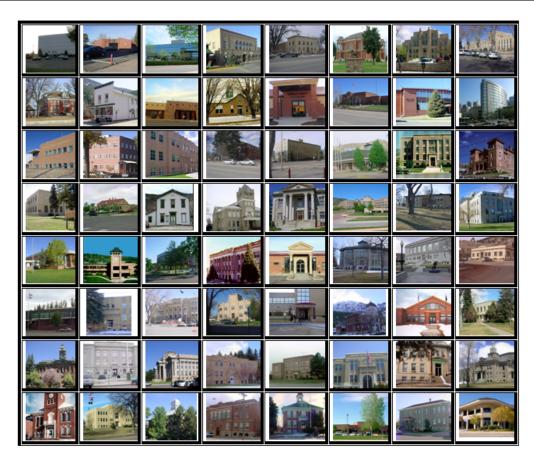


# 2010 LAS ANIMAS COUNTY PROPERTY ASSESSMENT STUDY







September 15, 2010

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

RE: Final Report for the 2010 Colorado Property Assessment Study

Dear Mr. Mauer:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2010 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 2010 and is pleased to report its findings for Las Animas County in the following report.



# REGIONAL/HISTORICAL SKETCH OF LAS ANIMAS COUNTY

# **Regional Information**

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





#### **Historical Information**

Las Animas County has a population of approximately 16,020 people with 3.2 people per square mile, according to the U.S. Census Bureau's 2009 estimated population data.

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

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

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

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

(Wikipedia.org, www.trinidadco.co, trinidadchamber.com)



# RATIO ANALYSIS

# Methodology

All significant classes of 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 2007 and June 2008. Counties with less than 30 sales typically extended the sale period back up to 5 years prior to June 30, 2008 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 Las Animas County are:

Las Animas County Ratio Grid					
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis
Commercial/Industrial	44	0.967	1.134	11.3	Compliant
Condominium	N/A	N/A	N/A	N/A	N/A
Single Family	276	0.970	1.029	11.8	Compliant
Vacant Land	100	0.990	1.043	19.5	Compliant

After applying the above described methodologies, it is concluded from the sales ratios that Las Animas County is in compliance with SBOE, DPT, and Colorado State Statute valuation guidelines.

#### Recommendations

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, 2007 through June 30, 2008. 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, Las Animas 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 Las Animas County has complied with the statutory requirements to analyze the effects of time on value in their county. Las Animas County has also satisfactorily applied the results of their time trending analysis to arrive at the time adjusted sales price (TASP).

#### Recommendations



# SOLD/UNSOLD ANALYSIS

# Methodology

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

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 2009 and 2010 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 R	esults
Property Class	Results
Commercial/Industrial	Compliant
Condominium	N/A
Single Family	Compliant
Vacant Land	Compliant

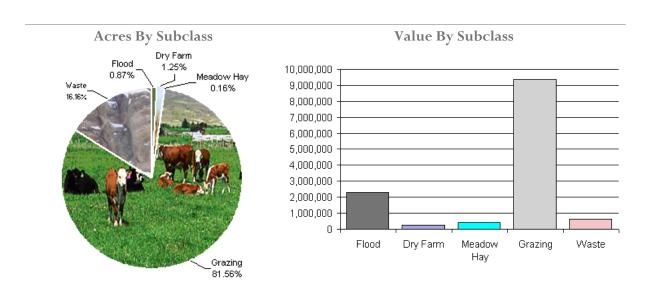
# Conclusions

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

# Recommendations



# AGRICULTURAL LAND STUDY



# **Agricultural Land**

County records were reviewed to determine major land categories such as irrigated farm, dry farm, meadow hay, grazing and other In addition, county records were 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. County yields compared favorably to those published by Colorado Agricultural Statistics. Expenses used by the county were allowable expenses and were in an acceptable range. Grazing lands carrying capacities were in an acceptable range. The data analyzed resulted in the following ratios:



	Las Animas County Agricultural Land Ratio Grid					
Abstract Code	Land Class	Number Of Acres	County Value Per Acre	County Assessed Total Value	WRA Total Value	Ratio
4117	Flood	21,183	109.28	2,314,904	2,284,495	1.01
4127	Dry Farm	30,512	8.81	268,858	267,837	1.00
4137	Meadow Hay	3,785	112.36	425,296	412,547	1.03
4147	Grazing	1,985,439	4.71	9,360,102	9,360,102	1.00
4167	Waste	393,426	1.62	635,413	635,413	1.00
Total/Avg		2,434,345	5.34	13,004,572	12,960,393	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**

Las Animas County has substantially complied with the procedures provided by the Division of Property Taxation for the valuation of agricultural outbuildings.

#### 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 2010 for Las Animas County. This study was conducted by checking selected sales from the master sales list for the Jan 1, 2007 - June 30, 2008 valuation period. Specifically WRA selected 30 sales listed as unqualified.

All but three of the sales selected in the sample gave reasons that were clear and supportable. Three sales had insufficient documentation.

#### Conclusions

Las Animas County appears to be doing an adequate job of verifying their sales. There are no recommendations.

#### Recommendations



# ECONOMIC AREA REVIEW AND EVALUATION

# Methodology

Las Animas County has submitted a written narrative describing the economic areas that make up the county's market areas. Las Animas County has also submitted a map illustrating these areas. Each of these narratives have been read and analyzed for logic and appraisal sensibility. The maps were also compared to the narrative for consistency between the written description and the map.

#### Conclusions

After review and analysis, it has been determined that Las Animas County has

adequately identified homogeneous economic areas comprised of smaller neighborhoods. Each economic area defined is equally subject to a set of economic forces that impact the value of the properties within that geographic area and this has been adequately addressed. Each economic area defined adequately delineates an area that will give "similar values for similar properties in similar areas."

#### Recommendations



# NATURAL RESOURCES

#### **Earth and Stone Products**

# Methodology

Under the guidelines of the Assessor's Reference Library (ARL), Volume 3, Natural Resource Valuation Procedures, the income approach was applied to determine value for production of earth and stone products. The number of tons was multiplied by an economic royalty rate determined by the Division of Property Taxation to determine income. The income was multiplied by a recommended Hoskold factor to determine the actual value. The Hoskold factor is determined by the life of the reserves or the lease. Value is based on two 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 Procedures

# 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



# VACANT LAND

# **Subdivision Discounting**

Subdivisions were reviewed in 2010 in Las Animas 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.

#### Conclusions

Las Animas 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, concession, contract, or other agreement.

Las Animas County has been reviewed for their procedures and adherence to guidelines when assessing and valuing agricultural and commercial possessory interest properties. The county has also been queried as to their confidence that the possessory interest properties have been discovered and placed on the tax rolls.

#### Conclusions

Las Animas County has implemented a discovery process to place possessory interest properties on the roll. They have also correctly and consistently applied the correct procedures and valuation methods in the valuation of possessory interest properties.

#### Recommendations



# PERSONAL PROPERTY AUDIT

Las Animas County was studied for its procedural compliance with the personal property assessment outlined in the Assessor's Reference Library (ARL) Volume 5, and in the State of Equalization Board (SBOE) requirements for the assessment of personal property. The SBOE requires that counties use ARL Volume 5, including current discovery, documentation classification, 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.

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

- Public Record Documents
- Chamber of Commerce/Economic Development Contacts
- Local Telephone Directories, Newspapers or Other Local Publications
- Personal Observation, Physical Canvassing or Word of Mouth

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

Las Animas County submitted their personal property written audit plan and was current for the 2010 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:

- New businesses filing for the first time
- Non-filing Accounts Best Information Available
- Businesses changing locations
- All businesses on a 6 to 8 year rotation



