

# 2022

# LARIMER COUNTY PROPERTY ASSESSMENT STUDY







September 15, 2022

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

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

Dear Ms. Mullis:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2022 Colorado Property Assessment Study.

These reports are the result of two analyses: A procedural audit and a statistical audit.

The procedural audit examines all classes of property. It specifically looks at how the assessor develops economic areas, confirms and qualifies sales, develops time adjustments and performs periodic physical property inspections. The audit reviews the procedures for determining subdivision absorption and subdivision discounting. Valuation methodology is examined for residential properties and commercial properties. Procedures are reviewed for producing mines, oil and gas leaseholds and lands producing, producing coal mines, producing earth and stone products, severed mineral interests, and non-producing patented mining claims.

Statistical audits are performed on vacant land, residential properties, commercial/industrial properties and agricultural land. A statistical analysis is performed for personal property compliance on the eleven largest counties: Adams, Arapahoe, Boulder, Denver, Douglas, El Paso, Jefferson, Larimer, Mesa, Pueblo and Weld. The remaining counties receive a personal property procedural study.

Wildrose Appraisal Inc. – Audit Division appreciates the opportunity to be of service to the State of Colorado. Please contact us with any questions or concerns.

Harry J. Fuller Project Manager

Harry J. Dulla

Wildrose Appraisal Inc. - Audit Division



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# INTRODUCTION



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 twopart 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 subdivision discounting procedures. Valuation methodology for vacant land, improved residential properties commercial and properties is examined. Procedures for producing mines, oil and gas leaseholds and lands producing, producing coal mines, producing earth and stone products, severed mineral interests and non-producing patented mining claims are also reviewed.

Statistical analysis is performed on vacant land, residential properties, commercial/industrial properties, agricultural land, and personal property. The statistical study results are compared with State Board of Equalization compliance requirements and the manuals published by the State Property Tax Administrator.

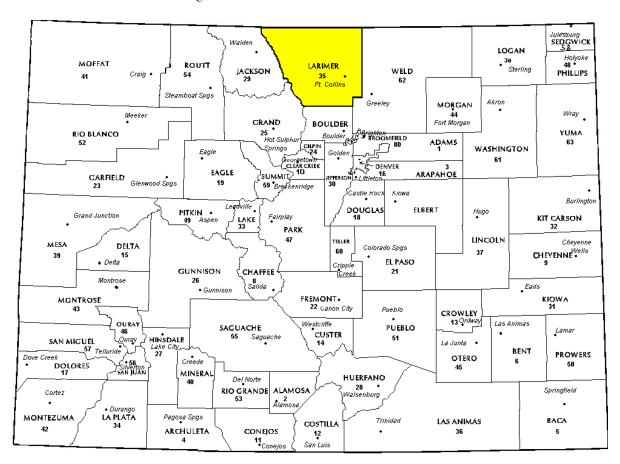
Wildrose Audit has completed the Property Assessment Study for 2022 and is pleased to report its findings for Larimer County in the following report.



# REGIONAL/HISTORICAL SKETCH OF LARIMER COUNTY

#### **Regional Information**

Larimer 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

Larimer County has approximately 2,596 square miles and an estimated population of approximately 356,899 people, according to the U.S. Census Bureau's 2020 estimated census data. This represents a 19.1 percent change from April 1, 2010 to July 1, 2019.

Larimer County was created in 1861 as one of the seventeen original counties in the Colorado Territory; however, its western boundary was disputed. Controversy existed as to whether Larimer County ended at the Medicine Bow Range or at the Continental Divide thirty miles further west. An 1886 Colorado Supreme Court decision set the boundary at the Continental Divide, although the land between the Medicine Bow Range and the divide was made part of Jackson County in 1909.

Unlike that of much of Colorado, which was founded on the mining of gold and silver, the settlement of Larimer County was based almost entirely on agriculture, an industry that few thought possible in the region during the initial days of the Colorado Gold Rush. The mining boom almost entirely passed the county by. It would take the introduction of irrigation to the region in the 1860s to bring the first widespread settlement to the area.

In 1862, the United States Army established an outpost near Laporte that was designated as Camp Collins. A devastating flood in June 1864 wiped out the outpost, forcing the Army to seek a better location. At the urging of Joseph Mason, who had settled along the Poudre in 1860, the Army relocated its post downstream adjacent to Mason's land along the Overland stage route. The site of the new post became the nucleus of the town of Fort Collins, incorporated in 1873 after the withdrawal of the Army. By that time, Mason and others had convinced the legislature of the Colorado Territorial Legislature to designate the new town as the county seat. In 1870, the legislature designated Fort Collins as the location of the state agricultural college (later Colorado State University).

Cities and towns located in Larimer County, Colorado include Berthoud, Estes Park, Fort Timnath, Collins, Loveland, Wellington, Windsor, Bellvue, Buckeye, Campion, Cherokee Park, Drake, Glendevey, Glen Haven, LaPorte, Livermore, Kinikinik, Manhattan, Masonville, Pinewood Springs, Pingree Park, Poudre Park, Feather Lakes, Rustic, Teds Place, Virginia Dale and Waverly. (Wikipedia.org)



# RATIO ANALYSIS

#### Methodology

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

Although it was required that we examine the median and coefficient of dispersion for all counties, we also calculated the weighted mean and price-related differential for each class of property. Counties were not passed or failed by these latter measures, but were counseled if there were anomalies noted during our analysis. Qualified sales were based on the qualification code used by each county, which were typically coded as either "Q" or "C." The ratio analysis included all sales. The data was trimmed for counties with obvious outliers using IAAO standards for data analysis. In every case, we examined the loss in data from

trimming to ensure that only true outliers were excluded. Any county with a significant portion of sales excluded by this trimming method was examined further. No county was allowed to pass the audit if more than 5% of the sales were "lost" because of trimming.

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

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

#### **Conclusions**

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

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



#### The results for Larimer County are:

Larimer County Ratio Grid					
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis
Commercial/Industrial	246	0.975	1.020	8.9	Compliant
Single Family	13,783	0.979	1.013	6.3	Compliant
Vacant Land	538	0.989	1.037	14.9	Compliant

After applying the above described methodologies, it is concluded from the sales ratios that Larimer County is in compliance

with SBOE, DPT, and Colorado State Statute valuation guidelines.

Recommendations



# 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 Larimer County has complied with the statutory requirements to analyze the effects of time on value in their county. Larimer County has also satisfactorily applied the results of their time trending analysis to arrive at the time adjusted sales price (TASP).

#### Recommendations



# SOLD/UNSOLD ANALYSIS

#### Methodology

Larimer 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. 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. determines if the sold/unsold variable is statistically and empirically significant. 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 nonparametric 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 R	Results
Property Class	Results
Commercial/Industrial	Compliant
Single Family	Compliant
Vacant Land	Compliant

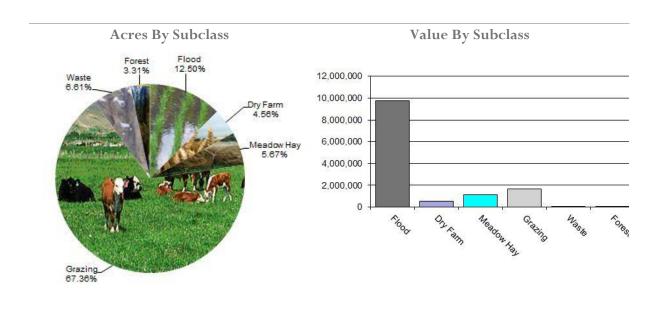
#### Conclusions

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

#### Recommendations



# AGRICULTURAL LAND STUDY



# **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 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:



	Larimer County Agricultural Land Ratio Grid					
Abstract	Number County County WRA Abstract Of Value Assessed Total					
Code	Land Class	Acres	Per Acre	Total Value	Value	Ratio
4117	Flood	48,484	182.86	8,865,927	9,279,046	0.96
4127	Dry Farm	17,683	27.90	493,399	499,863	0.99
4137	Meadow Hay	21,983	47.36	1,041,098	1,041,098	1.00
4147	Grazing	261,313	5.77	1,508,653	1,508,653	1.00
4177	Forest	12,853	6.12	78,690	78,768	1.00
4167	Waste	25,640	2.20	56,442	56,442	1.00
Total/Avg		387,956	31.05	12,044,209	12,463,871	0.97

#### 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**

Larimer County has complied with the procedures provided by the Division of

Property Taxation for the valuation of agricultural outbuildings.

#### Recommendations



### **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

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

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

Larimer 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.:

- Questionnaires
- Field Inspections
- Phone Interviews
- In-Person Interviews with Owners/Tenants
- Personal Knowledge of Occupants at Assessment Date

Larimer 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



# SALES VERIFICATION

#### According to Colorado Revised Statutes:

A representative body of sales is required when considering the market approach to appraisal.

(8) In any case in which sales prices of comparable properties within any class or subclass are utilized when considering the market approach to appraisal in the determination of actual value of any taxable property, the following limitations and conditions shall apply:

(a)(I) Use of the market approach shall require a representative body of sales, including sales by a lender or government, sufficient to set a pattern, and appraisals shall reflect due consideration of the degree of comparability of sales, including the extent of similarities and dissimilarities among properties that are compared for assessment purposes. In order to obtain a reasonable sample and to reduce sudden price changes or fluctuations, all sales shall be included in the sample that reasonably reflect a true or typical sales price during the period specified in section 39-1-104 (10.2). Sales of personal property exempt pursuant to the provisions of sections 39-3-102, 39-3-103, and 39-3-119 to 39-3-122 shall not be included in any such sample.

(b) Each such sale included in the sample shall be coded to indicate a typical, negotiated sale, as screened and verified by the assessor. (39-1-103, C.R.S.)

The assessor is required to use sales of real property only in the valuation process.

(8)(f) Such true and typical sales shall include only those sales which have been determined on an individual basis to reflect the selling price of the real property only or which have been adjusted on an individual basis to reflect the selling price of the real property only. (39-1-103, C.R.S.)

Part of the Property Assessment Study is the sales verification analysis. WRA has used the above-cited statutes as a guide in our study of the county's procedures and practices for verifying sales.

WRA reviewed the sales verification procedures in 2022 for Larimer County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 61 sales listed as unqualified.

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

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

Larimer County appears to be doing an adequate job of verifying their sales.

