.036	.067	9.6%
14	.981	.978	.984	.974	.972	.976	95.1%	.976	.973	.979	1.005	.053	7.8%
15	.981	.977	.985	.975	.973	.976	95.1%	.974	.970	.978	1.007	.059	8.6%
16	.989	.977	1.001	.977	.976	.980	96.2%	.983	.972	.993	1.006	.061	9.6%
17	.971	.961	.981	.974	.965	.975	95.2%	.962	.953	.972	1.009	.085	12.9%
18	1.022	1.007	1.036	.977	.976	.980	95.6%	1.003	.991	1.015	1.018	.095	17.7%
19	1.023	.968	1.078	.979	.976	.982	95.1%	1.000	.967	1.032	1.023	.099	26.3%
20	.992	.987	.997	.978	.977	.980	95.4%	.986	.981	.990	1.006	.056	8.6%

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.

### Commercial Land

Mean	95% Confidence Interval for Mean		Median	95% Confidence Interval for Median			Actual Coverage	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	Lower Bound			Upper Bound				
.968	.934	1.002	.959	.937	.976	95.8%	.889	.831	.947	1.089	.185	31.4%	

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

### Vacant Land

Mean	95% Confidence Interval for Mean		Median	95% Confidence Interval for Median			Actual Coverage	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	Lower Bound			Upper Bound				
.999	.989	1.009	.999	.990	1.000	95.4%	.966	.952	.980	1.034	.131	19.7%	

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.

**Residential Median Ratio Stratification**

**Sale Price**

**Case Processing Summary**

		Count	Percent
SPRec	LT \$25K	7	0.0%
	\$25K to \$50K	101	0.4%
	\$50K to \$100K	855	3.8%
	\$100K to \$150K	2944	13.1%
	\$150K to \$200K	5161	23.0%
	\$200K to \$300K	7552	33.6%
	\$300K to \$500K	4717	21.0%
	\$500K to \$750K	886	3.9%
	\$750K to \$1,000K	115	0.5%
	Over \$1,000K	115	0.5%
Overall		22453	100.0%
Excluded		0	
Total		22453	

**Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT \$25K	.781	.938	.438	66.3%
\$25K to \$50K	1.086	1.003	.140	19.0%
\$50K to \$100K	1.056	1.001	.114	18.5%
\$100K to \$150K	.998	1.002	.089	13.8%
\$150K to \$200K	.976	1.001	.065	9.5%
\$200K to \$300K	.966	1.000	.051	7.6%
\$300K to \$500K	.971	1.000	.059	8.9%
\$500K to \$750K	.974	1.001	.067	10.1%
\$750K to \$1,000K	.962	.999	.069	9.3%
Over \$1,000K	.973	1.053	.082	12.3%
Overall	.974	1.016	.067	10.7%

**Subclass**

**Case Processing Summary**

		Count	Percent
ABSTRIMP	1212	21246	94.6%
	1215	126	0.6%
	1220	136	0.6%
	1225	46	0.2%
	1230	891	4.0%
	1240	2	0.0%
	4279	6	0.0%
	Overall	22453	100.0%
Excluded	0		
Total	22453		

**Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212	.974	1.009	.066	10.6%
1215	1.005	1.019	.110	14.8%
1220	.962	1.017	.105	15.1%
1225	.945	1.084	.121	18.1%
1230	.990	1.013	.065	11.1%
1240	.735	.962	.086	12.2%
4279	.943	1.034	.105	17.5%
Overall	.974	1.016	.067	10.7%

## Age

### Case Processing Summary

		Count	Percent
AgeRec	Over 100	539	2.4%
	75 to 100	319	1.4%
	50 to 75	2242	10.0%
	25 to 50	6593	29.4%
	5 to 25	8694	38.7%
	5 or Newer	4066	18.1%
Overall		22453	100.0%
Excluded		0	
Total		22453	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	.980	1.014	.083	13.5%
75 to 100	.980	1.022	.087	14.2%
50 to 75	.979	1.017	.091	14.4%
25 to 50	.976	1.021	.077	11.8%
5 to 25	.975	1.015	.064	9.9%
5 or Newer	.966	1.003	.038	5.7%
Overall	.974	1.016	.067	10.7%

