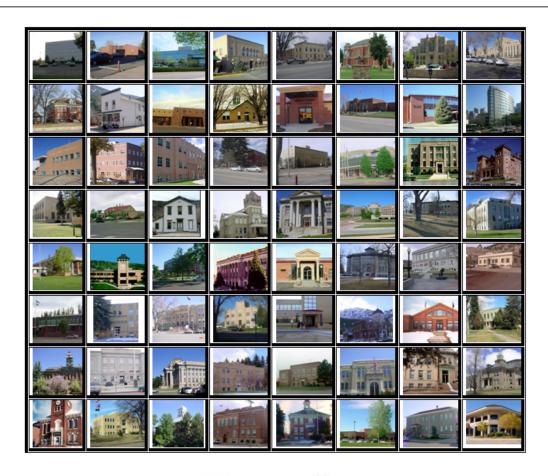


## 2010 DELTA COUNTY PROPERTY ASSESSMENT STUDY





WILDROSE Appraisal, Incorporated Audit Division



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. Dulla

Harry J. Fuller Project Manager Wildrose Appraisal Inc. – Audit Division



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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 Delta County in the following report.



## REGIONAL/HISTORICAL SKETCH OF DELTA COUNTY

## **Regional Information**

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





## **Historical Information**

Delta County has a population of approximately 31,322 people with 24.4 people per square mile, according to the U.S. Census Bureau's 2009 estimated population data.

Delta County is located on Colorado's western slope at the base of Grand Mesa (one of the largest flat top mountains in the world) and was created by the Colorado legislature on February 11, 1883 out of portions of central Gunnison County. The county was named for the City of Delta, which was named for its location on the delta of the Uncompahgre River. The county was primarily settled by a German populace, although many English, Irish and Mexican people brought their roots from the homeland to settle in Delta County.

The city of Delta is situated just west of the Black Canyon of the Gunnison. Seven buildings downtown act as canvasses for local artists displaying murals depicting the local economy, history and the natural surroundings. Another town symbol at the entrance to Delta is Ute Council Tree, an 85-foot cottonwood, once a gathering point for tribal discussions. Today the tree symbolizes the growing connections between Colorado Utes and the Western Slope's other residents.

The Delta County Museum, housed in an old firehouse, recounts the Western Slope's cultural heritage and natural history. The butterfly exhibit contains some of the onlyknown specimens from now extinct species. The Fort Uncompany Living History Museum at the entrance to the 265-acre Confluence Park is staffed by authentically garbed interpreters who guide visitors through an old fur trading post. Just outside Delta is Dry Mesa Quarry, the site where archeologists first discovered Brachiosaurus and Ultrasaurus bones. This dig-in-process is open to the public.

(Wikipedia.org, deltacolorado.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 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	D	
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 Delta County are:

	Delta County Ratio Grid						
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis		
Commercial/Industrial	47	1.036	1.050	14.1	Compliant		
Condominium	N/A	N/A	N/A	N/A	N/A		
Single Family	518	0.988	1.007	9.7	Compliant		
Vacant Land	140	1.000	1.020	10.7	Compliant		

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

Assessor's qualified or unqualified database.

SBOE, DPT, and Colorado State Statute valuation guidelines.

Recommendations
None

## 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

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

Delta 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. Once the percent change was determined for each appropriate class and sub-class, the next step was to select the unsold sample. This sample

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

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

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



Sold/Unsold Re	sults
Property Class	Results
Commercial/Industrial	Compliant
Condominium	N/A
Single Family	Compliant
Vacant Land	Compliant

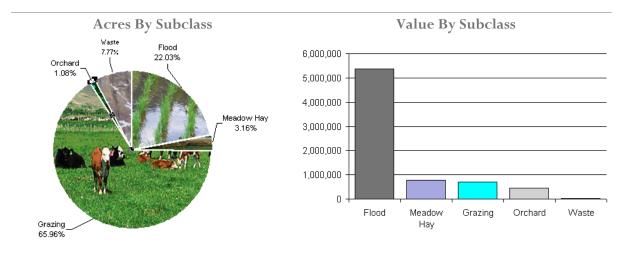
## Conclusions

## Recommendations

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



## 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 yields, any locally developed 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:



	Delta County Agricultural Land Ratio Grid						
Abstract Code	Land Class	Number Of Acres	County Value Per Acre	County Assessed Fotal Value	WRA Total Value	Ratio	
4117	Flood	59,524	90.00	5,376,996	5,834,759	0.92	
4137	Meadow Hay	8,537	91.00	779,978	779,978	1.00	
4147	Grazing	178,216	4.00	698,463	698,463	1.00	
4157	Orchard	2,915	155.00	451,831	451,831	1.00	
4167	Waste	21,000	2.00	33,917	33,917	1.00	
Total/Avg		270,192	27.00	7,341,184	7,798,947	0.94	

## 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

Delta 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)(1) 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 Delta 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 four of the sales selected in the sample gave reasons that were clear and supportable. Four sales had insufficient documentation.