#### Recommendations



# ECONOMIC AREA REVIEW AND EVALUATION

#### Methodology

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



# 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 The operator variables: life and tonnage. 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

# **Producing Oil and Gas**

# Methodology

Assessors Reference Library (ARL) Volume 3, Chapter 6: Valuation of Natural Resources

#### **STATUTORY REFERENCES**

Section § 39-1-103, C.R.S., specifies that producing oil or gas leaseholds and lands are valued according to article 7 of title 39, C.R.S. Actual value determined - when.

(2) The valuation for assessment of leaseholds and lands producing oil or gas shall be determined as provided in article 7 of this title. § 39-1-103, C.R.S.

Article 7 covers the listing, valuation, and assessment of producing oil and gas leaseholds and lands.

#### Valuation:

#### Valuation for assessment.

- (1) Except as provided in subsection (2) of this section, on the basis of the information contained in such statement, the assessor shall value such oil and gas leaseholds and lands for assessment, as real property, at an amount equal to eighty-seven and one-half percent of:
- (a) The selling price of the oil or gas sold there from during the preceding calendar year, after excluding the selling price of all oil or gas delivered to the United States government or any agency thereof, the state of Colorado or any agency thereof, or any political subdivision of the state as royalty during the preceding calendar year;
- (b) The selling price of oil or gas sold in the same field area for oil or gas transported from the premises which is not sold during the preceding calendar year, after excluding the selling price of all oil or gas delivered to the United States government or any agency thereof, the state of Colorado or any agency thereof, or any political subdivision of the state as royalty during the preceding calendar year. § 39-7-102, C.R.S.

#### Conclusions

The county applied approved appraisal procedures in the valuation of oil and gas.

#### Recommendations



# VACANT LAND

#### **Subdivision Discounting**

Subdivisions were reviewed in 2022 in Larimer 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

Larimer County has implemented proper procedures to adequately estimate absorption periods, discount rates, and lot values for qualifying subdivisions.

#### Recommendations



# 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 C.R.S. Chapter 39-1-103 (17)(a)(II)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 under lease, permit, concession, contract, or other agreement.

Larimer 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

Larimer 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



# PERSONAL PROPERTY AUDIT

Larimer 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.

Larimer 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
- Local Telephone Directories, Newspapers or Other Local Publications
- Personal Observation, Physical Canvassing or Word of Mouth

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.

Larimer County submitted their personal property written audit plan and was current for the 2022 valuation period. The number and listing of businesses audited was also submitted and was in conformance with the written audit plan. The following audit triggers were used by the county to select accounts to be audited:

- Accounts with obvious discrepancies
- New businesses filing for the first time
- Incomplete or inconsistent declarations
- Accounts with omitted property
- Businesses with no deletions or additions for 2 or more years
- Non-filing Accounts Best Information Available
- Accounts close to the \$50,000 actual value exemption status
- Accounts protested with substantial disagreement



Larimer 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**

Larimer 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



# WILDROSE AUDITOR STAFF

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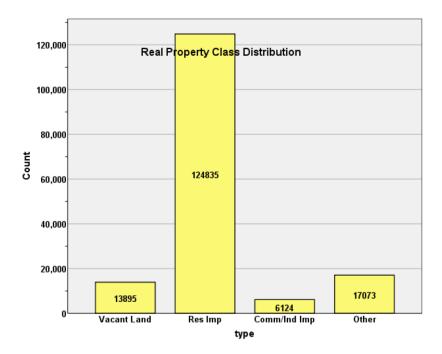
# APPENDICES



#### STATISTICAL COMPLIANCE REPORT FOR LARIMER COUNTY 2022

#### I. OVERVIEW

Larimer County is a northern county located along Colorado's Front Range urban corridor. The county has a total of 161,927 real property parcels, according to data submitted by the county assessor's office in 2022. The following provides a breakdown of property classes for this county:



The vacant land class of properties was dominated by residential land. Residential lots (coded 100) accounted for 74.3% of all vacant land parcels.

For residential improved properties, single family properties accounted for 87.7% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial properties accounted for 3.8% of all such properties in this county.

#### II. DATA FILES

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



#### III. RESIDENTIAL SALES RESULTS

There were 13,783 qualified residential sales for the 24-month period ending June 30, 2020. The sales ratio analysis results were as follows:

Median	0.979
Price Related Differential	1.013
Coefficient of Dispersion	6.3

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	1.00	7422	53.8%
	2.00	5303	38.5%
	3.00	596	4.3%
	4.00	462	3.4%
Overall		13783	100.0%
Excluded		0	
Total		13783	

#### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion
1.00	.978	1.014	.061
2.00	.980	1.011	.060
3.00	.975	1.007	.081
4.00	.979	1.024	.120
Overall	.979	1.013	.063

# B. Neighborhoods with 35 or more sales Ratio Statistics for CURRTOT / TASP

Group	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
18729 0679	.998	.054	10.7%
18729 0896	1.004	.061	8.0%
18729 0898	1.012	.069	9.1%
18729 1997	1.005	.090	11.8%
18729 19976	1.000	.052	7.1%
18729 8014	1.003	.052	8.9%
18729 8040	1.001	.039	5.0%
18729 8050	1.002	.039	4.6%
18933 1971	1.000	.036	4.8%
18933 240768	1.003	.052	7.0%
18933 5006	1.006	.080	10.4%
18933 5007	1.003	.043	7.9%

