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WILDROSE
APPRAISAL, INCORPORATED
Audit Division

September 15, 2020

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

RE: **Final Report for the 2020 Colorado Property Assessment Study**

Dear Ms. Mullis:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2020 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.

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

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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 2020 and is pleased to report its findings for El Paso County in the following report.

REGIONAL/HISTORICAL SKETCH OF EL PASO COUNTY

Regional Information

El Paso County is located in the Front Range region of Colorado. The Colorado Front Range is a colloquial geographic term for the populated areas of the State that are just east of the foothills of the Front Range. It includes Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, El Paso, Jefferson, Larimer, Pueblo, and Weld counties.
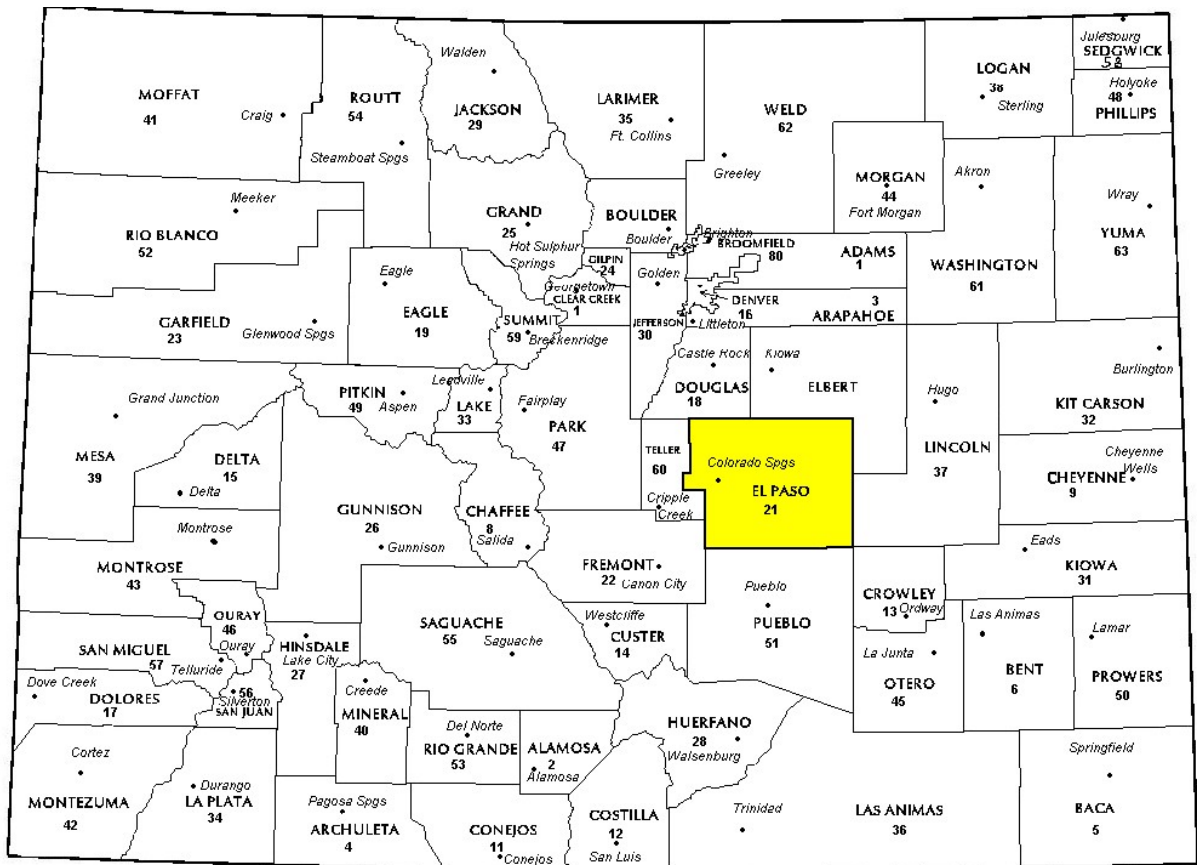
Historical Information

El Paso County had an estimated population of approximately 688,284 people with 323.59 people per square mile, according to the U.S. Census Bureau's 2016 estimated census data. This represents a 10.6 percent change from April 1, 2010 to July 1, 2016.

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

The Jefferson Territory never received federal sanction, but on Feb. 2, 1861, U.S. President James Buchanan signed an act organizing the Territory of Colorado. El Paso County was one of the original 17 counties created by the Colorado legislature on November 1, 1861. Part of its western territory was broken off to create Teller County in 1899. Originally based in Old Colorado City (now part of Colorado Springs, not today's Colorado City between Pueblo and Walsenburg), El Paso County's county seat was moved to Colorado Springs in 1873.

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

(Wikipedia.org)

RATIO ANALYSIS

Methodology

All significant classes of properties were analyzed. Sales were collected for each property class over the appropriate sale period, which was typically defined as the 18-month period between January 1, 2017 and June 30, 2018. Counties with less than 30 sales typically extended the sale period back up to 5 years prior to June 30, 2018 in 6-month increments. If there were still fewer than 30 sales, supplemental appraisals were performed and treated as proxy sales. Residential sales for all counties using this method totaled at least 30 per county. For commercial sales, the total number analyzed was allowed, in some cases, to fall below 30. There were no sale quantity issues for counties requiring vacant land analysis or condominium analysis. Although it was required that we examine the median and coefficient of dispersion for all counties, we also calculated the weighted mean and price-related differential for each class of property. Counties were not passed or failed by these latter measures, but were counseled if there were anomalies noted during our analysis. Qualified sales were based on the qualification code used by each county, which were typically coded as either "Q" or "C." The ratio analysis included all sales. The data was trimmed for counties with obvious outliers using IAAO standards for data analysis. In every case, we examined the loss in data from trimming to ensure that only true outliers were excluded. Any county with a significant portion of sales excluded by this trimming method was examined further. No county was allowed to pass the audit if more than 5% of the sales were "lost" because of trimming. For the largest 11 counties, the residential ratio statistics were broken down by economic area as well.

Conclusions

For this final analysis report, the minimum acceptable statistical standards allowed by the State Board of Equalization are:

ALLOWABLE STANDARDS RATIO GRID		
Property Class	Unweighted Median Ratio	Coefficient of Dispersion
Commercial/Industrial	Between .95-1.05	Less than 20.99
Condominium	Between .95-1.05	Less than 15.99
Single Family	Between .95-1.05	Less than 15.99
Vacant Land	Between .95-1.05	Less than 20.99

The results for El Paso County are:

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	350	0.950	1.083	14.1	Compliant
Condominium	N/A	N/A	N/A	N/A	N/A
Single Family	36,923	0.970	1.009	5.9	Compliant
Vacant Land	1,342	0.986	1.027	9.7	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

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.

