



2022

# EL PASO COUNTY PROPERTY ASSESSMENT STUDY

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**WILDROSE**  
APPRAISAL, INCORPORATED  
**Audit Division**



September 15, 2022

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

**RE: Final Report for the 2022 Colorado Property Assessment Study**

Dear Ms. Mullis:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2022 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 2022 and is pleased to report its findings for El Paso County in the following report.



## Historical Information

El Paso County has approximately 2,126.8 square miles and an estimated population of approximately 720,403 people, according to the U.S. Census Bureau's 2020 estimated census data. This represents a 15.8 percent change from April 1, 2010 to July 1, 2019.

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 property were analyzed. Sales were collected for each property class over the eighteen month period from January 1, 2019 through June 30th, 2020. Property classes with less than thirty sales had the sales period extended in six month increments up to an additional forty-two months. If this extended sales period did not produce the minimum thirty qualified sales, the Audit performed supplemental appraisals to reach the minimum.

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.

All sixty-four counties were examined for compliance on the economic area level. Where there were sufficient sales data, the neighborhood and subdivision levels were tested for compliance. Although counties are determined to be in or out of compliance at the class level, non-compliant economic areas, neighborhoods and subdivisions (where applicable) were discussed with the Assessor.

**Data on the individual economic areas, neighborhoods and subdivisions are found in the STATISTICAL APPENDIX.**

## 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	323	0.960	1.041	12.4	Compliant
Single Family	34,484	0.974	1.008	5.9	Compliant
Vacant Land	1,136	0.978	1.018	9.8	Compliant

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
Single Family	Compliant
Vacant Land	Compliant

**Conclusions**

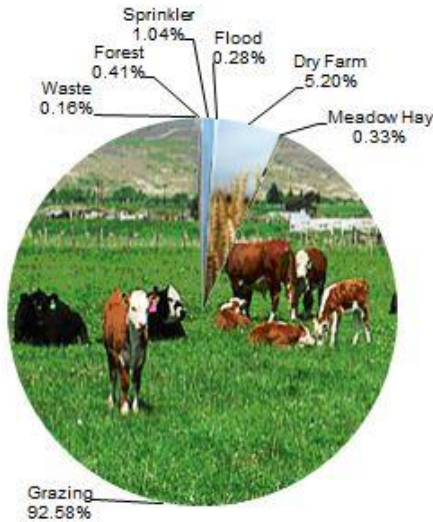
After applying the above described methodologies, it is concluded that El Paso County is reasonably treating its sold and unsold properties in the same manner.

**Recommendations**

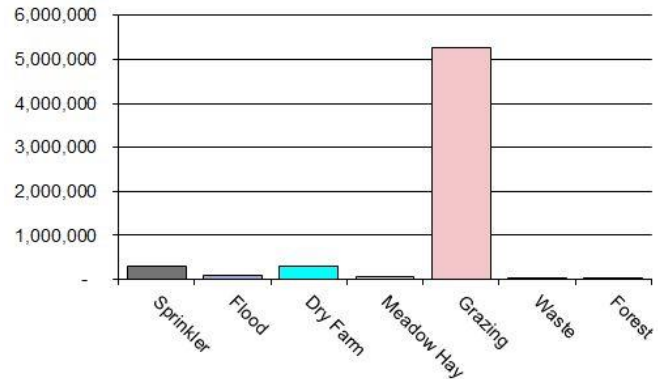
None

# 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	5,700	49.25	280,755	286,252	0.98
4117	Flood	1,522	50.82	77,332	78,422	0.99
4127	Dry Farm	27,461	10.01	274,767	281,158	0.98
4137	Meadow Hay	2,023	29.04	58,748	58,748	1.00
4147	Grazing	496,558	9.48	4,708,941	4,708,941	1.00
4177	Forest	3,186	11.18	35,628	35,628	1.00
4167	Waste	887	2.20	1,953	1,953	1.00
<b>Total/Avg</b>		<b>537,337</b>	<b>10.12</b>	<b>5,438,122</b>	<b>5,451,101</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 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.:

- Field Inspections
- Phone Interviews
- Personal Knowledge of Occupants at Assessment Date
- Aerial Photography/Pictometry

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 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 2022 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 62 sales listed as unqualified.

All but two of the sales selected in the sample gave reasons that were clear and supportable. Two sales had insufficient reason for disqualification.

For residential, commercial, and vacant land sales with considerations over \$100,000, the contractor has examined and reported the ratio of qualified sales to total sales by class and performed the following analyses of unqualified sales:

The contractor has examined the manner in which sales have been classified as qualified or unqualified, including a listing of each step in the sales verification process, any adjustment procedures, and the county official responsible for making the final decision on qualification.

The contractor has reviewed with the assessor any analysis indicating that sales data are inadequate, fail to reflect typical properties, or have been disqualified for insufficient cause. In addition, the contractor has reviewed the disqualified sales by assigned code.



If there appears to be any inconsistency in the coding, the contractor has conducted further analysis to determine if the sales included in that code have been assigned appropriately.

### **Conclusions**

El Paso County appears to be doing an adequate 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 2022 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 can be accomplished by reducing the absorption period by one year.

In instances where the number of sales within an approved plat was less than the absorption

rate per year calculated for the plat, the absorption period was left unchanged.

### **Conclusions**

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

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 2022 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 \$50,000 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 1.02. 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*

**Suzanne Howard**, *Audit Administrative Manager*

**Steve Kane**, *Audit Statistician*

**Carl W. Ross**, *Agricultural/Natural Resource Analyst*

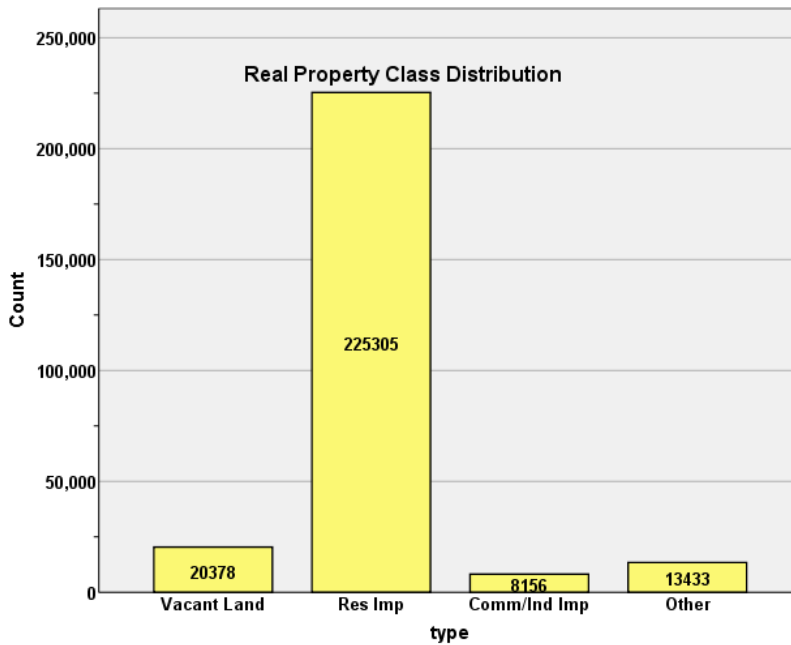
**J. Andrew Rodriguez**, *Field Analyst*

# APPENDICES

## STATISTICAL COMPLIANCE REPORT FOR EL PASO COUNTY 2022

### I. OVERVIEW

El Paso County is an urban county located along Colorado’s Front Range. The county has a total of 267,272 real property parcels, according to data submitted by the county assessor’s office in 2022. 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 77.8% of all vacant land parcels.

For residential improved properties, single family properties accounted for 94.3% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial properties accounted for 3.1% of all such properties in this county.

### II. DATA FILES

The following sales analyses were based on the requirements of the 2022 Colorado Property Assessment Study. Information was provided by the El Paso Assessor’s Office in April 2022. The data included all 5 property record files as specified by the Auditor.

