



2023

# EL PASO COUNTY PROPERTY ASSESSMENT STUDY

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September 15, 2023

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

**RE: Final Report for the 2023 Colorado Property Assessment Study**

Dear Ms. Castle:

East West Econometrics - Audit Division is pleased to submit the Final Reports for the 2023 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 locally assessed 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.

East West Econometrics – 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".

Harry J. Fuller  
Project Manager  
East West Econometrics – 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.

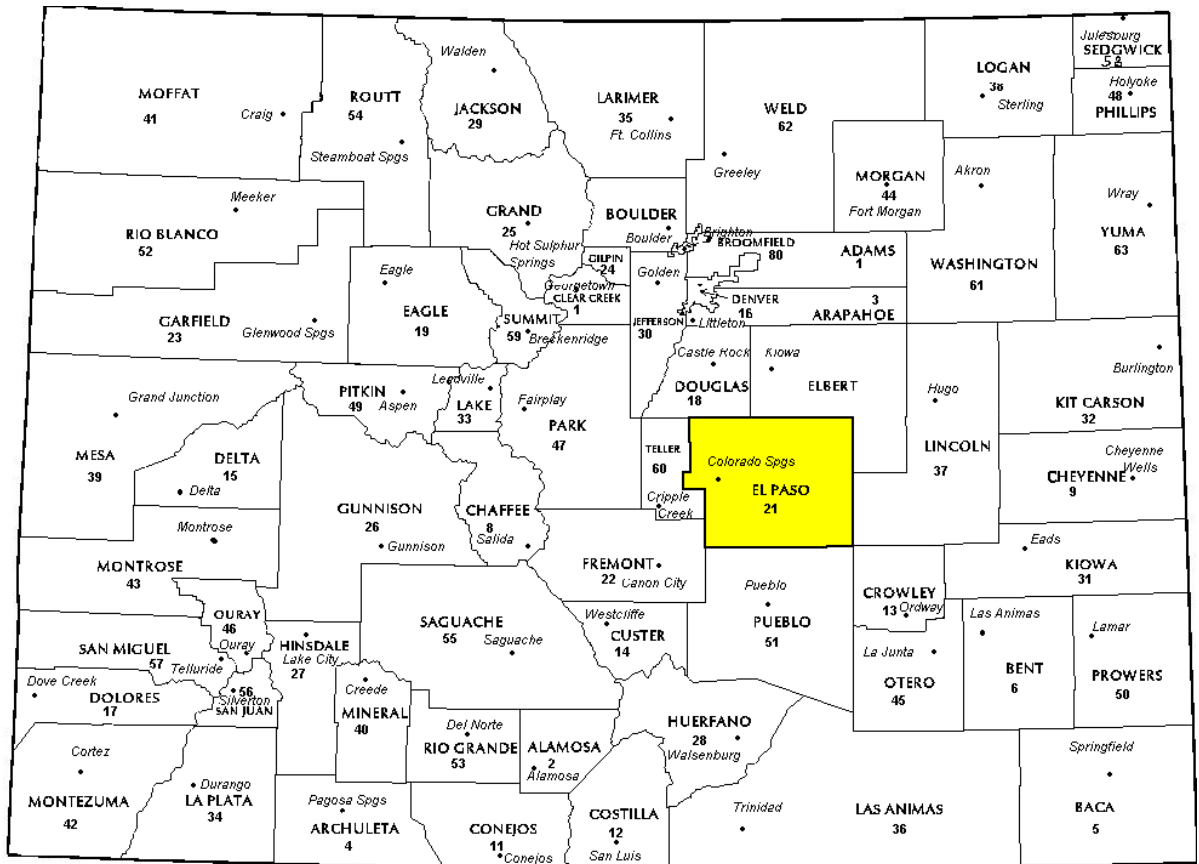
East West Econometrics Audit has completed the Property Assessment Study for 2023 and is pleased to report its findings for El Paso County in the following report.

# 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 has approximately 2,126.8 square miles and an estimated population of approximately 720,403 people with 292.6 people per square mile, 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, 2021 through June 30th, 2022. 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
Residential Condominium	Between .95-1.05	Less than 15.99
Residential	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:

El Paso County Ratio Grid					
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis
Commercial/Industrial	364	0.976	1.037	13.6	Compliant
Residential	31,483	0.961	1.012	7.7	Compliant
Vacant Land	1,744	0.973	1.020	9.9	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
Residential	Compliant
Vacant Land	Compliant

### **Conclusions**

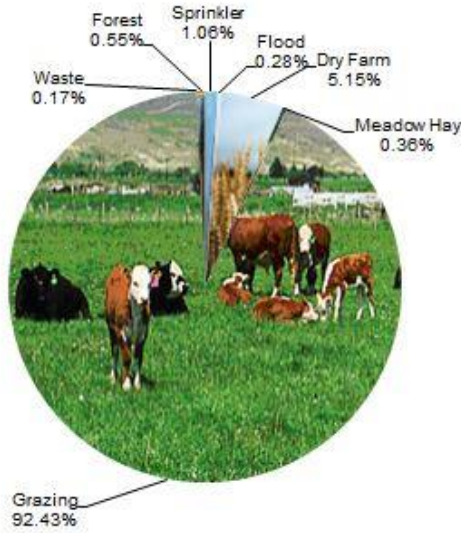
After applying the above described methodologies, it is concluded that El Paso County is reasonably treating its sold and unsold properties in the same manner.

### **Recommendations**

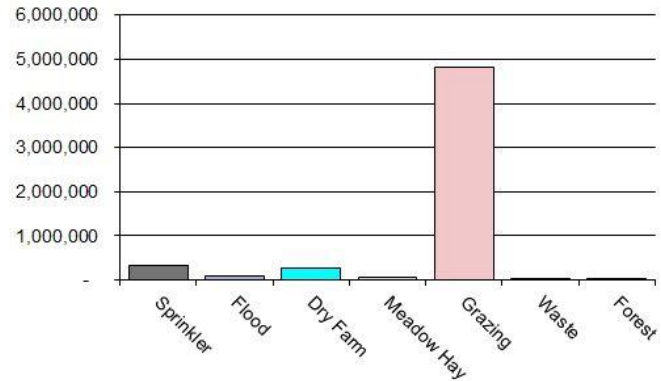
None

# 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:

El Paso County Agricultural Land Ratio Grid						
Abstract Code	Land Class	Number Of Acres	County Value Per Acre	County Assessed Total Value	WRA Total Value	Ratio
4107	Sprinkler	5,699	55.95	318,866	317,723	1.00
4117	Flood	1,522	55.10	83,836	83,360	1.01
4127	Dry Farm	27,650	10.02	277,093	283,511	0.98
4137	Meadow Hay	1,927	29.52	56,889	56,889	1.00
4147	Grazing	495,864	9.69	4,806,720	4,806,720	1.00
4177	Forest	2,936	11.13	32,780	32,670	1.00
4167	Waste	887	2.19	1,941	1,941	1.00
<b>Total/Avg</b>		<b>536,485</b>	<b>10.40</b>	<b>5,578,125</b>	<b>5,582,815</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.:

- 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 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.

EWE reviewed the sales verification procedures in 2023 for El Paso County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically EWE selected 58 sales listed as unqualified.

All but 2 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.

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

reviewed with the assessor any analysis indicating that sales data are inadequate, fail to reflect typical properties, or have been disqualified for insufficient cause. In addition, the contractor has reviewed the disqualified sales by assigned code. If there appears to be any inconsistency in the coding, the contractor has conducted further analysis to determine if the sales included in that code have been assigned appropriately.

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

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

The following subclasses were analyzed for El Paso County:

- 2225 Recreation
- 2245 Commercial Condominiums

### **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 2023 in El Paso County. The review showed that subdivisions were discounted pursuant to 39-1-103 (14) C.R.S. Discounting procedures were applied to all subdivisions where less than 80 percent of vacant land parcels were sold. An absorption rate was estimated for each discounted subdivision. An appropriate discount rate was developed using the Summation Method,

following Division of Property Taxation guidelines.

