



2024

HINSDALE COUNTY PROPERTY ASSESSMENT STUDY





September 15, 2024

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

RE: Final Report for the 2024 Colorado Property Assessment Study

Dear Ms. Castle:

East West Econometrics.-Audit Division is pleased to submit the Final Reports for the 2024 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.

East West Econometrics – Audit Division appreciates the opportunity to be of service to the State of Colorado. Please contact us with any questions or concerns.

A handwritten signature in black ink that reads "Harry J. Fuller". The signature is written in a cursive style with a prominent initial "H".

Harry J. Fuller
Project Manager
East West Econometrics. – Audit Division

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INTRODUCTION



Colorado

The State Board of Equalization (SBOE) reviews assessments for conformance to the Constitution. The SBOE will order revaluations for counties whose valuations do not reflect the proper valuation period level of value.

The statutory basis for the audit is found in C.R.S. 39-1-104 (16)(a)(b) and (c).

The legislative council sets forth two criteria that are the focus of the audit group:

To determine whether each county assessor is applying correctly the constitutional and statutory provisions, compliance requirements of the State Board of Equalization, and the manuals published by the State Property Tax Administrator to arrive at the actual value of each class of property.

To determine if each assessor is applying correctly the provisions of law to the actual values when arriving at valuations for assessment of all locally valued properties subject to the property tax.

The property assessment audit conducts a two-part analysis: A procedural analysis and a statistical analysis.

The procedural analysis includes all classes of property and specifically looks at how the assessor develops economic areas, confirms and qualifies sales, and develops time adjustments. The audit also examines the procedures for adequately discovering, classifying and valuing agricultural outbuildings, discovering subdivision build-out and subdivision discounting procedures. Valuation methodology for vacant land, improved residential properties and commercial properties is examined. Procedures for producing mines, oil and gas leaseholds and lands producing, producing coal mines, producing earth and stone products, severed mineral interests and non-producing patented mining claims are also reviewed.

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

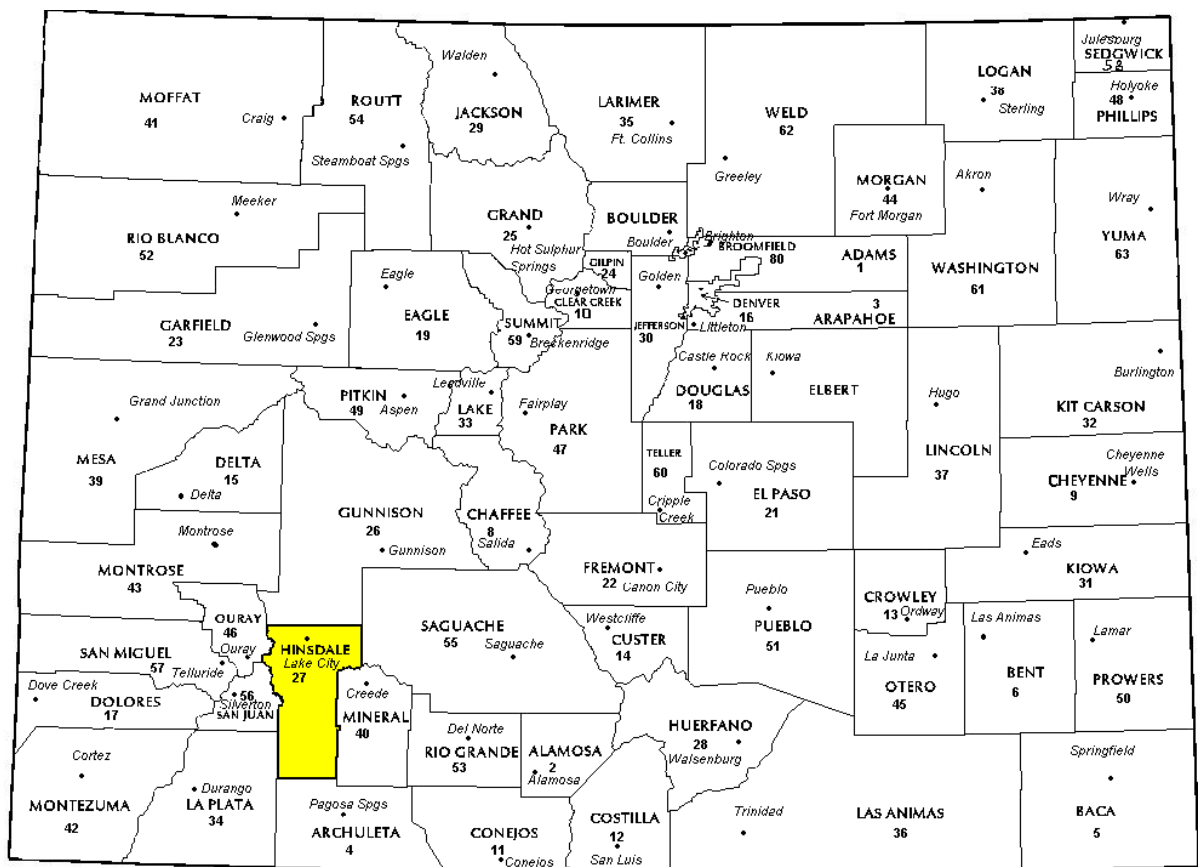
East West Econometrics has completed the Property Assessment Study for 2024 and is pleased to report its findings for Hinsdale County in the following report.