### III. RESIDENTIAL SALES RESULTS

There were 34,484 qualified residential sales over the 24 month period ending on June 30, 2020. The sales ratio analysis results were as follows:

Median	<b>0.974</b>
Price Related Differential	<b>1.008</b>
Coefficient of Dispersion	<b>5.9</b>

We next stratified the sale ratio analysis by economic area and neighborhood. The minimum count for the neighborhood stratification is 35 sales. The following are the results of this stratification analysis:

#### Economic Area

##### Case Processing Summary

		Count	Percent
ECONAREA	1.00	6046	17.5%
	2.00	1046	3.0%
	3.00	538	1.6%
	4.00	2743	8.0%
	5.00	1474	4.3%
	6.00	578	1.7%
	7.00	1187	3.4%
	8.00	768	2.2%
	9.00	727	2.1%
	10.00	702	2.0%
	11.00	1584	4.6%
	12.00	3850	11.2%
	13.00	1814	5.3%
	14.00	3730	10.8%
	15.00	1989	5.8%
	16.00	539	1.6%
	17.00	989	2.9%
	18.00	736	2.1%
	19.00	196	0.6%
	20.00	3239	9.4%
Overall		34475	100.0%
Excluded		9	
Total		34484	

##### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion
1.00	.971	1.005	.053
2.00	.977	1.007	.079
3.00	.963	1.006	.108
4.00	.971	1.018	.050
5.00	.969	1.009	.095
6.00	.991	1.012	.099
7.00	.975	1.007	.072
8.00	.972	1.019	.054

9.00	.976	1.006	.059
10.00	.976	1.000	.052
11.00	.977	1.004	.048
12.00	.974	1.004	.042
13.00	.975	1.008	.050
14.00	.972	1.005	.051
15.00	.977	1.009	.059
16.00	.975	1.007	.092
17.00	.970	1.024	.107
18.00	.986	1.012	.101
19.00	.979	1.004	.131
20.00	.975	1.004	.047
Overall	.974	1.008	.059

**Neighborhoods with at least 35 sales  
Ratio Statistics for CURRTOT / TASP**

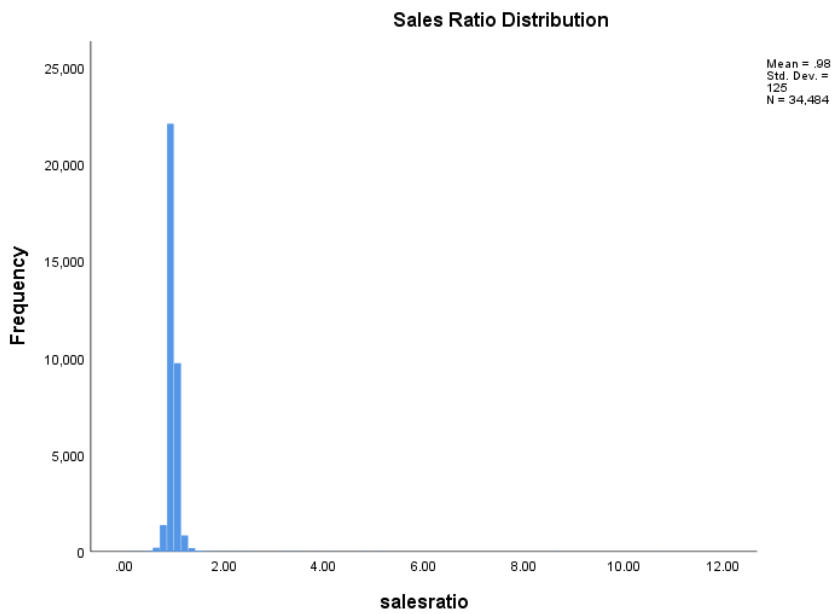
Group	Median	Price Related Differential	Coefficient of Dispersion
1	.970	1.004	.046
5	.973	1.001	.043
10	.967	1.009	.070
15	.967	1.016	.071
16	.952	1.002	.105
17	.966	1.010	.063
18	.958	1.008	.079
24	.987	1.004	.086
26	.970	1.014	.102
28	.971	1.022	.114
30	.970	1.007	.084
32	.961	1.007	.086
35	.972	1.004	.053
38	.968	1.003	.049
40	.966	1.003	.049
41	.965	1.003	.054
42	.968	1.008	.068
44	.958	1.006	.063
45	.960	1.005	.132
48	.970	1.002	.081
49	.969	1.011	.080
50	.973	1.010	.099
51	.980	1.011	.116
54	.994	1.015	.105
56	.991	1.007	.099
57	.980	1.009	.070
58	.945	1.006	.089
59	.975	1.035	.106
60	.989	1.006	.067
61	.972	1.004	.050
62	.970	1.004	.058
63	.973	1.005	.055
64	.971	1.005	.051
66	.975	1.006	.052
67	.974	1.003	.047
68	.985	1.001	.072
69	.972	1.008	.080
70	.976	1.008	.073

71	.977	1.006	.055
72	.968	1.006	.055
74	.976	1.005	.058
75	.984	1.003	.068
76	.992	1.017	.100
77	.968	1.002	.049
79	.976	1.005	.044
80	.972	.999	.040
82	.974	1.003	.055
83	.979	1.005	.055
84	.978	1.004	.054
85	.989	1.007	.058
86	.973	1.002	.043
87	.915	1.014	.144
88	.964	1.007	.122
89	.980	1.001	.040
90	.979	1.004	.064
91	.980	1.006	.094
92	.973	1.009	.100
93	.977	1.003	.057
94	.970	1.033	.127
95	.989	1.014	.110
96	.988	1.009	.116
97	.989	1.002	.046
98	.977	.995	.142
99	.977	1.009	.114
100	.981	1.007	.134
101	.973	1.004	.124
103	.975	1.014	.067
105	.971	1.014	.089
106	.974	1.003	.049
107	.967	1.038	.118
211	.972	1.036	.090
213	.955	1.034	.084
441	.987	1.001	.030
470	.997	1.001	.030
480	.973	1.005	.050
526	.953	1.010	.058
529	.980	1.000	.018
546	.963	1.002	.034
566	.977	1.004	.042
590	.981	1.001	.021
635	.972	1.002	.032
676	.973	1.001	.027
685	.985	1.001	.026
712	.991	1.001	.027
727	.976	1.001	.022
729	.982	1.001	.027
731	.980	1.001	.021
734	.983	1.001	.024
742	.977	1.001	.031
743	.979	1.001	.030
751	.992	1.000	.022
754	.992	1.001	.022
780	.977	1.002	.030
784	.989	1.001	.023
786	.984	1.001	.021

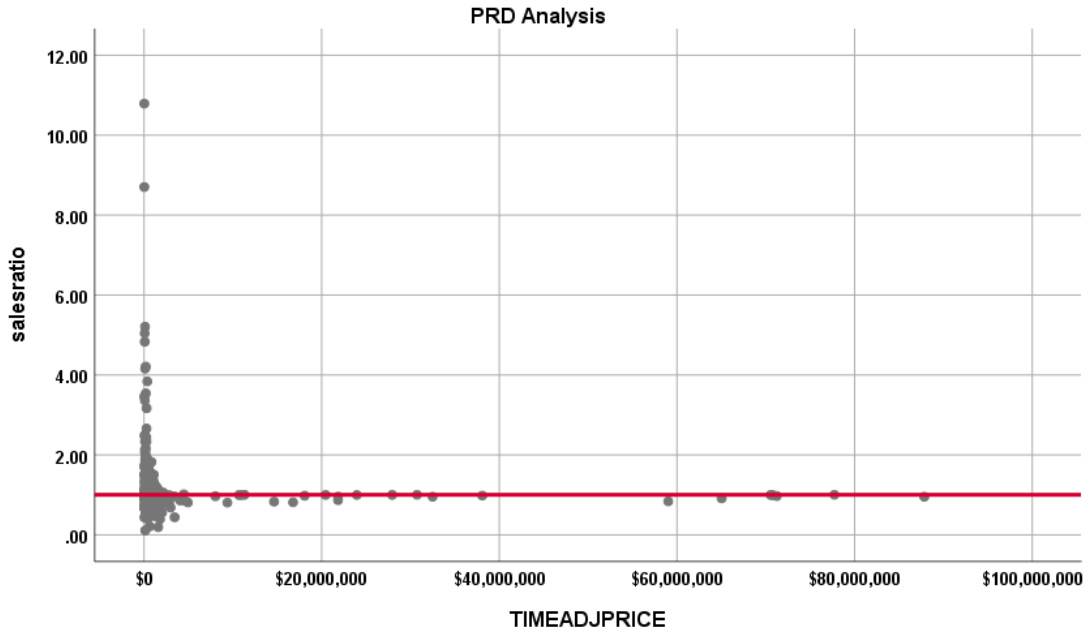
795	.984	1.001	.018
796	.985	1.001	.026
797	.973	1.001	.018
957	.970	1.004	.018
<b>Overall</b>	<b>.974</b>	<b>1.007</b>	<b>.061</b>