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

Conclusions

After applying the above described methodologies, it is concluded that 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
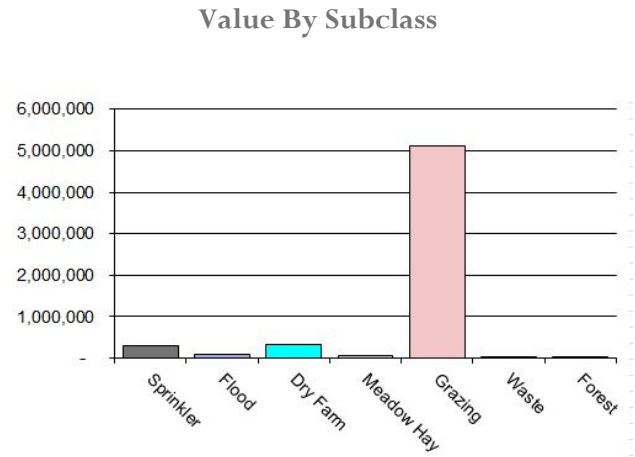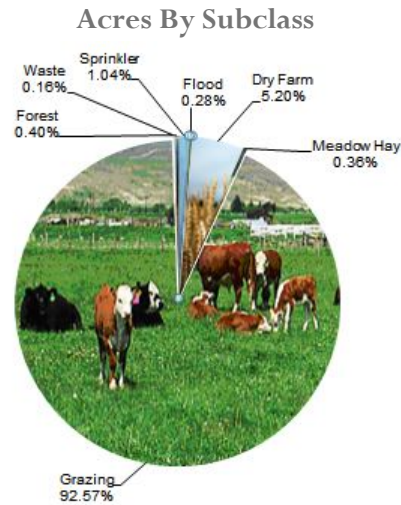
Agricultural Land

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	5,722	55.01	314,758	319,316	0.99
4117	Flood	1,518	57.49	87,266	88,281	0.99
4127	Dry Farm	28,660	11.28	323,192	328,897	0.98
4137	Meadow Hay	1,980	30.69	60,766	60,766	1.00
4147	Grazing	510,650	10.04	5,125,557	5,125,557	1.00
4177	Forest	2,224	12.59	28,002	28,002	1.00
4167	Waste	887	2.39	2,116	2,116	1.00
Total/Avg		**551,641**	**10.77**	**5,941,657**	**5,952,935**	**1.00**

Recommendations

None

Agricultural Outbuildings

Methodology

Data was collected and reviewed to determine if the guidelines found in the Assessor's Reference Library (ARL) Volume 3, pages 5.74 through 5.77 were being followed.

Conclusions

El Paso County has complied with the procedures provided by the Division of Property Taxation for the valuation of agricultural outbuildings.

Recommendations

None

Agricultural Land Under Improvements

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 2020 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 60 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 a good job of verifying their sales.

Recommendations

None

ECONOMIC AREA REVIEW AND EVALUATION

Methodology

El Paso County has submitted a written narrative describing the economic areas that make up the county's market areas. El Paso County has also submitted a map illustrating these areas. Each of these narratives have been read and analyzed for logic and appraisal sensibility. The maps were also compared to the narrative for consistency between the written description and the map.

Conclusions

After review and analysis, it has been determined that El Paso County has adequately identified homogeneous economic areas comprised of smaller neighborhoods. Each economic area defined is equally subject to a set of economic forces that impact the value of the properties within that geographic area and this has been adequately addressed. Each economic area defined adequately delineates an area that will give "similar values for similar properties in similar areas."

Recommendations

None

NATURAL RESOURCES

Earth and Stone Products

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 2020 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
- CO Secretary of State
- Business Filngs
- Volunteer Filings

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 2020 valuation period. The number and listing of businesses audited was also submitted and was in conformance with the written audit plan. The following audit triggers were used by the county to select accounts to be audited:

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

- Incomplete or inconsistent declarations
- Accounts with omitted property
- Same business type or use
- Businesses with no deletions or additions for 2 or more years
- Non-filing Accounts - Best Information Available
- Accounts close to the $7,700 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 1.05. 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
FOR EL PASO COUNTY
2020**

I. OVERVIEW

El Paso County is an urban county located along Colorado's Front Range. The county has a total of 255,402 real property parcels, according to data submitted by the county assessor's office in 2020. The following provides a breakdown of property classes for this county:
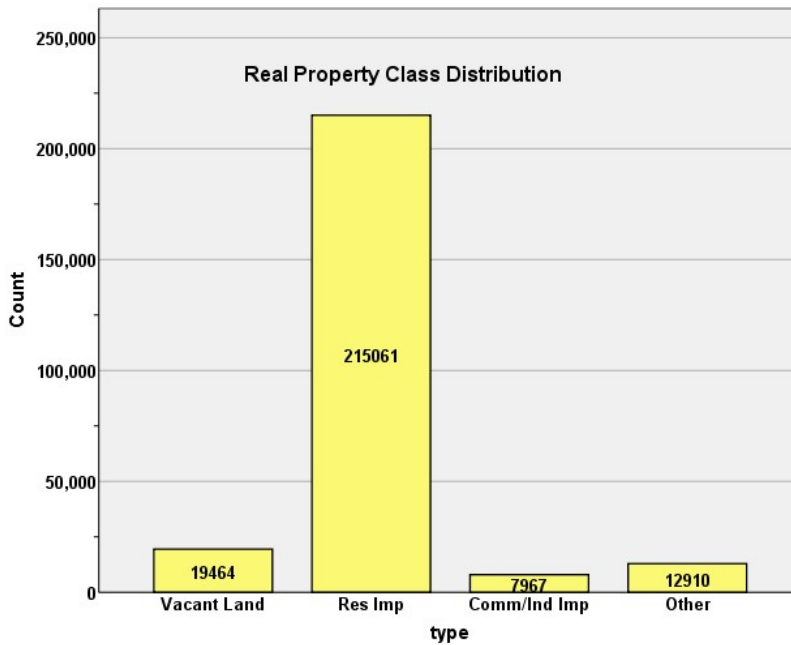
The vacant land class of properties was dominated by residential land. Residential lots (coded 100 and 1112) accounted for 76.8% of all vacant land parcels.

For residential improved properties, single family properties accounted for 94.1% 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.

Based on the Audit questionnaire filled out by the assessor (see below), the following geographic areas were used by the assessor to value residential, commercial and vacant land properties:

Geo Area	Residential	Comm/Ind	Vacant Land
Economic Area	V	N	V
Neighborhood	V	N	V
Subdivision	V	N	V

Codes
V=Valid Geographic Level – used for modeling
N = Not used as Geographic Level for modeling

Note: **Multiple Regression was not used on all Residential areas. Economic areas are divided into neighborhoods for all property types, but these divisions are not used for Comm/ Ind. Residential and vacant land are further divided into Market Areas, which may be similar to Subdivision.**

II. DATA FILES

The following sales analyses were based on the requirements of the 2020 Colorado Property Assessment Study. Information was provided by the El Paso Assessor's Office in May 2020. The data included all 5 property record files as specified by the Auditor.

