

San Matteo

D A T A A N A L Y T I C S

2025 Property Assessment Study

Moffat County



September 15, 2025

Natalie Castle

Director of Research, Colorado Legislative Council
Room 029, 200 East Colfax Avenue
Denver, CO 80203

San Matteo Data Analytics (SMDA) respectfully submits the **Final Report regarding the 2025 Colorado Property Assessment Study for Moffat County**. This report summarizes the results of both a procedural review and a statistical analysis.

The **procedural review** evaluated local assessment practices, including valuation methods of residential, commercial, agricultural properties, as well as natural resources, personal property, possessory interests, and subdivision discounting. It also examined processes related to the development of economic areas, and sales qualification.

The **statistical analysis** measured compliance with statutory assessment levels for vacant land, residential, and commercial/industrial properties.

We value the opportunity to support the State of Colorado in ensuring fair and consistent property assessments. Please contact us if you have any questions or need additional details regarding these reports.



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1. Statistical Overview

Compliance and Evaluations

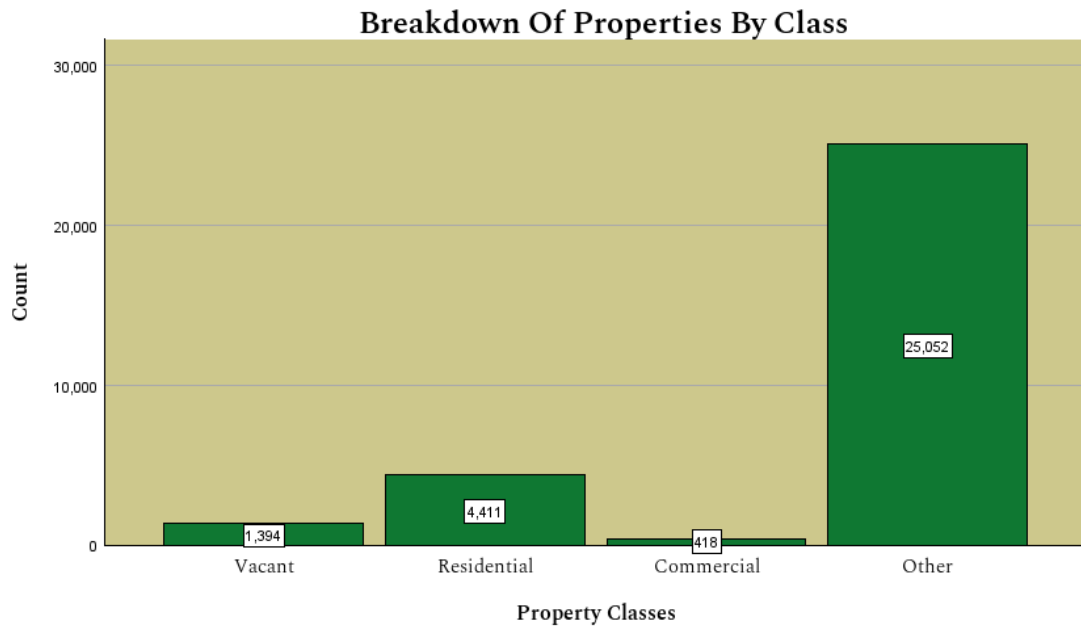
Moffat County was found to be in compliance.

	Result	Value
Vacant Land		
Median Sales Ratio	Pass	0.99
Coefficient of Dispersion	Pass	12.29%
Time Adjustments	Pass	0.294
Price Related Differential	Sufficient	1.01
Price Related Bias	Sufficient	0.00
Sold/Unsold Similarity	Sufficient	
Qualified Sales > 50%	Yes	

	Result	Value
Residential		
Median Sales Ratio	Pass	0.99
Coefficient of Dispersion	Pass	8.30%
Time Adjustments	Pass	0.606
Price Related Differential	Sufficient	1.00
Price Related Bias	Sufficient	0.03
Sold/Unsold Similarity	Sufficient	
Qualified Sales > 50%	Yes	

Moffat County
Property Types

Below is a breakdown of the property types of the 31,275 parcels in Moffat County.



2. Vacant Land

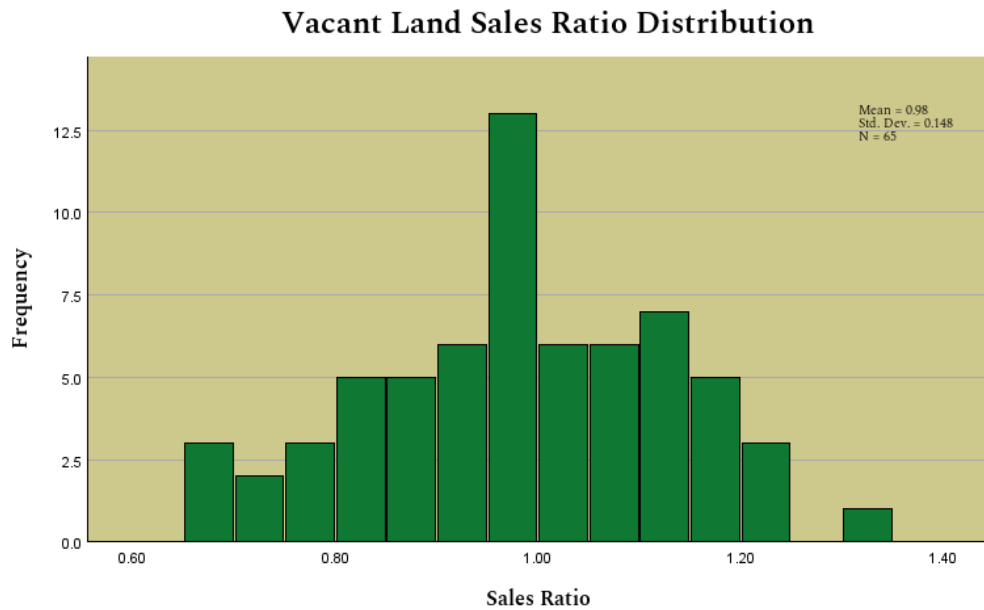
Overview

Moffat was found to be compliant for Vacant Land properties.

	Result	Value
Vacant Land		
Median Sales Ratio	Pass	0.99
Coefficient of Dispersion	Pass	12.29%
Time Adjustments	Pass	0.294
Price Related Differential	Sufficient	1.01
Price Related Bias	Sufficient	0.00
Sold/Unsold Similarity	Sufficient	
Qualified Sales > 50%	Yes	

Vacant Land Median Sales Ratio

The median sales ratio (MSR) tests how close the Assessor's valuations (estimates of market value) are to the true market value. The distribution of these sales ratios should be centered around 1.00. The Vacant Land MSR for Moffat County was calculated to be 0.99, which is within the acceptable statistical range of 0.95 to 1.05 established by the State Board of Equalization (SBOE). We trimmed zero sales during the development of this analysis. The MSR was also calculated for all applicable subclass, neighborhoods, economic areas, size and valuation strata identified by the auditor. See appendix for more details.

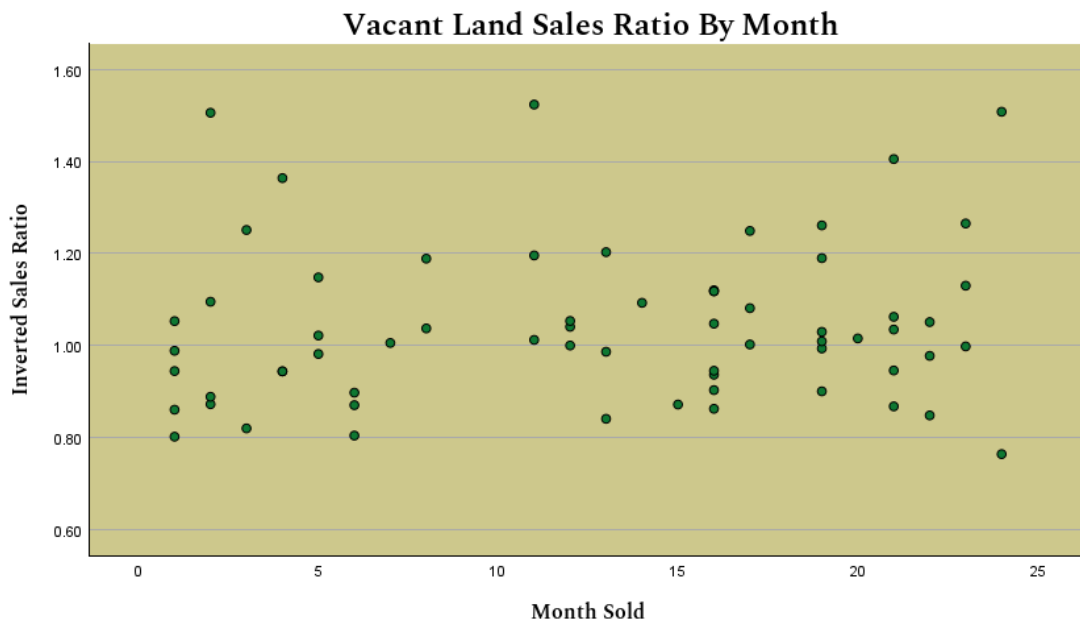


Vacant Land Coefficient of Dispersion

The Coefficient of Dispersion (COD) tests for undesirable variance in the valuations. The variance in sales ratios should be as small as possible. The COD for Vacant Land properties in Moffat County was calculated at 12.29% which is within the acceptable statistical standard of 20.99% or less established by the State Board of Equalization (SBOE). The COD was also calculated for all applicable class, subclass, neighborhoods, economic areas, and valuation strata identified by the auditor. See appendix for more details.

