2010
GRAND COUNTY
PROPERTY ASSESSMENT
STUDY

WILDROSE
APPRAISAL, INCORPORATED
Audit Division

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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. 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 2010 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 13,911 people with 6.7 people per square mile, according to the U.S. Census Bureau's 2009 estimated population data.

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 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 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	0.992	1.018	6.5	Compliant
Condominium	647	0.999	1.001	4.5	Compliant
Single Family	698	0.996	1.007	6.1	Compliant
Vacant Land	380	1.000	1.004	0.83	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

Random Deed Analysis

An additional analysis was performed as part of the Ratio Analysis. Ten randomly selected deeds with documentary fees were obtained from the Clerk and Recorder. These deeds were for sales that occurred from January 1, 2007 through June 30, 2008. These sales were then checked for inclusion on the Assessor's qualified or unqualified database.

Conclusions

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

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 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 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.

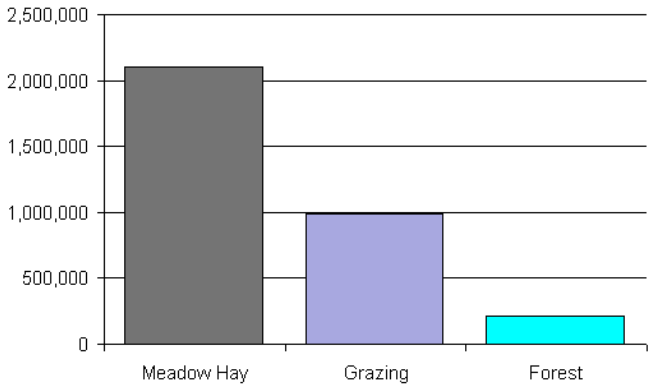
Recommendations

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. 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:

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	30,850	68.23	2,104,790	2,104,790	1.00
4147	Grazing	200,531	4.95	992,422	992,422	1.00
4177	Forest	19,253	11.30	217,614	217,614	1.00
Total/Avg		**250,634**	**13.23**	**3,314,826**	**3,314,826**	**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

SALES VERIFICATION

According to Colorado Revised Statutes:

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

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

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

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

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

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

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

WRA reviewed the sales verification procedures in 2010 for Grand 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 31 sales listed as unqualified.

All of the sales in the unqualified sales sample had reasons that were clear and supportable.

Conclusions

Grand County appears to be doing an excellent job of verifying their sales. WRA agreed with the county's reason for disqualifying each of the sales selected in the sample. There are no recommendations or suggestions.

Recommendations

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

VACANT LAND

Subdivision Discounting

Subdivisions were reviewed in 2010 in Grand 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

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 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
- Same business type or use

- Businesses with no deletions or additions for 2 or more years
- Non-filing Accounts - Best Information Available
- Accounts close to the $4,000 actual value exemption status
- Lowest or highest quartile of value per square foot
- Accounts protested with substantial disagreement
- Accounts which supply 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 statistical compliance with SBOE requirements.

Recommendations

None

WILDROSE AUDITOR STAFF

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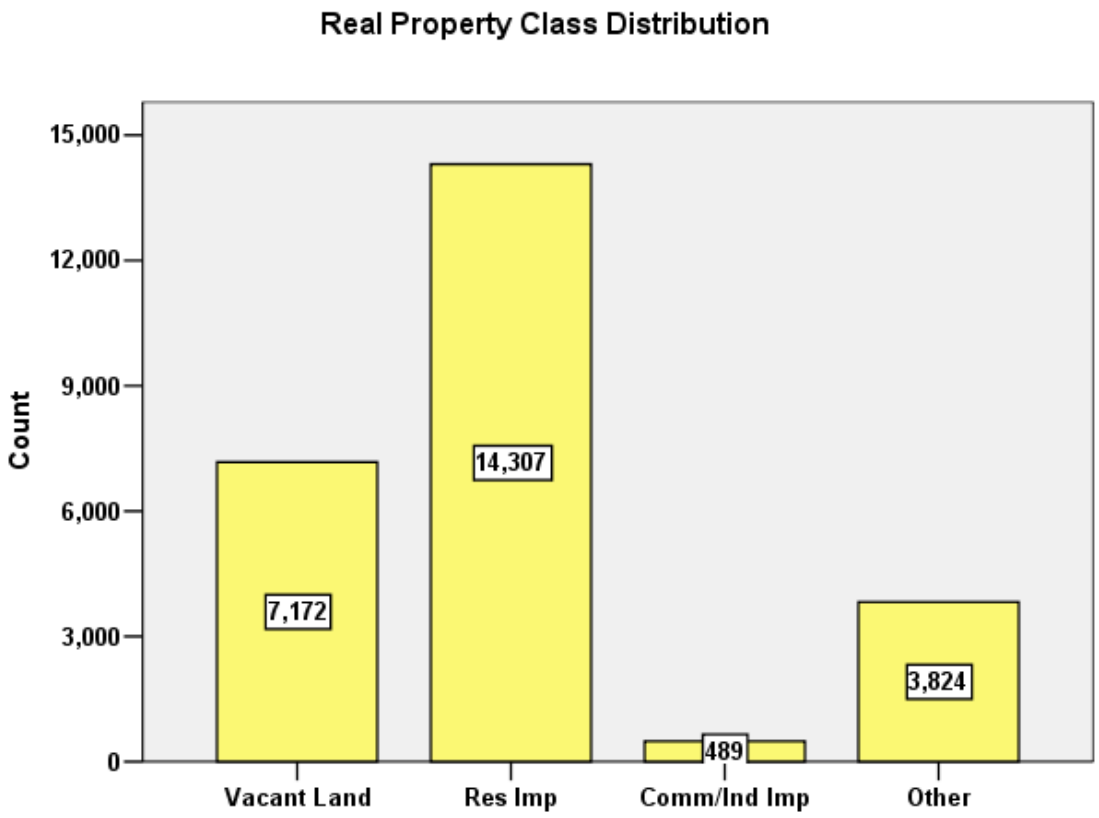
APPENDICES

STATISTICAL RESULTS
FOR GRAND COUNTY
2010

I. OVERVIEW

Grand County is a mountain resort located in western Colorado. The county has a total of 25,792 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:



The vacant land class of properties was dominated by residential land. Residential lots (coded 100) accounted for 85% of all vacant land parcels.

For residential improved properties, single family properties accounted for 65% of all residential properties. Residential condominiums accounted for 38% 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 2010 Colorado Property Assessment Study. Information was provided by the Grand Assessor's Office on April 13, 2010. The data included all 5 property record files as specified by the Auditor.

