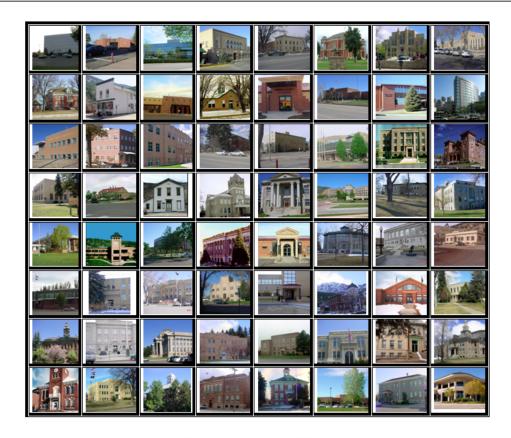


# 2010 EL PASO COUNTY PROPERTY ASSESSMENT STUDY





WILDROSE Appraisal, Incorporated Audit Division



September 15, 2010

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

#### RE: Final Report for the 2010 Colorado Property Assessment Study

Dear Mr. Mauer:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2010 Colorado Property Assessment Study.

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

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

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

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

Harry J. Dulla

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



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The State Board of Equalization (SBOE) reviews assessments for conformance to the Constitution. The SBOE will order revaluations for counties whose valuations do not reflect the proper valuation period level of value.

The statutory basis for the audit is found in C.R.S. 39-1-104(16)(a)(b) and (c).

The legislative council sets forth two criteria that are the focus of the audit group:

To determine whether each county assessor is applying correctly the constitutional and statutory provisions, compliance requirements of the State Board of Equalization, and the manuals published by the State Property Tax Administrator to arrive at the actual value of each class of property.

To determine if each assessor is applying correctly the provisions of law to the actual values when arriving at valuations for assessment of all locally valued properties subject to the property tax.

The property assessment audit conducts a twopart analysis: A procedural analysis and a statistical analysis. The procedural analysis includes all classes of property and specifically looks at how the assessor develops economic areas, confirms and qualifies sales, and develops time adjustments. The audit also examines the procedures for adequately discovering, classifying and valuing agricultural outbuildings, discovering subdivision build-out subdivision and discounting procedures. Valuation methodology for vacant land, improved properties commercial residential and properties is examined. Procedures for producing mines, oil and gas leaseholds and lands producing, producing coal mines, producing earth and stone products, severed mineral interests and non-producing patented mining claims are also reviewed.

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

Wildrose Audit has completed the Property Assessment Study for 2010 and is pleased to report its findings for El Paso County in the following report.



# REGIONAL/HISTORICAL SKETCH OF EL PASO COUNTY

### **Regional Information**

El Paso County is located in the Front Range region of Colorado. The Colorado Front Range is a colloquial geographic term for the populated areas of the State that are just east of the foothills of the Front Range. It includes Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, El Paso, Jefferson, Larimer, Pueblo, and Weld counties.





#### **Historical Information**

El Paso County has a population of approximately 604,542 people with 243.1 people per square mile, according to the U.S. Census Bureau's 2009 estimated population data.

In July 1858, gold was discovered along the South Platte River in Arapahoe County, Kansas Territory. This discovery precipitated the Pike's Peak Gold Rush. Many residents of the mining region felt disconnected from the remote territorial governments of Kansas and Nebraska, so they voted to form their own Territory of Jefferson on Oct 24, 1859. The following month, the Jefferson Territorial Legislature organized 12 counties for the new territory including El Paso County. El Paso County was named for the Spanish language name for Ute Pass north of Pikes Peak. Colorado City served as the county seat of El Paso County. The Jefferson Territory never received federal sanction, but on Feb. 2, 1861, U.S. President James Buchanan signed an act organizing the Territory of Colorado. El Paso County was one of the original 17 counties created by the Colorado legislature on November 1, 1861. Part of its western territory was broken off to create Teller County in 1899. Originally based in Old Colorado City (now part of Colorado Springs, not today's Colorado City between Pueblo and Walsenburg), El Paso County's county seat was moved to Colorado Springs in 1873. Colorado Springs was founded in August 1871 by General William Palmer, with the intention of creating a high quality resort community, and was soon nicknamed "Little London" because of the many English tourists who came. Nearby Pikes Peak and the Garden of the Gods made the city's location a natural choice. (Wikipedia.org)