Out of all residential neighborhoods with at least 35 sales, there were no neighborhoods with median sales ratios or CODs out of compliance.

Overall and by economic area, 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:



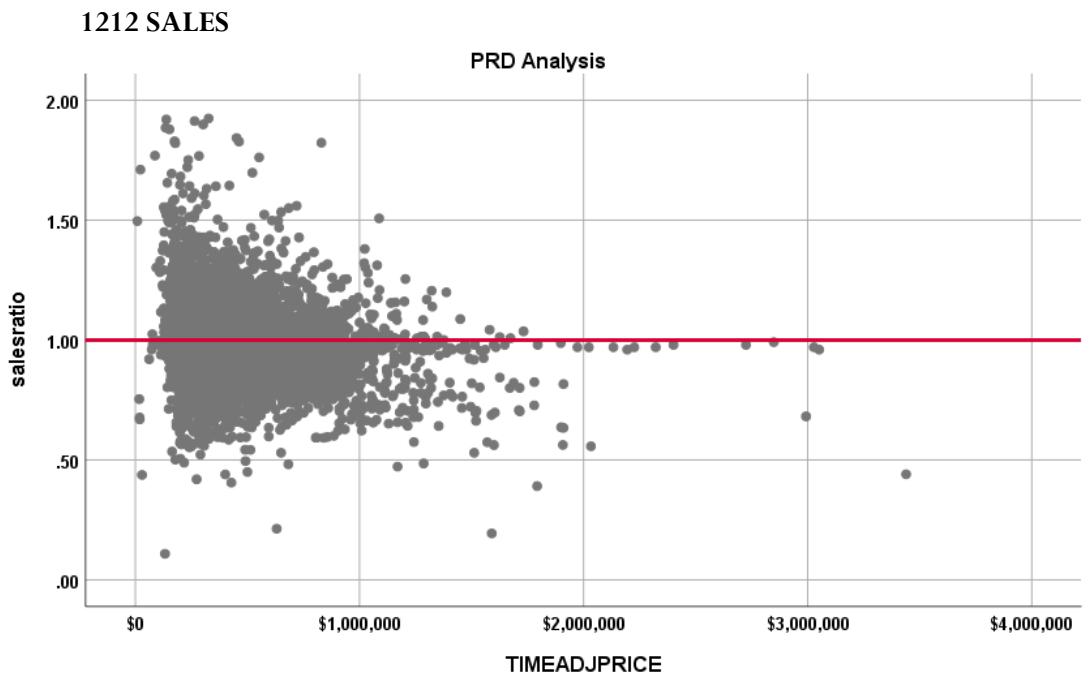




The above graphs indicate that the distribution of the sale ratios was within state mandated limits.

### Subclass 1212 PRD Analysis

We next analyzed residential properties identified as 1212 using the state abstract code system. These include single family residences, town homes and purged manufactured homes. The following indicates the distribution of sales ratios across the sale price spectrum; we excluded sales with sales ratios over 2.0:



The Price-Related Differential (PRD) for 1212 sales is 1.005, which is within IAAO standards for the PRD. We also performed a regression analysis between the sales ratio and the assessor's current value to further test for regressivity or progressivity in the residential sales valuation, as follows:

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

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	.956	.001		739.826	.000
	CURRTOT	.0000000619	.000	.106	19.293	.000

a. Dependent Variable: salesratio

The slope of the line at 0.0000000619 indicates that there is virtually no slope in the regression line, which indicates that sales ratios are similar across the entire sale price array. This indicates no regressivity or progressivity in the residential values assigned by the assessor.

**Case Processing Summary**

		Count	Percent
SPRec	LT \$200K	747	2.3%
	\$200K to \$300K	8642	26.5%
	\$300K to \$400K	12730	39.1%
	\$400K to \$500K	5577	17.1%
	\$500K to \$600K	2468	7.6%
	\$600K to \$700K	1183	3.6%
	\$700K to \$800K	544	1.7%
	\$800K to \$900K	293	0.9%
	\$900K to \$1,000K	149	0.5%
	Over \$1,000K	260	0.8%
Overall		32593	100.0%
Excluded		0	
Total		32593	

**Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion
LT \$200K	.987	1.003	.105
\$200K to \$300K	.977	1.001	.058
\$300K to \$400K	.974	1.000	.048
\$400K to \$500K	.973	1.000	.058
\$500K to \$600K	.965	1.000	.066
\$600K to \$700K	.965	1.000	.076
\$700K to \$800K	.958	1.000	.075
\$800K to \$900K	.950	1.000	.089
\$900K to \$1,000K	.947	1.000	.103
Over \$1,000K	.946	1.010	.138
Overall	.974	1.005	.058

The above table indicates no regressivity in the sales ratios across sale price categories.

## 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>

ECONAREA	Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
.	1	(Constant)	.987	.010		100.547	.000
		SalePeriod	-.019	.011	-.551	-1.749	.124
1.00	1	(Constant)	.962	.005		209.919	.000
		SalePeriod	.002	.000	.056	4.388	.000
2.00	1	(Constant)	.974	.007		138.167	.000
		SalePeriod	.001	.001	.058	1.868	.062
3.00	1	(Constant)	.933	.015		64.125	.000
		SalePeriod	.002	.001	.082	1.900	.058
4.00	1	(Constant)	.968	.003		326.753	.000
		SalePeriod	.001	.000	.084	4.417	.000
5.00	1	(Constant)	.975	.009		111.885	.000
		SalePeriod	4.996E-5	.001	.002	.076	.939
6.00	1	(Constant)	.974	.012		83.932	.000
		SalePeriod	.002	.001	.088	2.116	.035
7.00	1	(Constant)	.972	.006		163.223	.000
		SalePeriod	.001	.000	.074	2.566	.010
8.00	1	(Constant)	.971	.006		175.882	.000
		SalePeriod	.001	.000	.062	1.717	.086
9.00	1	(Constant)	.982	.006		153.226	.000
		SalePeriod	.000	.000	.026	.690	.490
10.00	1	(Constant)	.976	.006		177.351	.000
		SalePeriod	.001	.000	.053	1.413	.158
11.00	1	(Constant)	.971	.003		289.505	.000
		SalePeriod	.001	.000	.131	5.243	.000
12.00	1	(Constant)	.970	.002		508.029	.000
		SalePeriod	.001	.000	.093	5.791	.000
13.00	1	(Constant)	.975	.003		284.066	.000
		SalePeriod	.001	.000	.070	2.984	.003
14.00	1	(Constant)	.968	.003		358.574	.000
		SalePeriod	.001	.000	.073	4.438	.000
15.00	1	(Constant)	.971	.005		210.583	.000
		SalePeriod	.001	.000	.065	2.889	.004
16.00	1	(Constant)	.966	.013		76.610	.000
		SalePeriod	.001	.001	.058	1.347	.179
17.00	1	(Constant)	.951	.013		75.380	.000
		SalePeriod	.003	.001	.101	3.182	.002
18.00	1	(Constant)	.979	.016		61.890	.000
		SalePeriod	.002	.001	.050	1.366	.172
19.00	1	(Constant)	.931	.025		36.545	.000

