

# LAS ANIMAS 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 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 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.

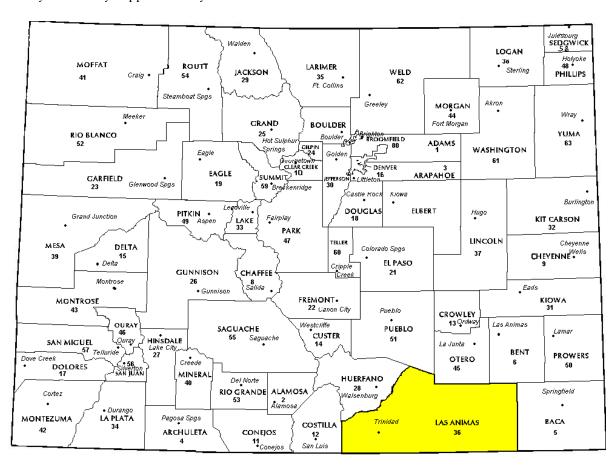
Wildrose Audit has completed the Property Assessment Study for 2022 and is pleased to report its findings for Las Animas County in the following report.



## REGIONAL/HISTORICAL SKETCH OF LAS ANIMAS COUNTY

#### **Regional Information**

Las Animas County is located in the Central Mountains region of Colorado. The Central Mountains Region is in the central portion of Colorado. It extends from the northern Gilpin county boundary approximately 210 miles southeasterly to the southern boundary of Colorado, including Chaffee, Clear Creek, Custer, Fremont, Gilpin, Huerfano, Lake, Las Animas, Park, and Teller counties.





#### Historical Information

Las Animas County has approximately 4,772.7 square miles and an estimated population of approximately 14,506 people, according to the U.S. Census Bureau's 2020 estimated census data. This represents a -6.5 percent change from April 1, 2010 to July 1, 2019.

Las Animas County is the largest of the 64 counties in Colorado and takes its name from the Spanish language name of the Animas River, Río de las Ánimas Perdidas, which means "River of the Lost Souls."

The City of Trinidad was founded in 1876, and was slated as a possible capitol for the State of Colorado. Due to many circumstances that dream did not come into fruition, but it is the County seat of Las Animas County. During the height of the cattle industry based around the Santa Fe Trail, around 1881, Trinidad was home to Bat Masterson, the Earps, Doc

Holiday, and many other well-known personages.

During the 1900's the industry shifted to Coal Mining and was supported by the railroad industry. Coal camps spread throughout the Purgatoire Valley and many of the surrounding canyons.

The largest habitat acquisition to date for both the Rocky Mountain Elk Foundation and the Colorado Division of Wildlife, the Bosque del Oso State Wildlife Area, is located in Las Animas County. This area protects nearly 30,000 acres of critical habitat and provides winter range for animals for Colorado's second-largest elk herd, along with habitat for mule deer, bears, turkeys, bobcats, bald eagles and trout. Now, as a public wildlife area, many generations will enjoy the Bosque's open spaces, wildlife, scenery and recreational opportunities.

(Wikipedia.org, www.trinidadco.co, trinidadchamber.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 Las Animas County are:

Las Animas County Ratio Grid						
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis	
Commercial/Industrial	43	0.967	1.008	8.4	Compliant	
Single Family	235	0.972	1.014	7.6	Compliant	
Vacant Land	157	1.000	1.036	16.3	Compliant	

After applying the above described methodologies, it is concluded from the sales ratios that Las Animas 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 Las Animas County has complied with the statutory requirements to analyze the effects of time on value in their county. Las Animas 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

Las Animas 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. The model 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 l	Results
Property Class	Results
Commercial/Industrial	Compliant
Single Family	Compliant
Vacant Land	Compliant