# **Conclusions**

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

#### Recommendations



# WILDROSE AUDITOR STAFF

Harry J. Fuller, Audit Project Manager

Suzanne Howard, Audit Administrative Manager

Steve Kane, Audit Statistician/Field Analyst

Carl W. Ross, Agricultural/Natural Resource Analyst

J. Andrew Rodriguez, Field Analyst



# APPENDICES

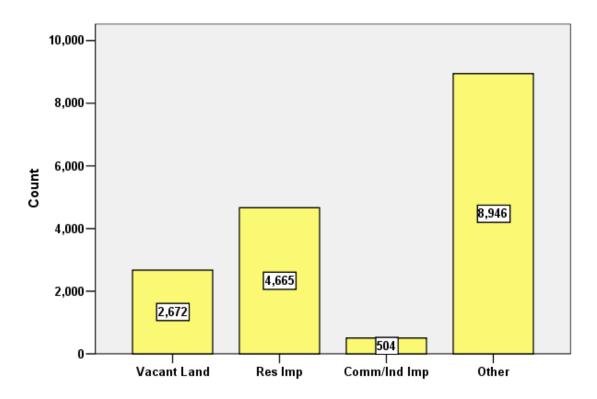


# STATISTICAL RESULTS FOR LAS ANIMAS COUNTY 2010

#### I. OVERVIEW

Las Animas County is located in southern Colorado. The county has a total of 16,787 real property parcels, according to data submitted by the county assessor's office in 2010. The following provides a breakdown of property classes for this county:

#### Real Property Class Distribution



The vacant land class of properties was dominated by residential land. Residential lots (coded 100 and 1112) accounted for 76% of all vacant land parcels.

For residential improved properties, single family properties accounted for 91% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial properties accounted for 3% of all such properties in this county.



#### II. DATA FILES

The following sales analyses were based on the requirements of the 2010 Colorado Property Assessment Study. Information was provided by the Las Animas Assessor's Office in April 2010. 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:

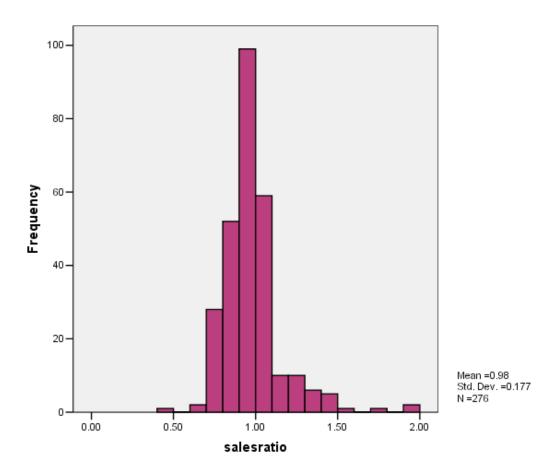
1. All sales	7,068
2. Select qualified sales	1,105
3. Select improved sales	662
2. Select residential sales only	609
3. Sales between January 1, 2007 and June 30, 2008	276

The sales ratio analysis was analyzed as follows:

Median	0.970
Price Related Differential	1.029
Coefficient of Dispersion	.118

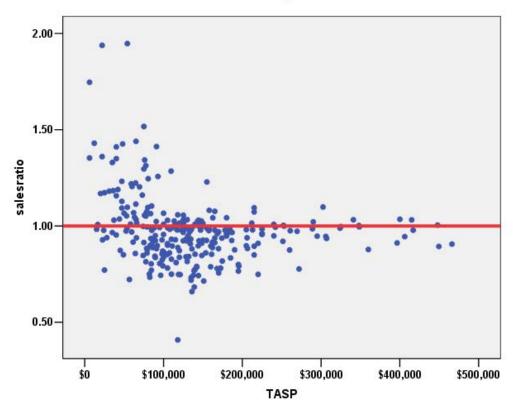
The above ratio statistics were in compliance with the standards set forth by the Colorado State Board of Equalization (SBOE) for the overall residential sales. The following graphs describe further the sales ratio distribution for these properties:











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. The following indicates that there was no statistically significant residual trend based on the sale ratios:

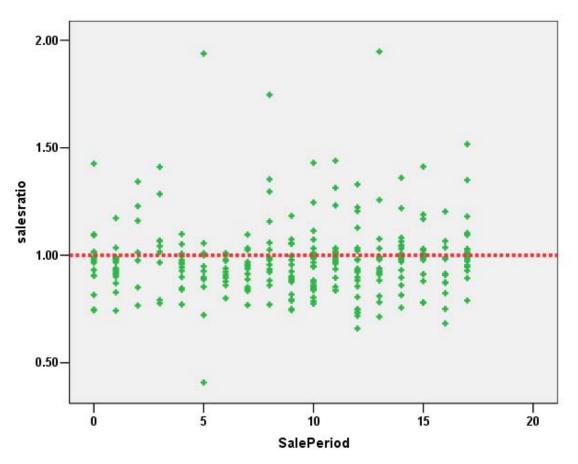
Coefficientsa

		Unstand Coeffi	lardized cients	Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	.962	.022		43.773	.000
	SalePeriod	.002	.002	.049	.813	.417

a. Dependent Variable: salesratio



#### Residential Sale Price Market Trend



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 actual value per square foot for 2010 between each group and stratified the results by subdivision, as follows:

Group	No. Sales	Median	Mean
Unsold	4,357	\$55.90	\$59.48
Sold	276	\$66.13	\$69.54

Based on the gap seen above between sold and unsold properties, we next checked the difference between sold and unsold residential properties using the median and mean change in value between 2008 and 2010 for both groups, as follows:



Group	No. Sales	Median	Mean
Unsold	4,357	1.00	1.25
Sold	276	1.03	1.12

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

#### IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

The following steps were taken to analyze the commercial sales:

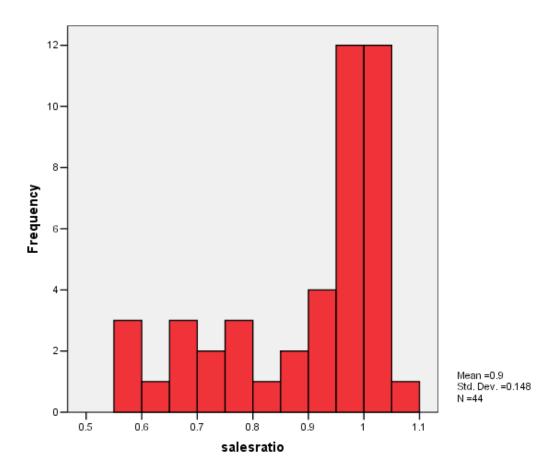
1. All sales	7,068
2. Select qualified sales	1,105
3. Select improved sales	662
4. Select commercial sales	44

The sales ratio analysis was analyzed as follows:

Median	0.967
Price Related Differential	1.134
Coefficient of Dispersion	.113

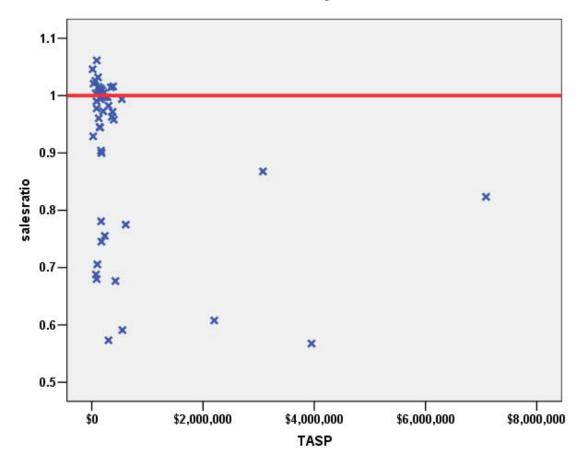
The above table indicates that the Las Animas County commercial/industrial sale ratios were in compliance with the SBOE standards for the median sales ratio and corresponding COD. The following histogram and scatter plot describe the sales ratio distribution further:







# Commercial Sale Price by Sales Ratio



# **Commercial Market Trend Analysis**

The assessor did not apply any market trend adjustment to the commercial dataset. The commercial sales were analyzed, examining the sale ratios across the 18 month sale period with the following results and stratifying the results by commercial subclass:

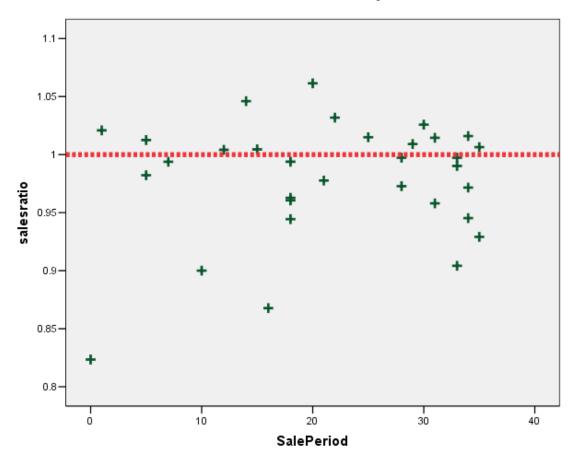
Coefficientsa

		Unstandardized Coefficients		Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	.965	.021		46.878	.000
	SalePeriod	.001	.001	.142	.785	.439

a. Dependent Variable: salesratio



# Commercial Market Trend Analysis



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

# **Sold/Unsold Analysis**

We compared the median actual value per square foot between sold and unsold commercial properties to determine if the assessor was valuing each group consistently. The following results indicate that, based on the median actual value, both groups were valued overall in a consistent manner:

Group	No, Props	Median Val / SF
Unsold	471	\$40
Sold	43	\$44



#### V. VACANT LAND SALE RESULTS

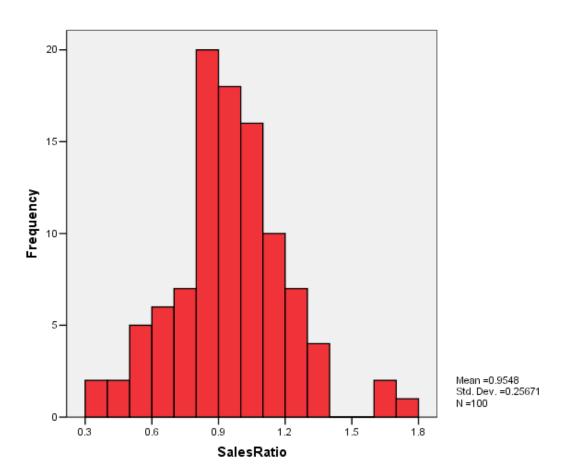
The following steps were taken to analyze vacant land sales:

1. All sales	7,068
2. Select qualified sales	1,105
3. Select vacant land sales	291
4. Select sales occurring between January 2007 and June 2008	100

The sales ratio analysis was analyzed as follows:

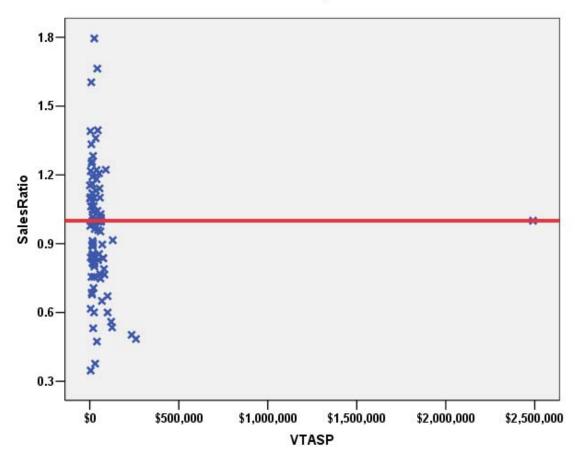
Median	0.990
Price Related Differential	1.043
Coefficient of Dispersion	.195

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









# **Vacant Land Market Trend Analysis**

The assessor did apply market trend adjustments to the vacant land dataset. The 100 vacant land sales were analyzed, examining the sale ratios across the 18 month sale period with the following results:

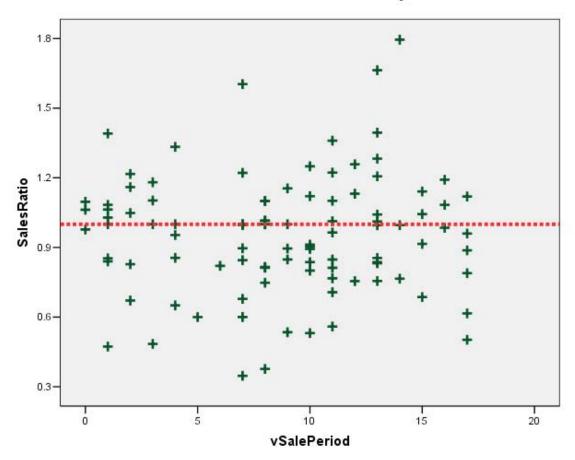
#### Coefficientsa

			lardized cients	Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	.940	.053		17.612	.000
	vSalePeriod	.002	.005	.031	.305	.761

a. Dependent Variable: SalesRatio



# Vacant Land Sales Market Trend Analysis



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

# **Sold/Unsold Analysis**

We compared the median change in actual value between 2008 and 2010 for vacant land properties to determine if sold and unsold properties were valued consistently. We performed the analysis stratifying the properties by subdivision, as follows:



Subdivision	Group	N	Median	Mean
1165	Unsold	14	1.00	.97
	Sold	4	1.00	1.00
1185	Unsold	226	1.72	2.03
	Sold	4	1.72	2.00
1615	Unsold	16	1.00	.98
	Sold	12	1.00	1.00
1778	Unsold	30	1.47	1.46
	Sold	8	1.47	1.47
5580	Unsold	222	1.35	1.30
	Sold	13	1.35	1.35
5640	Unsold	70	.83	.83
	Sold	6	.83	.79
5740	Unsold	133	1.00	1.00
	Sold	9	1.00	1.00
5760	Unsold	95	1.00	1.01
	Sold	4	1.00	1.01
5781	Unsold	2	1.17	1.17
	Sold	6	1.33	1.33

The above results when stratified by subdivision indicated that sold and unsold vacant land properties were valued consistently.

#### 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 Las Animas County.

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



#### Descriptives

	ABSTRIMP			Statistic	Std. Error
ImpValSF	1212.00	Mean		\$173.88	\$64.674
		95% Confidence	Lower Bound	\$47.09	
		Interval for Mean	Upper Bound	\$300.67	
		5% Trimmed Mean		\$51.53	
		Median		\$49.55	)
		Variance		20503504.849	
		Std. Deviation		\$4,528.080	
		Minimum		\$0	
		Maximum		\$252,372	
		Range		\$252,372	
		Interquartile Range		\$30	
		Skewness		48.465	.035
		Kurtosis		2471.209	.070
	1277.00	Mean		\$167.46	\$80.520
		95% Confidence	Lower Bound	\$8.78	
		Interval for Mean	Upper Bound	\$326.14	
		5% Trimmed Mean		\$50.28	
		Median		\$52.19	
		Variance		1445822.918	
		Std. Deviation		\$1,202.424	
		Minimum		\$0	
		Maximum		\$15,000	
		Range		\$15,000	
		Interquartile Range		\$37	
		Skewness		11.019	.163
		Kurtosis		124.811	.324

# VI. Conclusions

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



#### STATISTICAL ABSTRACT

#### Residential

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

Mean		.978
95% Confidence Interval	Lower Bound	.957
for Mean	Upper Bound	.999
Median		.970
95% Confidence Interval	Lower Bound	.948
for Median	Upper Bound	.981
	Actual Coverage	95.3%
Weighted Mean		.951
95% Confidence Interval	Lower Bound	.937
for Weighted Mean	Upper Bound	.965
Price Related Differential		1.029
Coefficient of Dispersion		.118
Coefficient of Variation	Mean Centered	18.1%

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.