		SalePeriod	.002	.002	.088	1.237	.217
20.00	1	(Constant)	.961	.003		310.508	.000
		SalePeriod	.001	.000	.103	5.903	.000

a. Dependent Variable: salesratio

There was no residual market trending present in the sale ratio data for most of the economic areas; those with statistical 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 2022 between each group. This analysis was first performed for the entire class and by economic area, as follows:

#### Report

VALSF				
sold	N	Median	Mean	
UNSOLD	190546	\$205	\$212	
SOLD	34475	\$202	\$212	

#### 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	.018	Retain the null hypothesis.

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

#### Report

VALSF				
ECONAREA	sold	N	Median	Mean
1.00	UNSOLD	25118	\$190	\$194
	SOLD	6043	\$187	\$193
2.00	UNSOLD	8188	\$224	\$238
	SOLD	1046	\$231	\$244
3.00	UNSOLD	4135	\$219	\$219
	SOLD	537	\$236	\$240
4.00	UNSOLD	14039	\$198	\$203
	SOLD	2738	\$187	\$197
5.00	UNSOLD	12245	\$230	\$235
	SOLD	1474	\$235	\$247
6.00	UNSOLD	5012	\$256	\$257
	SOLD	578	\$270	\$272
7.00	UNSOLD	9860	\$225	\$219
	SOLD	1187	\$229	\$225
8.00	UNSOLD	6122	\$217	\$229
	SOLD	768	\$225	\$239

9.00	UNSOLD	5246	\$203	\$212
	SOLD	727	\$201	\$210
10.00	UNSOLD	4968	\$206	\$209
	SOLD	702	\$188	\$194
11.00	UNSOLD	11262	\$200	\$207
	SOLD	1584	\$195	\$204
12.00	UNSOLD	18109	\$197	\$201
	SOLD	3850	\$194	\$201
13.00	UNSOLD	12586	\$206	\$213
	SOLD	1814	\$204	\$213
14.00	UNSOLD	17047	\$206	\$216
	SOLD	3730	\$209	\$222
15.00	UNSOLD	10261	\$215	\$232
	SOLD	1989	\$224	\$241
16.00	UNSOLD	2924	\$233	\$245
	SOLD	539	\$251	\$256
17.00	UNSOLD	7751	\$228	\$235
	SOLD	989	\$247	\$251
18.00	UNSOLD	5925	\$140	\$151
	SOLD	736	\$148	\$160
19.00	UNSOLD	1267	\$114	\$129
	SOLD	196	\$139	\$145
20.00	UNSOLD	8371	\$185	\$191
	SOLD	3239	\$189	\$200

We next stratified this analysis by neighborhoods with at least 50 sales, using the second comparison test, which compares the median change in value between valuation year 2018 and valuation year 2020 for sold and unsold residential properties. Out of 90 neighborhoods with at least 50 sales, only 2 neighborhoods had a difference of more than 10 percent between sold and unsold properties using this method.

### Report

VALSF

NBHD		sold	N	Median	Mean
1	UNSOLD		1179	\$194	\$195
	SOLD		482	\$184	\$187
5	UNSOLD		7500	\$188	\$194
	SOLD		2554	\$189	\$195
10	UNSOLD		4065	\$199	\$198
	SOLD		651	\$182	\$194
15	UNSOLD		6500	\$192	\$197
	SOLD		1189	\$193	\$198
16	UNSOLD		658	\$204	\$200
	SOLD		111	\$206	\$207
17	UNSOLD		2136	\$207	\$209
	SOLD		270	\$207	\$210
18	UNSOLD		338	\$181	\$185
	SOLD		67	\$184	\$190
24	UNSOLD		2227	\$224	\$247
	SOLD		336	\$234	\$259
26	UNSOLD		893	\$251	\$255
	SOLD		80	\$249	\$255
28	UNSOLD		1462	\$234	\$238
	SOLD		165	\$245	\$251
30	UNSOLD		1570	\$244	\$251

	SOLD	156	\$258	\$259
32	UNSOLD	1377	\$222	\$218
	SOLD	189	\$237	\$233
35	UNSOLD	2439	\$212	\$207
	SOLD	550	\$195	\$201
38	UNSOLD	3390	\$219	\$221
	SOLD	614	\$200	\$212
40	UNSOLD	1744	\$205	\$213
	SOLD	296	\$205	\$212
41	UNSOLD	842	\$224	\$219
	SOLD	125	\$215	\$218
42	UNSOLD	1478	\$225	\$219
	SOLD	238	\$217	\$217
44	UNSOLD	695	\$235	\$231
	SOLD	89	\$245	\$243
45	UNSOLD	2071	\$219	\$222
	SOLD	248	\$243	\$249
48	UNSOLD	705	\$225	\$229
	SOLD	72	\$246	\$268
49	UNSOLD	731	\$270	\$269
	SOLD	68	\$275	\$279
50	UNSOLD	2335	\$252	\$250
	SOLD	239	\$247	\$248
51	UNSOLD	3737	\$231	\$234
	SOLD	429	\$264	\$265
54	UNSOLD	758	\$246	\$254
	SOLD	87	\$269	\$268
56	UNSOLD	4011	\$262	\$262
	SOLD	455	\$277	\$279
57	UNSOLD	2375	\$238	\$228
	SOLD	301	\$241	\$233
58	UNSOLD	1094	\$219	\$220
	SOLD	153	\$226	\$224
59	UNSOLD	429	\$326	\$334
	SOLD	57	\$356	\$346
60	UNSOLD	2651	\$223	\$217
	SOLD	286	\$227	\$222
61	UNSOLD	1029	\$221	\$222
	SOLD	107	\$226	\$230
63	UNSOLD	1262	\$212	\$230
	SOLD	157	\$223	\$236
64	UNSOLD	1439	\$225	\$237
	SOLD	172	\$226	\$239
66	UNSOLD	2529	\$231	\$221
	SOLD	409	\$225	\$216
67	UNSOLD	3924	\$194	\$203
	SOLD	789	\$187	\$195
68	UNSOLD	1368	\$228	\$226
	SOLD	146	\$234	\$236
69	UNSOLD	1768	\$231	\$222
	SOLD	201	\$241	\$237
70	UNSOLD	3621	\$205	\$216
	SOLD	386	\$200	\$211
71	UNSOLD	504	\$203	\$216
	SOLD	124	\$221	\$231
72	UNSOLD	5672	\$220	\$224
	SOLD	2009	\$228	\$231