# **RATIO ANALYSIS**

#### Methodology

All significant classes of properties were Sales were collected for each analyzed. property class over the appropriate sale period, which was typically defined as the 18-month period between January 2007 and June 2008. Counties with less than 30 sales typically extended the sale period back up to 5 years prior to June 30, 2008 in 6-month increments. If there were still fewer than 30 sales, supplemental appraisals were performed and treated as proxy sales. Residential sales for all counties using this method totaled at least 30 per county. For commercial sales, the total number analyzed was allowed, in some cases, to fall below 30. There were no sale quantity issues for counties requiring vacant land analysis or condominium analysis. Although it was required that we examine the median and coefficient of dispersion for all counties, we also calculated the weighted mean and pricerelated differential for each class of property. Counties were not passed or failed by these

latter measures, but were counseled if there were anomalies noted during our analysis. Qualified sales were based on the qualification code used by each county, which were typically coded as either "Q" or "C." The ratio analysis included all sales. The data was trimmed for counties with obvious outliers using IAAO standards for data analysis. In every case, we examined the loss in data from trimming to ensure that only true outliers were excluded. Any county with a significant portion of sales excluded by this trimming method was examined further. No county was allowed to pass the audit if more than 5% of the sales were "lost" because of trimming. For the largest 11 counties, the residential ratio statistics were broken down by economic area as well.

#### Conclusions

For this final analysis report, the minimum acceptable statistical standards allowed by the State Board of Equalization are:

ALLOWABLE 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 El Paso County are:

El Paso County Ratio Grid						
Number of QualifiedUnweightedPrice CoefficientQualifiedMedianRelatedofProperty ClassSalesRatioDifferentialDispersion						
Commercial/Industrial	141	0.960	1.038	10.8	Compliant	
Condominium	N/A	N/A	N/A	N/A	N/A	
Single Family	12,961	0.963	1.022	8	Compliant	
Vacant Land	439	0.990	1.066	7.5	Compliant	

Group	Median	Price Related Differential	Coefficient of Dispersion
10	1.014	1.270	.111
12	.928	1.132	.173
13	.860	1.052	.198
2	1.006	1.032	.074
4	1.026	1.202	.122
5	1.002	1.257	.199
7	.982	1.021	.136
8	.924	1.084	.128
ļ	.959	1.015	.080
II.	.950	1.028	.097
III	.999	1.027	.139
IV	.970	1.017	.113
IX	.953	1.011	.075
V	.963	1.027	.120
VI	.957	1.036	.138
VII	.963	1.017	.095
VIII	.957	1.014	.066
Х	.955	1.017	.079
XI	.955	1.009	.079
XII	.965	1.003	.054
XIII	.966	1.004	.065
XIV	.964	1.004	.058
XIX	.972	1.016	.106
XV	.967	1.007	.061
XVI	.957	1.009	.062
XVII	.962	1.013	.071
XVIII	.962	1.019	.099
Overall	.963	1.022	.080



After applying the above described methodologies, it is concluded from the sales ratios that El Paso 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, El Paso County has accurately transferred sales data from the recorded deeds to the qualified or unqualified database.

Recommendations



# TIME TRENDING VERIFICATION

### Methodology

While we recommend that counties use the inverted ratio regression analysis method to account for market (time) trending, some counties have used other IAAO-approved methods, such as the weighted monthly median approach. We are not auditing the methods used, but rather the results of the methods used. Given this range of methodologies used to account for market trending, we concluded that the best validation method was to examine the sale ratios for each class across the appropriate sale period. To be specific, if a county has considered and adjusted correctly for market trending, then the sale ratios should remain stable (i.e. flat) across the sale period. If a residual market trend is detected, then the county may or may not have addressed market

trending adequately, and a further examination is warranted. This validation methodology also considers the number of sales and the length of the sale period. Counties with few sales across the sale period were carefully examined to determine if the statistical results were valid.

#### Conclusions

After verification and analysis, it has been determined that El Paso County has complied with the statutory requirements to analyze the effects of time on value in their county. El Paso County has also satisfactorily applied the results of their time trending analysis to arrive at the time adjusted sales price (TASP).

Recommendations



# SOLD/UNSOLD ANALYSIS

### Methodology

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

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

If either residential or commercial differences were significant using the unit value method, or if data limitations made the comparison invalid, then the next step was to perform a ratio analysis comparing the 2009 and 2010 actual values for each qualified class of property. All qualified vacant land classes were tested using this method. The sale property ratios were arrayed using a range of 0.8 to 1.5, which theoretically excluded changes between years that were due to other unrelated changes in the property. These ratios were also stratified at the appropriate level of analysis. Once the percent change was determined for each appropriate class and sub-class, the next step was to select the unsold sample. This sample

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

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

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



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

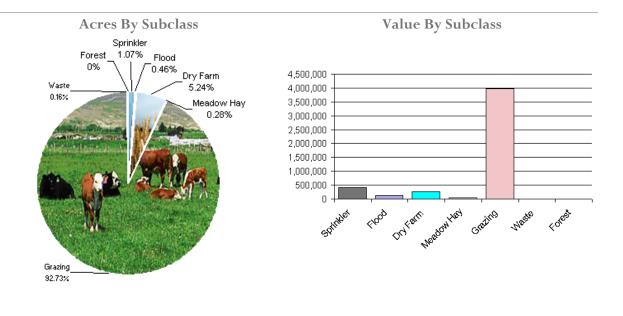
### Conclusions

### Recommendations

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



# AGRICULTURAL LAND STUDY



# Agricultural Land

County records were reviewed to determine major land categories such as irrigated farm, dry farm, meadow hay, grazing and other In addition, county records were lands. 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 locally developed yields, any 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:



	El Paso County Agricultural Land Ratio Grid						
Abstract Code	Land Class	Number Of Acres	County Value Per Acre T	County Assessed Total Value	WRA Total Value	Ratio	
4107	Sprinkler	6,198	68.42	424,059	423,210	1.00	
4117	Flood	2,654	49.43	131,179	132,251	0.99	
4127	Dry Farm	30,441	8.69	264,464	263,805	1.00	
4137	Meadow Hay	1,644	25.21	41,441	41,441	1.00	
4147	Grazing	538,204	7.37	3,965,550	3,965,550	1.00	
4177	Forest	330	9.66	3,188	3,188	1.00	
4167	Waste	918	1.62	1,483	1,483	1.00	
Total/Avg		580,389	8.32	4,831,363	4,830,928	1.00	

Recommendations



# Agricultural Outbuildings

### Methodology

Data was collected and reviewed to determine if the guidelines found in the Assessor's Reference Library (ARL) Volume 3, pages 5.74 through 5.77 were being followed.

### Conclusions

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

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

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

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

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

WRA reviewed the sales verification procedures in 2010 for El Paso 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 45 sales listed as unqualified.

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

#### Conclusions

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

Recommendations



# ECONOMIC AREA REVIEW AND EVALUATION

#### Methodology

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



# 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** 



# VACANT LAND

#### **Subdivision Discounting**

Subdivisions were reviewed in 2010 in El Paso 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

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

Recommendations



# **POSSESSORY INTEREST PROPERTIES**

#### **Possessory Interest**

Possessory interest property discovery and valuation is described in the Assessor's Reference Library (ARL) Volume 3 section 7 in accordance with the requirements of C.R.S. Chapter 39-1-103 (17)(a)(II) Possessory Interest is defined by the Property Tax Administrator's Publication ARL Volume 3, Chapter 7: A private property interest in government-owned property or the right to the occupancy and use of any benefit in government-owned property that has been granted under lease, permit, license, concession, contract, or other agreement.

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

#### Conclusions

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

**Recommendations** 



# PERSONAL PROPERTY AUDIT

El Paso 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.

El Paso 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
- Secretary of State Business Filings
- Voluntary Filings

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.

El Paso 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:

- 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

El Paso County's median ratio is 1.00. This is in compliance with the State Board of Equalization (SBOE) compliance requirements which range from .90 to 1.10 with no COD requirements.

### Conclusions

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

#### Recommendations



# WILDROSE AUDITOR STAFF

Harry J. Fuller, Audit Project Manager

Suzanne Howard, Audit Administrative Manager

Steve Kane, Audit Statistician/Field Analyst

Carl W. Ross, Agricultural / Natural Resource Analyst

J. Andrew Rodriguez, Field Analyst



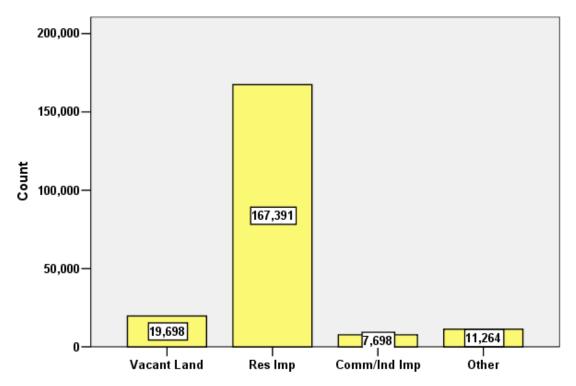
# **A P P E N D I C E S**



## STATISTICAL RESULTS FOR EL PASO COUNTY 2010

#### I. OVERVIEW

El Paso County is an urban county located along Colorado's Front Range. The county has a total of 206,051 real property parcels, according to data submitted by the county assessor's office in 2010. The following provides a breakdown of property classes for this county:



### **Real Property Class Distribution**

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

For residential improved properties, single family properties accounted for 97% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial properties accounted for 3.7% 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 El Paso Assessor's Office in April 2010. The data included all 5 property record files as specified by the Auditor.