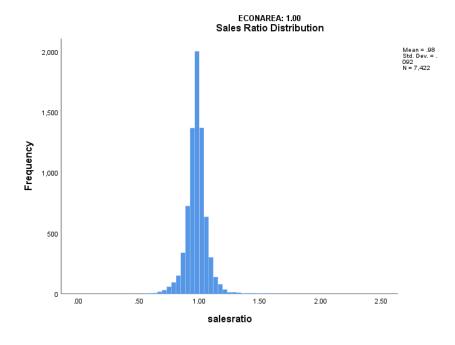


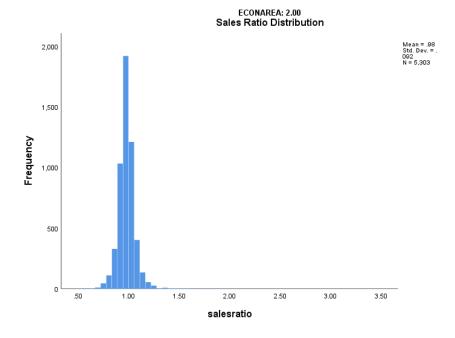
18933 50080010         1.002         .041         5.6%           18933 5017         1.003         .045         6.0%           18933 5017         1.003         .045         6.0%           18933 8098         1.000         .045         5.8%           18933 8132         1.000         .042         5.5%           18933 8330         1.001         .036         4.7%           18934 6043         1.000         .046         5.4%           18934 6046         1.001         .028         3.8%           18934 6051         1.002         .030         4.0%           18934 6053         1.000         .030         4.3%           18934 6055         1.005         .052         10.2%           18934 6067         1.005         .052         10.2%           18934 6067         1.005         .050         6.6%           19613 1956         1.008         .047         5.7%           19614 18513         1.000         .037         5.2%           19722 1227         .999         .051         7.2%           19836 8116         1.007         .048         6.7%           28506 230568         1.002         .048         6.7%				
18933 5010         1.002         .041         5.6%           18933 5017         1.003         .045         6.0%           18933 8098         1.000         .045         5.8%           18933 8132         1.000         .042         5.5%           18933 8330         1.001         .036         4.7%           18934 6043         1.000         .046         5.4%           18934 6046         1.001         .028         3.8%           18934 6046         1.001         .040         7.4%           18934 6051         1.002         .030         4.0%           18934 6053         1.000         .030         4.0%           18934 6055         1.005         .052         10.2%           18934 6067         1.005         .050         6.6%           19613 1956         1.008         .047         5.7%           19614 18513         1.000         .037         5.2%           19722 1227         .999         .051         7.2%           19836 8116         1.007         .048         6.7%           28506 230568         1.002         .048         6.7%           28506 2725         1.005         .053         7.1%	18933 5008	1.005	.054	6.6%
18933 5017         1.003         .045         6.0%           18933 8098         1.000         .045         5.8%           18933 8132         1.000         .042         5.5%           18933 8255         1.004         .041         5.4%           18934 6043         1.000         .046         5.4%           18934 6048         1.001         .028         3.8%           18934 6048         1.001         .040         7.4%           18934 6051         1.002         .030         4.0%           18934 6055         1.005         .052         10.2%           18934 6067         1.005         .052         10.2%           18934 6067         1.005         .050         .66%           19613 1956         1.008         .047         5.7%           19614 18513         1.000         .037         5.2%           19722 1227         .999         .051         7.2%           19836 8116         1.007         .048         6.7%           28506 230568         1.002         .048         6.7%           28506 2723         1.005         .053         7.1%           28506 2736         1.003         .039         5.2% <td></td> <td></td> <td>.047</td> <td></td>			.047	
18933 8098         1.000         .045         5.8%           18933 8132         1.000         .042         5.5%           18933 8255         1.004         .041         5.4%           18934 6043         1.000         .046         5.4%           18934 6046         1.001         .028         3.8%           18934 6048         1.001         .040         7.4%           18934 6051         1.002         .030         4.0%           18934 6053         1.000         .030         4.3%           18934 6055         1.005         .052         10.2%           18934 6067         1.005         .052         10.2%           19613 1956         1.008         .047         5.7%           19614 18513         1.000         .037         5.2%           19722 1227         .999         .051         7.2%           19836 8116         1.007         .048         6.7%           28506 230568         1.002         .048         6.7%           28506 2723         1.005         .042         5.7%           28506 2736         1.03         .039         5.2%           28506 5802         .999         .038         5.2%		1.002	.041	5.6%
18933 8132       1.000       .042       5.5%         18933 8255       1.004       .041       5.4%         18934 8043       1.000       .046       5.4%         18934 6048       1.001       .028       3.8%         18934 6048       1.001       .040       7.4%         18934 6051       1.002       .030       4.0%         18934 6053       1.005       .052       10.2%         18934 6065       1.005       .052       10.2%         18934 6067       1.005       .050       6.6%         19613 1956       1.008       .047       5.7%         19614 18513       1.000       .037       5.2%         19722 1227       .999       .051       7.2%         19836 8116       1.007       .048       6.7%         28506 23668       1.002       .048       6.7%         28506 2723       1.005       .053       7.1%         28506 2736       1.003       .039       5.2%         28506 2736       1.003       .039       5.2%         28506 5802       .999       .038       5.2%         28506 5813       1.024       .078       10.6% <t< td=""><td>18933 5017</td><td>1.003</td><td>.045</td><td>6.0%</td></t<>	18933 5017	1.003	.045	6.0%
18933 8255         1.004         .041         5.4%           18934 333 330         1.001         .036         4.7%           18934 6043         1.000         .046         5.4%           18934 6046         1.001         .028         3.8%           18934 6048         1.001         .040         7.4%           18934 6051         1.002         .030         4.3%           18934 6055         1.005         .052         10.2%           18934 6067         1.005         .050         6.6%           19613 1956         1.008         .047         5.7%           19614 18513         1.000         .037         5.2%           19722 1227         .999         .051         7.2%           19836 8116         1.007         .048         6.7%           28506 230568         1.002         .048         6.7%           28506 2723         1.005         .057         10.7%           28506 2723         1.005         .053         7.1%           28506 2725         1.005         .053         7.7%           28506 5802         .999         .038         5.2%           28506 5802         .999         .038         5.2% <td>18933 8098</td> <td>1.000</td> <td>.045</td> <td>5.8%</td>	18933 8098	1.000	.045	5.8%
18933 8330       1.001       .036       4.7%         18934 6043       1.000       .046       5.4%         18934 6046       1.001       .028       3.8%         18934 6048       1.001       .040       7.4%         18934 6051       1.002       .030       4.0%         18934 6053       1.000       .030       4.3%         18934 6067       1.005       .050       6.6%         19613 1956       1.008       .047       5.7%         19614 18513       1.000       .037       5.2%         19722 1227       .999       .051       7.2%         19836 8116       1.007       .048       6.7%         28506 230568       1.007       .057       10.7%         28506 2723       1.005       .042       5.7%         28506 2725       1.005       .053       7.1%         28506 2753       1.003       .039       5.2%         28506 2753       1.009       .057       7.7%         28506 5802       .999       .038       5.2%         28506 5813       1.024       .078       10.4%         28623 5510       1.017       .071       9.6% <t< td=""><td>18933 8132</td><td>1.000</td><td>.042</td><td></td></t<>	18933 8132	1.000	.042	
18934 6043       1.000       .046       5.4%         18934 6046       1.001       .028       3.8%         18934 6081       1.001       .040       7.4%         18934 6051       1.002       .030       4.0%         18934 6053       1.005       .052       10.2%         18934 6067       1.005       .050       6.6%         19613 1956       1.008       .047       5.7%         19614 18513       1.000       .037       5.2%         19722 1227       .999       .051       7.2%         19836 8116       1.007       .048       6.7%         28506 230568       1.002       .048       6.7%         28506 2436       1.007       .057       10.7%         28506 2723       1.005       .042       5.7%         28506 2725       1.005       .053       7.1%         28506 2736       1.003       .039       5.2%         28506 2753       1.009       .057       7.7%         28506 5802       .999       .038       5.2%         28605 5802       .999       .038       5.2%         28605 5813       1.024       .078       10.6% <t< td=""><td>18933 8255</td><td>1.004</td><td>.041</td><td>5.4%</td></t<>	18933 8255	1.004	.041	5.4%
18934 6046         1.001         .028         3.8%           18934 6048         1.001         .040         7.4%           18934 6051         1.002         .030         4.0%           18934 6053         1.000         .030         4.3%           18934 6055         1.005         .052         10.2%           18934 6067         1.005         .050         6.6%           19613 1956         1.008         .047         5.7%           19614 18513         1.000         .037         5.2%           19722 1227         .999         .051         7.2%           19836 8116         1.007         .048         6.7%           28506 230568         1.002         .048         6.7%           28506 2733         1.005         .042         5.7%           28506 2723         1.005         .042         5.7%           28506 2736         1.003         .039         5.2%           28506 5802         .999         .038         5.2%           28506 5802         .999         .038         5.2%           28603 55034         1.007         .078         10.6%           28623 55034         1.007         .078         10.6% <td>18933 8330</td> <td>1.001</td> <td>.036</td> <td>4.7%</td>	18933 8330	1.001	.036	4.7%
18934 6048         1.001         .040         7.4%           18934 6051         1.002         .030         4.0%           18934 6053         1.000         .030         4.3%           18934 6067         1.005         .052         10.2%           18934 6067         1.008         .047         5.7%           19613 1956         1.008         .047         5.7%           19614 18513         1.000         .037         5.2%           19722 1227         .999         .051         7.2%           19836 8116         1.007         .048         6.7%           28506 230568         1.002         .048         6.7%           28506 2436         1.007         .057         10.7%           28506 2723         1.005         .042         5.7%           28506 2723         1.005         .053         7.1%           28506 2736         1.003         .039         5.2%           28506 2736         1.003         .039         5.2%           28506 5802         .999         .038         5.2%           28506 5802         .999         .038         5.2%           28603 5513         1.007         .078         10.4%	18934 6043	1.000	.046	5.4%
18934 6051         1.002         .030         4.0%           18934 6053         1.000         .030         4.3%           18934 6055         1.005         .052         10.2%           18934 6067         1.005         .050         6.6%           19613 1956         1.008         .047         5.7%           19614 18513         1.000         .037         5.2%           19722 1227         .999         .051         7.2%           19836 8116         1.007         .048         6.7%           28506 230568         1.002         .048         6.7%           28506 2436         1.007         .057         10.7%           28506 2723         1.005         .042         5.7%           28506 2725         1.005         .053         7.1%           28506 2736         1.003         .039         5.2%           28506 5802         .999         .038         5.2%           28506 5802         .999         .038         5.2%           28506 5813         1.024         .078         10.4%           28623 0455         1.007         .078         10.6%           28623 5510         1.017         .071         .9.6% <td>18934 6046</td> <td>1.001</td> <td>.028</td> <td>3.8%</td>	18934 6046	1.001	.028	3.8%
18934 6053         1.000         .030         4.3%           18934 6065         1.005         .052         10.2%           18934 6067         1.005         .050         6.6%           19613 1956         1.008         .047         5.7%           19614 18513         1.000         .037         5.2%           19722 1227         .999         .051         7.2%           19836 8116         1.007         .048         6.7%           28506 230568         1.002         .048         6.7%           28506 2436         1.007         .057         10.7%           28506 2723         1.005         .042         5.7%           28506 2725         1.005         .053         7.1%           28506 2736         1.003         .039         5.2%           28506 5802         .999         .038         5.2%           28506 5802         .999         .054         6.7%           28623 0455         1.007         .078         10.4%           28623 0455         1.007         .078         10.6%           28623 5510         1.017         .071         9.6%           28623 5513         1.008         .057         7.7% <td>18934 6048</td> <td>1.001</td> <td>.040</td> <td>7.4%</td>	18934 6048	1.001	.040	7.4%
18934 6055         1.005         .052         10.2%           18934 6067         1.005         .050         6.6%           19613 1956         1.008         .047         5.7%           19614 18513         1.000         .037         5.2%           19722 1227         .999         .051         7.2%           19836 8116         1.007         .048         6.7%           28506 230568         1.002         .048         6.7%           28506 2436         1.007         .057         10.7%           28506 2723         1.005         .042         5.7%           28506 2725         1.005         .053         7.1%           28506 2736         1.003         .039         5.2%           28506 5802         .999         .038         5.2%           28506 5802         .999         .054         6.7%           28603 55034         1.007         .078         10.6%           28623 55034         1.007         .078         10.6%           28623 55034         1.004         .043         6.0%           28623 5513         1.004         .043         6.0%           28623 5514         1.020         .076         10.1%	18934 6051	1.002	.030	4.0%
18934 6067       1.005       .050       6.6%         19613 1956       1.008       .047       5.7%         19614 18513       1.000       .037       5.2%         19722 1227       .999       .051       7.2%         19836 8116       1.007       .048       6.7%         28506 230568       1.002       .048       6.7%         28506 2436       1.007       .057       10.7%         28506 2723       1.005       .042       5.7%         28506 2723       1.005       .053       7.1%         28506 2736       1.003       .039       5.2%         28506 5802       .999       .038       5.2%         28506 5802       .999       .038       5.2%         28506 5813       1.024       .078       10.4%         28623 0455       1.007       .078       10.6%         28623 5510       1.017       .071       9.6%         28623 5513       1.008       .057       7.7%         28623 5514       1.020       .076       10.1%         28623 5513       1.008       .057       7.7%         28623 5514       1.020       .076       10.1%	18934 6053	1.000	.030	4.3%
19613 1956         1.008         .047         5.7%           19614 18513         1.000         .037         5.2%           19722 1227         .999         .051         7.2%           19836 8116         1.007         .048         6.7%           28506 230568         1.002         .048         6.7%           28506 2436         1.007         .057         10.7%           28506 2723         1.005         .042         5.7%           28506 2725         1.005         .053         7.1%           28506 2736         1.003         .039         5.2%           28506 5802         .999         .038         5.2%           28506 5802         .999         .054         6.7%           28603 5802         .999         .054         6.7%           28604 5813         1.024         .078         10.4%           28623 5533         1.007         .078         10.6%           28623 5510         1.017         .071         9.6%           28623 5513         1.004         .043         6.0%           28623 5514         1.020         .076         10.1%           28623 5514         1.020         .076         10.1% <td>18934 6055</td> <td>1.005</td> <td>.052</td> <td>10.2%</td>	18934 6055	1.005	.052	10.2%
19614 18513         1.000         .037         5.2%           19722 1227         .999         .051         7.2%           19836 8116         1.007         .048         6.7%           28506 230568         1.002         .048         6.7%           28506 2436         1.007         .057         10.7%           28506 2723         1.005         .042         5.7%           28506 2725         1.005         .053         7.1%           28506 2736         1.003         .039         5.2%           28506 5802         .999         .038         5.2%           28506 5802         .999         .054         6.7%           28605 5813         1.024         .078         10.4%           28623 55034         1.004         .043         6.0%           28623 5510         1.017         .071         9.6%           28623 5513         1.008         .057         7.7%           28623 5514         1.000         .076         10.1%           28623 5513         1.008         .057         7.7%           28623 5514         1.020         .076         10.1%           28623 5522         1.006         .042         6.0% <td>18934 6067</td> <td>1.005</td> <td>.050</td> <td>6.6%</td>	18934 6067	1.005	.050	6.6%
19722 1227         .999         .051         7.2%           19836 8116         1.007         .048         6.7%           28506 230568         1.002         .048         6.7%           28506 2436         1.007         .057         10.7%           28506 2723         1.005         .042         5.7%           28506 2725         1.005         .053         7.1%           28506 2736         1.003         .039         5.2%           28506 2753         1.009         .057         7.7%           28506 5802         .999         .038         5.2%           28506 58020010         .999         .054         6.7%           28506 5813         1.024         .078         10.4%           28623 0455         1.007         .078         10.6%           28623 5510         1.017         .071         9.6%           28623 5513         1.008         .057         7.7%           28623 5514         1.020         .076         10.1%           28623 5522         1.006         .042         6.0%           29414 4104         1.039         .123         17.1%           29414 4118         1.008         .049         6.7%	19613 1956	1.008	.047	5.7%
19836 8116         1.007         .048         6.7%           28506 230568         1.002         .048         6.7%           28506 2436         1.007         .057         10.7%           28506 2723         1.005         .042         5.7%           28506 2725         1.003         .039         5.2%           28506 2736         1.009         .057         7.7%           28506 5802         .999         .038         5.2%           28506 5802         .999         .038         5.2%           28506 58020010         .999         .054         6.7%           28506 5813         1.024         .078         10.4%           28623 0455         1.007         .078         10.6%           28623 5510         1.017         .071         9.6%           28623 5514         1.020         .076         10.1%           28623 5514         1.020         .076         10.1%           28623 5522         1.006         .042         6.0%           29414 4114         1.003         .051         6.5%           29414 4114         1.003         .051         6.5%           29414 4118         1.001         .036         4.7%	19614 18513	1.000	.037	5.2%
28506 230568         1.002         .048         6.7%           28506 2436         1.007         .057         10.7%           28506 2723         1.005         .042         5.7%           28506 2725         1.005         .053         7.1%           28506 2736         1.003         .039         5.2%           28506 2753         1.009         .057         7.7%           28506 5802         .999         .038         5.2%           28506 58020010         .999         .054         6.7%           28506 5813         1.024         .078         10.4%           28623 0455         1.007         .078         10.6%           28623 55034         1.004         .043         6.0%           28623 5510         1.017         .071         9.6%           28623 5514         1.020         .076         10.1%           28623 5522         1.006         .042         6.0%           29414 4104         1.039         .123         17.1%           29414 4118         1.008         .049         6.7%           29517 2853         1.001         .036         4.7%           29517 2853         1.001         .036         4.	19722 1227	.999	.051	7.2%
