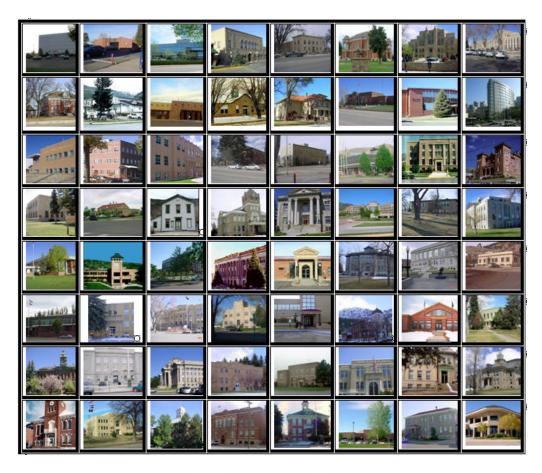


# 2012 ALAMOSA COUNTY PROPERTY ASSESSMENT STUDY







September 15, 2012

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

RE: Final Report for the 2012 Colorado Property Assessment Study

Dear Mr. Mauer:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2012 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



# TABLE OF CONTENTS

Introduction	
Regional/Historical Sketch of Alamosa County	4
Ratio Analysis	
Random Deed Analysis	8
Time Trending Verification	9
Sold/Unsold Analysis	
Agricultural Land Study	12
Agricultural Land	
Agricultural Outbuildings	
Agricultural Land Under Improvements	
Sales Verification	
Economic Area Review and Evaluation	15
Natural Resources	16
Earth and Stone Products	
Vacant Land	
Possessory Interest Properties	18
Personal Property Audit	
Wildrose Auditor Staff	
Appendices	22
11	



# 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 2012 and is pleased to report its findings for Alamosa County in the following report.

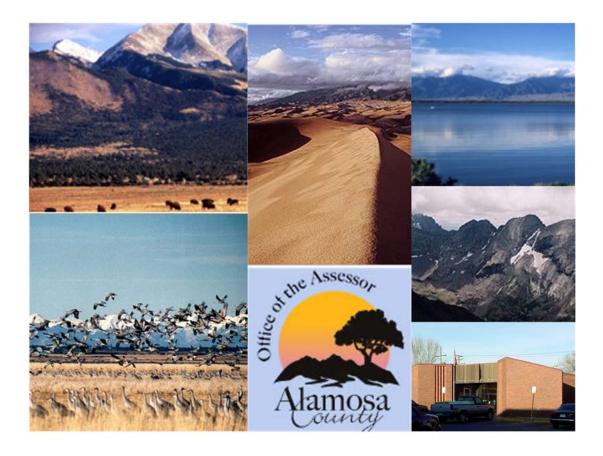


# REGIONAL/HISTORICAL SKETCH OF ALAMOSA COUNTY

# **Regional Information**

Alamosa County is located in the San Luis Valley region of Colorado. The San Luis Valley is a large, broad, alpine valley in the Rio Grande Basin of south-central Colorado. The valley is drained to the south by the Rio Grande

River which rises in the San Juan Mountains to the west of the valley. The San Luis Valley includes Alamosa, Conejos, Costilla, Mineral, Rio Grande, and Saguache counties.





# **Historical Information**



Alamosa County has a population of approximately 15,445 people with 21.36 people per square mile, according to the U.S. Census Bureau's 2010 census data. This represents a 3.2 percent change from the 2000 Census.

Alamosa offers majestic mountain views, the winding Rio Grande, clear skies, breathing room, abundant agriculture, a thriving economy, and two institutions of higher learning.

Gold and silver discoveries near Summitville in 1870 fueled the mining rush to the San Luis Valley environs. While other mining settlements quickly followed at Creede and Bonzana, the history of the Valley's settlement was greatly influenced by the railroad, farming, ranching, and timber.

