## Table of Contents

## 2009 Commission Summary

## 2009 Opinions of the Property Tax Administrator

## Residential Reports

Preliminary Statistics
Residential Assessment Actions
Residential Assessment Survey
R\&O Statistics

## Residential Correlation

Residential Real Property
I. Correlation
II. Analysis of Percentage of Sales Used
III. Analysis of the Preliminary, Trended Preliminary, and R\&O Median Ratio
IV. Analysis of Percentage Change in Total Assessed Value in the Sales File to Percentage Change in Assessed Value
V. Analysis of the R\&O Median, Weighted Mean, and Mean Ratios
VI. Analysis of R\&O COD and PRD
VII. Analysis of Change in Statistics Due to the Assessor Actions
VIII. Trended Ratio Analysis

## Commercial Reports

Preliminary Statistics
Commercial Assessment Actions
Commercial Assessment Survey
R\&O Statistics

## Commercial Correlation

Commercial Real Property
I. Correlation
II. Analysis of Percentage of Sales Used
III. Analysis of the Preliminary, Trended Preliminary, and R\&O Median Ratio
IV. Analysis of Percentage Change in Total Assessed Value in the Sales File to Percentage Change in Assessed Value
V. Analysis of the R\&O Median, Weighted Mean, and Mean Ratios
VI. Analysis of R\&O COD and PRD
VII. Analysis of Change in Statistics Due to the Assessor Actions

## Agricultural or Special Valuation Reports

Preliminary Statistics
Agricultural Assessment Actions
Agricultural Assessment Survey
R\&O Statistics
2009 Special Valuation Methodology

## Agricultural or Special Valuation Correlation

Agricultural or Special Valuation Land
I. Correlation
II. Analysis of Percentage of Sales Used
III. Analysis of the Preliminary, Trended Preliminary, and R\&O Median Ratio
IV. Analysis of Percentage Change in Total Assessed Value in the Sales File to Percentage Change in Assessed Value
V. Analysis of the R\&O Median, Weighted Mean, and Mean Ratios
VI. Analysis of R\&O COD and PRD
VII. Analysis of Change in Statistics Due to the Assessor Actions

## County Reports

2009 County Abstract of Assessment for Real Property, Form 45
2009 County Agricultural Land Detail
2009 County Abstract of Assessment for Real Property Compared with the 2008
Certificate of Taxes Levied (CTL)
County Assessor's Three Year Plan of Assessment
Assessment Survey - General Information

## Certification

Maps
Market Areas
Registered Wells > 500 GPM
Geo Codes
Soil Classes
Valuation History Charts

## 2009 Commission Summary

## 15 Chase

## Residential Real Property - Current

| Number of Sales | 111 | COD | 14.32 |
| :--- | ---: | :--- | ---: |
| Total Sales Price | $\$ 7,978,250$ | PRD | 108.16 |
| Total Adj. Sales Price | $\$ 7,981,750$ | COV | 22.53 |
| Total Assessed Value | $\$ 7,191,019$ | STD | 21.96 |
| Avg. Adj. Sales Price | $\$ 71,908$ | Avg. Absolute Deviation |  |
| Avg. Assessed Value | $\$ 64,784$ | Average Assessed Value <br> of the Base | 13.94 |
| Median | 97 | Wgt. Mean | $\$ 52,790$ |
| Mean | 97 | Max | 90 |
| Min | 31.81 |  | 176 |

## Confidenence Interval - Current

| $95 \%$ Median C.I | 95.51 to 98.47 |
| :--- | ---: |
| $95 \%$ Mean C.I | 93.36 to 101.53 |
| $95 \%$ Wgt. Mean C.I | 86.22 to 93.97 |

$\begin{array}{ll}\% \text { of Value of the Class of all Real Property Value in the County } & 16.85\end{array}$
\% of Records Sold in the Study Period
\% of Value Sold in the Study Period
7.92

## Residential Real Property - History

| Year | Number of Sales | Median | COD | PRD |
| :---: | :---: | :---: | :---: | ---: |
| $\mathbf{2 0 0 8}$ | 128 | 98 | 10.19 | 101.77 |
| $\mathbf{2 0 0 7}$ | 134 | 97 | 8.77 | 100.56 |
| $\mathbf{2 0 0 6}$ | 149 | 95 | 15.51 | 105.47 |
| $\mathbf{2 0 0 5}$ | 142 | 95 | 18.61 | 106.36 |

## 2009 Commission Summary

## 15 Chase

## Commercial Real Property - Current

| Number of Sales | 22 | COD | 8.76 |
| :--- | ---: | :--- | ---: |
| Total Sales Price | $\$ 1,388,563$ | PRD | 99.91 |
| Total Adj. Sales Price | $\$ 1,388,563$ | COV | 16.74 |
| Total Assessed Value | $\$ 1,364,459$ | STD | 16.44 |
| Avg. Adj. Sales Price | $\$ 63,117$ | Avg. Absolute Deviation | 8.52 |
| Avg. Assessed Value | $\$ 62,021$ | Average Assessed Value <br> of the Base | $\$ 115,721$ |
| Median | 97 | Wgt. Mean | 98 |
| Mean | 98 | Max | 153 |
| Min | 65 |  |  |

## Confidenence Interval - Current

| $95 \%$ Median C.I | 95.65 to 100.00 |
| :--- | :--- |
| $95 \%$ Mean C.I | 90.88 to 105.46 |
| $95 \%$ Wgt. Mean C.I | 93.79 to 102.73 |


| \% of Value of the Class of all Real Property Value in the County | 10.59 |
| :--- | ---: |
| $\%$ of Records Sold in the Study Period | 4.46 |
| $\%$ of Value Sold in the Study Period | 2.39 |

## Commercial Real Property - History

| Year | Number of Sales | Median | COD | PRD |
| :---: | :---: | :---: | ---: | ---: |
| $\mathbf{2 0 0 8}$ | 22 | 97 | 8.41 | 98.37 |
| $\mathbf{2 0 0 7}$ | 31 | 100 | 18.95 | 99.85 |
| $\mathbf{2 0 0 6}$ | 30 | 95 | 20.85 | 99.99 |
| $\mathbf{2 0 0 5}$ | 26 | 95 | 22.5 | 100.91 |

## 2009 Commission Summary

## 15 Chase

Agricultural Land - Current

| Number of Sales | 74 | COD | 16.81 |
| :--- | :---: | :--- | ---: |
| Total Sales Price | $\$ 18,226,095$ | PRD | 104.54 |
| Total Adj. Sales Price | $\$ 17,848,315$ | COV | 22.43 |
| Total Assessed Value | $\$ 12,658,330$ | STD | 16.63 |
| Avg. Adj. Sales Price | $\$ 241,193$ | Avg. Absolute Deviation | 12.10 |
| Avg. Assessed Value | $\$ 171,059$ | Average Assessed Value <br> of the Base | $\$ 152,317$ |
| Median | 72 | Wgt. Mean |  |
| Mean | 74 | Max | 71 |
| Min | 43.26 |  | 135.75 |

## Confidenence Interval - Current

| $95 \%$ Median C.I | 68.29 to 74.23 |
| :--- | :--- |
| $95 \%$ Mean C.I | 70.36 to 77.93 |
| $95 \%$ Wgt. Mean C.I | 66.95 to 74.89 |

