

2016 GUNNISON COUNTY PROPERTY ASSESSMENT STUDY







September 15, 2016

Mr. Mike Mauer Director of Research Colorado Legislative Council Room 029, State Capitol Building Denver, Colorado 80203

RE: Final Report for the 2016 Colorado Property Assessment Study

Dear Mr. Mauer:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2016 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. Zulln

Wildrose Appraisal Inc. - Audit Division



TABLE OF CONTENTS

Introduction	3
Regional/Historical Sketch of Gunnison County	4
Ratio Analysis	6
Time Trending Verification	8
Sold/Unsold Analysis	9
Agricultural Land Study	11
Agricultural Land	
Agricultural Outbuildings	12
Agricultural Land Under Improvements	
Sales Verification	14
Economic Area Review and Evaluation	16
Natural Resources	17
Earth and Stone Products	17
Producing Oil and Gas	17
Producing Coal Mines	
Vacant Land	19
Possessory Interest Properties	20
Personal Property Audit	
Wildrose Auditor Staff	
Appendices	24



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 and discounting procedures. Valuation methodology for vacant land, improved properties commercial residential 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.

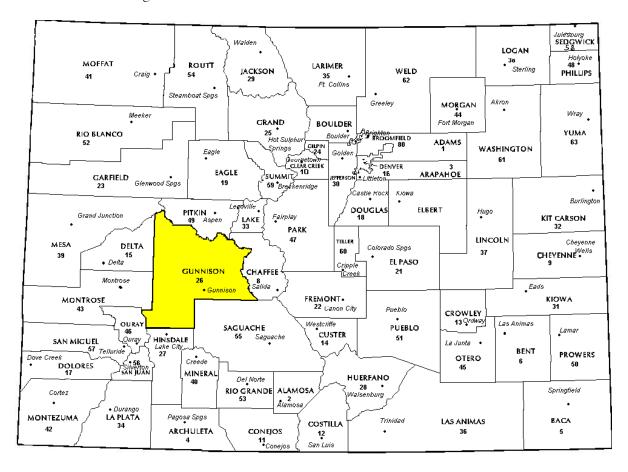
Wildrose Audit has completed the Property Assessment Study for 2016 and is pleased to report its findings for Gunnison County in the following report.



REGIONAL/HISTORICAL SKETCH OF GUNNISON COUNTY

Regional Information

Gunnison County is located in the Western Slope region of Colorado. The Western Slope of Colorado refers to the region west of the Rocky Mountains. It includes Archuleta, Delta, Dolores, Eagle, Garfield, Grand, Gunnison, Hinsdale, Jackson, La Plata, Mesa, Moffat, Montezuma, Montrose, Ouray, Pitkin, Rio Blanco, Routt, San Juan, San Miguel, and Summit counties.





Historical Information

Gunnison County had an estimated population of approximately 15,725 people with 4.7 people per square mile, according to the U.S. Census Bureau's 2014 estimated census data. This represents a 2.6 percent change from April 1, 2010 to July 1, 2014.

The county was named for John W. Gunnison, a United States Army officer and captain in the Army Topographical Engineers, who surveyed for the transcontinental railroad in 1853. The county seat is the City of Gunnison.

Long before today's residents settled in, Ute Indians roamed the area's valleys and mountains. As early as 1810, fur traders came to the region in search of animal pelts. The 1860's brought placer miners to the rivers and streams. Sylvester Richardson, regarded as the founder of Gunnison, established a colony along the Gunnison River in 1874. Hopes of establishing a farming community were dashed as these early settlers learned the hardships imposed by a 70-day growing season. Ranching quickly emerged as the agricultural mainstay of

the region. Silver brought tens of thousands to the area during the 1870s and 80s and Gunnison developed into a smelting, railroad and supply town. After the turn of the century, coal and cattle ruled the area. Today, Western State College is a major employer, as are the county hospital, City of Gunnison and the recreation industry.

Crested Butte, a former coal mining town now called "the last great Colorado ski town," is a destination for skiing, mountain biking, and a variety of other outdoor activities.

The area has what many consider to be the country's best fly-fishing and big game hunting. Snow sports abound during winter, while warm summer months provide some of the most scenic hiking and camping in the Rockies. Bird watchers will enjoy sighting an American Bald Eagle or Red Tailed Hawk, while botanists will delight at the bloom of summer wildflowers throughout the local mountains.



