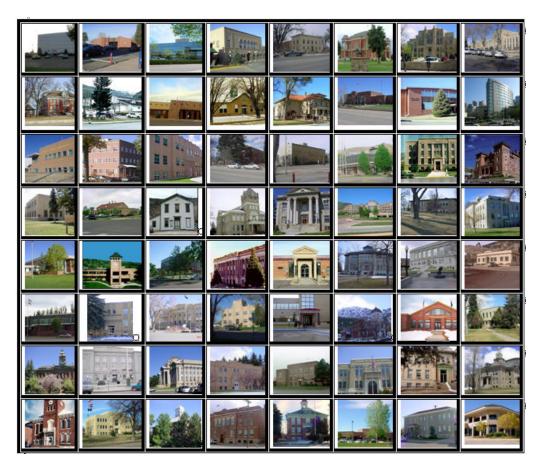


# 2011 CLEAR CREEK COUNTY PROPERTY ASSESSMENT STUDY







September 15, 2011

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

RE: Final Report for the 2011 Colorado Property Assessment Study

Dear Mr. Mauer:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2011 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 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.

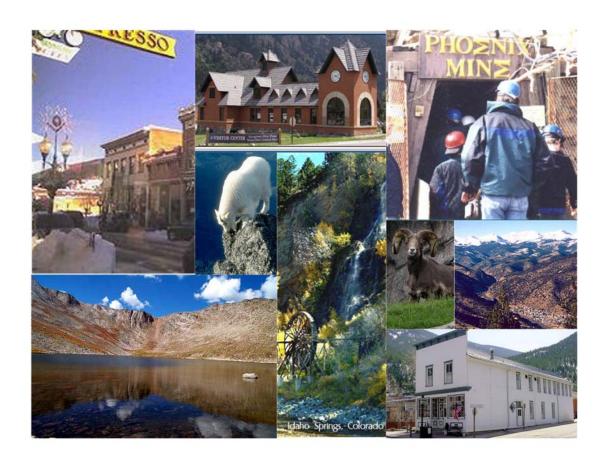
Wildrose Audit has completed the Property Assessment Study for 2011 and is pleased to report its findings for Clear Creek County in the following report.



# REGIONAL/HISTORICAL SKETCH OF CLEAR CREEK COUNTY

# **Regional Information**

Clear Creek 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**

Clear Creek County has a population of approximately 9,088 people with 22.94 people per square mile, according to the U.S. Census Bureau's 2010 census data. This represents a -2.51 percent change from the 2000 Census.

Clear Creek County was one of the original 17 counties created by the Colorado legislature on 1 November 1861, and is one of only two counties (along with Gilpin) to have persisted with its original boundaries unchanged. It was named after Clear Creek, which runs down from the continental divide through the county. Idaho Springs was originally designated the county seat, but the county government was moved to Georgetown in 1867.

George Jackson discovered gold in a sandbar in the western reaches of Clear Creek (then called Vasquez Creek) just south of present-day Idaho Springs in January, 1859, thus starting the Colorado Gold Rush. Within a year, almost every foot of upper Clear Creek was staked out as a placer claim by miners eager to find their fortune by gold panning. It wasn't long, however, before the creek's easily accessible placer deposits were panned out.

The heartier miners shifted their focus to hardrock mining, using the hydro-energy from the creek to help with milling operations. Miners continued to venture west, and in 1864 silver discovered in Georgetown. With was thousands of mines in operation, the population of Clear Creek Watershed swelled, at one point reaching 50,000 residents. The first train ran up Clear Creek Canyon in 1872 to Black Hawk. Mining and milling boomed in the area until the late 1890s. Silver mining continued for only two decades until the United States government removed silver as a standard for our monetary system. Gold mining continued sporadically in the communities along the creek until the early 1940s, when it could no longer be sustained.