\% of Value of the Class of all Real Property Value in the County 71.85
$\%$ of Records Sold in the Study Period 2.91
$\%$ of Value Sold in the Study Period 4.42

| Agricultural Land - History |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Year | Number of Sales | Median | COD | PRD |
| 2008 | 91 | 72 | 15.01 | 101.95 |
| 2007 | 75 | 72 | 15.1 | 102.08 |
| 2006 | 72 | 75 | 16.67 | 103.23 |
| 2005 | 60 | 77 | 18.37 | 101.59 |

Opinions

# 2009 Opinions of the Property Tax Administrator for Chase County 

My opinions and recommendations are stated as a conclusion based on all of the factors known to me regarding the assessment practices and statistical analysis for this county. See, Neb. Rev. Stat. §77-5027 (R. S. Supp., 2005). While the median assessment sales ratio from the Qualified Statistical Reports for each class of real property is considered, my opinion of the level of value for a class of real property may be determined from other evidence contained within this Reports and Opinions of the Property Tax Administrator. The resource used regarding the quality of assessment for each class of real property in this county are the performance standards issued by the International Association of Assessing Officers (IAAO). My opinion of quality of assessment for a class of real property may be influenced by the assessment practices of the county assessor.

## Residential Real Property

It is my opinion that the level of value of the class of residential real property in Chase County is $97.00 \%$ of actual value. It is my opinion that the quality of assessment for the class of residential real property in Chase County is in compliance with generally accepted mass appraisal practices.

## Commercial Real Property

It is my opinion that the level of value of the class of commercial real property in Chase County is $97.00 \%$ of actual value. It is my opinion that the quality of assessment for the class of commercial real property in Chase County is in compliance with generally accepted mass appraisal practices.

## Agricultural Land or Special Valuation of Agricultural Land

It is my opinion that the level of value of the class of agricultural or special value land in Chase County is $72.00 \%$ of actual value. It is my opinion that the quality of assessment for the class of agricultural land in Chase County is in compliance with generally accepted mass appraisal practices.

Dated this 7th day of April, 2009.


Ruth A. Sorensen<br>Property Tax Administrato



Exhibit 15 - Page 5

Date Range: 07/01/2006 to 06/30/2008 Posted Before: 01/22/2009


Exhibit 15 - Page 6


Exhibit 15 - Page 7

## PAD 2009 Preliminary Statistics



Exhibit 15 - Page 8

## PAD 2009 Preliminary Statistics

Type: Qualified
Date Range: 07/01/2006 to 06/30/2008 Posted Before: 01/22/2009


Exhibit 15 - Page 9

# Chase County 2009 Assessment Actions taken to address the following property classes/subclasses: 

## Residential

Residential improvement values within the Village of Wauneta were increased by 5\% for 2009 to equalize the property subclass in this assessor location. The assessor location of rural residential had new depreciation tables applied for updated 2009 values of improvements. This brings the dwellings on agricultural parcels and dwellings on rural residential parcel valued in the same manner that provide the same relationship to the market.

No residential changes were made in the City of Imperial or the small villages of Champion, Enders, or Lamar.

## 2009 Assessment Survey for Chase County

## Residential Appraisal Information

(Includes Urban, Suburban and Rural Residential)

| 1. | Data collection done by: |
| :---: | :---: |
|  | Staff |
| 2. | Valuation done by: |
|  | Assessor |
| 3. | Pickup work done by whom: |
|  | Assessor and Staff |
| 4. | What is the date of the Replacement Cost New data (Marshall-Swift) that are used to value this property class? |
|  | June/2005 |
| 5. | What was the last year a depreciation schedule for this property class was developed using market-derived information? |
|  | In 2009 a new depreciation table was developed for the rural residential properties. |
| 6. | What approach to value is used in this class or subclasses to estimate the market value of properties? |
|  | Cost Approach |
| 7. | Number of Market Areas/Neighborhoods/Assessor Locations? |
|  | 6; Imperial, Wauneta, Enders, Champion, Lamar and Rural Residential |
| 8. | How are these Market Areas/Neighborhoods/Assessor Locations defined? |
|  | By market driven information and assessor location. |
| 9. | Is "Market Area/Neighborhoods/Assessor Locations" a unique usable valuation grouping? If not, what is a unique usable valuation grouping? |
|  | Yes |
| 10. | Is there unique market significance of the suburban location as defined in Reg. 10-001.07B? (Suburban shall mean a parcel of real estate property located outside of the limits of an incorporated city or village, but within the legal jurisdiction of an incorporated city or village.) |
|  | Yes, the suburban properties have a unique market. |
| 11. | Are dwellings on agricultural parcels and dwellings on rural residential parcels valued in a manner that would provide the same relationship to the market? Explain? |
|  | Yes, as of 2009 with the new depreciation table applied. |

Residential Permit Numbers:

| Permits | Information Statements | Other | Total |
| :---: | :---: | :---: | :---: |
| 20 | 4 | 11 | 35 |

NUMBER of Sales:
TOTAL Sales Price:
TOTAL Adj.Sales Price:
TOTAL Assessed Value:
AVG. Adj. Sales Price:
AVG. Adj. Sales Price:
AVG. Assessed Value:
DATE OF SALE *

| DATE OF SALE * |  |
| :---: | :---: |
| RANGE | COUNT |
| Qrtrs |  |
| 07/01/06 TO 09/30/06 | 12 |
| 10/01/06 TO 12/31/06 | 12 |
| 01/01/07 TO 03/31/07 | 17 |
| 04/01/07 то 06/30/07 | 13 |
| 07/01/07 то 09/30/07 | 19 |
| 10/01/07 TO 12/31/07 | 8 |
| 01/01/08 то 03/31/08 | 10 |
| 04/01/08 TO 06/30/08 | 20 |
| Study Years |  |
| 07/01/06 TO 06/30/07 | 54 |
| 07/01/07 то 06/30/08 | 57 |
| Calendar Yrs |  |
| 01/01/07 TO 12/31/07 | 57 |
|  |  |

# PAD 2009 R\&O Statistics <br> Base Stat <br> Type: Qualified <br> Date Range: 07/01/2006 to 06/30/2008 Posted Before: 01/23/2009 

State Stat Run
111
$7,978,250$
$7,981,750$
$7,191,019$
71,907
64,783

WGT. MEAN

| $\mathbf{9 7}$ | COV: | 22.53 |
| :--- | ---: | ---: |
| 90 | STD: | 21.96 |
| 97 | AVG.ABS.DEV: | 13.94 |

MEAN :

95\% Wgt. Mean C.I.: 86.22 to 93.97
95\% Mean C.I.: 93.36 to 101.53
(!: Derived)

Printed: 03/21/2009 13:05:07
MEDIAN
MEAN WRD

| 97.60 | 97.56 | 97.53 |
| ---: | ---: | ---: |
| 98.69 | 102.86 | 101.33 |
| 99.30 | 102.65 | 97.69 |
| 100.70 | 103.30 | 97.58 |
| 92.39 | 96.46 | 87.39 |
| 91.38 | 88.64 | 87.50 |
| 93.96 | 100.94 | 95.63 |
| 89.19 | 88.62 | 77.40 |
|  |  |  |
| 98.97 | 101.72 | 98.37 |
| 92.39 | 93.40 | 83.89 |
|  |  |  |
| 97.46 | 98.77 | 92.03 |