RATIO ANALYSIS

Methodology

All significant classes of properties were Sales were collected for each analyzed. property class over the appropriate sale period, which was typically defined as the 18-month period between January 2013 and June 2014. Counties with less than 30 sales typically extended the sale period back up to 5 years prior to June 30, 2014 in 6-month increments. If there were still fewer than 30 sales, supplemental appraisals were performed and treated as proxy sales. Residential sales for all counties using this method totaled at least 30 per county. For commercial sales, the total number analyzed was allowed, in some cases, to fall below 30. There were no sale quantity issues for counties requiring vacant land analysis or condominium analysis. Although it was required that we examine the median and coefficient of dispersion for all counties, we also calculated the weighted mean and pricerelated differential for each class of property. Counties were not passed or failed by these

latter measures, but were counseled if there were anomalies noted during our analysis. Qualified sales were based on the qualification code used by each county, which were typically coded as either "Q" or "C." The ratio analysis included all sales. The data was trimmed for counties with obvious outliers using IAAO standards for data analysis. In every case, we examined the loss in data from trimming to ensure that only true outliers were excluded. Any county with a significant portion of sales excluded by this trimming method was examined further. No county was allowed to pass the audit if more than 5% of the sales were "lost" because of trimming. For the largest 11 counties, the residential ratio statistics were broken down by economic area as well.

Conclusions

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

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



The results for Gunnison County are:

Gunnison County Ratio Grid						
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis	
*Commercial/Industrial	29	1.001	1.084	12	Compliant	
Condominium	350	0.989	1.042	11.5	Compliant	
Single Family	537	0.993	1.035	13.8	Compliant	
Vacant Land	347	1.000	1.126	17.5	Compliant	

^{*}County Sales Files augmented by one supplemental appraisal

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

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

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

or if there are other explanations for the observed difference.

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

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

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



Sold/Unsold Resu	lts
Property Class	Results
Commercial/Industrial	Compliant
Condominium	Compliant
Single Family	Compliant
Vacant Land	Compliant

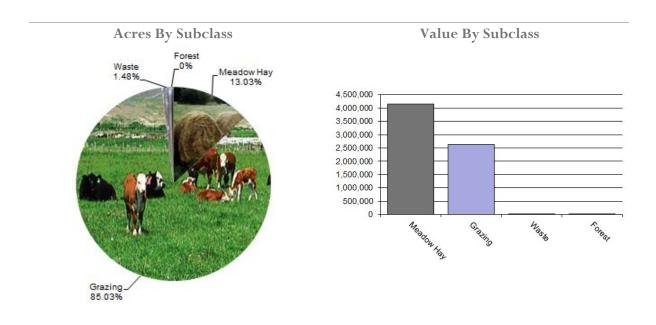
Conclusions

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

Recommendations



AGRICULTURAL LAND STUDY



Agricultural Land

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

and expenses, furnished by the Property Tax Administrator (PTA), were applied properly. (See Assessor Reference Library Volume 3 Chapter 5.)

Conclusions

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



Gunnison County Agricultural Land Ratio Grid						
Abstract Code	Land Class	Number Of Acres	County Value Per Acre	County Assessed Fotal Value	WRA Total Value	Ratio
4137	Meadow Hay	41,672	97.06	4,044,890	4,137,909	0.98
4147	Grazing	272,021	9.65	2,625,562	2,625,562	1.00
4177	Forest	1,463	1.99	10,675	10,675	1.00
4167	Waste	4,741	1.99	9,418	9,418	1.00
Total/Avg		319,897	20.91	6,690,545	6,783,564	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

Gunnison County has substantially 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

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

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

Aerial Photography/Pictometry

Gunnison 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.:

- Field Inspections
- Aerial Photography/Pictometry

Gunnison County has substantially 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 2016 for Gunnison County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 32 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 \$500, 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

Gunnison County appears to be doing a good 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

Gunnison County has submitted a written narrative describing the economic areas that make up the county's market areas. Gunnison 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 Gunnison 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 variables: life and tonnage. The operator determines these since there is no other means to obtain production data through any state or private agency.

Conclusions

The County has applied the correct formulas and state guidelines to earth and stone production.

Recommendations

None

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

Subdivision Discounting

Subdivisions were reviewed in 2016 in Gunnison County. The review showed that subdivisions were discounted pursuant to the Colorado Revised Statutes in Article 39-1-103 (14) and by applying the recommended methodology in ARL Vol 3, Chap 4. Subdivision Discounting in the intervening year was accomplished by reducing the absorption period by one year. In instances where the number of sales within an approved plat was less than the absorption rate per year calculated

for the plat, the absorption period was left unchanged.

Conclusions

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

Recommendations



POSSESSORY INTEREST PROPERTIES

Possessory Interest

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

Gunnison County has been reviewed for their procedures and adherence to guidelines when assessing and valuing agricultural, commercial and ski area 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

Gunnison 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

Gunnison 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.