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

The following steps were taken to analyze the residential sales:

1. Improved sales	13,200
2. Select residential sales only	12,979
3. Sales between January 1, 2007 and June 30, 2008	12,979

The sales ratio analysis was analyzed as follows:



#### Percent Count ECONAREA 10 13 .1% 12 13 .1% 13 5 .0% 2 12 .1% 4 13 .1% 5 8 .1% 7 18 .1% 8 19 .1% L 2047 15.8% II 443 3.4% Ш 181 1.4% IV 976 7.5% IX 275 2.1% V 581 4.5% VI 348 2.7% VII 504 3.9% VIII 333 2.6% Х 173 1.3% XI 541 4.2% XII 1900 14.7% XIII 946 7.3% XIV 1131 8.7% XIX 78 .6% XV 771 5.9% XVI 153 1.2% XVII 973 7.5% XVIII 506 3.9% Overall 12961 100.0% Excluded 0 Total 12961

#### **Case Processing Summary**

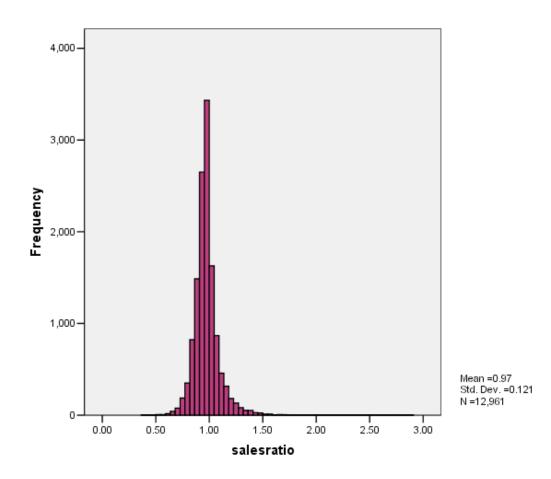


		Price Related	Coefficient of
Group	Median	Differential	Dispersion
10	1.014	1.270	.111
12	.928	1.132	.173
13	.860	1.052	.198
2	1.006	1.032	.074
4	1.026	1.202	.122
5	1.002	1.257	.199
7	.982	1.021	.136
8	.924	1.084	.128
I	.959	1.015	.080
II	.950	1.028	.097
III	.999	1.027	.139
IV	.970	1.017	.113
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V	.963	1.027	.120
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XIX	.972	1.016	.106
XV	.967	1.007	.061
XVI	.957	1.009	.062
XVII	.962	1.013	.071
XVIII	.962	1.019	.099
Overall	.963	1.022	.080

#### Ratio Statistics for CURRTOT / TASP

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





The above graphs indicate that the distribution of the sale ratios was within state mandated limits.

#### **Residential Market Trend Analysis**

We next analyzed the residential dataset using the 18-month sale period for any residual market trending and broken down by economic area, as follows:



Coefficients<sup>a</sup>

				lardized cients	Standardized Coefficients		
ECONAREA	Model		В	Std. Error	Beta	t	Sig.
10	1	(Constant)	1.131	.082		13.867	.000
		SalePeriod	010	.007	388	-1.395	.191
12	1	(Constant)	1.105	.157		7.034	.000
		SalePeriod	010	.013	231	787	.448
13	1	(Constant)	.925	.250		3.695	.034
		SalePeriod	010	.026	209	370	.736
2	1	(Constant)	.943	.063		14.884	.000
		SalePeriod	.009	.007	.380	1.299	.223
4	1	(Constant)	1.115	.094		11.825	.000
		SalePeriod	007	.008	260	893	.391
5	1	(Constant)	1.201	.190		6.326	.001
		SalePeriod	025	.017	518	-1.482	.189
7	1	(Constant)	.880	.097	1010	9.099	.000
	•	SalePeriod	.009	.008	.259	1.073	.299
8	1	(Constant)	.871	.107	.200	8.171	.000
-	•	SalePeriod	.005	.009	.135	.560	.583
1	1	(Constant)	1.019	.009	.133	174.847	.000
•		SalePeriod	004	.000	153	-7.018	.000
	1	(Constant)	.958	.001	100	70.286	.000
	•	SalePeriod	002	.014	061	-1.283	.200
	1	(Constant)	1.094	.001	001	40.325	.000
	1	SalePeriod	005	.027	100	-1.645	.102
IV	1	(Constant)	1.080	.003	122	108.705	
IV	1	SalePeriod			252		.000
	1	(Constant)	008	.001	253	-8.145	.000
IX	1	(Constant) SalePeriod	.978	.012	100	80.881	.000
V			003	.001	129	-2.154	.032
v	1	(Constant)	.998	.015	0.45	64.916	.000
1/1		SalePeriod	002	.002	045	-1.082	.280
VI	1	(Constant)	.955	.021		45.084	.000
VII	1	SalePeriod	.002	.002	.042	.784	.433
VII	I	(Constant)	.992	.012		80.075	.000
\//III	-	SalePeriod	003	.001	096	-2.165	.031
VIII	1	(Constant)	.982	.010		102.888	.000
		SalePeriod	003	.001	157	-2.892	.004
Х	1	(Constant)	.963	.015		64.780	.000
		SalePeriod	001	.001	027	353	.724
XI	1	(Constant)	.991	.009		104.808	.000
MI		SalePeriod	003	.001	149	-3.493	.001
XII	1	(Constant)	.963	.004		245.176	.000
		SalePeriod	.001	.000	.060	2.629	.009
XIII	1	(Constant)	.971	.006		170.652	.000
		SalePeriod	.000	.001	013	396	.692
XIV	1	(Constant)	.965	.005		190.155	.000
		SalePeriod	.000	.000	.006	.211	.833
XIX	1	(Constant)	.950	.063		15.023	.000
		SalePeriod	.004	.006	.071	.617	.539
XV	1	(Constant)	.964	.006		149.695	.000
		SalePeriod	.000	.001	.018	.499	.618
XVI	1	(Constant)	.960	.014		70.131	.000
		SalePeriod	002	.001	117	-1.453	.148
XVII	1	(Constant)	.959	.007		133.149	.000
		SalePeriod	.001	.001	.043	1.348	.178
XVIII	1	(Constant)	.972	.014		67.371	.000
		SalePeriod	.000	.001	.009	.198	.843

