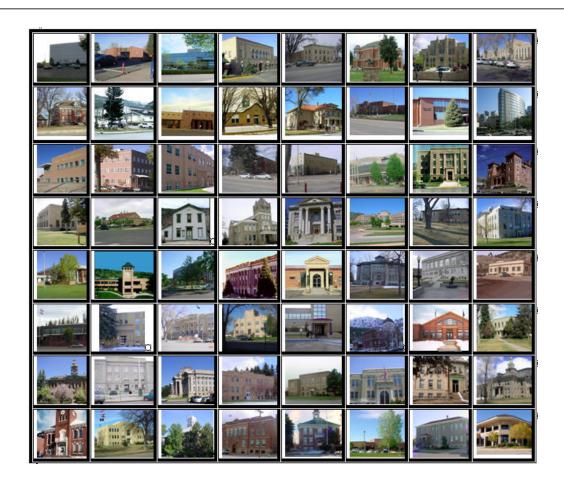


# 2013 GUNNISON COUNTY PROPERTY ASSESSMENT STUDY







September 15, 2013

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

RE: Final Report for the 2013 Colorado Property Assessment Study

Dear Mr. Mauer:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2013 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. Zulla

Wildrose Appraisal Inc. – Audit Division



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# INTRODUCTION



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

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

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

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

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

The property assessment audit conducts a twopart analysis: A procedural analysis and a statistical analysis. The procedural analysis includes all classes of property and specifically looks at how the assessor develops economic areas, confirms and qualifies sales, and develops time adjustments. The audit also examines the procedures for adequately discovering, classifying and valuing agricultural outbuildings, discovering subdivision build-out subdivision 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 2013 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 has a population of approximately 15,324 people with 4.73 people per square mile, according to the U.S. Census Bureau's 2010 census data. This represents a 9.8 percent change from the 2000 Census.

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. (Wikipedia.org & Visitgunnison.com)



# 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 2011 and June 2012. Counties with less than 30 sales typically extended the sale period back up to 5 years prior to June 30, 2012 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	57	1.021	1.022	15.8	Compliant			
Condominium	357	0.969	1.039	12.5	Compliant			
Single Family	545	0.995	1.039	15.9	Compliant			
Vacant Land	513	1.000	1.115	20.8	Compliant			

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 methodology 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.

All qualified residential and commercial class properties were examined using the unit value method, where the actual value per square foot was compared between sold and unsold properties. A class was considered qualified if it met the criteria for the ratio analysis. The median value per square foot for both groups was compared from an appraisal and statistical perspective. If no significant difference was indicated, then we concluded that no further testing was warranted and that the county was in compliance in terms of sold/unsold consistency.

If either residential or commercial differences were significant using the unit value method, or if data limitations made the comparison invalid, then the next step was to perform a ratio analysis comparing the 2012 and 2013 actual values for each qualified class of property. All qualified vacant land classes were tested using this method. The sale property ratios were arrayed using a range of 0.8 to 1.5, which theoretically excluded changes between years that were due to other unrelated changes in the property. These ratios were also stratified at the appropriate level of analysis. percent change was determined for each appropriate class and sub-class, the next step was to select the unsold sample. This sample

was at least 1% of the total population of unsold properties and excluded any sale properties. The unsold sample was filtered based on the attributes of the sold dataset to closely correlate both groups. The ratio analysis was then performed on the unsold properties and stratified. The median and mean ratio distribution was then compared between the sold and unsold group. A nonparametric test such as the Mann-Whitney test for differences between independent samples was undertaken to determine whether any observed differential was significant. If this test determined that the unsold properties were treated in a manner similar to the sold properties, it was concluded that no further testing was warranted and that the county was in compliance.

If a class or sub-class of property was determined to be significantly different by this method, the final step was to perform a multivariate mass appraisal model that developed ratio statistics from the sold properties that were then applied to the unsold sample. This test compared the measures of central tendency and confidence intervals for the sold properties with the unsold property sample. If this comparison was also determined to be significantly different, then the conclusion was that the county had treated the unsold properties in a different manner than sold properties.