III. RESIDENTIAL SALES RESULTS

There were 36,923 qualified residential sales over the 24 month period ending on June 30, 2018. The sales ratio analysis results were as follows:

Median	0.970
Price Related Differential	1.009
Coefficient of Dispersion	5.9

We next stratified the sale ratio analysis by economic area and neighborhood. The minimum count for the neighborhood stratification is 30 sales. The following are the results of this stratification analysis:

Economic Area
Case Processing Summary

		Count	Percent
ECONAREA	.00	272	0.7%
	1.00	6163	16.7%
	2.00	1178	3.2%
	3.00	641	1.7%
	4.00	3041	8.2%
	5.00	1617	4.4%
	6.00	667	1.8%
	7.00	1259	3.4%
	8.00	804	2.2%
	9.00	786	2.1%
	10.00	812	2.2%
	11.00	1771	4.8%
	12.00	4460	12.1%

	13.00	2101	5.7%
	14.00	3866	10.5%
	15.00	2342	6.3%
	16.00	583	1.6%
	17.00	921	2.5%
	18.00	729	2.0%
	19.00	176	0.5%
	20.00	2734	7.4%
Overall		36923	100.0%
Excluded		0	
Total		36923	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion
.00	.970	1.088	.133
1.00	.978	1.002	.040
2.00	.970	1.007	.080
3.00	.970	1.010	.110
4.00	.976	1.003	.050
5.00	.966	1.010	.074
6.00	.961	1.007	.098
7.00	.970	1.006	.062
8.00	.960	1.016	.069
9.00	.964	1.004	.069
10.00	.967	1.006	.069
11.00	.960	1.005	.065
12.00	.968	1.003	.050
13.00	.960	1.004	.065
14.00	.967	1.005	.053
15.00	.966	1.006	.058
16.00	.953	1.009	.088
17.00	.965	1.009	.074
18.00	.973	1.001	.071
19.00	.970	1.015	.110
20.00	.967	1.006	.049
Overall	.970	1.009	.059

Neighborhoods with at least 30 sales
Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion
1	.966	1.001	.039
2	.984	1.000	.047
5	.980	1.001	.037
10	.970	1.003	.046
15	.973	1.002	.039
16	.970	1.024	.079
17	.976	1.004	.043
18	.980	1.005	.048
23	.974	1.009	.077
24	.974	1.008	.075
26	.971	1.005	.105
28	.963	1.017	.115
30	.966	1.002	.090

31	.974	1.000	.107
32	.960	1.013	.111
35	.983	1.004	.053
38	.976	1.003	.039
40	.978	1.002	.035
41	.983	1.005	.051
42	.980	1.004	.053
43	.970	1.001	.034
44	.990	1.014	.063
45	.970	1.012	.137
48	.967	1.021	.086
49	.959	1.016	.087
50	.955	1.004	.095
51	.970	1.011	.076
54	.969	1.008	.095
56	.960	1.009	.101
57	.974	1.003	.053
58	.958	1.015	.098
59	**.969**	**1.128**	**.212**
60	.972	1.005	.057
61	.956	1.006	.074
62	.967	1.006	.065
63	.952	1.005	.078
64	.960	1.001	.049
66	.970	1.003	.059
67	.967	1.003	.057
68	.945	1.008	.069
69	.970	1.005	.053
70	.965	1.003	.082
71	.958	1.004	.069
72	.967	1.005	.054
73	.957	1.007	.069
74	.947	1.010	.083
75	.980	1.007	.082
76	.962	1.004	.067
77	.965	1.003	.057
79	.972	1.003	.044
80	.987	1.001	.036
82	.955	1.005	.074
83	.927	.999	.095
84	.956	1.005	.074
85	.966	1.008	.060
86	.969	1.003	.050
87	.963	1.008	.096
88	.961	1.000	.071
89	.955	1.002	.067
90	.965	1.004	.064
91	.953	1.004	.086
92	.951	1.014	.100
93	.962	1.003	.058
94	.970	1.006	.070
95	.970	1.000	.069
96	.977	1.005	.079
97	.975	1.002	.074
99	.975	1.001	.061
100	.970	1.035	.147
101	.970	.996	.071

103	.971	1.010	.063
105	.960	1.014	.085
106	.965	1.007	.052
107	.950	1.006	.087
211	.978	1.033	.129
213	.972	1.012	.118
409	.985	1.001	.021
417	.958	1.004	.054
441	.964	1.001	.039
452	.968	1.003	.037
453	.974	1.003	.054
456	.970	1.003	.045
463	.954	1.008	.069
470	.983	1.002	.030
472	.944	1.007	.073
474	.965	1.002	.036
480	.970	1.006	.073
481	.951	1.005	.066
486	.948	1.012	.090
515	.946	.991	.080
526	.964	1.010	.085
529	.993	1.001	.020
566	.962	1.007	.061
570	.956	1.002	.025
635	.965	1.002	.034
653	.971	1.001	.032
672	.959	1.005	.053
676	.968	1.006	.065
677	.978	1.002	.037
685	.973	1.001	.029
712	.962	1.003	.038
723	.976	1.003	.048
727	.959	1.003	.035
729	.961	1.000	.029
731	.959	1.002	.032
734	.974	1.001	.033
742	.975	1.001	.040
743	.968	1.004	.039
751	.972	1.006	.042
754	.978	1.002	.031
756	.965	1.001	.025
757	.984	1.001	.026
771	.972	1.001	.030
780	.968	1.001	.028
784	.982	1.001	.032
786	.982	1.002	.044
787	.990	1.006	.048
789	.972	1.002	.029
797	.990	1.000	.016
957	.960	.998	.030
Overall	.970	1.007	.059

Out of all residential neighborhoods with at least 30 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:

Mean = .97
Std. Dev. = .098
N = 36,923

Commercial Sale Price by Sales Ratio
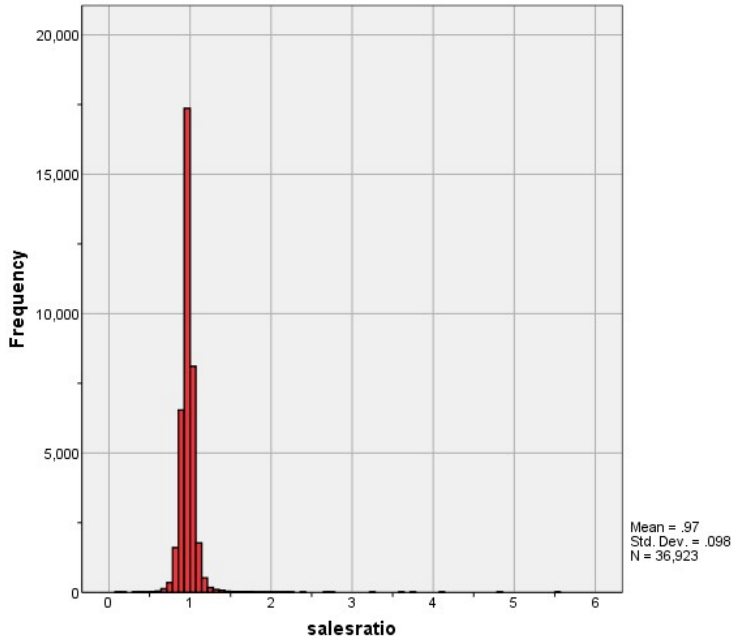
The above graphs indicate that the distribution of the sale ratios was within state mandated limits.