a. Dependent Variable: salesratio



There was no residual market trending present in the sale ratio data for most of the economic areas. Those with statistical trends were generally not significant in terms of magnitude. 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 median actual value per square foot for 2010 between each group. The data was analyzed as follows:

Group	No.	Median	Mean
Unsold	153,325	\$139	\$143
Sold	12,960	\$140	\$147

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

#### IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

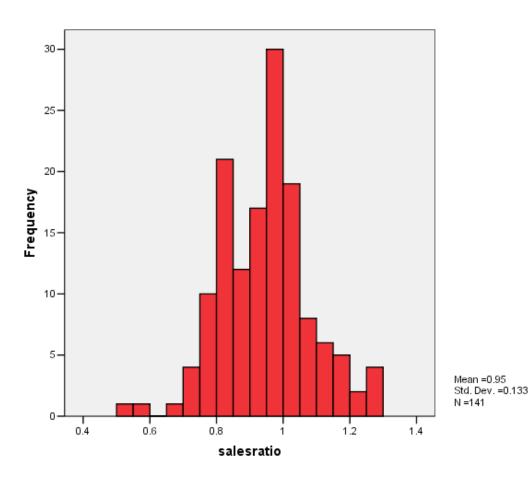
1. Improved sales	13,200
2. Select commercial sales only	205
3. Sales between January 1, 2007 and June 30, 2008	141

The sales ratio analysis was analyzed as follows:

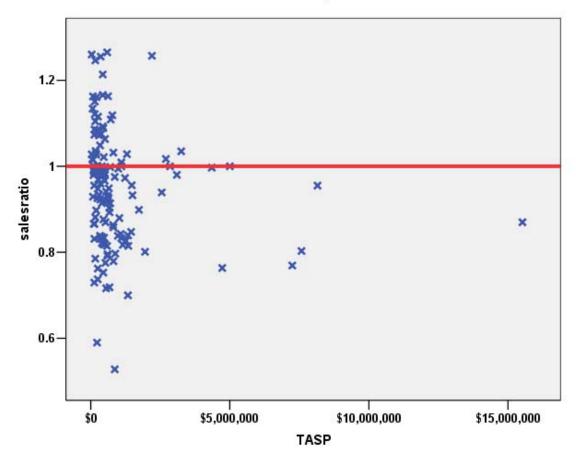
Median	0.960
Price Related Differential	1.038
Coefficient of Dispersion	.108

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









### **Commercial Sale Price by Sales Ratio**

#### Commercial/Industrial Market Trend Analysis

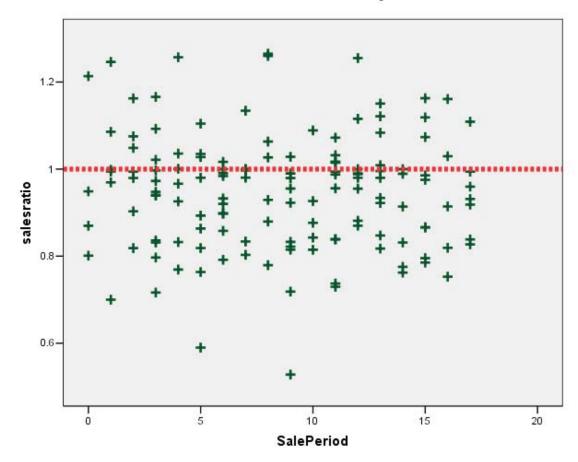
The assessor did apply market trend adjustments to the commercial/industrial dataset. The 141 commercial/industrial sales were analyzed, examining the sale ratios across the 18 month sale period with the following results:

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

		Unstandardized Coefficients		Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	.957	.023		42.197	.000
	SalePeriod	001	.002	041	481	.632

a. Dependent Variable: salesratio





**Commercial Market Trend Analysis** 

There was no residual market trending present in the commercial sale ratios. We concluded that the assessor has adequately considered market trending adjustments as part of the commercial/industrial valuation.