People today can experience some of Clear Creek County's history by visiting the Georgetown Loop Railroad, a famous railroad that climbs several hundred feet between Georgetown and Silver Plume in a short distance by looping over itself and by taking in the Phoenix Mine, a working gold mine with tours and gold panning available to the public. (Wikipedia.org, clearcreekwater.org &peaktopeak.com)



# RATIO ANALYSIS

# Methodology

All significant classes of properties were analyzed. Sales were collected for each 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 Clear Creek County are:

Clear Creek County Ratio Grid							
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis		
Commercial/Industrial	29	0.989	1.014	8.4	Compliant		
Condominium	N/A	N/A	N/A	N/A	N/A		
Single Family	206	1.004	1.021	10.7	Compliant		
Vacant Land	68	0.971	0.992	18.7	Compliant		

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

Clear Creek 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 2011 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

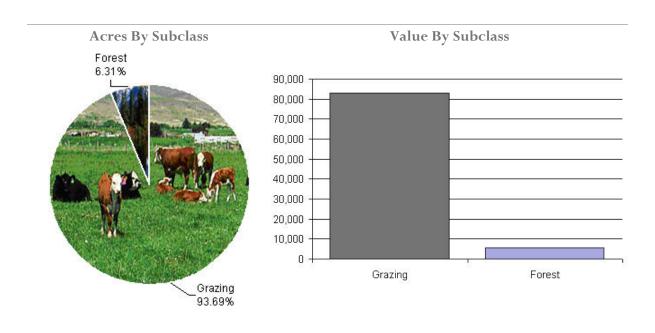
#### Conclusions

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



	Clear Creek County Agricultural Land Ratio Grid						
Number County County WRA Abstract Of Value Assessed Total							
Code	Land Class	Acres	Per Acre T	Total Value	Value	Ratio	
4147	Grazing	13,256	6.00	83,006	83,006	1.00	
4177	Forest	893	6.00	5,592	5,592	1.00	
Total/Avg		14,149	6.00	88,598	88,598	1.00	

#### 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**

Clear Creek 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 2011 for Clear Creek County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 30 sales listed as unqualified.

All but one of the sales selected in the sample gave reasons that were clear and supportable. One sale had insufficient documentation.

#### Conclusions

Clear Creek County appears to be doing a good job of verifying their sales. There are no recommendations.

#### Recommendations



# EVALUATION EVALUATION

# Methodology

Clear Creek County has submitted a written narrative describing the economic areas that make up the county's market areas. Clear Creek 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 Clear Creek 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 Mine Valuation Procedures

# Methodology

Colorado Revised Statutes (CRS) Article 39, Section 6, and the Assessor's Reference Library (ARL), Volume 3 are the basis for valuing producing mine property. The gross value of the ore extracted during the preceding year is determined. All costs of treatment, reduction, transportation and sale are deducted to estimate gross proceeds. The costs of extraction are deducted from the gross proceeds to estimate net proceeds.

The current value for assessment is determined by determining if 25% of the gross proceeds or 100% of the net proceeds is greater, then applying that number as the valuation for assessment.

#### Conclusions

The County valued the producing mine production using acceptable appraisal procedures.

#### Recommendations



# VACANT LAND

# **Subdivision Discounting**

Subdivisions were reviewed in 2011 in Clear Creek County. The review showed that subdivisions were discounted pursuant to the Colorado Revised Statutes in Article 39-1-103 (14). Discounting procedures were applied to all subdivisions where less than 80 percent of all sites were sold using the present worth method. The market approach was applied where 80 percent or more of the subdivision sites were sold. An absorption period was estimated for each subdivision that was discounted. An appropriate discount rate was

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

#### Conclusions

Clear Creek 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.

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

#### Conclusions

Clear Creek 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

Clear Creek 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 procedures, classification, current economic lives table, cost factor tables, depreciation table, and level of value adjustment factor table.

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

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

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

Clear Creek 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
- 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.

Clear Creek County submitted their personal property written audit plan and was current for the 2011 valuation period. The number and listing of businesses audited was also submitted and was in conformance with the written audit plan. The following audit triggers were used by the county to select accounts to be audited:

- Accounts with obvious discrepancies
- Incomplete or inconsistent declarations
- Non-filing Accounts Best Information Available
- Accounts protested with substantial disagreement

#### Conclusions

Clear Creek 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



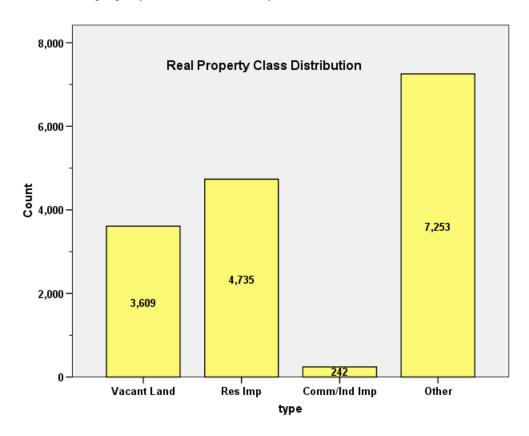
# APPENDICES



# STATISTICAL COMPLIANCE REPORT FOR CLEAR CREEK COUNTY 2011

#### I. OVERVIEW

Clear Creek County is located in central Colorado. The county has a total of 15,839 real property parcels, according to data submitted by the county assessor's office in 2011. 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 and 1112) accounted for 62% of all vacant land parcels.