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

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

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

Gunnison County submitted their personal property written audit plan and was current for the 2016 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
- Businesses with no deletions or additions for 2 or more years
- Non-filing Accounts Best Information Available



Accounts protested with substantial disagreement

Conclusions

Gunnison County has employed adequate discovery, classification, documentation,

valuation, and auditing procedures for their personal property assessment and is in statistical compliance with SBOE requirements.

Recommendations



WILDROSE AUDITOR STAFF

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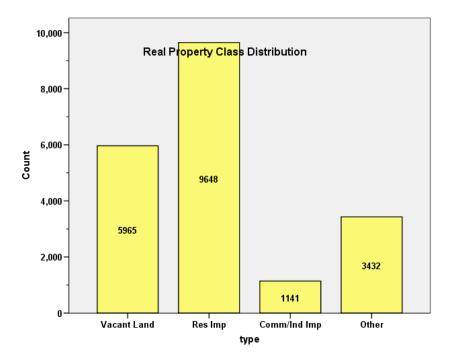
APPENDICES



STATISTICAL COMPLIANCE REPORT FOR GUNNISON COUNTY 2016

I. OVERVIEW

Gunnison County is a mountain resort located in western Colorado. The county has a total of 20,186 real property parcels, according to data submitted by the county assessor's office in 2016. The following provides a breakdown of property classes for this county:



The vacant land class of properties was dominated by residential land. Residential lots (coded 100) accounted for 66.3% of all vacant land parcels.

For residential improved properties, single family properties accounted for 71.7% of all residential properties. Residential condominiums accounted for 24.6% of all residential improved properties. Based on the guidelines for the state audit statistical compliance analysis, we will analyze residential condominiums separately.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial sales accounted for 5.8% of all such properties in this county.

II. DATA FILES

The following sales analyses were based on the requirements of the 2016 Colorado Property Assessment Study. The data included all 5 property record files as specified by the Auditor.



III. RESIDENTIAL SALES RESULTS

There were 887 qualified residential sales. The sale period for residential non-condominium properties was 36 months prior to June 30, 2014 and the residential condominium sale period range was also 36 months prior to June 30, 2014. The sales ratio analysis was analyzed as follows:

Residential Non-Condominiums (537Sales)

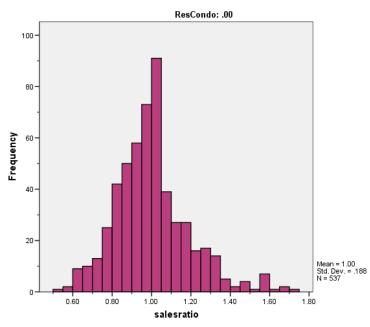
Median	0.993
Price Related Differential	1.035
Coefficient of Dispersion	13.8

Residential Condominiums (350 Sales)

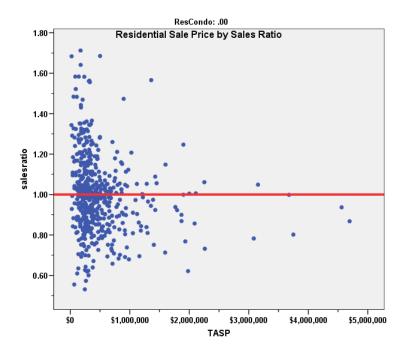
Median	0.989
Price Related Differential	1.042
Coefficient of Dispersion	11.5

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:

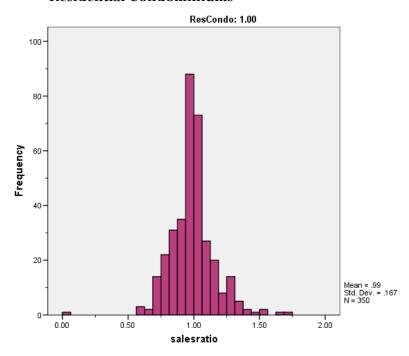
Residential Non-Condominiums



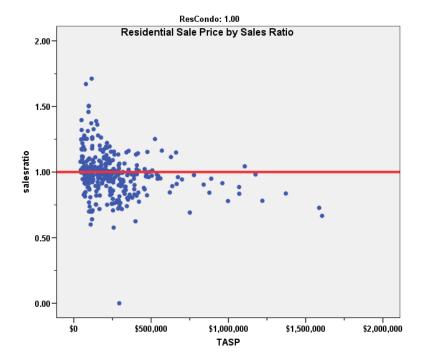




Residential Condominiums







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

Residential Market Trend Analysis

We next analyzed the residential dataset using the 36-month and 48-month sale periods for any residual market trending. We stratified the sales by residential non-condominiums and residential condominiums (0 = residential non-condominiums, 1 = residential condominiums), with the following results:

			Unstandardized Coefficients		Standardized Coefficients		
ResCondo	Model		В	Std. Error	Beta	t	Sig.
.00	1	(Constant)	.980	.016		63.012	.000
		SalePeriod	.001	.001	.069	1.598	.111
1.00	1	(Constant)	.980	.017		57.156	.000
		SalePeriod	.000	.001	.024	.457	.648

a. Dependent Variable: salesratio

0 = Residential non-condominiums, 1 = residential condominiums

The above analysis indicated that the assessor has adequately addressed market trending in the valuation of residential properties (both condominium and non-condominium).