REGIONAL/HISTORICAL SKETCH OF HINSDALE COUNTY

Regional Information

Hinsdale County is located in the Western Slope region of Colorado. The Western Slope of Colorado refers to the region west of the Rocky Mountains. It includes Archuleta, Delta, Dolores, Eagle, Garfield, Grand,

Gunnison, Hinsdale, Jackson, La Plata, Mesa, Moffat, Montezuma, Montrose, Ouray, Pitkin, Rio Blanco, Routt, San Juan, San Miguel, and Summit counties.



Historical Information

Hinsdale County has approximately 1,117.3 square miles and an estimated population of approximately 820 people, according to the U.S. Census Bureau's 2020 estimated census data. This represents a -2.7 percent change from April 1, 2010 to July 1, 2019.

Hinsdale County was formed in 1874, from Conejos, Costilla and Lake Counties and is the least densely populated of the 64 Colorado counties. The county seat and the only municipality in the county is the Town of Lake City. Hinsdale County is named for George A. Hinsdale, a prominent pioneer and former Lt. Governor of Colorado.

It is approximately 96% public lands, with 49% of that land designated as wilderness. The second largest natural lake in Colorado, Lake San Cristobal, is located in Hinsdale County. The lake was formed naturally over 700 years

ago by the Slumgullion Earthflow, which blocked the Lake Fork of the Gunnison River. There are five mountain peaks over 14,000 feet in Hinsdale County - Uncomphagre, Wetterhorn, Sunshine, Handies and Redcloud - all located near Lake City.

Lake City was formed in 1874 when a road building crew found gold in the nearby hills and the Town was officially established in 1875. During the 1880's the town boomed to almost 5,000 residents and had two breweries, two banks, seven saloons, and the first newspaper and Protestant church on the Western Slope of Colorado. Today, Lake City is a national historic district with many ghost towns such as Spencer, Vulcan (Vulcan Hill), Carson, Sherman, Burrows Park, Capitol City and others nearby.

(Wikipedia.org & www.rootsweb.ancestry.com)

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 Hinsdale County are:

Hinsdale County Ratio Grid						
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis	
*Commercial/Industrial	15	0.983	1.019	11.6	Compliant	
Single Family	156	0.992	1.014	11.3	Compliant	
Vacant Land	N/A	N/A	N/A	N/A	N/A	

**County Sales File augmented by five supplemental appraisals*

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

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

Recommendations

None

TIME TRENDING VERIFICATION

Methodology

While we recommend that counties use the inverted ratio regression analysis method to account for market (time) trending, some counties have used other IAAO-approved methods, such as the weighted monthly median approach. We are not auditing the methods used, but rather the results of the methods used. Given this range of methodologies used to account for market trending, we concluded that the best validation method was to examine the sale ratios for each class across the appropriate sale period. To be specific, if a county has considered and adjusted correctly for market trending, then the sale ratios should remain stable (i.e. flat) across the sale period. If a residual market trend is detected, then the county may or may not have addressed market

trending adequately, and a further examination is warranted. This validation method also considers the number of sales and the length of the sale period. Counties with few sales across the sale period were carefully examined to determine if the statistical results were valid.

Conclusions

After verification and analysis, it has been determined that Hinsdale County has complied with the statutory requirements to analyze the effects of time on value in their county. Hinsdale County has also satisfactorily applied the results of their time trending analysis to arrive at the time adjusted sales price (TASP).

Recommendations

None

SOLD / UNSOLD ANALYSIS

Methodology

Hinsdale County was tested for the equal treatment of sold and unsold properties to ensure that “sales chasing” has not occurred. The auditors employed a multi-step process to determine if sold and unsold properties were valued in a consistent manner.

We test the hypothesis that the assessor has valued unsold properties consistent with what is observed with the sold properties based on several units of comparison and tests. The units of comparison include the actual value per square foot and the change in value from the previous base year period to the current base year. The first test compares the actual value per square foot between sold and unsold properties by class. The median and mean value per square foot is compared and tested for any significant difference. This is tested using non-parametric methods, such as the Mann-Whitney test for differences in the distributions or medians between sold and unsold groups. It is also examined graphically and from an appraisal perspective. Data can be stratified based on location and subclass. The second test compares the difference in the median change in value from the previous base year to the current base year between sold and unsold properties by class. The same combination of non-parametric and appraisal testing is used as with the first test. A third test employing a valuation model testing a sold/unsold binary variable while controlling for property attributes such as location, size, age and other attributes. The model determines if the sold/unsold variable is statistically and empirically significant. If all three tests indicate a significant difference between sold and unsold properties for a given class, the Auditor may meet with the county to determine if sale chasing is actually occurring,

or if there are other explanations for the observed difference.

If the unsold properties have a higher median value per square foot than the sold properties, or if the median change in value is greater for the unsold properties than the sold properties, the analysis is stopped and the county is concluded to be in compliance with sold and unsold guidelines. All sold and unsold properties in a given class are first tested, although properties with extreme unit values or percent changes can be trimmed to stabilize the analysis. The median is the primary comparison metric, although the mean can also be used as a comparison metric if the distribution supports that type of measure of central tendency.