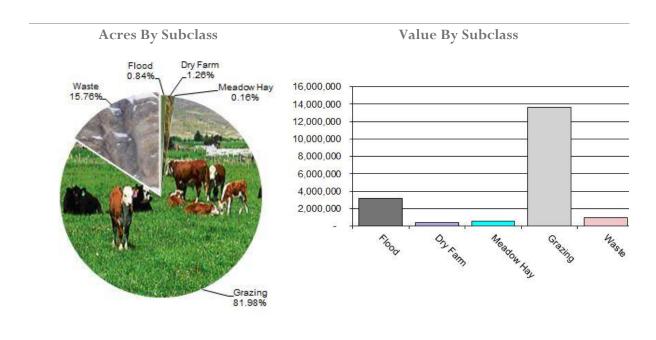
#### **Conclusions**

After applying the above described methodologies, it is concluded that Las Animas 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 In addition, county records were lands. 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:



	Las Animas County Agricultural Land Ratio Grid							
Abstract	Number County County WRA Abstract Of Value Assessed Total							
Code	<b>Land Class</b>	Acres	Per Acre	Total Value	Value	Ratio		
4117	Flood	20,446	139.92	2,860,864	2,959,012	0.97		
4127	Dry Farm	30,465	11.84	360,687	360,687	1.00		
4137	Meadow Hay	3,939	128.73	507,020	507,020	1.00		
4147	Grazing	1,923,871	6.31	12,145,665	12,145,665	1.00		
4167	Waste	354,195	2.20	779,709	779,709	1.00		
Total/Avg		2,332,916	7.14	16,653,944	16,752,092	0.99		

#### 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**

Las Animas 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

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

- Field Inspections
- Written Correspondence other than Questionnaire
- Personal Knowledge of Occupants at Assessment Date
- Aerial Photography/Pictometry

Las Animas 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
- Personal Knowledge of Occupants at Assessment Date
- Aerial Photography/Pictometry

Las Animas 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 Las Animas County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 72 sales listed as unqualified.

All of the sales in the unqualified sales sample had reasons that were clear and supportable.

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** 

Las Animas County appears to be doing an adequate job of verifying their sales. WRA

agreed with the county's reason for disqualifying each of the sales selected in the sample. There are no recommendations or suggestions.

Recommendations



## ECONOMIC AREA REVIEW AND EVALUATION

#### Methodology

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



## **Producing Coal Mines**

#### Methodology

Under the guidelines of the Assessor's Reference Library (ARL), Volume 3, Section 6, Valuation of Producing Coal Leaseholds and Lands, the income approach is the primary method applied to find value for the valuation of coalmines. This methodology estimates annual economic royalty income based on previous year's production, then capitalizes that income to value using a Hoskold factor to

estimate the present worth of the permitted acres. The operator provides production data and the life of the leases.

#### **Conclusions**

County has applied the correct formulas and state guidelines to coal mine valuation.

#### Recommendations



## VACANT LAND

Las Animas County is exempt from the Vacant Land Subdivision Discount Study.



## 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.

Las Animas County has been reviewed for their procedures and adherence to guidelines when

assessing and valuing agricultural 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

Las Animas 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

Las Animas 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, documentation procedures, classification, 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.

Las Animas 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

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.

Las Animas 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
- Same business type or use
- Businesses with no deletions or additions for 2 or more years
- Non-filing Accounts Best Information Available
- Accounts close to the \$50,000 actual value exemption status



Accounts protested with substantial disagreement

#### **Conclusions**

Las Animas 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

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



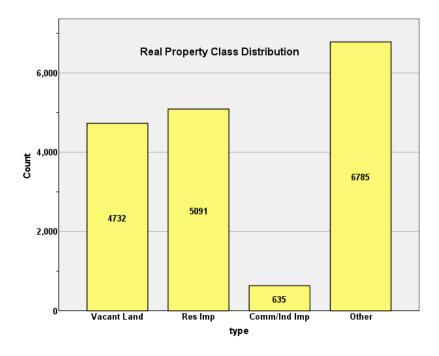
## APPENDICES



#### STATISTICAL COMPLIANCE REPORT FOR LAS ANIMAS COUNTY 2022

#### I. OVERVIEW

Las Animas County is located in southern Colorado. The county has a total of 17,243 real property parcels, according to data submitted by the county assessor's office in 2022. The following provides a breakdown of property classes for this county:



The vacant land class of properties was dominated by residential land. Residential lots (coded 100 and 550) accounted for 78.5% of all vacant land parcels.