Before written history, native American cultures, including Clovis and Folsom, hunted and gathered in the area 11,000 years ago. Spain claimed the area in the 1500's and established land grants to attract settlers. Clashes with Comanches, however, left the valley largely unsettled for many years. Zebulon Pike, exploring the southern part of the Louisiana Purchase and after his discovery of Pike's Peak, was awed by the view of the Sand Dunes (probably from Medano Pass) in

1807. Until Mexico's liberation from Spain in 1821, Spain claimed the San Luis Valley. The 1850's saw the first permanent settlements.

Just two years after Colorado became a state, a narrow-gauge train loaded with expectant settlers and their belongings stopped at a protected bend in the Rio Grande shaded by a grove of cottonwoods. In 1878 Alamosa, Spanish for cottonwood grove, was founded.

Trains delivered lumber and hardware and left with agricultural products. Over the next ten years rails were laid in all four directions and Alamosa became a veritable center of the San Luis Valley.

The easy access to the mountain regions surrounding the San Luis Valley are a major attraction for visitors and locals alike. Not only a provider of recreation, the forests are a key economic resource. The extensive Rio Grande National Forest first came under government control in 1891 with the authorization of the Timber Reserves Act in 1891. Established to conserve the nation's timber, range and water resources, much of this land has remained unspoiled and public. The Great Sand Dunes National Park (first created as a monument in 1932) and The San Luis Lakes State Park offer outdoor recreation on the valley floor. (*Alamosa.org*)



# 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 2009 and June 2010. Counties with less than 30 sales typically extended the sale period back up to 5 years prior to June 30, 2010 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 Alamosa County are:

	Alamosa County Ratio Grid						
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis		
Commercial/Industrial	26	0.968	0.999	13.4	Compliant		
Condominium	N/A	N/A	N/A	N/A	N/A		
Single Family	138	0.997	1.017	13.1	Compliant		
Vacant Land	63	0.970	1.058	19.7	Compliant		

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

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

#### Recommendations

None

# **Random Deed Analysis**

An additional analysis was performed as part of the Ratio Analysis. Ten randomly selected deeds with documentary fees were obtained from the Clerk and Recorder. These deeds were for sales that occurred from January 1, 2009 through June 30, 2010. These sales were then checked for inclusion on the Assessor's qualified or unqualified database.

#### **Conclusions**

After comparing the list of randomly selected deeds with the Assessor's database, Alamosa County has accurately transferred sales data from the recorded deeds to the qualified or unqualified database.

#### 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 Alamosa County has complied with the statutory requirements to analyze the effects of time on value in their county. Alamosa 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

Alamosa 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 2010 and 2012 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 Results				
Property Class	Results			
Commercial/Industrial	Compliant			
Condominium	N/A			
Single Family	Compliant			
Vacant Land	Compliant			

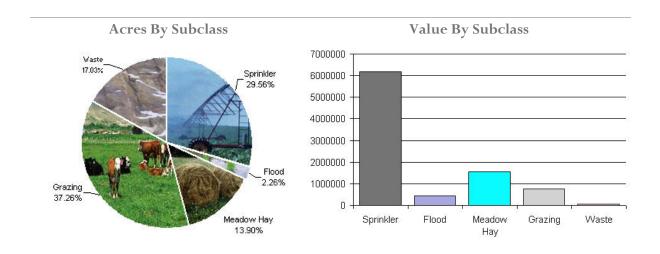
#### Conclusions

After applying the above described methodologies, it is concluded that Alamosa 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:



	Alamosa County Agricultural Land Ratio Grid					
Abstract Code	Land Class	Number Of Acres	County Value Per Acre	County Assessed Total Value	WRA Total Value	Ratio
4107	Sprinkler	72,623	85.00	6,184,838	6,280,689	0.98
4117	Flood	5,556	77.00	430,324	4,722,800	0.91
4137	Meadow Hay	34,152	46.00	1,558,973	15,589,730	1.00
4147	Grazing	91,540	8.00	748,109	748,109	1.00
4167	Waste	41,840	2.00	675,280	67,528	1.00
Total/Avg		245,711	37.00	8,989,772	9,127,579	0.98

#### 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**

Alamosa 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.

#### Conclusions

Alamosa 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 2012 for Alamosa 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.