The first test (unit value method) is applied to both residential and commercial/industrial sold and unsold properties. The second test is applied to sold and unsold vacant land properties. The second test (change in value method) is also applied to residential or commercial sold and unsold properties if the first test results in a significant difference observed and/or tested between sold and unsold properties. The third test (valuation modeling) is used in instances where the results from the first two tests indicate a significant difference between sold and unsold properties. It can also be used when the number of sold and unsold properties is so large that the non-parametric testing is indicating a false rejection of the hypothesis that there is no difference between the sold and unsold property values.

These tests were supported by both tabular and graphics presentations, along with written documentation explaining the methodology used.

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

Conclusions

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

Recommendations

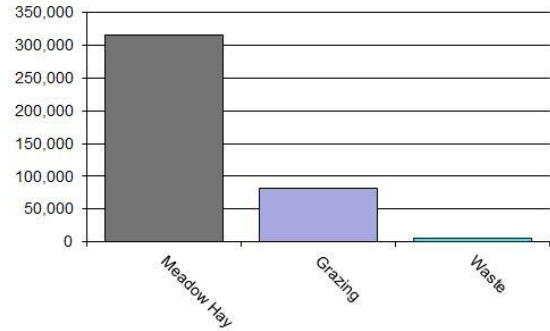
None

AGRICULTURAL LAND STUDY

Acres By Subclass



Value By Subclass



Agricultural Land

County records were reviewed to determine major land categories such as irrigated farm, dry farm, meadow hay, grazing and other lands. In addition, county records were reviewed in order to determine if: Aerial photographs are available and are being used; soil conservation guidelines have been used to classify lands based on productivity; crop rotations have been documented; typical commodities and yields have been determined; orchard lands have been properly classified and valued; expenses reflect a ten year average and are typical landlord expenses; grazing lands have been properly classified and valued; the number of acres in each class and subclass have been determined; the capitalization rate was properly applied. Also, documentation was required for the valuation methods used and any locally developed yields, carrying capacities, and expenses. Records were also checked to ensure that the commodity prices and expenses, furnished by the Property Tax Administrator (PTA), were applied properly.

(See Assessor Reference Library Volume 3 Chapter 5.)

Conclusions

An analysis of the agricultural land data indicates an acceptable appraisal of this property type. Directives, commodity prices and expenses provided by the PTA were properly applied. County yields compared favorably to those published by Colorado Agricultural Statistics. Expenses used by the county were allowable expenses and were in an acceptable range. Grazing lands carrying capacities were in an acceptable range. The data analyzed resulted in the following ratios:

Hinsdale County Agricultural Land Ratio Grid						
Abstract Code	Land Class	Number Of Acres	County Value Per Acre	County Assessed Total Value	WRA Total Value	Ratio
4137	Meadow Hay	5,479	57.72	316,270	316,270	1.00
4147	Grazing	6,957	11.73	81,638	81,654	1.00
4167	Waste	2,564	2.19	5,611	5,611	1.00
Total/Avg		15,000	26.90	403,519	403,534	1.00

Recommendations

None

Agricultural Outbuildings

Methodology

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

Property Taxation for the valuation of agricultural outbuildings.

Recommendations

None

Conclusions

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

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

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

- Questionnaires
- Field Inspections
- Phone Interviews
- Personal Knowledge of Occupants at Assessment Date

Hinsdale 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.:

- Property Record Card Analysis
- Field Inspections
- Phone Interviews
- In-Person Interviews with Owners/Tenants
- Personal Knowledge of Occupants at Assessment Date
- USDA Soil Mapping website

Hinsdale County has complied with the procedures provided by the Division of Property Taxation for the valuation of land under residential improvements that may or may not be integral to an agricultural operation.

Recommendations

None

SALES VERIFICATION

According to Colorado Revised Statutes:

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

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

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

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

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

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

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

EWE reviewed the sales verification procedures in 2024 for Hinsdale County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically EWE selected 34 sales listed as unqualified.

All but one of the sales selected in the sample gave reasons that were clear and supportable. One sale 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

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

Recommendations

None

ECONOMIC AREA REVIEW AND EVALUATION

Methodology

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

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

Recommendations

None

NATURAL RESOURCES

Hinsdale County is exempt from the Natural Resources Study.

VACANT LAND

Subdivision Discounting

Subdivisions were reviewed in 2024 in Hinsdale 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

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

Recommendations

None

POSSESSORY INTEREST PROPERTIES

Possessory Interest

Possessory interest property discovery and valuation is described in the Assessor's Reference Library (ARL) Volume 3 section 7 in accordance with the requirements of Chapter 39-1-103 (17)(a) (II) C.R.S. Possessory Interest is defined by the Property Tax Administrator's Publication ARL Volume 3, Chapter 7: A private property interest in government-owned property or the right to the occupancy and use of any benefit in government-owned property that has been granted under lease, permit, license, concession, contract, or other agreement.

Hinsdale 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

Hinsdale County has implemented a discovery process to place possessory interest properties on the roll. They have also correctly and consistently applied the correct procedures and valuation methods in the valuation of possessory interest properties.

Recommendations

None

PERSONAL PROPERTY AUDIT

Hinsdale 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.

Hinsdale County is compliant with the guidelines set forth in ARL Volume 5 regarding discovery procedures, using the following methods to discover personal property accounts in the county:

- Public Record Documents
- MLS Listing and/or Sold Books
- Chamber of Commerce/Economic Development Contacts
- Local Telephone Directories, Newspapers or Other Local Publications
- Personal Observation, Physical Canvassing or Word of Mouth
- Questionnaires, Letters and/or Phone Calls to Buyer, Seller and/or Realtor

The county uses the Division of Property Taxation (DPT) recommended classification and documentation procedures. The DPT's recommended cost factor tables, depreciation tables and level of value adjustment factor tables are also used.