3. 

|  | 111 | 97.32 | 97.45 | 90.09 | 14.32 | 108.16 | 31.81 | 176.25 | 95.51 to 98.47 | 71,907 | 64,783 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ASSESSOR LOCATION |  |  |  |  |  |  |  |  |  | Avg. Adj. |  |
| RANGE | COUNT | MEDIAN | MEAN | WGT. MEAN | COD | PRD | MIN | MAX | 95\% Median C.I. | Sale Price | Assd Val |
| CHAMPION | 4 | 97.38 | 94.75 | 93.83 | 2.99 | 100.99 | 86.40 | 97.86 | N/A | 28,812 | 27,034 |
| ENDERS | 3 | 50.38 | 59.75 | 63.22 | 43.18 | 94.52 | 31.81 | 97.07 | N/A | 68,333 | 43,198 |
| IMPERIAL | 76 | 97.41 | 97.20 | 90.01 | 13.44 | 107.98 | 36.40 | 157.81 | 95.13 to 99.03 | 80,955 | 72,870 |
| LAMAR | 4 | 119.43 | 128.36 | 113.84 | 21.21 | 112.75 | 98.34 | 176.25 | N/A | 3,787 | 4,311 |
| RURALRES | 4 | 96.44 | 94.64 | 92.27 | 2.62 | 102.57 | 87.94 | 97.74 | N/A | 194,000 | 178,996 |
| WAUNETA | 20 | 95.70 | 98.96 | 95.01 | 15.17 | 104.16 | 60.35 | 140.76 | 90.37 to 106.62 | 35,887 | 34,095 |
| $\ldots$ ALL |  |  |  |  |  |  |  |  |  |  |  |
|  | 111 | 97.32 | 97.45 | 90.09 | 14.32 | 108.16 | 31.81 | 176.25 | 95.51 to 98.47 | 71,907 | 64,783 |
| LOCATIONS : URBAN, | URBAN | \& RURAL |  |  |  |  |  |  |  | Avg. Adj. | Avg. |
| RANGE | COUNT | MEDIAN | MEAN | WGT. MEAN | COD | PRD | MIN | MAX | 95\% Median C.I. | Sale Price | Assd Val |
| 1 | 105 | 97.45 | 98.63 | 90.72 | 13.91 | 108.72 | 36.40 | 176.25 | 95.51 to 98.90 | 67,483 | 61,218 |
| 2 | 1 | 87.94 | 87.94 | 87.94 |  |  | 87.94 | 87.94 | N/A | 400,000 | 351,749 |
| 3 | 5 | 96.28 | 74.56 | 82.93 | 23.29 | 89.91 | 31.81 | 97.74 | N/A | 99,200 | 82,264 |
| $\ldots$ ALL_ |  |  |  |  |  |  |  |  |  |  |  |
|  | 111 | 97.32 | 97.45 | 90.09 | 14.32 | 108.16 | 31.81 | 176.25 | 95.51 to 98.47 | 71,907 | 64,783 |

Exhibit 15 - Page 12

Date Range: 07/01/2006 to 06/30/2008 Posted Before: 01/23/2009


PAD 2009 R\&O Statistics
Type: Qualified
Date Range: 07/01/2006 to 06/30/2008 Posted Before: 01/23/2009


Exhibit 15 - Page 14



PAD 2009 R\&O Statistics
Type: Qualified
Date Range: 07/01/2006 to 06/30/2008 Posted Before: 01/23/2009
State Stat Run
PAGE:5 of 5

| 111 | MEDIAN: | $\mathbf{9 7}$ | COV: | 22.53 | $95 \%$ Median C.I. $: 95.51$ to 98.47 |  |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $7,978,250$ | WGT. MEAN: | 90 | STD: | 21.96 | 95\% Wgt. Mean C.I.: | 86.22 to 93.97 |
| $7,981,750$ | MEAN: | 97 |  | AVG.ABS.DEV: | 13.94 | $95 \%$ Mean C.I.: 93.36 to 101.53 |

Printed: 03/21/2009 13:05:08

| 71,907 | COD: | 14.32 | MAX Sales Ratio: | 176.25 |
| ---: | ---: | ---: | ---: | ---: |
| 64,783 | PRD: | 108.16 | MIN Sales Ratio: | 31.81 |

MEDIAN
88.89
107.73

| MEAN | WGT. MEAN |
| ---: | ---: |
| 84.93 | 64.73 |
| 121.13 | 105.61 |
| 106.92 | 95.86 |
| 99.72 | 96.89 |
| 96.28 | 96.28 |
| 86.94 | 83.15 |
| 95.90 | 93.01 |
| 89.63 | 90.25 |
| 97.45 | 90.09 |

97.97
98.10

$$
98.10
$$

$$
96.28
$$

$$
89.17
$$

$$
96.59
$$

$$
88.71
$$

11197.32
COD
30.79
21.51
21.96
10.80

16.66
8.55
8.85
14.32
PRD
131.21
114.70
111.54
102.93

104.55
103.11
99.32

108.16
MIN
36.40
94.54
60.35
50.38
96.28
31.81
81.64
80.77
31.81

| MIN | MAX | 95\% Median C.I. |
| :---: | :---: | :---: |
| 6.40 | 119.00 | N/A |
| 4.54 | 176.25 | N/A |
| 0.35 | 157.81 | 86.40 to 138.03 |
| 0.38 | 153.69 | 95.21 to 99.32 |
| 6.28 | 96.28 | N/A |
| 1.81 | 124.18 | 81.46 to 97.74 |
| 1.64 | 115.24 | 82.51 to 102.54 |
| 0.77 | 100.34 | N/A |
| 1.81 | 176.25 | 95.51 to 98.47 |

le Price
50,300
10,830
21,937
62,389
133,000
132,286
84,944
57,125
71,907
$s d \mathrm{Val}$
32,559
11,437
21,029
60,448
128,047
110,002
79,006
51,553
64,783

Exhibit 15 - Page 16

## Residential Real Property

## I. Correlation

RESIDENTIAL:The 2009 statistical reports contains seven tables of data which reflect the equalization results by the Chase County Assessor in the residential class of property. The 111 sales are weighted heavily by the sales within Imperial and Wauneta. These two assessor locations make $86 \%$ of the sample. Each have acceptable levels of value shown through the median for Imperial at 97 and Wauneta at 96 . Actions taken since the preliminary statistics were calculated include $5 \%$ increased improvements values within Wauneta, and new depreciation tables applied for improvements in the rural residential areas. Both adjustments support the level of value as shown through the median measure of central tendency at 97 . Despite the nationwide economy status of residential home values, the most recent study year reflects three additional sales and a lower median, which indicates a higher market. Each subclass with a representable sample; Imperial and Wauneta locations, urban, improved, and single family show acceptable levels of value. Through the known assessment practices of Chase County and the coefficient of dispersion, it is believed that the county also has uniform and proportionate assessment practices.

## II. Analysis of Percentage of Sales Used

This section documents the utilization of total sales compared to qualified sales in the sales file. Neb. Rev. Stat. 77-1327(2) (R. S. Supp., 2007) provides that all sales are deemed to be arm's length transactions unless determined to be otherwise under professionally accepted mass appraisal techniques. The county assessor is responsible for the qualification of the sales included in the residential sales file. The Division periodically reviews the procedures utilized by the county assessor to qualify/disqualify sales.