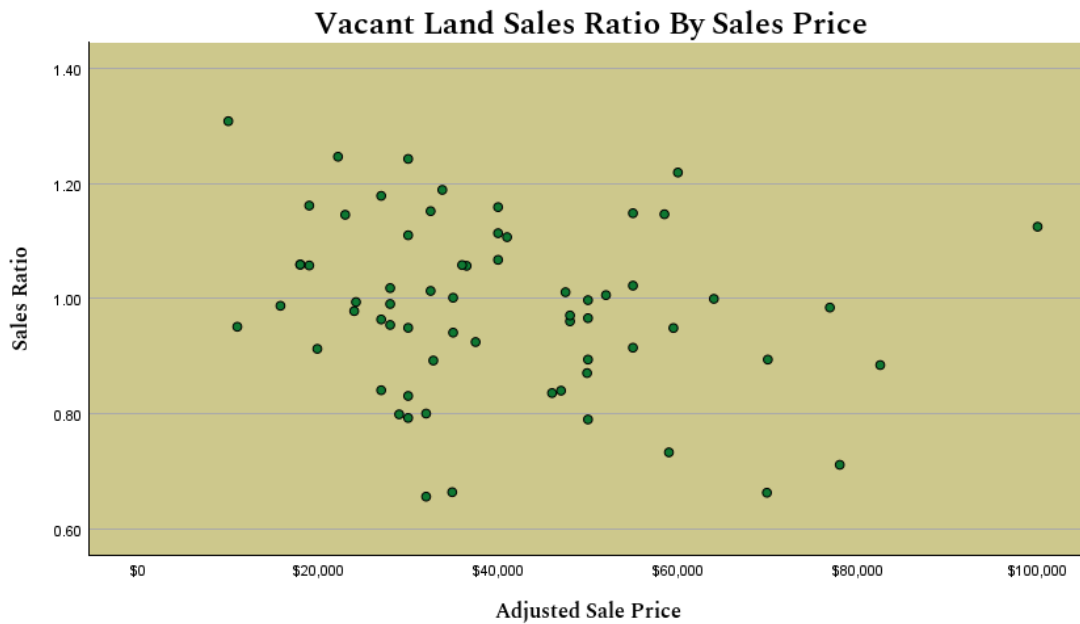
Vacant Land Market (Time) Adjustments

All previous statistics used the time-adjusted sales price to ensure that the effect of time on sales ratios has been appropriately addressed. There should be a consistent and reasonable time adjustment methodology, not one tailored to improve sales ratios. We examined the sales ratios over the 24 - month period of sales. There does not appear to be a significant effect of time on Moffat's Vacant Land sales ratios.



Vacant Land Price Related Differential

The Price Related Differential (PRD) tests for differences in the valuations of high and low value sold properties. Sales ratios should be consistent across the range of sale prices so the PRD should be very close to 1.00. The PRD for Moffat County was calculated at 1.01, which is within the acceptable range of 0.98 to 1.03 established by the International Association of Assessing Officers (IAAO). The PRD was also calculated for all applicable class, subclass, neighborhoods, economic areas, size, and valuation strata identified by the auditor. See appendix for more details.



Vacant Land Price Related Bias

The Price Related Bias (PRB) measures whether assessment levels change systematically with property value. A PRB close to 0.00 indicates that high- and low-value properties are valued consistently, without upward or downward bias in the sales ratios. For Moffat County, the PRB was calculated at 0.00 which is within the acceptable statistical range of -0.05 to 0.05 established by the International Association of Assessing Officers. The PRB was also analyzed across all applicable categories, including property class, subclass, neighborhood, economic area, size, and valuation strata as identified by the auditor. Additional details are provided in the appendix.

Vacant Land Sold/Unsold Comparison

All previous Vacant Land statistics focus only on the compliance of properties that were sold during the Vacant Land data collection period. In order to ensure that the unsold properties are also being valued consistently we evaluate whether or not they were treated the same as the sold properties.

Our default comparison approach utilizes the Mann-Whitney U test (also known as the Wilcoxon rank-sum test), to analyze two samples of sold and unsold properties. First, we compare the price per square foot, followed by the change in price per square foot from last reappraisal to this one, and finally we compare the change in total value from last reappraisal to this one. If necessary, we will also consider the stratified (economic area, neighborhood, improvement abstract, etc.) medians of the following unitary metrics: price per foot, change in price per foot, and change in value. See appendix for more details.

Our study indicates that the Vacant Land sold and unsold properties are treated similarly.

Vacant Land Sales Qualification

All the analysis above, notwithstanding the sold/unsold comparison, relies entirely on qualified sales. In order to ensure that this is a complete and unbiased analysis of assessment practices, we will verify that sales are being correctly coded. We have concluded that Vacant Land sales are being coded in an acceptable way.

There were 66 Vacant Land sales. We have confirmed that more than 50% of all sales were qualified.

3. Residential

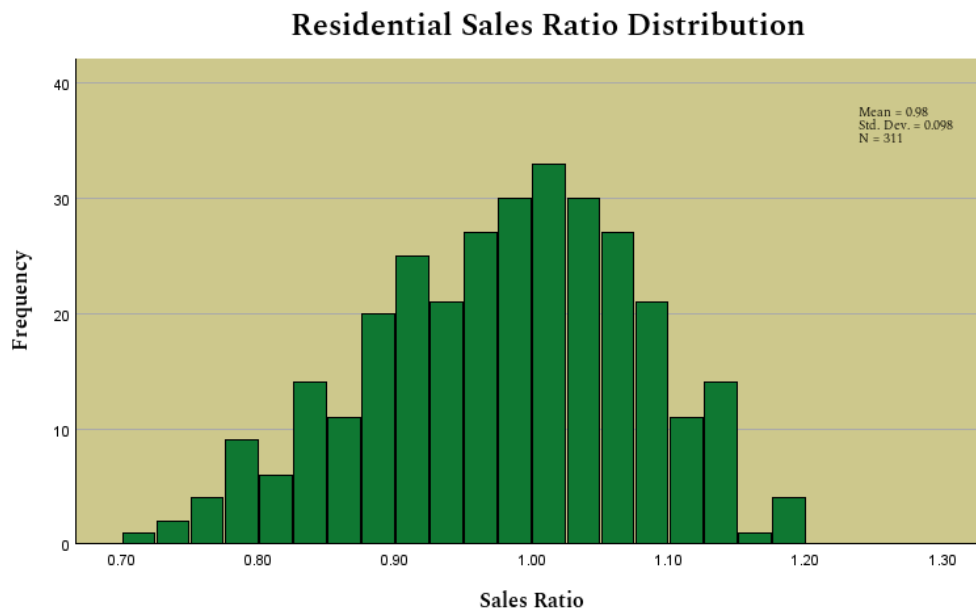
Overview

Moffat County was found to be compliant for Residential properties.

	Result	Value
Residential		
Median Sales Ratio	Pass	0.99
Coefficient of Dispersion	Pass	8.30%
Time Adjustments	Pass	0.606
Price Related Differential	Sufficient	1.00
Price Related Bias	Sufficient	0.03
Sold/Unsold Similarity	Sufficient	
Qualified Sales > 50%	Yes	

Residential Median Sales Ratio

The median sales ratio (MSR) tests how close the Assessor's valuations (estimates of market value) are to the true market value. The distribution of these sales ratios should be centered around 1.00. The Residential MSR for Moffat County was calculated to be 0.99, which is within the acceptable statistical range of 0.95 to 1.05 established by the State Board of Equalization (SBOE). We trimmed zero sales during the development of this analysis. The MSR was also calculated for all applicable subclass, neighborhoods, economic areas, size and valuation strata identified by the auditor. See appendix for more details.



Residential Coefficient of Dispersion

The Coefficient of Dispersion (COD) tests for undesirable variance in the valuations. The variance in sales ratios should be as small as possible. The COD for Residential properties in Moffat County was calculated at 8.30% which is within the acceptable statistical standard of 15.99% or less established by the State Board of Equalization (SBOE). The COD was also calculated for all applicable class, subclass, neighborhoods, economic areas, and valuation strata identified by the auditor. See appendix for more details.

Residential Market (Time) Adjustments

All previous statistics used the time-adjusted sales price to ensure that the effect of time on sales ratios has been appropriately addressed. There should be a consistent and reasonable time adjustment methodology, not one tailored to improve sales ratios. We examined the sales ratios over the 24 - month period of sales. There does not appear to be a significant effect of time on Moffat County's Residential sales ratios.



Residential Price Related Differential

The Price Related Differential (PRD) tests for differences in the valuations of high and low value sold properties. Sales ratios should be consistent across the range of sale prices so the PRD should be very close to 1.00. The PRD for Moffat County was calculated at 1.00, which is within the acceptable range of 0.98 to 1.03 established by the International Association of Assessing Officers (IAAO). The PRD was also calculated for all applicable class, subclass, neighborhoods, economic areas, size, and valuation strata identified by the auditor. See appendix for more details.



Residential Price Related Bias

The Price Related Bias (PRB) measures whether assessment levels change systematically with property value. A PRB close to 0.00 indicates that high- and low-value properties are valued consistently, without upward or downward bias in the sales ratios. For Moffat County, the PRB was calculated at 0.03 which is within the acceptable statistical range of -0.05 to 0.05 established by the International Association of Assessing Officers. The PRB was also analyzed across all applicable categories, including property class, subclass, neighborhood, economic area, size, and valuation strata as identified by the auditor. Additional details are provided in the appendix.

Residential Sold/Unsold Comparison

All previous Residential statistics focus only on the compliance of properties that were sold during the Residential data collection period. In order to ensure that the unsold properties are also being valued consistently we evaluate whether or not they were treated the same as the sold properties.

Our default comparison approach utilizes the Mann-Whitney U test (also known as the Wilcoxon rank-sum test), to analyze two samples of sold and unsold properties. First, we compare the price per square foot, followed by the change in price per square foot from last reappraisal to this one, and finally we compare the change in total value from last reappraisal to this one. If necessary, we will also consider the stratified (economic area, neighborhood, improvement abstract, etc.) medians of the following unitary metrics: price per foot, change in price per foot, and change in value. See appendix for more details.