Sold/Unsold Analysis

In terms of the valuation consistency between sold and unsold residential properties, we compared the median actual value per square foot for 2016 between each group for residential non-condominiums and condominiums (coded 0 and 1, respectively), as follows:

Rej	oort
-----	------

ValSF				
ResCondo	sold	N	Median	Mean
.00	UNSOLD	6,700	\$176	\$214
	SOLD	539	\$187	\$236
1.00	UNSOLD	1,981	\$175	\$209
	SOLD	347	\$183	\$217

We next used the Mann-Whitney test for both sets of properties to determine if sold and unsold properties were valued consistently. The following tests the hypothesis that the distributions were the same for sold and unsold properties, as follows:

RESIDENTIAL NON-CONDOMINIUMS

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of ValSF 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.

RESIDENTIAL CONDOMINIUMS

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of ValSF is the same across categories of sold.	Independent- Samples Mann- Whitney U Test	.072	Retain the null hypothesis.

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



While the null hypothesis was retained for condominium sold and unsold properties, the hypothesis that the sold and unsold distributions for residential non-condominiums were the same was rejected. While this non-parametric result was likely due to the high number of properties in both groups, we tested this set of properties using the change in actual value from 2014 to 2016 for residential non-condominium sold and unsold groups, as follows:

RESIDENTIAL NON-CONDOMINIUMS

Report

ResCondo	sold	N	Median	Mean
.00	UNSOLD	6,652	1.20	1.46
	SOLD	539	1.20	1.25

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of DIFF is the same across categories of sold.	Independent- Samples Mann- Whitney U Test	.485	Retain the null hypothesis.

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

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

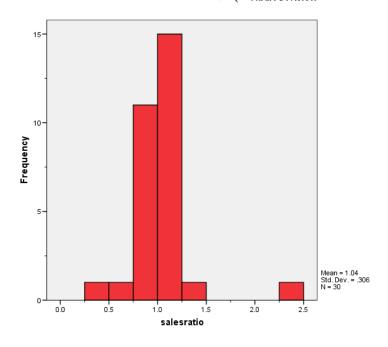
IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

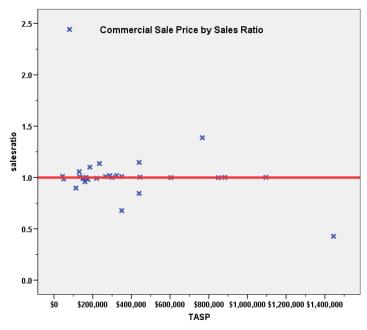
There were 29 qualified commercial/industrial sales. The sale period for this class was 60 months prior to June 30, 2014. Since there were fewer than 30 sales, we augmented the sale set with one appraised property to bring the total to 30 total properties for this analysis. Please note that we used the 29 sales for the market trend and sold/unsold analyses. The sales ratio analysis was analyzed as follows:

Median	1.001
Price Related Differential	1.084
Coefficient of Dispersion	12.0

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







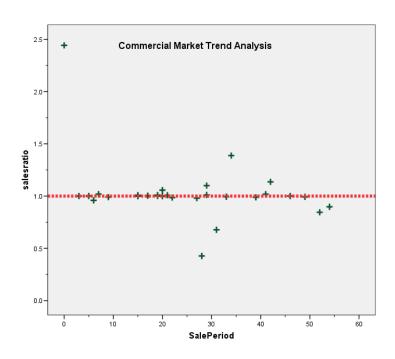
Commercial Market Trend Analysis

We next analyzed the 29 commercial/industrial sales to determine if there was any residual market trending across the 60-month sale period, with the following results:



		Unstandardize	d Coefficients	Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	1.193	.110		10.844	.000
	SalePeriod	006	.004	310	-1.696	.101

a. Dependent Variable: salesratio



The market trend results indicated no statistically significant trend. We concur that the assessor has adequately accounted for market trending in Gunnison County.