#### Sold/Unsold Analysis

We compared the median actual value per square foot between sold and unsold commercial properties to determine if sold and unsold properties were valued consistently, as follows:

Group	Ν	Median	Mean
Unsold	7,560	\$76	\$105
Sold	140	\$80	\$99

The above results indicated that sold and unsold vacant land properties were valued consistently.



#### V. VACANT LAND SALE RESULTS

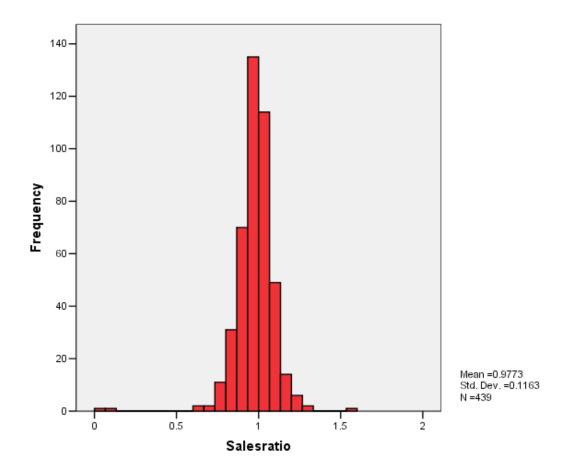
The following steps were taken to analyze the vacant land sales:

1. Vacant land sales	442
2. Select non-agricultural sales only	439
3. Sales between January 1, 2007 and June 30, 2008	439

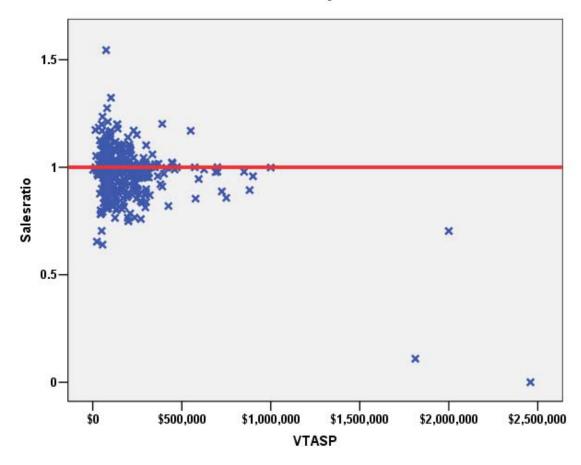
The sales ratio analysis was analyzed as follows:

Ratio Statistics for currInd / Vtasp			
Median	0.990		
Price Related Differential	1.066		
Coefficient of Dispersion	.075		

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







### Vacant Land Sale Price by Sales Ratio

The above histogram indicates that the distribution of the vacant land sale ratios was within state mandated limits, while the above scatter plot indicated that there was no price related differential issues. No sales were trimmed.

#### Vacant Land Market Trend Analysis

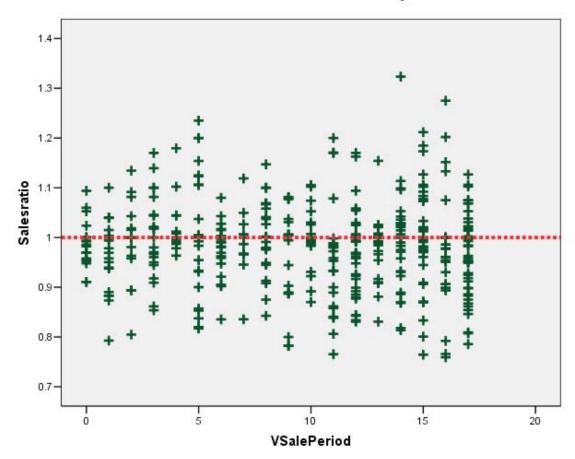
We next analyzed the vacant land dataset using the 18-month sale period, with the following results:

		Unstandardized Coefficients		Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	.994	.009		109.832	.000
	VSalePeriod	001	.001	058	-1.209	.227

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

a. Dependent Variable: Salesratio





Vacant Land Sales Market Trend Analysis

The above analysis indicated a marginally significant market trend in terms of statistical significance, but its magnitude (at 0.2% per month) was not significant. We therefore concluded that the assessor has adequately dealt with market trending for vacant land properties.

#### Sold/Unsold Analysis

In terms of the valuation consistency between sold and unsold vacant land properties, we compared the median change in value for 2008 and 2010 between each group. The following results present the comparison results for sold and unsold properties:

Group	No.	Median
Unsold	18,284	1.05
Sold	439	1.10

Overall, we concluded that the county assessor valued sold and unsold vacant properties consistently.



#### V. AGRICULTURAL IMPROVEMENTS ANALYSIS

Based on the parameters of the state audit analysis, this county was exempt from this analysis for 2010.