28506 2436         1.007         .057         10.7%           28506 2723         1.005         .042         5.7%           28506 2725         1.005         .053         7.1%           28506 2736         1.003         .039         5.2%           28506 2753         1.009         .057         7.7%           28506 5802         .999         .038         5.2%           28506 58020010         .999         .054         6.7%           28506 5813         1.024         .078         10.4%           28623 0455         1.007         .078         10.6%           28623 55034         1.004         .043         6.0%           28623 5510         1.017         .071         9.6%           28623 5513         1.008         .057         7.7%           28623 5514         1.020         .076         10.1%           28623 5522         1.006         .042         6.0%           29414 4104         1.039         .123         17.1%           29414 4118         1.008         .049         6.7%           29414 4118         1.001         .036         4.7%           29517 2853         1.001         .036         4.7%	19836 8116		.048	6.7%
28506 2723       1.005       .042       5.7%         28506 2725       1.005       .053       7.1%         28506 2736       1.003       .039       5.2%         28506 2753       1.009       .057       7.7%         28506 5802       .999       .038       5.2%         28506 58020010       .999       .054       6.7%         28506 5813       1.024       .078       10.4%         28623 0455       1.007       .078       10.6%         28623 55034       1.004       .043       6.0%         28623 5510       1.017       .071       9.6%         28623 5514       1.020       .076       10.1%         28623 5522       1.006       .042       6.0%         29414 4104       1.039       .123       17.1%         29414 4118       1.008       .049       6.7%         29414 41125       1.001       .036       4.7%         29502 2558       1.005       .061       11.8%         29517 2853       1.002       .037       4.7%         29522 27440090       1.000       .035       4.5%         29635 2748       1.002       .050       6.1% <tr< td=""><td>28506 230568</td><td>1.002</td><td>.048</td><td>6.7%</td></tr<>	28506 230568	1.002	.048	6.7%
28506 2725         1.005         .053         7.1%           28506 2736         1.003         .039         5.2%           28506 2753         1.009         .057         7.7%           28506 5802         .999         .038         5.2%           28506 58020010         .999         .054         6.7%           28506 5813         1.024         .078         10.4%           28623 0455         1.007         .078         10.6%           28623 55034         1.004         .043         6.0%           28623 5510         1.017         .071         9.6%           28623 5513         1.008         .057         7.7%           28623 5514         1.020         .076         10.1%           28623 5522         1.006         .042         6.0%           29414 4104         1.039         .123         17.1%           29414 4118         1.008         .049         6.7%           29414 4118         1.008         .049         6.7%           29517 2631         1.011         .057         8.2%           29517 2853         1.005         .061         11.8%           29517 2853         1.002         .037         4.7%	28506 2436	1.007	.057	10.7%
28506 2725         1.005         .053         7.1%           28506 2736         1.003         .039         5.2%           28506 2753         1.009         .057         7.7%           28506 5802         .999         .038         5.2%           28506 58020010         .999         .054         6.7%           28506 5813         1.024         .078         10.4%           28623 0455         1.007         .078         10.6%           28623 55034         1.004         .043         6.0%           28623 5510         1.017         .071         9.6%           28623 5513         1.008         .057         7.7%           28623 5514         1.020         .076         10.1%           28623 5522         1.006         .042         6.0%           29414 4104         1.039         .123         17.1%           29414 4118         1.008         .049         6.7%           29414 4118         1.008         .049         6.7%           29517 2631         1.011         .057         8.2%           29517 2853         1.005         .061         11.8%           29517 2853         1.002         .037         4.7%		1.005	.042	5.7%
28506 2753         1.009         .057         7.7%           28506 5802         .999         .038         5.2%           28506 5813         1.024         .078         10.4%           28623 0455         1.007         .078         10.6%           28623 55034         1.004         .043         6.0%           28623 5510         1.017         .071         9.6%           28623 5513         1.008         .057         7.7%           28623 5514         1.020         .076         10.1%           28623 5522         1.006         .042         6.0%           29414 4104         1.039         .123         17.1%           29414 4118         1.003         .051         6.5%           29414 4118         1.008         .049         6.7%           29414 4125         1.001         .036         4.7%           29502 2558         1.005         .061         11.8%           29517 2631         1.011         .057         8.2%           29517 2853         1.002         .037         4.7%           29522 27440090         1.000         .035         4.5%           29635 2748         1.002         .050         6.1	28506 2725	1.005	.053	
28506 2753       1.009       .057       7.7%         28506 5802       .999       .038       5.2%         28506 58020010       .999       .054       6.7%         28506 5813       1.024       .078       10.4%         28623 0455       1.007       .078       10.6%         28623 55034       1.004       .043       6.0%         28623 5510       1.017       .071       9.6%         28623 5513       1.008       .057       7.7%         28623 5514       1.020       .076       10.1%         28623 5522       1.006       .042       6.0%         29414 4104       1.039       .123       17.1%         29414 4114       1.003       .051       6.5%         29414 4118       1.008       .049       6.7%         29414 4125       1.001       .036       4.7%         29502 2558       1.005       .061       11.8%         29517 2631       1.011       .057       8.2%         29517 2853       1.002       .037       4.7%         29522 27440090       1.000       .035       4.5%         29635 2733       1.004       .046       6.4%	28506 2736	1.003	.039	5.2%
28506 5802         .999         .038         5.2%           28506 58020010         .999         .054         6.7%           28506 5813         1.024         .078         10.4%           28623 0455         1.007         .078         10.6%           28623 55034         1.004         .043         6.0%           28623 5510         1.017         .071         9.6%           28623 5513         1.008         .057         7.7%           28623 5514         1.020         .076         10.1%           28623 5522         1.006         .042         6.0%           29414 4104         1.039         .123         17.1%           29414 4118         1.003         .051         6.5%           29414 4118         1.008         .049         6.7%           29502 2558         1.005         .061         11.8%           29517 2631         1.011         .057         8.2%           29517 2853         1.002         .037         4.7%           29522 27440090         1.000         .035         4.5%           29635 2733         1.005         .048         6.8%           29635 2849         1.000         .039	28506 2753			
28506 58020010         .999         .054         6.7%           28506 5813         1.024         .078         10.4%           28623 0455         1.007         .078         10.6%           28623 55034         1.004         .043         6.0%           28623 5510         1.017         .071         9.6%           28623 5513         1.008         .057         7.7%           28623 5514         1.020         .076         10.1%           28623 5522         1.006         .042         6.0%           29414 4104         1.039         .123         17.1%           29414 4114         1.003         .051         6.5%           29414 4118         1.008         .049         6.7%           29414 4125         1.001         .036         4.7%           29502 2558         1.005         .061         11.8%           29517 2631         1.011         .057         8.2%           29517 2853         1.002         .037         4.7%           29522 27440090         1.000         .035         4.5%           29635 2733         1.005         .048         6.8%           29635 2849         1.000         .039 <td< td=""><td>28506 5802</td><td></td><td></td><td>5.2%</td></td<>	28506 5802			5.2%
28623 0455       1.007       .078       10.6%         28623 55034       1.004       .043       6.0%         28623 5510       1.017       .071       9.6%         28623 5513       1.008       .057       7.7%         28623 5514       1.020       .076       10.1%         28623 5522       1.006       .042       6.0%         29414 4104       1.039       .123       17.1%         29414 4118       1.003       .051       6.5%         29414 4125       1.001       .036       4.7%         29502 2558       1.005       .061       11.8%         29517 2631       1.011       .057       8.2%         29517 2853       1.002       .037       4.7%         29522 27440090       1.000       .035       4.5%         29522 2803       1.004       .046       6.4%         29635 2738       1.002       .050       6.1%         29635 2849       1.000       .039       5.1%         29635 8510       1.006       .050       7.7%         33525 3195       1.028       .088       10.7%	28506 58020010	.999	.054	
28623 55034       1.004       .043       6.0%         28623 5510       1.017       .071       9.6%         28623 5513       1.008       .057       7.7%         28623 5514       1.020       .076       10.1%         28623 5522       1.006       .042       6.0%         29414 4104       1.039       .123       17.1%         29414 4118       1.003       .051       6.5%         29414 4125       1.001       .036       4.7%         29502 2558       1.005       .061       11.8%         29517 2631       1.011       .057       8.2%         29517 2853       1.002       .037       4.7%         29522 27440090       1.000       .035       4.5%         29522 2803       1.004       .046       6.4%         29635 2738       1.005       .048       6.8%         29635 2849       1.000       .039       5.1%         29635 8510       1.006       .050       7.7%         33525 3195       1.028       .088       10.7%	28506 5813	1.024	.078	
28623 55034       1.004       .043       6.0%         28623 5510       1.017       .071       9.6%         28623 5513       1.008       .057       7.7%         28623 5514       1.020       .076       10.1%         28623 5522       1.006       .042       6.0%         29414 4104       1.039       .123       17.1%         29414 4118       1.003       .051       6.5%         29414 4125       1.001       .036       4.7%         29502 2558       1.005       .061       11.8%         29517 2631       1.011       .057       8.2%         29517 2853       1.002       .037       4.7%         29522 27440090       1.000       .035       4.5%         29522 2803       1.004       .046       6.4%         29635 2738       1.005       .048       6.8%         29635 2849       1.000       .039       5.1%         29635 8510       1.006       .050       7.7%         33525 3195       1.028       .088       10.7%	28623 0455	1.007	.078	10.6%
28623 5510       1.017       .071       9.6%         28623 5513       1.008       .057       7.7%         28623 5514       1.020       .076       10.1%         28623 5522       1.006       .042       6.0%         29414 4104       1.039       .123       17.1%         29414 4114       1.003       .051       6.5%         29414 4125       1.001       .036       4.7%         29502 2558       1.005       .061       11.8%         29517 2631       1.011       .057       8.2%         29517 2853       1.002       .037       4.7%         29522 27440090       1.000       .035       4.5%         29522 2803       1.004       .046       6.4%         29635 2748       1.002       .050       6.1%         29635 2849       1.000       .039       5.1%         29635 8510       1.006       .050       7.7%         33525 0223       1.005       .079       11.4%         33525 3195       1.028       .088       10.7%	28623 55034	1.004	.043	
28623 5514       1.020       .076       10.1%         28623 5522       1.006       .042       6.0%         29414 4104       1.039       .123       17.1%         29414 4114       1.003       .051       6.5%         29414 4118       1.008       .049       6.7%         29414 4125       1.001       .036       4.7%         29502 2558       1.005       .061       11.8%         29517 2631       1.011       .057       8.2%         29517 2853       1.002       .037       4.7%         29522 27440090       1.000       .035       4.5%         29522 2803       1.004       .046       6.4%         29635 2733       1.005       .048       6.8%         29635 2748       1.002       .050       6.1%         29635 8510       1.006       .050       7.7%         33525 0223       1.005       .079       11.4%         33525 3195       1.028       .088       10.7%	28623 5510	1.017	.071	9.6%
28623 5522       1.006       .042       6.0%         29414 4104       1.039       .123       17.1%         29414 4114       1.003       .051       6.5%         29414 4118       1.008       .049       6.7%         29414 4125       1.001       .036       4.7%         29502 2558       1.005       .061       11.8%         29517 2631       1.011       .057       8.2%         29517 2853       1.002       .037       4.7%         29522 27440090       1.000       .035       4.5%         29522 2803       1.004       .046       6.4%         29635 2733       1.005       .048       6.8%         29635 2748       1.002       .050       6.1%         29635 8510       1.006       .050       7.7%         33525 0223       1.005       .079       11.4%         33525 3195       1.028       .088       10.7%	28623 5513	1.008	.057	7.7%
29414 4104       1.039       .123       17.1%         29414 4114       1.003       .051       6.5%         29414 4118       1.008       .049       6.7%         29414 4125       1.001       .036       4.7%         29502 2558       1.005       .061       11.8%         29517 2631       1.011       .057       8.2%         29517 2853       1.002       .037       4.7%         29522 27440090       1.000       .035       4.5%         29522 2803       1.004       .046       6.4%         29635 2733       1.005       .048       6.8%         29635 2748       1.002       .050       6.1%         29635 2849       1.000       .039       5.1%         29635 8510       1.006       .050       7.7%         33525 0223       1.005       .079       11.4%         33525 3195       1.028       .088       10.7%	28623 5514	1.020	.076	10.1%
29414 4104       1.039       .123       17.1%         29414 4114       1.003       .051       6.5%         29414 4118       1.008       .049       6.7%         29414 4125       1.001       .036       4.7%         29502 2558       1.005       .061       11.8%         29517 2631       1.011       .057       8.2%         29517 2853       1.002       .037       4.7%         29522 27440090       1.000       .035       4.5%         29522 2803       1.004       .046       6.4%         29635 2733       1.005       .048       6.8%         29635 2748       1.002       .050       6.1%         29635 2849       1.000       .039       5.1%         29635 8510       1.006       .050       7.7%         33525 0223       1.005       .079       11.4%         33525 3195       1.028       .088       10.7%	28623 5522	1.006	.042	6.0%
29414 4114       1.003       .051       6.5%         29414 4118       1.008       .049       6.7%         29414 4125       1.001       .036       4.7%         29502 2558       1.005       .061       11.8%         29517 2631       1.011       .057       8.2%         29517 2853       1.002       .037       4.7%         29522 27440090       1.000       .035       4.5%         29522 2803       1.004       .046       6.4%         29635 2733       1.005       .048       6.8%         29635 2748       1.002       .050       6.1%         29635 2849       1.000       .039       5.1%         29635 8510       1.006       .050       7.7%         33525 0223       1.005       .079       11.4%         33525 3195       1.028       .088       10.7%	29414 4104			17.1%
29414 4118       1.008       .049       6.7%         29414 4125       1.001       .036       4.7%         29502 2558       1.005       .061       11.8%         29517 2631       1.011       .057       8.2%         29517 2853       1.002       .037       4.7%         29522 27440090       1.000       .035       4.5%         29522 2803       1.004       .046       6.4%         29635 2733       1.005       .048       6.8%         29635 2748       1.002       .050       6.1%         29635 2849       1.000       .039       5.1%         29635 8510       1.006       .050       7.7%         33525 0223       1.005       .079       11.4%         33525 3195       1.028       .088       10.7%	29414 4114			
29414 4125       1.001       .036       4.7%         29502 2558       1.005       .061       11.8%         29517 2631       1.011       .057       8.2%         29517 2853       1.002       .037       4.7%         29522 27440090       1.000       .035       4.5%         29522 2803       1.004       .046       6.4%         29635 2733       1.005       .048       6.8%         29635 2748       1.002       .050       6.1%         29635 2849       1.000       .039       5.1%         29635 8510       1.006       .050       7.7%         33525 0223       1.005       .079       11.4%         33525 3195       1.028       .088       10.7%	29414 4118	1.008		6.7%
29517 2631       1.011       .057       8.2%         29517 2853       1.002       .037       4.7%         29522 27440090       1.000       .035       4.5%         29522 2803       1.004       .046       6.4%         29635 2733       1.005       .048       6.8%         29635 2748       1.002       .050       6.1%         29635 2849       1.000       .039       5.1%         29635 8510       1.006       .050       7.7%         33525 0223       1.005       .079       11.4%         33525 3195       1.028       .088       10.7%	29414 4125	1.001	.036	
29517 2631       1.011       .057       8.2%         29517 2853       1.002       .037       4.7%         29522 27440090       1.000       .035       4.5%         29522 2803       1.004       .046       6.4%         29635 2733       1.005       .048       6.8%         29635 2748       1.002       .050       6.1%         29635 2849       1.000       .039       5.1%         29635 8510       1.006       .050       7.7%         33525 0223       1.005       .079       11.4%         33525 3195       1.028       .088       10.7%	29502 2558	1.005	.061	11.8%
29517 2853       1.002       .037       4.7%         29522 27440090       1.000       .035       4.5%         29522 2803       1.004       .046       6.4%         29635 2733       1.005       .048       6.8%         29635 2748       1.002       .050       6.1%         29635 2849       1.000       .039       5.1%         29635 8510       1.006       .050       7.7%         33525 0223       1.005       .079       11.4%         33525 3195       1.028       .088       10.7%			.057	8.2%
29522 27440090       1.000       .035       4.5%         29522 2803       1.004       .046       6.4%         29635 2733       1.005       .048       6.8%         29635 2748       1.002       .050       6.1%         29635 2849       1.000       .039       5.1%         29635 8510       1.006       .050       7.7%         33525 0223       1.005       .079       11.4%         33525 3195       1.028       .088       10.7%			.037	4.7%
29522 2803       1.004       .046       6.4%         29635 2733       1.005       .048       6.8%         29635 2748       1.002       .050       6.1%         29635 2849       1.000       .039       5.1%         29635 8510       1.006       .050       7.7%         33525 0223       1.005       .079       11.4%         33525 3195       1.028       .088       10.7%				
29635 2733       1.005       .048       6.8%         29635 2748       1.002       .050       6.1%         29635 2849       1.000       .039       5.1%         29635 8510       1.006       .050       7.7%         33525 0223       1.005       .079       11.4%         33525 3195       1.028       .088       10.7%	29522 2803	1.004		
29635 2748       1.002       .050       6.1%         29635 2849       1.000       .039       5.1%         29635 8510       1.006       .050       7.7%         33525 0223       1.005       .079       11.4%         33525 3195       1.028       .088       10.7%				
29635 2849       1.000       .039       5.1%         29635 8510       1.006       .050       7.7%         33525 0223       1.005       .079       11.4%         33525 3195       1.028       .088       10.7%				
29635 8510     1.006     .050     7.7%       33525 0223     1.005     .079     11.4%       33525 3195     1.028     .088     10.7%				
33525 0223     1.005     .079     11.4%       33525 3195     1.028     .088     10.7%				
33525 3195 1.028 .088 10.7%				
41420 0131 1.004 1.100 14.4%	41428 0151	1.004	.106	14.4%
42915 0327 1.020 .100 12.8%				
43028 0272 1.030 .110 16.2%				
Overall 1.007 .056 8.0%				