Our analysis indicates that the Residential sold and unsold properties are treated similarly. See appendix for more details.

Residential Sales Qualification

All the analysis above, notwithstanding the sold/unsold comparison, relies entirely on qualified sales. In order to ensure that this is a complete and unbiased analysis of assessment practices, we will verify that sales are being correctly coded. We have concluded that Residential sales are being coded in an acceptable way.

There were 312 Residential sales. We have confirmed that more than 50% of all sales were qualified.

4. Commercial and Industrial

Overview

Over the two-year base period, there were too few commercial and industrial sales to support a valid statistical analysis. As a result, Moffat County is excused from this portion of the statistical audit for commercial and industrial properties.

Recommendations

The county may submit sales information for up to five years.

5. Agriculture

Methodology

SMDA conducted a comprehensive review of county records to evaluate the classification and valuation of agricultural lands. The review included an assessment of major land categories, such as sprinkler irrigated farmland (4107), flood irrigated (4117), dry farmland (4127), meadow hay (4137), grazing areas (4147), orchard land (4157), farm/ranch waste land (4167), and forest land (4177).

Moffat County applied the following methods to determine agricultural land classification and appropriate valuation methodology:

- Aerial photos are available and used for land classification
- Soil conservation guidelines determine land productivity classes
- Crop rotations are documented using a ten-year average
- Expenses reflect a ten-year average of typical landlord costs
- Ten-year crop yield averages are based on local and supporting data
- Grazing land is classified by its ten-year carrying capacity
- Acreage totals for all classes and subclasses are verified
- A 13% capitalization rate is correctly applied

Additionally, SMDA checked the county records to confirm that the commodity prices and expense data provided by the Property Tax Administrator (PTA) were accurately applied. Guidance from the **Assessor's Reference Library (ARL), Volume 3, Chapter 5** was referenced where appropriate.

Conclusions

Based on the review and analysis, SMDA considers Moffat County's appraisal practices for agricultural property acceptable and in alignment with statutory requirements. The directives, commodity pricing, and expense figures issued by the Property Tax Administrator were correctly applied throughout the process. County-reported yields closely matched the figures published by Colorado Agricultural Statistics, and the expenses used were both reasonable and within allowable ranges. Grazing land carrying capacities were properly supported and fell within acceptable limits. Overall, the analysis confirms that the valuation approach is sound, well-documented, and based on reliable data.

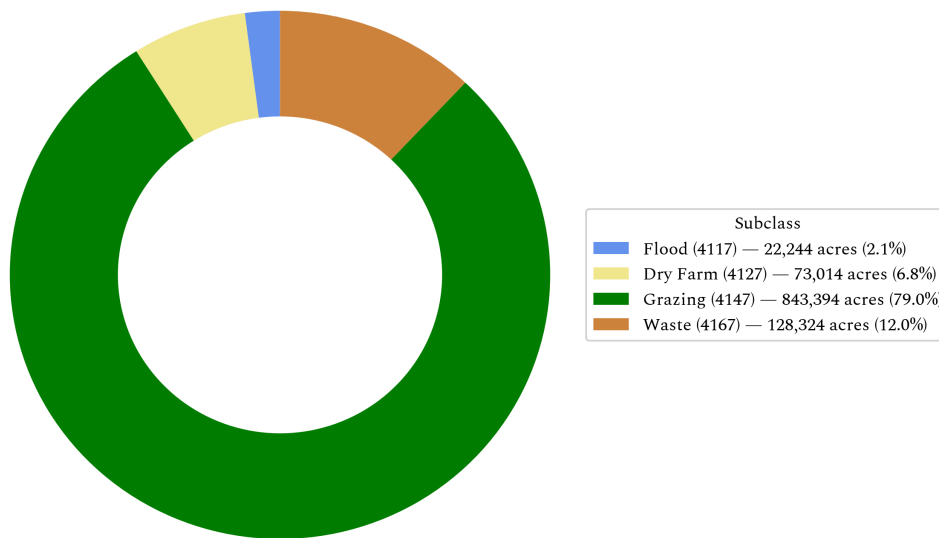
Recommendations

None

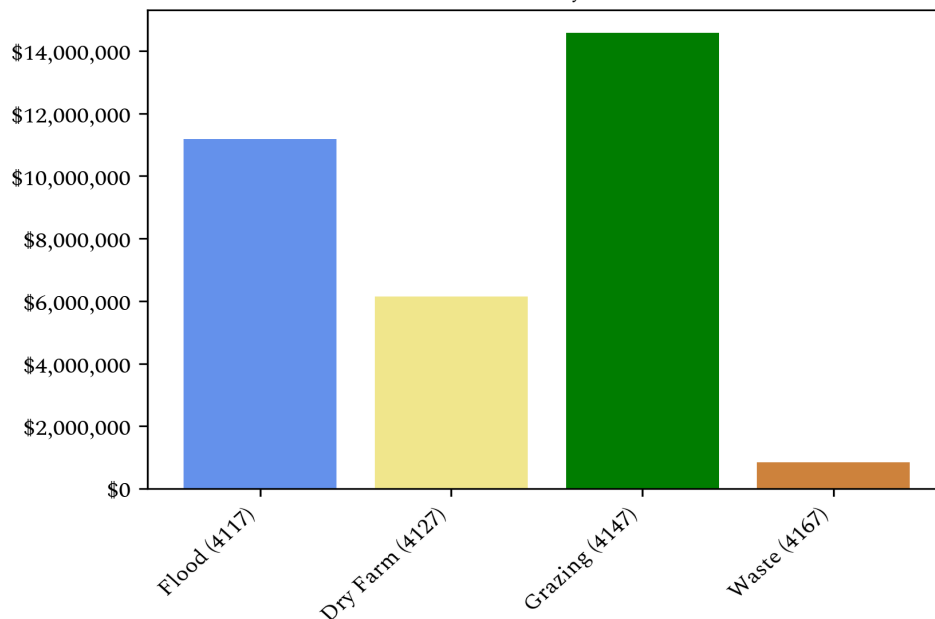
Agricultural Land Breakdown

Abstract	Class	Acres	Actual Value	Actual Value/Acre	Assessed Value
4117	Flood	22,243.91	\$11,178,107	\$502.52	\$3,019,089
4127	Dry Farm	73,013.58	\$6,143,345	\$84.14	\$1,658,706
4147	Grazing	843,393.65	\$14,579,755	\$17.29	\$3,936,534
4167	Waste	128,323.60	\$848,910	\$6.62	\$229,206

Acres by Subclass



Actual Value by Subclass



6. Agriculture Non-Integral

Methodology

SMDA reviewed Moffat County's processes to determine whether it complied with the guidelines outlined in the **Assessor's Reference Library (ARL), Volume 3, Chapter 5**. The review focused on Moffat County's approach to identifying land associated with residential improvements on farms and ranches, as well as land beneath residential structures that may not be integral to an agricultural operation under **§39-1-102, C.R.S.**

For Residential Improvements on a Farm or Ranch

When identifying land under residential structures on a **farm or ranch** that is determined to be not integral to agricultural activity, Moffat County applied the following discovery methods:

- Questionnaires
- Field Inspections
- Phone Interviews
- In Person Interviews
- Written Correspondence
- Personal Knowledge of Occupants
- Aerial Photography

For Residential Improvements Not Integral to Agriculture

When identifying land under residential structures that is determined to be **not integral** to agricultural activity, Moffat County applied the following discovery methods:

- Aerial Photography

Conclusions

Moffat County followed the procedures set forth by the **Division of Property Taxation** for classifying and valuing land associated with residential improvements, whether or not the property is considered integral to agricultural use.

Recommendations

None

7. Economic Areas

Methodology

Moffat County submitted written narratives and maps outlining its economic areas. SMDA reviewed these materials for clarity, logical consistency, and alignment between the descriptions and mapped boundaries.

Conclusions

Each area is affected by comparable market conditions, which supports consistent property valuations and helps maintain uniformity in values among properties with similar characteristics within the same geographic region.

Recommendations

None

8. Natural Resources

Earth and Stone

Methodology

In accordance with the **Assessor's Reference Library (ARL), Volume 3, Chapter 6: Natural Resource Valuation Procedures**, the county used the **income approach** to determine the value of earth and stone production. Production totals, measured in tons, were multiplied by the economic royalty rate established by the **Division of Property Taxation** to calculate projected income. This income figure was then capitalized using the **Hoskold factor**, which is based on the expected life of the reserves or lease. Since production data is not collected by any state or private agency, the operator is the source for both estimated tonnage and reserve life. Ultimately, valuation depends on two primary variables: the quantity of material and the remaining productive life of the site.

Conclusions

The county applied the correct formulas and state guidelines to earth and stone resources.

Recommendations

None

Producing Coal Mines

Methodology

In accordance with the **Assessor's Reference Library (ARL), Volume 3, Chapter 6: Valuation of Natural Resources for Producing Coal Mines and Producing Coal Leaseholds and Lands**, the income approach is used as the primary method for valuing producing coal mines. This process estimates annual economic royalty income based on the prior year's production figures, which is then multiplied by the **Hoskold factor** to determine the actual value of the permitted acreage. Production data and the expected life of the leases are provided directly by the operator, as there is no independent source for this information.

Conclusions

The county applied the correct formulas and state guidelines to producing coal mines resources.

Recommendations

None

Producing Oil and Gas

Methodology

Under the guidelines of the **Assessor's Reference Library (ARL), Volume 3, Chapter 6: Valuation of Natural Resources**, the valuation of producing oil and gas leaseholds and lands follows the statutory requirements outlined in **§39-1-103, C.R.S.** and **Article 7 of Title 39, C.R.S.** By law, producing oil and gas properties are assessed based on **87.5% of the selling price** of oil or gas from the previous calendar year. When calculating this value, sales delivered as royalty to federal, state, or local government entities are excluded. For oil or gas produced but not sold during the prior year, valuation is based on the average selling price of comparable production within the same field.