#### **VI.** Conclusions

Based on this 2010 audit statistical analysis, residential, commercial/industrial and vacant land properties were found to be in compliance with state guidelines.



#### STATISTICAL ABSTRACT

#### **Residential**

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

Mean		.974
95% Confidence Interval	Lower Bound	.972
for Mean	Upper Bound	.976
Median		.963
95% Confidence Interval	Lower Bound	.962
for Median	Upper Bound	.964
	Actual Coverage	95.1%
Weighted Mean		.953
95% Confidence Interval	Lower Bound	.949
for Weighted Mean	Upper Bound	.958
Price Related Differential		1.022
Coefficient of Dispersion		.080
Coefficient of Variation	Mean Centered	12.4%

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 Land**

#### Ratio Statistics for CURRTOT / TASP

Mean		.947
95% Confidence Interval	Lower Bound	.925
for Mean	Upper Bound	.969
Median		.960
95% Confidence Interval	Lower Bound	.927
for Median	Upper Bound	.986
	Actual Coverage	95.7%
Weighted Mean		.913
95% Confidence Interval	Lower Bound	.881
for Weighted Mean	Upper Bound	.945
Price Related Differential		1.038
Coefficient of Dispersion		.108
Coefficient of Variation	Mean Centered	14.0%

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

#### Mean .977 95% Confidence Interval .966 Lower Bound for Mean Upper Bound .988 Median .990 95% Confidence Interval .982 Lower Bound for Median Upper Bound .995 Actual Coverage 95.5% Weighted Mean .917 95% Confidence Interval Lower Bound .847 for Weighted Mean Upper Bound .986 Price Related Differential 1.066 Coefficient of Dispersion .075 Coefficient of Variation Mean Centered 11.9%

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

#### **Residential Median Ratio Stratification**

#### Sale Price

#### **Case Processing Summary**

		Count	Percent
SPRec	\$25K to \$50K	8	.1%
	\$50K to \$100K	244	1.9%
	\$100K to \$150K	1490	11.5%
	\$150K to \$200K	3265	25.2%
	\$200K to \$300K	4491	34.7%
	\$300K to \$500K	2637	20.3%
	\$500K to \$750K	610	4.7%
	\$750K to \$1,000K	122	.9%
	Over \$1,000K	94	.7%
Overall		12961	100.0%
Excluded		0	
Total		12961	



				Coefficient of Variation
		Price Related	Coefficient of	Median
Group	Median	Differential	Dispersion	Centered
\$25K to \$50K	1.144	.976	.361	62.2%
\$50K to \$100K	1.259	1.010	.160	21.4%
\$100K to \$150K	1.003	1.006	.120	16.0%
\$150K to \$200K	.967	1.000	.070	10.0%
\$200K to \$300K	.958	1.000	.063	9.3%
\$300K to \$500K	.960	1.001	.064	9.5%
\$500K to \$750K	.954	1.001	.076	10.9%
\$750K to \$1,000K	.945	1.001	.083	12.0%
Over \$1,000K	.867	1.036	.143	19.6%
Overall	.963	1.022	.080	12.6%

#### Ratio Statistics for CURRTOT / TASP

#### Subclass

#### **Case Processing Summary**

		Count	Percent
Preduse	1212	12777	98.6%
	1215	83	.6%
	1220	85	.7%
	1225	16	.1%
Overall		12961	100.0%
Excluded		0	
Total		12961	

				Coefficient of Variation
		Price Related	Coefficient of	Median
Group	Median	Differential	Dispersion	Centered
1212	.963	1.016	.079	12.5%
1215	.975	1.023	.117	17.4%
1220	1.012	1.019	.125	16.1%
1225	.856	1.029	.161	21.8%
Overall	.963	1.022	.080	12.6%



### Age

### Case Processing Summary

		Count	Percent
AgeRec	0	1	.0%
	Over 100	250	1.9%
	75 to 100	243	1.9%
	50 to 75	849	6.6%
	25 to 50	3148	24.3%
	5 to 25	5056	39.0%
	5 or Newer	3414	26.3%
Overall		12961	100.0%
Excluded		0	
Total		12961	

#### Ratio Statistics for CURRTOT / TASP

				Coefficient of Variation
		Price Related	Coefficient of	Median
Group	Median	Differential	Dispersion	Centered
0	.377	1.000	.000	
Over 100	.949	1.040	.146	21.5%
75 to 100	.949	1.084	.155	22.6%
50 to 75	.966	1.020	.131	19.6%
25 to 50	.965	1.028	.101	14.4%
5 to 25	.963	1.021	.071	10.6%
5 or Newer	.962	1.012	.052	8.8%
Overall	.963	1.022	.080	12.6%