Hinsdale County submitted their personal property written audit plan and was current for the 2024 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
- Accounts with greater than 10% change
- 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 \$52,000 actual value exemption status

Conclusions

Hinsdale County has employed adequate discovery, classification, documentation, valuation, and auditing procedures for their personal property assessment and is in statistical compliance with SBOE requirements.

Recommendations

None



EAST WEST ECONOMETRICS AUDITOR STAFF

Harry J. Fuller, *Audit Project Manager*

Suzanne Howard, *Audit Administrative Manager*

Steve Kane, *Audit Statistician*

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

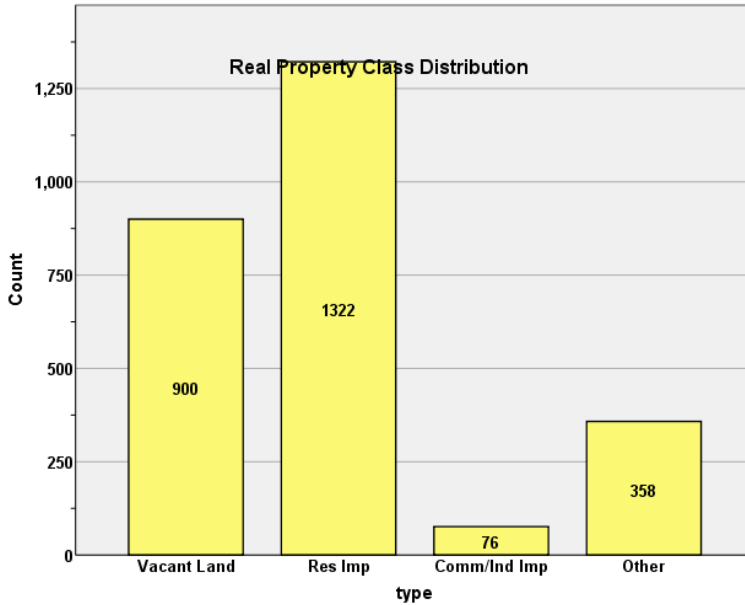
J. Andrew Rodriguez, *Field Analyst*

APPENDICES

**STATISTICAL COMPLIANCE REPORT
FOR HINSDALE COUNTY
2024**

I. OVERVIEW

Hinsdale County is located in the San Juan Mountain region of southwestern Colorado. The county has a total of 2,656 real property parcels, according to data submitted by the county assessor’s office in 2024. The following provides a breakdown of property classes for this county:



Based on the number of vacant land parcels in Hinsdale County, we were not required to analyze this class of property for audit compliance.

For residential improved properties, single family properties accounted for 89.9% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial sales accounted for 2.6% of all such properties in this county.

Hinsdale County has no significant geographic strata. All but 2 sales occurred in Economic Area 1.

II. DATA FILES

The following sales analyses were based on the requirements of the 2024 Colorado Property Assessment Study. Information was provided by the Hinsdale Assessor’s Office in May 2024. The data included all 5 property record files as specified by the Auditor.

III. RESIDENTIAL SALES RESULTS

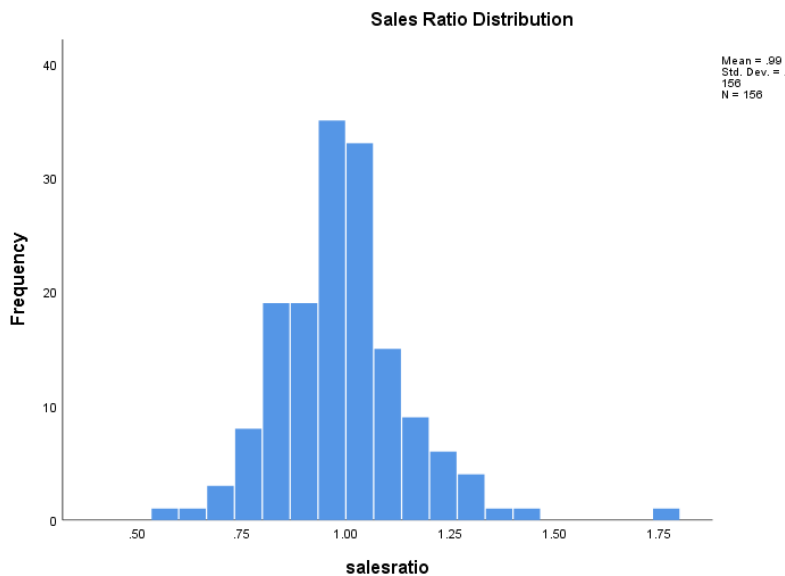
There were 156 qualified residential sales used in this analysis. They occurred in the 60-month period ending June 30, 2022.