The assessor relies on the production and sales information reported by operators to determine the appropriate valuation for assessment purposes, ensuring that the procedures conform to state statutes and the ARL's established methodologies.

Conclusions

The county applied the correct formulas and state guidelines to producing oil and gas resources.

Recommendations

None

9. Personal Property

Methodology

SMDA reviewed Moffat County's personal property assessment procedures for compliance with the **Assessor's Reference Library (ARL), Volume 5** and the requirements of the **State Board of Equalization (SBOE)**. The SBOE mandates the use of ARL Volume 5, which includes up-to-date discovery processes, classification methods, documentation standards, economic life tables, cost factor tables, depreciation schedules, and level-of-value adjustment tables.

The county provided a current personal property audit plan for the 2025 valuation period along with a list of audited businesses, which matched the plan requirements.

To identify and discover personal property accounts, Moffat County used several methods:

- Public record documents and MLS listing or sold books
- Chamber of Commerce/Economic Development contacts
- Local publications, personal observation, and questionnaires

The county follows all classification, documentation, and valuation procedures recommended by the **Division of Property Taxation (DPT)**, including the prescribed cost factor tables, depreciation schedules, and level-of-value adjustment factors.

Moffat County also employed a structured audit process using multiple audit triggers to select accounts for review:

- Accounts close to \$56,000 actual value exemption status
- Non-filing taxpayers
- Businesses with no deletions or additions for 2 or more years
- Same business type or use
- Accounts with omitted property
- Incomplete or inconsistent declarations
- Accounts with greater than 10% change
- New businesses filing for the first time
- Accounts with obvious discrepancies

Conclusions

Moffat County implemented effective discovery, classification, documentation, valuation, and auditing practices for personal property assessments. The county's procedures align with ARL Volume 5, meet all SBOE requirements, and demonstrate statistical compliance.

Recommendations

None

10. Possessory Interest

Methodology

SMDA reviewed Moffat County's discovery and valuation of possessory interest properties to ensure they correctly applied the guidelines outlined in the **Assessor's Reference Library (ARL), Volume 3, Chapter 7**, in accordance with **§39-1-103(17)(a)(II), C.R.S.** Possessory interest refers to a private right to occupy or use government-owned property granted through a lease, license, permit, concession, contract, or other agreement, as defined by the Property Tax Administrator.

SMDA reviewed Moffat County's assessment procedures for compliance with these guidelines for **agricultural and commercial** possessory interests. The county confirmed the completeness of its discovery process and whether it was confident that all relevant possessory interest properties had been identified and placed on the assessment roll.

Conclusions

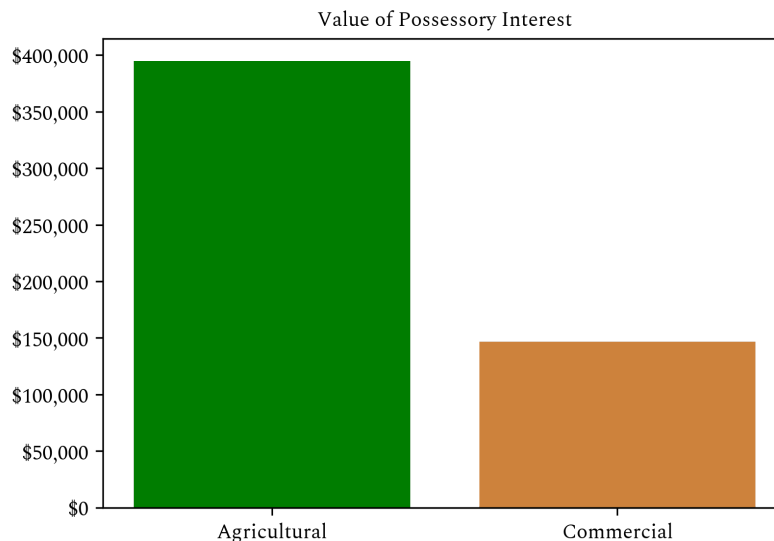
Moffat County established an effective discovery process to ensure that possessory interest properties were added to the tax roll. The county consistently applied the proper procedures and valuation methods according to State guidelines, resulting in accurate and compliant assessments.

Recommendations

None

Possessory Interest Breakdown

Possessory Interest Type	Value
Agricultural	\$394,737
Commercial	\$146,818



11. Sales Verification

Methodology

As part of the Property Assessment Study, SMDA conducted an evaluation of Moffat County's procedures for verifying real estate sales. This review was guided by the relevant provisions of the **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.)

SMDA examined Moffat County's sales verification practices for the 2025 valuation period by reviewing a selection of sales from Moffat County's master sales list. A total of 35 unqualified sales were analyzed. Of these, 32 sales provided clear and supportable reasons for disqualification, while three sales lacked sufficient justification.

Where fewer than **50% of sales** were qualified within a property class, SMDA evaluated the reasons for disqualification within any subclass comprising **20% or more** of the class (by property count or value). When indications arose that sales data might be inadequate, unrepresentative, or incorrectly disqualified, SMDA discussed these cases directly with the assessor. SMDA also reviewed disqualified sales by assigned code to confirm consistent application; additional analysis was performed if SMDA discovered discrepancies.

Because Moffat County maintained a sufficient percentage of qualified sales, an in-depth subclass analysis was not required.

Moffat County

Conclusions

Based on SMDA's review, Moffat County performed adequately in verifying sales and applying statutory requirements.

Recommendations

None

12. Subdivision Discounting

Methodology

SMDA reviewed Moffat County's subdivision discounting practices to ensure compliance with §39-1-103(14), C.R.S. The review confirmed that discounting was applied to subdivisions where fewer than 80% of vacant lots had been sold. For each qualifying subdivision, an absorption rate was estimated to reflect the expected timeframe for selling the remaining parcels. Using the Summation Method and following the Division of Property Taxation guidelines, an appropriate discount rate was developed to account for the anticipated holding period and associated carrying costs.

Conclusions

Moffat County properly applied discounting procedures for qualifying subdivisions. The county's estimates of absorption periods, discount rates, and lot values are consistent with statutory requirements and state-recommended methodologies.

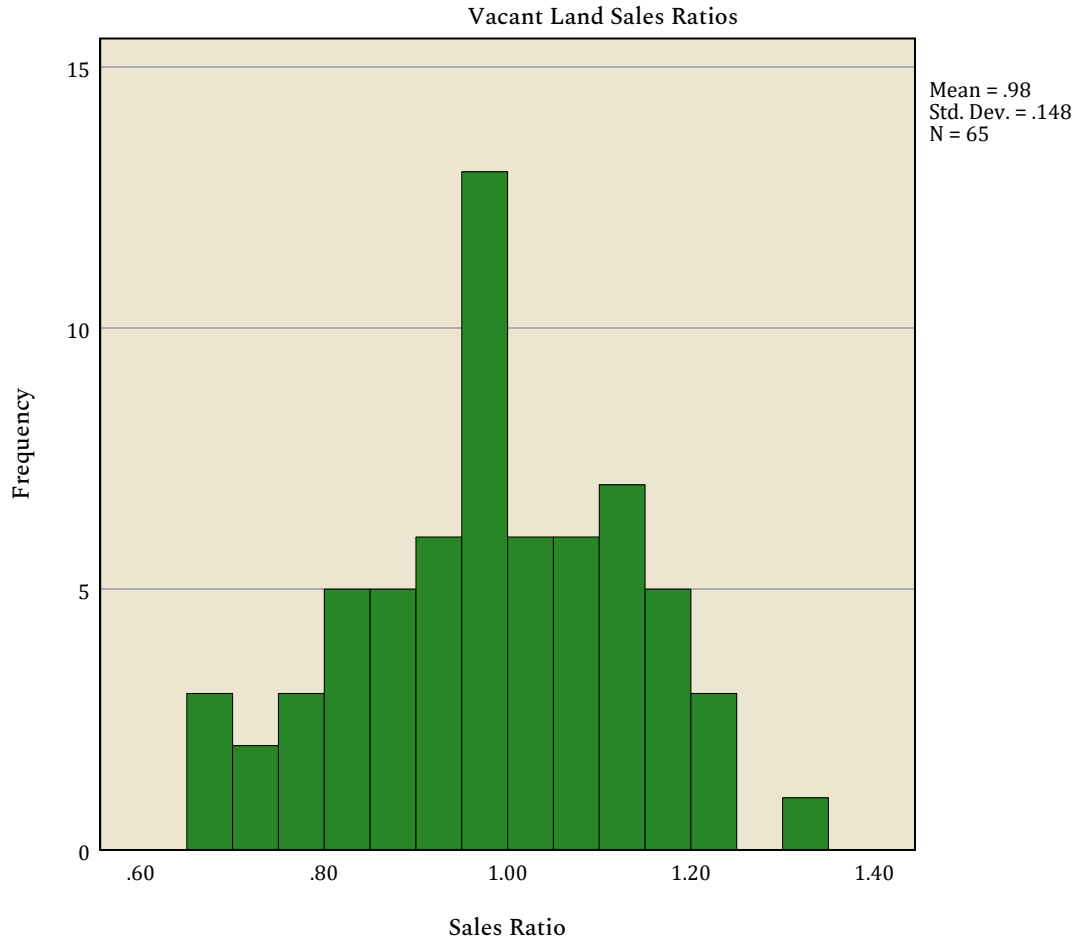
Recommendations

None

13. Appendix

OVERALL Vacant Land: Sales Ratio Distribution

Graph



OVERALL Vacant Land: Central Tendencies

Ratio Statistics

Ratio Statistics for Current Total Value /
Adjusted Sale Price

N	Median	Coefficient of Dispersion
66	.986	.123

Ratio Statistics

Ratio Statistics for Current Total
Value / Adjusted Sale Price

Price Related Bias	Price Related Differential
.005	1.010

OVERALL Vacant Land: Sales Price by Sales Ratio

Regression

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.022	.048		21.339	<.001
	Adjusted Sale Price	-1.193E-6	.000	-.135	-1.094	.278