### Conclusions

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

Recommendations



## ECONOMIC AREA REVIEW AND EVALUATION

## Methodology

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



## **Producing Coal Mines**

## Methodology

Under the guidelines of the Assessor's Reference Library (ARL), Volume 3, Section 6, Valuation of Producing Coal Leaseholds and Lands, the income approach is the primary method applied to find value for the valuation of coalmines. This methodology estimates annual economic royalty income based on previous year's production, then capitalizes

that income to value using a Hoskold factor to estimate the present worth of the permitted acres. The operator provides production data and the life of the leases.

### Conclusions

County has applied the correct formulas and state guidelines to coal mine valuation.

**Recommendations** 



## VACANT LAND

#### **Subdivision Discounting**

Subdivisions were reviewed in 2010 in Delta 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

Delta 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 granted under lease, permit, license, concession, contract, or other agreement.

Delta 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

Delta 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

Delta 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.

Delta 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
- 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.

Delta 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:

- Businesses in a selected area
- Accounts with obvious discrepancies
- New businesses filing for the first time
- Accounts with greater than 10% change
- Incomplete or inconsistent declarations
- Accounts with omitted property
- Businesses with no deletions or additions for 2 or more years



- Non-filing Accounts Best Information Available
- Accounts close to the \$4,000 actual value exemption status
- Lowest or highest quartile of value per square foot
- Accounts protested with substantial disagreement

## Conclusions

Delta 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



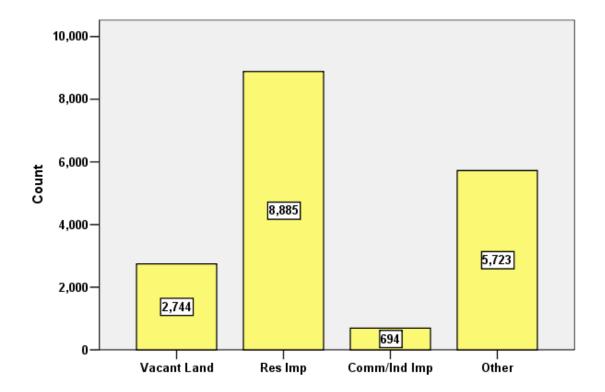
## **A P P E N D I C E S**



## STATISTICAL RESULTS FOR DELTA COUNTY 2010

#### **I. OVERVIEW**

Delta County is located in southwestern Colorado. The county has a total of 18,046 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 52% of all vacant land parcels, followed by mobile home lots (1135) at 20%.

For residential improved properties, single family properties accounted for 96% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial sales accounted for 4% of all such properties in this county.



## **II. DATA FILES**

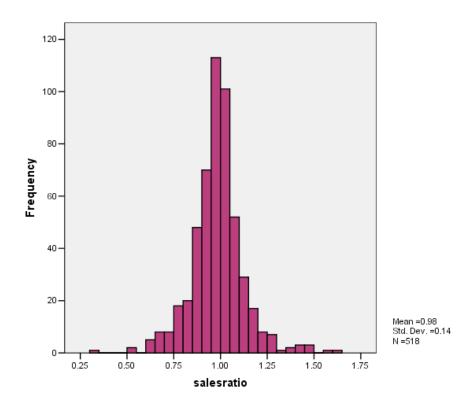
The following sales analyses were based on the requirements of the 2010 Colorado Property Assessment Study. Information was provided by the Delta Assessor's Office on May 1, 2010. The data included all 5 property record files as specified by the Auditor. Due to data issues, the assessor provided three separate files for residential, commercial and vacant land sales, and a revised current value file.