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. None of the neighborhoods with at least 30

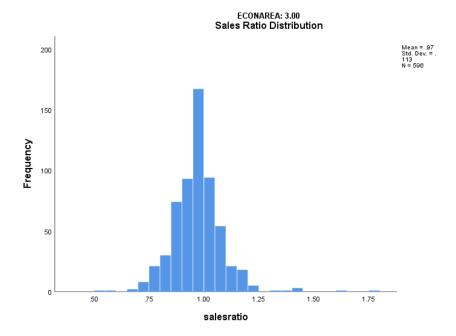


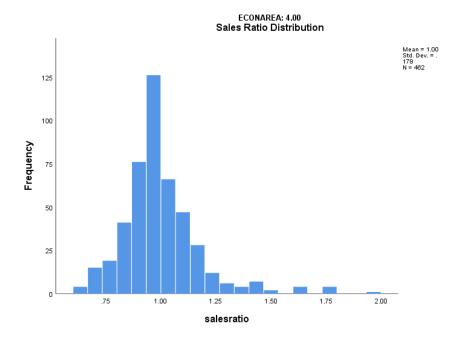
sales were outside of the standards for either the median sales ratio or the COD after rounding to two places. The following graphs describe further the sales ratio distribution for these properties:









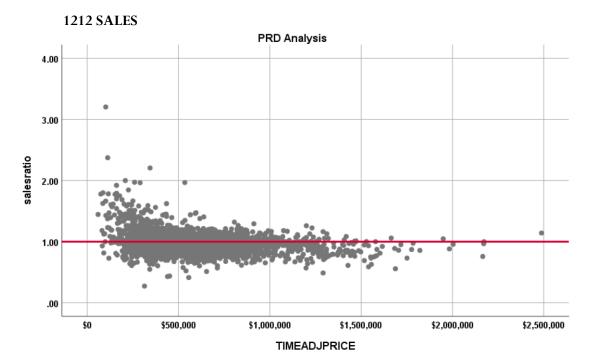


The above graphs indicate that the distribution of the sale ratios was within state mandated limits.