a. Dependent Variable: Sales Ratio

Graph



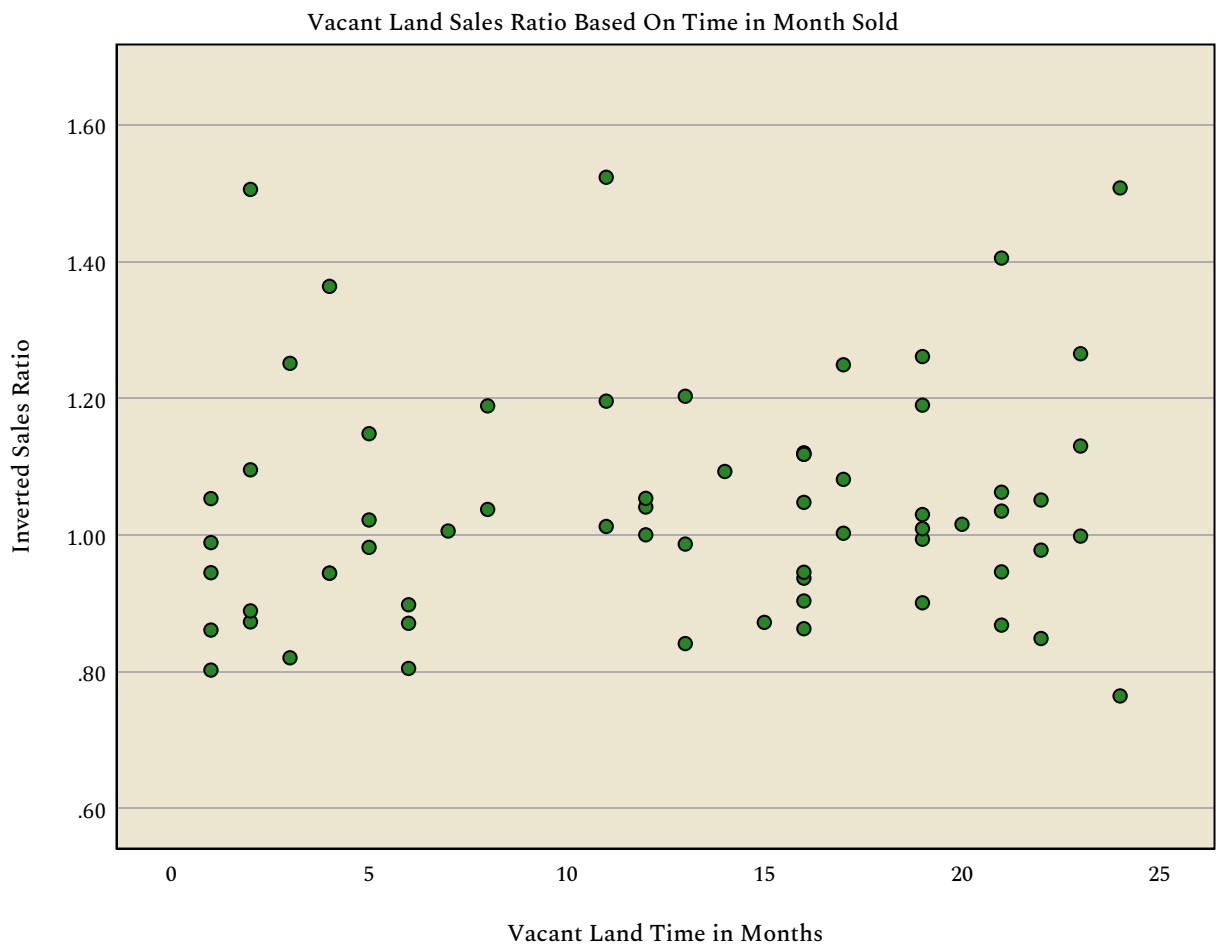
OVERALL Vacant Land: Months by Inverted Sales Ratio

Regression

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	1.010	.056		17.949	<.001
	Vacant Land Time in Months	.004	.004	.131	1.057	.294

a. Dependent Variable: Inverted Sales Ratio

Graph



OVERALL Vacant Land: Descriptive Statistics

Frequencies

		Statistics		
		Previous Total Value	Current Total Value	Difference in Total Value
N	Valid	66	66	66
	Missing	0	0	0
Mean		\$33,550.41	\$38,574.95	\$5,024.55
Median		\$28,507.00	\$37,361.00	\$5,141.00
Percentiles	2.5	\$5,895.05	\$9,623.25	-\$66,407.82
	25	\$14,787.00	\$24,718.75	\$708.25
	50	\$28,507.00	\$37,361.00	\$5,141.00
	75	\$41,948.25	\$46,965.50	\$13,420.75
	97.5	\$132,815.65	\$87,672.83	\$38,510.43

OVERALL Vacant Land: Mann-Whitney U-Test (Rank-sum)

Nonparametric Tests

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. ^{a,b}
1	The distribution of Current Total Value is the same across categories of Vacant Land Sold vs. Unsold.	Independent-Samples Mann-Whitney U Test	<.001

Hypothesis Test Summary

	Decision
1	Reject the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.

Independent-Samples Mann-Whitney U Test

Current Total Value across Vacant Land Sold vs. Unsold

Independent-Samples Mann-Whitney U Test Summary

Total N	1310
Mann-Whitney U	21868.500
Wilcoxon W	796258.500
Test Statistic	21868.500
Standard Error	2994.728
Standardized Test Statistic	-6.406
Asymptotic Sig.(2-sided test)	<.001

Nonparametric Tests

OVERALL Vacant Land: Mann-Whitney U-Test (Rank-sum)

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. ^{a,b}
1	The distribution of Difference in Total Value is the same across categories of Vacant Land Sold vs. Unsold.	Independent-Samples Mann-Whitney U Test	.163

Hypothesis Test Summary

	Decision
1	Retain the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.

Independent-Samples Mann-Whitney U Test

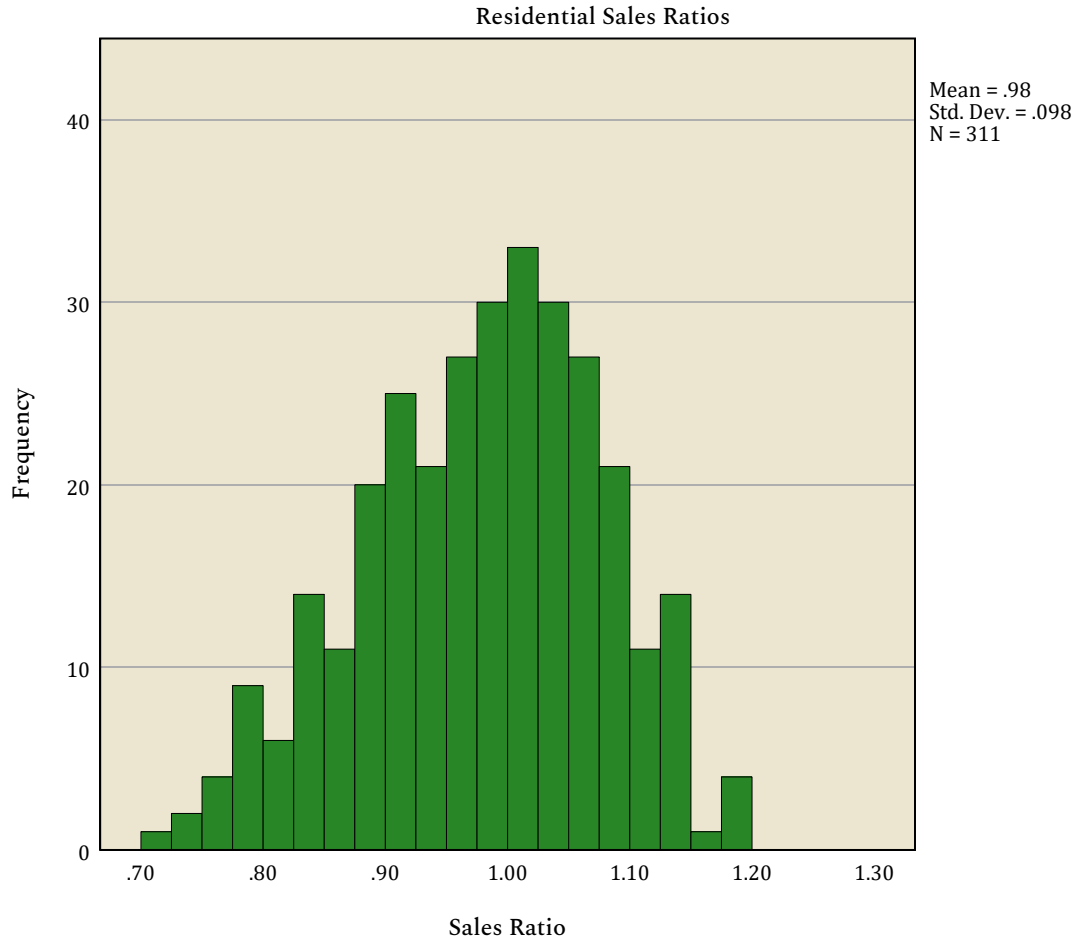
Difference in Total Value across Vacant Land Sold vs. Unsold

Independent-Samples Mann-Whitney U Test Summary

Total N	735
Mann-Whitney U	13901.500
Wilcoxon W	251606.500
Test Statistic	13901.500
Standard Error	1393.846
Standardized Test Statistic	-1.396
Asymptotic Sig.(2-sided test)	.163