These tests were supported by both tabular and chart presentations, along with saved sold and unsold sample files.



Sold/Unsold Re	esults
Property Class	Results
Commercial/Industrial	Compliant
Condominium	Compliant
Single Family	Compliant
Vacant Land	Compliant

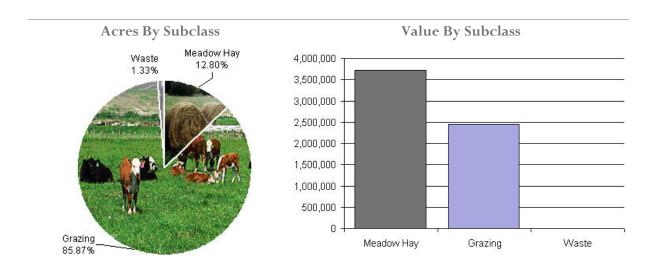
#### Conclusions

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

(See Assessor Reference Library Volume 3 Chapter 5.)

#### Conclusions

An analysis of the agricultural land data indicates an acceptable appraisal of this property type. Directives, commodity prices and expenses provided by the PTA were properly applied. 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 T	County Assessed Total Value	WRA Total Value	Ratio	
4137	Meadow Hay	41,022	91.00	3,718,888	3,718,888	1.00	
4147	Grazing	275,221	9.00	2,453,988	2,453,988	1.00	
4167	Waste	4,253	2.00	7,424	7,424	1.00	
Total/Avg		320,496	19.00	6,180,301	6,180,301	1.00	

# Recommendations



# **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

None

# **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.

Gunnison County utilized the following discovery method(s):

- Questionnaires
- Phone Interviews
- In-Person Interviews

 Personal Knowledge of Owners and Tenants

#### Conclusions

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 2013 for Gunnison County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 38 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.

When less than 50 percent of sales are qualified in any of the three property classes (residential, commercial, and vacant land), the contractor analyzed the reasons for disqualifying sales in any subclass that constitutes at least 20 percent of the class, either by number of properties or by value, from the prior year. The contractor has



reviewed with the assessor any analysis indicating that sales data inadequate, fail to reflect typical properties, or have been disqualified for insufficient cause. In addition, the contractor has reviewed disqualified sales by assigned code. If there appears to be any inconsistency in the coding, the contractor has conducted further analysis determine if the sales included in that code have been assigned appropriately.

If 50 percent or more of the sales are qualified, the contractor has reviewed a statistically significant sample of unqualified sales, excluding sales that were disqualified for obvious reasons.

Gunnison County did not qualify for in-depth subclass analysis.

#### **Conclusions**

Gunnison County appears to be doing an excellent 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 2013 in Gunnison County. The review showed that subdivisions were discounted pursuant to the Colorado Revised Statutes in Article 39-1-103 (14). Discounting procedures were applied to all subdivisions where less than 80 percent of all sites were sold using the present worth method. The market approach was applied where 80 percent or more of the subdivision sites were sold. An absorption period was estimated for each subdivision that was discounted. An appropriate discount rate was

developed using the summation method. Subdivision land with structures was appraised at full market value.

#### **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 C.R.S. Chapter 39-1-103 (17)(a)(II)Possessory Interest is defined by the Property Tax Administrator's Publication ARL Volume 3, Chapter 7: A private property interest in government-owned property or the right to the occupancy and use of any benefit in government-owned property that has been under lease, permit, license, 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 2013 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 compliance with SBOE requirements.