### **III. RESIDENTIAL SALES RESULTS**

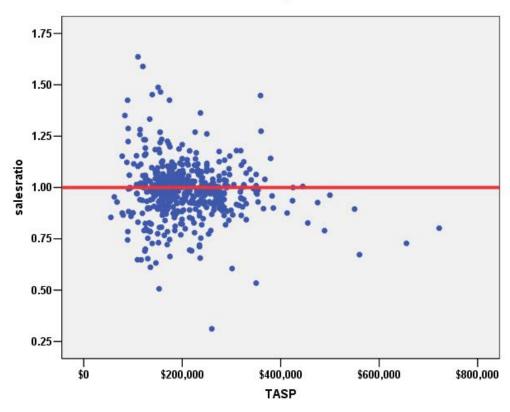
As noted, the assessor provided a separate sales file of the qualified residential sales used by the assessor to determine values; there were 518 qualified residential sales. The sales ratio analysis results were as follows:

Median	0.988
Price Related Differential	1.007
Coefficient of Dispersion	.097

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







Residential Sale Price by Sales Ratio

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

## **Residential Market Trend Analysis**

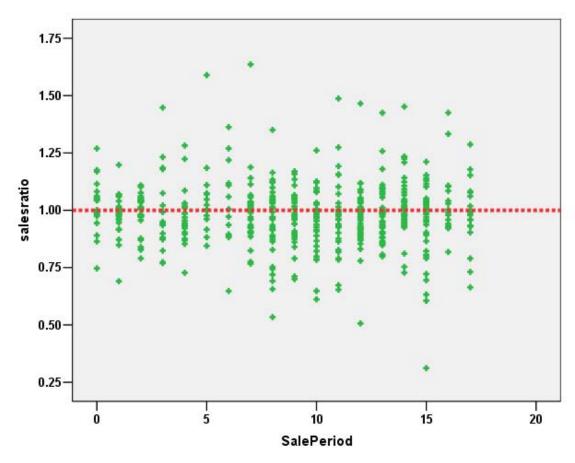
We next analyzed the residential dataset using the 18-month sale period for any residual market trending, with the following results:

		Unstandardized Coefficients		Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	.995	.013		76.200	.000
	SalePeriod	001	.001	039	894	.371

Coefficients<sup>a</sup>

a. Dependent Variable: salesratio





**Residential Sale Price Market Trend** 

With no significant statistical trend evident in the sales ratio data, 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, as follows:

Group	No.	Median	Mean
Unsold	8,101	\$116	\$126
Sold	482	\$127	\$131

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



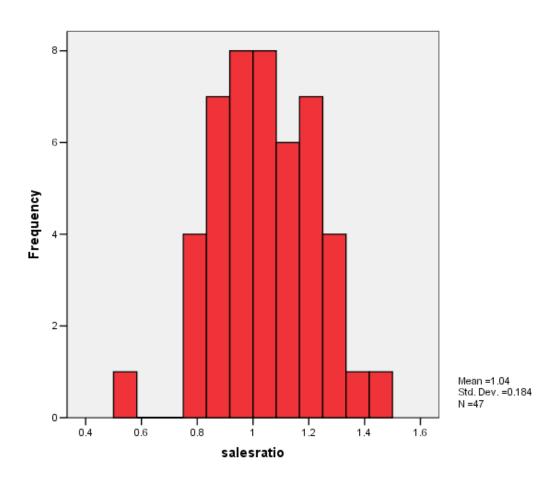
## IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

We were provided a separate sale file with sales between July 2005 and June 2008. This file included sales over a 36-month sale period, including 47 commercial/industrial sales that were qualified.

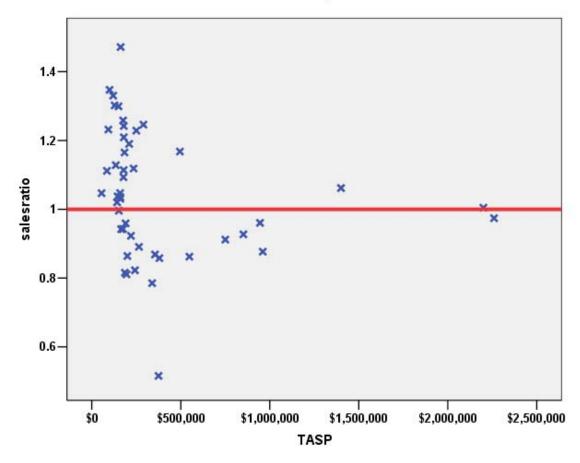
The sales ratio analysis resulted in the following ratio statistics:

Median	1.036
Price Related Differential	1.050
Coefficient of Dispersion	.141

The above table indicates that the Delta 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 Sale Price by Sales Ratio