The Standard on Ratio Studies, International Association of Assessing Officials, (2007), indicates that low levels of sale utilization may indicate excessive trimming by the county assessor. Excessive trimming, the arbitrary exclusion or adjustment of arm's length transactions, may indicate an attempt to inappropriately exclude arm's length transactions to create the appearance of a higher level of value and quality of assessment. The sales file, in a case of excess trimming, will fail to properly represent the level of value and quality of assessment of the population of residential real property.

|  | Total Sales | Qualified Sales | Percent Used |
| :---: | :---: | :---: | :---: |
| 2009 | 173 | 111 | $\mathbf{6 4 . 1 6}$ |
| 2008 | 176 | 128 | 72.73 |
| 2007 | 186 | 134 | 72.04 |
| 2006 | 199 | 149 | 74.87 |
| 2005 | 180 | 142 | 78.89 |

RESIDENTIAL:Historically the County has been decreasing the percent of available residential sales for statistical purposes. Based on the known assessment practices the assessor uses to verify sales data, there is no indication of excessively trimming the sample for analysis. Chase County has a strong knowledge of the sales information through a detailed verification process.

## III. Analysis of the Preliminary, Trended Preliminary and R\&O Median Ratio

The trended preliminary ratio is an alternative method to calculate a point estimate as an indicator of the level of value. This table compares the preliminary median ratio, trended preliminary median ratio, and $\mathrm{R} \& \mathrm{O}$ median ratio, presenting four years of data to reveal any trends in assessment practices. The analysis that follows compares the changes in these ratios to the assessment actions taken by the county assessor. If the county assessor's assessment practices treat all properties in the sales file and properties in the population in a similar manner, the trended preliminary ratio will correlate closely with the R\&O median ratio. The following is the justification for the trended preliminary ratio:

## Adjusting for Selective Reappraisal

The reliability of sales ratio statistics depends on unsold parcels being appraised in the same manner as sold parcels. Selective reappraisal of sold parcels distorts sales ratio results, possibly rendering them useless. Equally important, selective reappraisal of sold parcels (sales chasing) is a serious violation of basic appraisal uniformity and is highly unprofessional. Oversight agencies must be vigilant to detect the practice if it occurs and take necessary corrective action.
[To monitor sales chasing] A preferred approach is to use only sales that occur after appraised values are determined. However, as long as values from the most recent appraisal year are used in ratio studies, this is likely to be impractical. A second approach is to use values from the previous assessment year, so that most (or all) sales in the study follow the date values were set. In this approach, measures of central tendency must be adjusted to reflect changes in value between the previous and current year. For example, assume that the measure of central tendency is 0.924 and, after excluding parcels with changes in use or physical characteristics, that the overall change in value between the previous and current assessment years is 6.3 percent. The adjusted measure of central tendency is $0.924 \times 1.063=0.982$. This approach can be effective in determining the level of appraisal, but measures of uniformity will be unreliable if there has been any meaningful reappraisal activity for the current year.

Gloudemans, Robert J., Mass Appraisal of Real Property, International Association of Assessing Officers, (1999), p. 315.

## III. Analysis of the Preliminary, Trended Preliminary and R\&O Median Ratio

 Continued|  | Preliminary <br> Median | \% Change in Assessed <br> Value (excl. growth) | Trended <br> Preliminary Ratio | R\&O <br> Median |
| :---: | :---: | :---: | :---: | :---: |
| 2009 | 97 | 2.21 | 99 | 97 |
| 2008 | 98.02 | -0.07 | 98 | 97.9 |
| 2007 | 91 | 8.84 | 99 | 97 |
| 2006 | 92 | 2.58 | 94 | 95 |
| 2005 | 91 | 4.71 | 95 | 95 |

RESIDENTIAL:The percent change in assessed value (excl. growth) of $2.21 \%$ reflects the increases due to the assessor's actions to increase the improvements within Wauneta and new values to rural residential properties. The R\&O Ratio is representing the heavy sales base of the City of Imperial, where no changes were made. Nearly $69 \%$ of the residential sales are within Imperial.

## IV. Analysis of Percentage Change in Total Assessed Value in the Sales File to Percentage Change in Assessed Value

This section analyzes the percentage change of the assessed values in the sales file, between the 2009 Preliminary Statistical Reports and the 2009 R\&O Statistical Reports, to the percentage change in the assessed value of all real property base, by class, reported in the 2008 County Abstract of Assessment for Real Property, Form 45, excluding growth valuation, compared to the 2008 Certificate of Taxes Levied (CTL) Report. For purposes of calculating the percentage change in the sales file, only the sales in the most recent year of the study period are used. If assessment practices treat sold and unsold properties consistently, the percentage change in the sales file and assessed base will be similar. The analysis of this data assists in determining if the statistical representations calculated from the sales file are an accurate measure of the population. The following is justification for such an analysis:

## Comparison of Average Value Changes

If sold and unsold properties are similarly appraised, they should experience similar changes in value over time. Accordingly, it is possible to compute the average change in value over a selected period for sold and unsold parcels and, if necessary, test to determine whether observed differences are significant. If, for example, values for vacant sold parcels in an area have increased by 45 percent since the previous reappraisal, but values for vacant unsold parcels have increased only 10 percent, sold and unsold parcels appear to have not been equally appraised. This apparent disparity between the treatment of sold and unsold properties provides an initial indication of poor assessment practices and should trigger further inquiry into the reasons for the disparity.

# IV. Analysis of Percentage Change in Total Assessed Value in the Sales File to Percentage Change in Assessed Value Continued 

\% Change in Total
Assessed Value in the Sales File
\% Change in Total Assessed
Value (excl. growth)

| 3.7 | 2009 | 2.21 |
| :---: | :---: | :---: |
| -0.04 | 2008 | -0.07 |
| 11.65 | 2007 | 8.84 |
| 4.01 | 2006 | 2.58 |
| 4.65 | 2005 | 4.71 |

RESIDENTIAL:The 1.49 point spread between the assessed value in the sales file and the assessed value in the base is not unreasonable. This reflects the increases made to residential properties within the assessor location Wauneta. The sales within Wauneta consist of $18 \%$ of the sample, whereas Wauneta only contributes approximately $12 \%$ to the county total residential value.

## V. Analysis of the R\&O Median, Wgt. Mean, and Mean Ratios

There are three measures of central tendency calculated by the Division: median ratio, weighted mean ratio, and mean ratio. Since each measure of central tendency has strengths and weaknesses, the use of any statistic for equalization should be reconciled with the other two, as in an appraisal, based on the appropriateness in the use of the statistic for a defined purpose, the quantity of the information from which it was drawn, and the reliability of the data that was used in its calculation. An examination of the three measures can serve to illustrate important trends in the data if the measures do not closely correlate to each other.

The IAAO considers the median ratio the most appropriate statistical measure for use in determining level of value for direct equalization; the process of adjusting the values of classes or subclasses of property in response to the determination of level of value at a point above or below a particular range. Since the median ratio is considered neutral in relationship to either assessed value or selling price, its use in adjusting the class or subclass of properties will not change the relationships between assessed value and level of value already present within the class or subclass of properties, thus rendering an adjustment neutral in its impact on the relative tax burden to an individual property. Additionally, the median ratio is less influenced by the presence of extreme ratios, commonly called outliers. One outlier in a small sample size of sales can have controlling influence over the other measures of central tendency. The median ratio limits the distortion potential of an outlier.