III. RESIDENTIAL SALES RESULTS

The following steps were taken to analyze the residential sales:

1. Selected qualified sales	1,849
2. Select improved sales	1,871
3. Select residential sales only	1,803
4. Sales between January 1, 2007 and June 30, 2008	1,345

The sales ratio analysis was analyzed as follows:

Residential Non-Condominiums (698 Sales)

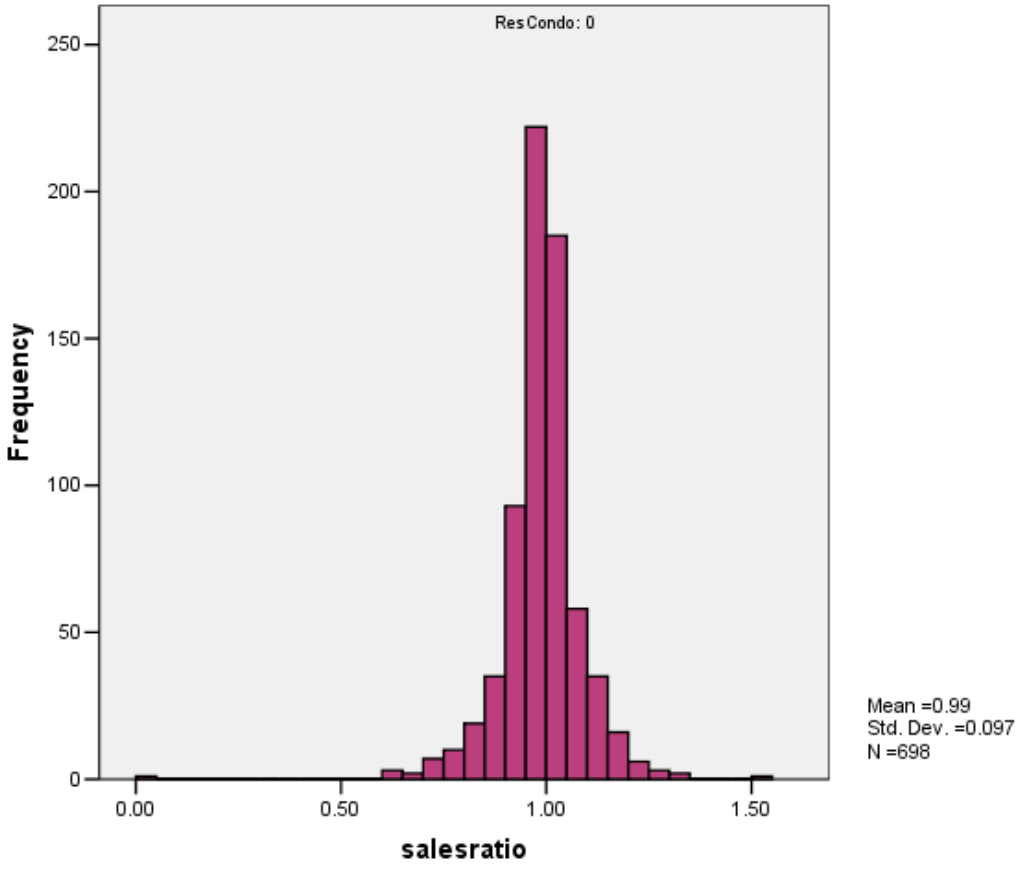
Median	**0.996**
Price Related Differential	**1.007**
Coefficient of Dispersion	**.061**

Residential Condominiums (647 Sales)

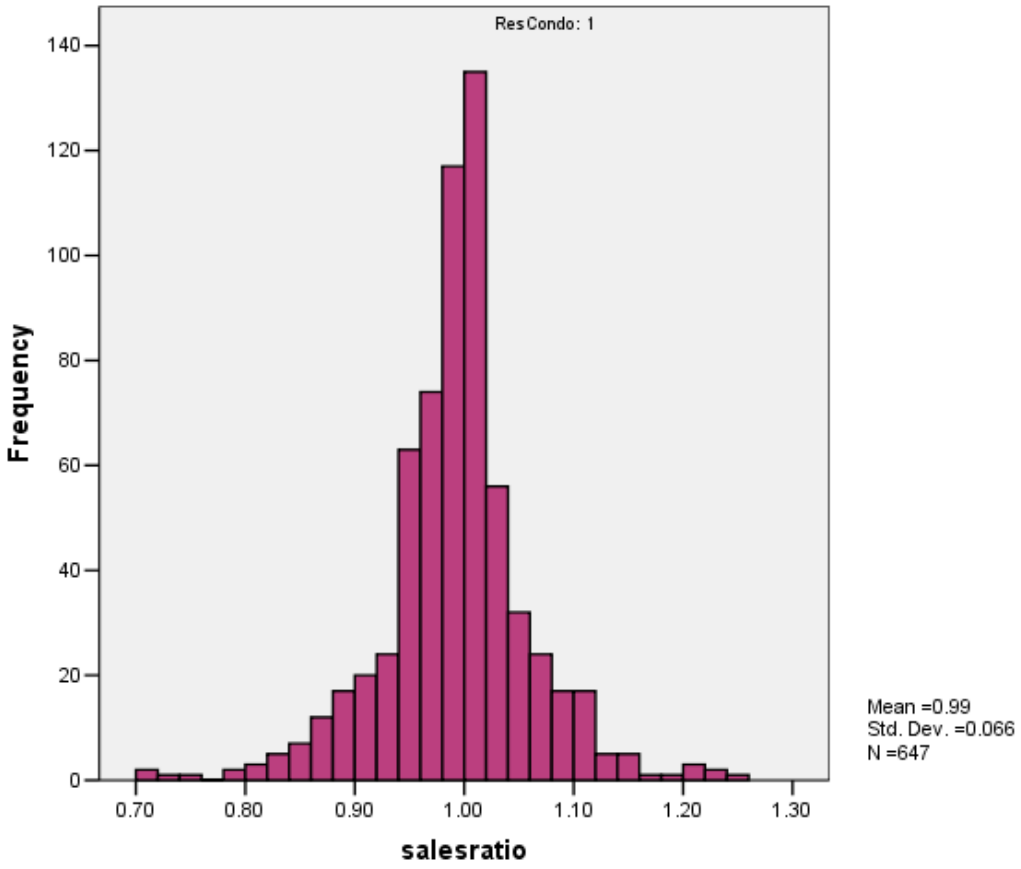
Median	**0.999**
Price Related Differential	**1.001**
Coefficient of Dispersion	**.045**

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. We stratified the sales by economic area, assigning residential condominiums under Economic Area 0, with the following results:

Coefficients[a]

ECONAREA	Model		Unstandardized Coefficients		Standardized Coefficients		
			B	Std. Error	Beta	t	Sig.
0	1	(Constant)	.999	.005		190.889	.000
		SalePeriod	-.001	.001	-.057	-1.459	.145
1	1	(Constant)	.985	.010		94.621	.000
		SalePeriod	.001	.001	.035	.570	.569
2	1	(Constant)	.977	.013		73.135	.000
		SalePeriod	.002	.001	.136	1.547	.124
3	1	(Constant)	.973	.025		38.937	.000
		SalePeriod	.002	.002	.110	.788	.434
4	1	(Constant)	.972	.025		39.127	.000
		SalePeriod	.001	.002	.041	.484	.629
5	1	(Constant)	1.034	.041		25.346	.000
		SalePeriod	-.005	.005	-.227	-1.043	.309
6	1	(Constant)	.941	.030		31.062	.000
		SalePeriod	.004	.003	.155	1.430	.157

a. Dependent Variable: salesratio

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

Sold/Unsold Analysis

In terms of the valuation consistency between sold and unsold residential properties, we compared the 2010 median actual value per square foot between each group, stratified by subdivision, as follows:

Subdivision	Group	No.	Median	Mean
255	**Unsold**	22	$333	$343
	Sold	19	$335	$358
	Total	41	$333	$350
257	**Unsold**	13	$214	$229
	Sold	19	$374	$379
	Total	32	$368	$318
300	**Unsold**	192	$234	$253
	Sold	13	$222	$210
	Total	205	$231	$250
500	**Unsold**	82	$129	$135
	Sold	7	$140	$168
	Total	89	$130	$138
520	**Unsold**	73	$158	$162
	Sold	7	$164	$179
	Total	80	$162	$164

610	**Unsold**	129	$135	$139
	Sold	11	$126	$132
	Total	140	$135	$138
615	**Unsold**	87	$140	$141
	Sold	7	$116	$123
	Total	94	$139	$140
625	**Unsold**	74	$163	$166
	Sold	12	$173	$176
	Total	86	$166	$168
1007	**Unsold**	8	$546	$551
	Sold	10	$611	$614
	Total	18	$611	$586
1098	**Unsold**	31	$365	$359
	Sold	25	$352	$367
	Total	56	$356	$363
1130	**Unsold**	94	$179	$190
	Sold	13	$177	$181
	Total	107	$178	$189
1201	**Unsold**	10	$400	$350
	Sold	14	$409	$408
	Total	24	$406	$384
1237	**Unsold**	68	$506	$504
	Sold	7	$538	$525
	Total	75	$508	$506
1239	**Unsold**	12	$481	$495
	Sold	14	$575	$561
	Total	26	$508	$531
1258	**Unsold**	9	$586	$575
	Sold	15	$586	$595
	Total	24	$586	$588
1273	**Unsold**	16	$236	$235
	Sold	7	$245	$244
	Total	23	$238	$238
1280	**Unsold**	381	$236	$260
	Sold	17	$270	$258
	Total	398	$236	$260
1412	**Unsold**	48	$596	$607
	Sold	152	$628	$612
	Total	200	$628	$611
1515	**Unsold**	57	$133	$137
	Sold	14	$136	$136
	Total	71	$136	$137
1710	**Unsold**	34	$214	$238
	Sold	6	$207	$210

	Total	40	$214	$234
1773	**Unsold**	228	$236	$238
	Sold	21	$263	$266
	Total	249	$237	$241
1859	**Unsold**	4	$391	$419
	Sold	31	$374	$376
	Total	35	$374	$381
1860	**Unsold**	65	$206	$212
	Sold	8	$191	$195
	Total	73	$203	$210
2020	**Unsold**	52	$149	$154
	Sold	6	$149	$145
	Total	58	$149	$153
2170	**Unsold**	30	$180	$186
	Sold	6	$187	$189
	Total	36	$180	$186
2215	**Unsold**	26	$214	$214
	Sold	8	$198	$215
	Total	34	$210	$214
2553	**Unsold**	70	$235	$255
	Sold	38	$252	$254
	Total	108	$239	$255
2651	**Unsold**	26	$245	$243
	Sold	17	$269	$267
	Total	43	$254	$252
2800	**Unsold**	16	$238	$239
	Sold	8	$238	$240
	Total	24	$238	$239
2950	**Unsold**	101	$271	$281
	Sold	9	$262	$328
	Total	110	$271	$285
3026	**Unsold**	9	$269	$269
	Sold	7	$267	$267
	Total	16	$268	$268
4126	**Unsold**	16	$288	$275
	Sold	7	$273	$281
	Total	23	$286	$277
5258	**Unsold**	24	$245	$256
	Sold	10	$273	$266
	Total	34	$257	$259
5500	**Unsold**	91	$77	$72
	Sold	11	$61	$67
	Total	102	$77	$72
5510	**Unsold**	139	$77	$73

	Sold	11	$77	$73
	Total	150	$77	$73
5625	**Unsold**	44	$452	$453
	Sold	6	$452	$458
	Total	50	$452	$454
5660	**Unsold**	47	$236	$232
	Sold	10	$237	$231
	Total	57	$236	$232
5661	**Unsold**	45	$240	$237
	Sold	13	$225	$229
	Total	58	$238	$235
5665	**Unsold**	41	$209	$216
	Sold	11	$201	$207
	Total	52	$208	$214
5671	**Unsold**	91	$276	$278
	Sold	6	$289	$296
	Total	97	$277	$279
5950	**Unsold**	69	$126	$141
	Sold	11	$126	$142
	Total	80	$126	$141
6026	**Unsold**	18	$302	$300
	Sold	7	$310	$319
	Total	25	$306	$305
6305	**Unsold**	34	$221	$226
	Sold	12	$221	$224
	Total	46	$221	$226
6360	**Unsold**	10	$157	$157
	Sold	8	$157	$157
	Total	18	$157	$157
6440	**Unsold**	38	$226	$226
	Sold	8	$230	$232
	Total	46	$227	$227
6651	**Unsold**	51	$243	$239
	Sold	8	$235	$231
	Total	59	$243	$238
6662	**Unsold**	32	$239	$239
	Sold	7	$250	$263
	Total	39	$239	$243
6682	**Unsold**	21	$279	$309
	Sold	6	$289	$286
	Total	27	$287	$304
6750	**Unsold**	204	$582	$567
	Sold	26	$578	$568
	Total	230	$581	$567

