2013
GRAND COUNTY
PROPERTY ASSESSMENT
STUDY

WILDROSE
APPRAISAL, INCORPORATED
Audit Division

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APPRAISAL, INCORPORATED
Audit Division

September 15, 2013

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

RE: Final Report for the 2013 Colorado Property Assessment Study

Dear Mr. Mauer:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2013 Colorado Property Assessment Study.

These reports are the result of two analyses: A procedural audit and a statistical audit.

The procedural audit examines all classes of property. It specifically looks at how the assessor develops economic areas, confirms and qualifies sales, develops time adjustments and performs periodic physical property inspections. The audit reviews the procedures for determining subdivision absorption and subdivision discounting. Valuation methodology is examined for residential properties and commercial properties. Procedures are reviewed for producing mines, oil and gas leaseholds and lands producing, producing coal mines, producing earth and stone products, severed mineral interests, and non-producing patented mining claims.

Statistical audits are performed on vacant land, residential properties, commercial/industrial properties and agricultural land. A statistical analysis is performed for personal property compliance on the eleven largest counties: Adams, Arapahoe, Boulder, Denver, Douglas, El Paso, Jefferson, Larimer, Mesa, Pueblo and Weld. The remaining counties receive a personal property procedural study.

Wildrose Appraisal Inc. – Audit Division appreciates the opportunity to be of service to the State of Colorado. Please contact us with any questions or concerns.

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

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INTRODUCTION

Colorado

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 and subdivision discounting procedures. Valuation methodology for vacant land, improved residential properties and commercial properties is examined. Procedures for producing mines, oil and gas leaseholds and lands producing, producing coal mines, producing earth and stone products, severed mineral interests and non-producing patented mining claims are also reviewed.

Statistical analysis is performed on vacant land, residential properties, commercial industrial properties, agricultural land, and personal property. The statistical study results are compared with State Board of Equalization compliance requirements and the manuals published by the State Property Tax Administrator.

Wildrose Audit has completed the Property Assessment Study for 2013 and is pleased to report its findings for Grand County in the following report.

REGIONAL / HISTORICAL SKETCH OF GRAND COUNTY

Regional Information

Grand 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

Grand County has a population of approximately 14,843 people with 8.04 people per square mile, according to the U.S. Census Bureau's 2010 census data. This represents a 19.3 percent change from the 2000 Census.

When Grand County was created on February 2, 1874 it was carved out of Summit County and contained land to the western and northern borders of the state, which is now in present day Moffat County and Routt County. It was named after Grand Lake and the Grand River, an old name for the Colorado River, which has its headwaters in the county. On January 29, 1877 Routt County was created and Grand County shrunk down to its current western boundary. When valuable minerals were found in North Park, Grand County claimed the area as part of its county, a claim Larimer County also held. It took a decision by the Colorado Supreme Court in 1886 to declare North Park part of Larimer County, setting Grand County's northern boundary.

Grand Lake is the deepest and largest natural lake in Colorado and the area attracts an impressive diversity of wildlife. Prehistoric peoples, and later Native American Ute, Arapaho and Cheyenne tribes made annual pilgrimages to the area each summer to fish, hunt and reap the bounty of nature's harvest. It wasn't long before trappers, traders and explorers followed.

In the mid-1800s, European hunting parties discovered Grand Lake. Some hunters constructed summer lodges and hired local mountain men as guides. The area was permanently settled in 1867. Grand Lake Village's first full-time, year-round residents were an intriguing mix of miners (who participated in a brief mining boom) and hunting guides. In the late 1870s, silver was discovered in the rivers and mountains near Grand Lake. Prospectors bought supplies in local stores and established small mountain mining communities. Almost overnight, the town of Grand Lake transformed into a bustling economy.

(Wikipedia.org & www.grandlakechamber.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 2011 and June 2012. Counties with less than 30 sales typically extended the sale period back up to 5 years prior to June 30, 2012 in 6-month increments. If there were still fewer than 30 sales, supplemental appraisals were performed and treated as proxy sales. Residential sales for all counties using this method totaled at least 30 per county. For commercial sales, the total number analyzed was allowed, in some cases, to fall below 30. There were no sale quantity issues for counties requiring vacant land analysis or condominium analysis. Although it was required that we examine the median and coefficient of dispersion for all counties, we also calculated the weighted mean and price-related 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 Grand County are:

Grand County Ratio Grid					
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis
Commercial/Industrial	40	0.982	1.011	12.3	Compliant
Condominium	393	0.997	1.019	9.5	Compliant
Single Family	459	1.000	1.029	12.9	Compliant
Vacant Land	118	0.999	1.013	11.8	Compliant

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

Recommendations

None

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 Grand County has complied with the statutory requirements to analyze the effects of time on value in their county. Grand County has also satisfactorily applied the results of their time trending analysis to arrive at the time adjusted sales price (TASP).

Recommendations

None

SOLD / UNSOLD ANALYSIS

Methodology

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

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

If either residential or commercial differences were significant using the unit value method, or if data limitations made the comparison invalid, then the next step was to perform a ratio analysis comparing the 2012 and 2013 actual values for each qualified class of property. All qualified vacant land classes were tested using this method. The sale property ratios were arrayed using a range of 0.8 to 1.5, which theoretically excluded changes between years that were due to other unrelated changes in the property. These ratios were also stratified at the appropriate level of analysis. 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 non-parametric 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 multi-variate mass appraisal model that developed ratio statistics from the sold properties that were then applied to the unsold sample. This test compared the measures of central tendency and confidence intervals for the sold properties with the unsold property sample. If this comparison was also determined to be significantly different, then the conclusion was that the county had treated the unsold properties in a different manner than sold properties.