74	UNSOLD	1503	\$235	\$220
	SOLD	159	\$231	\$223
75	UNSOLD	1413	\$224	\$232
	SOLD	154	\$215	\$221
76	UNSOLD	597	\$197	\$204
	SOLD	53	\$235	\$230
77	UNSOLD	7304	\$195	\$205
	SOLD	961	\$196	\$205
79	UNSOLD	2868	\$183	\$194
	SOLD	1176	\$185	\$197
80	UNSOLD	891	\$167	\$171
	SOLD	319	\$164	\$163
82	UNSOLD	7944	\$206	\$214
	SOLD	1084	\$205	\$214
84	UNSOLD	6332	\$196	\$207
	SOLD	793	\$195	\$206
85	UNSOLD	1956	\$235	\$243
	SOLD	298	\$235	\$246
86	UNSOLD	11794	\$204	\$208
	SOLD	2431	\$203	\$210
87	UNSOLD	1043	\$259	\$262
	SOLD	84	\$270	\$263
88	UNSOLD	1363	\$234	\$236
	SOLD	113	\$253	\$255
89	UNSOLD	2657	\$212	\$221
	SOLD	405	\$211	\$219
90	UNSOLD	3003	\$214	\$228
	SOLD	420	\$219	\$232
91	UNSOLD	1534	\$225	\$236
	SOLD	266	\$243	\$247
92	UNSOLD	1276	\$249	\$257
	SOLD	236	\$278	\$273
93	UNSOLD	2937	\$211	\$225
	SOLD	445	\$213	\$226
94	UNSOLD	4998	\$213	\$227
	SOLD	519	\$223	\$237
95	UNSOLD	2430	\$162	\$175
	SOLD	288	\$175	\$184
96	UNSOLD	604	\$95	\$107
	SOLD	74	\$108	\$111
97	UNSOLD	939	\$117	\$132
	SOLD	132	\$143	\$151
99	UNSOLD	1734	\$143	\$147
	SOLD	210	\$145	\$150
100	UNSOLD	523	\$95	\$100
	SOLD	69	\$108	\$121
101	UNSOLD	391	\$116	\$128
	SOLD	90	\$144	\$141
103	UNSOLD	3393	\$230	\$247
	SOLD	875	\$252	\$255
105	UNSOLD	2400	\$251	\$252
	SOLD	399	\$274	\$273
106	UNSOLD	5364	\$188	\$191
	SOLD	1961	\$189	\$197
107	UNSOLD	522	\$237	\$238
	SOLD	135	\$238	\$245
470	UNSOLD	261	\$199	\$196



	SOLD	86	\$203	\$202
480	UNSOLD	219	\$106	\$103
	SOLD	63	\$110	\$105
529	UNSOLD	117	\$161	\$156
	SOLD	60	\$178	\$182
635	UNSOLD	140	\$206	\$203
	SOLD	77	\$207	\$205
712	UNSOLD	329	\$174	\$174
	SOLD	95	\$174	\$174
727	UNSOLD	168	\$161	\$162
	SOLD	51	\$167	\$166
731	UNSOLD	205	\$164	\$165
	SOLD	149	\$164	\$165
742	UNSOLD	192	\$147	\$151
	SOLD	55	\$144	\$150
743	UNSOLD	270	\$159	\$155
	SOLD	67	\$155	\$153
754	UNSOLD	231	\$194	\$189
	SOLD	60	\$195	\$192
780	UNSOLD	187	\$237	\$219
	SOLD	66	\$262	\$244
786	UNSOLD	104	\$144	\$145
	SOLD	50	\$144	\$148
795	UNSOLD	242	\$157	\$141
	SOLD	76	\$170	\$164
796	UNSOLD	30	\$290	\$291
	SOLD	96	\$298	\$294
957	UNSOLD	190	\$80	\$94
	SOLD	92	\$130	\$125

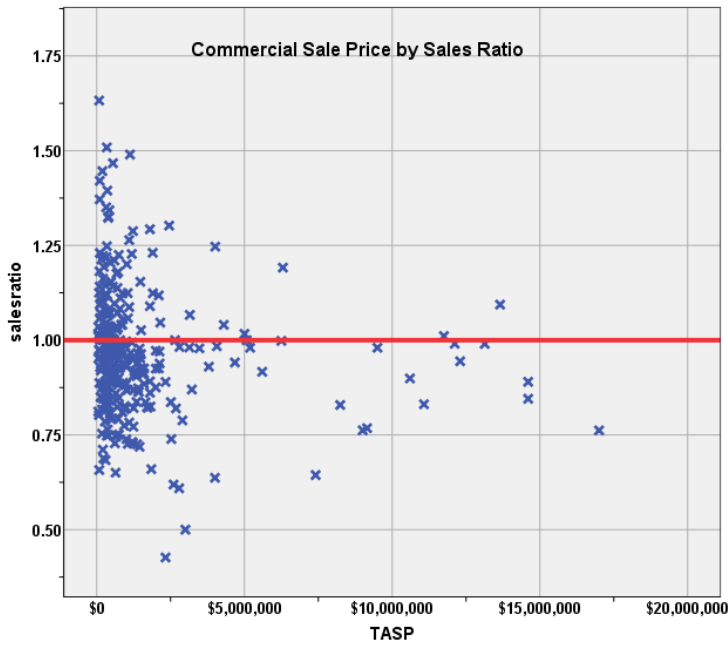
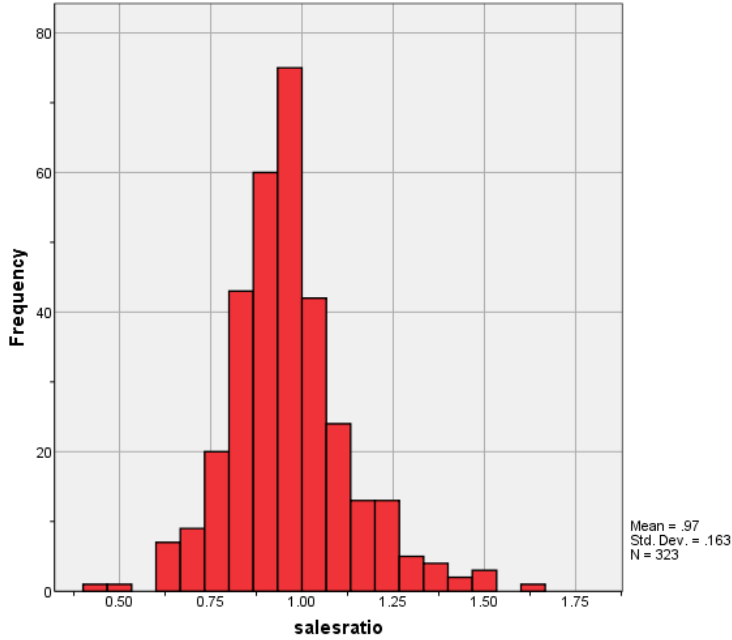
The above results by class and by economic area indicate that sold and unsold residential properties were valued in a consistent manner overall.

#### IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

There were 323 qualified commercial/industrial sales over the 24 month period ending June 30, 2020. The sales ratio analysis results were as follows:

Median	<b>0.960</b>
Price Related Differential	<b>1.041</b>
Coefficient of Dispersion	<b>12.4</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:



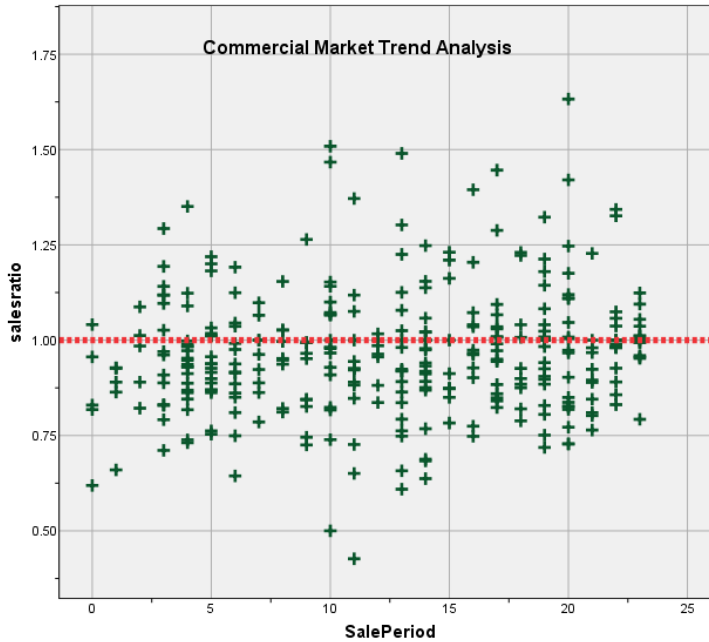
### Commercial/Industrial Market Trend Analysis

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

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

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	.929	.019		47.933	.000
	SalePeriod	.003	.001	.117	2.113	.035

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 median and mean change in actual value for valuation year 2018 and valuation year 2020 for commercial/industrial properties to determine if sold and unsold properties were valued consistently.