Sold/Unsold Analysis

We compared the median actual value per square foot between sold and unsold commercial properties to determine if the assessor was valuing each group consistently. The following analysis indicated that sold and unsold commercial properties were valued consistently:

Report

ValSF			
sold	N	Median	Mean
UNSOLD	1,081	\$139.74	\$160.91
SOLD	29	\$133.96	\$164.97



Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of ValSF is the same across categories of sold.	Independent- Samples Mann- Whitney U Test	.758	Retain the null hypothesis.

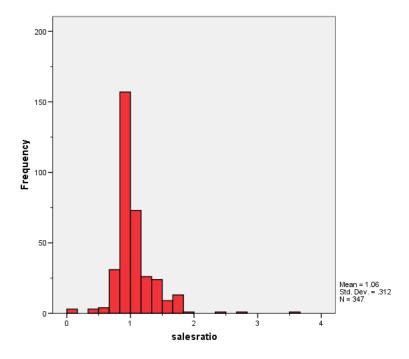
Asymptotic significances are displayed. The significance level is .05.

V. VACANT LAND SALE RESULTS

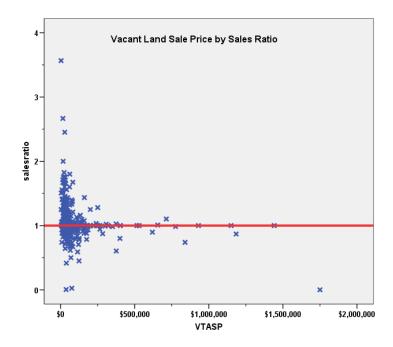
There were 347 qualified vacant land sales. The sale period for this class was 60 months prior to June 30, 2014 for sales in Economic Area 2, and 48 months for vacant land sales in Economic Areas 1, 6 and 8. The sales ratio analysis was analyzed as follows:

Median	1.000
Price Related Differential	1.126
Coefficient of Dispersion	17.5

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







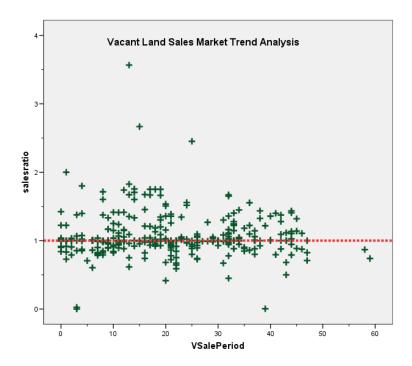
Vacant Land Market Trend Analysis

The 347 vacant land sales were analyzed, examining the sale ratios across the sale period with the following results:

		Unstandardize	d Coefficients	Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	1.070	.031		34.386	.000
	VSalePeriod	.000	.001	016	297	.766

a. Dependent Variable: salesratio





The market trend results indicated a statistically significant trend, but the magnitude of that trend was not significant. We concur that the assessor has adequately addressed market trending for vacant land in Gunnison County.

Sold/Unsold Analysis

We compared the median change in actual value between 2014 and 2016 for vacant land properties to determine if sold and unsold properties were valued consistently, with the following results:

Report

DIFF			
sold	N	Median	Mean
UNSOLD	5,164	.956	1.252
SOLD	347	1.000	1.064

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of DIFF is the same across categories of sold.	Independent- Samples Mann- Whitney U Test	.017	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .01.



We also examined sold and unsold vacant land properties by economic area, as follows:

Report

	DIFF				
	ECONAREA	sold	N	Median	Mean
	1	UNSOLD	510	1.051	1.253
		SOLD	56	1.051	1.142
2	UNSOLD	88	1.116	1.261	
	SOLD	12	1.095	.993	
	6	UNSOLD	1,212	1.053	1.445
		SOLD	141	1.040	1.166
	8	UNSOLD	3,354	.900	1.182
		SOLD	138	.886	.934

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

V. AGRICULTURAL IMPROVEMENTS ANALYSIS

The final statistical verification concerned the assigned actual values for agricultural residential improvements. We compared the actual value per square foot rate for this group and compared it to rates assigned to residential single family improvements in Gunnison County.

The following indicates that agricultural residential improvements were valued in a manner similar to the single family residential improvements in this county:

Report

IMPVALSF				
ECONAREA	ABSTRIMP	N	Median	Mean
1	1212	2284	\$112.68	\$112.31
	4277	19	\$104.87	\$112.44
6	1212	1606	\$215.54	\$256.16
	4277	5	\$179.11	\$156.13
8	1212	2320	\$129.37	\$129.07
	4277	81	\$101.25	\$104.79



ECONAREA = 1

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of IMPVALSF is the same across categories of ABSTRIMP.	Independent- Samples Mann- Whitney U Test	.705	Retain the null hypothesis.