9030	**Unsold**	270	$204	$233
	Sold	11	$197	$214
	Total	281	$204	$233

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

IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

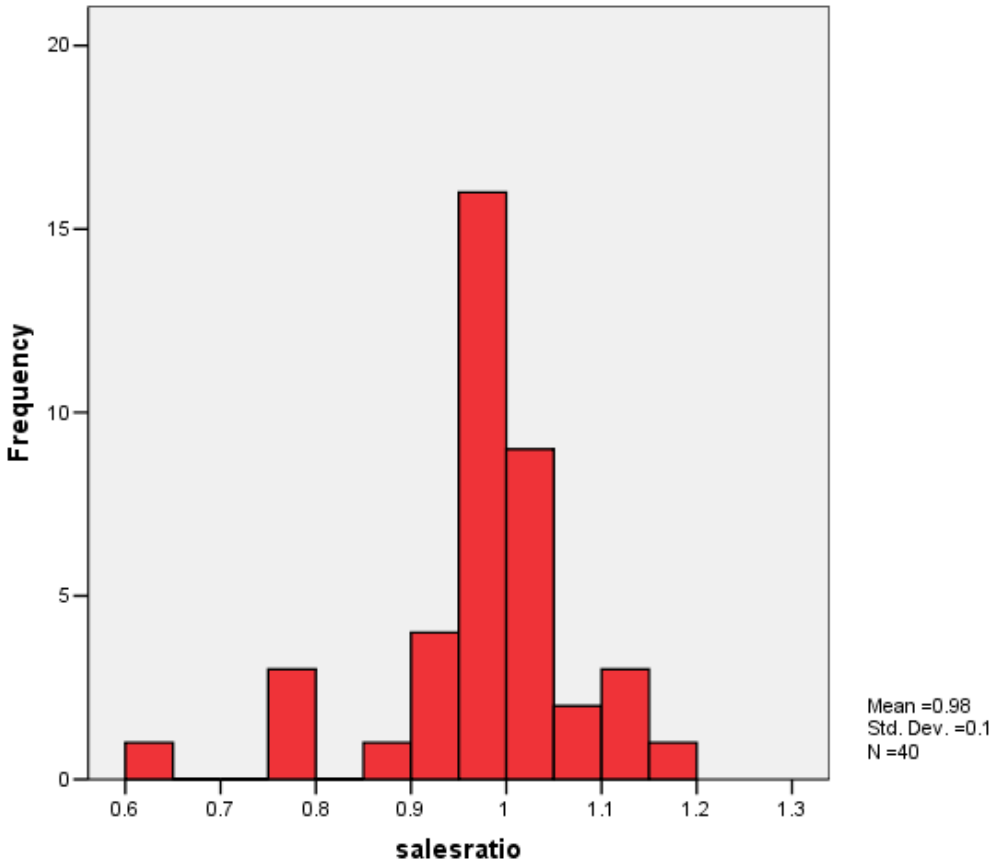
The following steps were taken to analyze the commercial sales:

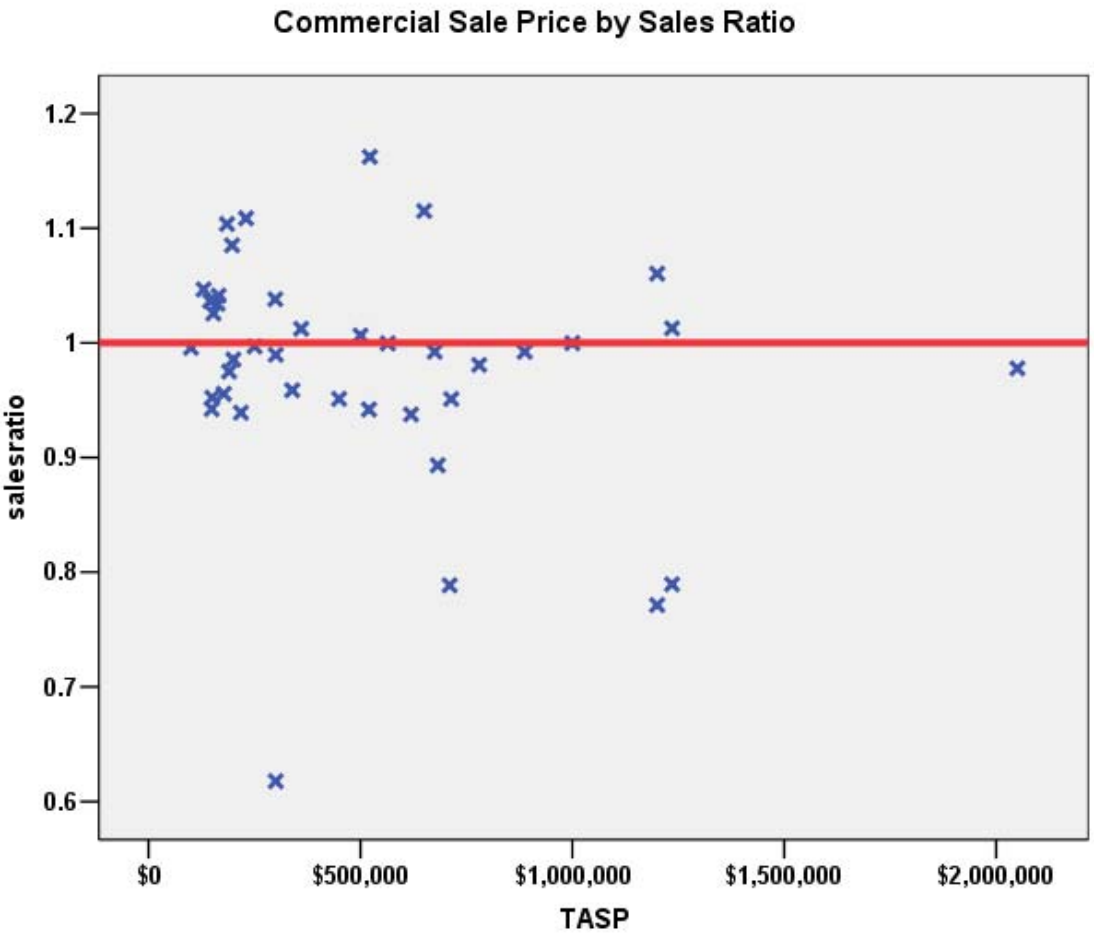
1. Selected qualified sales	1,849
2. Select improved sales	1,871
3. Select commercial sales only	56
4. Sales between January 1, 2007 and June 30, 2008	40

The sales ratio analysis was analyzed as follows:

Median	**0.992**
Price Related Differential	**1.018**
Coefficient of Dispersion	**.065**

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:


Frequency
20
15
10
5
0
0.6
0.7
0.8
0.9
1
1.1
1.2
1.3
salesratio
Mean =0.98
Std. Dev. =0.1
N =40



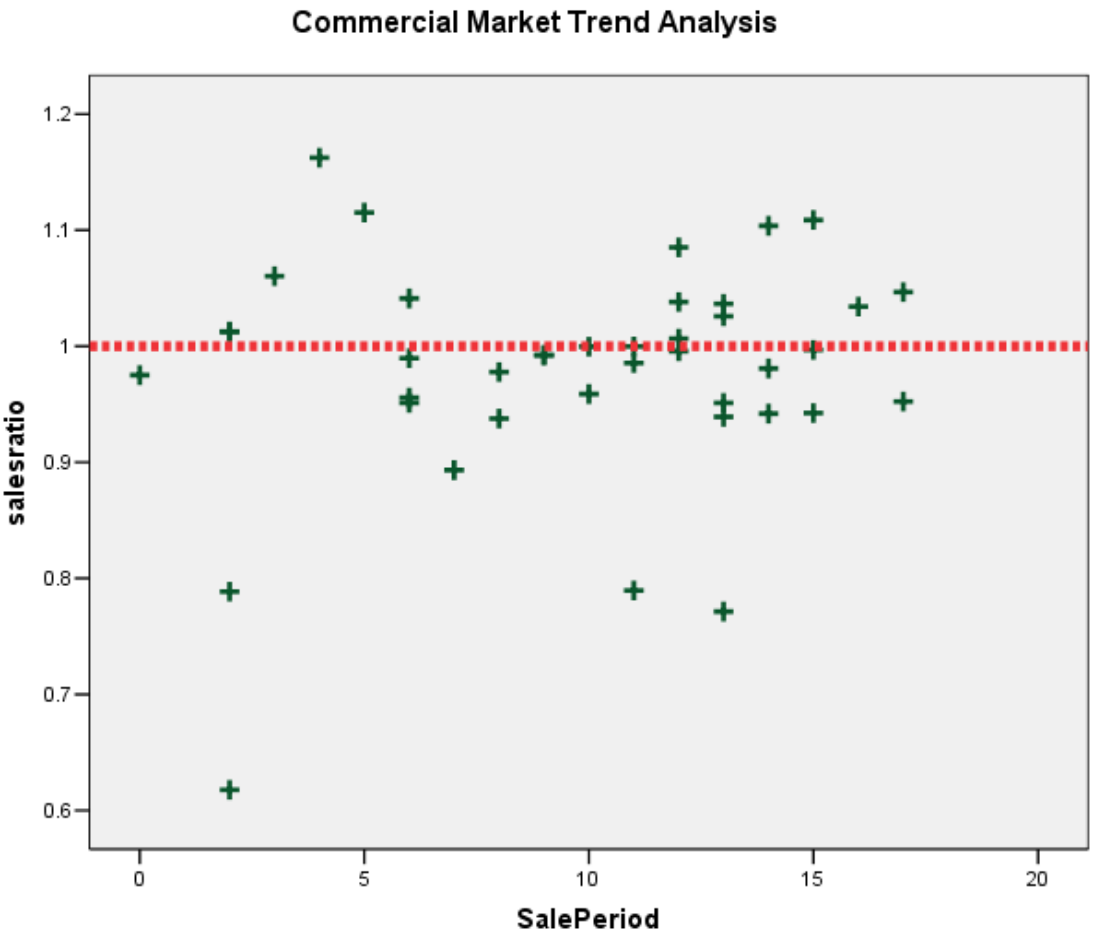
Commercial Market Trend Analysis

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 18 month sale period with the following results:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.945	.037		25.869	.000
	SalePeriod	.004	.003	.167	1.044	.303

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 actual value, both groups were valued overall in a consistent manner:

Subclass	Group	No, Props	Median Val / SF	Mean Val / SF
2212	Unsold	37	$174	$208
	Sold	7	$232	$226
2215	Unsold	16	$178	$171
	Sold	4	$90	$104
2220	Unsold	12	$220	$260
	Sold	3	$240	$299
2230	Unsold	86	$136	$155
	Sold	13	$135	$190
2235	Unsold	14	$81	$129
	Sold	5	$135	$138
2240	Unsold	8	$151	$175
	Sold	2	$151	$151
Total	Unsold	193	$169	$178
	Sold	38	$184	$188

While there were several subclasses of properties that had sold properties valued at a higher median rate, there were other classes where the opposite was the case.

V. VACANT LAND SALE RESULTS

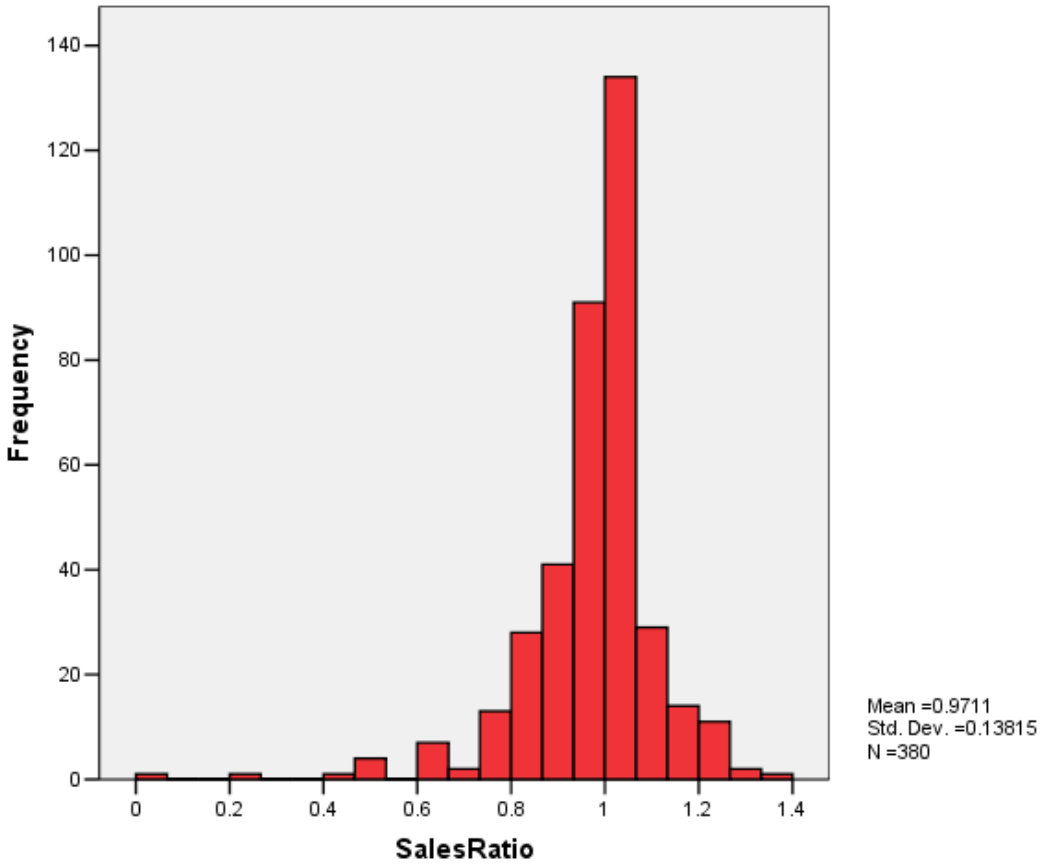
The following steps were taken to analyze vacant land sales:

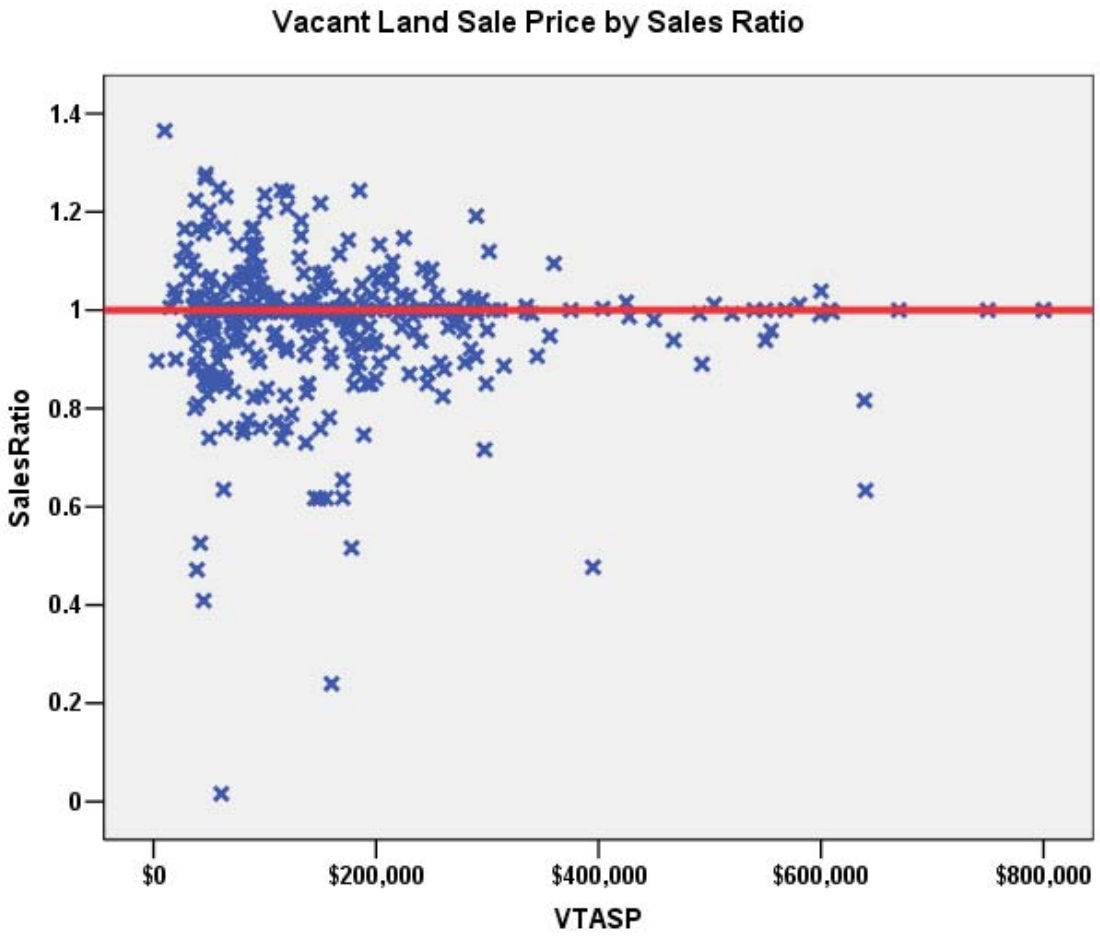
1. Selected qualified sales	1,849
2. Select vacant land sales	633
3. Sales between January 1, 2007 and June 30, 2008	380

The sales ratio analysis was analyzed as follows:

Median	**1.000**
Price Related Differential	**1.004**
Coefficient of Dispersion	**.083**

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:


Frequency
140
120
100
80
60
40
20
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
SalesRatio
Mean =0.9711
Std. Dev. =0.13815
N =380