For residential improved properties, single family properties accounted for 94% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial sales accounted for less than 2% of all such properties in this county.



#### II. DATA FILES

The following sales analyses were based on the requirements of the 2011 Colorado Property Assessment Study. Information was provided by the Clear Creek Assessor's Office in May 2011. The data included all 5 property record files as specified by the Auditor.

#### III. RESIDENTIAL SALES RESULTS

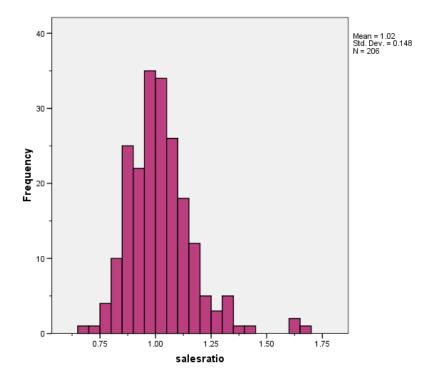
The following steps were taken to analyze the residential sales:

1. Total sales	2,166
2. Selected qualified sales	1,285
3. Select improved sales	793
4 Select residential sales only	758
5 Sales between January 1, 2009 and June 30, 2010	206

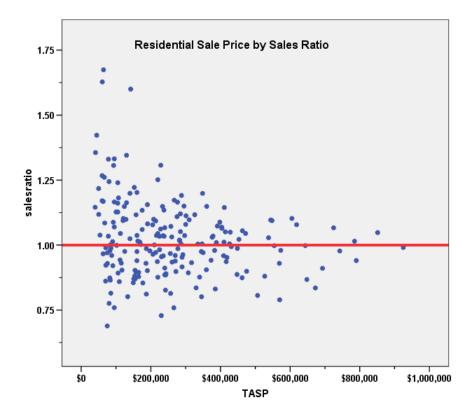
The sales ratio analysis was analyzed as follows:

Median	1.004
Price Related Differential	1.021
Coefficient of Dispersion	.107

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**

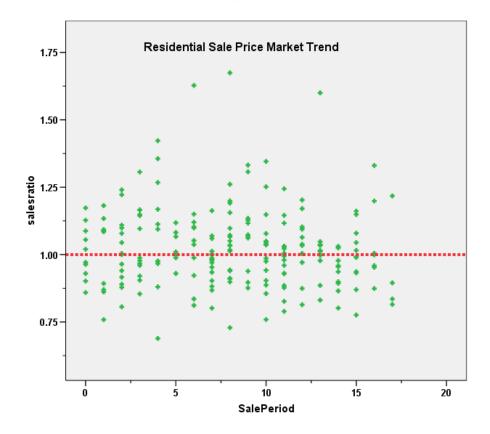
We next analyzed the residential dataset using the 18-month sale period for any residual market trending, with the following results:

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients		
		В	Std. Error	Beta	t	Sig.
1	(Constant)	1.040	.021		50.517	.000
	SalePeriod	002	.002	068	978	.329

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 actual value per square foot for 2011 between each group, as follows:

Group	No.	Median	Mean
Unsold	4,495	\$153	\$162
Sold	204	\$160	\$167

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



#### IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

A separate commercial sales file that ranges from July 2003 to June 2008 was provided by the assessor. The following steps were taken to analyze these commercial/industrial sales:

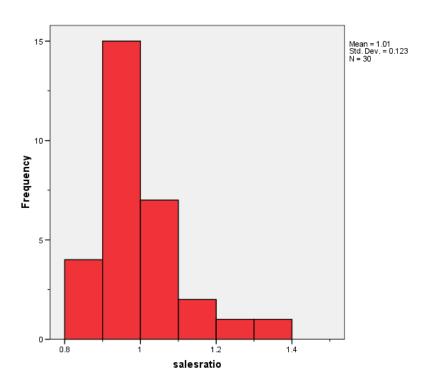
1. Total sales	2,166
2. Selected qualified sales	1,285
3. Select commercial/industrial sales	29

Because there were fewer than 30 sales, one supplemental appraisal of an unsold commercial property was 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 29 sold properties for the market trending and sold/unsold analysis.