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

ECONAREA = 6

Hypothesis Test Summary

_			-	
	Null Hypothesis	Test	Sig.	Decision
1	The distribution of IMPVALSF is the same across categories of ABSTRIMP.	Independent- Samples Mann- Whitney U Test	.052	Retain the null hypothesis.

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

ECONAREA = 8

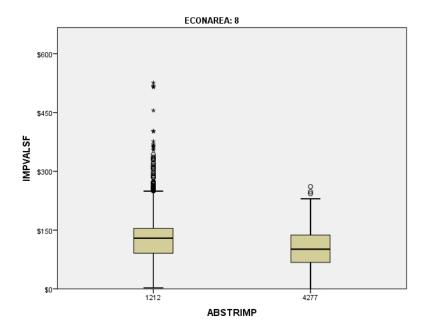
Hypothesis Test Summary

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

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



The above results indicate that there was no significant difference in the value distribution between 1212 and 4277 properties for two of the three relevant economic areas. For Economic Area 8, the following graph has enough overlap between both subclasses to pass this test:



VI. CONCLUSIONS

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



STATISTICAL ABSTRACT Residential

			nce Interval for ean		95% Cor	ifidence Interval fo	or Median			ce Interval for ed Mean			Coefficient of Variation
ResCondo	Mean	Lower Bound	Upper Bound	Median	Lower Bound	Upper Bound	Actual Coverage	Weighted Mean	Lower Bound	Upper Bound	Price Related Differential	Coefficient of Dispersion	Mean Centered
.00	1.002	.986	1.018	.993	.982	1.004	95.3%	.968	.949	.987	1.035	.138	18.8%
1.00	.987	.969	1.005	.989	.978	.999	95.2%	.947	.926	.968	1.042	.115	16.9%

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 Mean			95% Cor	ifidence Interval fo	or Median		95% Confiden Weighte	ce Interval for d 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
1.036	.922	1.150	1.001	.993	1.009	95.7%	.956	.794	1.119	1.084	.120	29.5%

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

Vacant Land

	95% Confidence Interval for Mean			95% Cor	ifidence Interval fo	or Median		95% Confiden Weighte				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
1.063	1.030	1.095	1.000	1.000	1.000	95.9%	.944	.852	1.035	1.126	.175	29.3%

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



Residential Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT \$25K	2	0.2%
	\$25K to \$50K	15	1.7%
	\$50K to \$100K	86	9.7%
	\$100K to \$150K	86	9.7%
	\$150K to \$200K	101	11.4%
	\$200K to \$300K	216	24.4%
	\$300K to \$500K	200	22.5%
	\$500K to \$750K	86	9.7%
	\$750K to \$1,000K	43	4.8%
	Over \$1,000K	52	5.9%
Overall		887	100.0%
Excluded	1	0	
Total		887	

		Price Related	Coefficient of	Coefficient of Variation Median
Group	Median	Differential	Dispersion	Centered
LT \$25K	1.513	.994	.112	15.9%
\$25K to \$50K	1.079	.994	.105	13.6%
\$50K to \$100K	1.027	1.001	.136	19.7%
\$100K to \$150K	1.016	.998	.152	21.0%
\$150K to \$200K	1.020	1.000	.121	17.5%
\$200K to \$300K	.988	1.002	.124	17.6%
\$300K to \$500K	.980	.999	.124	17.3%
\$500K to \$750K	.963	1.002	.097	12.6%
\$750K to \$1,000K	.950	1.003	.134	17.4%
Over \$1,000K	.916	1.005	.131	17.7%
Overall	.992	1.035	.129	18.1%



Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	0	1	0.1%
	1212	529	59.6%
	1215	7	0.8%
	1220	1	0.1%
	1230	348	39.2%
	2245	1	0.1%
Overall		887	100.0%
Excluded		0	
Total		887	

				Coefficient of Variation
Group	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
0	.000			
1212	.993	1.035	.137	18.8%
1215	1.103	1.041	.213	28.9%
1220	.910	1.000	.000	
1230	.991	1.042	.113	16.0%
2245	.975	1.000	.000	
Overall	.992	1.035	.129	18.1%



Age

Case Processing Summary

		Count	Percent
AgeRec	.00	1	0.1%
	Over 100	33	3.7%
	75 to 100	19	2.1%
	50 to 75	37	4.2%
	25 to 50	346	39.0%
	5 to 25	438	49.4%
	5 or Newer	13	1.5%
Overall		887	100.0%
Excluded		0	
Total		887	