## **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 2023 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 \$52,000 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 1.00. This is

in compliance with the State Board of Equalization (SBOE) compliance requirements which range from .90 to 1.10 with no COD requirements.

### **Conclusions**

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

# EAST WEST ECONOMETRICS AUDITOR STAFF

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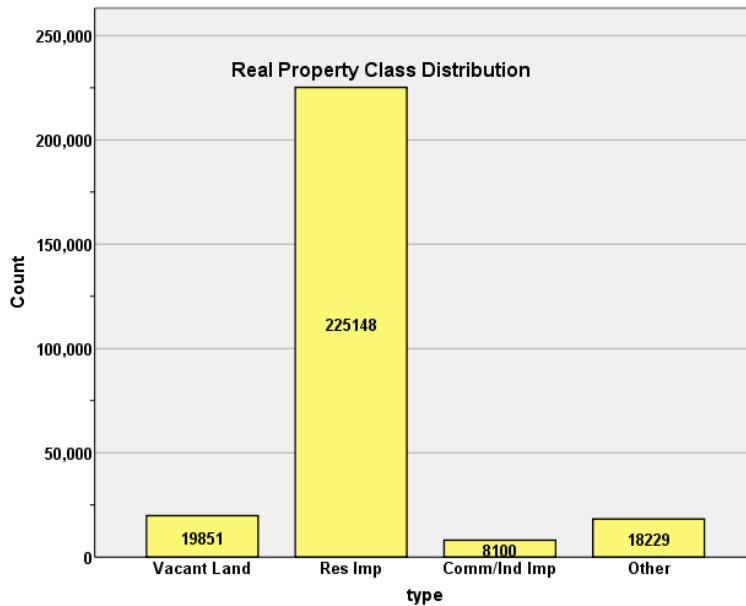
# STATISTICAL APPENDIX



**STATISTICAL COMPLIANCE REPORT  
FOR EL PASO COUNTY  
2023**

**I. OVERVIEW**

El Paso County is an urban county located along Colorado’s Front Range. The county has a total of 271,328 real property parcels, according to data submitted by the county assessor’s office in 2023. 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 78.2% 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 3.0% of all such properties in this county.

**II. DATA FILES**

The following sales analyses were based on the requirements of the 2023 Colorado Property Assessment Study. Information was provided by the El Paso Assessor’s Office in April 2023. The data included all 5 property record files as specified by the Auditor.

### III. RESIDENTIAL SALES RESULTS

There were 31,483 qualified residential sales over the 18 month period ending on June 30, 2022. The sales ratio analysis results were as follows:

Median	<b>0.961</b>
Price Related Differential	<b>1.012</b>
Coefficient of Dispersion	<b>7.7</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	5570	17.8%
	2.00	934	3.0%
	3.00	521	1.7%
	4.00	2449	7.8%
	5.00	1252	4.0%
	6.00	483	1.5%
	7.00	982	3.1%
	8.00	624	2.0%
	9.00	543	1.7%
	10.00	666	2.1%
	11.00	1454	4.6%
	12.00	3384	10.8%
	13.00	1512	4.8%
	14.00	3960	12.6%
	15.00	1714	5.5%
	16.00	362	1.2%
	17.00	878	2.8%
	18.00	653	2.1%
	19.00	209	0.7%
	20.00	3188	10.2%
Overall		31338	100.0%
Excluded		146	
Total		31484	

#### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion
1.00	.965	1.005	.062
2.00	.956	1.025	.097
3.00	.959	1.024	.112
4.00	.960	1.005	.068
5.00	.957	1.020	.119
6.00	.965	1.026	.119
7.00	.963	1.015	.091
8.00	.958	1.026	.075

9.00	.952	1.015	.077
10.00	.955	.973	.068
11.00	.975	1.007	.071
12.00	.958	1.004	.062
13.00	.959	1.000	.062
14.00	.961	1.008	.071
15.00	.965	1.016	.081
16.00	.957	1.018	.092
17.00	.967	1.028	.115
18.00	.971	1.031	.133
19.00	.968	1.016	.145
20.00	.955	1.006	.075
Overall	.961	1.012	.077

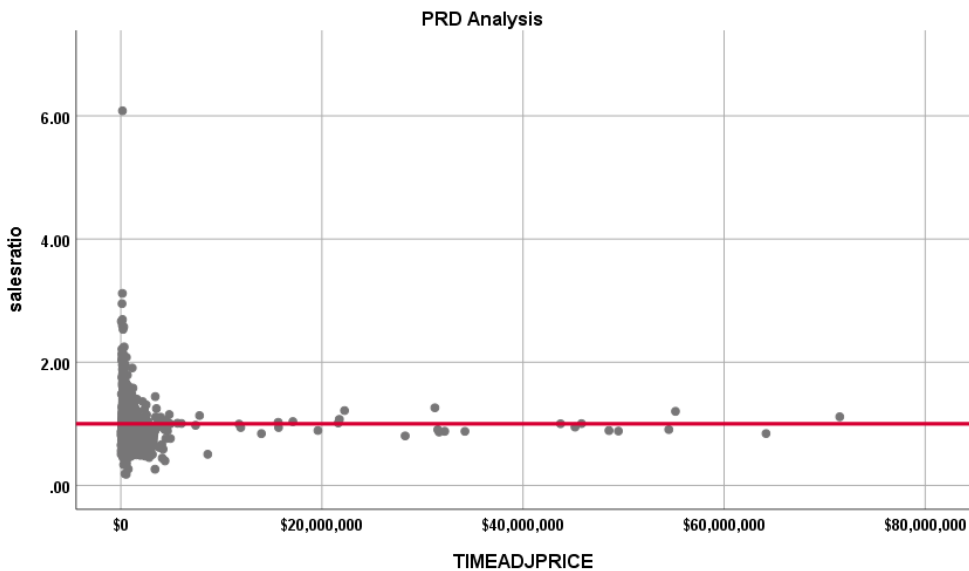
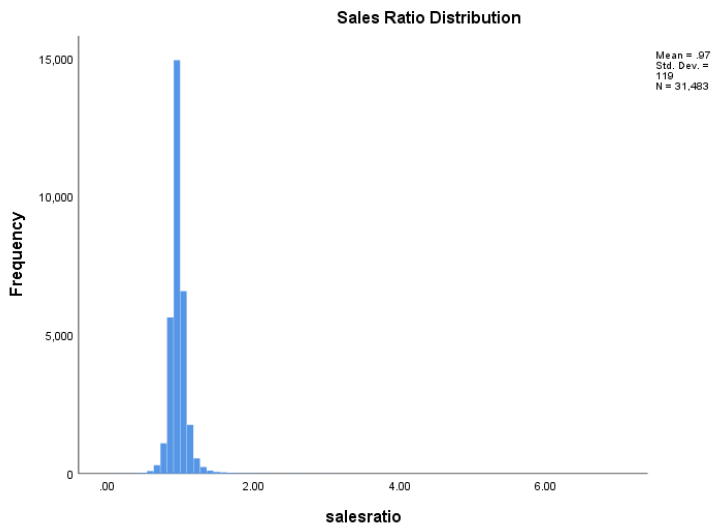
**Neighborhoods with at least 35 sales  
Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion
1	.970	1.002	.049
5	.969	1.004	.059
10	.962	1.008	.072
15	.957	1.008	.069
16	.967	1.005	.086
17	.968	1.008	.075
18	.955	1.016	.083
24	.966	1.017	.100
26	.964	1.074	.157
28	.949	1.029	.116
30	.949	1.022	.099
32	.951	1.018	.110
35	.974	1.009	.074
38	.960	1.009	.068
40	.968	1.006	.059
41	.965	1.014	.080
42	.967	1.016	.087
44	.974	1.013	.097
45	.986	1.028	.131
48	.974	1.020	.105
49	.951	1.029	.117
50	.960	1.018	.112
51	.965	1.044	.148
54	1.003	1.026	.119
56	.964	1.023	.121
57	.957	1.011	.085
58	.957	1.042	.124
59	.969	1.072	.144
60	.962	1.006	.077
61	.954	1.006	.061
62	1.008	1.013	.076
63	.960	1.012	.081
64	.960	1.008	.070
66	1.000	1.008	.076
67	.964	1.005	.065
68	.976	1.009	.080
69	.973	1.021	.111
70	.958	1.023	.093