The weighted mean ratio is viewed by the IAAO as the most appropriate statistical measure for indirect equalization; to ensure proper funding distribution of aid to political subdivisions, particularly when the distribution in part is based on the assessable value in that political subdivision, Standard on Ratio Studies, International Association of Assessing Officers, (2007). The weighted mean, because it is a value weighted ratio, best reflects a comparison of the assessed and market value of property in the political subdivision. If the distribution of aid to political subdivisions must relate to the market value available for assessment in the political subdivision, the measurement of central tendency used to analyze level of value should reflect the dollars of value available to be assessed. The weighted mean ratio does that more than either of the other measures of central tendency.

If the weighted mean ratio, because of its dollar-weighting feature, is significantly different from the median ratio, it may be an indication of other problems with assessment proportionality. When this occurs, an evaluation of the county's assessment practices and procedures is appropriate to discover remedies to the situation.

The mean ratio is used as a basis for other statistical calculations, such as the price related differential and coefficient of variation. However, the mean ratio has limited application in the analysis of level of value because it assumes a normal distribution of the data set around the mean ratio with each ratio having the same impact on the calculation regardless of the assessed value or the selling price.

## V. Analysis of the R\&O Median, Wgt. Mean, and Mean Ratios Continued

|  | Median | Wgt. Mean | Mean |
| :---: | :---: | :---: | :---: |
| R\&O Statistics | $\mathbf{9 7}$ | $\mathbf{9 0}$ | $\mathbf{9 7}$ |

RESIDENTIAL:The median and mean are identical and are within the acceptable range for residential property. Both measures are close to supporting the Trended Preliminary Ratio, at 99. The weighted mean is below the acceptable statistics, whereas it is weighted heavily by the sales within the assessor location of Imperial. Imperial makes up approximately $68 \%$ of the sold residential properties. The median for Imperial is also $97 \%$. The overall county median of 97 best represents the level of value for this property class.

## VI. Analysis of R\&O COD and PRD

In analyzing the statistical data of assessment quality, there are two measures primarily relied upon by assessment officials. The Coefficient of Dispersion, COD, is produced to measure assessment uniformity. A low COD tends to indicate good assessment uniformity as there is a smaller spread or dispersion of the ratios in the sales file. A COD of less than 15 suggests that there is good assessment uniformity. Mass Appraisal of Real Property, International Association of Assessing Officers, (1999), pp. 235-237. The IAAO has issued performance standards for major property groups:

Single-family residences: a COD of 15 percent or less.
For newer and fairly homogeneous areas: a COD of 10 or less.
Income-producing property: a COD of 20 or less, or in larger urban jurisdictions, 15 or less. Vacant land and other unimproved property, such as agricultural land: a COD of 20 or less.
Rural residential and seasonal properties: a COD of 20 or less.

Mass Appraisal of Real Property, International Association of Assessing Officers, (1999), p. 246.

The Price Related Differential, PRD, is produced to measure assessment vertical uniformity (progressivity or regressivity). For example, assessments are considered regressive if high value properties are under-assessed relative to low value properties. A PRD of greater than 100 suggests that high value properties are relatively under-assessed. Mass Appraisal of Real Property, International Association of Assessing Officers, (1999), pp. 239-240. A PRD of less than 100 indicates that high value properties are relatively over-assessed. As a general rule, except for small samples, a PRD should range between 98 and 103. This range is centered slightly above 100 to allow for a slightly upward measurement bias inherent in the PRD. Mass Appraisal of Real Property, International Association of Assessing Officers, (1999), p. 247.

The analysis in this section indicates whether the COD and PRD meet the performance standards described above.

|  | COD | PRD |
| :--- | :---: | :---: |
| R\&O Statistics | 14.32 | 108.16 |
| Difference | 0.00 | 5.16 |

RESIDENTIAL:The coefficient of dispersion is within the parameters accepted for qualitative measurement statistics. The price related differential is above the range although this is not an indication that the county has not treated properties in a uniform manner. It appears that the assessor location of Imperial may be a factor of the higher PRD. Based on the known assessment practices in Chase County, it is believed residential properties are treated in a proportionate manner.

## VII. Analysis of Change in Statistics Due to Assessor Actions

This section compares the statistical indicators from the Preliminary Statistical Reports to the same statistical indicators from the R\&O Statistical Reports. The analysis that follows explains the changes in the statistical indicators in consideration of the assessment actions taken by the county assessor.

|  | Preliminary Statistics | R\&O Statistics | Change |
| :--- | :---: | :---: | :---: |
| Number of Sales | 111 | 111 | 0 |
| Median | 97 | 97 | 0 |
| Wgt. Mean | 88 | 90 | 2 |
| Mean | 95 | 97 | 2 |
| COD | 14.56 | 14.32 | -0.24 |
| PRD | 108.94 | 108.16 | -0.78 |
| Minimum | 31.81 | 31.81 | 0.00 |
| Maximum | 176.25 | 176.25 | 0.00 |

RESIDENTIAL:Minor changes between the preliminary and R\&O statistics are reflected due to the assessors actions to increase improvement values within the assessor location of Wauneta. These statistics support the assessors actions reported.

## VIII. Trended Ratio Analysis

In order to be meaningful, statistical inferences must be based on a representative and proportionate sample of the population. If the sales are representative of the population and the sales have been appraised in a similar manner to the unsold properties, statistical inferences should be substantially the same as statistics developed from actual assessed value. This comparison is to provide additional information to the analyst in determining the reliability of the statistical inference.

|  | R\&O Statistics | Trended Ratio | Difference |
| :--- | :---: | :---: | :---: |
| Number of Sales | 111 | 115 | -4 |
| Median | 97 | 94 | 3 |
| Wgt. Mean | 90 | 86 | 4 |
| Mean | 97 | 98 | -1 |
| COD | 14.32 | 24.05 | -9.73 |
| PRD | 108.16 | 113.96 | -5.80 |
| Minimum | 31.81 | 9.18 | 22.63 |
| Maximum | 176.25 | 214.50 | -38.25 |

Table VIII is a result of comparing the R\&O statistics to a set of trending statistics that are generated beginning with the taxable value of the sold property prior to the sale date. Each year thereafter the value is trended by the county overall percent of change in the residential base.