Residential Market Trend Analysis

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

Coefficients[a]

ECONAREA	Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
.00	1	(Constant)	.984	.035		28.208	.000
		SalePeriod	.003	.003	.061	.999	.319
1.00	1	(Constant)	.988	.002		577.325	.000
		SalePeriod	.000	.000	-.036	-2.823	.005
2.00	1	(Constant)	.967	.006		157.208	.000
		SalePeriod	.000	.000	.030	1.019	.308
3.00	1	(Constant)	.980	.014		70.097	.000
		SalePeriod	.000	.001	.007	.188	.851
4.00	1	(Constant)	.977	.003		317.514	.000
		SalePeriod	.000	.000	.023	1.276	.202
5.00	1	(Constant)	.974	.005		181.814	.000
		SalePeriod	.000	.000	-.014	-.574	.566
6.00	1	(Constant)	.946	.010		93.123	.000
		SalePeriod	.001	.001	.060	1.541	.124
7.00	1	(Constant)	.984	.005		206.389	.000
		SalePeriod	-.001	.000	-.067	-2.376	.018
8.00	1	(Constant)	.970	.011		90.275	.000
		SalePeriod	.000	.001	-.019	-.533	.594
9.00	1	(Constant)	.959	.006		156.856	.000
		SalePeriod	.001	.000	.090	2.517	.012
10.00	1	(Constant)	.954	.007		144.364	.000
		SalePeriod	.002	.000	.135	3.887	.000
11.00	1	(Constant)	.955	.004		230.746	.000
		SalePeriod	.001	.000	.072	3.055	.002
12.00	1	(Constant)	.964	.002		489.984	.000
		SalePeriod	.001	.000	.089	5.937	.000
13.00	1	(Constant)	.949	.004		260.147	.000
		SalePeriod	.001	.000	.087	3.999	.000
14.00	1	(Constant)	.969	.002		476.462	.000
		SalePeriod	.000	.000	-.015	-.952	.341
15.00	1	(Constant)	.961	.003		318.000	.000
		SalePeriod	.001	.000	.054	2.610	.009
16.00	1	(Constant)	.943	.010		91.095	.000
		SalePeriod	.000	.001	.023	.560	.575
17.00	1	(Constant)	.981	.011		92.582	.000
		SalePeriod	-.002	.001	-.061	-1.855	.064
18.00	1	(Constant)	.987	.008		123.532	.000
		SalePeriod	-.001	.001	-.064	-1.731	.084
19.00	1	(Constant)	.992	.028		35.844	.000

		SalePeriod	-.001	.002	-.042	-.553	.581
20.00	1	(Constant)	.971	.002		423.392	.000
		SalePeriod	.000	.000	-.024	-1.277	.202

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 2020 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	177872	$174	$181
SOLD	36915	$175	$185

Although the overall comparison indicated consistency in the valuation of sold and unsold properties by economic area, we also examined the percent change in actual value for taxable years 2018 and 2020 for sold and unsold residential properties by class and by economic area:

Report
DIFF

sold	N	Median	Mean
UNSOLD	171627	1.1930	1.2019
SOLD	35822	1.1905	1.2172

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of DIFF is the same across categories of sold.	Independent-Samples Mann-Whitney U Test	.468	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .00.

Report
DIFF

ECONAREA	sold	N	Median	Mean
.00	UNSOLD	1982	1.2500	1.2168
	SOLD	249	1.3000	1.3386
1.00	UNSOLD	22252	1.1980	1.2065
	SOLD	6006	1.2114	1.2428
2.00	UNSOLD	7722	1.1250	1.1351

	SOLD	1176	1.1250	1.1442
3.00	UNSOLD	3981	1.2810	1.2799
	SOLD	606	1.2810	1.2863
4.00	UNSOLD	13170	1.2895	1.2999
	SOLD	3005	1.3595	1.3668
5.00	UNSOLD	11571	1.1847	1.1974
	SOLD	1584	1.1703	1.2219
6.00	UNSOLD	4808	1.1650	1.1763
	SOLD	663	1.1590	1.1917
7.00	UNSOLD	9582	1.2420	1.2461
	SOLD	1251	1.2610	1.2832
8.00	UNSOLD	5374	1.1480	1.1467
	SOLD	797	1.1480	1.1516
9.00	UNSOLD	5078	1.1170	1.1376
	SOLD	786	1.1170	1.1580
10.00	UNSOLD	4547	1.2339	1.2310
	SOLD	812	1.2274	1.2401
11.00	UNSOLD	10812	1.1870	1.2115
	SOLD	1769	1.1900	1.2314
12.00	UNSOLD	15747	1.2237	1.2290
	SOLD	4373	1.2145	1.2173
13.00	UNSOLD	12010	1.1890	1.1809
	SOLD	2094	1.1890	1.1868
14.00	UNSOLD	13098	1.1953	1.1866
	SOLD	3621	1.1645	1.1658
15.00	UNSOLD	8797	1.1165	1.1234
	SOLD	2213	1.1202	1.1323
16.00	UNSOLD	2524	1.1820	1.1834
	SOLD	532	1.1538	1.1590
17.00	UNSOLD	6877	1.1620	1.1711
	SOLD	879	1.1620	1.1998
18.00	UNSOLD	5541	1.2130	1.2145
	SOLD	701	1.2263	1.2656
19.00	UNSOLD	1150	1.1600	1.1792
	SOLD	155	1.1600	1.2335
20.00	UNSOLD	5004	1.1620	1.1714
	SOLD	2550	1.1395	1.1550

We next stratified this analysis by neighborhoods with at least 30 sales. Out of 118 neighborhoods with at least 30 sales, the following 5 neighborhoods had significant differences between sold and unsold residential properties:

Report
DIFF

NBHD	sold	N	Median	Mean
16	UNSOLD	672	1.2094	1.2114
	SOLD	104	1.3731	1.3939
18	UNSOLD	330	1.2170	1.2477
	SOLD	71	1.3611	1.3807
41	UNSOLD	814	1.2907	1.2883
	SOLD	147	1.3731	1.3894
42	UNSOLD	1449	1.2857	1.2840
	SOLD	264	1.3828	1.4077
44	UNSOLD	694	1.2864	1.2843
	SOLD	86	1.4318	1.4673

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 363 qualified commercial/industrial sales over the 24 month period ending June 30, 2018. We trimmed 13 sale using IAAO standards, resulting in a final count of 350 qualified commercial sales. The sales ratio analysis results were as follows:

Median	0.950
Price Related Differential	1.083
Coefficient of Dispersion	14.1

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:

Mean = .95
Std. Dev. = .182
N = 350
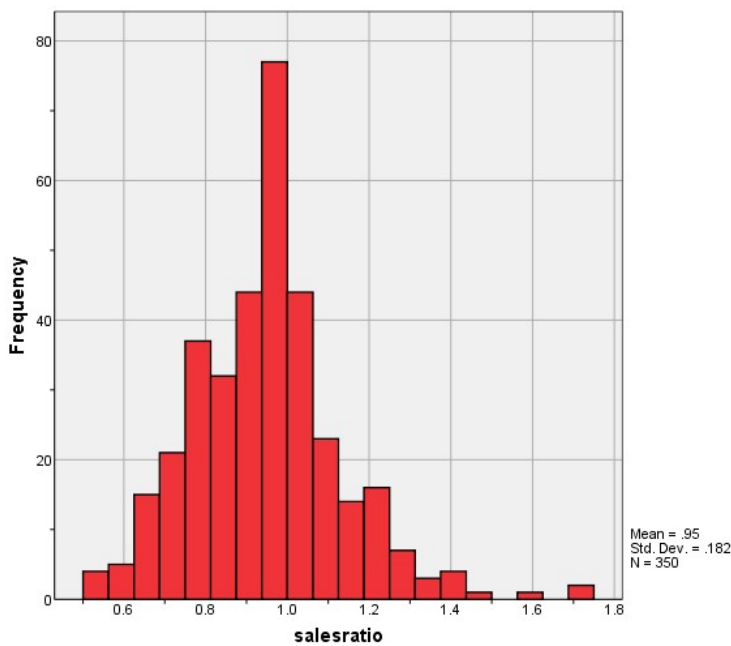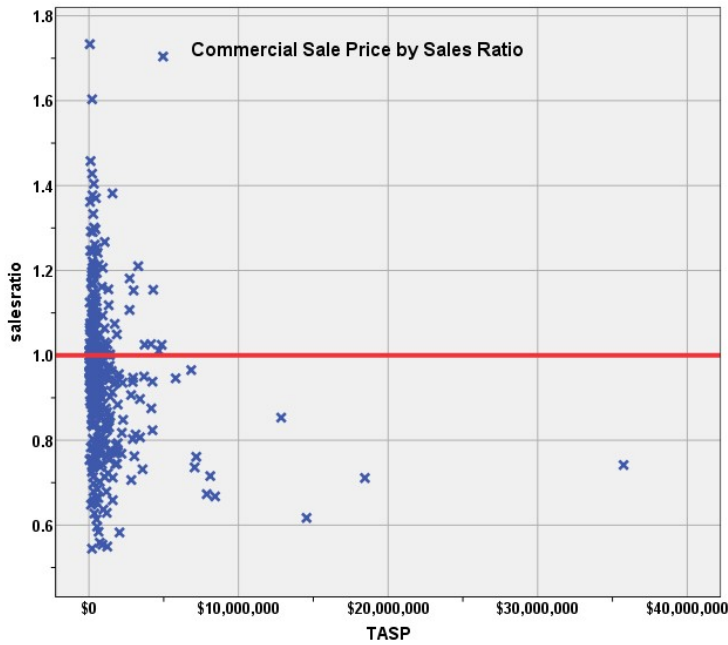
Commercial/Industrial Market Trend Analysis

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

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.938	.019		48.341	.000
	SalePeriod	.001	.001	.027	.512	.609

a. Dependent Variable: salesratio
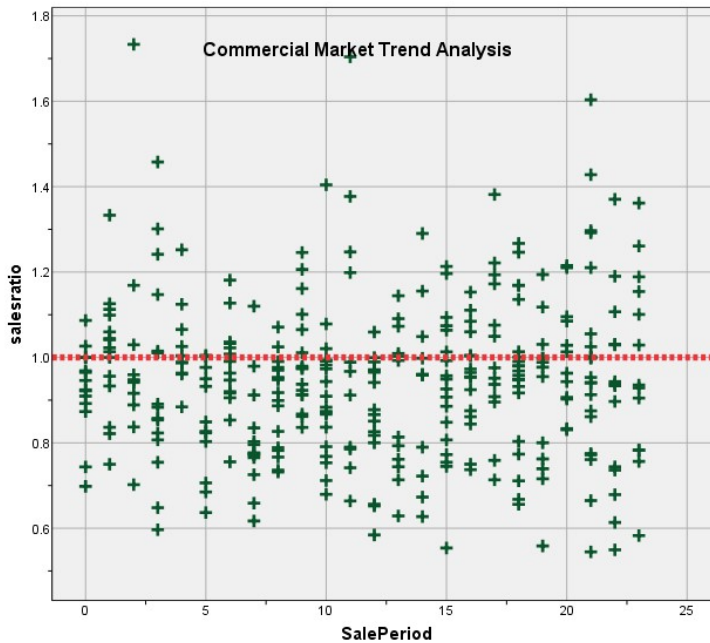
There was no residual market trending present in the commercial sale ratios. We concluded that the assessor has adequately considered market trending adjustments as part of the commercial/industrial valuation.

Sold/Unsold Analysis

We compared the 2020 actual value per square foot between sold and unsold commercial/industrial properties to determine if sold and unsold properties were valued consistently.

Report

VALSF

sold	N	Median	Mean
UNSOLD	7634	$84	$113
SOLD	350	$93	$108

Report

VALSF

ABSTRIMP	sold	N	Median	Mean
2212.00	UNSOLD	1259	$100	$128
	SOLD	33	$121	$135
2215.00	UNSOLD	115	$62	$79
	SOLD	3	$70	$58
2220.00	UNSOLD	788	$91	$101
	SOLD	72	$98	$114
2225.00	UNSOLD	112	$85	$191
	SOLD	3	$65	$61
2227.50	UNSOLD	64	$74	$92
	SOLD	3	$100	$131
2230.00	UNSOLD	1613	$119	$153
	SOLD	58	$110	$138

2235.00	UNSOLD	1743	$67	$96
	SOLD	79	$76	$74
2245.00	UNSOLD	768	$87	$99
	SOLD	61	$102	$112
3215.00	UNSOLD	149	$56	$71
	SOLD	4	$49	$71
3230.00	UNSOLD	227	$74	$71
	SOLD	5	$85	$82

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

V. VACANT LAND SALE RESULTS

There were 1,342 qualified commercial/industrial sales over the 24 month period ending June 30, 2018. The sales ratio analysis was analyzed as follows:

Ratio Statistics for currlnd / Vtasp

Median	0.986
Price Related Differential	1.027
Coefficient of Dispersion	9.7

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:

Mean = .98
Std. Dev. = .266
N = 1,342
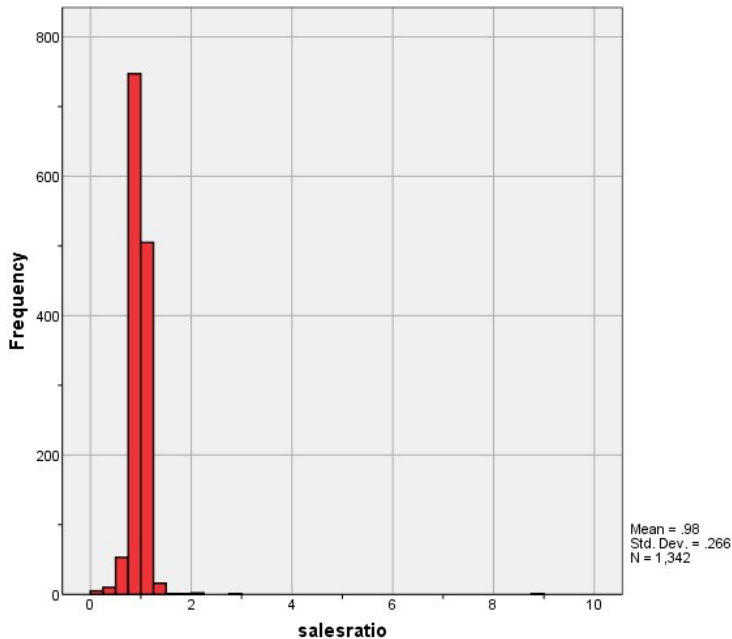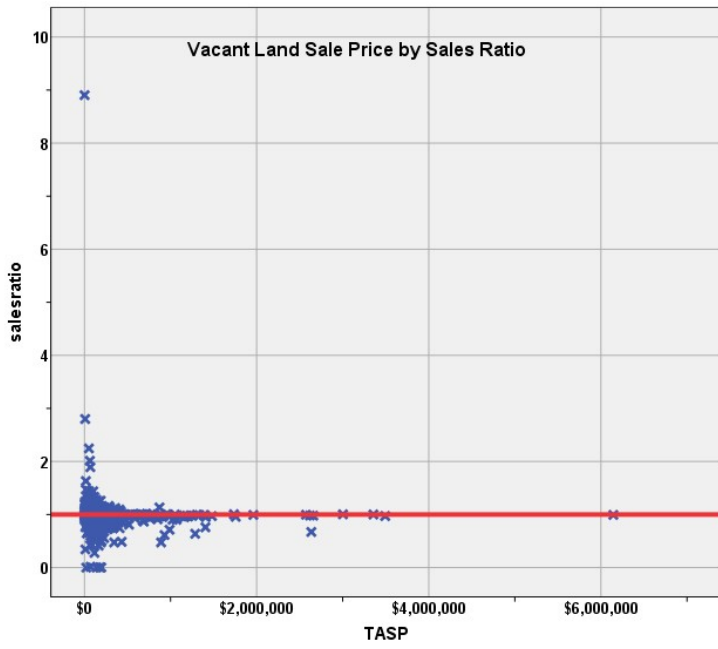
The above histogram indicates that the distribution of the vacant land sale ratios was within state mandated limits, while the above scatter plot indicated that there was no price related differential issues.