## **Commercial Market Trend Analysis**

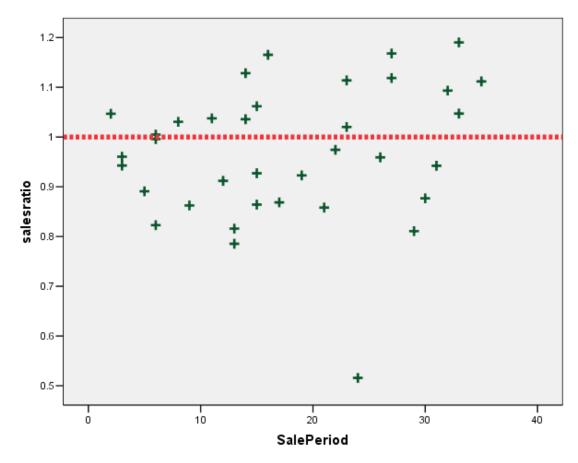
The 47 commercial/industrial sales were next analyzed by subclass for any residual market trending, examining the sale ratios across the 36-month sale period with the following results:

#### **Coefficients**<sup>a</sup>

		Unstandardized Coefficients		Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	.924	.047		19.636	.000
	SalePeriod	.003	.002	.183	1.086	.285

a. Dependent Variable: salesratio





## **Commercial Market Trend Analysis**

The market trend results indicated no significant residual sales ratio trend in the commercial/industrial data. We therefore concluded that the assessor adequately considered market trending in the valuation of commercial and industrial properties.

## 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, as follows:

Subclass	Group	No.	Median	Mean
Total	Unsold	622	\$74	\$93
	Sold	47	\$97	\$101

Based on the above results, we concluded that the Delta County assessor was valuing sold and unsold commercial properties consistently.



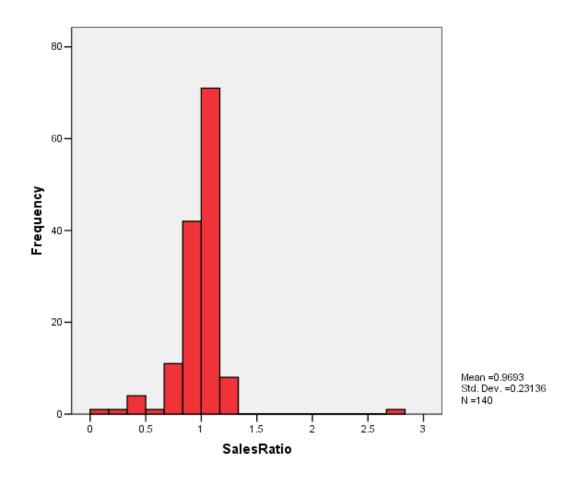
### V. VACANT LAND SALE RESULTS

We were provided a separate vacant land sale file with sales between January 2007 and June 2008. This file included sales over the specified 18-month sale period and included 140 vacant land sales that were qualified.

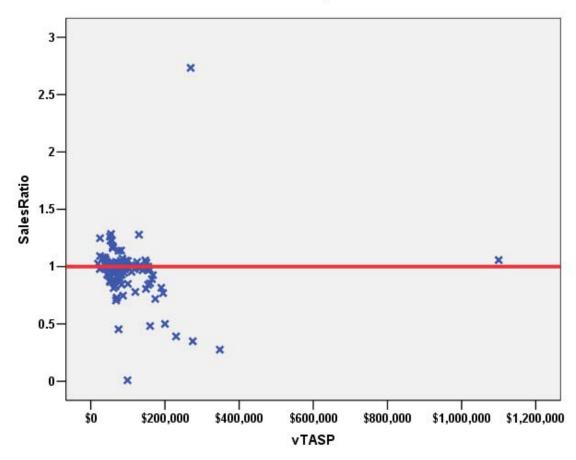
The sales ratio analysis resulted in the following ratio statistics:

Median	1.000
Price Related Differential	1.020
Coefficient of Dispersion	.107

The above tables indicate that the Delta 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 Sale Price by Sales Ratio