71	.970	1.011	.080
72	.950	1.006	.079
74	.951	1.009	.074
75	.960	1.017	.088
76	1.009	1.026	.129
77	.990	1.007	.065
79	.958	1.006	.075
80	.966	1.001	.053
82	.960	1.007	.067
84	.971	1.010	.071
85	.963	1.017	.073
86	.959	1.005	.063
87	.979	1.036	.140
88	.982	1.051	.226
89	.971	1.003	.053
90	1.007	1.013	.085
91	.957	1.009	.080
92	.957	1.024	.114
93	.954	1.011	.071
94	.974	1.031	.126
95	.979	1.022	.103
<b>96</b>	<b>.952</b>	<b>1.050</b>	<b>.191</b>
<b>97</b>	<b>.973</b>	<b>1.068</b>	<b>.192</b>
99	.969	1.012	.105
100	.970	1.020	.146
101	.967	1.009	.144
103	.959	1.022	.087
105	.955	1.024	.104
106	.953	1.005	.075
107	.957	1.008	.102
207	.966	.970	.057
211	.960	.968	.108
213	.999	1.045	.109
411	.973	1.001	.020
<b>441</b>	<b>.937</b>	<b>1.002</b>	<b>.054</b>
470	.998	1.004	.046
480	.949	1.009	.079
<b>515</b>	<b>.938</b>	<b>.981</b>	<b>.132</b>
529	.964	1.002	.033
546	.949	1.006	.066
629	.981	1.002	.038
712	.952	1.001	.029
727	.947	1.001	.024
<b>729</b>	<b>.944</b>	<b>1.003</b>	<b>.035</b>
<b>731</b>	<b>.945</b>	<b>1.002</b>	<b>.031</b>
<b>742</b>	<b>.939</b>	<b>1.003</b>	<b>.042</b>
743	.952	1.004	.043
754	.946	1.003	.043
780	.961	1.002	.028
786	.938	1.002	.038
<b>795</b>	<b>.946</b>	<b>1.001</b>	<b>.047</b>
800	.965	1.001	.036
<b>957</b>	<b>.913</b>	<b>1.022</b>	<b>.113</b>
Overall	.963	1.014	.079

Out of 92 residential neighborhoods with at least 35 sales, there were 9 neighborhoods with median sales ratios and/or CODs out of compliance. All of these neighborhoods had sale totals below the average sale count of 308 sales per neighborhood. The range of sale totals for these neighborhoods was 39 to 242, with a median average of 54 sales.

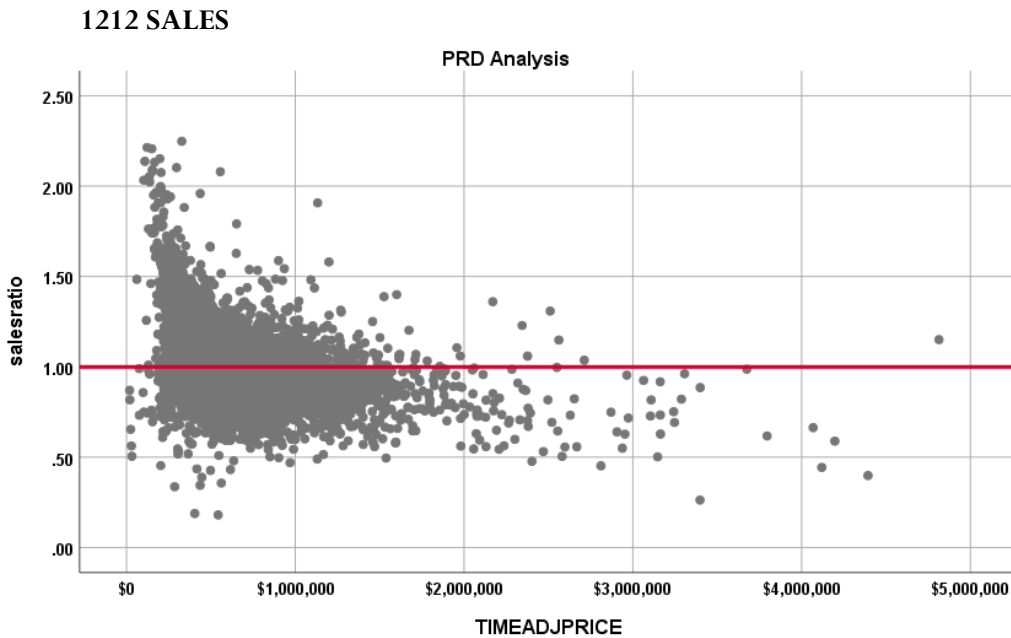
Overall and by economic area, the above ratio statistics were in compliance with the standards set forth by the Colorado State Board of Equalization (SBOE) for the overall residential sales and broken down by economic area. The following graphs describe further the sales ratio distribution for these 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 2.25:



The Price-Related Differential (PRD) for 1212 sales is 1.013, 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 Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	.963	.002	523.934	.000
	CURRTOT	.0000000141	.000	.025	4.280

a. Dependent Variable: salesratio

The slope of the line at 0.0000000141 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	69	0.2%
	\$200K to \$300K	865	2.9%
	\$300K to \$400K	4790	16.1%
	\$400K to \$500K	10223	34.3%
	\$500K to \$600K	6088	20.4%
	\$600K to \$700K	3376	11.3%
	\$700K to \$800K	1812	6.1%
	\$800K to \$900K	1008	3.4%
	\$900K to \$1,000K	569	1.9%
	Over \$1,000K	1009	3.4%
Overall		29809	100.0%
Excluded		0	
Total		29809	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion
LT \$200K	1.361	.969	.333
\$200K to \$300K	1.014	1.005	.164
\$300K to \$400K	.980	1.001	.076
\$400K to \$500K	.964	1.000	.063
\$500K to \$600K	.959	1.000	.066
\$600K to \$700K	.953	1.000	.072
\$700K to \$800K	.943	1.000	.082
\$800K to \$900K	.940	1.000	.087
\$900K to \$1,000K	.935	1.000	.098
Over \$1,000K	.893	1.017	.122
Overall	.962	1.013	.077

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

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

ECONAREA	Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1.00	1	(Constant)	.976	.002		404.139	.000
		SalePeriod	.000	.000	.013	.956	.339
2.00	1	(Constant)	.944	.010		95.916	.000
		SalePeriod	.002	.001	.079	2.429	.015
3.00	1	(Constant)	.980	.014		72.167	.000
		SalePeriod	.001	.001	.038	.857	.392
4.00	1	(Constant)	.971	.004		248.429	.000
		SalePeriod	.001	.000	.034	1.669	.095
5.00	1	(Constant)	.967	.010		97.439	.000

		SalePeriod	.002	.001	.057	2.025	.043
6.00	1	(Constant)	.979	.014		72.189	.000
		SalePeriod	.001	.001	.027	.590	.556
7.00	1	(Constant)	.988	.008		119.518	.000
		SalePeriod	.000	.001	-.016	-.485	.628
8.00	1	(Constant)	.945	.008		117.037	.000
		SalePeriod	.002	.001	.083	2.053	.041
9.00	1	(Constant)	.948	.008		115.038	.000
		SalePeriod	.001	.001	.064	1.494	.136
10.00	1	(Constant)	.935	.007		133.564	.000
		SalePeriod	.003	.001	.154	4.015	.000
11.00	1	(Constant)	.975	.005		183.266	.000
		SalePeriod	.002	.001	.088	3.365	.001
12.00	1	(Constant)	.957	.003		314.892	.000
		SalePeriod	.001	.000	.065	3.788	.000
13.00	1	(Constant)	.958	.004		221.266	.000
		SalePeriod	.002	.000	.086	3.367	.001
14.00	1	(Constant)	.933	.003		323.709	.000
		SalePeriod	.003	.000	.170	10.884	.000
15.00	1	(Constant)	.935	.005		189.163	.000
		SalePeriod	.004	.001	.178	7.483	.000
16.00	1	(Constant)	.909	.013		70.919	.000
		SalePeriod	.005	.001	.194	3.751	.000
17.00	1	(Constant)	.908	.010		94.742	.000
		SalePeriod	.006	.001	.212	6.434	.000
18.00	1	(Constant)	.987	.022		45.069	.000
		SalePeriod	.003	.002	.048	1.226	.221
19.00	1	(Constant)	.955	.032		29.724	.000
		SalePeriod	.003	.003	.055	.788	.432
20.00	1	(Constant)	.929	.003		288.425	.000
		SalePeriod	.003	.000	.155	8.854	.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 statistically significant 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 2023 between each group. This analysis was first performed for the entire class and by economic area, as follows:

<b>Report</b>			
VALSF			
sold	N	Median	Mean
UNSOLD	193917	\$296	\$306
SOLD	30969	\$285	\$298



**Report**

VALSF

ECONAREA	sold	N	Median	Mean
1.00	UNSOLD	\$25,618	\$277	\$285
	SOLD	\$5,536	\$270	\$278
2.00	UNSOLD	\$8,296	\$307	\$323
	SOLD	\$930	\$307	\$322
3.00	UNSOLD	\$4,146	\$339	\$333
	SOLD	\$520	\$339	\$339
4.00	UNSOLD	\$14,359	\$289	\$295
	SOLD	\$2,413	\$278	\$292
5.00	UNSOLD	\$12,458	\$339	\$342
	SOLD	\$1,236	\$326	\$340
6.00	UNSOLD	\$5,107	\$378	\$377
	SOLD	\$483	\$378	\$384
7.00	UNSOLD	\$10,061	\$323	\$315
	SOLD	\$982	\$323	\$318
8.00	UNSOLD	\$6,264	\$303	\$316
	SOLD	\$619	\$311	\$321
9.00	UNSOLD	\$5,432	\$286	\$296
	SOLD	\$543	\$283	\$293
10.00	UNSOLD	\$5,002	\$286	\$293
	SOLD	\$666	\$267	\$278
11.00	UNSOLD	\$11,407	\$282	\$296
	SOLD	\$1,442	\$285	\$296
12.00	UNSOLD	\$18,622	\$280	\$287
	SOLD	\$3,337	\$275	\$283
13.00	UNSOLD	\$12,891	\$289	\$309
	SOLD	\$1,509	\$289	\$302
14.00	UNSOLD	\$16,930	\$301	\$316
	SOLD	\$3,844	\$289	\$301
15.00	UNSOLD	\$10,577	\$314	\$329
	SOLD	\$1,663	\$323	\$335
16.00	UNSOLD	\$3,083	\$336	\$349
	SOLD	\$362	\$357	\$358
17.00	UNSOLD	\$7,838	\$345	\$350
	SOLD	\$874	\$357	\$357
18.00	UNSOLD	\$6,001	\$211	\$225
	SOLD	\$644	\$215	\$238
19.00	UNSOLD	\$1,257	\$164	\$181
	SOLD	\$205	\$177	\$195
20.00	UNSOLD	\$8,546	\$273	\$281
	SOLD	\$3,064	\$260	\$271

We next stratified this analysis by neighborhoods with at least 50 sales, using the same comparison method:

**Report**

VALSF

NBHD	sold	N	Median	Mean
1	UNSOLD	1360	\$277	\$278
	SOLD	301	\$265	\$272
5	UNSOLD	7577	\$269	\$276
	SOLD	2473	\$273	\$279

10	UNSOLD	4109	\$316	\$299
	SOLD	604	\$254	\$279
15	UNSOLD	6656	\$290	\$291
	SOLD	1033	\$283	\$291
16	UNSOLD	670	\$354	\$328
	SOLD	99	\$350	\$326
17	UNSOLD	2161	\$300	\$300
	SOLD	246	\$302	\$309
18	UNSOLD	349	\$277	\$290
	SOLD	56	\$236	\$273
24	UNSOLD	2286	\$302	\$323
	SOLD	276	\$308	\$333
26	UNSOLD	872	\$340	\$347
	SOLD	98	\$327	\$333
28	UNSOLD	1479	\$344	\$347
	SOLD	146	\$362	\$362
30	UNSOLD	1590	\$339	\$339
	SOLD	134	\$347	\$340
32	UNSOLD	1396	\$342	\$332
	SOLD	170	\$344	\$339
35	UNSOLD	2583	\$318	\$306
	SOLD	406	\$301	\$300
38	UNSOLD	3446	\$316	\$319
	SOLD	558	\$304	\$319
40	UNSOLD	1668	\$301	\$311
	SOLD	372	\$295	\$301
41	UNSOLD	829	\$328	\$321
	SOLD	138	\$331	\$324
42	UNSOLD	1509	\$336	\$325
	SOLD	207	\$343	\$332
44	UNSOLD	708	\$351	\$348
	SOLD	76	\$362	\$355
45	UNSOLD	2081	\$348	\$345
	SOLD	235	\$356	\$357
48	UNSOLD	700	\$342	\$345
	SOLD	72	\$318	\$332
49	UNSOLD	738	\$374	\$375
	SOLD	61	\$385	\$383
50	UNSOLD	2404	\$359	\$353
	SOLD	168	\$362	\$363
51	UNSOLD	3764	\$359	\$357
	SOLD	396	\$365	\$361
54	UNSOLD	771	\$345	\$357
	SOLD	74	\$365	\$367
56	UNSOLD	4090	\$389	\$388
	SOLD	376	\$393	\$397
57	UNSOLD	2443	\$340	\$327
	SOLD	234	\$343	\$329
58	UNSOLD	1107	\$335	\$334
	SOLD	138	\$337	\$337
60	UNSOLD	2678	\$317	\$307
	SOLD	260	\$316	\$307
61	UNSOLD	1041	\$313	\$311
	SOLD	95	\$332	\$322
63	UNSOLD	1290	\$303	\$320
	SOLD	129	\$316	\$330
64	UNSOLD	1473	\$315	\$333

	SOLD	137	\$327	\$342
66	UNSOLD	2529	\$346	\$329
	SOLD	412	\$333	\$331
67	UNSOLD	3993	\$277	\$290
	SOLD	720	\$282	\$291
68	UNSOLD	1408	\$324	\$322
	SOLD	105	\$337	\$329
69	UNSOLD	1798	\$333	\$323
	SOLD	170	\$334	\$331
70	UNSOLD	3704	\$288	\$300
	SOLD	304	\$285	\$296
71	UNSOLD	573	\$296	\$311
	SOLD	55	\$284	\$306
72	UNSOLD	5536	\$320	\$322
	SOLD	2145	\$296	\$303
74	UNSOLD	1515	\$337	\$316
	SOLD	147	\$338	\$315
75	UNSOLD	1415	\$310	\$316
	SOLD	152	\$316	\$321
77	UNSOLD	7399	\$294	\$309
	SOLD	866	\$300	\$312
79	UNSOLD	2664	\$261	\$275
	SOLD	1380	\$248	\$263
80	UNSOLD	887	\$245	\$248
	SOLD	324	\$244	\$245
82	UNSOLD	8129	\$292	\$305
	SOLD	899	\$290	\$304
84	UNSOLD	6407	\$277	\$294
	SOLD	718	\$271	\$286
85	UNSOLD	2058	\$323	\$337
	SOLD	194	\$324	\$340
86	UNSOLD	12129	\$292	\$299
	SOLD	2095	\$288	\$294
87	UNSOLD	1036	\$376	\$384
	SOLD	85	\$381	\$403
88	UNSOLD	1390	\$351	\$348
	SOLD	80	\$358	\$360
89	UNSOLD	2715	\$302	\$314
	SOLD	347	\$303	\$314
90	UNSOLD	3042	\$329	\$343
	SOLD	371	\$331	\$342
91	UNSOLD	1600	\$332	\$346
	SOLD	192	\$347	\$351
92	UNSOLD	1348	\$357	\$360
	SOLD	154	\$391	\$375
93	UNSOLD	2963	\$302	\$315
	SOLD	419	\$308	\$319
94	UNSOLD	5050	\$340	\$349
	SOLD	446	\$338	\$355
95	UNSOLD	2482	\$240	\$257
	SOLD	227	\$230	\$261
96	UNSOLD	594	\$138	\$149
	SOLD	86	\$158	\$168
97	UNSOLD	962	\$184	\$196
	SOLD	106	\$215	\$272
99	UNSOLD	1739	\$216	\$223
	SOLD	201	\$225	\$224