Vacant Land Market Trend Analysis

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

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.983	.006		167.988	.000
	SalePeriod	-.001	.000	-.043	-1.554	.120

a. Dependent Variable: salesratio
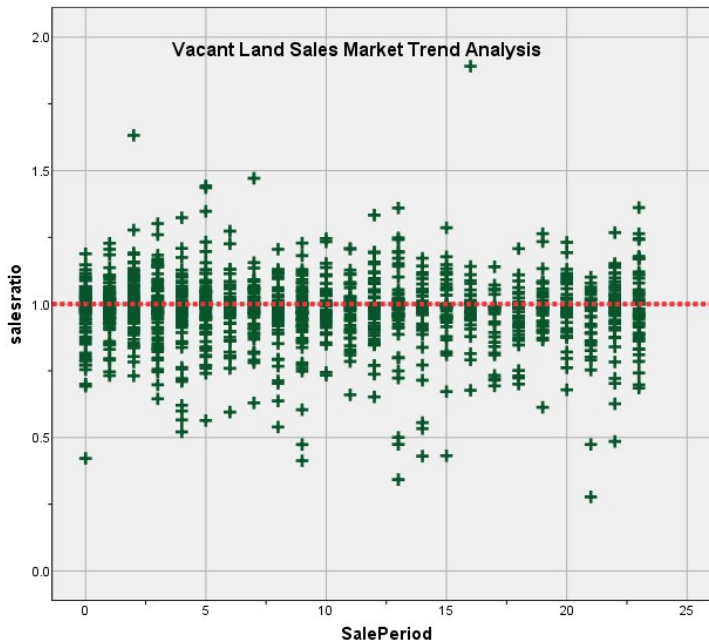
There was no significant trend. We therefore concluded that the assessor has adequately dealt with market trending for vacant land properties.

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 years 2018 and 2020 for each group. The following results present the comparison results for sold and unsold properties:

Report

DIFF

sold	N	Median	Mean
UNSOLD	13386	1.0380	.9085
SOLD	1162	1.1333	1.1736

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
10511	UNSOLD	13	1.0223	1.0480
	SOLD	10	1.0421	1.0204
11901	UNSOLD	5	.9856	.6209
	SOLD	10	.9859	1.1061
12407	UNSOLD	4	1.0347	1.0657
	SOLD	14	1.2319	1.2603
13539	UNSOLD	4	.9107	.9554
	SOLD	14	.8964	.9375

13789	UNSOLD	16	.9323	.7285
	SOLD	12	1.6492	1.4338
13831	UNSOLD	3	.9073	.9382
	SOLD	16	.9073	.9384
13937	UNSOLD	1	1.1324	1.1324
	SOLD	16	1.7472	1.5550
13946	UNSOLD	9	.5405	.5626
	SOLD	11	.8964	.9092
14011	UNSOLD	2	.9967	.9967
	SOLD	16	1.0585	1.0270
14016	UNSOLD	9	1.1384	.8393
	SOLD	13	1.1384	1.1384

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 2020 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											
		95% Confidence Interval for Mean			95% Confidence Interval for Median				95% Confidence Interval for Weighted Mean				Coefficient of Variation
ECONAREA	Mean	Lower Bound	Upper Bound	Median	Lower Bound	Upper Bound	Actual Coverage	Weighted Mean	Lower Bound	Upper Bound	Price Related Differential	Coefficient of Dispersion	Mean Centered
.00	1.014	.976	1.051	.970	.960	.984	95.5%	.932	.900	.964	1.088	.133	30.7%
1.00	.984	.982	.986	.978	.975	.980	95.0%	.982	.981	.984	1.002	.040	7.2%
2.00	.972	.966	.979	.970	.963	.972	95.6%	.966	.958	.974	1.007	.080	11.8%
3.00	.983	.968	.998	.970	.961	.976	95.2%	.973	.959	.986	1.010	.110	19.8%
4.00	.980	.977	.983	.976	.972	.979	95.4%	.977	.975	.980	1.003	.050	9.2%
5.00	.972	.966	.977	.966	.962	.970	95.3%	.962	.957	.968	1.010	.074	11.6%
6.00	.960	.949	.970	.961	.953	.969	95.6%	.953	.942	.963	1.007	.098	14.5%
7.00	.975	.970	.980	.970	.967	.970	95.2%	.969	.964	.974	1.006	.062	9.3%
8.00	.965	.954	.976	.960	.956	.965	95.6%	.950	.935	.964	1.016	.069	16.8%
9.00	.972	.965	.978	.964	.958	.970	95.0%	.968	.960	.977	1.004	.069	9.5%
10.00	.976	.969	.983	.967	.960	.973	95.5%	.970	.962	.978	1.006	.069	9.8%
11.00	.966	.962	.971	.960	.958	.965	95.4%	.962	.958	.966	1.005	.065	9.1%
12.00	.974	.972	.976	.968	.966	.970	95.0%	.971	.969	.973	1.003	.050	7.1%
13.00	.961	.958	.965	.960	.957	.964	95.0%	.957	.953	.961	1.004	.065	8.9%
14.00	.968	.965	.970	.967	.965	.969	95.2%	.963	.960	.965	1.005	.053	7.1%
15.00	.968	.965	.971	.966	.964	.969	95.0%	.962	.958	.966	1.006	.058	7.9%
16.00	.948	.937	.959	.953	.946	.960	95.3%	.940	.930	.950	1.009	.088	14.5%
17.00	.965	.953	.977	.965	.960	.970	95.2%	.957	.949	.964	1.009	.074	19.0%
18.00	.975	.967	.983	.973	.970	.977	95.5%	.974	.966	.983	1.001	.071	11.4%
19.00	.979	.950	1.009	.970	.965	.980	95.8%	.965	.942	.989	1.015	.110	20.0%
20.00	.968	.966	.971	.967	.965	.970	95.1%	.963	.956	.970	1.006	.049	6.7%

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

Commercial Land

Ratio Statistics for CURRTOT / TASP

	95% Confidence Interval for Mean			95% Confidence Interval for Median				95% Confidence Interval for Weighted Mean				Coefficient of Variation
Mean	Lower Bound	Upper Bound	Median	Lower Bound	Upper Bound	Actual Coverage	Weighted Mean	Lower Bound	Upper Bound	Price Related Differential	Coefficient of Dispersion	Mean Centered
.947	.928	.966	.950	.937	.963	95.2%	.874	.830	.919	1.083	.141	19.2%

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.