**Report**

DIFF				
	DIFF	N	Median	Mean
UNSOLD	7564	1.13	1.30	
SOLD	323	1.25	1.49	

**Report**

DIFF				
ABSTRIMP	DIFF	N	Median	Mean
2212.00	UNSOLD	1260	1.12	1.17
	SOLD	36	1.24	1.52
2219.20	UNSOLD	2	1.00	1.00

	SOLD	1	1.00	1.00
2220.00	UNSOLD	774	1.25	1.66
	SOLD	82	1.25	1.49
2225.00	UNSOLD	114	1.00	1.63
	SOLD	5	1.72	1.68
2230.00	UNSOLD	1620	1.10	1.21
	SOLD	62	1.24	1.44
2231.67	UNSOLD	4	1.04	.98
	SOLD	1	.67	.67
2232.50	UNSOLD	45	1.08	1.09
	SOLD	2	1.33	1.33
2235.00	UNSOLD	1723	1.21	1.36
	SOLD	69	1.22	1.60
2245.00	UNSOLD	761	1.17	1.11
	SOLD	41	1.17	1.27
3215.00	UNSOLD	148	1.00	1.00
	SOLD	2	1.33	1.33
3230.00	UNSOLD	219	1.00	.99
	SOLD	9	1.70	1.68
3412.00	UNSOLD	1	1.68	1.68

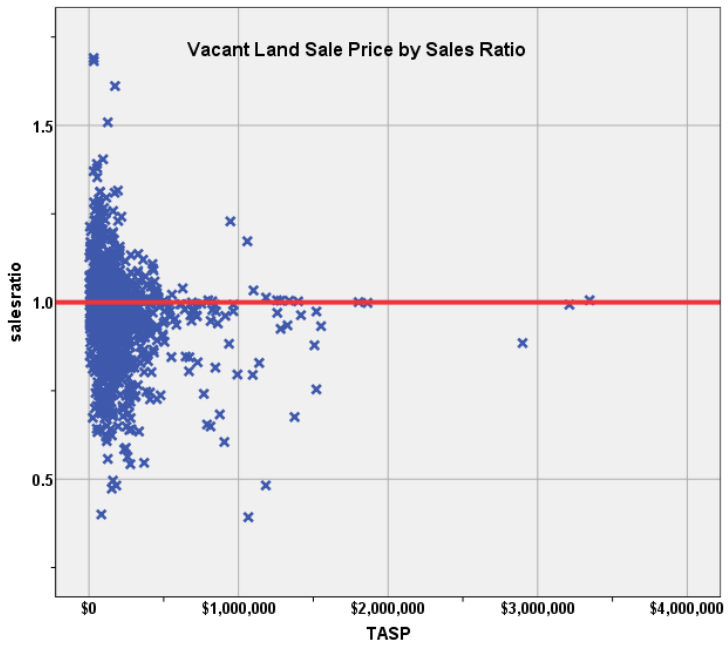
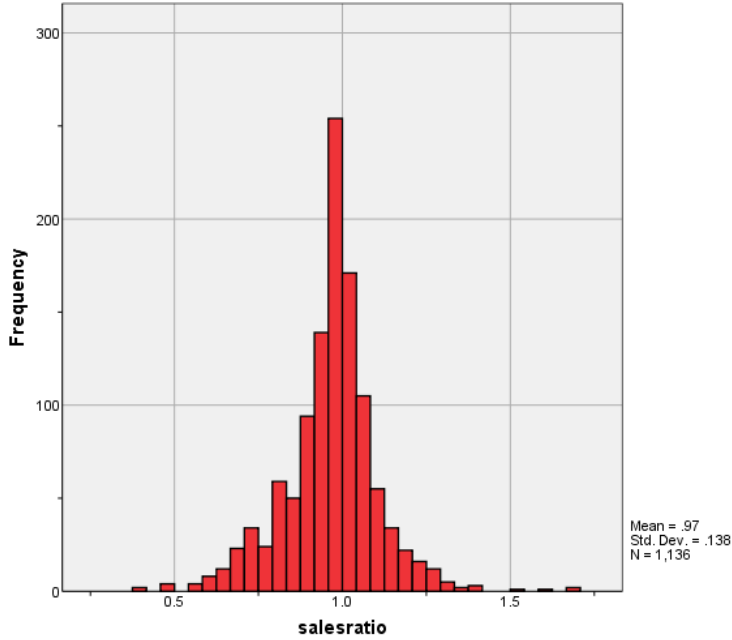
The above results indicated that sold and unsold commercial/industrial properties were valued consistently overall.

#### V. VACANT LAND SALE RESULTS

There were 1,136 qualified commercial/industrial sales over the 24 month period ending June 30, 2020. The sales ratio analysis was analyzed as follows:

Ratio Statistics for currInd / Vtasp	
<b>Median</b>	<b>0.978</b>
<b>Price Related Differential</b>	<b>1.018</b>
<b>Coefficient of Dispersion</b>	<b>9.8</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.

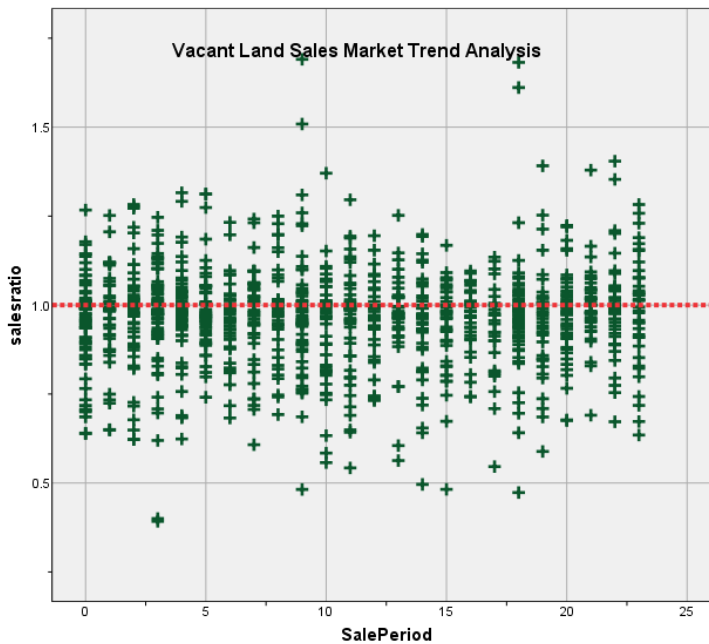
## Vacant Land Market Trend Analysis

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

### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	.963	.007		130.770	.000
	SalePeriod	.000	.001	.015		

a. Dependent Variable: salesratio



There was no significant trend. 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 actual value for valuation year 2018 and valuation year 2020 for each group. The following results present the comparison results for sold and unsold properties:

#### Report

DIFF			
diff	N	Median	Mean
UNSOLD	9291	1.14	1.11
SOLD	958	1.15	1.20

Given the difference in the overall comparison analysis, we next examined sold and unsold properties by subdivision with at least 10 sales, as follows:

**Report**

DIFF	SUBDIVNO	sold	N	Median	Mean
	12541	UNSOLD	5	1.12	1.12
		SOLD	12	1.12	1.12
	12603	UNSOLD	6	1.15	1.15
		SOLD	13	1.18	1.18
	14016	UNSOLD	9	1.19	1.12
		SOLD	16	1.12	1.15
	14170	UNSOLD	6	.97	.97
		SOLD	23	1.07	1.09
	14209	UNSOLD	54	1.38	1.37
		SOLD	16	1.38	1.38
	14220	UNSOLD	12	.88	.88
		SOLD	15	1.10	1.10
	14232	SOLD	10	1.15	1.15
	14238	UNSOLD	16	1.20	1.18
		SOLD	59	1.11	1.10
	14249	UNSOLD	1	1.12	1.12
		SOLD	15	1.12	1.02
	14300	UNSOLD	7	.00	.00
		SOLD	16	1.15	1.15
	14460	UNSOLD	1	1.20	1.20
		SOLD	11	1.15	1.15

Overall, while we concluded that the county assessor valued sold and unsold vacant land properties consistently, we are going to meet with the assessor to address the subdivision in the above table with significant differences in the median change in value between sold and unsold vacant land properties.