For residential improved properties, single family properties accounted for 92.7% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial properties accounted for 3.7% 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 Las Animas Assessor's Office in May 2022. The data included all 5 property record files as specified by the Auditor.



#### III. RESIDENTIAL SALES RESULTS

There were 235 qualified residential sales for the 18-month sale period ending June 30, 2020. The sales ratio analysis results were as follows:

Median	0.972
Price Related Differential	1.014
Coefficient of Dispersion	7.6

We next stratified the sale ratio analysis by economic area and neighborhood. The minimum count for the neighborhood stratification is 15 sales. The following are the results of this stratification analysis:

## Economic Area Case Processing Summary

		Count	Percent
ECONAREA	1.00	188	80.7%
	2.00	31	13.3%
	3.00	14	6.0%
Overall		233	100.0%
Excluded		2	
Total		235	

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

Group	N	Median	Price Related Differential	Coefficient of Dispersion
1.00	188	.972	1.015	.074
2.00	31	.970	1.012	.092
3.00	14	.960	1.003	.066
Overall	233	.971	1.014	.076

## Neighborhoods with 15 or more sales Case Processing Summary

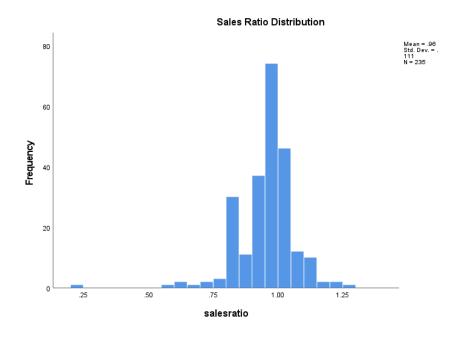
		Count	Percent
NBHD	300	69	56.6%
	400	38	31.1%
	700	15	12.3%
Overall		122	100.0%
Exclude	d	0	
Total		122	

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

Group	N	Median	Price Related Differential	Coefficient of Dispersion
300	69	.975	1.004	.057
400	38	.969	1.045	.069
700	15	.974	1.000	.083
Overall	122	.975	1.019	.064

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 these properties:





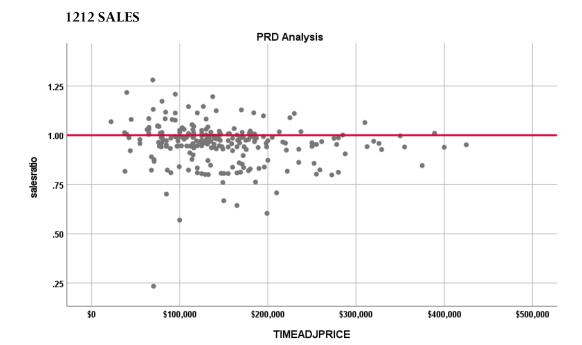


The above graphs indicate that the distribution of the sale ratios was within state mandated limits. No sales were trimmed.

#### **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 1.007, 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	Coefficients	Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	.939	.017		55.795	<.001
	CURRTOT	.000000115	.000	.071	1.071	.285

a. Dependent Variable: salesratio

The slope of the line at 0.000000115 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.