				Coefficient of Variation
Group	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
.00	.000			
Over 100	1.031	1.037	.200	28.1%
75 to 100	.998	1.081	.142	20.9%
50 to 75	.958	1.031	.138	17.4%
25 to 50	.995	1.031	.123	17.5%
5 to 25	.988	1.038	.127	17.2%
5 or Newer	.999	.996	.040	6.4%
Overall	.992	1.035	.129	18.1%



Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	.00	1	0.1%
	LE 500 sf	52	5.9%
	500 to 1,000 sf	181	20.4%
	1,000 to 1,500 sf	274	30.9%
	1,500 to 2,000 sf	178	20.1%
	2,000 to 3,000 sf	136	15.3%
	3,000 sf or Higher	65	7.3%
Overall		887	100.0%
Excluded		0	
Total		887	

				Coefficient of Variation
Group	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
.00	.000			
LE 500 sf	1.003	1.010	.113	16.3%
500 to 1,000 sf	.993	1.046	.137	19.7%
1,000 to 1,500 sf	.982	1.032	.125	17.1%
1,500 to 2,000 sf	.997	1.036	.119	15.8%
2,000 to 3,000 sf	.997	1.038	.126	17.4%
3,000 sf or Higher	.999	1.068	.155	22.5%
Overall	.992	1.035	.129	18.1%



Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY		1	0.1%
	Average	377	42.5%
	Excellent	29	3.3%
	Fair	308	34.7%
	Good	137	15.4%
	Low	9	1.0%
	Poor	1	0.1%
	Very Good	25	2.8%
Overall		887	100.0%
Excluded		0	
Total		887	

				Coefficient of Variation
Group	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
	.000			
Average	.994	1.028	.124	17.0%
Excellent	.924	1.022	.108	14.4%
Fair	.993	1.037	.134	19.1%
Good	.995	1.034	.116	16.3%
Low	.810	1.079	.185	27.2%
Poor	1.484	1.000	.000	
Very Good	.982	1.034	.146	20.8%
Overall	.992	1.035	.129	18.1%



Improvement Condition

Case Processing Summary

		Count	Percent
CONDITION		1	0.1%
	Average	690	77.8%
	Below Average	45	5.1%
	Excellent	6	0.7%
	Good	105	11.8%
	Very Good	40	4.5%
Overall		887	100.0%
Excluded		0	
Total		887	

				Coefficient of Variation
Group	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
	.000			
Average	.995	1.030	.128	17.8%
Below Average	.940	1.070	.200	27.6%
Excellent	1.000	1.020	.023	3.5%
Good	.984	1.036	.114	16.1%
Very Good	.930	1.012	.108	13.9%
Overall	.992	1.035	.129	18.1%



Commercial Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	\$25K to \$50K	2	6.7%
	\$50K to \$100K	1	3.3%
	\$100K to \$150K	4	13.3%
	\$150K to \$200K	6	20.0%
	\$200K to \$300K	5	16.7%
	\$300K to \$500K	6	20.0%
	\$500K to \$750K	1	3.3%
	\$750K to \$1,000K	3	10.0%
	Over \$1,000K	2	6.7%
Overall		30	100.0%
Excluded	1	0	
Total		30	

				Coefficient of Variation
Group	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
\$25K to \$50K	.998	1.001	.013	1.8%
\$50K to \$100K	2.442	1.000	.000	
\$100K to \$150K	.999	.997	.045	6.8%
\$150K to \$200K	.991	.998	.028	5.2%
\$200K to \$300K	1.009	1.002	.032	6.4%
\$300K to \$500K	1.006	.995	.107	17.4%
\$500K to \$750K	.999	1.000	.000	
\$750K to \$1,000K	1.001	1.009	.130	27.3%
Over \$1,000K	.714	1.059	.402	56.9%
Overall	1.001	1.084	.120	30.8%



Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	2212	1	3.3%
	2215	2	6.7%
	2220	1	3.3%
	2225	2	6.7%
	2230	7	23.3%
	2235	1	3.3%
	2240	2	6.7%
	2245	13	43.3%
	3212	1	3.3%
Overall		30	100.0%
Excluded		0	
Total		30	

				Coefficient of Variation
Group	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
2212	.999	1.000	.000	
2215	.715	1.271	.403	57.0%
2220	1.002	1.000	.000	
2225	1.730	1.303	.412	58.2%
2230	1.008	1.020	.092	15.8%
2235	1.001	1.000	.000	
2240	1.267	.975	.095	13.5%
2245	.994	.997	.029	4.8%
3212	.999	1.000	.000	
Overall	1.001	1.084	.120	30.8%



Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	4	13.3%
	75 to 100	1	3.3%
	50 to 75	3	10.0%
	25 to 50	12	40.0%
	5 to 25	9	30.0%
	5 or Newer	1	3.3%
Overall		30	100.0%
Excluded		0	
Total		30	