## V. CONCLUSIONS

Based on this 2022 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 Mean Centered
		Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			
.	.976	.957	.996	.978	.950	.998	96.1%	.975	.955	.995	1.001	.020	2.6%
1.00	.980	.975	.984	.971	.970	.972	95.1%	.974	.973	.976	1.005	.053	18.6%
2.00	.985	.978	.992	.977	.971	.981	95.6%	.978	.971	.985	1.007	.079	12.1%
3.00	.956	.941	.971	.963	.956	.970	95.7%	.951	.938	.964	1.006	.108	18.6%
4.00	.979	.976	.982	.971	.969	.973	95.3%	.962	.945	.978	1.018	.050	8.2%
5.00	.976	.967	.985	.969	.966	.975	95.5%	.967	.959	.975	1.009	.095	17.6%
6.00	.995	.983	1.007	.991	.980	.996	95.9%	.983	.967	.999	1.012	.099	14.7%
7.00	.985	.979	.991	.975	.971	.979	95.2%	.979	.972	.985	1.007	.072	10.8%
8.00	.979	.973	.985	.972	.970	.976	95.3%	.960	.943	.978	1.019	.054	8.2%
9.00	.986	.979	.992	.976	.970	.981	95.5%	.980	.972	.987	1.006	.059	8.6%
10.00	.982	.977	.988	.976	.972	.979	95.5%	.982	.975	.990	1.000	.052	7.6%
11.00	.986	.982	.989	.977	.974	.980	95.3%	.982	.978	.986	1.004	.048	7.2%
12.00	.979	.977	.981	.974	.972	.975	95.3%	.975	.972	.978	1.004	.042	6.2%
13.00	.983	.980	.987	.975	.973	.978	95.4%	.976	.964	.987	1.008	.050	7.6%
14.00	.978	.975	.981	.972	.970	.974	95.2%	.973	.971	.976	1.005	.051	8.7%
15.00	.983	.978	.987	.977	.975	.980	95.2%	.974	.969	.979	1.009	.059	10.4%
16.00	.981	.969	.993	.975	.966	.984	95.3%	.974	.961	.986	1.007	.092	14.9%
17.00	.985	.972	.998	.970	.966	.977	95.1%	.962	.951	.973	1.024	.107	21.5%
18.00	.997	.981	1.013	.986	.980	.993	95.7%	.985	.975	.995	1.012	.101	22.2%
19.00	.958	.934	.982	.979	.963	1.001	96.2%	.954	.927	.982	1.004	.131	17.8%
20.00	.977	.974	.980	.975	.972	.977	95.1%	.973	.971	.975	1.004	.047	9.2%

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 Mean Centered
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			
.966	.948	.983	.960	.938	.978	95.5%	.928	.899	.956	1.041	.124	16.9%

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.

## Vacant Land

Ratio Statistics for CURRLND / 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 Mean Centered
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			
.966	.958	.974	.978	.973	.983	95.3%	.949	.936	.962	1.018	.098	14.3%

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**

**Subclass**

**Case Processing Summary**

		Count	Percent
ABSTRIMP	1212.00	32585	94.5%
	1213.00	1	0.0%
	1213.33	1	0.0%
	1213.50	12	0.0%
	1214.00	2	0.0%
	1215.00	175	0.5%
	1215.40	1	0.0%
	1215.50	2	0.0%
	1216.00	1	0.0%
	1217.50	1	0.0%
	1218.50	1	0.0%
	1220.00	207	0.6%
	1221.00	1	0.0%
	1221.67	1	0.0%
	1222.50	1	0.0%
	1225.00	46	0.1%
	1226.00	1	0.0%
	1230.00	1419	4.1%
	1548.00	1	0.0%
	1712.00	2	0.0%
	1713.50	2	0.0%
	1716.00	1	0.0%
	1721.00	1	0.0%
	1978.75	1	0.0%
	1980.75	1	0.0%
	2028.40	1	0.0%
	2234.33	2	0.0%
	2745.50	8	0.0%
	3052.20	1	0.0%
	3256.67	3	0.0%
	3261.00	1	0.0%
	3665.60	1	0.0%
Overall		34484	100.0%
Excluded		0	
Total		34484	

**Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212.00	.974	1.006	.060	13.0%
1213.00	.980	1.000	.000	.
1213.33	1.254	1.000	.000	.
1213.50	.927	1.111	.306	45.0%
1214.00	.921	1.007	.042	6.0%
1215.00	.950	1.020	.119	16.2%
1215.40	.693	1.000	.000	.
1215.50	.751	.998	.118	16.6%

1216.00	.662	1.000	.000	.
1217.50	1.141	1.000	.000	.
1218.50	1.325	1.000	.000	.
1220.00	.948	1.026	.086	12.0%
1221.00	.932	1.000	.000	.
1221.67	.912	1.000	.000	.
1222.50	1.070	1.000	.000	.
1225.00	.970	.990	.067	8.9%
1226.00	.194	1.000	.000	.
1230.00	.973	1.002	.036	5.6%
1548.00	1.823	1.000	.000	.
1712.00	1.225	.998	.118	16.6%
1713.50	.929	.984	.076	10.8%
1716.00	1.000	1.000	.000	.
1721.00	1.469	1.000	.000	.
1978.75	.858	1.000	.000	.
1980.75	1.498	1.000	.000	.
2028.40	1.468	1.000	.000	.
2234.33	.988	.997	.016	2.2%
2745.50	.971	.999	.064	9.9%
3052.20	1.031	1.000	.000	.
3256.67	1.014	.996	.025	4.0%
3261.00	2.492	1.000	.000	.
3665.60	1.301	1.000	.000	.
Overall	.974	1.008	.059	12.9%

## Age

### Case Processing Summary

	Count	Percent
AgeRec		
Over 100	741	2.1%
75 to 100	367	1.1%
50 to 75	4143	12.0%
25 to 50	9120	26.4%
5 to 25	12279	35.6%
5 or Newer	7834	22.7%
Overall	34484	100.0%
Excluded	0	
Total	34484	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	.971	1.009	.123	17.6%
75 to 100	.965	1.012	.120	21.1%
50 to 75	.970	1.011	.078	12.7%
25 to 50	.970	1.011	.062	16.7%
5 to 25	.975	1.002	.050	8.4%
5 or Newer	.976	1.011	.052	12.7%
Overall	.974	1.008	.059	12.9%

## Improved Area

### Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	29	0.1%
	500 to 1,000 sf	3066	8.9%
	1,000 to 1,500 sf	9679	28.1%
	1,500 to 2,000 sf	11163	32.4%
	2,000 to 3,000 sf	8341	24.2%
	3,000 sf or Higher	2206	6.4%
Overall		34484	100.0%
Excluded		0	
Total		34484	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	.946	1.031	.209	32.0%
500 to 1,000 sf	.962	1.008	.071	12.0%
1,000 to 1,500 sf	.971	1.005	.053	11.9%
1,500 to 2,000 sf	.974	1.006	.052	13.1%
2,000 to 3,000 sf	.980	1.009	.062	11.9%
3,000 sf or Higher	.980	1.025	.094	18.3%
Overall	.974	1.008	.059	12.9%

## Improvement Quality

### Case Processing Summary

		Count	Percent
QUALITY	.0	2	0.0%
	1.0	239	0.7%
	2.0	25601	74.2%
	3.0	8052	23.3%
	4.0	533	1.5%
	5.0	57	0.2%
Overall		34484	100.0%
Excluded		0	
Total		34484	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.0	1.004	1.000	.007	1.1%
1.0	.940	.967	.141	19.8%
2.0	.972	1.007	.056	12.7%
3.0	.978	1.009	.065	11.7%
4.0	.987	1.031	.113	25.4%
5.0	.970	1.007	.030	7.3%
Overall	.974	1.008	.059	12.9%