We also stratified the sales ratio analysis by the sale price range, as follows:

#### **Case Processing Summary**

	_	Count	Percent
SPRec	LT \$100K	61	26.5%
	\$100K to \$200K	132	57.4%
	\$200K to \$300K	26	11.3%
	Over \$300K	11	4.8%
Overall		230	100.0%
Excluded	d	0	
Total		230	



#### Ratio Statistics for CURRTOT / TASP

		Price Related	Coefficient of
Group	Median	Differential	Dispersion
LT \$100K	.988	1.004	.092
\$100K to \$200K	.972	1.004	.068
\$200K to \$300K	.953	1.001	.075
Over \$300K	.951	1.002	.039
Overall	.971	1.007	.075

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

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

We next analyzed the residential dataset using the 18-month sale period for any residual market trending. The following indicates that there was no statistically significant residual trend based on the sale ratios:

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

		Unstandardized	Coefficients	Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	.937	.014		67.314	<.001
	SalePeriod	.002	.001	.102	1.566	.119

a. Dependent Variable: salesratio



The above analysis indicated that the assessor has adequately addressed market trending in the valuation of residential properties.



#### Sold/Unsold Analysis

We first analyzed the 2022 median actual value per square foot between sold and unsold residential properties, as follows:

<b>Report</b> VALSF			
sold	N	Median	Mean
UNSOLD	3626	\$44	\$47
SOLD	204	\$60	\$60

#### Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of CURRTOT is the same across categories of sold.	Independent- Samples Mann- Whitney U Test	.000	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

We also stratified this analysis by economic area, as follows:

<b>Report</b> VALSF				
<b>ECONAREA</b>	sold	N	Median	Mean
1.00	UNSOLD	2747	\$46	\$49
	SOLD	178	\$60	\$61
2.00	UNSOLD	793	\$35	\$39
	SOLD	23	\$45	\$54
3.00	UNSOLD	16	\$87	\$93
	SOLD	2	\$100	\$100

We compared the attributes of residential sold and unsold properties to determine whether there were differences that could explain why the average sold value per square foot was greater than the unsold average. While we did conclude that sold residential properties tended to be newer and of superior quality, we met with the assessor to review their residential valuation process. Please note that the second test using the median change in value between valuation year 2018 and valuation year 2020 indicated a similar difference between sold and unsold properties.

#### IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

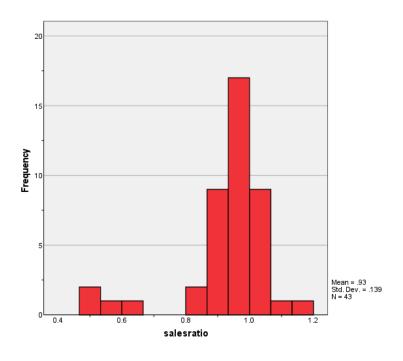
There were 43 qualified commercial and industrial sales for the 48-month sale period ending to June 30, 2020.

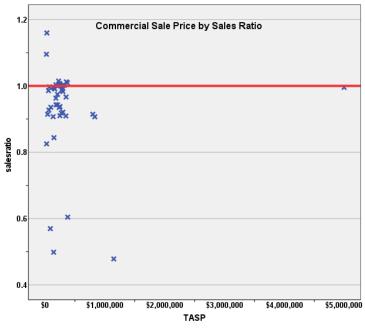
The sales ratio analysis results were as follows:



Median	0.967
Price Related Differential	1.008
Coefficient of Dispersion	8.4

The above table indicates that the Las Animas County commercial/industrial sale ratios were in compliance with the SBOE standards for the median sales ration and corresponding COD. The following histogram and scatter plot describe the sales ratio distribution further:







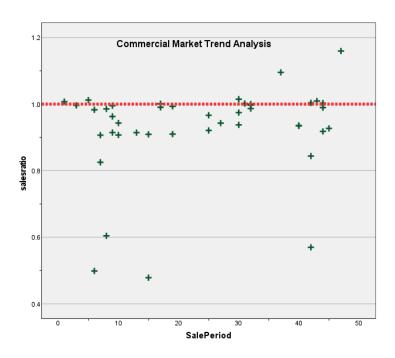
#### **Commercial Market Trend Analysis**

The commercial sales were analyzed, examining the sale ratios across the 48-month sale period with the following:

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

		Unstandardized	d Coefficients	Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	.879	.040		21.916	<.001
	SalePeriod	.002	.001	.213	1.399	.169

a. Dependent Variable: salesratio



The market trend analysis indicated no statistically significant trend. We concluded that the assessor has adequately addressed market trending for commercial/industrial sales in Las Animas County.