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

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

Conclusions

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

Recommendations

None

AGRICULTURAL LAND STUDY

Acres By Subclass

Value By Subclass

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. 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:

Grand County Agricultural Land Ratio Grid						
Abstract Code	Land Class	Number Of Acres	County Value Per Acre	County Assessed Total Value	WRA Total Value	Ratio
4137	Meadow Hay	33,794	75.00	2,548,529	2,548,529	1.00
4147	Grazing	193,045	6.00	1,092,219	1,092,219	1.00
4177	Forest	16,275	13.00	205,128	205,128	1.00
4167	Waste	6,494	2.00	11,336	11,336	1.00
Total/Avg		**249,608**	**15.00**	**3,857,211**	**3,857,211**	**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

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

Recommendations

None

Agricultural Land Under Improvements

Methodology

Data was collected and reviewed to determine if the guidelines found in the Assessor's Reference Library (ARL) Volume 3, pages 5.19 and 5.20 were being followed.

Grand County utilized the following discovery method(s):

- Questionnaires
- Phone Interviews
- In-Person Interviews
- Written Correspondence
- Personal Knowledge of Owners and Tenants

Conclusions

Grand County has substantially complied with the procedures provided by the Division of Property Taxation for the valuation of land under residential improvements that may or may not be integral to an agricultural operation.

Recommendations

None

SALES VERIFICATION

According to Colorado Revised Statutes:

A representative body of sales is required when considering the market approach to appraisal.

(8) In any case in which sales prices of comparable properties within any class or subclass are utilized when considering the market approach to appraisal in the determination of actual value of any taxable property, the following limitations and conditions shall apply:

(a)(I) Use of the market approach shall require a representative body of sales, including sales by a lender or government, sufficient to set a pattern, and appraisals shall reflect due consideration of the degree of comparability of sales, including the extent of similarities and dissimilarities among properties that are compared for assessment purposes. In order to obtain a reasonable sample and to reduce sudden price changes or fluctuations, all sales shall be included in the sample that reasonably reflect a true or typical sales price during the period specified in section 39-1-104 (10.2). Sales of personal property exempt pursuant to the provisions of sections 39-3-102, 39-3-103, and 39-3-119 to 39-3-122 shall not be included in any such sample.

(b) Each such sale included in the sample shall be coded to indicate a typical, negotiated sale, as screened and verified by the assessor. (39-1-103, C.R.S.)

The assessor is required to use sales of real property only in the valuation process.

(8)(f) Such true and typical sales shall include only those sales which have been determined on an individual basis to reflect the selling price of the real property only or which have been adjusted on an individual basis to reflect the selling price of the real property only. (39-1-103, C.R.S.)

Part of the Property Assessment Study is the sales verification analysis. WRA has used the above-cited statutes as a guide in our study of the county's procedures and practices for verifying sales.

WRA reviewed the sales verification procedures in 2013 for Grand 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 saleshad insufficient reason for disqualification.

For residential, commercial, and vacant land sales with considerations over $500, the contractor has examined and reported the ratio of qualified sales to total sales by class and performed the following analyses of unqualified sales:

> The contractor has examined the manner in which sales have been classified as qualified or unqualified, including a listing of each step in the sales verification process, any adjustment procedures, and the county official responsible for making the final decision on qualification.
>
> When less than 50 percent of sales are qualified in any of the three property classes (residential, commercial, and vacant land), the contractor analyzed the reasons for disqualifying sales in any subclass that constitutes at least 20 percent of the class, either by number

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

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

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

Conclusions

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

Recommendations

None

ECONOMIC AREA REVIEW AND EVALUATION

Methodology

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

None

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 Mines

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

None

VACANT LAND

Subdivision Discounting

Subdivisions were reviewed in 2013 in Grand 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

Grand County has implemented proper procedures to adequately estimate absorption periods, discount rates, and lot values for qualifying subdivisions.

Recommendations

None

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 Chapter 39-1-103 (17)(a) (II) C.R.S. 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.

Grand 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

Grand 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

None

PERSONAL PROPERTY AUDIT

Grand 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.

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

- Public Record Documents
- MLS Listing and/or Sold Books
- Chamber of Commerce/Economic Development Contacts
- Local Telephone Directories, Newspapers or Other Local Publications
- Personal Observation, Physical Canvassing or Word of Mouth
- Questionnaires, Letters and/or Phone Calls to Buyer, Seller and/or Realtor

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

Grand County submitted their personal property written audit plan and was current for the 2013 valuation period. The number and listing of businesses audited was also submitted and was in conformance with the written audit plan. The following audit triggers were used by the county to select accounts to be audited:

- New businesses filing for the first time
- Incomplete or inconsistent declarations
- Same business type or use
- Businesses with no deletions or additions for 2 or more years
- Non-filing Accounts - Best Information Available

- Accounts with questionable or suspicious information
- Businesses with new owners