Vacant Land

Ratio Statistics for CURRLND / TASP

	95% Confidence Interval for Mean			95% Confidence Interval for Median				95% Confidence Interval for Weighted Mean				Coefficient of Variation
Mean	Lower Bound	Upper Bound	Median	Lower Bound	Upper Bound	Actual Coverage	Weighted Mean	Lower Bound	Upper Bound	Price Related Differential	Coefficient of Dispersion	Mean Centered
.981	.967	.996	.986	.982	.990	95.4%	.956	.945	.966	1.027	.097	27.1%

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

Residential Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT $25K	3	0.0%
	$25K to $50K	4	0.0%
	$50K to $100K	318	0.9%
	$100K to $150K	938	2.5%
	$150K to $200K	3185	8.6%
	$200K to $300K	14429	39.1%
	$300K to $500K	14238	38.6%
	$500K to $750K	3098	8.4%
	$750K to $1,000K	492	1.3%
	Over $1,000K	218	0.6%
Overall		36923	100.0%
Excluded		0	
Total		36923	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT $25K	.960	1.132	.186	36.9%
$25K to $50K	.970	.986	.134	29.2%
$50K to $100K	.992	1.010	.123	32.3%
$100K to $150K	.986	1.000	.107	18.9%
$150K to $200K	.979	1.000	.072	14.5%
$200K to $300K	.970	1.001	.051	8.6%
$300K to $500K	.969	1.001	.054	7.8%
$500K to $750K	.952	1.001	.070	9.6%
$750K to $1,000K	.952	1.001	.093	12.7%
Over $1,000K	.960	1.000	.087	14.0%
Overall	.970	1.009	.059	10.1%

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	.00	2	0.0%
	1212.00	34757	94.1%
	1212.75	1	0.0%
	1213.00	4	0.0%
	1213.50	10	0.0%
	1214.00	1	0.0%
	1215.00	187	0.5%
	1216.00	4	0.0%
	1217.50	1	0.0%
	1220.00	204	0.6%
	1221.00	1	0.0%
	1224.46	1	0.0%

	1225.00	48	0.1%
	1230.00	1676	4.5%
	1545.33	1	0.0%
	1548.00	1	0.0%
	1667.91	1	0.0%
	1713.50	1	0.0%
	1716.00	2	0.0%
	1720.00	1	0.0%
	1721.00	1	0.0%
	1722.25	1	0.0%
	1723.50	1	0.0%
	2029.00	1	0.0%
	2234.33	1	0.0%
	2575.33	1	0.0%
	2745.50	8	0.0%
	3261.00	1	0.0%
	3512.25	1	0.0%
	5235.00	1	0.0%
	9240.00	1	0.0%
	9270.00	1	0.0%
Overall		36923	100.0%
Excluded		0	
Total		36923	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.00	.321	.899	.402	56.8%
1212.00	.970	1.007	.058	9.8%
1212.75	.974	1.000	.000	.
1213.00	1.075	1.026	.094	12.7%
1213.50	.987	1.030	.112	19.8%
1214.00	.871	1.000	.000	.
1215.00	.970	1.014	.097	14.8%
1216.00	1.009	1.005	.196	30.0%
1217.50	1.833	1.000	.000	.
1220.00	.975	1.025	.114	18.9%
1221.00	1.001	1.000	.000	.
1224.46	1.000	1.000	.000	.
1225.00	.954	1.025	.094	13.3%
1230.00	.962	1.004	.053	8.2%
1545.33	.713	1.000	.000	.
1548.00	.982	1.000	.000	.
1667.91	.869	1.000	.000	.
1713.50	.698	1.000	.000	.
1716.00	.865	.964	.105	14.9%
1720.00	.516	1.000	.000	.
1721.00	4.798	1.000	.000	.
1722.25	.811	1.000	.000	.
1723.50	.874	1.000	.000	.
2029.00	1.227	1.000	.000	.
2234.33	.930	1.000	.000	.
2575.33	.926	1.000	.000	.
2745.50	.971	1.001	.038	5.0%
3261.00	2.754	1.000	.000	.

3512.25	1.024	1.000	.000	.
5235.00	1.003	1.000	.000	.
9240.00	1.210	1.000	.000	.
9270.00	.970	1.000	.000	.
Overall	.970	1.009	.059	10.1%

Age

Case Processing Summary

		Count	Percent
AgeRec	.00	2	0.0%
	Over 100	800	2.2%
	75 to 100	412	1.1%
	50 to 75	3469	9.4%
	25 to 50	9887	26.8%
	5 to 25	13770	37.3%
	5 or Newer	8583	23.2%
Overall		36923	100.0%
Excluded		0	
Total		36923	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.00	.321	.899	.402	56.8%
Over 100	.970	1.013	.100	15.2%
75 to 100	.969	1.016	.100	15.0%
50 to 75	.970	1.009	.076	13.3%
25 to 50	.966	1.015	.066	11.2%
5 to 25	.968	1.005	.052	7.6%
5 or Newer	.973	1.009	.049	9.9%
Overall	.970	1.009	.059	10.1%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	.00	2	0.0%
	LE 500 sf	28	0.1%
	500 to 1,000 sf	3709	10.0%
	1,000 to 1,500 sf	10739	29.1%
	1,500 to 2,000 sf	11221	30.4%
	2,000 to 3,000 sf	8876	24.0%
	3,000 sf or Higher	2348	6.4%
Overall		36923	100.0%
Excluded		0	
Total		36923	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.00	.321	.899	.402	56.8%
LE 500 sf	.939	1.031	.143	23.2%
500 to 1,000 sf	.967	1.007	.069	11.2%
1,000 to 1,500 sf	.965	1.006	.055	9.3%
1,500 to 2,000 sf	.969	1.005	.053	8.0%
2,000 to 3,000 sf	.974	1.008	.059	9.5%
3,000 sf or Higher	.975	1.033	.085	18.8%
Overall	.970	1.009	.059	10.1%

Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY	.0	1	0.0%
	1.0	289	0.8%
	2.0	27181	73.6%
	3.0	8793	23.8%
	4.0	587	1.6%
	5.0	70	0.2%
Overall		36921	100.0%
Excluded		2	
Total		36923	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.0	.926	1.000	.000	.
1.0	.958	.993	.105	15.8%
2.0	.970	1.009	.056	9.6%
3.0	.966	1.007	.063	9.6%
4.0	.973	1.017	.092	15.9%
5.0	.970	1.072	.101	57.4%
Overall	.970	1.009	.059	10.1%

Commercial Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	$25K to $50K	16	4.6%
	$50K to $100K	14	4.0%
	$100K to $150K	11	3.1%
	$150K to $200K	23	6.6%
	$200K to $300K	45	12.9%
	$300K to $500K	67	19.1%
	$500K to $750K	55	15.7%

$750K to $1,000K	23	6.6%	
Over $1,000K	96	27.4%	
Overall	350	100.0%	
Excluded	0		
Total	350		

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
$25K to $50K	.970	1.000	.036	6.4%
$50K to $100K	1.044	1.010	.133	22.1%
$100K to $150K	.989	1.011	.175	23.8%
$150K to $200K	.982	1.001	.101	13.2%
$200K to $300K	.934	1.006	.179	24.2%
$300K to $500K	.980	1.003	.128	17.2%
$500K to $750K	.941	1.003	.127	17.1%
$750K to $1,000K	.899	.996	.136	17.6%
Over $1,000K	.875	1.047	.151	20.2%
Overall	.950	1.083	.141	19.1%