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

We compared the change in actual value for valuation year 2018 and valuation year 2020 between sold and unsold commercial properties to determine if the assessor was valuing each group consistently. The following results indicate that, based on the mean and median actual value, both groups were valued consistently:

Report			
DIFF			
sold	N	Median	Mean
UNSOLD	597	.98	1.31
SOLD	43	1.10	1.31



Report
DIFF

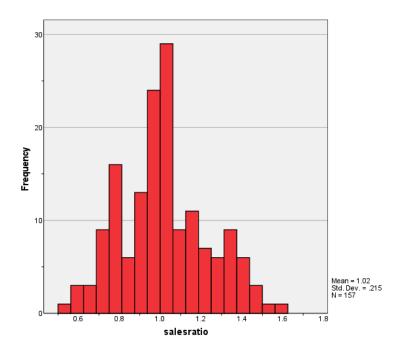
D.I. I				
ABSTRIMP	sold	N	Median	Mean
2212.00	UNSOLD	1	.89	.89
	SOLD	3	1.06	1.12
2230.00	UNSOLD	188	.96	1.45
	SOLD	20	1.18	1.35
2235.00	UNSOLD	70	.97	1.04
	SOLD	3	1.00	1.42
3215.00	UNSOLD	24	.94	1.10
	SOLD	4	.96	1.01

#### V. VACANT LAND SALE RESULTS

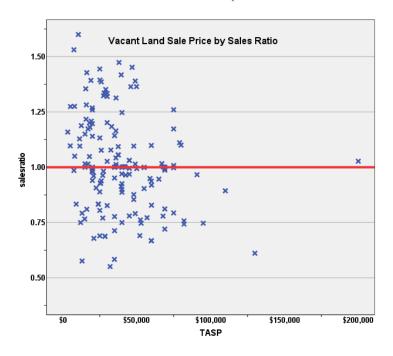
There were 158 qualified vacant land sales for the 18-month sale period ending June 30, 2020. One sale was trimmed using IAAO standards, resulting in 157 sales in the following analysis. The sales ratio analysis results were as follows:

Median	1.000
Price Related Differential	1.036
Coefficient of Dispersion	16.3

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







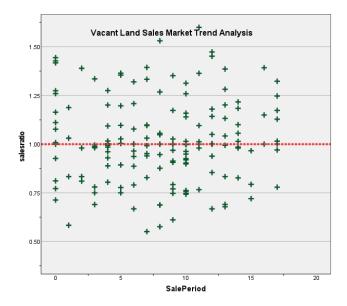
#### **Vacant Land Market Trend Analysis**

The vacant land sales were analyzed, examining the sale ratios across the 18- month sale period with the following results:

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

		Unstandardized	Coefficients	Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	1.005	.034		29.549	<.001
	SalePeriod	.001	.004	.031	.388	.698

a. Dependent Variable: salesratio





The results indicated that there was no significant market trending present in the sales ratios across the sale period. We concluded that the assessor has applied market trending adjustments in an appropriate manner.

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

We compared the median change in actual value for valuation year 2018 and valuation year 2020 for vacant land properties to determine if sold and unsold properties were valued consistently, as follows:

Report				
DIFF				
sold	N	Median	Mean	
UNSOLD	4372	1.00	1.12	
SOLD	144	1.00	1.15	

#### **Hypothesis Test Summary**

	Null Hypothesis	Test	Sig. <sup>a,b</sup>	Decision
1	The distribution of DIFF is the same across categories of sold.	Independent-Samples Mann- Whitney U Test	.883	Retain the null hypothesis.

a. The significance level is .001.