#### Recommendations



# WILDROSE AUDITOR STAFF

Harry J. Fuller, Audit Project Manager

Suzanne Howard, Audit Administrative Manager

Steve Kane, Audit Statistician

Carl W. Ross, Agricultural/Natural Resource Analyst

J. Andrew Rodriguez, Field Analyst



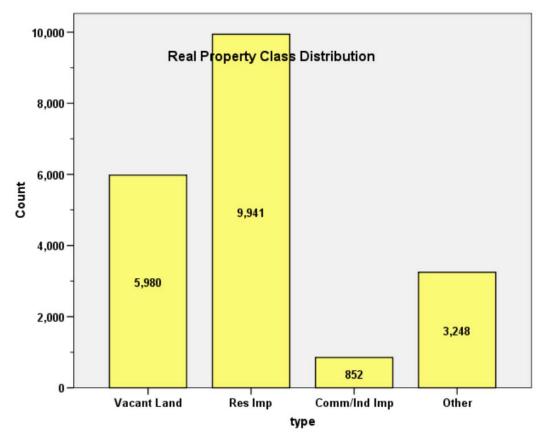
# APPENDICES



#### STATISTICAL ANALYSIS REPORT FOR GUNNISON COUNTY 2013

#### I. OVERVIEW

Gunnison County is a mountain resort located in western Colorado. The county has a total of 20,021 real property parcels, according to data submitted by the county assessor's office in 2013. 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 67.9% of all vacant land parcels.

For residential improved properties, single family properties accounted for 67.7% of all residential properties. Residential condominiums accounted for 26.9% 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 4.3% of all such properties in this county.



#### II. DATA FILES

The following sales analyses were based on the requirements of the 2013 Colorado Property Assessment Study. The data included all 5 property record files as specified by the Auditor.

#### III. RESIDENTIAL SALES RESULTS

There were 912 qualified residential sales, after trimming 18 sales with extreme ratios. The sale period for residential non-condominium properties was 36 months prior to June 30, 2013 and the residential condominium sale period range was 48 months prior to June 30, 2012. The sales ratio analysis was analyzed as follows:

#### Residential Non-Condominiums (545 Sales)

Median	0.995
Price Related Differential	1.039
Coefficient of Dispersion	.159

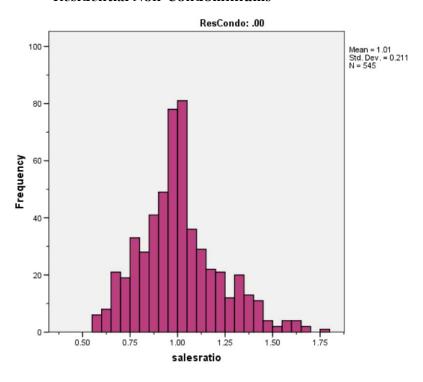
#### Residential Condominiums (357 Sales)

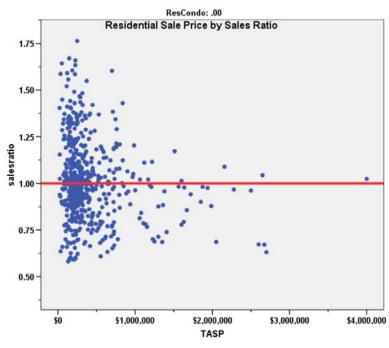
Median	0.969
Price Related Differential	1.039
Coefficient of Dispersion	.125

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:



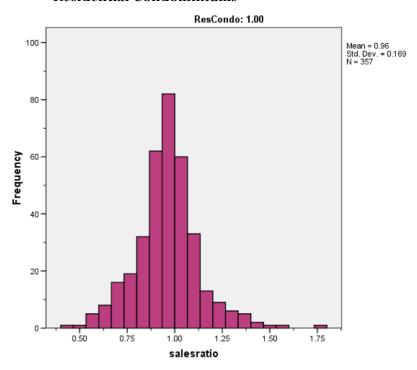
#### **Residential Non-Condominiums**

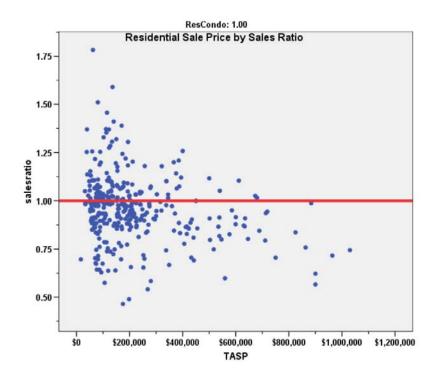






#### **Residential Condominiums**





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:

Coefficients<sup>a</sup>

ResCondo	Model		Unstandardized Coefficients		Standardized Coefficients		
			В	Std. Error	Beta	t	Sig.
.00	1	(Constant)	1.026	.017		61.911	.000
		SalePeriod	001	.001	046	-1.068	.286
1.00	1	(Constant)	.970	.016		59.759	.000
		SalePeriod	.000	.001	031	579	.563

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 2013 between each group, as follows:

RESIDENTIAL NON-CONDOMINIUMS

Group	No.	Median	Mean
Unsold	6,659	\$143	\$178
Sold	545	\$156	\$196

#### RESIDENTIAL CONDOMINIUMS

Group	No.	Median	Mean
Unsold	2,276	\$142	\$155
Sold	355	\$152	\$1704

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

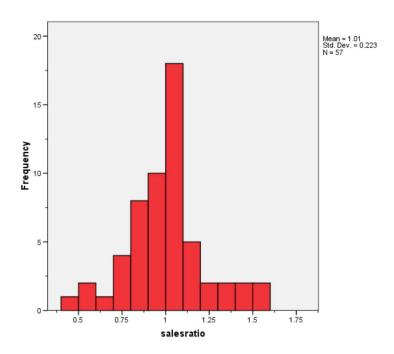


#### IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

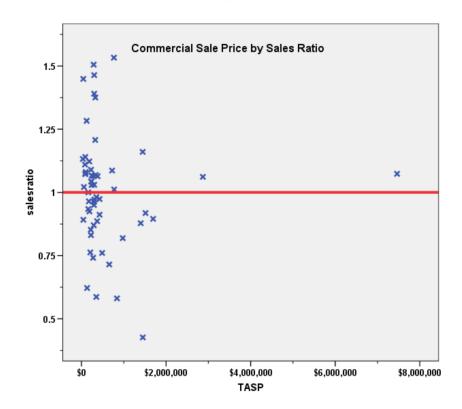
There were 57 qualified commercial/industrial sales. The sale period for this class was 60 months prior to June 30, 2012. The sales ratio analysis was analyzed as follows:

Median	1.021
Price Related Differential	1.022
Coefficient of Dispersion	.158

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**

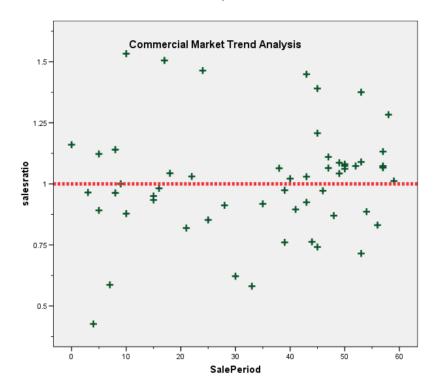
We next analyzed the 57 commercial/industrial sales to determine if there was any residual market trending across the 60 month sale period, with the following results:

Coefficients<sup>a</sup>

Mode	I	Unstandardized Coefficients		Standardized Coefficients		
		В	Std. Error	Beta	t	Sig.
1	(Constant)	.958	.063		15.101	.000
	SalePeriod	.001	.002	.120	.893	.376

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. We stratified the analysis by subclass in the following table, which indicated that sold and unsold commercial properties were valued consistently:

Group	No.	Median	Mean
Unsold	769	\$117	\$135
Sold	57	\$126	\$142

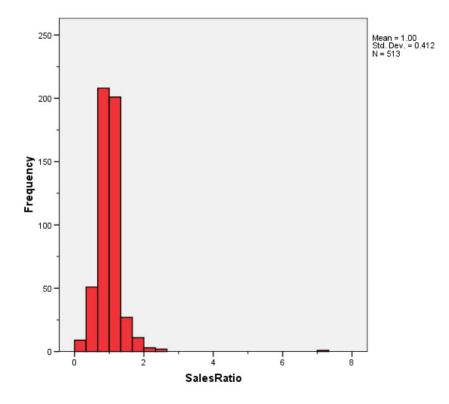


#### V. VACANT LAND SALE RESULTS

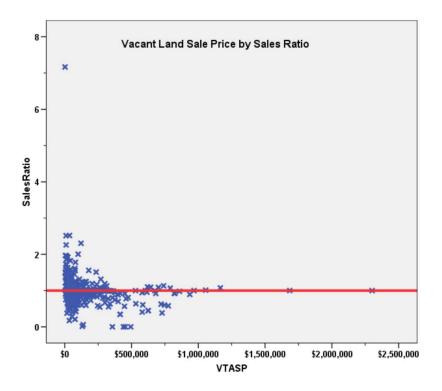
There were 513 qualified vacant land sales. The sale period for this class was 60 months prior to June 30, 2012. The sales ratio analysis was analyzed as follows:

Median	1.000
Price Related Differential	1.115
Coefficient of Dispersion	.208

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**

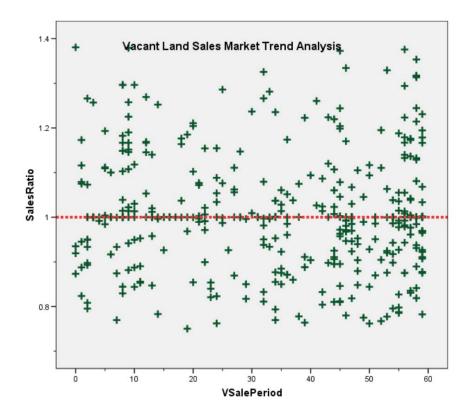
The assessor did not apply any market trend adjustment to the vacant land dataset. The 513 vacant land sales were analyzed, examining the sale ratios across the 60 month sale period with the following results:

Coefficients<sup>a</sup>

Mod	el	Unstandardize	d Coefficients	Standardized Coefficients		
		В	Std. Error	Beta	t	Sig.
1	(Constant)	1.023	.013		76.721	.000
	VSalePeriod	.000	.000	058	-1.153	.249

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 2012 and 2013 for vacant land properties to determine if sold and unsold properties were valued consistently, with the following results:

Group	No Drope		Mean Chg Val
Unsold	5,113	0.7500	1.2776
Sold	513	0.7380	0.7414

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:

	ABSTRIM			Statistic	Std. Error		
lmp	SFR	Mean		\$87.32	\$.612		
ValSF		95% Confidence Interval for	Lower Bound	\$86.12			
		Mean	Upper Bound	\$88.52			
		5% Trimmed Mean		\$87.27			
		Median		\$88.91			
		Variance	786.361				
		Std. Deviation	\$28.042				
		Minimum	\$3				
		Maximum	\$194				
		Range	\$191				
		Interquartile Range		\$34			
		Skewness		036	.053		
		Kurtosis	Kurtosis				
	Ag Res	Mean	\$79.55	\$4.726			
		95% Confidence Interval for	Lower Bound	\$70.19			
		Mean	Upper Bound	\$88.90			
		5% Trimmed Mean		\$75.72			
		Median		\$76.41			
		Variance		2858.000			
		Std. Deviation		\$53.468			
		Minimum		\$0			
		Maximum		\$296			
		Range		\$296			
		Interquartile Range		\$89			
		Skewness					
		Kurtosis	2.897	.425			

### 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

#### Ratio Statistics for CURRTOT / TASP

		95% Confiden Me			95% Con	fidence Interval fo	r 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	.991	.979	1.004	.982	.973	.992	95.1%	.960	.942	.978	1.033	.147	19.9%

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% Confiden Me		95% Confidence Interval for Median 95% Confidence Interval for Weighted Mean				Coefficient of Variation					
Mean	Lower Bound	Upper Bound	Median	Lower Bound	Upper Bound	Actual Coverage	Weighted Mean	Lower Bound	Upper Bound	Price Related Differential	Coefficient of Dispersion	Mean Centered
1.008	.949	1.067	1.021	.950	1.066	96.7%	.987	.906	1.068	1.022	.158	22.1%

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

### **Vacant Land**

	95% Confiden Me			95% Con	fidence 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
1.002	.966	1.038	1.000	.987	1.000	95.8%	.899	.859	.938	1.115	.208	41.1%