### Vacant Land Market Trend Analysis

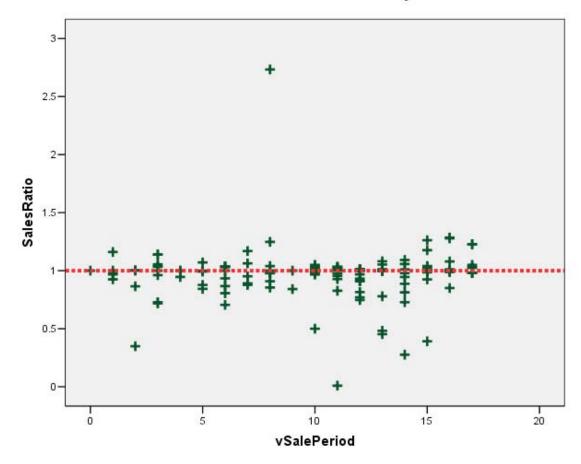
The assessor did not apply any market trend adjustments to the vacant land dataset. The 140 vacant land sales were analyzed, examining the sale ratios across the 18 month sale period with the following results:

Coefficients <sup>a</sup>
---------------------------

		Unstandardized Coefficients		Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	.959	.047		20.210	.000
	vSalePeriod	.001	.004	.021	.250	.803

a. Dependent Variable: SalesRatio





## Vacant Land Sales 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 Delta County.

### 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, as follows:

SUBDIVNO	Group	N	Median	Mean
Total	Unsold	2,092	1.14	1.20
	Sold	90	1.25	1.28

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 Delta County.

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

	abstrimp			Statistic	Std. Error
ImpVaISF	1212	Mean		\$85.19	\$.982
		95% Confidence	Lower Bound	\$83.27	
		Interval for Mean	Upper Bound	\$87.12	
		5% Trimmed Mean		\$82.30	
		Median		\$82.51	
		Variance		8087.841	
		Std. Deviation		\$89.932	
		Minimum		\$0	
		Maximum		\$5,170	
		Range		\$5,170	
		Interquartile Range		\$46	
		Skewness		41.092	.027
		Kurtosis		2107.523	.053
	4277	Mean		\$87.55	\$1.000
		95% Confidence	Lower Bound	\$85.59	
		Interval for Mean	Upper Bound	\$89.51	
		5% Trimmed Mean		\$85.12	
		Median		\$82.88	
		Variance		1910.088	
		Std. Deviation		\$43.705	
		Minimum		\$0	
		Maximum		\$447	
		Range		\$447	
		Interquartile Range		\$54	
		Skewness		1.759	.056
		Kurtosis		9.120	.112

Descriptives

### **VI.** Conclusions

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



## STATISTICAL ABSTRACT

### <u>Residential</u>

#### Ratio Statistics for CurrTot / TASP

Mean		.985
95% Confidence Interval	Lower Bound	.973
for Mean	Upper Bound	.997
Median		.988
95% Confidence Interval	Lower Bound	.980
for Median	Upper Bound	.999
	Actual Coverage	95.2%
Weighted Mean		.978
95% Confidence Interval	Lower Bound	.966
for Weighted Mean	Upper Bound	.991
Price Related Differential		1.007
Coefficient of Dispersion		.097
Coefficient of Variation	Mean Centered	14.2%

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.

### **Commercial/Industrial**

#### Ratio Statistics for CURRTOT / TASP

Mean		1.044
95% Confidence Interval	Lower Bound	.989
for Mean	Upper Bound	1.098
Median		1.036
95% Confidence Interval	Lower Bound	.959
for Median	Upper Bound	1.114
	Actual Coverage	96.0%
Weighted Mean		.994
95% Confidence Interval	Lower Bound	.953
for Weighted Mean	Upper Bound	1.035
Price Related Differential		1.050
Coefficient of Dispersion		.141
Coefficient of Variation	Mean Centered	17.7%

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

#### Mean .969 95% Confidence Interval Lower Bound .931 for Mean Upper Bound 1.008 Median 1.000 95% Confidence Interval Lower Bound .992 for Median Upper Bound 1.000 Actual Coverage 96.6% Weighted Mean .951 95% Confidence Interval Lower Bound .858 for Weighted Mean Upper Bound 1.043 Price Related Differential 1.020 Coefficient of Dispersion .107 Coefficient of Variation Mean Centered 23.9%

Ratio Statistics for CURRLND / vTASP

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

		Count	Percent
SPRec	\$50K to \$100K	20	3.9%
	\$100K to \$150K	85	16.4%
	\$150K to \$200K	191	36.9%
	\$200K to \$300K	172	33.2%
	\$300K to \$500K	46	8.9%
	\$500K to \$750K	4	.8%
Overall		518	100.0%
Excluded		0	
Total		518	