We next stratified this analysis by subdivisions with at least 5 sales, as follows:

Report DIFF				
SUBDIVNO	sold	N	Median	Mean
5559	UNSOLD	37	1.40	1.40
	SOLD	6	1.40	1.40
5563	UNSOLD	68	.90	.90
	SOLD	13	.90	.90
5580	UNSOLD	245	1.63	1.44
	SOLD	13	1.63	1.25
5590	UNSOLD	376	1.40	1.40
	SOLD	15	1.40	1.40
5600	UNSOLD	77	1.24	1.24
	SOLD	6	1.24	1.24
5670	UNSOLD	88	1.33	1.33
	SOLD	5	1.33	1.24
5726	UNSOLD	18	.97	.84
	SOLD	6	.97	.97
5740	UNSOLD	123	1.85	1.74
	SOLD	6	1.44	1.35

The above results indicated that sold and unsold vacant land properties were valued consistently.

#### **V. CONCLUSIONS**

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

b. Asymptotic significance is displayed.



#### **STATISTICAL ABSTRACT**

#### Residential

	Ratio Statistics for CURRTOT / TASP											
	95% Confiden Me	ice Interval for an		95% Cor	nfidence Interval	for Median			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
.955	.941	.969	.972	.961	.981	96.3%	.942	.925	.959	1.014	.076	11.6%

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/Industrial

	Ratio Statistics for CURRTOT / TASP											
	95% Confidence Interval for 95% Confidence Interval for Median 95% Confidence Interval for Median Weighted Me								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
.927	.884	.970	.967	.927	.993	96.8%	.920	.836	1.005	1.008	.084	15.0%

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% Confiden Me			95% Cor	nfidence Interval	for Median		95% Confiden Weighte	ice Interval for ed Mean			Coefficient of Variation
M	ean	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
	1.016	.982	1.050	1.000	.982	1.014	96.2%	.981	.945	1.017	1.036	.163	21.2%

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



#### Residential Median Ratio Stratification

#### **Subclass**

#### **Case Processing Summary**

		Count	Percent
ABSTRIMP	1212.00	230	97.9%
	1215.00	2	0.9%
	1220.00	2	0.9%
	1225.00	1	0.4%
Overall		235	100.0%
Excluded		0	
Total		235	

#### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212.00	.971	1.007	.075	11.6%
1215.00	1.026	1.006	.034	4.8%
1220.00	.892	1.007	.094	13.3%
1225.00	.818	1.000	.000	
Overall	.972	1.014	.076	11.6%

#### Improvement Age

#### **Case Processing Summary**

		Count	Percent
AgeRec	Over 100	107	45.5%
	75 to 100	25	10.6%
	50 to 75	30	12.8%
	25 to 50	36	15.3%
	5 to 25	36	15.3%
	5 or Newer	1	0.4%
Overall		235	100.0%
Excluded		0	
Total		235	

#### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	.973	1.006	.075	12.6%
75 to 100	.997	1.016	.057	8.9%
50 to 75	.970	1.048	.078	11.0%
25 to 50	.960	1.007	.089	12.2%
5 to 25	.965	1.005	.072	9.8%
5 or Newer	.922	1.000	.000	
Overall	.972	1.014	.076	11.6%



#### Improvement Size

#### **Case Processing Summary**

		Count	Percent
ImpSFRec	LE 500 sf	31	13.2%
	500 to 1,000 sf	8	3.4%
	1,000 to 1,500 sf	22	9.4%
	1,500 to 2,000 sf	53	22.6%
	2,000 to 3,000 sf	71	30.2%
	3,000 sf or Higher	50	21.3%
Overall		235	100.0%
Excluded		0	
Total		235	

#### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
			<del> </del>	
LE 500 sf	.970	1.042	.085	12.4%
500 to 1,000 sf	.883	1.025	.165	29.8%
1,000 to 1,500 sf	.943	1.010	.073	9.3%
1,500 to 2,000 sf	.984	1.019	.075	11.6%
2,000 to 3,000 sf	.972	1.014	.064	9.4%
3,000 sf or Higher	.982	1.008	.067	9.8%
Overall	.972	1.014	.076	11.6%