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



# **Residential Median Ratio Stratification**

### Sale Price

# **Case Processing Summary**

		Count	Percent
SPRec	LT \$25K	5	.6%
	\$25K to \$50K	16	1.8%
	\$50K to \$100K	121	13.4%
	\$100K to \$150K	114	12.6%
	\$150K to \$200K	155	17.2%
	\$200K to \$300K	188	20.8%
	\$300K to \$500K	147	16.3%
	\$500K to \$750K	88	9.8%
	\$750K to \$1,000K	27	3.0%
	Over \$1,000K	41	4.5%
Overall		902	100.0%
Excluded	i	0	
Total		902	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
LT \$25K	1.025	.988	.180	25.6%
\$25K to \$50K	1.038	1.000	.131	20.4%
\$50K to \$100K	.978	1.005	.133	19.4%
\$100K to \$150K	1.015	.997	.168	22.8%
\$150K to \$200K	.984	1.000	.139	19.0%
\$200K to \$300K	.974	.999	.144	21.0%
\$300K to \$500K	.995	1.003	.134	17.6%
\$500K to \$750K	.909	.997	.156	20.3%
\$750K to \$1,000K	.988	1.005	.158	20.8%
Over \$1,000K	.884	.998	.141	16.4%
Overall	.982	1.033	.147	20.1%



# Subclass

# **Case Processing Summary**

		Count	Percent
ABSTRIMP	1212.00	538	59.6%
	1215.00	5	.6%
	1220.00	2	.2%
	1230.00	357	39.6%
Overall		902	100.0%
Excluded		0	
Total		902	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
1212.00	.995	1.041	.159	21.3%
1215.00	.986	1.001	.215	30.9%
1220.00	.924	1.003	.042	6.0%
1230.00	.969	1.039	.125	17.4%
Overall	.982	1.033	.147	20.1%



# Age

### **Case Processing Summary**

		Count	Percent
AgeRec	75 to 100	1	.1%
	50 to 75	29	3.2%
	25 to 50	341	37.8%
	5 to 25	487	54.0%
	5 or Newer	44	4.9%
Overall		902	100.0%
Excluded		0	
Total		902	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
75 to 100	1.154	1.000	.000	.%
50 to 75	1.003	1.000	.134	20.4%
25 to 50	.988	1.009	.144	19.8%
5 to 25	.978	1.040	.151	20.6%
5 or Newer	.984	1.013	.122	16.5%
Overall	.982	1.033	.147	20.1%



# Improved Area

# **Case Processing Summary**

		Count	Percent
ImpSFRec	LE 500 sf	58	6.4%
	500 to 1,000 sf	182	20.2%
	1,000 to 1,500 sf	267	29.6%
	1,500 to 2,000 sf	180	20.0%
	2,000 to 3,000 sf	135	15.0%
	3,000 sf or Higher	80	8.9%
Overall		902	100.0%
Excluded		0	
Total		902	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
LE 500 sf	.940	1.029	.135	17.9%
500 to 1,000 sf	.956	1.023	.140	19.2%
1,000 to 1,500 sf	.982	1.030	.133	18.8%
1,500 to 2,000 sf	1.011	1.050	.152	20.1%
2,000 to 3,000 sf	.998	1.040	.148	20.4%
3,000 sf or Higher	.996	1.086	.183	24.1%
Overall	.982	1.033	.147	20.1%



# Improvement Quality

# **Case Processing Summary**

		Count	Percent
QUALITY	Average	361	40.0%
	Excellent	61	6.8%
	Fair	302	33.5%
	Good	142	15.7%
	Low	8	.9%
	Poor	2	.2%
	Very Good	26	2.9%
Overall		902	100.0%
Excluded		0	
Total		902	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
Average	.998	1.033	.143	19.7%
Excellent	.887	1.000	.139	18.0%
Fair	.984	1.028	.141	19.5%
Good	.961	.998	.154	21.0%
Low	1.068	1.047	.285	35.8%
Poor	.981	.976	.080	11.3%
Very Good	.956	1.049	.143	19.7%
Overall	.982	1.033	.147	20.1%