Conclusions

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

Recommendations

None

WILDROSE AUDITOR STAFF

Harry J. Fuller, *Audit Project Manager*

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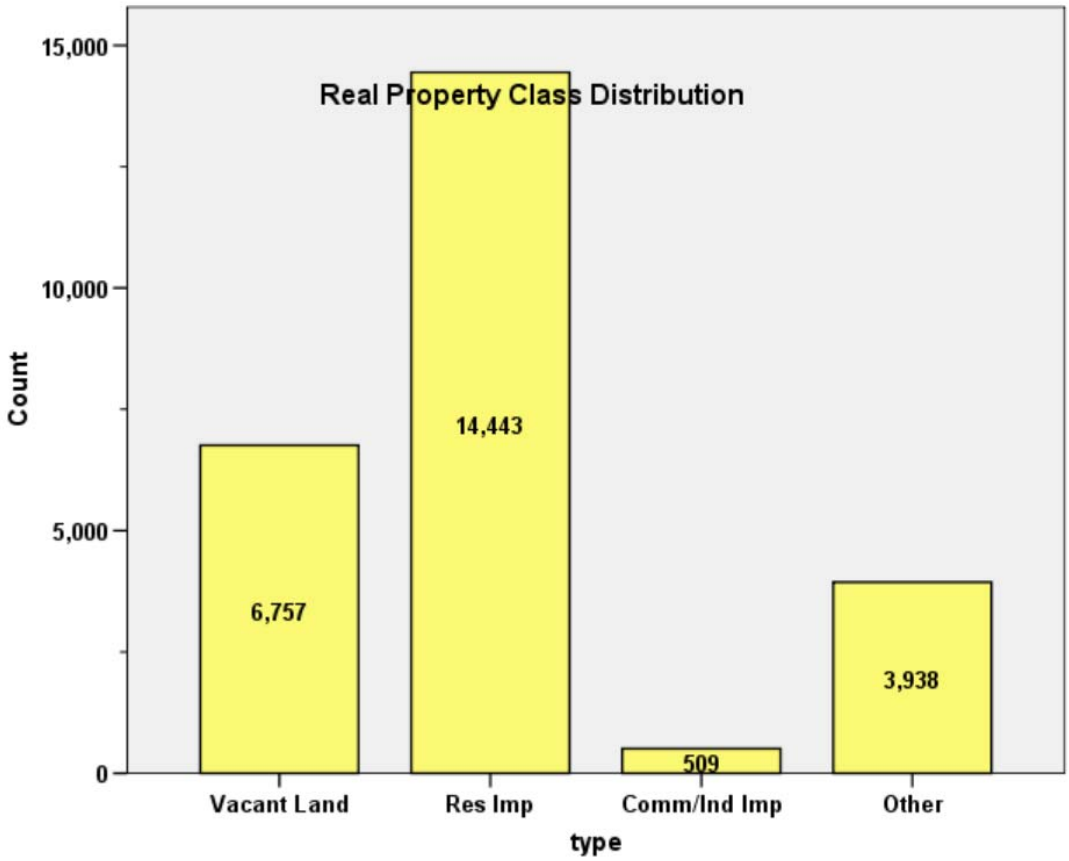
J. Andrew Rodriguez, *Field Analyst*

APPENDICES

STATISTICAL COMPLIANCE REPORT
FOR GRAND COUNTY
2013

I. OVERVIEW

Grand County is a mountain resort located in western Colorado. The county has a total of 25,647 real property parcels, according to data submitted by the county assessor's office in 2013. The following provides a breakdown of property classes for this county:



The vacant land class of properties was dominated by residential land. Residential lots (coded 100) accounted for 86.5% of all vacant land parcels.

For residential improved properties, single family properties accounted for 65.0% of all residential properties. Residential condominiums accounted for 32.7% of all residential improved properties. Based on the guidelines for the state audit statistical compliance analysis, we will analyze residential condominiums separately.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial sales accounted for 1.9% of all such properties in this county.

II. DATA FILES

The following sales analyses were based on the requirements of the 2013 Colorado Property Assessment Study. Information was provided by the Grand Assessor's Office in May 2013. The data included all 5 property record files as specified by the Auditor.

III. RESIDENTIAL SALES RESULTS

There were 852 qualified residential sales in the 18 month sale period prior to June 30, 2013. The following analysis separated residential condominiums from other residential property types:

Residential Non-Condominiums (459 Sales)

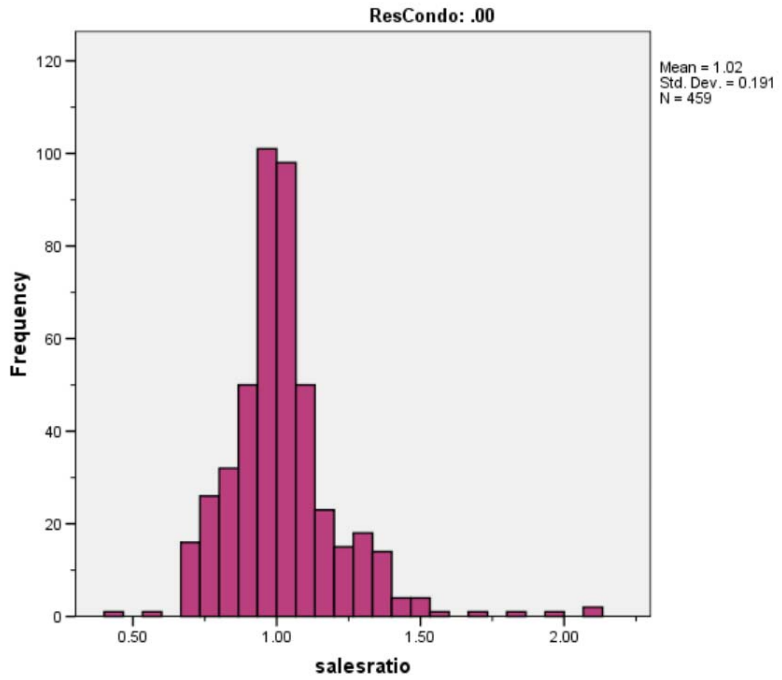
Median	**1.000**
Price Related Differential	**1.029**
Coefficient of Dispersion	**.129**

Residential Condominiums (393 Sales)