#### Conclusions

Alamosa 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

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



# VACANT LAND

# **Subdivision Discounting**

Subdivisions were reviewed in 2012 in Alamosa 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**

Alamosa 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.

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

assessing and valuing agricultural possessory interest properties. The county has also been queried as to their confidence that the possessory interest properties have been discovered and placed on the tax rolls.

#### Conclusions

Alamosa 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

Alamosa County was studied for its procedural compliance with the personal property assessment outlined in the Assessor's Reference Library (ARL) Volume 5, and in the State Board of Equalization (SBOE) requirements for the assessment of personal property. The SBOE requires that counties use ARL Volume 5, including current discovery, classification, documentation procedures, current economic lives table, cost factor tables, depreciation table, and level of value adjustment factor table.

The personal property audit standards narrative must be in place and current. A listing of businesses that have been audited by the assessor within the twelve-month period reflected in the plan is given to the auditor. The audited businesses must be in conformity with those described in the plan.

Aggregate ratio will be determined solely from the personal property accounts that have been physically inspected. The minimum assessment sample is one percent or ten schedules, whichever is greater, and the maximum assessment audit sample is 100 schedules.

For the counties having over 100,000 population, WRA selected a sample of all personal property schedules to determine whether the assessor is correctly applying the provisions of law and manuals of the Property Tax Administrator in arriving at the assessment levels of such property. This sample was selected from the personal property schedules audited by the assessor. In no event was the sample selected by the contractor less than 30 schedules. The counties to be included in this study are Adams, Arapahoe, Boulder, Denver, Douglas, El Paso, Jefferson, Larimer, Mesa, Pueblo, and Weld. All other counties received a procedural study.

Alamosa 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
- 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.

Alamosa County submitted their personal property written audit plan and was current for the 2012 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:

- Businesses in a selected area
- Accounts with obvious discrepancies
- New businesses filing for the first time
- Incomplete or inconsistent declarations
- Accounts with omitted property
- Same business type or use
- Businesses with no deletions or additions for 2 or more years



- Non-filing Accounts Best Information Available
- Accounts close to the \$5,500 actual value exemption status
- Accounts protested with substantial disagreement

#### **Conclusions**

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

#### Recommendations



# WILDROSE AUDITOR STAFF

Harry J. Fuller, Audit Project Manager

Suzanne Howard, Audit Administrative Manager

Steve Kane, Audit Statistician

Carl W. Ross, Agricultural/Natural Resource Analyst

J. Andrew Rodriguez, Field Analyst



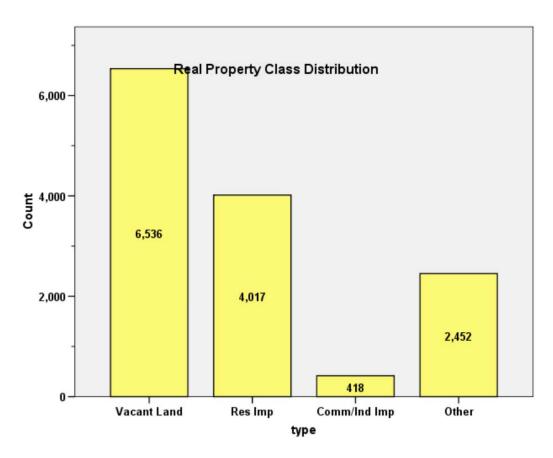
# APPENDICES



# STATISTICAL COMPLIANCE REPORT FOR ALAMOSA COUNTY 2012

#### I. OVERVIEW

Alamosa County is located in south central Colorado. The county has a total of 13,423 real property parcels, according to data submitted by the county assessor's office in 2012. 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 73.8% of all vacant land parcels.

For residential improved properties, single family properties accounted for 94.7% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial sales accounted for 3.1% of all such properties in this county.



#### II. DATA FILES

The following sales analyses were based on the requirements of the 2012 Colorado Property Assessment Study. Information was provided by the Alamosa Assessor's Office in May 2012. The data included all 5 property record files as specified by the Auditor.