#### **Improvement Quality**

#### **Case Processing Summary**

	_	Count	Percent
QUALITY	1 - Low	1	0.4%
	3 - Fair	9	3.8%
	5 - Average	191	81.3%
	7 - Good	28	11.9%
	9 - Very Good	6	2.6%
Overall		235	100.0%
Excluded		0	
Total		235	

#### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1 - Low	1.054	1.000	.000	
3 - Fair	1.013	.974	.129	28.1%
5 - Average	.972	1.017	.077	11.0%
7 - Good	.958	1.006	.046	6.9%
9 - Very Good	.976	1.006	.047	6.7%
Overall	.972	1.014	.076	11.6%



#### **Improvement Condition**

#### **Case Processing Summary**

		Count	Percent
CONDITION	1 - Low	2	0.9%
	2 - Poor	2	0.9%
	3 - Average	222	94.5%
	4 - Good	7	3.0%
	5 - Very Good	2	0.9%
Overall		235	100.0%
Excluded		0	
Total		235	

#### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1 - Low	1.024	.991	.018	2.5%
2 - Poor	.923	.972	.115	16.2%
3 - Average	.971	1.016	.077	11.8%
4 - Good	.968	1.000	.019	2.4%
5 - Very Good	1.031	1.024	.077	10.9%
Overall	.972	1.014	.076	11.6%

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

#### Sale Price

#### **Case Processing Summary**

		Count	Percent
SPRec	LT \$25K	1	2.3%
	\$25K to \$50K	3	7.0%
	\$50K to \$100K	5	11.6%
	\$100K to \$150K	5	11.6%
	\$150K to \$200K	4	9.3%
	\$200K to \$300K	15	34.9%
	\$300K to \$500K	6	14.0%
	\$750K to \$1,000K	2	4.7%
	Over \$1,000K	2	4.7%
Overall		43	100.0%
Excluded	d	0	
Total		43	



#### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT \$25K	1.095	1.000	.000	
\$25K to \$50K	.914	1.000	.122	20.2%
\$50K to \$100K	.936	1.017	.104	20.0%
\$100K to \$150K	.907	1.002	.143	23.8%
\$150K to \$200K	.977	1.000	.022	2.8%
\$200K to \$300K	.983	1.000	.032	4.0%
\$300K to \$500K	.984	1.004	.092	17.7%
\$750K to \$1,000K	.911	1.000	.004	0.6%
Over \$1,000K	.737	.820	.351	49.6%
Overall	.967	1.008	.084	15.0%

#### Subclass

#### **Case Processing Summary**

		Count	Percent
ABSTRIMP	1212.00	4	9.3%
	1725.00	1	2.3%
	1892.33	1	2.3%
	2212.00	3	7.0%
	2215.00	1	2.3%
	2220.00	1	2.3%
	2225.00	2	4.7%
	2230.00	20	46.5%
	2232.50	2	4.7%
	2235.00	3	7.0%
	2236.00	1	2.3%
	3215.00	4	9.3%
Overall		43	100.0%
Excluded		0	
Total		43	

#### Ratio Statistics for CURRTOT / TASP

Orana.	Madian	Price Related	Coefficient of	Coefficient of Variation
Group	Median	Differential	Dispersion	Median Centered
1212.00	.881	.948	.133	21.4%
1725.00	.910	1.000	.000	
1892.33	.983	1.000	.000	
2212.00	.927	1.412	.189	34.7%
2215.00	.915	1.000	.000	
2220.00	.986	1.000	.000	
2225.00	.994	1.000	.007	1.0%
2230.00	.971	.983	.063	10.5%
2232.50	.969	.999	.036	5.1%
2235.00	.943	1.003	.028	4.3%
2236.00	.499	1.000	.000	
3215.00	1.006	1.033	.042	8.8%
Overall	.967	1.008	.084	15.0%