#### **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:





The Price-Related Differential (PRD) for 1212 sales is 1.009, 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>

		Unstandardized Coefficier	nts	Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	.975	.003		376.779	.000
	CURRTOT	.000000114	.000	.019	2.119	.034

a. Dependent Variable: salesratio

The slope of the line at 0.000000032 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 \$300K	879	7.3%
	\$300K to \$400K	4364	36.3%
	\$400K to \$500K	3490	29.0%
	\$500K to \$600K	1524	12.7%
	\$600K to \$750K	1008	8.4%
	\$750K to \$1000K	511	4.3%
	\$1000K to \$2000K	242	2.0%
	Over \$2000K	5	0.0%
Overall		12023	100.0%
Excluded		0	
Total		12023	



#### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT \$300K	.999	1.013	.114	20.5%
\$300K to \$400K	.984	1.000	.052	7.8%
\$400K to \$500K	.978	1.000	.054	7.5%
\$500K to \$600K	.973	1.000	.066	9.3%
\$600K to \$750K	.962	1.000	.075	10.0%
\$750K to \$1000K	.944	1.001	.088	11.6%
\$1000K to \$2000K	.926	1.005	.107	13.6%
Over \$2000K	.967	.995	.088	14.2%
Overall	.978	1.009	.064	10.1%

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

#### **Residential Market Trend Analysis**

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

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

ECONAREA	Model		Unstandardized B	d Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1.00	1	(Constant)	.986	.002		413.749	.000
		SalePeriod	.000	.000	030	-2.399	.016
2.00	1	(Constant)	.986	.003		364.794	.000
		SalePeriod	.000	.000	022	-1.521	.128
3.00	1	(Constant)	.990	.015		67.678	.000
		SalePeriod	001	.001	038	702	.483
4.00	1	(Constant)	.999	.017		60.248	.000
		SalePeriod	.000	.001	.015	.337	.737

a. Dependent Variable: salesratio

There was no residual market trending present in the sale ratio data for any of the economic areas; in Economic Area 1, where the marginally statistical trend was present, the magnitude of that trend at less than 0.01% per month was not significant. We therefore concluded that the assessor has adequately addressed market trending in the valuation of residential properties.

#### **Sold/Unsold Analysis**

In terms of the valuation consistency between sold and unsold residential properties, we compared the median actual value per square foot for 2022 between each group. The data was analyzed for the entire class and stratified by economic area, as follows:

<b>Report</b> VALSF			
sold	N	Median	Mean
UNSOLD	109130	\$244	\$254
SOLD	13779	\$245	\$258



# Report VALSF

ECONAREA	sold	N	Median	Mean
1.00	UNSOLD	59219	\$243	\$254
	SOLD	7419	\$241	\$256
2.00	UNSOLD	36780	\$239	\$243
	SOLD	5303	\$242	\$249
3.00	UNSOLD	6129	\$329	\$341
	SOLD	596	\$336	\$347
4.00	UNSOLD	6760	\$240	\$246
	SOLD	461	\$278	\$286

We next stratified the comparison by neighborhood with at least 30 sales. All neighborhoods valued residential sold and unsold properties consistently using the value per square foot method.

F	₹	е	p	0	rt	

VALSF				
NBHD	sold	N	Median	Mean
18729 0679	UNSOLD	371	\$215	\$225
	SOLD	36	\$212	\$220
18729 0896	UNSOLD	80	\$212	\$223
	SOLD	61	\$194	\$206
18729 0898	UNSOLD	259	\$246	\$247
	SOLD	142	\$232	\$237
18729 1997	UNSOLD	318	\$234	\$242
	SOLD	47	\$247	\$246
18729 19976	UNSOLD	280	\$220	\$224
	SOLD	35	\$219	\$221
18729 8014	UNSOLD	444	\$237	\$235
8729 8040	SOLD	68	\$236	\$233
18729 8040	UNSOLD	327	\$226	\$231
	SOLD	44	\$228	\$230
18729 8050	UNSOLD	56	\$238	\$240
	SOLD	50	\$245	\$242
18933 1971	UNSOLD	408	\$222	\$219
	SOLD	69	\$219	\$221
18933 240768	UNSOLD	88	\$314	\$302
18933 240768	SOLD	82	\$207	\$231
18933 5006	UNSOLD	282	\$426	\$425
	SOLD	60	\$436	\$438
18933 5007	UNSOLD	389	\$192	\$195
	SOLD	83	\$183	\$191
18933 5008	UNSOLD	178	\$229	\$234
	SOLD	191	\$225	\$228
18933 50080010	UNSOLD	154	\$199	\$205
	SOLD	47	\$192	\$199
18933 5010	UNSOLD	166	\$284	\$275
	SOLD	79	\$281	\$271
18933 5017	UNSOLD	104	\$197	\$231
	SOLD	89	\$184	\$210
18933 8098	UNSOLD	439	\$221	\$227
	SOLD	68	\$214	\$222
18933 8132	UNSOLD	226	\$228	\$230
	SOLD	68	\$241	\$241



18933 8255	UNSOLD	302	\$212	\$214
	SOLD	260	\$217	\$221
18933 8330	UNSOLD	133	\$215	\$223
	SOLD	39	\$215	\$217
18934 6043	UNSOLD	280	\$249	\$244
	SOLD	42	\$248	\$247
18934 6046	UNSOLD	182	\$208	\$213
	SOLD	43	\$202	\$203
18934 6048	UNSOLD	345	\$234	\$230
	SOLD	61	\$231	\$226
18934 6051	UNSOLD	91	\$160	\$163
	SOLD	41	\$159	\$159
18934 6053	UNSOLD	79	\$199	\$163
	SOLD	63	\$219	\$207
18934 6055	UNSOLD	150	\$222	\$220
	SOLD	94	\$225	\$225
18934 6067	UNSOLD	165	\$180	\$189
	SOLD	109	\$215	\$211
19613 1956	UNSOLD	302	\$226	\$224
	SOLD	56	\$237	\$230
19614 18513	UNSOLD	367	\$205	\$209
10014 10010	SOLD	47	\$200	\$203
19722 1227	UNSOLD	153	\$250	\$251
13122 1221	SOLD	36	\$242	\$247
19836 8116	UNSOLD	167	\$302	\$294
19030 0110	SOLD	42		
28506 230568			\$321	\$330
	UNSOLD	68	\$210	\$203
	SOLD	56	\$201	\$205
28506 2436	UNSOLD	319	\$229	\$245
00500 0700	SOLD	49	\$236	\$243
28506 2723	UNSOLD	262	\$271	\$272
2252225	SOLD	42	\$245	\$252
28506 2725	UNSOLD	437	\$219	\$226
2252225	SOLD	198	\$228	\$227
28506 2736	UNSOLD	191	\$254	\$257
	SOLD	35	\$261	\$263
28506 2753	UNSOLD	271	\$274	\$275
	SOLD	72	\$277	\$277
28506 5802	UNSOLD	371	\$194	\$195
	SOLD	89	\$194	\$197
28506 58020010	UNSOLD	331	\$182	\$183
	SOLD	84	\$185	\$192
28506 5813	UNSOLD	91	\$260	\$252
	SOLD	72	\$257	\$251
28623 0455	UNSOLD	250	\$243	\$244
	SOLD	40	\$243	\$246
28623 55034	UNSOLD	201	\$241	\$243
	SOLD	35	\$237	\$240
28623 5510	UNSOLD	589	\$297	\$292
	SOLD	131	\$299	\$299
28623 5513	UNSOLD	249	\$255	\$254
	SOLD	45	\$260	\$256
28623 5514	UNSOLD	314	\$265	\$262
	SOLD	53	\$252	\$258
28623 5522	UNSOLD	39	\$304	\$305
	SOLD	57	\$303	\$304
29414 4104	UNSOLD	98	\$307	\$333
20111 4104	O. NOOLD	00	φυσι	ψυσυ



	0015			<b>*</b>
	SOLD	36	\$401	\$377
29414 4114	UNSOLD	222	\$221	\$221
	SOLD	276	\$225	\$229
29414 4118	UNSOLD	165	\$255	\$251
	SOLD	160	\$232	\$238
29414 4125	UNSOLD	165	\$221	\$233
	SOLD	142	\$250	\$244
29502 2558	UNSOLD	310	\$215	\$215
	SOLD	63	\$216	\$216
29517 2631	UNSOLD	220	\$288	\$295
	SOLD	63	\$286	\$283
29517 2853	UNSOLD	67	\$222	\$224
	SOLD	85	\$228	\$232
29522 27440090	UNSOLD	54	\$206	\$210
	SOLD	41	\$200	\$204
29522 2803	UNSOLD	137	\$309	\$307
	SOLD	61	\$311	\$312
29635 2733	UNSOLD	49	\$234	\$249
	SOLD	35	\$232	\$237
29635 2748	UNSOLD	292	\$274	\$269
	SOLD	43	\$286	\$287
29635 2849	UNSOLD	12	\$253	\$258
	SOLD	48	\$254	\$250
29635 8510	UNSOLD	289	\$253	\$254
	SOLD	48	\$243	\$245
33525 0223	UNSOLD	481	\$334	\$336
	SOLD	55	\$312	\$329
33525 3195	UNSOLD	111	\$308	\$302
	SOLD	37	\$324	\$317
41428 0151	UNSOLD	293	\$306	\$310
	SOLD	39	\$333	\$334
42915 0327	UNSOLD	503	\$230	\$233
	SOLD	64	\$240	\$249
43028 0272	UNSOLD	752	\$248	\$257
	SOLD	90	\$251	\$256