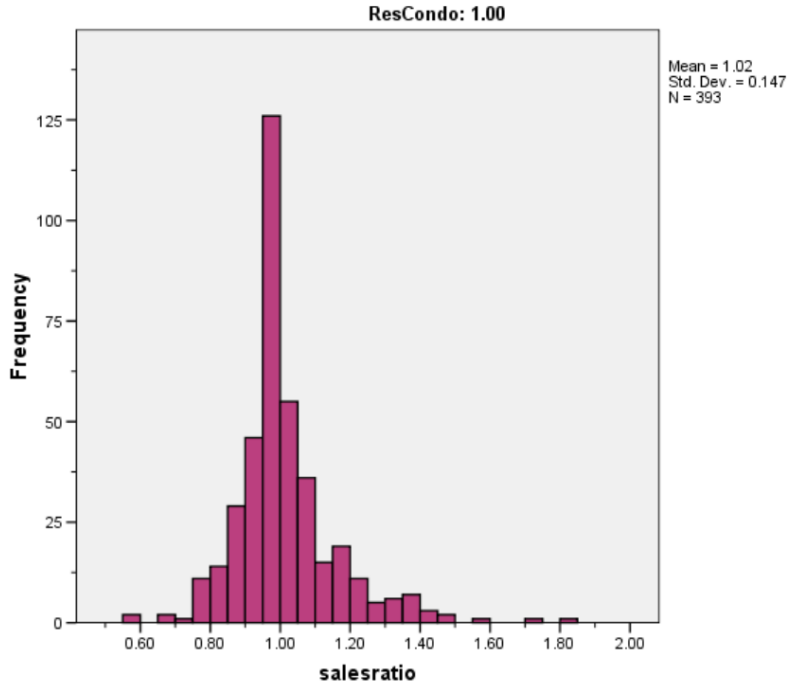
Median	**0.997**
Price Related Differential	**1.019**
Coefficient of Dispersion	**.095**

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

Residential Non-Condominiums



Residential Condominiums



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

Residential Market Trend Analysis

We next analyzed the residential dataset using the 18-month sale period for any residual market trending, as follows:

Coefficients[a]

ResCondo	Model		Unstandardized Coefficients		Standardized Coefficients		
			B	Std. Error	Beta	t	Sig.
.00	1	(Constant)	1.005	.017		60.547	.000
		SalePeriod	.002	.002	.057	1.228	.220
1.00	1	(Constant)	1.052	.015		70.379	.000
		SalePeriod	-.004	.002	-.140	-2.804	.005

a. Dependent Variable: salesratio

Although there was a statistically significant trend for residential condominiums, the magnitude was not. We therefore concluded 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 2013 median actual value per square foot between each group, stratified by subdivision, as follows:

ResCondo	Group	No. Props	Median	Mean
Res Non-Condo	Unsold	9214	$166.09	$191.76
	Sold	458	$186.68	$214.51
Res Condo	Unsold	4153	$179.43	$191.01
	Sold	391	$163.01	$163.24

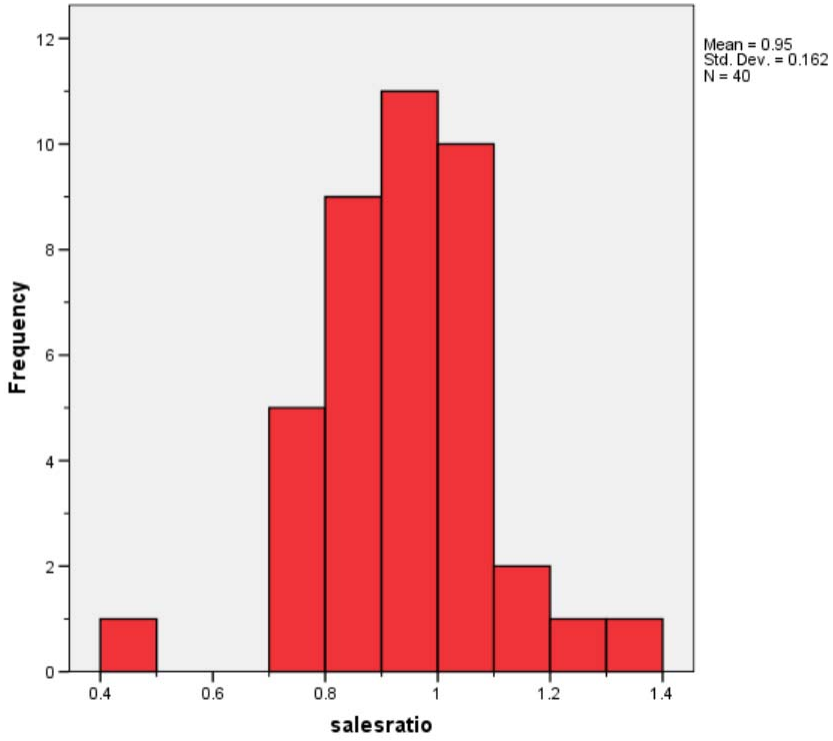
The above results indicate that sold and unsold residential properties were valued in a consistent manner.

IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

There were 40 qualified commercial and industrial sales in the 54 month sale period prior to June 30, 2013.