The three measures of central tendency are supportive of the trended ratios reflecting a spread of 1.44 for the mean to the largest change in the weighted mean at 3.62 difference. The median and mean trended ratios are still within the acceptable ranges and neither show indication of unfair treatment between sold and unsold properties. A possible difference shown in the statistics may be due to outliers, as four additional sales were used at the preliminary time frame.

| NUMBER of Sales: TOTAL Sales Price: TOTAL Adj.Sales Price: TOTAL Assessed Value: AVG. Adj. Sales Price: AVG. Assessed Value: |  | $\begin{array}{r} 22 \\ 1,388,563 \\ 1,388,563 \\ 1,361,636 \\ 63,116 \\ 61,892 \end{array}$ |  | MEDIAN: <br> WGT. MEAN: <br> MEAN : <br> COD : <br> PRD: | $\begin{gathered} \text { Date Rang } \\ \mathbf{9 7} \\ 98 \\ 98 \end{gathered}$ | e: 07/( | 01/2005 to 06/30/20 <br> COV: <br> STD: <br> AVG.ABS.DEV: | 8 Posted | efore: 01/2 | 2/2009 | $\text { C.I.: } 95.65 \text { to } 100.00$ |  | $\begin{gathered} (!: \text { AVTot=0) } \\ (!: \text { Derived } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 15.58 | 95\% |  |  |  |  | Median |  |  |  |
|  |  | 15.24 | 95\% Wg |  |  |  |  | Mean | C.I.: 93.90 | to 102.22 |  |  |
|  |  | 8.16 |  |  |  |  |  | Mean | C.I.: 91.0 | 6 to 104.58 |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 8.39 | MAX |  | Sales Ratio: | 144.72 |  |  |  |  |  |  |
|  |  | 99.75 | MIN |  | Sales Ratio: | 65.49 |  |  |  | Printed: 01/22/ | 21:26:36 |  |
| DATE OF SALE * RANGE | COUNT |  |  | MEDIAN | MEAN | WGT. MEAN | COD |  | PRD | MIN | MAX | 95\% M | Median C.I. | Avg. Adj. Sale Price | Avg. <br> Assd Val |
| Qrtrs |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 07/01/05 TO 09/30/05 | 1 |  |  | 92.59 | 92.59 | 92.59 |  |  |  | 92.59 | 92.59 |  | N/A | 27,000 | 25,000 |
| 10/01/05 TO 12/31/05 | 2 |  |  | 97.74 | 97.74 | 99.06 | 1.42 |  | 98.67 | 96.35 | 99.13 |  | N/A | 171,800 | 170,183 |
| 01/01/06 то 03/31/06 | 3 |  |  | 100.00 | 103.77 | 102.71 | 6.20 |  | 101.03 | 96.35 | 114.95 |  | N/A | 14,533 | 14,927 |
| 04/01/06 TO 06/30/06 | 5 |  |  | 96.67 | 94.87 | 100.14 | 10.61 |  | 94.73 | 67.54 | 114.29 |  | N/A | 45,612 | 45,676 |
| 07/01/06 то 09/30/06 | 1 | 93.18 | 93.18 | 93.18 |  |  |  | 93.18 | 93.18 |  | N/A | 5,000 | 4,659 |
| 10/01/06 TO 12/31/06 | 1 | 97.68 | 97.68 | 97.68 |  |  |  | 97.68 | 97.68 |  | N/A | 9,500 | 9,280 |
| 01/01/07 TO 03/31/07 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 04/01/07 TO 06/30/07 | 1 | 65.49 | 65.49 | 65.49 |  |  |  | 65.49 | 65.49 |  | N/A | 7,800 | 5,108 |
| 07/01/07 то 09/30/07 | 3 | 97.56 | 97.06 | 96.69 | 0.61 |  | 100.39 | 95.92 | 97.70 |  | N/A | 61,333 | 59,300 |
| 10/01/07 то 12/31/07 | 1 | 96.98 | 96.98 | 96.98 |  |  |  | 96.98 | 96.98 |  | N/A | 205,000 | 198,800 |
| 01/01/08 TO 03/31/08 | 2 | 122.13 | 122.13 | 124.18 | 18.50 |  | 98.35 | 99.54 | 144.72 |  | N/A | 33,000 | 40,981 |
| 04/01/08 TO 06/30/08$\qquad$ Study Years $\qquad$ | 2 | 94.76 | 94.76 | 91.23 | 5.54 |  | 103.87 | 89.51 | 100.00 |  | N/A | 134,500 | 122,698 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 07/01/05 TO 06/30/06 | 11 | 96.67 | 97.61 | 99.42 | 7.53 |  | 98.18 | 67.54 | 114.95 | 92.59 | 59 to 114.29 | 58,387 | 58,048 |
| 07/01/06 TO 06/30/07 | 3 | 93.18 | 85.45 | 85.41 | 11.52 |  | 100.04 | 65.49 | 97.68 |  | N/A | 7,433 | 6,349 |
| 07/01/07 то 06/30/08$\qquad$ Calendar Yrs $\qquad$ | 8 | 97.63 | 102.74 | 97.25 | 7.94 |  | 105.65 | 89.51 | 144.72 | 89.51 | 51 to 144.72 | 90,500 | 88,007 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 01/01/06 TO 12/31/06 | 10 | 97.18 | 97.65 | 100.33 | 8.00 |  | 97.33 | 67.54 | 114.95 | 93.18 | 18 to 114.29 | 28,616 | 28,710 |
| $\begin{gathered} 01 / 01 / 07 \text { TO } 12 / 31 / 07 \\ \text { ALL_ } \end{gathered}$ | 5 | 96.98 | 90.73 | 96.22 | 6.98 |  | 94.29 | 65.49 | 97.70 |  | N/A | 79,360 | 76,361 |
|  | 22 | 97.27 | 97.82 | 98.06 | 8.39 |  | 99.75 | 65.49 | 144.72 | 95.65 | 65 to 100.00 | 63,116 | 61,892 |
| ASSESSOR LOCATIONRANGE |  |  |  |  |  |  |  |  |  |  |  | Avg. Adj. | Avg. |
|  | COUNT | MEDIAN | MEAN | WGT. MEAN | COD |  | PRD | MIN | MAX | 95\% | Median C.I. | Sale Price | Assd Val |
| CHAMPION | 2 | 96.16 | 96.16 | 96.23 | 0.53 |  | 99.93 | 95.65 | 96.67 |  | N/A | 26,500 | 25,500 |
| ENDERS | 2 | 96.30 | 96.30 | 96.15 | 3.85 |  | 100.15 | 92.59 | 100.00 |  | N/A | 26,000 | 25,000 |
| IMPERIAL | 12 | 96.66 | 93.29 | 96.61 | 8.37 |  | 96.56 | 65.49 | 114.29 | 89.51 | 51 to 100.00 | 94,213 | 91,022 |
| LAMAR | 1 | 99.54 | 99.54 | 99.54 |  |  |  | 99.54 | 99.54 |  | N/A | 30,000 | 29,862 |
| RURAL | 1 | 114.95 | 114.95 | 114.95 |  |  |  | 114.95 | 114.95 |  | N/A | 10,000 | 11,495 |
| WAUNETA$\qquad$ ALL | 4 | 97.62 | 108.29 | 112.40 | 13.23 |  | 96.34 | 93.18 | 144.72 |  | N/A | 28,250 | 31,752 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 22 | 97.27 | 97.82 | 98.06 | 8.39 |  | 99.75 | 65.49 | 144.72 | 95.65 | 65 to 100.00 | 63,116 | 61,892 |

## PAD 2009 Preliminary Statistics



Exhibit 15 - Page 29

## PAD 2009 Preliminary Statistics



Date Range: 07/01/2005 to 06/30/2008 Posted Before: 01/22/2009


# Chase County 2009 Assessment Actions taken to address the following property classes/subclasses: 

## Commercial

After a county wide commercial reappraisal was applied in 2008 by Stanard Appraisal Services, no major changes were taken by the county in 2009. A continued review and verification process was conducted by the assessor and appraisal firm. The updated information done through the verification process was noted on the commercial property record files. This was a clean-up process to the new appraisal data applied on over 400 parcels in 2008.