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

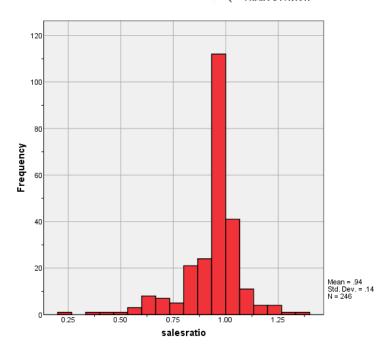
#### IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

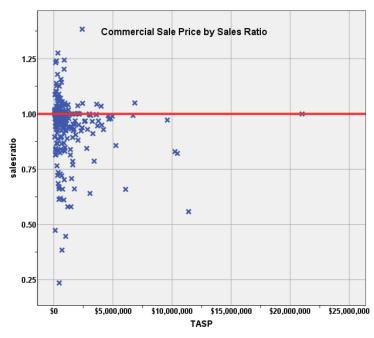
There were 246 qualified commercial and industrial sales for the 24 month period ending June 30, 2020. The sales ratio analysis results were as follows:

Median	0.975
Price Related Differential	1.020
Coefficient of Dispersion	8.9

The above table indicates that the Larimer County vacant land sale ratios were in compliance with the SBOE standards. The following histogram and scatter plot describe the sales ratio distribution further:







#### **Commercial/Industrial Market Trend Analysis**

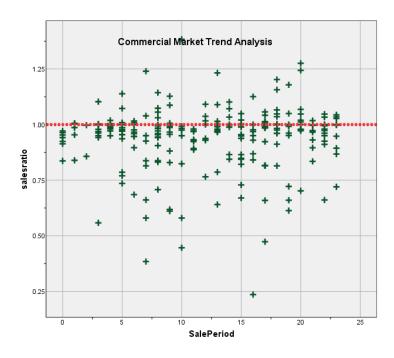
The assessor did apply market trend adjustments to the commercial/industrial dataset. The commercial/industrial sales were analyzed, examining the sale ratios across the 24 month sale period with the following results:



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

		Unstandardized	Coefficients	Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	.931	.019		48.725	.000
	SalePeriod	.001	.001	.044	.690	.491

a. Dependent Variable: salesratio



There was no statistically significant residual market trending present in the commercial sale ratios; therefore, 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 change in actual value for valuation year 2018 and valuation year 2020 between sold and unsold commercial properties, both overall and stratified by subclass, to determine if both groups were valued consistently, as follows:

Report DIFF				
sold	N	Median	Mean	
UNSOLD	5602	1.03	1.07	
SOLD	239	1.08	1.17	



# Report

DIFF

ABSTRIMP	sold	N	Median	Mean
2212.00	UNSOLD	682	1.00	1.03
	SOLD	26	1.15	1.24
2220.00	UNSOLD	483	1.01	1.03
	SOLD	26	1.06	1.10
2225.00	UNSOLD	78	1.00	1.00
	SOLD	3	1.02	1.08
2227.50	UNSOLD	32	1.06	1.11
	SOLD	3	1.14	1.12
2230.00	UNSOLD	1099	1.03	1.07
	SOLD	26	1.10	1.17
3215.00	UNSOLD	119	1.08	1.15
	SOLD	7	1.27	1.27

Although the magnitude overall was not significant, we will consult with the assessor's office to review the commercial valuation process. Sold properties for 2212, 2235 and 3215 subclasses tended to be smaller, newer, higher quality and/or superior condition. This likely explains some of the differences between sold and unsold changes in value for these subclasses.

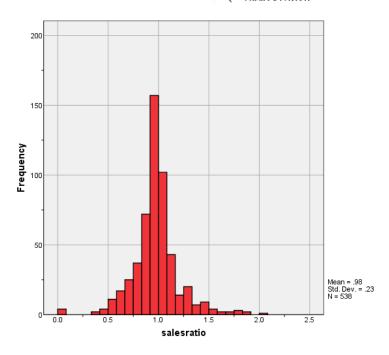
#### V. VACANT LAND SALE RESULTS

There were 538 qualified vacant land sales for the 24 month period ending June 30, 2020. The sales ratio analysis results were as follows:

Median	0.989
Price Related Differential	1.037
Coefficient of Dispersion	14.9

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 these properties:







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

# **Vacant Land Market Trend Analysis**

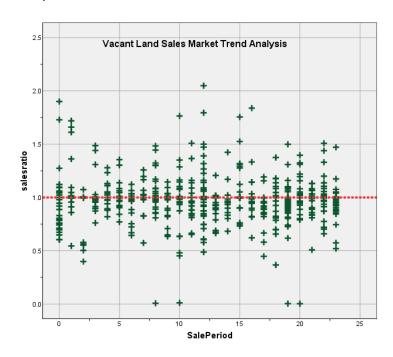
We next analyzed the vacant land dataset using the 24-month sale period and stratified by economic area, with the following results:



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

		Unstandardized		Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	.988	.020		49.668	.000
	SalePeriod	001	.001	032	744	.457

a. Dependent Variable: salesratio



The above analysis indicated that no significant market trending was present in the vacant land sale data. We concluded that the assessor has adequately dealt with market trending for vacant land properties.

#### **Sold/Unsold Analysis**

In terms of the valuation consistency between sold and unsold vacant land properties, we compared the median change in actual value for valuation year 2018 and valuation year 2020 between each group, as follows:

Report			
DIFF			
sold	N	Median	Mean
UNSOLD	8406	1.00	1.09
SOLD	512	1.13	1.14

We next examined sold and unsold properties with at least 10 sales to determine if sold and unsold properties were valued differently, as follows:



# Report DIFF

SUBDIVNO	sold	N	Median	Mean
0272120	UNSOLD	96	1.21	1.15
	SOLD	11	1.21	1.19
0272130	UNSOLD	47	1.09	1.13
	SOLD	12	1.09	1.07
0327120	UNSOLD	113	1.57	1.49
	SOLD	13	1.57	1.45
03279	UNSOLD	43	1.50	1.43
	SOLD	10	1.44	1.39
0923001000	UNSOLD	6	.44	.63
	SOLD	12	.44	.44
2631027000	UNSOLD	7	1.00	1.01
	SOLD	14	1.08	1.12
4104003000	UNSOLD	70	.97	.90
	SOLD	16	.97	.97
5006003001	UNSOLD	19	.74	.94
	SOLD	10	1.33	1.33

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

#### **V. CONCLUSIONS**

Based on this 2022 audit statistical analysis for Larimer County, residential, commercial industrial and vacant properties were found to be in compliance with state guidelines.



#### **STATISTICAL ABSTRACT**

#### **Residential**

	Ratio Statistics for CURRTOT / TASP												
		95% Confiden Me			95% Cor	nfidence Interval f	or Median		95% Confiden Weighte	ice Interval for ed 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
1.00	.979	.976	.981	.978	.977	.980	95.2%	.972	.969	.975	1.007	.062	9.5%
2.00	.981	.978	.984	.979	.977	.981	95.1%	.971	.968	.974	1.010	.060	9.6%
3.00	.970	.957	.983	.973	.964	.982	95.6%	.964	.951	.977	1.006	.086	12.4%
4.00	.999	.982	1.015	.979	.966	.991	95.5%	.976	.961	.990	1.024	.120	17.8%

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.

#### **Commercial Land**

	Ratio Statistics for CURRTOT / TASP											
	95% Confiden Me			95% Con	ifidence Interval fo	or Median		95% Confiden Weighte	ice Interval for ed 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
.943	.925	.961	.975	.966	.983	95.2%	.924	.890	.959	1.020	.089	14.8%

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											
95% Confidence Interval for 95% Confidence Interval for Median 95% Confidence Interval for Median 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
.975	.956	.995	.989	.973	.996	95.7%	.940	.919	.961	1.037	.149	23.5%

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



#### Residential Median Ratio Stratification

#### **Subclass**

# **Case Processing Summary**

		Count	Percent
ABSTRIMP	1212.00	11993	99.8%
	1215.00	3	0.0%
	1230.00	17	0.1%
	1713.50	2	0.0%
	1716.00	1	0.0%
	1721.00	4	0.0%
	9249.00	1	0.0%
	9250.00	2	0.0%
Overall		12023	100.0%
Excluded		0	
Total		12023	

#### **Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212.00	.978	1.009	.064	10.1%
1215.00	1.011	.999	.007	1.0%
1230.00	.952	1.002	.032	4.1%
1713.50	.990	1.000	.027	3.9%
1716.00	1.000	1.000	.000	
1721.00	1.037	1.000	.019	2.8%
9249.00	.576	1.000	.000	
9250.00	.876	.999	.161	22.7%
Overall	.978	1.009	.064	10.1%

# Age

		Count	Percent
AgeRec	Over 100	268	2.2%
	75 to 100	143	1.2%
	50 to 75	945	7.9%
	25 to 50	3287	27.3%
	5 to 25	4149	34.5%
	5 or Newer	3231	26.9%
Overall		12023	100.0%
Excluded		0	
Total		12023	



#### **Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	.969	1.036	.138	20.8%
75 to 100	.969	1.019	.101	14.1%
50 to 75	.975	1.017	.092	14.0%
25 to 50	.977	1.008	.069	11.6%
5 to 25	.983	1.005	.053	7.8%
5 or Newer	.976	1.009	.057	8.2%
Overall	.978	1.009	.064	10.1%

#### **Improved Area**

# **Case Processing Summary**

		Count	Percent
ImpSFRec	LE 500 sf	33	0.3%
	500 to 1,000 sf	654	5.4%
	1,000 to 1,500 sf	3363	28.0%
	1,500 to 2,000 sf	4169	34.7%
	2,000 to 3,000 sf	3116	25.9%
	3,000 sf or Higher	688	5.7%
Overall		12023	100.0%
Excluded		0	
Total		12023	

#### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	.969	1.127	.231	32.3%
500 to 1,000 sf	.951	1.018	.102	18.6%
1,000 to 1,500 sf	.975	1.007	.062	10.0%
1,500 to 2,000 sf	.978	1.007	.056	8.3%
2,000 to 3,000 sf	.986	1.012	.065	9.7%
3,000 sf or Higher	.990	1.011	.072	10.1%
Overall	.978	1.009	.064	10.1%