Median	**0.982**
Price Related Differential	**1.011**
Coefficient of Dispersion	**.123**

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



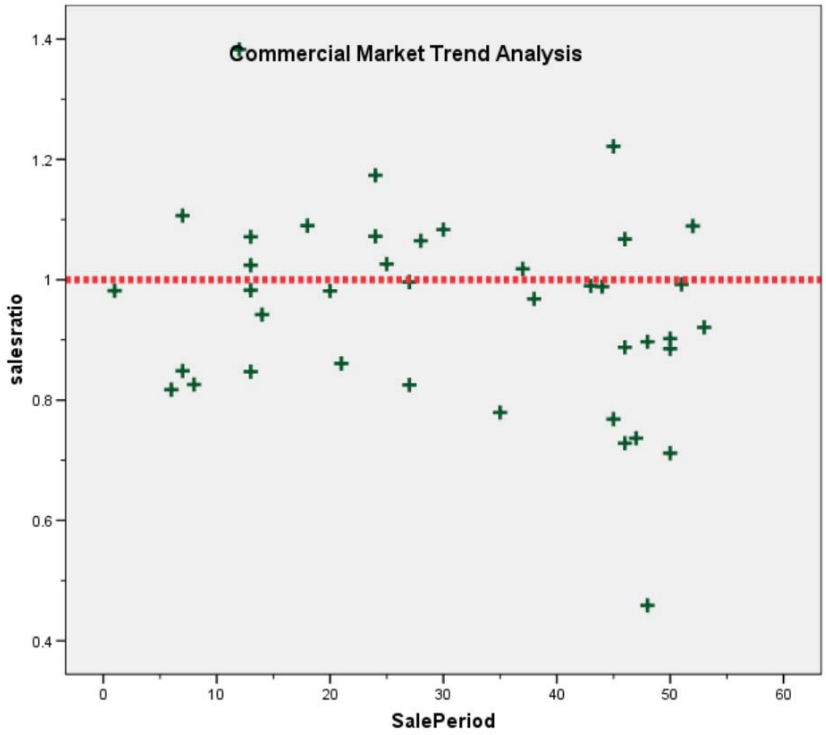
Commercial Market Trend Analysis

The assessor did not apply any market trend adjustment to the commercial dataset. The 40 commercial sales were analyzed, examining the sale ratios across the 54 month sale period with the following results:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.031	.054		19.236	.000
	SalePeriod	-.003	.002	-.265	-1.694	.098

a. Dependent Variable: salesratio



The market trend results indicated no statistically significant trend. We concur that no market trend adjustments were warranted for properties in this class for Grand 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. While this is a challenge to prove in

this county, given the small number of sales and the overall diversity of commercial/industrial properties across six economic areas, the following results indicate that based on the median and mean actual value, both groups were valued overall in a consistent manner:

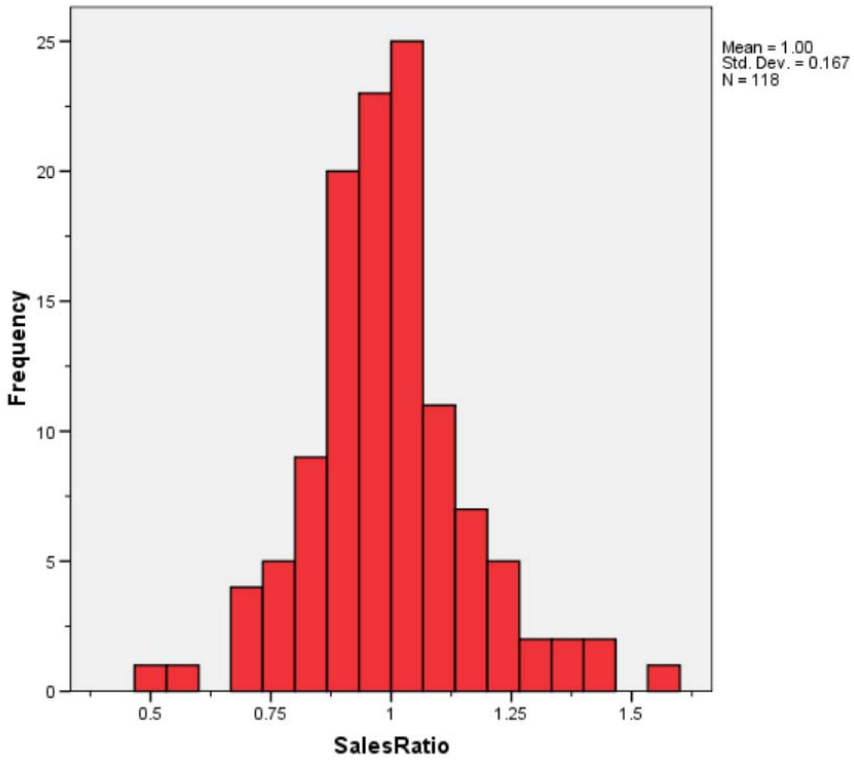
Group	No, Props	Median Val / SF	Mean Val / SF
Unsold	473	$79	$107
Sold	39	$103	$116