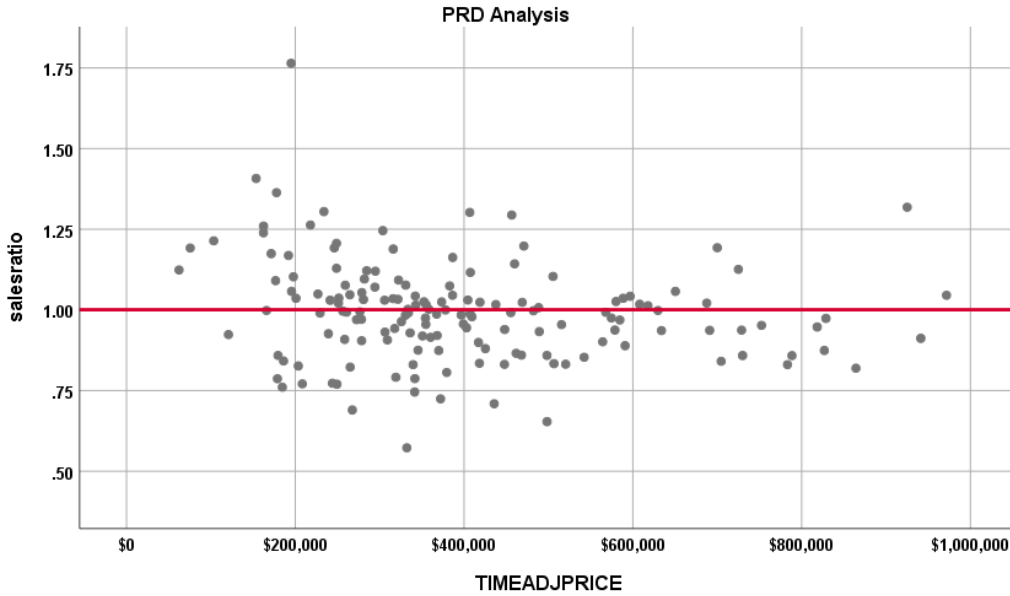
The sales ratio analysis was analyzed as follows:

Median	0.992
Price Related Differential	1.014
Coefficient of Dispersion	11.3

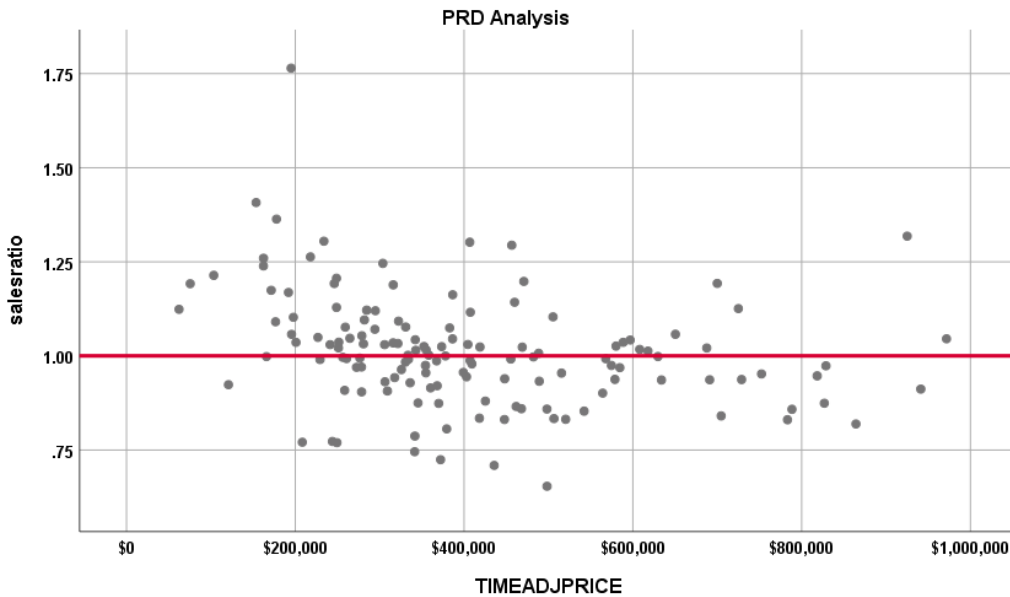
There was only one economic area with more than 8 sales. No further stratification was possible.

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. The following graphs describe further the sales ratio distribution for all of these properties:





ALL SALES



1212 SALES

The Price-Related Differential (PRD) for 1212 sales is 1.020. This is within the 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^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.017	.030		33.412	.000
	CURRTOT	-0.000000106	.000	-.013	-.154	.878

a. Dependent Variable: salesratio

The slope of the line (red box) is not significant, indicating that there is virtually no slope in the regression line, which in turn indicates that sales ratios are similar across the entire sale price array. We also stratified the sales ratio analysis by the sale price range, as follows:

Case Processing Summary

		Count	Percent
SPRec	LT \$100K	2	1.4%
	\$100K to \$200K	13	9.4%
	\$200K to \$300K	29	20.9%
	\$300K to \$400K	37	26.6%
	\$400K to \$500K	24	17.3%
	Over \$500K	34	24.5%
Overall		139	100.0%
Excluded		0	
Total		139	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion
LT \$100K	1.158	.997	.029
\$100K to \$200K	1.174	.993	.125
\$200K to \$300K	1.036	1.000	.088
\$300K to \$400K	.991	1.002	.080
\$400K to \$500K	.983	1.003	.120
Over \$500K	.962	.998	.084
Overall	1.000	1.020	.107

The above analysis indicates that the sales ratio distribution was more or less consistent across the sale price range for Hinsdale County.