OVERALL Residential: Sales Ratio Distribution

Graph



OVERALL Residential: Central Tendencies

Ratio Statistics

Ratio Statistics for Current Total Value /
Adjusted Sale Price

N	Median	Coefficient of Dispersion
312	.988	.083

Ratio Statistics

Ratio Statistics for Current Total
Value / Adjusted Sale Price

Price Related Bias	Price Related Differential
.030	.998

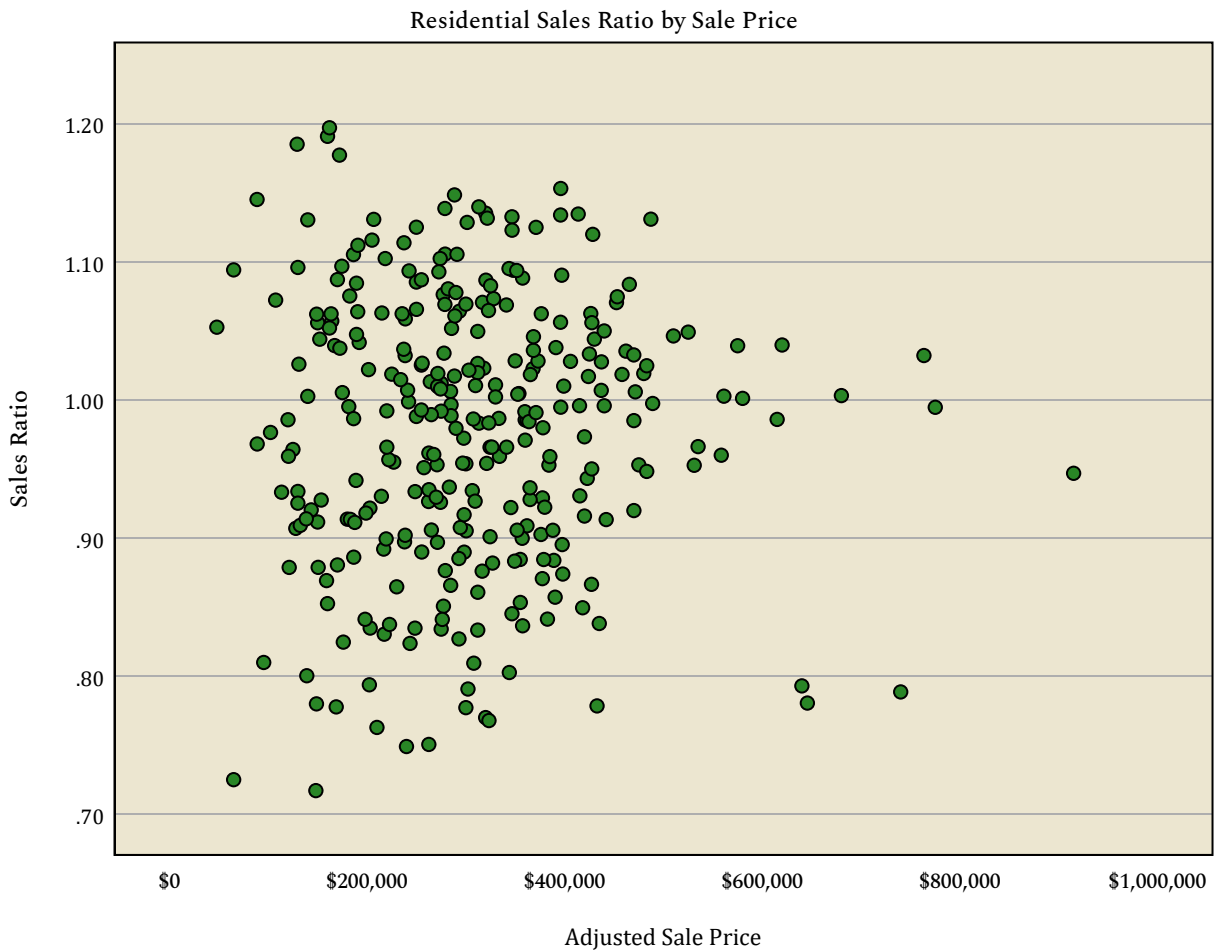
OVERALL Residential: Sales Price by Sales Ratio

Regression

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.967	.016		60.396	<.001
	Adjusted Sale Price	2.801E-8	.000	.033	.579	.563

a. Dependent Variable: Sales Ratio

Graph



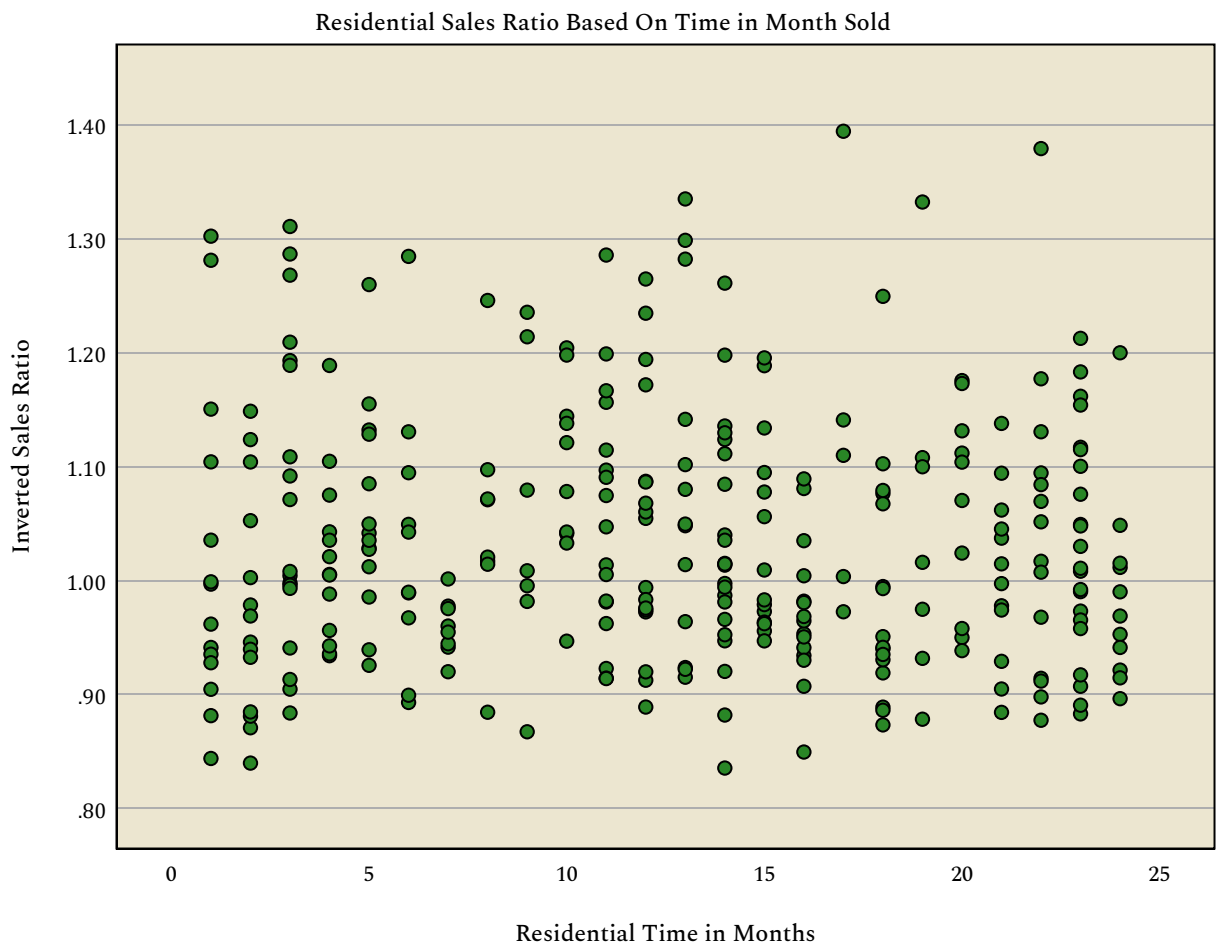
OVERALL Residential: Months by Inverted Sales Ratio

Regression

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.033	.034		30.152	<.001
	Residential Time in Months	.001	.002	.029	.516	.606

a. Dependent Variable: Inverted Sales Ratio

Graph



OVERALL Residential: Descriptive Statistics

Frequencies

		Statistics		
		Previous Price Per Foot	Price Per Foot	Difference in Price Per Foot
N	Valid	310	310	310
	Missing	2	2	2
Mean		\$254.84	\$153.98	1.12
Median		\$124.62	\$137.89	1.14
Percentiles	2.5	\$66.29	\$74.62	.94
	25	\$101.93	\$114.17	1.07
	50	\$124.62	\$137.89	1.14
	75	\$170.96	\$191.11	1.18
	97.5	\$241.70	\$271.36	1.26

Frequencies

		Statistics		
		Previous Total Value	Current Total Value	Difference in Total Value
N	Valid	312	312	311
	Missing	0	0	1
Mean		\$587,097.65	\$298,584.30	\$30,482.08
Median		\$255,333.50	\$286,530.50	\$28,499.00
Percentiles	2.5	\$85,720.63	\$101,282.00	-\$12,938.20
	25	\$178,429.25	\$205,875.25	\$19,075.00
	50	\$255,333.50	\$286,530.50	\$28,499.00
	75	\$327,561.00	\$364,339.25	\$42,167.00
	97.5	\$565,114.43	\$586,012.85	\$69,885.20

OVERALL Residential: Mann-Whitney U-Test (Rank-sum)

Nonparametric Tests

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. ^{a,b}
1	The distribution of Difference in Total Value is the same across categories of Residential Sold vs Unsold.	Independent-Samples Mann-Whitney U Test	<.001

Hypothesis Test Summary

	Decision
1	Reject the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.

Independent-Samples Mann-Whitney U Test

Difference in Total Value across Residential Sold vs Unsold

Independent-Samples Mann-Whitney U Test Summary

Total N	3867
Mann-Whitney U	386471.000
Wilcoxon W	6850281.000
Test Statistic	386471.000
Standard Error	17753.600
Standardized Test Statistic	-5.771
Asymptotic Sig.(2-sided test)	<.001

Nonparametric Tests

OVERALL Residential: Mann-Whitney U-Test (Rank-sum)

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. ^{a,b}
1	The distribution of Price Per Foot is the same across categories of Residential Sold vs Unsold.	Independent-Samples Mann-Whitney U Test	.359

Hypothesis Test Summary

	Decision
1	Retain the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.