#### Commercial/Industrial

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

Mean		.897
95% Confidence Interval	Lower Bound	.853
for Mean	Upper Bound	.942
Median		.967
95% Confidence Interval	Lower Bound	.904
for Median	Upper Bound	.994
	Actual Coverage	95.1%
Weighted Mean		.792
95% Confidence Interval	Lower Bound	.704
for Weighted Mean	Upper Bound	.879
Price Related Differential		1.134
Coefficient of Dispersion		.113
Coefficient of Variation	Mean Centered	16.4%

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



# **Vacant Land**

#### **Ratio Statistics for CURRLND / VTASP**

Mean		.955
95% Confidence Interval	Lower Bound	.904
for Mean	Upper Bound	1.006
Median		.990
95% Confidence Interval	Lower Bound	.893
for Median	Upper Bound	1.000
	Actual Coverage	96.5%
Weighted Mean		.916
95% Confidence Interval	Lower Bound	.828
for Weighted Mean	Upper Bound	1.003
Price Related Differential		1.043
Coefficient of Dispersion		.195
Coefficient of Variation	Mean Centered	26.9%

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.

# **Residential Median Ratio Stratification**

#### Sale Price

#### **Case Processing Summary**

		Count	Percent
SPRec	LT \$25K	12	4.3%
	\$25K to \$50K	19	6.9%
	\$50K to \$100K	76	27.5%
	\$100K to \$150K	84	30.4%
	\$150K to \$200K	40	14.5%
	\$200K to \$300K	28	10.1%
	\$300K to \$500K	17	6.2%
Overall		276	100.0%
Excluded		0	
Total		276	



# **Ratio Statistics for CURRTOT / TASP**

				Coefficient of Variation
		Price Related	Coefficient of	Median
Group	Median	Differential	Dispersion	Centered
LT \$25K	1.171	1.043	.225	30.2%
\$25K to \$50K	1.128	1.000	.124	15.3%
\$50K to \$100K	.983	1.012	.144	20.7%
\$100K to \$150K	.933	1.001	.099	13.1%
\$150K to \$200K	.931	1.002	.086	11.3%
\$200K to \$300K	.967	1.000	.058	8.2%
\$300K to \$500K	.989	1.003	.048	6.2%
Overall	.970	1.029	.118	18.2%

# **Subclass**

# **Case Processing Summary**

		Count	Percent
PredUse	1112	264	95.7%
	1120	2	.7%
	1212	10	3.6%
Overall		276	100.0%
Excluded		0	
Total		276	

				Coefficient of Variation
		Price Related	Coefficient of	Median
Group	Median	Differential	Dispersion	Centered
1112	.969	1.030	.119	18.3%
1120	.921	1.013	.029	4.2%
1212	.995	1.006	.114	17.7%
Overall	.970	1.029	.118	18.2%



# Age

# **Case Processing Summary**

		Count	Percent
AgeRec	Over 100	32	11.6%
	75 to 100	86	31.2%
	50 to 75	51	18.5%
	25 to 50	45	16.3%
	5 to 25	51	18.5%
	5 or Newer	11	4.0%
Overall		276	100.0%
Excluded		0	
Total		276	

# **Ratio Statistics for CURRTOT / TASP**

				Coefficient of Variation
		Price Related	Coefficient of	Median
Group	Median	Differential	Dispersion	Centered
Over 100	.963	1.041	.143	20.4%
75 to 100	.933	1.061	.152	23.5%
50 to 75	.988	1.045	.131	21.4%
25 to 50	.912	.998	.099	11.9%
5 to 25	.989	1.010	.060	10.8%
5 or Newer	.978	1.014	.049	6.3%
Overall	.970	1.029	.118	18.2%

# **Improved Area**

# **Case Processing Summary**

		Count	Percent
ImpSFRec	LE 500 sf	1	.4%
	500 to 1,000 sf	28	10.1%
	1,000 to 1,500 sf	80	29.0%
	1,500 to 2,000 sf	64	23.2%
	2,000 to 3,000 sf	75	27.2%
	3,000 sf or Higher	28	10.1%
Overall		276	100.0%
Excluded		0	
Total		276	



# **Ratio Statistics for CURRTOT / TASP**

				Coefficient of Variation
		Price Related	Coefficient of	Median
Group	Median	Differential	Dispersion	Centered
LE 500 sf	1.128	1.000	.000	
500 to 1,000 sf	.966	1.075	.178	25.5%
1,000 to 1,500 sf	.970	1.033	.127	19.8%
1,500 to 2,000 sf	.928	1.018	.113	15.3%
2,000 to 3,000 sf	.983	1.025	.096	14.4%
3,000 sf or Higher	.993	1.045	.094	20.6%
Overall	.970	1.029	.118	18.2%