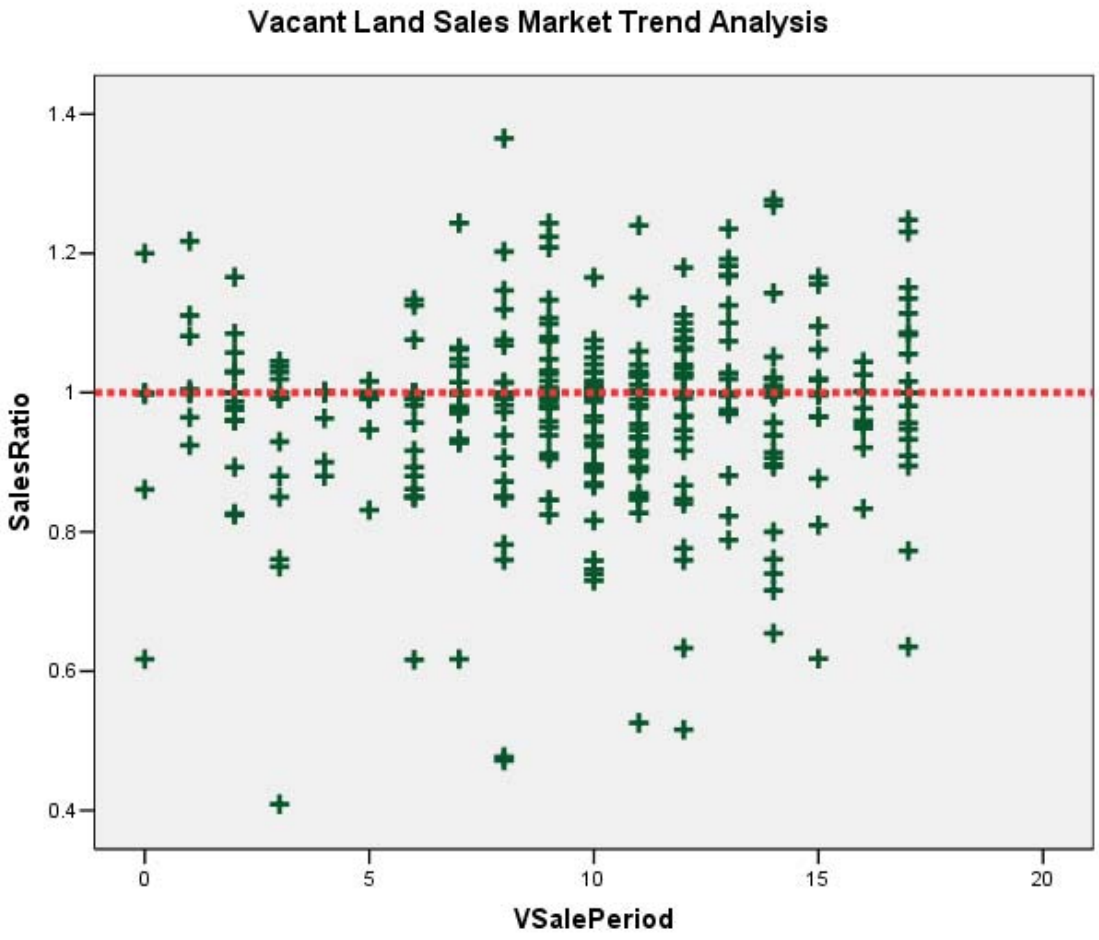
Vacant Land Market Trend Analysis

The assessor did not apply any market trend adjustment to the vacant land dataset. The 380 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	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.962	.016		61.453	.000
	VSalePeriod	.001	.001	.050	.974	.331

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 2008 and 2010 for vacant land properties to determine if sold and unsold properties were valued consistently. We performed the analysis stratifying the properties by subdivision with at least 6 sales, as follows:

SUBDIVNO	Group	N	Median	Mean
258	**Unsold**	39	1.73	1.58
	Sold	9	1.32	1.72
	Total	48	1.52	1.60
520	**Unsold**	57	.88	.89
	Sold	11	.85	.85
	Total	68	.88	.88

1236	**Unsold**	28	1.03	.99
	Sold	14	1.03	.95
	Total	42	1.03	.98
1280	**Unsold**	113	.85	.86
	Sold	11	.85	.89
	Total	124	.85	.86
1496	**Unsold**	66	1.22	1.28
	Sold	8	1.19	1.27
	Total	74	1.22	1.28
1773	**Unsold**	296	1.04	.97
	Sold	17	1.04	1.08
	Total	313	1.04	.98
1853	**Unsold**	44	1.11	1.10
	Sold	14	1.13	1.11
	Total	58	1.11	1.10
1854	**Unsold**	66	.86	.89
	Sold	7	.74	.79
	Total	73	.86	.88
2170	**Unsold**	21	1.10	1.10
	Sold	7	1.10	1.10
	Total	28	1.10	1.10
2226	**Unsold**	35	.91	.91
	Sold	9	.91	.90
	Total	44	.91	.91
2230	**Unsold**	101	1.03	1.16
	Sold	11	1.03	1.14
	Total	112	1.03	1.16
2234	**Unsold**	31	1.20	1.18
	Sold	10	1.12	1.32
	Total	41	1.20	1.21
2546	**Unsold**	27	.00	.45
	Sold	29	2.18	2.21
	Total	56	1.91	1.36
Total	**Unsold**	924	1.03	1.01
	Sold	157	1.05	1.29
	Total	1081	1.03	1.05

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

V. AGRICULTURAL IMPROVEMENTS ANALYSIS

The final statistical verification concerned the assigned actual values for agricultural residential improvements. We compared the actual value per square foot rate for this group and compared it to rates assigned to residential single family improvements in 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
ImpValSF	SFR	Mean		$136.13	$3.168
		95% Confidence Interval for Mean	Lower Bound	$129.85	
			Upper Bound	$142.41	
		5% Trimmed Mean		$133.77	
		Median		$129.36	
		Variance		1063.768	
		Std. Deviation		$32.615	
		Minimum		$76	
		Maximum		$252	
		Range		$177	
		Interquartile Range		$44	
		Skewness		1.115	.235
		Kurtosis		1.437	.465
	Ag Res	Mean		$146.94	$4.080
		95% Confidence Interval for Mean	Lower Bound	$138.92	
			Upper Bound	$154.96	
		5% Trimmed Mean		$139.98	
		Median		$130.55	
		Variance		6925.765	
		Std. Deviation		$83.221	
		Minimum		$4	
		Maximum		$648	
		Range		$644	
		Interquartile Range		$92	
		Skewness		2.030	.120
		Kurtosis		7.817	.239

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

Mean		.990
95% Confidence Interval for Mean	Lower Bound	.986
	Upper Bound	.995
Median		.998
95% Confidence Interval for Median	Lower Bound	.996
	Upper Bound	.999
	Actual Coverage	95.0%
Weighted Mean		.986
95% Confidence Interval for Weighted Mean	Lower Bound	.980
	Upper Bound	.991
Price Related Differential		1.005
Coefficient of Dispersion		.054
Coefficient of Variation	Mean Centered	8.5%

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

Commercial/Industrial

Ratio Statistics for CURRTOT / TASP

Mean		.979
95% Confidence Interval for Mean	Lower Bound	.947
	Upper Bound	1.011
Median		.992
95% Confidence Interval for Median	Lower Bound	.959
	Upper Bound	1.012
	Actual Coverage	96.2%
Weighted Mean		.962
95% Confidence Interval for Weighted Mean	Lower Bound	.921
	Upper Bound	1.004
Price Related Differential		1.018
Coefficient of Dispersion		.065
Coefficient of Variation	Mean Centered	10.2%

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

Vacant Land

Ratio Statistics for CURRLND / VTASP

Mean		.971
95% Confidence Interval for Mean	Lower Bound	.957
	Upper Bound	.985
Median		1.000
95% Confidence Interval for Median	Lower Bound	.996
	Upper Bound	1.000
	Actual Coverage	95.5%
Weighted Mean		.967
95% Confidence Interval for Weighted Mean	Lower Bound	.953
	Upper Bound	.982
Price Related Differential		1.004
Coefficient of Dispersion		.083
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.