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	1220.00	1	0.3%
	1554.00	1	0.3%
	1712.00	2	0.6%
	1716.00	5	1.4%
	1720.00	2	0.6%
	1721.00	1	0.3%
	1725.00	1	0.3%
	2032.00	1	0.3%
	2108.13	1	0.3%
	2142.73	1	0.3%
	2149.17	1	0.3%
	2212.00	33	9.4%
	2215.00	3	0.9%
	2220.00	72	20.6%
	2223.50	1	0.3%
	2225.00	3	0.9%
	2227.50	3	0.9%
	2230.00	58	16.6%
	2232.50	2	0.6%
	2235.00	79	22.6%
	2245.00	61	17.4%
	2333.00	1	0.3%
	2348.44	1	0.3%
	2725.00	1	0.3%
	2888.33	1	0.3%
	3215.00	4	1.1%
	3230.00	5	1.4%
	4584.67	1	0.3%
	5739.50	1	0.3%
	5752.00	1	0.3%

	5759.50	1	0.3%
	9249.00	1	0.3%
Overall		350	100.0%
Excluded		0	
Total		350	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1220.00	1.221	1.000	.000	.
1554.00	.998	1.000	.000	.
1712.00	1.181	1.017	.209	29.6%
1716.00	.902	.955	.101	15.9%
1720.00	.882	1.019	.122	17.2%
1721.00	.833	1.000	.000	.
1725.00	1.261	1.000	.000	.
2032.00	1.025	1.000	.000	.
2108.13	.897	1.000	.000	.
2142.73	.745	1.000	.000	.
2149.17	.807	1.000	.000	.
2212.00	.918	1.073	.131	15.7%
2215.00	.814	1.058	.116	17.4%
2220.00	.905	1.138	.180	22.5%
2223.50	1.030	1.000	.000	.
2225.00	1.118	.859	.191	37.2%
2227.50	1.377	1.107	.095	18.7%
2230.00	.925	1.054	.168	21.2%
2232.50	.917	1.078	.124	17.5%
2235.00	.949	1.014	.108	15.1%
2245.00	.968	1.039	.100	16.8%
2333.00	.965	1.000	.000	.
2348.44	.673	1.000	.000	.
2725.00	1.003	1.000	.000	.
2888.33	.907	1.000	.000	.
3215.00	.894	1.169	.231	28.4%
3230.00	1.000	.993	.055	8.3%
4584.67	1.210	1.000	.000	.
5739.50	1.078	1.000	.000	.
5752.00	1.153	1.000	.000	.
5759.50	1.013	1.000	.000	.
9249.00	.679	1.000	.000	.
Overall	.950	1.083	.141	19.1%

Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	23	6.6%
	75 to 100	5	1.4%
	50 to 75	41	11.7%
	25 to 50	155	44.3%
	5 to 25	108	30.9%
	5 or Newer	18	5.1%
Overall		350	100.0%
Excluded		0	
Total		350	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	.941	1.031	.187	23.0%
75 to 100	.912	1.063	.135	21.8%
50 to 75	.980	1.051	.171	21.2%
25 to 50	.953	1.085	.152	20.7%
5 to 25	.941	1.076	.101	13.9%
5 or Newer	.974	1.166	.133	19.4%
Overall	.950	1.083	.141	19.1%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	2	0.6%
	500 to 1,000 sf	21	6.0%
	1,000 to 1,500 sf	39	11.1%
	1,500 to 2,000 sf	24	6.9%
	2,000 to 3,000 sf	45	12.9%
	3,000 sf or Higher	219	62.6%
Overall		350	100.0%
Excluded		0	
Total		350	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	1.182	1.000	.093	13.1%
500 to 1,000 sf	.960	1.085	.145	24.0%
1,000 to 1,500 sf	.977	1.033	.116	17.4%
1,500 to 2,000 sf	.872	1.007	.138	18.6%
2,000 to 3,000 sf	.982	1.051	.107	15.2%
3,000 sf or Higher	.941	1.077	.148	19.6%
Overall	.950	1.083	.141	19.1%

Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY	1.0	62	17.7%
	2.0	283	80.9%
	3.0	5	1.4%
Overall		350	100.0%
Excluded		0	
Total		350	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1.0	.925	1.118	.152	20.1%
2.0	.953	1.080	.139	19.1%
3.0	.916	1.062	.129	16.6%
Overall	.950	1.083	.141	19.1%

Vacant Land Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT $25K	71	5.3%
	$25K to $50K	111	8.3%
	$50K to $100K	400	29.8%
	$100K to $150K	272	20.3%
	$150K to $200K	201	15.0%
	$200K to $300K	150	11.2%
	$300K to $500K	66	4.9%
	$500K to $750K	26	1.9%
	$750K to $1,000K	18	1.3%
	Over $1,000K	27	2.0%
Overall		1342	100.0%
Excluded		0	
Total		1342	

Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT $25K	.993	1.125	.240	99.6%
$25K to $50K	1.026	.994	.091	12.1%
$50K to $100K	1.001	1.002	.092	16.4%
$100K to $150K	.979	1.002	.085	13.8%
$150K to $200K	.966	1.002	.103	16.3%
$200K to $300K	.966	1.000	.076	10.6%
$300K to $500K	.971	1.000	.065	11.6%
$500K to $750K	.991	1.000	.029	5.3%
$750K to $1,000K	.965	1.004	.093	17.2%
Over $1,000K	.978	.992	.050	10.5%
Overall	.986	1.027	.097	27.0%

Subclass

Case Processing Summary

		Count	Percent
ABSTRLND	100.00	382	28.5%
	200.00	72	5.4%
	300.00	12	0.9%
	510.00	5	0.4%
	520.00	13	1.0%
	530.00	10	0.7%
	540.00	18	1.3%
	550.00	68	5.1%
	560.00	2	0.1%
	1112.00	692	51.6%
	1115.00	4	0.3%
	1135.00	16	1.2%
	2112.00	6	0.4%
	2115.00	4	0.3%
	2120.00	1	0.1%
	2130.00	21	1.6%
	2135.00	13	1.0%
	4137.00	2	0.1%
	4147.00	1	0.1%
Overall		1342	100.0%
		0	
Total		1342	

Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
100.00	.976	1.012	.091	13.6%
200.00	.987	1.010	.069	15.1%
300.00	.990	1.000	.014	2.0%
510.00	.971	1.384	.119	24.6%
520.00	.922	1.010	.220	38.2%
530.00	.994	1.011	.073	9.9%
540.00	.974	.972	.094	12.7%
550.00	.983	1.182	.235	99.7%
560.00	.829	1.014	.025	3.5%
1112.00	.995	1.021	.087	15.4%
1115.00	.916	.980	.085	14.7%
1135.00	.945	1.035	.131	17.1%
2112.00	.932	1.076	.082	13.4%
2115.00	.982	.999	.014	1.8%
2120.00	.999	1.000	.000	.
2130.00	.984	1.007	.035	6.6%
2135.00	.989	1.013	.022	5.1%
4137.00	.002	.993	.043	6.0%
4147.00	.003	1.000	.000	.
Overall	.986	1.027	.097	27.0%