100	UNSOLD	496	\$135	\$135
	SOLD	97	\$154	\$159
101	UNSOLD	401	\$162	\$177
	SOLD	80	\$196	\$195
103	UNSOLD	3569	\$321	\$338
105	UNSOLD	2398	\$355	\$355
	SOLD	396	\$375	\$363
106	UNSOLD	5664	\$279	\$283
	SOLD	1661	\$270	\$276
107	UNSOLD	549	\$331	\$334
	SOLD	108	\$298	\$308
211	UNSOLD	432	\$187	\$194
	SOLD	59	\$214	\$236
213	UNSOLD	378	\$171	\$178
	SOLD	50	\$211	\$216
411	UNSOLD	37	\$225	\$229
	SOLD	86	\$229	\$235
470	UNSOLD	240	\$271	\$272
	SOLD	107	\$271	\$272
480	UNSOLD	221	\$165	\$158
	SOLD	61	\$165	\$159
529	UNSOLD	113	\$248	\$240
	SOLD	64	\$201	\$222
629	UNSOLD	59	\$258	\$260
	SOLD	101	\$258	\$260
712	UNSOLD	355	\$243	\$242
	SOLD	69	\$243	\$242
731	UNSOLD	263	\$226	\$224
	SOLD	91	\$230	\$228
743	UNSOLD	268	\$219	\$213
	SOLD	69	\$219	\$212
780	UNSOLD	178	\$329	\$305
	SOLD	75	\$207	\$231
795	UNSOLD	106	\$239	\$230
	SOLD	212	\$239	\$230
800	UNSOLD	22	\$243	\$243
	SOLD	97	\$254	\$247
957	UNSOLD	213	\$127	\$131
	SOLD	69	\$157	\$152

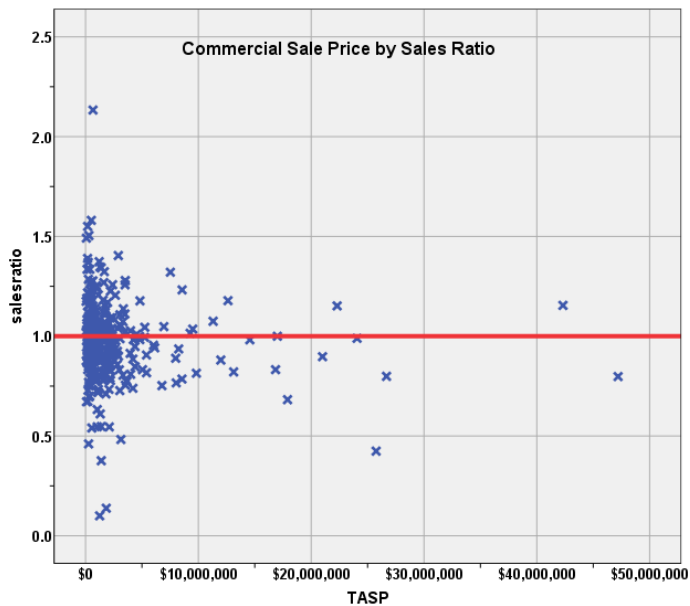
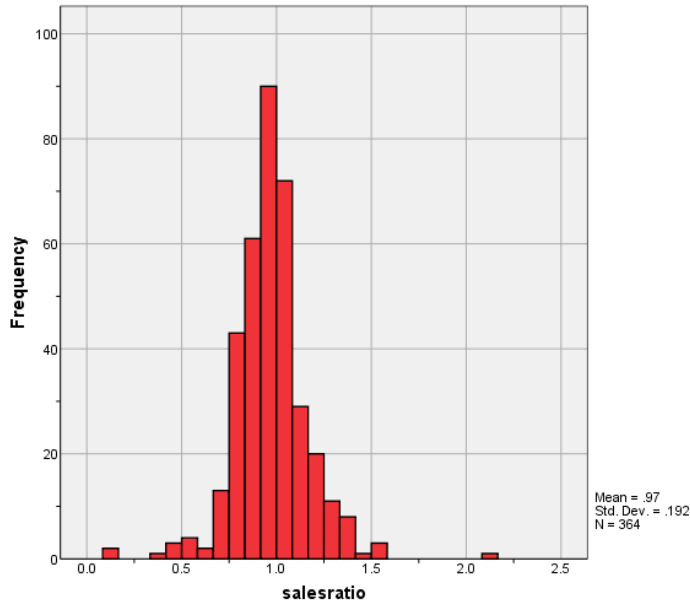
The above results by class and by economic area indicate that sold and unsold residential properties were valued in a consistent manner overall.

#### IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

There were 364 qualified commercial/industrial sales over the 24 month period ending June 30, 2022. The sales ratio analysis results were as follows:

Median	<b>0.976</b>
Price Related Differential	<b>1.037</b>
Coefficient of Dispersion	<b>13.6</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:



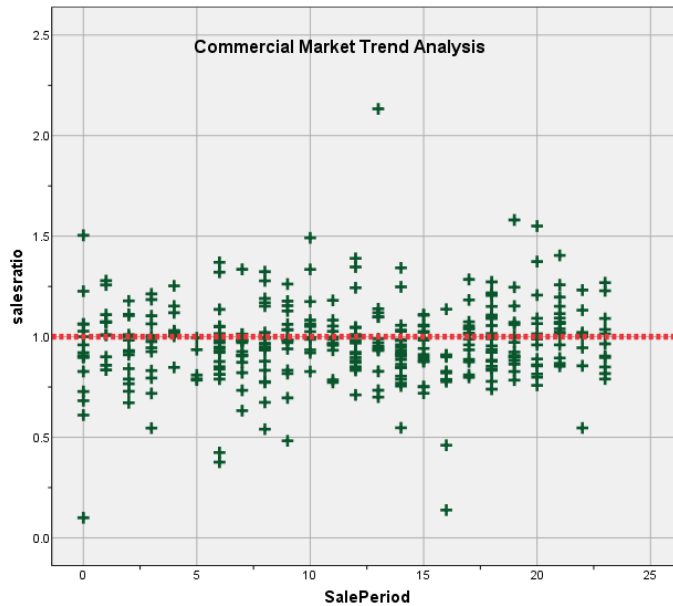
### Commercial/Industrial Market Trend Analysis

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)	.944	.020		46.089	.000
	SalePeriod	.002	.002	.081	1.545	.123

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 taxable year 2020 and taxable year 2022 for commercial/industrial properties to determine if sold and unsold properties were valued consistently.

#### Report

DIFF	N	Median	Mean
UNSOLD	7737	1.24	1.29
SOLD	363	1.35	1.82

**Report**

DIFF	ABSTRIMP	sold	N	Median	Mean
2212.00	UNSOLD		1263	1.25	1.27
	SOLD		37	1.59	1.60
2220.00	UNSOLD		756	1.32	1.35
	SOLD		91	1.32	1.52
2230.00	UNSOLD		1626	1.23	1.22
	SOLD		64	1.31	1.47
2235.00	UNSOLD		1766	1.23	1.22
	SOLD		44	1.23	1.37
2245.00	UNSOLD		802	1.35	1.24
	SOLD		49	1.35	1.39

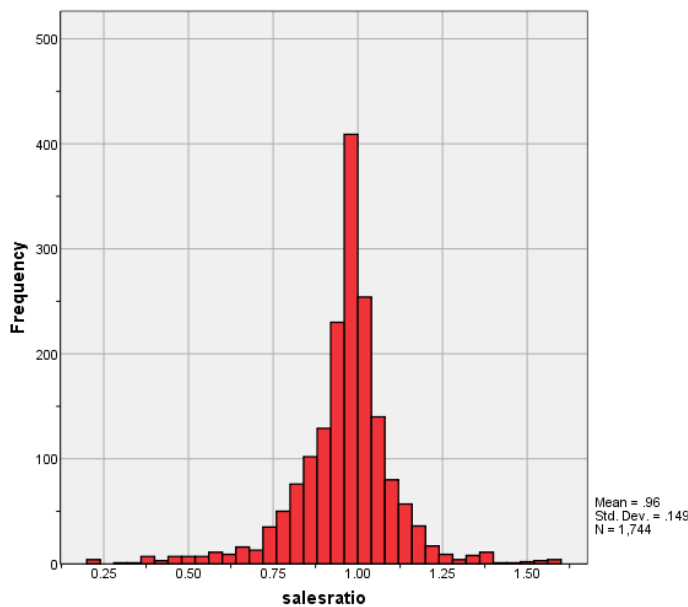
The above results indicated that sold and unsold commercial/industrial properties were valued consistently overall.