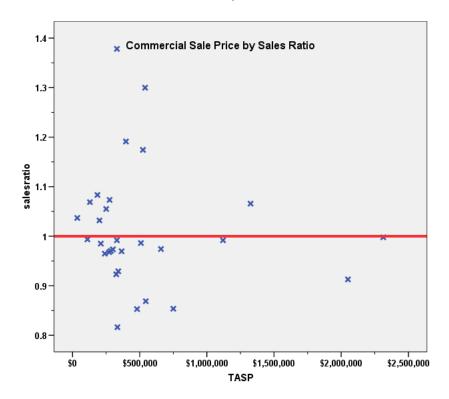
The sales ratio analysis was analyzed as follows:

Median	0.989
Price Related Differential	1.014
Coefficient of Dispersion	.084

The above table indicates that the Clear Creek 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**

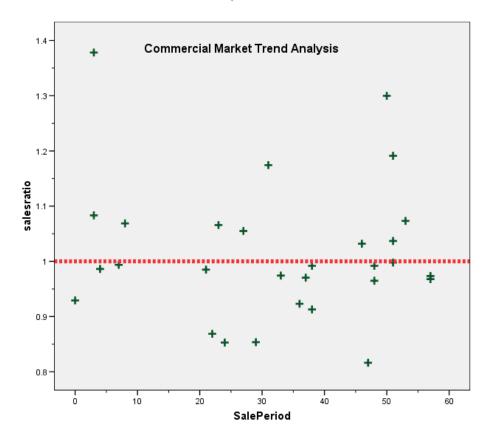
The assessor did not apply any market trend adjustment to the commercial dataset. The 29 commercial/industrial sales were analyzed, examining the sale ratios across a 60 month sale period with the following results:

Coefficients<sup>a</sup>

Model	I	Unstandardized Coefficients		Standardized Coefficients		
		В	Std. Error	Beta	t	Sig.
1	(Constant)	1.031	.049		21.010	.000
	SalePeriod	001	.001	074	383	.704

a. Dependent Variable: salesratio





The market trend results indicated no statistically significant trend. We concluded that the assessor has adequately considered market trending in their commercial/industrial valuations.

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

We compared the median change in value between 2010 and 2011 between sold and unsold commercial properties to determine if the assessor was valuing each group consistently, as follows

Subclass	Group	No.	Median	Mean
Total	Unsold	212	0.98	1.00
	Sold	29	1.07	1.14

The above results indicate that the assessor has valued sold and unsold commercial properties consistently.



#### V. VACANT LAND SALE RESULTS

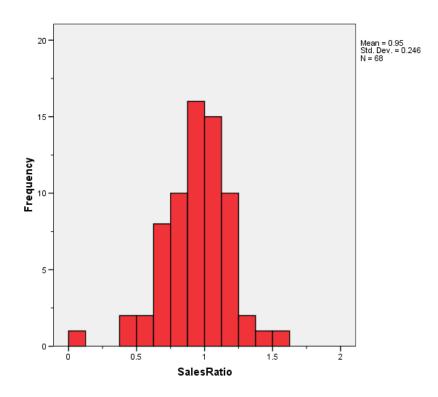
The following steps were taken to analyze vacant land sales:

1. Total sales	2,166
2. Selected qualified sales	1,285
3. Select vacant land sales	336
4. Select non-agricultural sales	310
5. Sales between July 1, 2008 and June 30, 2010	70
6. Trim three extreme ratios	68

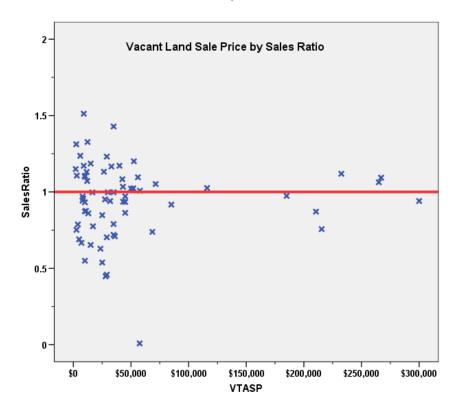
The sales ratio analysis was analyzed as follows:

Median	0.971
Price Related Differential	0.992
Coefficient of Dispersion	.187

The above tables indicate that the Clear Creek 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**