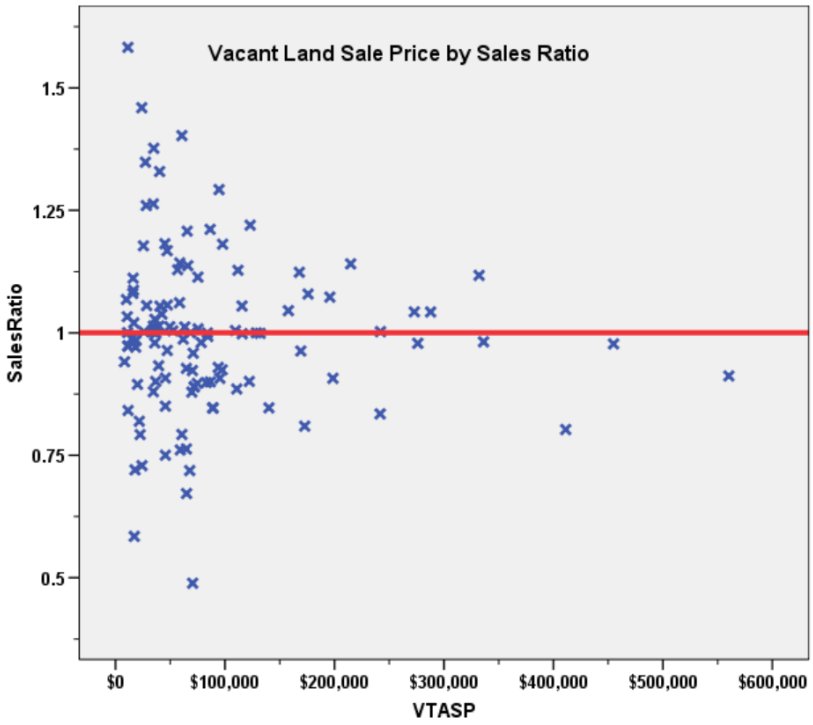
V. VACANT LAND SALE RESULTS

There were 118 qualified vacant land sales in the 18 month sale period prior to June 30, 2013. The following analysis separated residential condominiums from other residential property types:

Median	**0.999**
Price Related Differential	**1.013**
Coefficient of Dispersion	**.118**

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





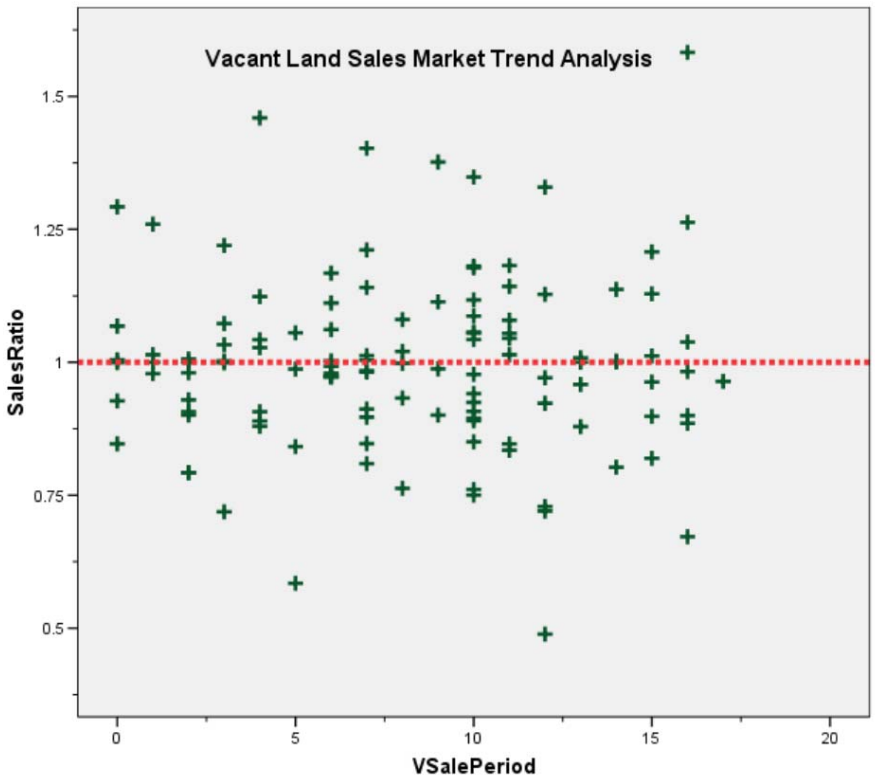
Vacant Land Market Trend Analysis

The assessor did not apply any market trend adjustment to the vacant land dataset. The 118 vacant land sales were analyzed, examining the sale ratios across the 18 month sale period with the following results:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.997	.031		31.929	.000
	VSalePeriod	3.900E-5	.003	.001	.012	.991

a. Dependent Variable: SalesRatio



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

Sold/Unsold Analysis

We compared the median change in actual value between 2012 and 2013 for vacant land properties to determine if sold and unsold properties were valued consistently, as follows:

Group	No. Props	Median	Mean
Unsold	6,612	.8182	.9018
Sold	118	.8455	.8291

The above results 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 Grand 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
Imp ValSF	SFR	Mean		$143.14	$.818
		95% Confidence Interval for Mean	Lower Bound	$141.54	
			Upper Bound	$144.75	
		5% Trimmed Mean		$136.80	
		Median		$126.33	
		Variance		6254.959	
		Std. Deviation		$79.088	
		Minimum		$10	
		Maximum		$737	
		Range		$727	
		Interquartile Range		$91	
		Skewness		1.352	.025
		Kurtosis		2.673	.051
	Ag Res	Mean		$112.72	$3.162
		95% Confidence Interval for Mean	Lower Bound	$106.50	
			Upper Bound	$118.93	
		5% Trimmed Mean		$107.64	
		Median		$100.03	
		Variance		4018.414	
		Std. Deviation		$63.391	
		Minimum		$3	
		Maximum		$474	
		Range		$470	
		Interquartile Range		$76	
		Skewness		1.564	.122
		Kurtosis		4.555	.243

VI. CONCLUSIONS

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

STATISTICAL ABSTRACT

Residential

Ratio Statistics for CURRTOT / TASP

ResCondo		95% Confidence Interval for Mean			95% Confidence Interval for Median				95% Confidence Interval for Weighted Mean				Coefficient of Variation
	Mean	Lower Bound	Upper Bound	Median	Lower Bound	Upper Bound	Actual Coverage	Weighted Mean	Lower Bound	Upper Bound	Price Related Differential	Coefficient of Dispersion	Mean Centered
.00	1.022	1.004	1.039	1.000	.993	1.010	95.0%	.993	.978	1.008	1.029	.129	18.7%
1.00	1.015	1.001	1.030	.997	.995	.999	95.7%	.996	.984	1.009	1.019	.095	14.4%

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.