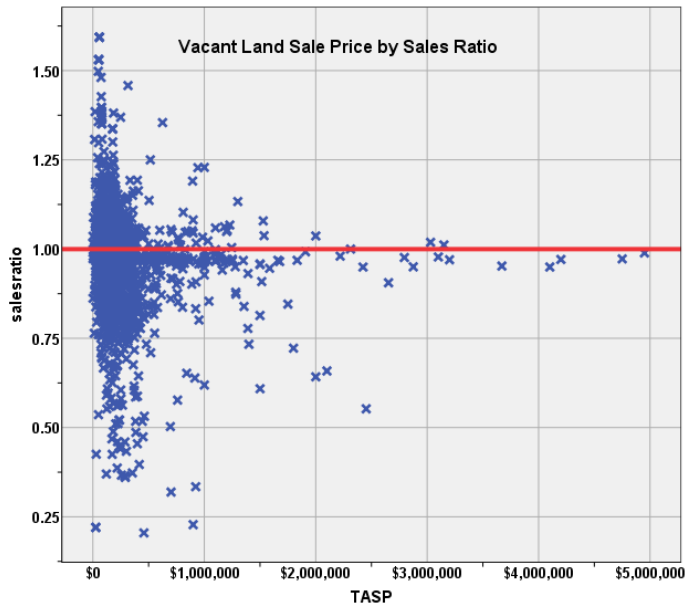
**V. VACANT LAND SALE RESULTS**

There were 1,744 qualified commercial/industrial sales over the 24 month period ending June 30, 2022. The sales ratio analysis was analyzed as follows:

Ratio Statistics for currInd / Vtasp	
<b>Median</b>	<b>0.973</b>
<b>Price Related Differential</b>	<b>1.020</b>
<b>Coefficient of Dispersion</b>	<b>9.9</b>

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





SALES OVER \$5,000,000 EXCLUDED FOR ILLUSTRATION PURPOSES

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

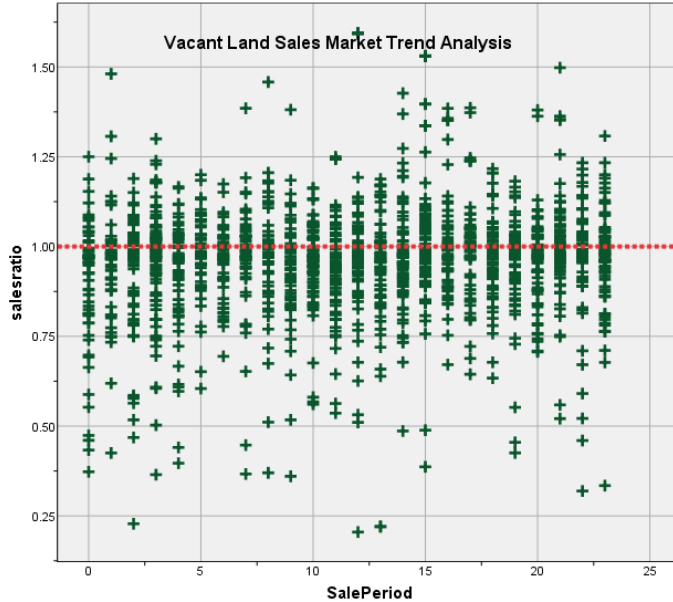
We next analyzed the vacant land dataset using the 24-month sale period, with the following results:

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

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	.935	.007		130.185	.000
	SalePeriod	.002	.001	.102	4.279	.000

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 taxable year 2020 and taxable year 2022 for each group. The following results present the comparison results for sold and unsold properties:

#### Report

DIFF				
	sold	N	Median	Mean
UNSOLD		18167	1.20	1.10
SOLD		1540	1.34	1.37

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	
5946	UNSOLD	13	1.69	1.70	
	SOLD	11	1.69	1.67	
12234	UNSOLD	5	.90	.87	
	SOLD	10	.90	.94	
13827	UNSOLD	9	1.25	.87	
	SOLD	16	1.57	1.56	
14053	UNSOLD	5	1.50	1.50	
	SOLD	18	1.26	1.29	
14161	UNSOLD	6	1.21	1.14	
	SOLD	18	1.02	1.11	
14170	UNSOLD	9	1.35	1.31	
	SOLD	16	1.16	1.21	

14209	UNSOLD	53	1.13	1.19
	SOLD	24	1.13	1.14
14238	UNSOLD	28	1.30	1.05
	SOLD	10	1.74	1.68
14486	UNSOLD	64	1.19	1.19
	SOLD	14	1.19	1.19
14495	SOLD	23	1.02	1.02
		23	1.02	1.02
14501	UNSOLD	134	1.33	1.33
	SOLD	43	1.33	1.33
14513	UNSOLD	7	1.35	1.27
	SOLD	14	1.35	1.26
14589	UNSOLD	6	1.03	1.06
	SOLD	48	1.02	1.02
14686	UNSOLD	7	1.54	1.34
	SOLD	37	1.54	1.53
14711	UNSOLD	6	1.19	1.19
	SOLD	10	1.19	1.19
14723	UNSOLD	114	.96	.98
	SOLD	11	.96	.93
14769	UNSOLD	9	1.49	1.49
	SOLD	23	1.49	1.49
14778	UNSOLD	8	1.50	.94
	SOLD	42	1.50	1.46
14807	UNSOLD	27	1.13	1.13
	SOLD	18	1.13	1.13
14896	UNSOLD	46	1.49	1.49
	SOLD	11	1.49	1.48

Based on the stratified comparison by subdivisions with at least 10 sales, we concluded that the assessor has valued sold and unsold vacant land parcels consistently.

## V. CONCLUSIONS

Based on this 2023 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			
.	.959	.948	.970	.964	.956	.969	95.4%	.959	.946	.972	1.000	.044	6.8%
1.00	.978	.976	.981	.965	.964	.967	95.1%	.973	.971	.976	1.005	.062	9.9%
2.00	.965	.956	.975	.956	.951	.962	95.4%	.942	.926	.958	1.025	.097	15.2%
3.00	.990	.975	1.004	.959	.951	.971	95.6%	.967	.954	.979	1.024	.112	16.8%
4.00	.977	.972	.981	.960	.957	.962	95.2%	.971	.962	.981	1.005	.068	10.7%
5.00	.984	.974	.994	.957	.953	.962	95.5%	.964	.937	.992	1.020	.119	18.9%
6.00	.986	.972	.999	.965	.955	.980	95.5%	.961	.940	.982	1.026	.119	15.7%
7.00	.985	.977	.994	.963	.957	.971	95.6%	.971	.963	.979	1.015	.091	14.0%
8.00	.960	.952	.968	.958	.953	.964	95.0%	.935	.905	.966	1.026	.075	10.7%
9.00	.958	.949	.967	.952	.943	.958	95.2%	.944	.932	.956	1.015	.077	11.0%
10.00	.959	.952	.966	.955	.951	.960	95.2%	.985	.932	1.038	.973	.068	10.0%
11.00	.990	.985	.996	.975	.970	.979	95.1%	.984	.979	.989	1.007	.071	10.9%
12.00	.966	.963	.970	.958	.956	.961	95.2%	.962	.959	.966	1.004	.062	9.6%
13.00	.970	.966	.975	.959	.955	.962	95.2%	.970	.941	.998	1.000	.062	9.2%
14.00	.959	.956	.962	.961	.958	.964	95.3%	.952	.948	.955	1.008	.071	10.1%
15.00	.967	.961	.972	.965	.960	.970	95.5%	.952	.944	.959	1.016	.081	11.6%
16.00	.950	.937	.963	.957	.943	.965	96.0%	.933	.916	.950	1.018	.092	13.2%
17.00	.961	.951	.971	.967	.953	.976	95.4%	.935	.923	.947	1.028	.115	15.6%
18.00	1.010	.988	1.032	.971	.960	.980	95.8%	.979	.967	.992	1.031	.133	28.3%
19.00	.977	.944	1.010	.968	.956	.990	96.2%	.962	.934	.990	1.016	.145	25.1%
20.00	.953	.950	.957	.955	.952	.958	95.1%	.948	.944	.951	1.006	.075	10.3%

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.