## Commercial Median Ratio Stratification

### Sale Price

#### Case Processing Summary

		Count	Percent
SPRec	\$25K to \$50K	1	0.3%
	\$50K to \$100K	16	5.0%
	\$100K to \$150K	13	4.0%
	\$150K to \$200K	8	2.5%
	\$200K to \$300K	27	8.4%
	\$300K to \$500K	80	24.8%
	\$500K to \$750K	47	14.6%
	\$750K to \$1,000K	25	7.7%
	Over \$1,000K	106	32.8%
Overall		323	100.0%
Excluded		0	
Total		323	

#### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
\$25K to \$50K	1.012	1.000	.000	.
\$50K to \$100K	1.009	.987	.151	23.0%
\$100K to \$150K	1.026	1.010	.111	15.4%
\$150K to \$200K	.942	1.001	.189	25.8%
\$200K to \$300K	.990	1.000	.123	15.5%
\$300K to \$500K	.990	1.001	.110	15.4%
\$500K to \$750K	.960	1.002	.114	15.7%
\$750K to \$1,000K	.948	1.004	.079	9.9%
Over \$1,000K	.925	1.012	.134	18.5%
Overall	.960	1.041	.124	17.0%

### Subclass

#### Case Processing Summary

		Count	Percent
ABSTRIMP	1550.67	1	0.3%
	1716.00	2	0.6%
	2132.00	1	0.3%
	2212.00	36	11.1%
	2214.67	1	0.3%
	2215.00	3	0.9%
	2219.20	1	0.3%
	2220.00	82	25.4%
	2225.00	5	1.5%
	2228.75	1	0.3%
	2230.00	62	19.2%
	2231.67	1	0.3%
	2232.50	2	0.6%
	2235.00	69	21.4%
	2245.00	41	12.7%

	2916.33	1	0.3%
	3215.00	2	0.6%
	3230.00	9	2.8%
	5759.50	1	0.3%
	9279.00	2	0.6%
Overall		323	100.0%
Excluded		0	
Total		323	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1550.67	1.248	1.000	.000	.
1716.00	1.023	1.039	.052	7.3%
2132.00	.982	1.000	.000	.
2212.00	.925	.997	.108	14.3%
2214.67	.762	1.000	.000	.
2215.00	.980	1.001	.114	24.2%
2219.20	1.000	1.000	.000	.
2220.00	.950	1.014	.147	19.2%
2225.00	.998	1.031	.123	16.2%
2228.75	.891	1.000	.000	.
2230.00	.958	1.048	.132	18.3%
2231.67	1.026	1.000	.000	.
2232.50	.994	1.094	.132	18.7%
2235.00	.948	1.010	.101	14.4%
2245.00	1.001	1.041	.132	19.0%
2916.33	.619	1.000	.000	.
3215.00	.805	1.052	.054	7.6%
3230.00	1.000	1.002	.013	3.5%
5759.50	.884	1.000	.000	.
9279.00	1.006	1.026	.080	11.4%
Overall	.960	1.041	.124	17.0%

### Age

#### Case Processing Summary

AgeRec	Count	Percent
Over 100	16	5.0%
75 to 100	12	3.7%
50 to 75	53	16.4%
25 to 50	138	42.7%
5 to 25	87	26.9%
5 or Newer	17	5.3%
Overall	323	100.0%
Excluded	0	
Total	323	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	.920	1.063	.117	17.6%
75 to 100	1.036	1.026	.108	14.7%
50 to 75	.956	1.013	.135	17.3%
25 to 50	.966	1.043	.132	18.0%
5 to 25	.932	1.034	.117	17.5%
5 or Newer	.982	1.066	.060	9.1%
Overall	.960	1.041	.124	17.0%

### Improved Area

#### Case Processing Summary

		Count	Percent
ImpSFRec	500 to 1,000 sf	17	5.3%
	1,000 to 1,500 sf	31	9.6%
	1,500 to 2,000 sf	26	8.0%
	2,000 to 3,000 sf	38	11.8%
	3,000 sf or Higher	211	65.3%
Overall		323	100.0%
Excluded		0	
Total		323	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
500 to 1,000 sf	.929	1.032	.103	12.3%
1,000 to 1,500 sf	.956	1.042	.148	21.8%
1,500 to 2,000 sf	.906	1.001	.098	13.4%
2,000 to 3,000 sf	1.000	1.033	.092	14.0%
3,000 sf or Higher	.948	1.035	.129	17.7%
Overall	.960	1.041	.124	17.0%

### Improvement Quality

#### Case Processing Summary

		Count	Percent
QUALITY	1.0	50	15.5%
	2.0	268	83.0%
	3.0	5	1.5%
Overall		323	100.0%
Excluded		0	
Total		323	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1.0	.929	1.065	.134	17.8%
2.0	.966	1.042	.124	17.1%
3.0	.890	1.002	.023	4.0%
Overall	.960	1.041	.124	17.0%

### Vacant Land Median Ratio Stratification

#### Sale Price

### Case Processing Summary

		Count	Percent
SPRec	LT \$25K	61	5.4%
	\$25K to \$50K	74	6.5%
	\$50K to \$100K	225	19.8%
	\$100K to \$150K	229	20.2%
	\$150K to \$200K	179	15.8%
	\$200K to \$300K	181	15.9%
	\$300K to \$500K	109	9.6%
	\$500K to \$750K	29	2.6%
	\$750K to \$1,000K	20	1.8%
	Over \$1,000K	29	2.6%
Overall		1136	100.0%
Excluded		0	
Total		1136	

### Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT \$25K	1.000	.999	.066	8.7%
\$25K to \$50K	1.027	.997	.112	16.5%
\$50K to \$100K	.995	1.000	.115	15.6%
\$100K to \$150K	.978	1.000	.087	13.0%
\$150K to \$200K	.976	.999	.097	14.4%
\$200K to \$300K	.952	1.004	.100	13.5%
\$300K to \$500K	.949	1.000	.082	11.0%
\$500K to \$750K	.976	1.001	.043	6.8%
\$750K to \$1,000K	.954	.998	.126	18.0%
Over \$1,000K	.980	.958	.099	18.0%
Overall	.978	1.018	.098	14.2%



**Subclass**

**Case Processing Summary**

		Count	Percent
ABSTRNLND	100.00	330	29.0%
	200.00	61	5.4%
	300.00	10	0.9%
	510.00	3	0.3%
	520.00	12	1.1%
	530.00	10	0.9%
	540.00	8	0.7%
	550.00	59	5.2%
	560.00	1	0.1%
	1112.00	565	49.7%
	1125.00	1	0.1%
	1126.00	1	0.1%
	1135.00	23	2.0%
	2112.00	5	0.4%
	2120.00	5	0.4%
	2130.00	33	2.9%
	2135.00	9	0.8%
Overall		1136	100.0%
Excluded		0	
Total		1136	

**Ratio Statistics for CURRLND / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
100.00	.973	1.025	.098	13.6%
200.00	.974	1.010	.083	13.9%
300.00	.964	.975	.072	10.8%
510.00	.939	1.041	.068	14.2%
520.00	.972	1.124	.066	11.3%
530.00	.939	1.030	.098	17.4%
540.00	.933	.949	.118	16.3%
550.00	.964	.987	.113	14.7%
560.00	.829	1.000	.000	.
1112.00	.984	1.021	.100	14.5%
1125.00	1.001	1.000	.000	.
1126.00	.981	1.000	.000	.
1135.00	.991	1.016	.096	13.1%
2112.00	.976	1.014	.043	6.3%
2120.00	.981	1.005	.025	4.4%
2130.00	.974	.997	.103	17.0%
2135.00	.980	.934	.108	19.7%
Overall	.978	1.018	.098	14.2%