# **Improved Quality**

# **Case Processing Summary**

	Count	Percent
QUAL 1	6	2.2%
2	50	18.1%
3	149	54.0%
4	54	19.6%
5	15	5.4%
6	2	.7%
Overall	276	100.0%
Excluded	0	
Total	276	

				Coefficient of Variation
		Price Related	Coefficient of	Median
Group	Median	Differential	Dispersion	Centered
1	1.082	1.101	.220	31.4%
2	1.041	1.063	.139	21.3%
3	.967	1.011	.100	15.9%
4	.883	.990	.105	13.6%
5	.906	.979	.090	10.9%
6	.872	.958	.122	17.2%
Overall	.970	1.029	.118	18.2%



# **Commercial Median Ratio Stratification**

# **Sale Price**

# **Case Processing Summary**

		Count	Percent
SPRec	LT \$25K	2	4.5%
	\$25K to \$50K	1	2.3%
	\$50K to \$100K	7	15.9%
	\$100K to \$150K	7	15.9%
	\$150K to \$200K	7	15.9%
	\$200K to \$300K	6	13.6%
	\$300K to \$500K	7	15.9%
	\$500K to \$750K	3	6.8%
	Over \$1,000K	4	9.1%
Overall		44	100.0%
Excluded		0	
Total		44	

				Coefficient
				of
				Variation
		Price Related	Coefficient of	Median
Group	Median	Differential	Dispersion	Centered
LT \$25K	.988	1.015	.059	8.4%
\$25K to \$50K	1.021	1.000	.000	
\$50K to \$100K	.990	1.002	.108	18.2%
\$100K to \$150K	.961	.994	.068	11.7%
\$150K to \$200K	.904	1.001	.093	12.1%
\$200K to \$300K	.985	1.015	.118	21.4%
\$300K to \$500K	.972	1.007	.061	12.7%
\$500K to \$750K	.775	1.002	.173	26.1%
Over \$1,000K	.716	.967	.180	21.1%
Overall	.967	1.134	.113	16.9%



# **Subclass**

# **Case Processing Summary**

		Count	Percent
PredUse	2112	15	34.1%
	2115	4	9.1%
	2120	4	9.1%
	2125	1	2.3%
	2130	11	25.0%
	2135	7	15.9%
	2140	1	2.3%
	3115	1	2.3%
Overall		44	100.0%
Excluded		0	
Total		44	

				Coefficient of Variation
		Price Related	Coefficient of	Median
Group	Median	Differential	Dispersion	Centered
2112	.963	1.290	.098	16.0%
2115	.846	1.038	.133	20.0%
2120	1.001	1.001	.013	1.9%
2125	.944	1.000	.000	
2130	.958	1.024	.134	18.9%
2135	.990	1.019	.106	17.5%
2140	.994	1.000	.000	
3115	.591	1.000	.000	
Overall	.967	1.134	.113	16.9%



# **Vacant Land Median Ratio Stratification**

# **Case Processing Summary**

	Count	Percent
VPredUse	2	2.0%
0100	73	73.0%
0200	6	6.0%
0300	7	7.0%
0510	1	1.0%
0520	4	4.0%
0530	1	1.0%
1112	6	6.0%
Overall	100	100.0%
Excluded	0	
Total	100	

				Coefficient of Variation
		Price Related	Coefficient of	Median
Group	Median	Differential	Dispersion	Centered
	.600	.826	.422	59.7%
0100	.996	1.015	.179	24.0%
0200	.600	1.173	.319	53.1%
0300	1.000	.988	.110	27.4%
0510	1.217	1.000	.000	
0520	1.128	1.079	.216	33.5%
0530	.964	1.000	.000	
1112	.816	.896	.107	22.6%
Overall	.990	1.043	.195	26.2%