## Improved Area

### Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	29	0.1%
	500 to 1,000 sf	2311	10.3%
	1,000 to 1,500 sf	6588	29.3%
	1,500 to 2,000 sf	6456	28.8%
	2,000 to 3,000 sf	5644	25.1%
	3,000 sf or Higher	1425	6.3%
Overall		22453	100.0%
Excluded		0	
Total		22453	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	.980	1.041	.198	34.1%
500 to 1,000 sf	.978	1.015	.082	12.8%
1,000 to 1,500 sf	.976	1.011	.068	10.6%
1,500 to 2,000 sf	.972	1.007	.060	9.1%
2,000 to 3,000 sf	.973	1.006	.061	9.2%
3,000 sf or Higher	.977	1.050	.086	16.4%
Overall	.974	1.016	.067	10.7%

## Improvement Quality

### Case Processing Summary

		Count	Percent
QUALITY	1.0	250	1.1%
	1.2	4	0.0%
	1.3	4	0.0%
	1.4	2	0.0%
	1.5	84	0.4%
	1.6	1	0.0%
	1.7	1	0.0%
	1.8	2	0.0%
	2.0	16117	71.8%
	2.2	1	0.0%
	2.3	1	0.0%
	2.5	13	0.1%
	3.0	5507	24.5%
	4.0	432	1.9%
5.0	34	0.2%	
Overall		22453	100.0%
Excluded		0	
Total		22453	



Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1.0	.980	1.039	.110	22.3%
1.2	.927	.988	.035	4.3%
1.3	.965	1.006	.018	2.2%
1.4	.922	.997	.066	9.3%
1.5	.965	1.031	.092	13.0%
1.6	.899	1.000	.000	.
1.7	.903	1.000	.000	.
1.8	.926	.985	.016	2.3%
2.0	.973	1.015	.067	10.8%
2.2	1.728	1.000	.000	.
2.3	1.074	1.000	.000	.
2.5	.946	1.061	.090	13.6%
3.0	.976	1.007	.062	9.4%
4.0	.981	1.012	.078	11.3%
5.0	.982	1.013	.100	14.5%
Overall	.974	1.016	.067	10.7%

## Commercial Median Ratio Stratification

### Sale Price

#### Case Processing Summary

		Count	Percent
SPRec	LT \$25K	1	0.3%
	\$25K to \$50K	9	2.9%
	\$50K to \$100K	16	5.1%
	\$100K to \$150K	22	7.0%
	\$150K to \$200K	21	6.7%
	\$200K to \$300K	41	13.1%
	\$300K to \$500K	76	24.3%
	\$500K to \$750K	31	9.9%
	\$750K to \$1,000K	21	6.7%
	Over \$1,000K	75	24.0%
Overall		313	100.0%
Excluded		0	
Total		313	

#### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT \$25K	1.292	1.000	.000	.
\$25K to \$50K	1.053	1.028	.232	37.8%
\$50K to \$100K	.961	.986	.310	67.3%
\$100K to \$150K	1.001	.996	.134	20.1%
\$150K to \$200K	.974	1.005	.128	17.3%
\$200K to \$300K	.959	1.003	.158	20.0%
\$300K to \$500K	.965	1.001	.187	30.3%
\$500K to \$750K	.981	1.003	.137	20.4%
\$750K to \$1,000K	.931	1.000	.129	17.4%
Over \$1,000K	.904	1.049	.218	39.6%
Overall	.959	1.089	.185	31.7%

## Subclass

### Case Processing Summary

		Count	Percent
ABSTRIMP	1220	3	1.0%
	2212	52	16.6%
	2215	4	1.3%
	2220	67	21.4%
	2225	1	0.3%
	2230	56	17.9%
	2235	78	24.9%
	2245	29	9.3%
	2250	2	0.6%
	3215	8	2.6%
	3230	9	2.9%
	9259	3	1.0%
	9299	1	0.3%
	Overall		313
Excluded		0	
Total		313	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1220	.748	1.127	.226	35.9%
2212	.942	1.090	.126	17.8%
2215	.885	.954	.190	25.0%
2220	.988	1.169	.186	24.9%
2225	1.526	1.000	.000	.
2230	.943	.985	.208	34.9%
2235	.962	1.044	.191	38.7%
2245	.974	1.063	.195	29.7%
2250	1.034	1.052	.059	8.3%
3215	.954	.949	.094	12.6%
3230	.963	1.012	.093	13.3%
9259	1.547	.779	.388	59.3%
9299	.924	1.000	.000	.
Overall	.959	1.089	.185	31.7%