#### Improvement Age

#### **Case Processing Summary**

		Count	Percent
AgeRec	0	37	86.0%
	Over 100	4	9.3%
	25 to 50	2	4.7%
Overall		43	100.0%
Excluded		0	
Total		43	

#### Ratio Statistics for CURRTOT / TASP

				Coefficient of
		Price Related	Coefficient of	Variation
Group	Median	Differential	Dispersion	Median Centered
0	.986	1.017	.077	14.7%
Over 100	.937	.990	.051	6.8%
25 to 50	.744	.894	.234	33.1%
Overall	.967	1.008	.084	15.0%

#### **Improved Area**

#### **Case Processing Summary**

		Count	Percent
ImpSFRec	0	37	86.0%
	LE 500 sf	3	7.0%
	1,500 to 2,000 sf	1	2.3%
	3,000 sf or Higher	2	4.7%
Overall		43	100.0%
Excluded		0	
Total		43	

#### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.986	1.017	.077	14.7%
LE 500 sf	.918	.915	.150	27.3%
1,500 to 2,000 sf	.963	1.000	.000	
3,000 sf or Higher	.877	.991	.038	5.3%
Overall	.967	1.008	.084	15.0%

#### **Improvement Quality**

#### **Case Processing Summary**

		Count	Percent
QUALITY		37	86.0%
	1 - Low	1	2.3%
	5 - Average	3	7.0%
	7 - Good	2	4.7%
Overall		43	100.0%
Excluded		0	
Total		43	



#### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
	.986	1.017	.077	14.7%
1 - Low	.983	1.000	.000	
5 - Average	.844	.936	.134	23.6%
7 - Good	.941	1.005	.024	3.4%
Overall	.967	1.008	.084	15.0%

#### **Improvement Condition**

## Case Processing Summary

		Count	Percent
CONDITION		37	86.0%
	3 - Average	4	9.3%
	4 - Good	2	4.7%
Overall		43	100.0%
Excluded		0	
Total		43	

#### Ratio Statistics for CURRTOT / TASP

				Coefficient of
		Price Related	Coefficient of	Variation
Group	Median	Differential	Dispersion	Median Centered
	.986	1.017	.077	14.7%
3 - Average	.877	.933	.137	21.6%
4 - Good	.941	1.005	.024	3.4%
Overall	.967	1.008	.084	15.0%

#### **Vacant Land Median Ratio Stratification**

#### Sale Price

#### **Case Processing Summary**

		Count	Percent
SPRec	LT \$25K	53	33.8%
	\$25K to \$50K	67	42.7%
	\$50K to \$100K	34	21.7%
	\$100K to \$150K	2	1.3%
	\$150K to \$200K	1	0.6%
Overall		157	100.0%
Excluded		0	
Total		157	

#### Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT \$25K	1.048	1.017	.170	21.2%
\$25K to \$50K	1.002	1.000	.163	22.0%
\$50K to \$100K	.942	.995	.136	16.7%
\$100K to \$150K	.752	1.016	.188	26.5%
\$150K to \$200K	1.027	1.000	.000	
Overall	1.000	1.036	.163	21.6%



#### Subclass

#### **Case Processing Summary**

		Count	Percent
ABSTRLND	100.00	45	28.7%
	200.00	1	0.6%
	530.00	2	1.3%
	540.00	3	1.9%
	550.00	101	64.3%
	1112.00	4	2.5%
	2115.00	1	0.6%
Overall		157	100.0%
Excluded		0	
Total		157	

#### Ratio Statistics for CURRLND / TASP

0	Madian	Price Related	Coefficient of	Coefficient of Variation
Group	Median	Differential	Dispersion	Median Centered
100.00	1.000	1.057	.203	25.4%
200.00	1.027	1.000	.000	
530.00	1.063	1.015	.126	17.8%
540.00	1.133	1.059	.069	13.0%
550.00	1.000	1.036	.150	20.4%
1112.00	.903	1.014	.093	11.8%
2115.00	.713	1.000	.000	
Overall	1.000	1.036	.163	21.6%