#### **Case Processing Summary**



#### Ratio Statistics for CurrTot / TASP

				Coefficient of Variation
		Price Related	Coefficient of	Median
Group	Median	Differential	Dispersion	Centered
\$50K to \$100K	.973	.997	.153	20.1%
\$100K to \$150K	.991	1.003	.136	19.2%
\$150K to \$200K	1.000	1.000	.083	12.2%
\$200K to \$300K	.985	1.000	.081	11.9%
\$300K to \$500K	.972	1.002	.102	15.2%
\$500K to \$750K	.765	1.001	.097	12.6%
Overall	.988	1.007	.097	14.2%

## Age

## **Case Processing Summary**

		Count	Percent
AgeRec	0	36	6.9%
	Over 100	35	6.8%
	75 to 100	45	8.7%
	50 to 75	61	11.8%
	25 to 50	141	27.2%
	5 to 25	91	17.6%
	5 or Newer	109	21.0%
Overall		518	100.0%
Excluded		0	
Total		518	

### Ratio Statistics for CurrTot / TASP

				Coefficient of Variation
		Price Related	Coefficient of	Median
Group	Median	Differential	Dispersion	Centered
0	1.014	1.001	.057	7.7%
Over 100	.976	1.021	.131	19.3%
75 to 100	.956	1.018	.132	18.4%
50 to 75	.977	1.009	.133	18.5%
25 to 50	.999	1.011	.102	14.2%
5 to 25	.984	1.013	.089	14.1%
5 or Newer	.987	1.003	.062	8.3%
Overall	.988	1.007	.097	14.2%



## Improved Area

## **Case Processing Summary**

		Count	Percent
ImpSFRec	0	36	6.9%
	LE 500 sf	1	.2%
	500 to 1,000 sf	65	12.5%
	1,000 to 1,500 sf	172	33.2%
	1,500 to 2,000 sf	144	27.8%
	2,000 to 3,000 sf	91	17.6%
	3,000 sf or Higher	9	1.7%
Overall		518	100.0%
Excluded		0	
Total		518	

#### Ratio Statistics for CurrTot / TASP

				Coefficient of Variation
		Price Related	Coefficient of	Median
Group	Median	Differential	Dispersion	Centered
0	1.014	1.001	.057	7.7%
LE 500 sf	.976	1.000	.000	
500 to 1,000 sf	.941	1.030	.153	20.0%
1,000 to 1,500 sf	.982	1.010	.097	14.6%
1,500 to 2,000 sf	.989	1.006	.077	11.2%
2,000 to 3,000 sf	1.005	1.019	.096	13.5%
3,000 sf or Higher	1.070	1.036	.121	17.1%
Overall	.988	1.007	.097	14.2%

## Improvement Quality

### **Case Processing Summary**

	Count	Percent
qual 1	20	4.1%
2	112	23.2%
3	347	72.0%
4	2	.4%
5	1	.2%
Overall	482	100.0%
Excluded	36	
Total	518	



				Coefficient of Variation
		Price Related	Coefficient of	Median
Group	Median	Differential	Dispersion	Centered
1	.946	1.020	.118	15.4%
2	.986	1.008	.146	20.0%
3	.988	1.008	.085	12.3%
4	.957	.998	.006	.8%
5	1.021	1.000	.000	
Overall	.987	1.007	.100	14.5%

## Ratio Statistics for CurrTot / TASP

### **Commercial Median Ratio Stratification**

#### Sale Price

#### Count Percent SPRec \$50K to \$100K 4 8.5% \$100K to \$150K 6 12.8% \$150K to \$200K 36.2% 17 \$200K to \$300K 7 14.9% \$300K to \$500K 5 10.6% \$500K to \$750K 2 4.3% \$750K to \$1,000K 3 6.4% Over \$1,000K 3 6.4% Overall 47 100.0% Excluded 0 Total 47

#### **Case Processing Summary**



				Coefficient of Variation
		Price Related	Coefficient of	Median
Group	Median	Differential	Dispersion	Centered
\$50K to \$100K	1.172	.983	.090	11.4%
\$100K to \$150K	1.214	1.004	.102	11.9%
\$150K to \$200K	1.036	1.004	.127	16.9%
\$200K to \$300K	1.119	.997	.131	16.8%
\$300K to \$500K	.858	.976	.171	27.2%
\$500K to \$750K	.887	.996	.028	3.9%
\$750K to \$1,000K	.927	1.000	.030	4.6%
Over \$1,000K	1.005	1.007	.029	4.6%
Overall	1.036	1.050	.141	17.8%

## Ratio Statistics for CURRTOT / TASP