## Age

### Case Processing Summary

		Count	Percent
AgeRec	Over 100	15	4.8%
	75 to 100	8	2.6%
	50 to 75	28	8.9%
	25 to 50	154	49.2%
	5 to 25	102	32.6%
	5 or Newer	6	1.9%
Overall		313	100.0%
Excluded		0	
Total		313	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	1.000	1.185	.195	33.3%
75 to 100	.861	1.004	.163	23.5%
50 to 75	.977	1.070	.174	21.4%
25 to 50	.959	1.026	.204	36.8%
5 to 25	.946	1.139	.154	26.0%
5 or Newer	.897	1.046	.235	30.1%
Overall	.959	1.089	.185	31.7%

## Improved Area

### Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	3	1.0%
	500 to 1,000 sf	10	3.2%
	1,000 to 1,500 sf	31	9.9%
	1,500 to 2,000 sf	28	8.9%
	2,000 to 3,000 sf	23	7.3%
	3,000 sf or Higher	218	69.6%
Overall		313	100.0%
Excluded		0	
Total		313	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	.973	.877	.242	41.7%
500 to 1,000 sf	1.000	1.116	.304	45.2%
1,000 to 1,500 sf	.924	1.174	.137	18.7%
1,500 to 2,000 sf	.952	1.222	.175	24.1%
2,000 to 3,000 sf	1.000	1.046	.133	18.5%
3,000 sf or Higher	.959	1.097	.190	34.2%
Overall	.959	1.089	.185	31.7%

## Improvement Quality

### Case Processing Summary

		Count	Percent
QUALITY	1.0	26	8.3%
	1.1	1	0.3%
	1.5	41	13.1%
	2.0	224	71.6%
	2.5	17	5.4%
	3.0	4	1.3%
Overall		313	100.0%
Excluded		0	
Total		313	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1.0	.895	1.062	.225	27.2%
1.1	1.000	1.000	.000	.
1.5	.972	1.046	.133	18.1%
2.0	.958	1.101	.195	35.1%
2.5	.985	1.039	.120	16.3%
3.0	1.023	1.649	.207	36.4%
Overall	.959	1.089	.185	31.7%

## Vacant Land Median Ratio Stratification

### Sale Price

#### Case Processing Summary

		Count	Percent
SPRec	LT \$25K	43	2.8%
	\$25K to \$50K	218	14.2%
	\$50K to \$100K	734	47.9%
	\$100K to \$150K	254	16.6%
	\$150K to \$200K	121	7.9%
	\$200K to \$300K	76	5.0%
	\$300K to \$500K	45	2.9%
	\$500K to \$750K	24	1.6%
	\$750K to \$1,000K	10	0.7%
	Over \$1,000K	8	0.5%
Overall		1533	100.0%
Excluded		0	
Total		1533	

#### Ratio Statistics for CURRLND / VTASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT \$25K	1.136	1.005	.191	25.1%
\$25K to \$50K	1.024	1.008	.137	19.6%
\$50K to \$100K	1.000	1.001	.117	18.1%
\$100K to \$150K	.980	1.000	.147	20.3%
\$150K to \$200K	.966	.998	.131	20.7%
\$200K to \$300K	.953	.996	.153	22.2%
\$300K to \$500K	.971	.999	.118	19.4%
\$500K to \$750K	.961	1.005	.099	14.0%
\$750K to \$1,000K	1.000	1.001	.041	6.2%
Over \$1,000K	.936	.972	.121	25.1%
Overall	.999	1.034	.131	19.7%

## Subclass

### Case Processing Summary

	Count	Percent
ABSTRLND	218	14.2%
100	36	2.3%
200	7	0.5%
300	1	0.1%
510	6	0.4%
520	3	0.2%
530	8	0.5%
540	25	1.6%
550	1174	76.6%
1112	4	0.3%
1125	16	1.0%
1135	8	0.5%
2112	23	1.5%
2130	4	0.3%
2135		
Overall	1533	100.0%
Excluded	0	
Total	1533	

### Ratio Statistics for CURRLND / VTASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
100	1.000	1.046	.162	23.5%
200	1.000	1.026	.094	16.1%
300	.980	.899	.236	35.9%
510	.768	1.000	.000	.
520	.940	.989	.086	11.2%
530	.991	1.062	.064	13.3%
540	.838	1.058	.200	30.8%
550	1.028	1.405	.172	25.5%
1112	1.000	1.024	.123	18.7%
1125	.993	1.076	.120	25.1%
1135	.781	1.111	.303	41.5%
2112	.945	1.032	.143	21.9%
2130	.956	.999	.106	16.3%
2135	1.014	.999	.051	7.6%
Overall	.999	1.034	.131	19.7%