#### III. RESIDENTIAL SALES RESULTS

The following steps were taken to analyze the residential sales:

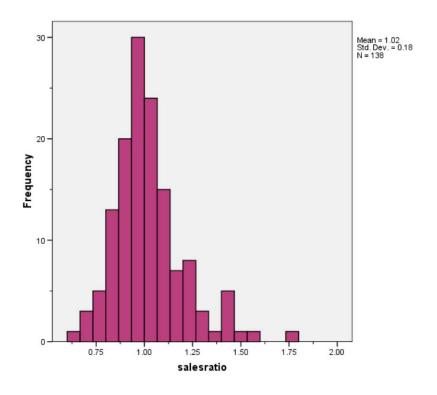
1. Total sales	5,761
2. Selected qualified sales	943
3. Select improved sales	553
4. Select residential sales	526
6. Sales between January 1, 2009 and June 30, 2010	138

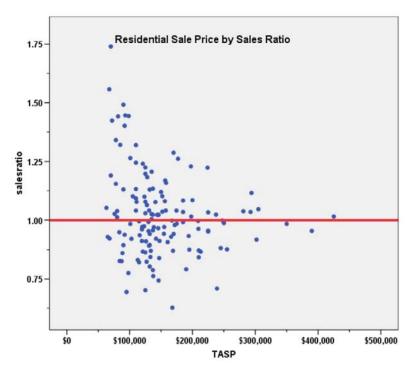
The sales ratio analysis was analyzed as follows:

Median	0.997
Price Related Differential	1.017
Coefficient of Dispersion	.131

The above ratio statistics were in compliance with the standards set forth by the Colorado State Board of Equalization (SBOE) for the overall residential sales. The following graphs describe further the sales ratio distribution for these properties:







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



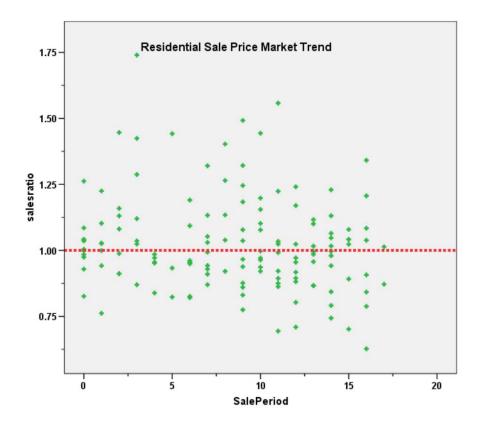
#### **Residential Market Trend Analysis**

We next analyzed the residential dataset using the 18-month sale period for any residual market trending, with the following results:

Coefficients<sup>a</sup>

Mo	Model Unstandardized Coefficients		Standardized Coefficients			
		В	Std. Error	Beta	t	Sig.
1	(Constant)	1.070	.030		35.700	.000
	SalePeriod	006	.003	154	-1.817	.071

a. Dependent Variable: salesratio



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

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

In terms of the valuation consistency between sold and unsold residential properties, we compared the median change in value between 2010 and 2012 between each group, as follows:



Group	N	Median Chg Val	Mean Chg Val
Unsold	3,762	1.01	1.03
Sold	138	1.01	1.01

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

#### IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

The following steps were taken to analyze the commercial sales:

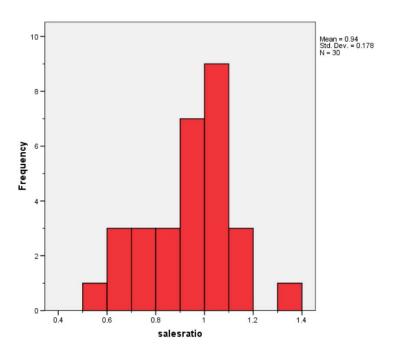
1. Total sales	5,753
2. Selected qualified sales	943
3. Select improved sales	553
4. Select commercial sales only	26