# **Improvement Condition**

### **Case Processing Summary**

		Count	Percent
CONDITIOn	Average	703	77.9%
	Below Average	55	6.1%
	Conversion	1	.1%
	Excellent	13	1.4%
	Good	60	6.7%
	Minimum	5	.6%
	Salvage	2	.2%
	Very Good	63	7.0%
Overall		902	100.0%
Excluded		0	
Total		902	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
Average	.985	1.031	.144	20.0%
Below Average	1.017	1.038	.163	21.3%
Conversion	.974	1.000	.000	.%
Excellent	1.000	.990	.093	13.6%
Good	1.000	1.004	.149	20.0%
Minimum	.906	.987	.198	26.9%
Salvage	1.263	.953	.257	36.3%
Very Good	.883	1.046	.137	18.2%
Overall	.982	1.033	.147	20.1%



# **Commercial Median Ratio Stratification**

### **Sale Price**

### **Case Processing Summary**

		Count	Percent
SPRec	\$25K to \$50K	3	5.3%
	\$50K to \$100K	5	8.8%
	\$100K to \$150K	3	5.3%
	\$150K to \$200K	5	8.8%
	\$200K to \$300K	17	29.8%
	\$300K to \$500K	11	19.3%
	\$500K to \$750K	2	3.5%
	\$750K to \$1,000K	4	7.0%
	Over \$1,000K	7	12.3%
Overall		57	100.0%
Excluded	I	0	
Total		57	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
\$25K to \$50K	1.132	.999	.164	24.8%
\$50K to \$100K	1.073	.996	.029	4.3%
\$100K to \$150K	1.081	1.016	.204	32.8%
\$150K to \$200K	.965	.999	.055	8.8%
\$200K to \$300K	1.030	.988	.152	21.9%
\$300K to \$500K	.974	1.013	.148	21.5%
\$500K to \$750K	.901	.990	.206	29.2%
\$750K to \$1,000K	.915	1.020	.313	45.1%
Over \$1,000K	.918	.934	.170	26.2%
Overall	1.021	1.022	.158	21.9%



# Subclass

### **Case Processing Summary**

		Count	Percent
ABSTRIMP	1713.50	1	1.8%
	2212.00	2	3.5%
	2215.00	4	7.0%
	2220.00	4	7.0%
	2230.00	14	24.6%
	2235.00	3	5.3%
	2240.00	4	7.0%
	2245.00	22	38.6%
	3230.00	1	1.8%
	9239.00	1	1.8%
	9259.00	1	1.8%
Overall		57	100.0%
Excluded		0	
Total		57	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
1713.50	.878	1.000	.000	.%
2212.00	1.058	.987	.027	3.8%
2215.00	.857	.850	.211	32.7%
2220.00	1.069	1.021	.317	37.2%
2230.00	.946	.973	.118	16.6%
2235.00	1.110	1.016	.023	3.5%
2240.00	1.312	1.026	.214	29.6%
2245.00	1.036	1.000	.117	17.2%
3230.00	1.073	1.000	.000	.%
9239.00	.950	1.000	.000	.%
9259.00	.581	1.000	.000	.%
Overall	1.021	1.022	.158	21.9%



# Age

### **Case Processing Summary**

		Count	Percent
AgeRec	75 to 100	3	5.3%
	50 to 75	5	8.8%
	25 to 50	22	38.6%
	5 to 25	24	42.1%
	5 or Newer	3	5.3%
Overall		57	100.0%
Excluded		0	
Total		57	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
75 to 100	.912	1.002	.231	43.3%
50 to 75	.963	.895	.265	38.3%
25 to 50	.978	1.047	.162	23.8%
5 to 25	1.054	1.016	.103	15.1%
5 or Newer	1.208	.989	.179	29.3%
Overall	1.021	1.022	.158	21.9%