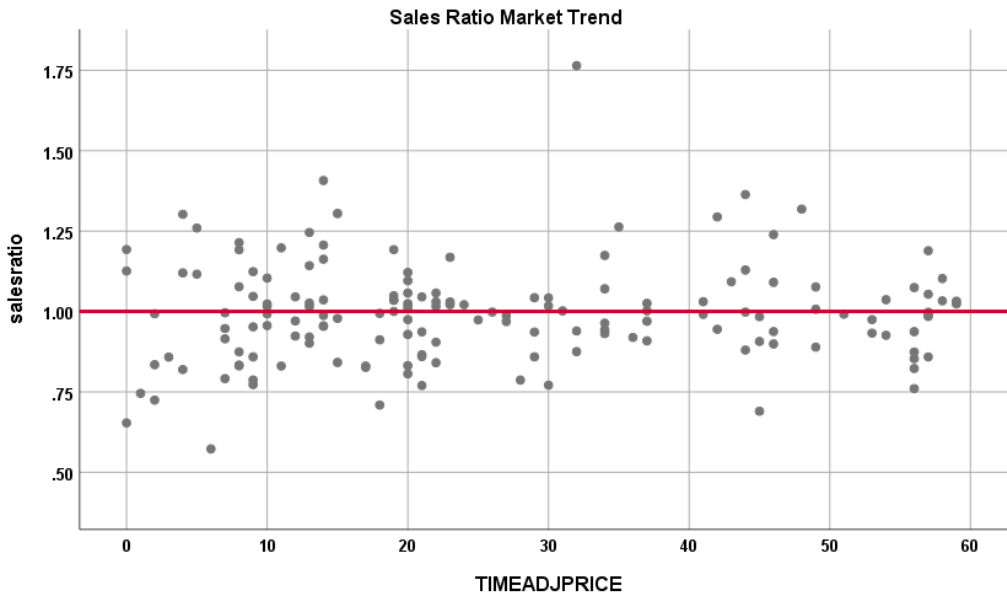
Residential Market Trend Analysis

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

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.979	.023		43.171	.000
	SalePeriod	.001	.001	.061	.754	.452

a. Dependent Variable: salesratio



The above analysis indicated that no significant market trend was present in the sale ratio data. We concluded that the assessor has adequately considered market trending in the residential valuation of properties in Hinsdale County.

Sold/Unsold Analysis

In terms of the valuation consistency between sold and unsold residential properties, we compared the median change in value between the prior base year value and the current level of value for sold and unsold residential properties, as follows:

Report

DIFF	N	Median	Mean
UNSOLD	1163	1.19	1.72
SOLD	156	1.17	1.20

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of DIFF is the same across categories of sold.	Independent-Samples Mann-Whitney U Test	.028	Retain the null hypothesis.

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

As with the sales ratio analysis, due to the small number of sales, no further stratification of the sold/unsold analysis was possible.

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

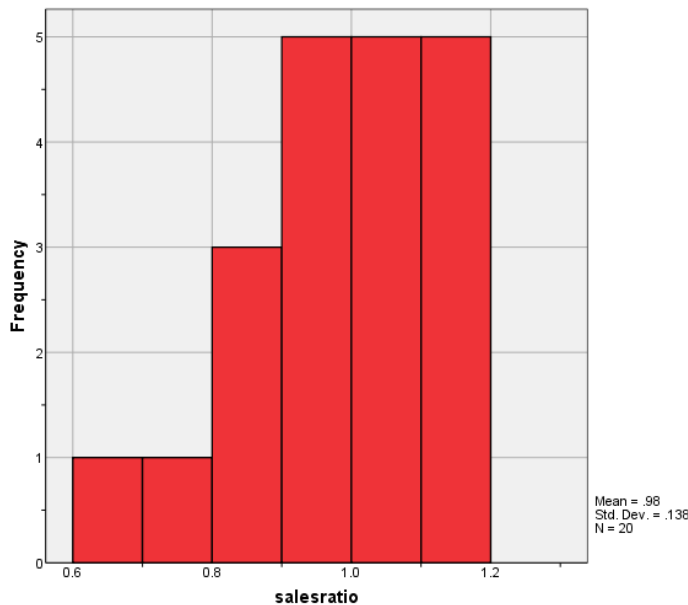
IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

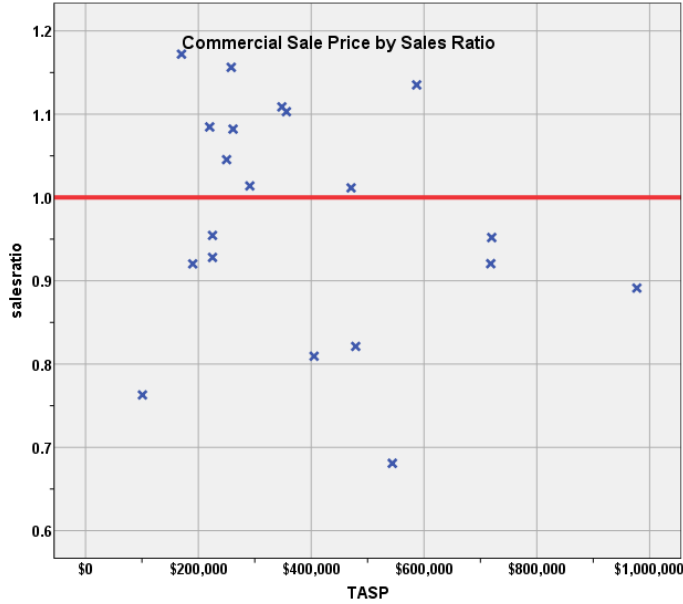
A total of 15 **valid and qualified sales** were identified in the five year period ending June 30, 2022. Because there were fewer than 20 sales, 5 supplemental appraisals were completed, bringing the commercial property total to 20 properties for the sales ratio analysis. The 15 sales will be used to analyze market trending and sold/unsold properties.