## Commercial

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			
.972	.952	.991	.976	.953	.990	95.9%	.936	.889	.984	1.037	.136	19.8%

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			
.962	.955	.969	.973	.971	.976	95.3%	.944	.935	.953	1.020	.099	15.4%

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

**Residential Median Ratio Stratification**

**Subclass**

**Case Processing Summary**

		Count	Percent
ABSTRIMP	.00	504	1.6%
	1212.00	29310	93.1%
	1213.00	3	0.0%
	1213.50	8	0.0%
	1214.00	1	0.0%
	1215.00	195	0.6%
	1215.40	1	0.0%
	1215.50	1	0.0%
	1216.00	2	0.0%
	1217.50	1	0.0%
	1218.00	1	0.0%
	1220.00	213	0.7%
	1221.00	1	0.0%
	1225.00	58	0.2%
	1230.00	1133	3.6%
	1381.67	1	0.0%
	1414.80	1	0.0%
	1467.13	1	0.0%
	1548.00	1	0.0%
	1551.33	1	0.0%
	1616.40	1	0.0%
	1712.00	1	0.0%
	1713.50	1	0.0%
	1716.00	2	0.0%
	1721.00	1	0.0%
	1723.50	3	0.0%
	1978.75	1	0.0%
	2220.00	2	0.0%
	2230.00	1	0.0%
	2234.33	5	0.0%
	2745.50	13	0.0%
	3052.20	1	0.0%
	3256.67	2	0.0%
	4277.00	4	0.0%
	4278.00	2	0.0%
	4278.50	1	0.0%
	4279.00	2	0.0%
	9250.00	1	0.0%
	9270.00	2	0.0%
Overall		31483	100.0%
Excluded		1	
Total		31484	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.00	.954	1.045	.099	27.1%
1212.00	.962	1.013	.076	12.0%
1213.00	.745	1.017	.107	21.7%
1213.50	.899	1.013	.068	10.2%
1214.00	.854	1.000	.000	.
1215.00	.938	1.042	.148	21.7%
1215.40	.810	1.000	.000	.
1215.50	.753	1.000	.000	.
1216.00	.506	1.005	.072	10.2%
1217.50	1.259	1.000	.000	.
1218.00	.825	1.000	.000	.
1220.00	.980	1.010	.079	11.7%
1221.00	.980	1.000	.000	.
1225.00	.989	1.003	.101	13.1%
1230.00	.951	1.006	.048	7.1%
1381.67	1.485	1.000	.000	.
1414.80	.487	1.000	.000	.
1467.13	.898	1.000	.000	.
1548.00	1.907	1.000	.000	.
1551.33	1.202	1.000	.000	.
1616.40	1.011	1.000	.000	.
1712.00	.965	1.000	.000	.
1713.50	.987	1.000	.000	.
1716.00	1.082	1.069	.100	14.1%
1721.00	.810	1.000	.000	.
1723.50	1.315	1.037	.083	16.3%
1978.75	.871	1.000	.000	.
2220.00	1.179	.937	.194	27.5%
2230.00	.980	1.000	.000	.
2234.33	.924	1.005	.052	6.6%
2745.50	.902	1.038	.172	27.3%
3052.20	.852	1.000	.000	.
3256.67	.988	1.002	.051	7.2%
4277.00	1.178	1.024	.146	19.7%
4278.00	.988	1.087	.282	39.9%
4278.50	1.194	1.000	.000	.
4279.00	2.666	.982	.169	24.0%
9250.00	.963	1.000	.000	.
9270.00	.996	1.000	.011	1.6%
Overall	.961	1.012	.077	12.5%

## Age

### Case Processing Summary

		Count	Percent
AgeRec	0	504	1.6%
	Over 100	681	2.2%
	75 to 100	331	1.1%
	50 to 75	3745	11.9%
	25 to 50	8032	25.5%
	5 to 25	9574	30.4%
	5 or Newer	8616	27.4%
Overall		31483	100.0%
Excluded		1	
Total		31484	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.954	1.045	.099	27.1%
Over 100	.960	1.038	.146	21.5%
75 to 100	.965	1.049	.148	21.9%
50 to 75	.964	1.016	.097	15.6%
25 to 50	.962	1.006	.076	12.3%
5 to 25	.956	1.009	.061	9.7%
5 or Newer	.967	1.010	.076	10.8%
Overall	.961	1.012	.077	12.5%

## Improved Area

### Case Processing Summary

		Count	Percent
ImpSFRec	0	504	1.6%
	LE 500 sf	30	0.1%
	500 to 1,000 sf	2854	9.1%
	1,000 to 1,500 sf	8345	26.5%
	1,500 to 2,000 sf	10227	32.5%
	2,000 to 3,000 sf	7550	24.0%
	3,000 sf or Higher	1973	6.3%
Overall		31483	100.0%
Excluded		1	
Total		31484	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.954	1.045	.099	27.1%
LE 500 sf	.911	.969	.203	37.9%
500 to 1,000 sf	.954	1.016	.091	16.2%
1,000 to 1,500 sf	.957	1.008	.069	11.7%
1,500 to 2,000 sf	.962	1.007	.070	10.4%
2,000 to 3,000 sf	.967	1.014	.078	11.7%
3,000 sf or Higher	.963	1.011	.106	15.2%
Overall	.961	1.012	.077	12.5%

### Improvement Quality

#### Case Processing Summary

	Count	Percent
QUALITY		
.00	1	0.0%
1.00	275	0.9%
2.00	23471	75.8%
3.00	6702	21.6%
4.00	463	1.5%
5.00	66	0.2%
Overall	30978	100.0%
Excluded	506	
Total	31484	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.00	.831	1.000	.000	.
1.00	.956	1.040	.181	29.8%
2.00	.960	1.007	.073	11.9%
3.00	.967	1.012	.079	11.2%
4.00	.951	1.030	.110	15.1%
5.00	.911	1.063	.197	25.8%
Overall	.961	1.011	.076	12.1%

### Commercial Median Ratio Stratification

#### Sale Price

#### Case Processing Summary

	Count	Percent
SPRec		
\$25K to \$50K	1	0.3%
\$50K to \$100K	6	1.6%
\$100K to \$150K	7	1.9%
\$150K to \$200K	11	3.0%
\$200K to \$300K	23	6.3%
\$300K to \$500K	51	14.0%
\$500K to \$750K	53	14.6%



\$750K to \$1,000K	39	10.7%
Over \$1,000K	173	47.5%
Overall	364	100.0%
Excluded	0	
Total	364	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
\$25K to \$50K	1.018	1.000	.000	.
\$50K to \$100K	.985	1.011	.203	28.9%
\$100K to \$150K	1.064	1.011	.113	15.3%
\$150K to \$200K	1.026	.996	.157	22.5%
\$200K to \$300K	.960	.997	.147	20.8%
\$300K to \$500K	.990	.999	.107	15.5%
\$500K to \$750K	.971	.998	.137	23.2%
\$750K to \$1,000K	.970	.998	.106	13.4%
Over \$1,000K	.942	1.010	.148	20.7%
Overall	.976	1.037	.136	19.7%