				Coefficient of Variation
Group	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
Over 100	1.005	.923	.101	22.0%
75 to 100	.845	1.000	.000	
50 to 75	1.009	1.020	.112	23.2%
25 to 50	1.006	1.290	.192	46.7%
5 to 25	.999	.995	.027	5.1%
5 or Newer	1.136	1.000	.000	
Overall	1.001	1.084	.120	30.8%



Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	5	16.7%
	500 to 1,000 sf	3	10.0%
	1,000 to 1,500 sf	3	10.0%
	1,500 to 2,000 sf	2	6.7%
	2,000 to 3,000 sf	2	6.7%
	3,000 sf or Higher	15	50.0%
Overall		30	100.0%
Excluded		0	
Total		30	

				Coefficient of Variation
Group	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
LE 500 sf	.988	1.004	.025	4.8%
500 to 1,000 sf	1.001	.996	.037	7.1%
1,000 to 1,500 sf	.993	1.004	.033	5.2%
1,500 to 2,000 sf	.838	.951	.192	27.1%
2,000 to 3,000 sf	.994	.995	.014	2.0%
3,000 sf or Higher	1.008	1.149	.190	42.7%
Overall	1.001	1.084	.120	30.8%



Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY	Average	7	23.3%
	Fair	19	63.3%
	Good	3	10.0%
	Low	1	3.3%
Overall		30	100.0%
Excluded		0	
Total		30	

				Coefficient of Variation
Group	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
Average	.999	.998	.012	1.5%
Fair	1.001	1.033	.145	36.5%
Good	1.002	.993	.068	10.1%
Low	.427	1.000	.000	
Overall	1.001	1.084	.120	30.8%



Improvement Condition

Case Processing Summary

		Count	Percent
CONDITION	Average	25	83.3%
	Below Average	5	16.7%
Overall		30	100.0%
Excluded		0	
Total		30	

				Coefficient of Variation
Group	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
Average	1.001	1.075	.071	14.8%
Below Average	1.009	1.121	.363	73.5%
Overall	1.001	1.084	.120	30.8%



Vacant Land Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT \$25K	71	20.5%
	\$25K to \$50K	97	28.0%
	\$50K to \$100K	88	25.4%
	\$100K to \$150K	37	10.7%
	\$150K to \$200K	20	5.8%
	\$200K to \$300K	13	3.7%
	\$300K to \$500K	9	2.6%
	\$500K to \$750K	5	1.4%
	\$750K to \$1,000K	3	0.9%
	Over \$1,000K	4	1.2%
Overall		347	100.0%
Excluded	1	0	
Total		347	

				Coefficient of Variation
Group	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
LT \$25K	1.029	1.008	.273	47.8%
\$25K to \$50K	1.032	1.011	.203	29.9%
\$50K to \$100K	.991	.997	.147	23.7%
\$100K to \$150K	1.000	.997	.082	14.7%
\$150K to \$200K	1.000	1.000	.071	13.4%
\$200K to \$300K	1.000	1.002	.039	9.1%
\$300K to \$500K	1.000	1.005	.073	15.7%
\$500K to \$750K	1.000	.997	.043	7.3%
\$750K to \$1,000K	.986	.999	.088	17.7%
Over \$1,000K	.935	1.095	.302	58.1%
Overall	1.000	1.126	.175	31.8%



Subclass

Case Processing Summary

		Count	Percent
ABSTRLND	100	251	72.3%
	200	4	1.2%
	300	3	0.9%
	510	1	0.3%
	520	2	0.6%
	530	3	0.9%
	540	5	1.4%
	550	9	2.6%
	1112	56	16.1%
	1115	1	0.3%
	1135	4	1.2%
	1140	1	0.3%
	2112	1	0.3%
	2130	1	0.3%
	3112	1	0.3%
	4147	4	1.2%
Overall		347	100.0%
Excluded		0	
Total		347	



				Coefficient of Variation
Group	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
100	1.000	1.073	.185	33.0%
200	.935	1.140	.184	27.8%
300	1.068	1.051	.200	34.0%
510	1.000	1.000	.000	
520	.952	1.030	.047	6.6%
530	1.000	.996	.025	4.2%
540	1.022	.993	.102	17.3%
550	.986	1.004	.044	7.0%
1112	1.000	1.056	.125	22.5%
1115	.995	1.000	.000	
1135	1.000	1.159	.257	57.8%
1140	.590	1.000	.000	
2112	.604	1.000	.000	
2130	1.039	1.000	.000	
3112	.909	1.000	.000	
4147	.015	2.624	16.760	3740.5%
Overall	1.000	1.126	.175	31.8%