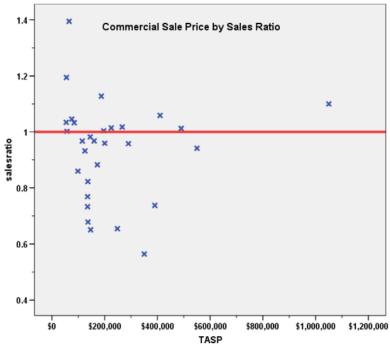
Because there were fewer than 30 sales, 4 supplemental appraisals of unsold commercial properties were completed to bring the total number of analyzed properties to 30 for the final sales ratio analysis. We used all 30 sold and appraised properties for the ratio analysis, and the 26 sold properties for the market trending and sold/unsold analysis.

Median	0.968
Price Related Differential	0.999
Coefficient of Dispersion	0.134

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









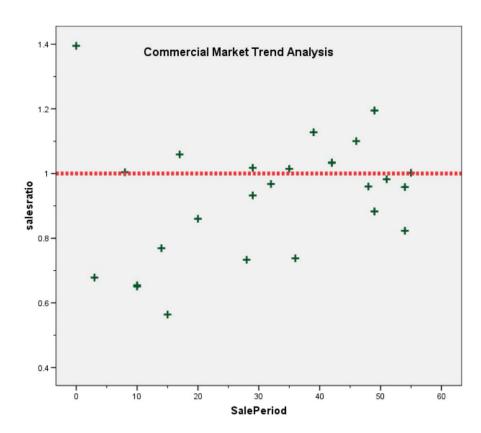
#### **Commercial Market Trend Analysis**

The assessor did not apply any market trend adjustment to the commercial dataset. The 26 commercial/industrial sales were analyzed, examining the sale ratios across a 60-month sale period with the following results:

Coefficients<sup>a</sup>

Γ	Model	Unstandardized Coefficients		Standardized Coefficients		
L		В	Std. Error	Beta	t	Sig.
П	(Constant)	.838	.076		10.974	.000
L	SalePeriod	.003	.002	.265	1.344	.192

a. Dependent Variable: salesratio



The market trend results indicated no statistically significant trend. We concur that no market trend adjustments were warranted for properties in this class for Alamosa County.

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

We compared the median and mean actual value per square foot between sold and unsold commercial properties to determine if the assessor was valuing each group consistently, as follows:



Group	N	Median Val/SF	Mean Val/SF
Unsold	361	\$42	\$59
Sold	26	\$61	\$67

Because of the difference between the sold and unsold commercial properties based on the comparison using the assessor's value per improved square foot, we next compared the median and mean change in value for commercial sold and unsold between 2008 and 2010, as follows:

Group	N	Median Chg Val	Mean Chg Val
Unsold	341	1,04	1.07
Sold	26	1.04	1.04

Based on the similarity between sold and unsold commercial properties, we concluded that sold and unsold commercial properties were valued consistently by the assessor.

#### V. VACANT LAND SALE RESULTS

The following steps were taken to analyze vacant land sales:

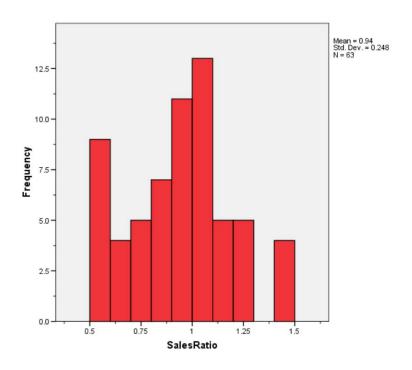
1. Total sales	5,753
2. Selected qualified sales	943
3. Select vacant land sales	313
4. Select non-agricultural sales	313
5. Sales between January 1, 2009 and June 30, 2010	63

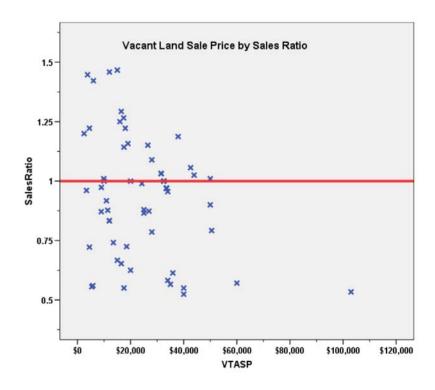
The sales ratio analysis was analyzed as follows:

Median	0.970
Price Related Differential	1.058
Coefficient of Dispersion	.197

The above tables indicate that the Alamosa 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**

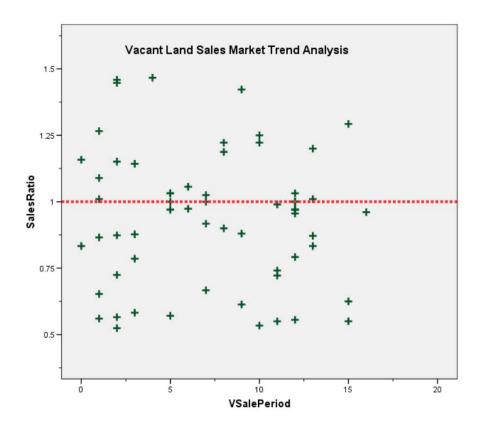
The assessor did not apply any market trend adjustment to the vacant land dataset. The 63 vacant land sales were analyzed, examining the sale ratios across the 18 month sale period with the following results:



Coefficients<sup>a</sup>

Mo	del	Unstandardize	d Coefficients	Standardized Coefficients		
		В	Std. Error	Beta	t	Sig.
1	(Constant)	.964	.059		16.317	.000
	VSalePeriod	004	.007	066	517	.607

a. Dependent Variable: SalesRatio



The market trend results indicated no statistically significant trend. We concur that no market trend adjustments were warranted for properties in this class for Alamosa County.

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

We compared the median change in actual value between 2008 and 2012 for vacant land properties to determine if sold and unsold properties were valued consistently, as follows:

Group	N	Median	Mean
Unsold	6,384	1.00	1.46
Sold	47	1.08	1.32



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 Alamosa County.

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

	ABSTE	RIMP		Statistic	Std. Error	
ImpValSF	SFR	Mean	\$72.88	\$.310		
impvaisi	J. K	95% Confidence Interval for	Lower Bound	\$72.27	ψ.510	
		Mean	Upper Bound	\$73.49		
		5% Trimmed Mean	\$73.13			
		Median	\$72.93	)		
		Variance	365.422			
		Std. Deviation	\$19.116			
		Minimum	\$12			
		Maximum	\$179			
		Range	Range			
		Interquartile Range		\$27		
		Skewness		040	.040	
		Kurtosis	.755	.079		
	AG	Mean	Mean			
	RES	95% Confidence Interval for	Lower Bound	\$68.21		
		Mean	Upper Bound	\$75.55		
		5% Trimmed Mean		\$67.85		
		Median		\$65.85	)	
		Variance		1383.802		
		Std. Deviation		\$37.199		
		Minimum	Minimum			
		Maximum	\$423			
		Range	\$408			
		Interquartile Range		\$22		
		Skewness		4.540	.122	
		Kurtosis		32.583	.244	

#### VI. CONCLUSIONS

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



#### **STATISTICAL ABSTRACT**

#### Residential

#### Ratio Statistics for CURRTOT / TASP

		95% Confiden Me			95% Con	fidence Interval fo	or 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
ı	1.023	.993	1.054	.997	.971	1.026	95.0%	1.007	.982	1.031	1.017	.131	17.6%

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

#### Commercial/Industrial

#### Ratio Statistics for CURRTOT / TASP

	95% Confider Me			95% Con	fidence Interval fo	r 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
.937	.870	1.003	.968	.883	1.014	95.7%	.938	.857	1.019	.999	.134	19.0%

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

#### **Vacant Land**

	95% Confider 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
.938	.875	1.000	.970	.877	1.000	95.7%	.886	.812	.961	1.058	.197	26.5%

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.