The following ratio analysis was completed as follows:

Median	.983
Price Related Differential	1.019
Coefficient of Dispersion	11.6

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





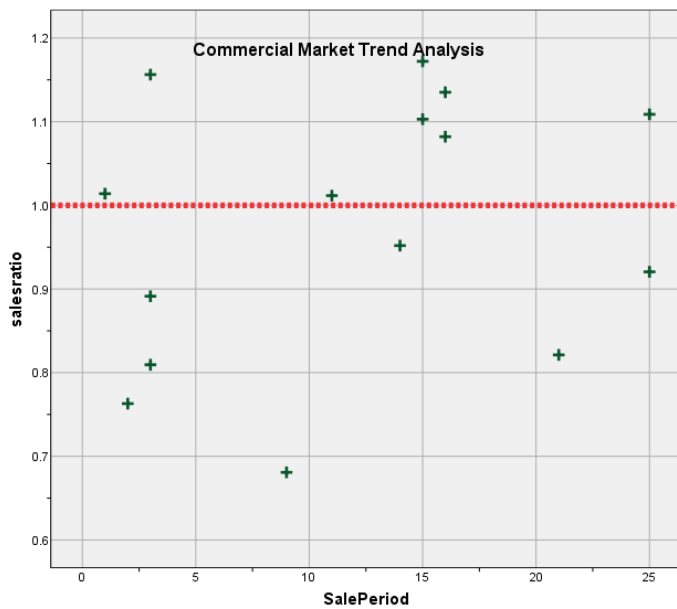
Commercial Market Trend Analysis

The 15 sales were analyzed next to verify that the assessor properly applied market trend adjustments to the commercial sales:

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
1	(Constant)	.914	.072	12.613	.000
	SalePeriod	.005	.005	1.001	.335

a. Dependent Variable: salesratio



The above analysis indicated that no market trend was present in the commercial/industrial sale ratio data; therefore, we concluded that the Hinsdale County assessor has adequately considered market trending in their commercial/industrial valuation.

Sold/Unsold Analysis

We compared the median and mean change in value for the prior base year value and the current level of value between sold and unsold commercial properties to determine if the assessor was valuing each group consistently. While this is a challenge to prove in this county, given the small number of sales and the overall small number and diversity of commercial/industrial properties in general, the following results indicate that both groups were valued in a consistent manner:

Report

DIFF			
DIFF	N	Median	Mean
UNSOLD	74	1.16	1.30
SOLD	15	1.19	1.23

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of DIFF is the same across categories of sold.	Independent-Samples Mann-Whitney U Test	.178	Retain the null hypothesis.

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

V. CONCLUSIONS

Based on this statistical analysis, there were no significant compliance issues concluded for Hinsdale County as of the date of this report.

STATISTICAL ABSTRACT

Residential

Ratio Statistics for CURRTOT / TASP												
Mean	95% Confidence Interval for Mean		Median	95% Confidence Interval for Median			Weighted Mean	95% Confidence Interval for Weighted Mean		Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Mean Centered
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			
.994	.969	1.018	.992	.970	1.015	95.5%	.980	.957	1.003	1.014	.113	15.7%

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

Commercial

Ratio Statistics for CURRTOT / TASP												
Mean	95% Confidence Interval for Mean		Median	95% Confidence Interval for Median			Weighted Mean	95% Confidence Interval for Weighted Mean		Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Mean Centered
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			
.978	.913	1.042	.983	.920	1.085	95.9%	.960	.892	1.027	1.019	.116	14.1%

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

Residential Median Ratio Stratification

Sub-Class

Case Processing Summary

		Count	Percent
ABSTRIMP	1212.00	138	88.5%
	1213.50	1	0.6%
	1215.00	2	1.3%
	1230.00	14	9.0%
	2218.75	1	0.6%
Overall		156	100.0%
Excluded		0	
Total		156	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212.00	.999	1.023	.105	14.9%
1213.50	.919	1.000	.000	.
1215.00	.904	.981	.125	17.6%
1230.00	.836	.986	.083	12.3%
2218.75	1.318	1.000	.000	.
Overall	.992	1.014	.113	15.7%

Improvement Age

Case Processing Summary

		Count	Percent
AgeRec	0	1	0.6%
	Over 100	12	7.7%
	75 to 100	10	6.4%
	50 to 75	18	11.5%
	25 to 50	64	41.0%
	5 to 25	50	32.1%
	5 or Newer	1	0.6%
Overall		156	100.0%
Excluded		0	
Total		156	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	1.318	1.000	.000	.
Over 100	1.084	.987	.112	15.6%
75 to 100	.876	1.075	.237	30.7%
50 to 75	.914	1.023	.122	15.9%
25 to 50	.993	1.027	.114	17.3%
5 to 25	.986	1.004	.066	8.3%
5 or Newer	1.302	1.000	.000	.
Overall	.992	1.014	.113	15.7%