### Improved Area

#### **Case Processing Summary**

		Count	Percent
ImpSFRec	0	1	.0%
	LE 500 sf	8	.1%
	500 to 1,000 sf	1727	13.3%
	1,000 to 1,500 sf	3891	30.0%
	1,500 to 2,000 sf	3493	27.0%
	2,000 to 3,000 sf	3077	23.7%
	3,000 sf or Higher	764	5.9%
Overall		12961	100.0%
Excluded		0	
Total		12961	



				Coefficient of Variation
		Price Related	Coefficient of	Median
Group	Median	Differential	Dispersion	Centered
0	.377	1.000	.000	
LE 500 sf	.788	1.068	.267	38.4%
500 to 1,000 sf	.970	1.020	.116	16.9%
1,000 to 1,500 sf	.964	1.012	.081	12.6%
1,500 to 2,000 sf	.961	1.007	.066	10.2%
2,000 to 3,000 sf	.963	1.011	.069	11.3%
3,000 sf or Higher	.959	1.060	.097	14.7%
Overall	.963	1.022	.080	12.6%

#### Ratio Statistics for CURRTOT / TASP

# Quality

#### **Case Processing Summary**

		Count	Percent
qual	1.00	252	1.9%
	2.00	9369	72.3%
	3.00	3019	23.3%
	4.00	320	2.5%
Overall		12960	100.0%
Excluded	ł	1	
Total		12961	

				Coefficient of Variation
		Price Related	Coefficient of	Median
Group	Median	Differential	Dispersion	Centered
1.00	.940	1.086	.167	26.1%
2.00	.963	1.022	.081	12.8%
3.00	.963	1.008	.070	10.0%
4.00	.954	1.028	.091	13.1%
Overall	.963	1.022	.080	12.6%



### **Commercial Median Ratio Stratification**

#### Sale Price

### Case Processing Summary

		Count	Percent
SPRec	\$25K to \$50K	2	1.4%
	\$50K to \$100K	6	4.3%
	\$100K to \$150K	16	11.3%
	\$150K to \$200K	9	6.4%
	\$200K to \$300K	13	9.2%
	\$300K to \$500K	33	23.4%
	\$500K to \$750K	22	15.6%
	\$750K to \$1,000K	10	7.1%
	Over \$1,000K	30	21.3%
Overall		141	100.0%
Excluded		0	
Total		141	

				Coefficient of Variation
Group	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
\$25K to \$50K	1.144	1.002	.102	14.4%
\$50K to \$100K	1.016	1.005	.064	9.3%
\$100K to \$150K	.989	.997	.076	11.2%
\$150K to \$200K	1.027	1.001	.093	13.4%
\$200K to \$300K	.970	.998	.122	17.1%
\$300K to \$500K	.979	1.003	.096	12.6%
\$500K to \$750K	.920	.998	.106	14.9%
\$750K to \$1,000K	.861	1.002	.137	19.3%
Over \$1,000K	.916	1.011	.101	12.4%
Overall	.960	1.038	.108	13.9%



#### Subclass

#### **Case Processing Summary**

		Count	Percent
Preduse	2212	24	17.0%
	2215	2	1.4%
	2220	27	19.1%
	2225	2	1.4%
	2230	19	13.5%
	2235	36	25.5%
	2245	21	14.9%
	3215	4	2.8%
	3230	6	4.3%
Overall		141	100.0%
Excluded		0	
Total		141	

				Coefficient of Variation
		Price Related	Coefficient of	Median
Group	Median	Differential	Dispersion	Centered
2212	.865	1.068	.157	20.8%
2215	.939	.988	.043	6.1%
2220	.933	1.013	.069	9.4%
2225	1.011	.992	.107	15.1%
2230	.984	1.049	.118	16.2%
2235	.952	1.023	.100	12.4%
2245	.995	1.059	.092	14.7%
3215	.891	1.085	.108	14.9%
3230	.996	1.005	.091	14.8%
Overall	.960	1.038	.108	13.9%



### Vacant Land Median Ratio Stratification

#### Subclass

#### **Case Processing Summary**

		Count	Percent
VPreduse	100	190	43.3%
	200	16	3.6%
	300	1	.2%
	530	3	.7%
	540	2	.5%
	550	7	1.6%
	1112	202	46.0%
	1135	6	1.4%
	2112	1	.2%
	2130	5	1.1%
	2135	6	1.4%
Overall		439	100.0%
Excluded		0	
Total		439	

				Coefficient of
				Variation
		Price Related	Coefficient of	Median
Group	Median	Differential	Dispersion	Centered
100	.983	1.052	.079	11.9%
200	.996	1.039	.050	11.8%
300	.992	1.000	.000	
530	1.056	.993	.014	2.4%
540	.494	24.870	1.000	141.4%
550	1.000	1.004	.030	4.0%
1112	.992	1.002	.071	10.0%
1135	.827	1.023	.146	23.2%
2112	.945	1.000	.000	
2130	.983	1.006	.012	1.7%
2135	.999	.999	.004	.8%
Overall	.990	1.066	.075	11.8%