# Residential Median Ratio Stratification

#### **Sale Price**

#### **Case Processing Summary**

		Count	Percent
SPRec	\$50K to \$100K	27	19.6%
	\$100K to \$150K	60	43.5%
	\$150K to \$200K	28	20.3%
	\$200K to \$300K	18	13.0%
	\$300K to \$500K	5	3.6%
Overall		138	100.0%
Excluded	I	0	
Total		138	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
\$50K to \$100K	1.053	1.006	.225	28.0%
\$100K to \$150K	.988	1.004	.112	14.1%
\$150K to \$200K	1.007	1.000	.102	13.9%
\$200K to \$300K	.976	.996	.088	11.9%
\$300K to \$500K	.985	.999	.039	5.2%
Overall	.997	1.017	.131	18.3%



# Subclass

# **Case Processing Summary**

		Count	Percent
ABSTRIMP	1212	132	95.7%
	1215	3	2.2%
	1220	3	2.2%
Overall		138	100.0%
Excluded		0	
Total		138	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
1212	.997	1.013	.125	17.1%
1215	1.341	1.096	.258	39.7%
1220	.955	1.003	.046	9.6%
Overall	.997	1.017	.131	18.3%



# Improvement Age

# **Case Processing Summary**

		Count	Percent
AgeRec	Over 100	6	4.3%
	75 to 100	23	16.7%
	50 to 75	19	13.8%
	25 to 50	38	27.5%
	5 to 25	47	34.1%
	5 or Newer	5	3.6%
Overall		138	100.0%
Excluded		0	
Total		138	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
Over 100	1.159	1.051	.267	32.5%
75 to 100	.995	1.018	.126	17.7%
50 to 75	1.023	1.012	.139	18.5%
25 to 50	1.021	1.009	.125	15.8%
5 to 25	.985	1.010	.111	16.2%
5 or Newer	1.034	1.014	.067	8.8%
Overall	.997	1.017	.131	18.3%



# Improved Area

# **Case Processing Summary**

		Count	Percent
ImpSFRec	500 to 1,000 sf	9	6.5%
	1,000 to 1,500 sf	54	39.1%
	1,500 to 2,000 sf	38	27.5%
	2,000 to 3,000 sf	31	22.5%
	3,000 sf or Higher	6	4.3%
Overall		138	100.0%
Excluded		0	
Total		138	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
500 to 1,000 sf	.929	1.016	.147	17.6%
1,000 to 1,500 sf	.968	1.015	.114	17.3%
1,500 to 2,000 sf	.982	1.020	.132	16.9%
2,000 to 3,000 sf	1.038	1.054	.137	21.2%
3,000 sf or Higher	1.035	1.016	.113	14.8%
Overall	.997	1.017	.131	18.3%



# **Improvement Quality**

#### **Case Processing Summary**

	Count	Percent
QUALITY 3	9	6.5%
4	100	72.5%
5	26	18.8%
6	3	2.2%
Overall	138	100.0%
Excluded	0	
Total	138	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
3	.999	1.014	.126	19.9%
4	.996	1.014	.139	18.9%
5	.994	1.028	.109	16.9%
6	1.016	.995	.041	7.2%
Overall	.997	1.017	.131	18.3%



# **Commercial Median Ratio Stratification**

# Sale Price

#### **Case Processing Summary**

		Count	Percent
SPRec	\$50K to \$100K	7	23.3%
	\$100K to \$150K	8	26.7%
	\$150K to \$200K	5	16.7%
	\$200K to \$300K	4	13.3%
	\$300K to \$500K	4	13.3%
	\$500K to \$750K	1	3.3%
	Over \$1,000K	1	3.3%
Overall		30	100.0%
Excluded		0	
Total		30	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
\$50K to \$100K	1.034	1.017	.102	17.1%
\$100K to \$150K	.796	1.005	.137	16.7%
\$150K to \$200K	.968	.998	.060	9.5%
\$200K to \$300K	.986	.998	.106	19.7%
\$300K to \$500K	.875	.977	.220	27.1%
\$500K to \$750K	.942	1.000	.000	.%
Over \$1,000K	1.100	1.000	.000	.%
Overall	.968	.999	.134	18.6%