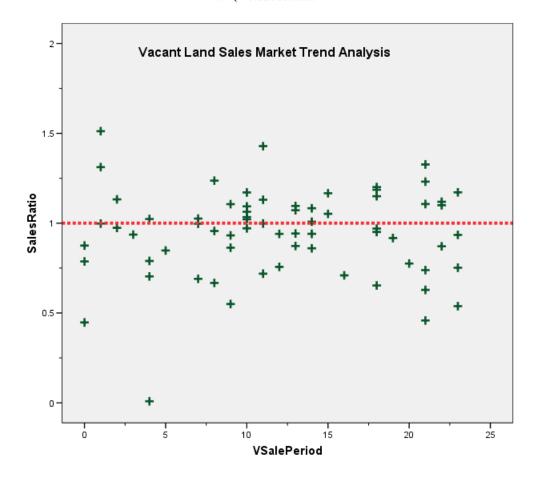
The assessor did apply market trend adjustment to the vacant land dataset. We analyzed the sales ratios for vacant land sales, based on the time adjusted sale price (TASP) and the actual land value to determine if there was any residual time trending in the vacant land valuations. The 68 vacant land sales were analyzed, examining the sales ratios across the 24 month sale period with the following results:

Coefficients<sup>a</sup>

Mod	del	Unstandardize	d Coefficients	Standardized Coefficients		
		В	Std. Error	Beta	t	Sig.
1	(Constant)	.929	.061		15.264	.000
	VSalePeriod	.001	.004	.038	.312	.756

a. Dependent Variable: SalesRatio





The market trend analysis indicated no statistically significant trend. Based on these results, we concluded that the assessor has adequately considered market trending in their vacant land valuations.

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

We compared the median change in actual value between 2010 and 2011 for vacant land properties to determine if sold and unsold properties were valued consistently, as follows:

Group	N	Median	Mean
Unsold	3,482	1.0000	0.9862
Sold	641	1.0000	1.0727

The above results indicated that sold properties were not valued consistently more than unsold properties.

#### V. AGRICULTURAL IMPROVEMENTS ANALYSIS

The final statistical verification concerned the assigned actual values for agricultural residential improvements; based on the parameters developed for the 2011 audit. Clear Creek County was exempt from this analysis.



# VI. CONCLUSIONS

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



#### STATISTICAL ABSTRACT Residential

#### Ratio Statistics for CURRTOT / TASP

	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
1.022	1.002	1.043	1.004	.987	1.031	95.7%	1.002	.985	1.018	1.021	.107	14.5%

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.

#### Commercial/Industrial

#### Ratio Statistics for CURRTOT / TASP

	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
1.013	.967	1.059	.989	.970	1.037	95.7%	.998	.952	1.045	1.014	.084	12.2%

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	ice Interval for an		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
.945	.886	1.005	.971	.932	1.025	96.2%	.953	.891	1.015	.992	.187	26.0%

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.



# **Residential Median Ratio Stratification**

#### Sale Price

	Case Processing	Summary	
		Count	Percent
SPRec	\$25K to \$50K	4	1.9%
	\$50K to \$100K	38	18.4%
	\$100K to \$150K	23	11.2%
	\$150K to \$200K	26	12.6%
	\$200K to \$300K	53	25.7%
	\$300K to \$500K	41	19.9%
	\$500K to \$750K	17	8.3%
	\$750K to \$1,000K	4	1.9%
Overall		206	100.0%
Excluded	ı	0	
Total		206	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
\$25K to \$50K	1.287	1.000	.081	9.8%
\$50K to \$100K	1.007	1.008	.153	21.8%
\$100K to \$150K	1.094	.997	.125	16.6%
\$150K to \$200K	.976	1.000	.094	11.7%
\$200K to \$300K	1.017	1.000	.088	11.4%
\$300K to \$500K	1.005	1.000	.073	9.2%
\$500K to \$750K	.980	.999	.088	10.8%
\$750K to \$1,000K	1.003	.999	.033	4.5%
Overall	1.004	1.021	.107	14.8%



#### **Subclass**

C	Case Processing Summary								
		Count	Percent						
abstrimp	1212	178	86.4%						
	1220	1	.5%						
	1225	1	.5%						
	1230	26	12.6%						
Overall		206	100.0%						
Excluded		0							
Total		206							

#### Ratio Statistics for CURRTOT / TASP

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
1212	1.011	1.021	.112	15.3%
1220	1.118	1.000	.000	.%
1225	.991	1.000	.000	.%
1230	.994	1.007	.072	10.5%
Overall	1.004	1.021	.107	14.8%