Improvement Quality

Case Processing Summary

	Count	Percent
QUALITY	12	7.7%
AVERAGE	19	12.2%
AVERAGE 1.25	10	6.4%
AVERAGE 1.50	9	5.8%
AVERAGE 1.75	4	2.6%
EXCELLENT	2	1.3%
EXCELLENT 1.25	1	0.6%
FAIR	8	5.1%
FAIR 1.25	17	10.9%
FAIR 1.50	12	7.7%
FAIR 1.75	11	7.1%
GOOD	10	6.4%
GOOD 1.25	8	5.1%
GOOD 1.5	6	3.8%
GOOD 1.75	3	1.9%
LOW	6	3.8%
LOW 1.25	1	0.6%
LOW 1.50	3	1.9%
LOW 1.75	2	1.3%
VERY GOOD	6	3.8%
VERY GOOD 1.25	2	1.3%
VERY GOOD 1.50	3	1.9%
VERY GOOD 1.75	1	0.6%
Overall	156	100.0%
Excluded	0	
Total	156	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
	.828	.986	.081	12.1%
AVERAGE	1.002	.988	.088	13.8%
AVERAGE 1.25	1.008	.999	.103	13.9%
AVERAGE 1.50	.991	1.007	.075	9.9%
AVERAGE 1.75	.947	1.004	.047	6.9%
EXCELLENT	.949	.972	.101	14.3%
EXCELLENT 1.25	.952	1.000	.000	.
FAIR	1.102	1.030	.131	16.6%
FAIR 1.25	.998	1.030	.115	17.5%
FAIR 1.50	.961	1.042	.132	18.1%
FAIR 1.75	1.024	1.036	.105	12.2%
GOOD	1.033	1.062	.148	26.2%
GOOD 1.25	.991	.997	.037	5.6%
GOOD 1.5	.965	1.017	.058	6.9%
GOOD 1.75	.974	1.000	.021	3.3%
LOW	1.053	1.025	.111	16.2%
LOW 1.25	.842	1.000	.000	.
LOW 1.50	.909	1.006	.074	11.3%

LOW 1.75	.973	1.021	.207	29.3%
VERY GOOD	1.009	1.011	.064	8.4%
VERY GOOD 1.25	.938	1.009	.104	14.7%
VERY GOOD 1.50	1.126	1.052	.143	22.2%
VERY GOOD 1.75	1.193	1.000	.000	.
Overall	.992	1.014	.113	15.7%

Commercial Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	\$100K to \$150K	1	5.0%
	\$150K to \$200K	2	10.0%
	\$200K to \$300K	7	35.0%
	\$300K to \$500K	5	25.0%
	\$500K to \$750K	4	20.0%
	\$750K to \$1,000K	1	5.0%
Overall		20	100.0%
Excluded		0	
Total		20	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
\$100K to \$150K	.763	1.000	.000	.
\$150K to \$200K	1.046	1.007	.120	17.0%
\$200K to \$300K	1.045	.998	.058	7.6%
\$300K to \$500K	1.012	1.011	.115	15.2%
\$500K to \$750K	.936	.994	.130	20.0%
\$750K to \$1,000K	.891	1.000	.000	.
Overall	.983	1.019	.116	14.0%

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	.00	2	10.0%
	1712.00	5	25.0%
	1716.00	1	5.0%
	1721.00	1	5.0%
	1967.25	1	5.0%
	2212.00	3	15.0%
	2215.00	1	5.0%
	2216.00	1	5.0%
	2230.00	2	10.0%
	2235.00	2	10.0%
	3212.00	1	5.0%
	Overall		20
Excluded		0	
Total		20	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.00	1.015	1.033	.093	13.1%
1712.00	1.012	1.006	.088	12.1%
1716.00	.809	1.000	.000	.
1721.00	1.014	1.000	.000	.
1967.25	.891	1.000	.000	.
2212.00	1.156	1.005	.037	6.8%
2215.00	.681	1.000	.000	.
2216.00	1.103	1.000	.000	.
2230.00	1.002	.994	.082	11.6%
2235.00	.859	.959	.111	15.8%
3212.00	.928	1.000	.000	.
Overall	.983	1.019	.116	14.0%

Improvement Quality

Case Processing Summary

	Count	Percent
QUALITY	2	10.0%
ABOVE AVERAGE	5	25.0%
AVERAGE	2	10.0%
AVERAGE 1.25	1	5.0%
AVERAGE 1.75	1	5.0%
FAIR	2	10.0%
FAIR 1.25	2	10.0%
FAIR 1.50	2	10.0%
LOW	2	10.0%
LOW 1.25	1	5.0%
Overall	20	100.0%
Excluded	0	
Total	20	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
	1.015	1.033	.093	13.1%
ABOVE AVERAGE	1.085	1.001	.056	8.5%
AVERAGE	1.038	.983	.114	16.1%
AVERAGE 1.25	.952	1.000	.000	.
AVERAGE 1.75	.821	1.000	.000	.
FAIR	.859	.959	.111	15.8%
FAIR 1.25	1.013	1.000	.001	0.2%
FAIR 1.50	1.013	1.031	.120	17.0%
LOW	.745	1.013	.086	12.2%
LOW 1.25	1.082	1.000	.000	.
Overall	.983	1.019	.116	14.0%