# Subclass

# **Case Processing Summary**

		Count	Percent
ABSTRIMP	2212	4	13.3%
	2215	1	3.3%
	2220	12	40.0%
	2230	7	23.3%
	2235	4	13.3%
	2240	1	3.3%
	2245	1	3.3%
Overall		30	100.0%
Excluded		0	
Total		30	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
2212	.985	1.074	.191	30.0%
2215	1.100	1.000	.000	.%
2220	.973	.990	.095	12.6%
2230	.958	1.085	.166	23.2%
2235	.975	1.035	.064	13.1%
2240	.769	1.000	.000	.%
2245	.651	1.000	.000	.%
Overall	.968	.999	.134	18.6%



# Improvement Age

# **Case Processing Summary**

		Count	Percent
AgeRec	Over 100	7	23.3%
	75 to 100	5	16.7%
	50 to 75	5	16.7%
	25 to 50	5	16.7%
	5 to 25	6	20.0%
	5 or Newer	2	6.7%
Overall		30	100.0%
Excluded		0	
Total		30	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
Over 100	1.004	1.001	.026	3.7%
75 to 100	.823	.997	.136	19.0%
50 to 75	1.128	1.062	.182	25.8%
25 to 50	.738	.867	.178	27.2%
5 to 25	.964	1.017	.091	19.1%
5 or Newer	.977	1.002	.036	5.1%
Overall	.968	.999	.134	18.6%



# Improved Area

#### **Case Processing Summary**

		Count	Percent
ImpSFRec	1,000 to 1,500 sf	9	30.0%
	1,500 to 2,000 sf	4	13.3%
	2,000 to 3,000 sf	6	20.0%
	3,000 sf or Higher	11	36.7%
Overall		30	100.0%
Excluded		0	
Total		30	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
1,000 to 1,500 sf	.932	1.089	.171	23.4%
1,500 to 2,000 sf	.823	1.053	.195	22.6%
2,000 to 3,000 sf	1.008	.984	.096	16.2%
3,000 sf or Higher	.968	.999	.105	16.9%
Overall	.968	.999	.134	18.6%



# **Improvement Quality**

#### **Case Processing Summary**

	Count	Percent
QUALITY 3	1	3.3%
4	16	53.3%
5	9	30.0%
6	2	6.7%
7	2	6.7%
Overall	30	100.0%
Excluded	0	
Total	30	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
3	1.195	1.000	.000	.%
4	.950	1.053	.175	23.3%
5	.960	1.026	.074	10.7%
6	1.038	.996	.020	2.8%
7	1.056	.985	.041	5.9%
Overall	.968	.999	.134	18.6%



# **Vacant Land Median Ratio Stratification**

#### **Subclass**

#### **Case Processing Summary**

		Count	Percent
ABSTRLND	100	20	31.7%
	200	1	1.6%
	530	1	1.6%
	540	1	1.6%
	550	13	20.6%
	1112	26	41.3%
	1135	1	1.6%
Overall		63	100.0%
Excluded		0	
Total		63	

Group				Coefficient of Variation	
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered	
100	.897	1.212	.269		32.8%
200	1.422	1.000	.000	.%	
530	.653	1.000	.000	.%	
540	.974	1.000	.000	.%	
550	.833	1.097	.274		36.6%
1112	.995	1.009	.102		15.8%
1135	1.143	1.000	.000	.%	
Overall	.970	1.058	.197		25.8%



# Sale Price

# **Case Processing Summary**

		Count	Percent
SPRec	LT \$25K	34	54.0%
	\$25K to \$50K	26	41.3%
	\$50K to \$100K	2	3.2%
	\$100K to \$150K	1	1.6%
Overall		63	100.0%
Excluded	i	0	
Total		63	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
LT \$25K	1.000	.827	1.195	300.6%
\$25K to \$50K	4.781	.997	.311	48.4%
\$50K to \$100K	2.688	1.073	.788	111.4%
\$100K to \$150K	.534	1.000	.000	.%
Overall	1.266	.869	1.633	254.6%