Residential Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT $25K	6	.4%
	$25K to $50K	14	1.0%
	$50K to $100K	40	3.0%
	$100K to $150K	70	5.2%
	$150K to $200K	149	11.1%
	$200K to $300K	365	27.1%
	$300K to $500K	335	24.9%
	$500K to $750K	279	20.7%
	$750K to $1,000K	50	3.7%
	Over $1,000K	37	2.8%
Overall		1345	100.0%
Excluded		0	
Total		1345	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT $25K	1.020	1.007	.062	10.5%
$25K to $50K	.920	.998	.119	15.2%
$50K to $100K	.999	1.002	.090	12.6%
$100K to $150K	.994	.999	.060	8.8%
$150K to $200K	1.000	1.000	.066	10.5%
$200K to $300K	.999	1.000	.048	7.3%
$300K to $500K	1.000	1.000	.050	7.4%
$500K to $750K	.989	1.001	.052	9.0%
$750K to $1,000K	.999	1.000	.029	4.5%
Over $1,000K	.968	1.003	.050	7.3%
Overall	.998	1.005	.054	8.4%

Subclass

Case Processing Summary

		Count	Percent
Preduse	1112	1	.1%
	1212	683	50.8%
	1215	11	.8%
	1220	1	.1%
	1230	647	48.1%
	1235	2	.1%
Overall		1345	100.0%
Excluded		0	
Total		1345	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1112	.037	1.000	.000	.
1212	.996	1.007	.059	9.0%
1215	.914	.980	.111	14.3%
1220	.869	1.000	.000	.
1230	.999	1.001	.045	6.7%
1235	.955	1.014	.054	7.7%
Overall	.998	1.005	.054	8.4%

Age

Case Processing Summary

		Count	Percent
AgeRec	0	1	.1%
	Over 100	2	.1%
	75 to 100	9	.7%
	50 to 75	32	2.4%
	25 to 50	358	26.6%
	5 to 25	380	28.3%
	5 or Newer	563	41.9%
Overall		1345	100.0%
Excluded		0	
Total		1345	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	1.007	1.000	.000	.
Over 100	.857	.999	.155	21.9%
75 to 100	.974	1.041	.110	15.2%
50 to 75	.957	.998	.106	17.0%
25 to 50	.998	1.007	.056	8.8%
5 to 25	.999	1.004	.050	7.7%
5 or Newer	.999	1.009	.050	7.8%
Overall	.998	1.005	.054	8.4%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	0	1	.1%
	LE 500 sf	96	7.1%
	500 to 1,000 sf	448	33.3%
	1,000 to 1,500 sf	405	30.1%
	1,500 to 2,000 sf	243	18.1%
	2,000 to 3,000 sf	125	9.3%
	3,000 sf or Higher	27	2.0%
Overall		1345	100.0%
Excluded		0	
Total		1345	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation: Median Centered
0	1.007	1.000	.000	.
LE 500 sf	1.000	.981	.074	10.1%
500 to 1,000 sf	.997	1.004	.055	8.2%
1,000 to 1,500 sf	.997	1.004	.048	8.1%
1,500 to 2,000 sf	1.000	1.010	.054	8.4%
2,000 to 3,000 sf	.997	1.014	.057	9.6%
3,000 sf or Higher	.999	1.014	.025	4.5%
Overall	.998	1.005	.054	8.4%

Improvement Quality

Case Processing Summary

		Count	Percent
Qual	1	2	.1%
	2	2	.1%
	3	1	.1%
	3	81	6.0%
	3	1	.1%
	3	1	.1%
	4	11	.8%
	4	2	.1%
	4	704	52.4%
	5	27	2.0%
	5	446	33.2%
	6	66	4.9%
Overall		1344	100.0%
Excluded		1	
Total		1345	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1	1.123	1.056	.070	9.9%
2	1.081	1.034	.073	10.4%
3	.987	1.000	.000	.
3	.995	1.009	.066	10.0%
3	1.533	1.000	.000	.
3	1.015	1.000	.000	.
4	1.002	1.039	.105	16.8%
4	1.007	1.001	.004	.6%
4	.997	1.000	.054	8.1%
5	.999	1.006	.038	5.5%
5	.998	1.009	.050	8.3%
6	.999	1.018	.051	7.4%
Overall	.998	1.005	.054	8.4%

Commercial Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	$50K to $100K	1	2.5%
	$100K to $150K	4	10.0%
	$150K to $200K	8	20.0%
	$200K to $300K	6	15.0%
	$300K to $500K	4	10.0%
	$500K to $750K	9	22.5%
	$750K to $1,000K	3	7.5%
	Over $1,000K	5	12.5%
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	.996	1.000	.000	.
$100K to $150K	.994	1.002	.047	5.5%
$150K to $200K	1.030	1.000	.039	5.1%
$200K to $300K	.993	1.009	.100	18.0%
$300K to $500K	.983	.999	.028	3.2%
$500K to $750K	.951	1.006	.083	12.1%
$750K to $1,000K	.992	.999	.006	1.0%
Over $1,000K	.978	.993	.105	15.0%
Overall	.992	1.018	.065	10.2%

Subclass

Case Processing Summary

		Count	Percent
Preduse	2212	7	17.5%
	2215	5	12.5%
	2220	4	10.0%
	2230	13	32.5%
	2235	5	12.5%
	2240	2	5.0%
	2245	4	10.0%
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
2212	.956	1.070	.063	10.1%
2215	1.013	1.016	.075	12.6%
2220	.984	1.003	.033	5.5%
2230	1.000	.995	.072	13.0%
2235	.990	1.014	.021	3.3%
2240	.885	.995	.109	15.4%
2245	.999	1.002	.060	7.2%
Overall	.992	1.018	.065	10.2%

Vacant Land Median Ratio Stratification

Case Processing Summary

		Count	Percent
VPreduse	100	268	70.5%
	200	8	2.1%
	510	4	1.1%
	520	3	.8%
	530	1	.3%
	540	3	.8%
	550	1	.3%
	600	3	.8%
	1113	3	.8%
	1212	84	22.1%
	1225	1	.3%
	5170	1	.3%
Overall		380	100.0%
Excluded		0	
Total		380	

Ratio Statistics for CURRLND / VTASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation: Median Centered
100	1.000	1.006	.083	13.9%
200	1.001	.979	.031	5.4%
510	1.026	1.085	.116	19.7%
520	.999	1.001	.002	.3%
530	1.039	1.000	.000	.
540	.965	1.088	.127	24.4%
550	1.000	1.000	.000	.
600	.975	.975	.047	8.8%
1113	1.000	1.030	.054	9.4%
1212	1.000	.995	.081	11.5%
1225	1.000	1.000	.000	.
5170	.016	1.000	.000	.
Overall	1.000	1.004	.083	14.1%