Independent-Samples Mann-Whitney U Test

Price Per Foot across Residential Sold vs Unsold

Independent-Samples Mann-Whitney U Test Summary

Total N	3905
Mann-Whitney U	510516.000
Wilcoxon W	7039207.000
Test Statistic	510516.000
Standard Error	18531.087
Standardized Test Statistic	-.916
Asymptotic Sig.(2-sided test)	.359

Nonparametric Tests

OVERALL Residential: Mann-Whitney U-Test (Rank-sum)

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. ^{a,b}
1	The distribution of Difference in Price Per Foot is the same across categories of Residential Sold vs Unsold.	Independent-Samples Mann-Whitney U Test	.002

Hypothesis Test Summary

	Decision
1	Reject the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.

Independent-Samples Mann-Whitney U Test

Difference in Price Per Foot across Residential Sold vs Unsold

Independent-Samples Mann-Whitney U Test Summary

Total N	3867
Mann-Whitney U	430711.000
Wilcoxon W	6901714.000
Test Statistic	430711.000
Standard Error	17693.131
Standardized Test Statistic	-3.102
Asymptotic Sig.(2-sided test)	.002

OVERALL Residential: Unit Value Comparison

Summarize

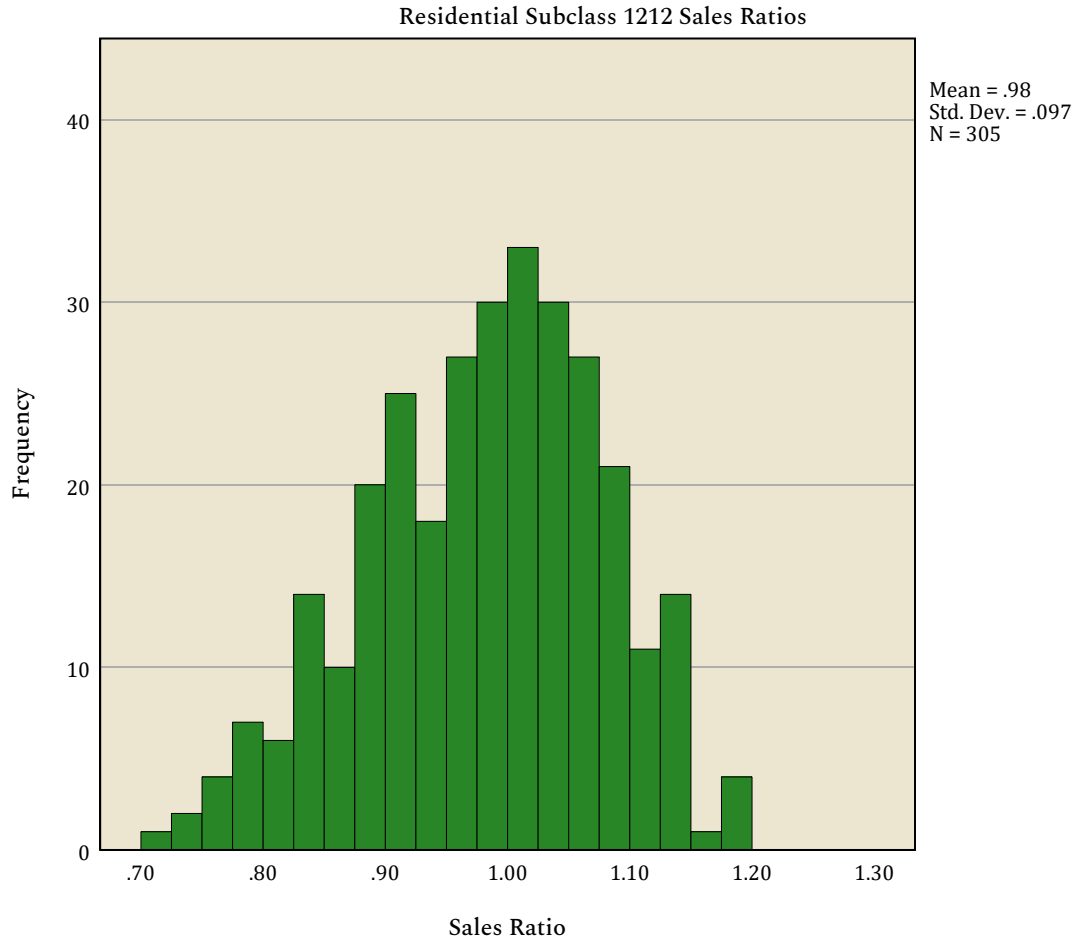
Sold vs Unsold

Difference in Price Per Foot

Residential Sold vs Unsold	N	Median	Mean
SOLD	299	1.14	1.12
UNSOLD	3808	1.12	1.12
Total	4107	1.12	1.12

Residential Subclass 1212: Sales Ratio Distribution

Graph



Residential Subclass 1212: Central Tendencies

Ratio Statistics

Ratio Statistics for Current Total Value /
Adjusted Sale Price

N	Median	Coefficient of Dispersion
306	.991	.082

Ratio Statistics

Ratio Statistics for Current Total
Value / Adjusted Sale Price

Price Related Bias	Price Related Differential
.034	.997

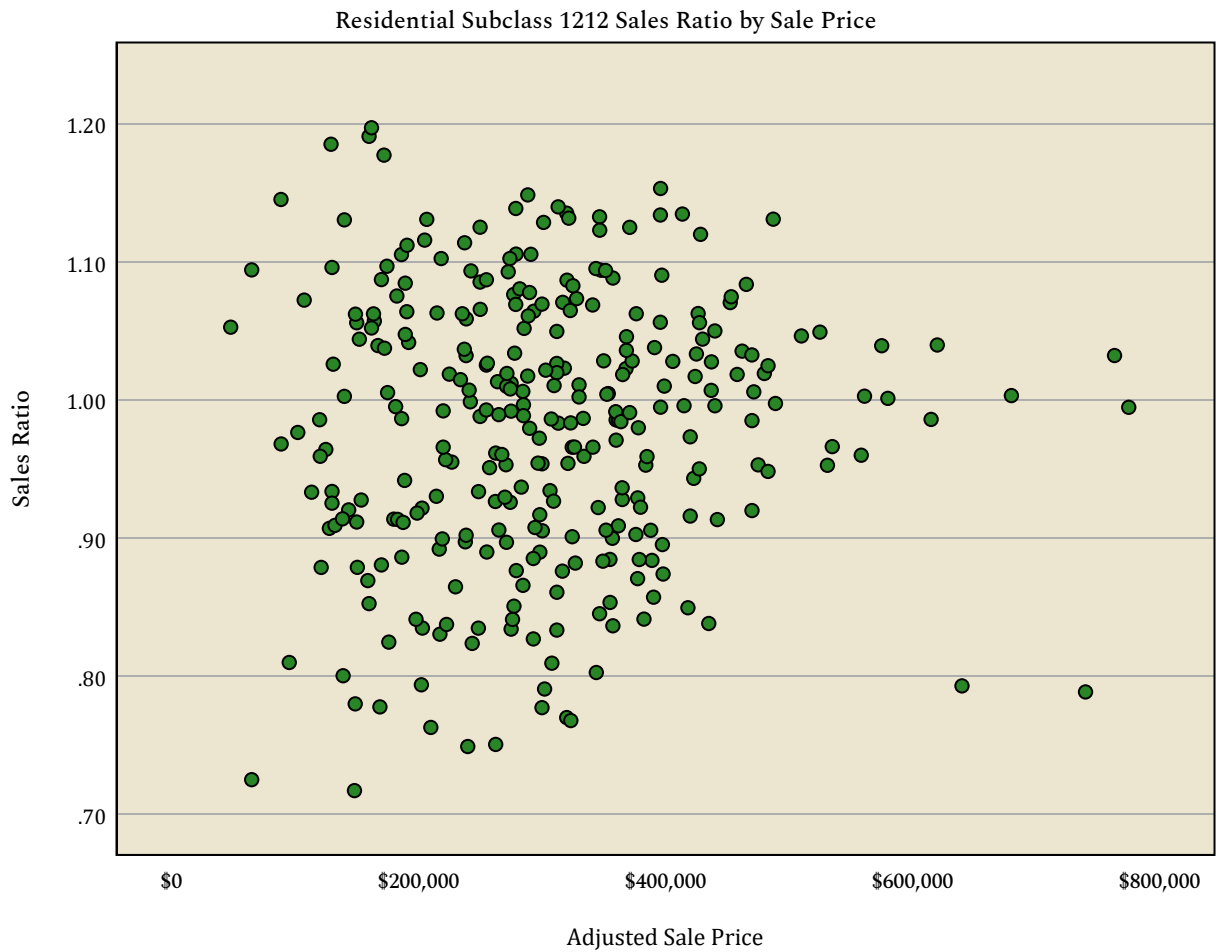
Residential Subclass 1212: Sales Price by Sales Ratio