Commercial/Industrial

Ratio Statistics for CURRTOT / TASP

	95% Confidence Interval for Mean			95% Confidence Interval for Median				95% Confidence Interval for Weighted Mean				Coefficient of Variation
Mean	Lower Bound	Upper Bound	Median	Lower Bound	Upper Bound	Actual Coverage	Weighted Mean	Lower Bound	Upper Bound	Price Related Differential	Coefficient of Dispersion	Mean Centered
.950	.899	1.002	.982	.888	1.018	96.2%	.940	.893	.988	1.011	.123	17.0%

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

Vacant Land

Ratio Statistics for CURRLND / VTASP

	95% Confidence Interval for Mean			95% Confidence Interval for Median				95% Confidence Interval for Weighted Mean				Coefficient of Variation
Mean	Lower Bound	Upper Bound	Median	Lower Bound	Upper Bound	Actual Coverage	Weighted Mean	Lower Bound	Upper Bound	Price Related Differential	Coefficient of Dispersion	Mean Centered
.998	.967	1.028	.999	.973	1.006	96.6%	.985	.955	1.015	1.013	.118	16.7%

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.

Residential Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT $25K	65	7.6%
	$25K to $50K	50	5.9%
	$50K to $100K	54	6.3%
	$100K to $150K	111	13.0%
	$150K to $200K	122	14.3%
	$200K to $300K	175	20.5%
	$300K to $500K	192	22.5%
	$500K to $750K	46	5.4%
	$750K to $1,000K	20	2.3%
	Over $1,000K	17	2.0%
Overall		852	100.0%
Excluded		0	
Total		852	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
LT $25K	1.036	1.011	.156	22.5%
$25K to $50K	.970	.998	.148	25.4%
$50K to $100K	1.007	1.004	.159	24.9%
$100K to $150K	1.002	1.003	.117	17.3%
$150K to $200K	.997	1.000	.114	17.0%
$200K to $300K	.997	.998	.121	17.0%
$300K to $500K	.998	1.001	.074	10.9%
$500K to $750K	.986	1.002	.079	10.4%
$750K to $1,000K	.982	1.000	.088	11.9%
Over $1,000K	.952	.998	.114	15.6%
Overall	.998	1.025	.113	17.3%

Subclass

Case Processing Summary

		Count	Percent
abstrimp	600	1	.1%
	1212	442	51.9%
	1212	1	.1%
	1214	1	.1%
	1215	3	.4%
	1220	1	.1%
	1230	393	46.1%
	1412	1	.1%
	2212	2	.2%
	2215	1	.1%
	2228	1	.1%
	2230	4	.5%
	2245	1	.1%
Overall		852	100.0%
Excluded		0	
Total		852	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation: Median Centered
600	.925	1.000	.000	.%
1212	1.000	1.028	.126	18.9%
1212	1.317	1.000	.000	.%
1214	1.468	1.000	.000	.%
1215	1.335	.972	.171	25.6%
1220	1.033	1.000	.000	.%
1230	.997	1.019	.095	14.8%
1412	.983	1.000	.000	.%
2212	.925	.973	.107	15.1%
2215	1.107	1.000	.000	.%
2228	.817	1.000	.000	.%
2230	.962	1.044	.149	26.2%
2245	.847	1.000	.000	.%
Overall	.998	1.025	.113	17.3%

Improvement Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	2	.2%
	75 to 100	7	.8%
	50 to 75	26	3.1%
	25 to 50	343	40.3%
	5 to 25	324	38.0%
	5 or Newer	150	17.6%
Overall		852	100.0%
Excluded		0	
Total		852	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
Over 100	.964	1.106	.211	29.8%
75 to 100	1.327	1.254	.321	43.4%
50 to 75	.990	1.065	.227	33.0%
25 to 50	.995	1.028	.121	17.8%
5 to 25	1.001	1.030	.107	15.7%
5 or Newer	.999	1.008	.071	10.2%
Overall	.998	1.025	.113	17.3%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	95	11.2%
	500 to 1,000 sf	257	30.2%
	1,000 to 1,500 sf	223	26.2%
	1,500 to 2,000 sf	144	16.9%
	2,000 to 3,000 sf	94	11.0%
	3,000 sf or Higher	39	4.6%
Overall		852	100.0%
Excluded		0	
Total		852	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
LE 500 sf	1.001	1.014	.113	16.0%
500 to 1,000 sf	.995	1.022	.114	17.6%
1,000 to 1,500 sf	.996	1.016	.103	15.7%
1,500 to 2,000 sf	1.012	1.041	.114	18.7%
2,000 to 3,000 sf	1.029	1.055	.129	18.2%
3,000 sf or Higher	.998	1.036	.102	16.0%
Overall	.998	1.025	.113	17.3%

Improvement Quality

Case Processing Summary

		Count	Percent
quality	1	4	.5%
	2	7	.8%
	3	56	6.6%
	4	538	63.1%
	5	213	25.0%
	6	34	4.0%
Overall		852	100.0%
Excluded		0	
Total		852	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation: Median Centered
1	1.478	1.065	.288	34.3%
2	1.048	1.030	.166	27.2%
3	1.020	1.063	.177	27.2%
4	.998	1.014	.120	17.2%
5	.994	1.008	.075	10.8%
6	.996	1.047	.067	11.3%
Overall	.998	1.025	.113	17.3%

Improvement Condition

Case Processing Summary

		Count	Percent
condition	1	7	.8%
	2	552	65.9%
	3	279	33.3%
Overall		838	100.0%
Excluded		14	
Total		852	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation: Median Centered
1	1.167	1.094	.212	34.4%
2	.997	1.023	.128	18.9%
3	1.000	1.021	.081	12.6%
Overall	.998	1.025	.114	17.4%