## 2009 Assessment Survey for Chase County

## Commercial/Industrial Appraisal Information

| 1. | Data collection done by: |
| :---: | :---: |
|  | Stanard Appraisal Service |
| 2. | Valuation done by: |
|  | Assessor |
| 3. | Pickup work done by whom: |
|  | Stanard Appraisal Service |
| 4. | What is the date of the Replacement Cost New data (Marshall-Swift) that are used to value this property class? |
|  | January/2007 |
| 5. | What was the last year a depreciation schedule for this property class was developed using market-derived information? |
|  | 2007 |
| 6. | When was the last time that the Income Approach was used to estimate or establish the market value of the properties in this class? |
|  | 2007 |
| 7. | What approach to value is used in this class or subclasses to estimate the market value of properties? |
|  | 2007 |
| 8. | Number of Market Areas/Neighborhoods/Assessor Locations? |
|  | 6; Imperial, Wauneta, Enders, Champion, Lamar and Rural |
| 9. | How are these Market Areas/Neighborhoods/Assessor Locations defined? |
|  | By market and assessor location. |
| 10. | Is "Market Area/Neighborhood/Assessor Location" a unique usable valuation grouping? If not, what is a unique usable valuation grouping? |
|  | Yes |
| 11. | Do the various subclasses of Commercial Property such as convenience stores, warehouses, hotels, etc. have common value characteristics? |
|  | Yes |
| 12. | Is there unique market significance of the suburban location as defined in Reg. 10-001.07B? (Suburban shall mean a parcel of real property located outside of the limits of an incorporated city or village, but within the legal jurisdiction of an incorporated city or village.) |
|  | Yes, the suburban commercial properties would have like similarities to rural commercial properties. |

Commercial Permit Numbers:

| Permits | Information Statements | Other | Total |
| :---: | :---: | :---: | :---: |
| 4 | 0 | 0 | 4 |

# PAD 2009 R\&O Statistics 



# PAD 2009 R\&O Statistics 



Exhibit 15 - Page 35

# PAD 2009 R\&O Statistics 




## Commerical Real Property

## I. Correlation

COMMERCIAL:After a new reappraisal was conducted including 400 commercial parcels in 2008 by Stanard Appraisal Services, no major changes were necessary by the assessor in 2009 to equalize this class of property. Review and pickup assessment work was timely completed and the continued verification process is an ongoing process. Although the total qualified commercial sales base includes 22 sales, over $55 \%$ of these are within the City of Imperial. The remainder of the assessor locations are not representative of the population. Two proposed sites for Ethanol Plant construction has not showed any future building. Possbile factors may contribute to the declining agricultural corn market and economy of the products.
An increase in the overall county commercial valuation is representing higher gas producing property valuations that are appraised by Pritchard and Abbott. A new commercial grain storage bin at Scoular Grain also added to the increase. All three measures of central tendency are close and support each other. The median best describes the level of value, at 97 like the median for the 12 commercial sales in Imperial. Both qualitative statistics are within the acceptable ranges and support the the county obtaining uniform and proportionate assessment practices.

## II. Analysis of Percentage of Sales Used

This section documents the utilization of total sales compared to qualified sales in the sales file. Neb. Rev. Stat. 77-1327(2) (R. S. Supp., 2007) provides that all sales are deemed to be arm's length transactions unless determined to be otherwise under professionally accepted mass appraisal techniques. The county assessor is responsible for the qualification of the sales included in the residential sales file. The Division periodically reviews the procedures utilized by the county assessor to qualify/disqualify sales.

The Standard on Ratio Studies, International Association of Assessing Officials, (2007), indicates that low levels of sale utilization may indicate excessive trimming by the county assessor. Excessive trimming, the arbitrary exclusion or adjustment of arm's length transactions, may indicate an attempt to inappropriately exclude arm's length transactions to create the appearance of a higher level of value and quality of assessment. The sales file, in a case of excess trimming, will fail to properly represent the level of value and quality of assessment of the population of residential real property.

|  | Total Sales | Qualified Sales | Percent Used |
| :---: | :---: | :---: | :---: |
| 2009 | 58 | 22 | 37.93 |
| 2008 | 57 | 22 | 38.60 |
| 2007 | 60 | 31 | 51.67 |
| 2006 | 53 | 30 | 56.60 |
| 2005 | 41 | 26 | 63.41 |

COMMERCIAL:Table II indicates a decline of commercial sales used to develop the statistical measures. The total number of sales include 7 eliminated sales due to substantially changed properties since the date of sale. Theoretically, if the 7 sales could be used in the qualified numbers the percent used by the assessor would be approximately $50 \%$.

## III. Analysis of the Preliminary, Trended Preliminary and R\&O Median Ratio

The trended preliminary ratio is an alternative method to calculate a point estimate as an indicator of the level of value. This table compares the preliminary median ratio, trended preliminary median ratio, and $\mathrm{R} \& \mathrm{O}$ median ratio, presenting four years of data to reveal any trends in assessment practices. The analysis that follows compares the changes in these ratios to the assessment actions taken by the county assessor. If the county assessor's assessment practices treat all properties in the sales file and properties in the population in a similar manner, the trended preliminary ratio will correlate closely with the R\&O median ratio. The following is the justification for the trended preliminary ratio:

## Adjusting for Selective Reappraisal

The reliability of sales ratio statistics depends on unsold parcels being appraised in the same manner as sold parcels. Selective reappraisal of sold parcels distorts sales ratio results, possibly rendering them useless. Equally important, selective reappraisal of sold parcels (sales chasing) is a serious violation of basic appraisal uniformity and is highly unprofessional. Oversight agencies must be vigilant to detect the practice if it occurs and take necessary corrective action.
[To monitor sales chasing] A preferred approach is to use only sales that occur after appraised values are determined. However, as long as values from the most recent appraisal year are used in ratio studies, this is likely to be impractical. A second approach is to use values from the previous assessment year, so that most (or all) sales in the study follow the date values were set. In this approach, measures of central tendency must be adjusted to reflect changes in value between the previous and current year. For example, assume that the measure of central tendency is 0.924 and, after excluding parcels with changes in use or physical characteristics, that the overall change in value between the previous and current assessment years is 6.3 percent. The adjusted measure of central tendency is $0.924 \times 1.063=0.982$. This approach can be effective in determining the level of appraisal, but measures of uniformity will be unreliable if there has been any meaningful reappraisal activity for the current year.

Gloudemans, Robert J., Mass Appraisal of Real Property, International Association of Assessing Officers, (1999), p. 315.

## III. Analysis of the Preliminary, Trended Preliminary and R\&O Median Ratio

 Continued|  | Preliminary <br> Median | \% Change in Assessed <br> Value (excl. growth) | Trended <br> Preliminary Ratio | R\&O <br> Median |
| :---: | :---: | :---: | :---: | :---: |
| 2009 | 97 | 4.97 | 102 | 97 |
| 2008 | 98.18 | 9.15 | 107 | 96.51 |
| 2007 | 100 | 0.79 | 101 | 100 |
| 2006 | 95 | -0.09 | 95 | 95 |
| 2005 | 95 | 0.45 | 96 | 95 |

COMMERCIAL:The $4.97 \%$ increase to the commercial assessed value (excluding growth) is reflecting the increased valuations to Noble Gas properties and one addition to a commercial grain storage facility for 2009. These gas producing parcels are valued through a contract with Pritchard and Abbott. These parcels alone increased $\$ 833,020$. The grain facility updates added approximately 2.3 million in value compared to 2008. Therefore, the Trended Preliminary Ratio is not representative of the assessor's actions and level of commercial property for this year. The R\&O Ratio accurately represents the commercial property class level of value through the assessment actions.