# Improved Area

# Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	8	14.0%
	500 to 1,000 sf	6	10.5%
	1,000 to 1,500 sf	6	10.5%
	1,500 to 2,000 sf	6	10.5%
	2,000 to 3,000 sf	4	7.0%
	3,000 sf or Higher	27	47.4%
Overall		57	100.0%
Excluded		0	
Total		57	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
LE 500 sf	1.037	1.062	.154	22.7%
500 to 1,000 sf	1.044	1.008	.056	7.2%
1,000 to 1,500 sf	.797	1.006	.080	10.9%
1,500 to 2,000 sf	1.020	1.040	.166	22.6%
2,000 to 3,000 sf	1.046	.988	.133	20.2%
3,000 sf or Higher	1.043	1.038	.168	24.4%
Overall	1.021	1.022	.158	21.9%



# Improvement Quality

# **Case Processing Summary**

		Count	Percent
QUALITY	Average	19	33.3%
	Fair	31	54.4%
	Good	3	5.3%
	Low	4	7.0%
Overall		57	100.0%
Excluded		0	
Total		57	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
Average	1.064	1.067	.136	17.9%
Fair	1.000	1.002	.135	19.8%
Good	1.074	.880	.155	29.9%
Low	.848	1.445	.460	56.7%
Overall	1.021	1.022	.158	21.9%



# **Improvement Condition**

### **Case Processing Summary**

		Count	Percent
CONDITIOn	Average	49	86.0%
	Below Average	7	12.3%
	Good	1	1.8%
Overall		57	100.0%
Excluded		0	
Total		57	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
Average	1.029	1.036	.142	20.1%
Below Average	.974	.939	.255	36.3%
Good	.761	1.000	.000	.%
Overall	1.021	1.022	.158	21.9%



# **Vacant Land Median Ratio Stratification**

#### **Sale Price**

# **Case Processing Summary**

		Count	Percent
SPRec	LT \$25K	86	16.8%
	\$25K to \$50K	140	27.3%
	\$50K to \$100K	121	23.6%
	\$100K to \$150K	43	8.4%
	\$150K to \$200K	29	5.7%
	\$200K to \$300K	37	7.2%
	\$300K to \$500K	28	5.5%
	\$500K to \$750K	18	3.5%
	\$750K to \$1,000K	7	1.4%
	Over \$1,000K	4	.8%
Overall		513	100.0%
Excluded	ı	0	
Total		513	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
LT \$25K	1.130	1.080	.300	67.1%
\$25K to \$50K	1.000	1.002	.179	26.6%
\$50K to \$100K	.943	.991	.187	27.3%
\$100K to \$150K	1.000	1.004	.170	32.9%
\$150K to \$200K	1.000	1.000	.114	17.8%
\$200K to \$300K	1.000	1.001	.103	16.9%
\$300K to \$500K	.792	1.030	.320	45.3%
\$500K to \$750K	.933	.999	.252	32.6%
\$750K to \$1,000K	.926	.996	.100	17.0%
Over \$1,000K	1.008	1.006	.022	4.0%
Overall	1.000	1.115	.208	41.2%



# Subclass

# **Case Processing Summary**

		Count	Percent
ABSTRLND	0	17	3.3%
	100	340	66.3%
	200	11	2.1%
	300	4	.8%
	400	8	1.6%
	510	2	.4%
	520	3	.6%
	530	3	.6%
	540	10	1.9%
	550	17	3.3%
	560	2	.4%
	606	1	.2%
	1112	81	15.8%
	1135	6	1.2%
	2130	3	.6%
	4137	4	.8%
	4147	1	.2%
Overall		513	100.0%
Excluded		0	
Total		513	



Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
0	1.015	.953	.115	25.0%
100	1.000	1.075	.203	31.3%
200	.987	.987	.069	14.4%
300	.993	1.080	.180	33.8%
400	.818	1.293	.383	48.5%
510	.587	1.970	.702	99.2%
520	1.008	1.285	.183	32.5%
530	1.176	1.104	.275	53.6%
540	.995	1.582	.734	207.5%
550	.987	1.041	.142	27.5%
560	1.080	1.037	.100	14.2%
606	.997	1.000	.000	.%
1112	.986	1.067	.154	22.5%
1135	1.000	1.090	.246	36.3%
2130	.818	1.109	.147	22.1%
4137	.002	1.012	.077	12.6%
4147	.015	1.000	.000	.%
Overall	1.000	1.115	.208	41.2%