# **Improvement Quality**

		Count	Percent
QUALITY	Average	9027	75.1%
	Average Plus	1898	15.8%
	Excellent	1	0.0%
	Fair	394	3.3%
	Good	566	4.7%
	Good Plus	91	0.8%
	Low	8	0.1%
	Very Good	38	0.3%
Overall		12023	100.0%
Excluded		0	
Total		12023	



#### **Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	.977	1.007	.059	9.2%
Average Plus	.991	1.010	.067	9.8%
Excellent	.974	1.000	.000	
Fair	.949	1.021	.111	20.7%
Good	.986	1.018	.088	12.9%
Good Plus	.974	1.009	.095	12.1%
Low	.952	1.075	.244	32.0%
Very Good	.984	1.017	.109	14.3%
Overall	.978	1.009	.064	10.1%

# **Improvement Condition**

# **Case Processing Summary**

		Count	Percent
CONDITION	Average	12009	99.9%
	Badly Worn	1	0.0%
	Good	11	0.1%
	Worn Out	2	0.0%
Overall		12023	100.0%
Excluded		0	
Total		12023	

#### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	.978	1.009	.064	10.1%
Badly Worn	.815	1.000	.000	
Good	.992	1.025	.082	14.9%
Worn Out	.741	.990	.125	17.7%
Overall	.978	1.009	.064	10.1%

#### **Commercial Median Ratio Stratification**

#### **Sale Price**

	_	-	
		Count	Percent
SPRec	\$50K to \$100K	7	2.8%
	\$100K to \$150K	7	2.8%
	\$150K to \$200K	12	4.9%
	\$200K to \$300K	28	11.4%
	\$300K to \$500K	52	21.1%
	\$500K to \$750K	32	13.0%
	\$750K to \$1,000K	33	13.4%
	Over \$1,000K	75	30.5%
Overall		246	100.0%
Excluded		0	
Total		246	



# Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
\$50K to \$100K	1.012	.995	.035	5.8%
\$100K to \$150K	.944	.984	.175	25.8%
\$150K to \$200K	.971	.993	.087	11.5%
\$200K to \$300K	.997	1.002	.058	8.9%
\$300K to \$500K	.973	1.001	.093	16.6%
\$500K to \$750K	.982	1.001	.105	17.2%
\$750K to \$1,000K	.974	1.002	.085	15.2%
Over \$1,000K	.966	1.010	.085	13.8%
Overall	.975	1.020	.089	14.7%

#### **Subclass**

# **Case Processing Summary**

	U	•	
		Count	Percent
ABSTRIMP	1212.00	2	0.8%
	1712.00	7	2.8%
	1713.50	2	0.8%
	1716.00	3	1.2%
	1721.00	2	0.8%
	1880.67	1	0.4%
	1964.25	2	0.8%
	2047.83	1	0.4%
	2212.00	27	11.0%
	2215.00	1	0.4%
	2220.00	26	10.6%
	2223.50	2	0.8%
	2225.00	3	1.2%
	2227.50	3	1.2%
	2230.00	30	12.2%
	2235.00	21	8.5%
	2240.00	1	0.4%
	2245.00	100	40.7%
	3215.00	7	2.8%
	3230.00	2	0.8%
	9259.00	1	0.4%
	9279.00	2	0.8%
Overall		246	100.0%
Excluded		0	
Total		246	

#### **Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212.00	.967	.999	.006	0.8%
1712.00	.955	.992	.034	5.3%
1713.50	.982	1.001	.054	7.6%
1716.00	1.002	.995	.018	3.7%
1721.00	.996	1.001	.004	0.6%
1880.67	.978	1.000	.000	



1964.25	.903	.980	.070	9.9%
2047.83	.994	1.000	.000	
2212.00	.961	1.125	.110	16.1%
2215.00	.837	1.000	.000	
2220.00	.998	.992	.040	8.8%
2223.50	.988	.991	.025	3.5%
2225.00	.978	1.051	.107	19.5%
2227.50	.889	.978	.040	6.0%
2230.00	.963	1.025	.099	18.9%
2235.00	.970	1.045	.068	12.4%
2240.00	.997	1.000	.000	
2245.00	.980	1.025	.105	16.0%
3215.00	.966	1.005	.073	11.0%
3230.00	.930	.941	.067	9.5%
9259.00	.979	1.000	.000	
9279.00	.731	.827	.353	49.9%
Overall	.975	1.020	.089	14.7%

# Age

# **Case Processing Summary**

		Count	Percent
AgeRec	Over 100	16	6.5%
	75 to 100	8	3.3%
	50 to 75	29	11.8%
	25 to 50	71	28.9%
	5 to 25	103	41.9%
	5 or Newer	19	7.7%
Overall		246	100.0%
Excluded		0	
Total		246	

#### **Ratio Statistics for CURRTOT / TASP**

		Price Related	Coefficient of	Coefficient of Variation
Group	Median	Differential	Dispersion	Median Centered
Over 100	.988	.993	.038	5.4%
75 to 100	.924	1.037	.069	8.8%
50 to 75	.975	1.032	.053	9.1%
25 to 50	.978	1.027	.097	16.4%
5 to 25	.975	1.008	.088	12.9%
5 or Newer	.968	1.029	.162	27.6%
Overall	.975	1.020	.089	14.7%



# Improved Area

# **Case Processing Summary**

		Count	Percent
ImpSFRec	LE 500 sf	5	2.0%
	500 to 1,000 sf	16	6.5%
	1,000 to 1,500 sf	36	14.6%
	1,500 to 2,000 sf	21	8.5%
	2,000 to 3,000 sf	35	14.2%
	3,000 sf or Higher	133	54.1%
Overall		246	100.0%
Excluded		0	
Total		246	

#### **Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	.944	1.558	.187	37.9%
500 to 1,000 sf	.988	.990	.078	15.3%
1,000 to 1,500 sf	.981	1.003	.075	11.4%
1,500 to 2,000 sf	.985	1.024	.108	18.5%
2,000 to 3,000 sf	.977	1.038	.108	15.8%
3,000 sf or Higher	.971	1.017	.081	13.4%
Overall	.975	1.020	.089	14.7%

# **Improvement Quality**

# **Case Processing Summary**

		Count	Percent
QUALITY	Average	177	72.0%
	Average Plus	22	8.9%
	Fair	7	2.8%
	Good	39	15.9%
	Very Good	1	0.4%
Overall		246	100.0%
Excluded		0	
Total		246	

#### **Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	.975	1.038	.098	16.3%
Average Plus	.980	.994	.048	6.8%
Fair	.969	1.029	.096	12.5%
Good	.975	.994	.061	9.4%
Very Good	.659	1.000	.000	
Overall	.975	1.020	.089	14.7%



# **Improvement Condition**

# **Case Processing Summary**

		Count	Percent
CONDITION	Average	216	87.8%
	Good	23	9.3%
	Very Good	7	2.8%
Overall		246	100.0%
Excluded		0	
Total		246	

#### Ratio Statistics for CURRTOT / TASP

Croup	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Group				
Average	.975	1.030	.085	14.5%
Good	.950	.953	.125	17.2%
Very Good	.997	1.048	.056	10.7%
Overall	.975	1.020	.089	14.7%

# **Vacant Land Median Ratio Stratification**

#### **Sale Price**

		Count	Percent
SPRec	LT \$25K	28	5.2%
	\$25K to \$50K	95	17.7%
	\$50K to \$100K	95	17.7%
	\$100K to \$150K	70	13.0%
	\$150K to \$200K	80	14.9%
	\$200K to \$300K	95	17.7%
	\$300K to \$500K	61	11.3%
	\$500K to \$750K	11	2.0%
	\$750K to \$1,000K	2	0.4%
	Over \$1,000K	1	0.2%
Overall		538	100.0%
Excluded		0	
Total		538	



# Ratio Statistics for CURRLND / TASP

Croup	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Group			<del></del>	
LT \$25K	1.000	1.013	.197	34.0%
\$25K to \$50K	.998	1.019	.151	22.5%
\$50K to \$100K	.978	1.006	.204	27.7%
\$100K to \$150K	.994	.993	.198	31.0%
\$150K to \$200K	.999	1.000	.101	17.4%
\$200K to \$300K	.967	1.003	.093	13.3%
\$300K to \$500K	.921	1.006	.114	15.6%
\$500K to \$750K	.971	.999	.215	33.6%
\$750K to \$1,000K	.977	1.002	.055	7.7%
Over \$1,000K	1.000	1.000	.000	
Overall	.989	1.037	.149	23.2%

#### **Sub-Class**

	•	,	
		Count	Percent
ABSTRLND	100.00	206	38.3%
	200.00	17	3.2%
	400.00	51	9.5%
	510.00	3	0.6%
	520.00	5	0.9%
	530.00	5	0.9%
	540.00	6	1.1%
	550.00	29	5.4%
	1112.00	193	35.9%
	1115.00	1	0.2%
	1135.00	1	0.2%
	2112.00	2	0.4%
	2120.00	1	0.2%
	2130.00	9	1.7%
	2135.00	2	0.4%
	3115.00	1	0.2%
	4147.00	2	0.4%
	4153.67	1	0.2%
	4177.00	1	0.2%
	5669.50	1	0.2%
	9129.00	1	0.2%
Overall		538	100.0%
Excluded		0	
Total		538	



# **Ratio Statistics for CURRLND / TASP**

		Price Related	Coefficient of	Coefficient of Variation
Group	Median	Differential	Dispersion	Median Centered
100.00	.996	1.039	.157	24.1%
200.00	.886	1.027	.157	21.9%
400.00	.956	1.071	.174	24.9%
510.00	.996	1.020	.037	7.5%
520.00	.967	.977	.097	16.4%
530.00	.987	1.048	.138	24.5%
540.00	1.000	1.033	.129	23.7%
550.00	.978	1.036	.128	17.8%
1112.00	.994	1.047	.126	19.3%
1115.00	.980	1.000	.000	
1135.00	.727	1.000	.000	
2112.00	1.014	.996	.017	2.5%
2120.00	1.439	1.000	.000	
2130.00	.973	1.001	.051	7.7%
2135.00	1.100	1.053	.091	12.9%
3115.00	.997	1.000	.000	
4147.00	.007	1.004	.574	81.2%
4153.67	.008	1.000	.000	
4177.00	.004	1.000	.000	
5669.50	1.030	1.000	.000	
9129.00	.933	1.000	.000	
Overall	.989	1.037	.149	23.2%