Commercial Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	$50K to $100K	3	7.5%
	$100K to $150K	5	12.5%
	$150K to $200K	8	20.0%
	$200K to $300K	7	17.5%
	$300K to $500K	11	27.5%
	$500K to $750K	3	7.5%
	$750K to $1,000K	3	7.5%
Overall		40	100.0%
Excluded		0	
Total		40	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
$50K to $100K	.897	1.036	.199	38.5%
$100K to $150K	.826	1.000	.067	9.6%
$150K to $200K	1.066	1.011	.100	22.1%
$200K to $300K	.902	1.004	.139	16.8%
$300K to $500K	.990	1.003	.086	11.8%
$500K to $750K	.968	.997	.046	7.1%
$750K to $1,000K	.847	1.003	.088	13.8%
Overall	.982	1.011	.123	16.8%

Subclass

Case Processing Summary

		Count	Percent
abstrimp	1212	10	25.0%
	1412	1	2.5%
	1714	1	2.5%
	1726	1	2.5%
	2212	6	15.0%
	2215	2	5.0%
	2220	3	7.5%
	2228	1	2.5%
	2230	11	27.5%
	2240	1	2.5%
	2245	3	7.5%
Overall		40	100.0%
Excluded		0	
Total		40	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation: Median Centered
1212	.979	.968	.114	19.9%
1412	.983	1.000	.000	.%
1714	1.018	1.000	.000	.%
1726	.885	1.000	.000	.%
2212	.925	1.015	.143	16.3%
2215	1.066	.988	.038	5.3%
2220	1.065	1.126	.142	22.3%
2228	.817	1.000	.000	.%
2230	.981	1.009	.127	18.8%
2240	.861	1.000	.000	.%
2245	.888	1.084	.123	23.0%
Overall	.982	1.011	.123	16.8%

Improvement Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	2	5.0%
	75 to 100	2	5.0%
	50 to 75	12	30.0%
	25 to 50	15	37.5%
	5 to 25	9	22.5%
Overall		40	100.0%
Excluded		0	
Total		40	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
Over 100	.681	.947	.326	46.1%
75 to 100	.888	.994	.122	17.3%
50 to 75	.931	.976	.117	15.5%
25 to 50	.982	1.040	.125	16.8%
5 to 25	1.024	1.037	.079	10.2%
Overall	.982	1.011	.123	16.8%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	2	5.0%
	500 to 1,000 sf	6	15.0%
	1,000 to 1,500 sf	5	12.5%
	1,500 to 2,000 sf	5	12.5%
	2,000 to 3,000 sf	6	15.0%
	3,000 sf or Higher	16	40.0%
Overall		40	100.0%
Excluded		0	
Total		40	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
LE 500 sf	1.182	1.103	.170	24.0%
500 to 1,000 sf	.837	1.006	.110	19.4%
1,000 to 1,500 sf	.902	.993	.198	28.5%
1,500 to 2,000 sf	1.026	.993	.053	7.5%
2,000 to 3,000 sf	.843	1.041	.139	19.3%
3,000 sf or Higher	.989	1.013	.074	10.7%
Overall	.982	1.011	.123	16.8%

Improvement Quality

Case Processing Summary

		Count	Percent
quality	2	4	10.0%
	3	10	25.0%
	4	25	62.5%
	5	1	2.5%
Overall		40	100.0%
Excluded		0	
Total		40	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
2	.947	1.084	.199	30.0%
3	1.004	.994	.097	12.5%
4	.968	1.005	.121	16.7%
5	.847	1.000	.000	.%
Overall	.982	1.011	.123	16.8%

Improvement Condition

Case Processing Summary

		Count	Percent
condition	1	1	2.6%
	2	35	89.7%
	3	3	7.7%
Overall		39	100.0%
Excluded		1	
Total		40	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
1	1.222	1.000	.000	.%
2	.968	1.001	.121	16.8%
3	1.083	1.005	.046	7.0%
Overall	.982	1.006	.123	16.9%

Vacant Land Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT $25K	24	20.3%
	$25K to $50K	28	23.7%
	$50K to $100K	38	32.2%
	$100K to $150K	10	8.5%
	$150K to $200K	7	5.9%
	$200K to $300K	6	5.1%
	$300K to $500K	4	3.4%
	$500K to $750K	1	.8%
Overall		118	100.0%
Excluded		0	
Total		118	

Ratio Statistics for CURRLND / VTASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation: Median Centered
LT $25K	.978	1.012	.136	21.6%
$25K to $50K	1.014	1.009	.111	15.9%
$50K to $100K	.944	.998	.138	18.8%
$100K to $150K	1.000	1.002	.078	11.3%
$150K to $200K	1.045	1.001	.081	11.7%
$200K to $300K	1.023	1.001	.067	10.0%
$300K to $500K	.979	1.008	.081	13.2%
$500K to $750K	.912	1.000	.000	.%
Overall	.999	1.013	.118	16.7%

Subclass

Case Processing Summary

		Count	Percent
abstrlnd	100.00	97	82.2%
	200.00	3	2.5%
	520.00	2	1.7%
	550.00	1	.8%
	1112.00	14	11.9%
	2125.00	1	.8%
Overall		118	100.0%
Excluded		0	
Total		118	

Ratio Statistics for CURRLND / VTASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
				Median Centered
100.00	1.000	1.020	.121	16.9%
200.00	1.004	.995	.018	2.8%
520.00	.909	1.045	.109	15.5%
550.00	1.043	1.000	.000	.%
1112.00	.929	.949	.127	18.0%
2125.00	.977	1.000	.000	.%
Overall	.999	1.013	.118	16.7%