# Age

Case Processing Summary						
	Count	Percent				
Over 100	27	13.1%				
75 to 100	1	.5%				
50 to 75	19	9.2%				
25 to 50	96	46.6%				
5 to 25	52	25.2%				
5 or Newer	11	5.3%				
	206	100.0%				
	0					
	206					
	Over 100 75 to 100 50 to 75 25 to 50 5 to 25	Over 100 27 75 to 100 1 50 to 75 19 25 to 50 96 5 to 25 52 5 or Newer 11 206 0				

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
Over 100	.972	1.016	.100	13.4%
75 to 100	1.012	1.000	.000	.%
50 to 75	.963	1.026	.149	19.7%
25 to 50	1.012	1.018	.104	15.2%
5 to 25	1.019	1.017	.100	14.2%
5 or Newer	.940	1.033	.113	14.4%
Overall	1.004	1.021	.107	14.8%



# Improved Area

#### Case Processing Summary

		Count	Percent
ImpSFRec	0	2	1.0%
	LE 500 sf	4	1.9%
	500 to 1,000 sf	48	23.3%
	1,000 to 1,500 sf	64	31.1%
	1,500 to 2,000 sf	46	22.3%
	2,000 to 3,000 sf	34	16.5%
	3,000 sf or Higher	8	3.9%
Overall		206	100.0%
Excluded		0	
Total		206	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
0	1.054	1.057	.060	8.5%
LE 500 sf	.946	1.031	.133	20.0%
500 to 1,000 sf	1.007	1.000	.114	14.3%
1,000 to 1,500 sf	1.015	1.035	.131	19.0%
1,500 to 2,000 sf	.975	1.008	.095	12.2%
2,000 to 3,000 sf	1.029	1.018	.070	9.9%
3,000 sf or Higher	1.001	.994	.065	9.2%
Overall	1.004	1.021	.107	14.8%



# **Improvement Quality**

#### **Case Processing Summary**

	Count	Percent
QUALITY 1	1	.5%
2	28	13.7%
3	165	80.9%
4	8	3.9%
5	2	1.0%
Overall	204	100.0%
Excluded	2	
Total	206	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
1	1.306	1.000	.000	.%
2	1.041	1.035	.156	20.1%
3	1.002	1.017	.100	13.8%
4	1.031	1.001	.066	9.1%
5	1.003	1.003	.063	8.9%
Overall	1.004	1.020	.108	14.9%



# **Commercial Median Ratio Stratification**

# **Sale Price**

#### Case Processing Summary

		Count	Percent
SPRec	\$25K to \$50K	1	3.3%
	\$100K to \$150K	2	6.7%
	\$150K to \$200K	2	6.7%
	\$200K to \$300K	7	23.3%
	\$300K to \$500K	8	26.7%
	\$500K to \$750K	6	20.0%
	Over \$1,000K	4	13.3%
Overall		30	100.0%
Excluded		212	
Total		242	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
\$25K to \$50K	1.037	1.000	.000	.%
\$100K to \$150K	1.031	.997	.036	5.1%
\$150K to \$200K	1.058	1.001	.024	3.4%
\$200K to \$300K	.973	1.000	.031	5.4%
\$300K to \$500K	.949	1.004	.133	20.8%
\$500K to \$750K	.980	1.012	.130	18.7%
Over \$1,000K	.995	1.008	.040	6.3%
Overall	.989	1.014	.084	12.7%



# Subclass

#### Case Processing Summary

		Count	Percent
abstrimp	2212	17	56.7%
	2215	4	13.3%
	2230	9	30.0%
Overall		30	100.0%
Excluded		212	
Total		242	

#### Ratio Statistics for CURRTOT / TASP

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
2212	.974	1.003	.076	12.1%
2215	1.029	1.046	.086	11.6%
2230	.986	1.015	.095	15.7%
Overall	.989	1.014	.084	12.7%

# **Vacant Land Median Ratio Stratification**

#### Case Processing Summary

		Count	Percent
abstrind	100	39	57.4%
	200	1	1.5%
	520	17	25.0%
	530	5	7.4%
	540	2	2.9%
	1112	4	5.9%
Overall		68	100.0%
Excluded		0	
Total		68	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
100	.940	.973	.187	24.4%
200	.009	1.000	.000	.%
520	1.022	1.059	.136	18.2%
530	.951	1.061	.175	24.2%
540	1.095	1.001	.001	.2%
1112	.854	.952	.222	27.5%
Overall	.971	.992	.187	25.5%