Regression

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.959	.017		57.958	<.001
	Adjusted Sale Price	6.007E-8	.000	.067	1.178	.240

a. Dependent Variable: Sales Ratio

Graph



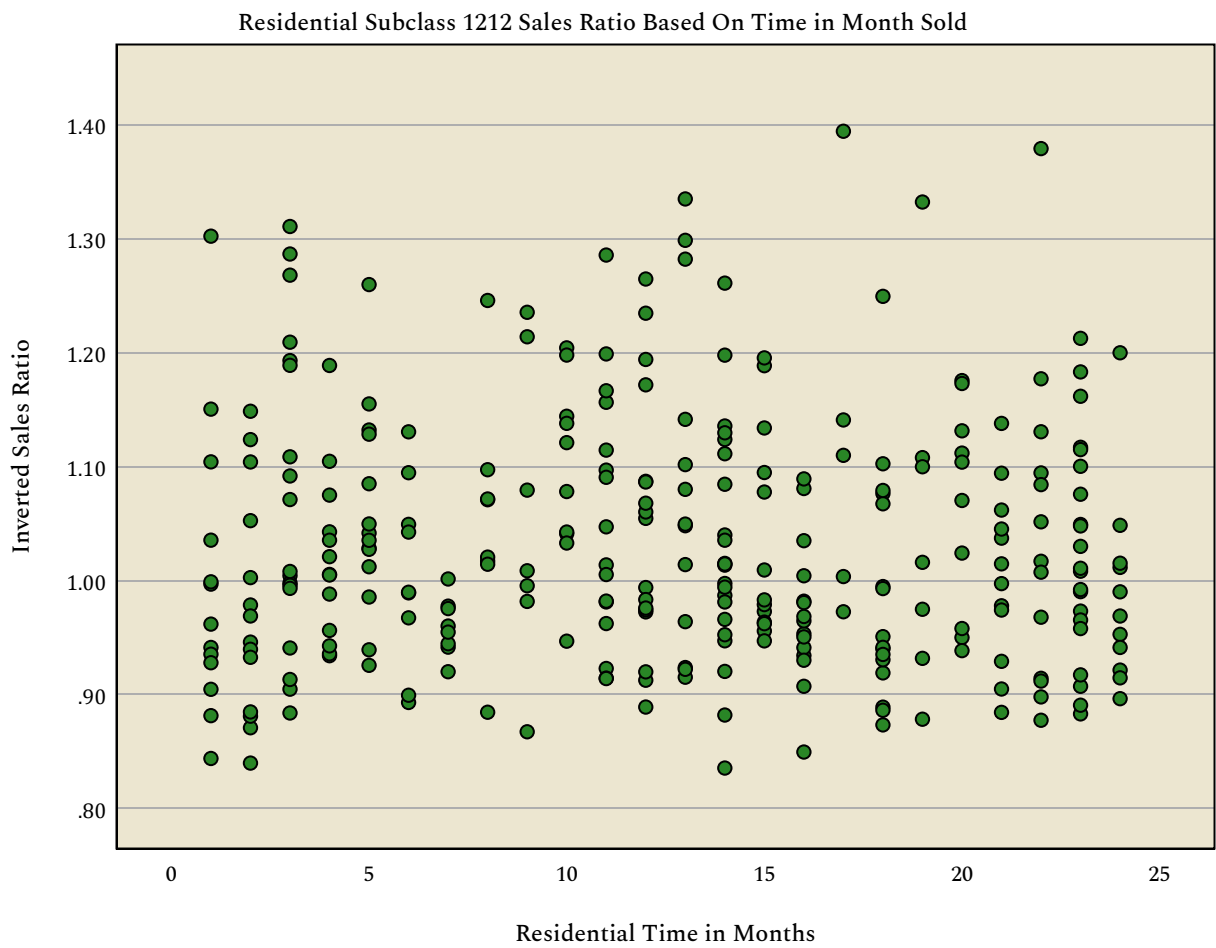
Residential Subclass 1212: Months by Inverted Sales Ratio

Regression

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.028	.035		29.453	<.001
	Residential Time in Months	.001	.002	.034	.600	.549

a. Dependent Variable: Inverted Sales Ratio

Graph



Residential Subclass 1212: Descriptive Statistics

Frequencies

		Statistics		
		Previous Price Per Foot	Price Per Foot	Difference in Price Per Foot
N	Valid	304	304	304
	Missing	2	2	2
Mean		\$136.63	\$154.18	1.13
Median		\$124.62	\$138.18	1.14
Percentiles	2.5	\$67.92	\$75.79	.95
	25	\$102.09	\$114.30	1.07
	50	\$124.62	\$138.18	1.14
	75	\$170.70	\$192.62	1.18
	97.5	\$239.28	\$271.54	1.27

Frequencies

		Statistics		
		Previous Total Value	Current Total Value	Difference in Total Value
N	Valid	306	306	306
	Missing	0	0	0
Mean		\$265,058.65	\$295,584.77	\$30,526.13
Median		\$254,205.00	\$286,201.50	\$28,606.50
Percentiles	2.5	\$85,716.88	\$101,030.00	-\$13,061.45
	25	\$177,966.50	\$204,661.00	\$19,195.00
	50	\$254,205.00	\$286,201.50	\$28,606.50
	75	\$326,126.75	\$360,679.75	\$42,355.00
	97.5	\$550,665.17	\$581,606.90	\$70,006.57

Residential Subclass 1212: Mann-Whitney U-Test (Rank-sum)

Nonparametric Tests

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. ^{a,b}
1	The distribution of Difference in Total Value is the same across categories of Residential Sold vs Unsold.	Independent-Samples Mann-Whitney U Test	<.001

Hypothesis Test Summary

	Decision
1	Reject the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.

Independent-Samples Mann-Whitney U Test

Difference in Total Value across Residential Sold vs Unsold

Independent-Samples Mann-Whitney U Test Summary

Total N	3729
Mann-Whitney U	371998.000
Wilcoxon W	6366451.000
Test Statistic	371998.000
Standard Error	16950.515
Standardized Test Statistic	-5.320
Asymptotic Sig.(2-sided test)	<.001

Nonparametric Tests

Residential Subclass 1212: Mann-Whitney U-Test (Rank-sum)

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. ^{a,b}
1	The distribution of Price Per Foot is the same across categories of Residential Sold vs Unsold.	Independent-Samples Mann-Whitney U Test	.953

Hypothesis Test Summary

	Decision
1	Retain the null hypothesis.

- a. The significance level is .050.
- b. Asymptotic significance is displayed.

Independent-Samples Mann-Whitney U Test

Price Per Foot across Residential Sold vs Unsold

Independent-Samples Mann-Whitney U Test Summary

Total N	3761
Mann-Whitney U	495884.000
Wilcoxon W	6535434.000
Test Statistic	495884.000
Standard Error	17651.401
Standardized Test Statistic	-.059
Asymptotic Sig.(2-sided test)	.953

Nonparametric Tests

Residential Subclass 1212: Mann-Whitney U-Test (Rank-sum)

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. ^{a,b}
1	The distribution of Difference in Price Per Foot is the same across categories of Residential Sold vs Unsold.	Independent-Samples Mann-Whitney U Test	.006

Hypothesis Test Summary

	Decision
1	Reject the null hypothesis.

a. The significance level is .050.

b. Asymptotic significance is displayed.

Independent-Samples Mann-Whitney U Test

Difference in Price Per Foot across Residential Sold vs Unsold

Independent-Samples Mann-Whitney U Test Summary

Total N	3729
Mann-Whitney U	412851.000
Wilcoxon W	6414231.000
Test Statistic	412851.000
Standard Error	16891.790
Standardized Test Statistic	-2.731
Asymptotic Sig.(2-sided test)	.006

Residential Subclass 1212: Unit Comparison Method

Summarize

Sold vs Unsold Percent Change for Subclass 1212

Difference in Price Per Foot

Residential Sold vs Unsold	N	Median	Mean
SOLD	293	1.14	1.13
UNSOLD	3666	1.12	1.12
Total	3959	1.12	1.12

Summarize

Sold vs Unsold Percent Change for Subclass 1212 by Economic Area

Difference in Price Per Foot

economic_area	Residential Sold vs Unsold	N	Median	Mean
	SOLD	4	1.09	1.06
	UNSOLD	104	1.02	1.04
	Total	108	1.02	1.04
1	SOLD	61	1.15	1.16
	UNSOLD	605	1.17	1.17
	Total	666	1.17	1.17
2	SOLD	150	1.15	1.15
	UNSOLD	1605	1.15	1.15
	Total	1755	1.15	1.15
3	SOLD	30	1.06	1.05
	UNSOLD	256	1.06	1.05
	Total	286	1.06	1.05
4	SOLD	34	1.06	1.05
	UNSOLD	582	1.06	1.07
	Total	616	1.06	1.07
5	SOLD	12	1.05	1.00
	UNSOLD	246	1.06	1.06
	Total	258	1.06	1.05
6	SOLD	2	1.07	1.07
	UNSOLD	261	1.06	1.09
	Total	263	1.06	1.09

Residential Subclass 1212: Unit Comparison Method

Sold vs Unsold Percent Change for Subclass 1212 by Economic Area

Difference in Price Per Foot

economic_area	Residential Sold vs Unsold	N	Median	Mean
7	UNSOLD	7	1.07	1.08
	Total	7	1.07	1.08
Total	SOLD	293	1.14	1.13
	UNSOLD	3666	1.12	1.12
	Total	3959	1.12	1.12

Final Analysis: OVERALL Statistical Abstract.

Ratio Statistics

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	N	Mean	95% Confidence Interval for Mean		Median
			Lower Bound	Upper Bound	
Vacant Land	66	.974	.935	1.014	.986
Residential	312	.975	.963	.988	.988
Commercial/Industrial	28	.944	.878	1.011	.981
Overall	406	.973	.961	.985	.987

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	95% Confidence Interval for Median			Weighted Mean	95% Confidence Interval for ...
	Lower Bound	Upper Bound	Actual Coverage		Lower Bound
Vacant Land	.950	1.014	96.4%	.965	.924
Residential	.971	1.003	95.3%	.977	.966
Commercial/Industrial	.861	1.000	96.4%	.830	.646
Overall	.971	.998	95.8%	.956	.918

Ratio Statistics for Current Total Value / Adjusted Sale Price

Group	95% Confidence Interval for ...	Price Related Differential	Coefficient of Dispersion
	Upper Bound		
Vacant Land	1.006	1.010	.123
Residential	.988	.998	.083
Commercial/Industrial	1.014	1.137	.125
Overall	.993	1.018	.092

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.