### Subclass

### Case Processing Summary

	Count	Percent	
ABSTRIMP	.00	4	1.1%
	1220.00	1	0.3%
	1716.00	5	1.4%
	1720.00	2	0.5%
	1722.50	1	0.3%
	1725.00	1	0.3%
	2122.22	1	0.3%
	2132.00	1	0.3%
	2155.77	1	0.3%
	2212.00	47	12.9%
	2215.00	1	0.3%
	2217.33	1	0.3%
	2218.00	1	0.3%
	2220.00	94	25.8%
	2221.00	1	0.3%
	2221.67	1	0.3%
	2222.22	1	0.3%
	2223.50	1	0.3%
	2224.00	1	0.3%
	2224.80	1	0.3%
	2225.00	4	1.1%
	2226.17	1	0.3%
	2227.50	2	0.5%
	2230.00	69	19.0%
	2232.50	2	0.5%
	2232.75	1	0.3%
	2233.75	1	0.3%
	2235.00	50	13.7%
	2245.00	58	15.9%
	3215.00	3	0.8%

	3230.00	2	0.5%
	3254.50	1	0.3%
	3257.00	1	0.3%
	9259.00	1	0.3%
	9279.00	1	0.3%
Overall		364	100.0%
Excluded		0	
Total		364	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.00	.950	1.010	.045	6.6%
1220.00	.138	1.000	.000	.
1716.00	1.000	1.028	.296	57.8%
1720.00	.873	1.041	.176	24.9%
1722.50	1.278	1.000	.000	.
1725.00	.990	1.000	.000	.
2122.22	1.232	1.000	.000	.
2132.00	.942	1.000	.000	.
2155.77	1.039	1.000	.000	.
2212.00	1.003	1.072	.115	16.3%
2215.00	.546	1.000	.000	.
2217.33	1.112	1.000	.000	.
2218.00	.958	1.000	.000	.
2220.00	.981	1.030	.132	17.9%
2221.00	1.071	1.000	.000	.
2221.67	.424	1.000	.000	.
2222.22	.931	1.000	.000	.
2223.50	1.010	1.000	.000	.
2224.00	.999	1.000	.000	.
2224.80	.955	1.000	.000	.
2225.00	.966	1.105	.077	11.2%
2226.17	1.137	1.000	.000	.
2227.50	1.042	1.022	.177	25.0%
2230.00	.948	.989	.141	18.9%
2232.50	.893	.987	.122	17.2%
2232.75	1.244	1.000	.000	.
2233.75	.376	1.000	.000	.
2235.00	.963	.992	.106	12.8%
2245.00	.981	.994	.133	18.3%
3215.00	.982	.984	.058	9.1%
3230.00	.907	1.007	.087	12.3%
3254.50	.610	1.000	.000	.
3257.00	.100	1.000	.000	.
9259.00	1.177	1.000	.000	.
9279.00	.850	1.000	.000	.
Overall	.976	1.037	.136	19.7%

## Age

### Case Processing Summary

		Count	Percent
AgeRec	0	4	1.1%
	Over 100	27	7.4%
	75 to 100	13	3.6%
	50 to 75	51	14.0%
	25 to 50	142	39.0%
	5 to 25	100	27.5%
	5 or Newer	27	7.4%
Overall		364	100.0%
Excluded		0	
Total		364	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.950	1.010	.045	6.6%
Over 100	1.000	1.039	.190	30.9%
75 to 100	1.016	1.125	.217	30.6%
50 to 75	.971	1.047	.149	21.1%
25 to 50	.985	1.044	.118	16.5%
5 to 25	.945	1.015	.143	19.5%
5 or Newer	.983	1.009	.094	13.0%
Overall	.976	1.037	.136	19.7%

## Improved Area

### Case Processing Summary

		Count	Percent
ImpSFRec	0	4	1.1%
	LE 500 sf	1	0.3%
	500 to 1,000 sf	18	4.9%
	1,000 to 1,500 sf	29	8.0%
	1,500 to 2,000 sf	27	7.4%
	2,000 to 3,000 sf	39	10.7%
	3,000 sf or Higher	246	67.6%
Overall		364	100.0%
Excluded		0	
Total		364	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.950	1.010	.045	6.6%
LE 500 sf	.674	1.000	.000	.
500 to 1,000 sf	.999	1.017	.087	14.3%
1,000 to 1,500 sf	.975	1.176	.162	22.1%
1,500 to 2,000 sf	.933	1.033	.150	22.3%
2,000 to 3,000 sf	.983	1.092	.157	22.2%
3,000 sf or Higher	.982	1.035	.131	19.2%
Overall	.976	1.037	.136	19.7%

### Improvement Quality

#### Case Processing Summary

	Count	Percent
QUALITY 1.00	52	14.4%
2.00	303	84.2%
3.00	5	1.4%
Overall	360	100.0%
Excluded	4	
Total	364	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1.00	.978	1.015	.155	25.4%
2.00	.977	1.042	.134	18.8%
3.00	.983	1.154	.088	12.2%
Overall	.979	1.038	.137	19.7%

### Vacant Land Median Ratio Stratification

### Sale Price

#### Case Processing Summary

	Count	Percent
SPreC LT \$25K	27	1.5%
\$25K to \$50K	60	3.4%
\$50K to \$100K	267	15.3%
\$100K to \$150K	416	23.9%
\$150K to \$200K	233	13.4%
\$200K to \$300K	333	19.1%
\$300K to \$500K	211	12.1%
\$500K to \$750K	61	3.5%
\$750K to \$1,000K	56	3.2%
Over \$1,000K	80	4.6%
Overall	1744	100.0%
Excluded	1	
Total	1745	

### Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT \$25K	1.005	.978	.089	13.1%
\$25K to \$50K	1.012	.982	.124	21.0%
\$50K to \$100K	1.008	1.005	.105	16.1%
\$100K to \$150K	.970	1.001	.070	10.4%
\$150K to \$200K	.978	.998	.113	15.7%
\$200K to \$300K	.968	1.003	.110	16.2%
\$300K to \$500K	.937	1.007	.114	16.7%
\$500K to \$750K	.968	1.002	.078	14.5%
\$750K to \$1,000K	.968	1.000	.101	18.7%
Over \$1,000K	.969	.997	.060	10.8%
Overall	.973	1.020	.099	15.3%

### Subclass

### Case Processing Summary

		Count	Percent
ABSTRLND	.00	37	2.1%
	100.00	887	50.9%
	200.00	134	7.7%
	300.00	23	1.3%
	510.00	3	0.2%
	520.00	13	0.7%
	530.00	24	1.4%
	540.00	20	1.1%
	550.00	141	8.1%
	560.00	2	0.1%
	1112.00	415	23.8%
	1115.00	1	0.1%
	1135.00	20	1.1%
	2112.00	3	0.2%
	2120.00	2	0.1%
	2130.00	11	0.6%
	2135.00	1	0.1%
	4147.00	3	0.2%
	9149.00	1	0.1%
	9159.00	3	0.2%
Overall		1744	100.0%
Excluded		1	
Total		1745	

### Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.00	.951	.994	.089	13.8%
100.00	.976	1.022	.098	14.3%
200.00	.970	1.006	.059	12.8%
300.00	.974	.990	.061	10.8%
510.00	.536	1.319	.367	65.0%
520.00	.971	1.025	.114	19.9%
530.00	.953	.977	.168	25.0%
540.00	.923	.959	.072	10.6%
550.00	.959	1.022	.141	18.4%
560.00	.736	1.040	.240	34.0%
1112.00	.981	1.027	.092	15.2%
1115.00	1.020	1.000	.000	.
1135.00	.860	.989	.207	26.6%
2112.00	1.136	.983	.094	15.0%
2120.00	.971	1.000	.001	0.1%
2130.00	.971	1.052	.099	14.4%
2135.00	1.051	1.000	.000	.
4147.00	.965	1.011	.084	17.6%
9149.00	1.180	1.000	.000	.
9159.00	.979	1.002	.064	9.9%
Overall	.973	1.020	.099	15.3%