## IV. Analysis of Percentage Change in Total Assessed Value in the Sales File to Percentage Change in Assessed Value

This section analyzes the percentage change of the assessed values in the sales file, between the 2009 Preliminary Statistical Reports and the 2009 R\&O Statistical Reports, to the percentage change in the assessed value of all real property base, by class, reported in the 2008 County Abstract of Assessment for Real Property, Form 45, excluding growth valuation, compared to the 2008 Certificate of Taxes Levied (CTL) Report. For purposes of calculating the percentage change in the sales file, only the sales in the most recent year of the study period are used. If assessment practices treat sold and unsold properties consistently, the percentage change in the sales file and assessed base will be similar. The analysis of this data assists in determining if the statistical representations calculated from the sales file are an accurate measure of the population. The following is justification for such an analysis:

## Comparison of Average Value Changes

If sold and unsold properties are similarly appraised, they should experience similar changes in value over time. Accordingly, it is possible to compute the average change in value over a selected period for sold and unsold parcels and, if necessary, test to determine whether observed differences are significant. If, for example, values for vacant sold parcels in an area have increased by 45 percent since the previous reappraisal, but values for vacant unsold parcels have increased only 10 percent, sold and unsold parcels appear to have not been equally appraised. This apparent disparity between the treatment of sold and unsold properties provides an initial indication of poor assessment practices and should trigger further inquiry into the reasons for the disparity.

## IV. Analysis of Percentage Change in Total Assessed Value in the Sales File to Percentage Change in Assessed Value Continued

\% Change in Total
Assessed Value in the Sales File
\% Change in Total Assessed
Value (excl. growth)

| 1.03 | 2009 | 4.97 |
| :---: | :---: | :---: |
| 52.36 | 2008 | 9.15 |
| 2.31 | 2007 | 0.79 |
| 0.00 | 2006 | -0.09 |
| -9.83 | 2005 | 0.45 |

COMMERCIAL:Comparing the $1.03 \%$ change in the sales file versus the $4.97 \%$ assessed value change in the total county commercial base supports the reports of actions from the assessor. Only minor changes were made to the commercial properties after a reappraisal was applied in 2008. The increased value of the total county base reflects the increased $\$ 833,020$ value of gas producing appraisals and a construction at Scoular Grain Co. of 2.3 million that was not growth value.

## V. Analysis of the R\&O Median, Wgt. Mean, and Mean Ratios

There are three measures of central tendency calculated by the Division: median ratio, weighted mean ratio, and mean ratio. Since each measure of central tendency has strengths and weaknesses, the use of any statistic for equalization should be reconciled with the other two, as in an appraisal, based on the appropriateness in the use of the statistic for a defined purpose, the quantity of the information from which it was drawn, and the reliability of the data that was used in its calculation. An examination of the three measures can serve to illustrate important trends in the data if the measures do not closely correlate to each other.

The IAAO considers the median ratio the most appropriate statistical measure for use in determining level of value for direct equalization; the process of adjusting the values of classes or subclasses of property in response to the determination of level of value at a point above or below a particular range. Since the median ratio is considered neutral in relationship to either assessed value or selling price, its use in adjusting the class or subclass of properties will not change the relationships between assessed value and level of value already present within the class or subclass of properties, thus rendering an adjustment neutral in its impact on the relative tax burden to an individual property. Additionally, the median ratio is less influenced by the presence of extreme ratios, commonly called outliers. One outlier in a small sample size of sales can have controlling influence over the other measures of central tendency. The median ratio limits the distortion potential of an outlier.

The weighted mean ratio is viewed by the IAAO as the most appropriate statistical measure for indirect equalization; to ensure proper funding distribution of aid to political subdivisions, particularly when the distribution in part is based on the assessable value in that political subdivision, Standard on Ratio Studies, International Association of Assessing Officers, (2007). The weighted mean, because it is a value weighted ratio, best reflects a comparison of the assessed and market value of property in the political subdivision. If the distribution of aid to political subdivisions must relate to the market value available for assessment in the political subdivision, the measurement of central tendency used to analyze level of value should reflect the dollars of value available to be assessed. The weighted mean ratio does that more than either of the other measures of central tendency.

If the weighted mean ratio, because of its dollar-weighting feature, is significantly different from the median ratio, it may be an indication of other problems with assessment proportionality. When this occurs, an evaluation of the county's assessment practices and procedures is appropriate to discover remedies to the situation.

The mean ratio is used as a basis for other statistical calculations, such as the price related differential and coefficient of variation. However, the mean ratio has limited application in the analysis of level of value because it assumes a normal distribution of the data set around the mean ratio with each ratio having the same impact on the calculation regardless of the assessed value or the selling price.

## V. Analysis of the R\&O Median, Wgt. Mean, and Mean Ratios Continued

|  | Median | Wgt. Mean | Mean |
| :---: | :---: | :---: | :---: |
| R\&O Statistics | $\mathbf{9 7}$ | $\mathbf{9 8}$ | $\mathbf{9 8}$ |

COMMERCIAL:All three measures of central tendency are within the acceptable parameters and support each other well. For direct equalization purposes the median will be used to describe the level of value for the commercial class of property as is supported by the median within Imperial, where over $55 \%$ of the sales make up the sample.

## VI. Analysis of R\&O COD and PRD

In analyzing the statistical data of assessment quality, there are two measures primarily relied upon by assessment officials. The Coefficient of Dispersion, COD, is produced to measure assessment uniformity. A low COD tends to indicate good assessment uniformity as there is a smaller spread or dispersion of the ratios in the sales file. A COD of less than 15 suggests that there is good assessment uniformity. Mass Appraisal of Real Property, International Association of Assessing Officers, (1999), pp. 235-237. The IAAO has issued performance standards for major property groups:

Single-family residences: a COD of 15 percent or less.
For newer and fairly homogeneous areas: a COD of 10 or less.
Income-producing property: a COD of 20 or less, or in larger urban jurisdictions, 15 or less. Vacant land and other unimproved property, such as agricultural land: a COD of 20 or less.
Rural residential and seasonal properties: a COD of 20 or less.

Mass Appraisal of Real Property, International Association of Assessing Officers, (1999), p. 246.

The Price Related Differential, PRD, is produced to measure assessment vertical uniformity (progressivity or regressivity). For example, assessments are considered regressive if high value properties are under-assessed relative to low value properties. A PRD of greater than 100 suggests that high value properties are relatively under-assessed. Mass Appraisal of Real Property, International Association of Assessing Officers, (1999), pp. 239-240. A PRD of less than 100 indicates that high value properties are relatively over-assessed. As a general rule, except for small samples, a PRD should range between 98 and 103 . This range is centered slightly above 100 to allow for a slightly upward measurement bias inherent in the PRD. Mass Appraisal of Real Property, International Association of Assessing Officers, (1999), p. 247.

The analysis in this section indicates whether the COD and PRD meet the performance standards described above.

|  | COD | PRD |
| :--- | :---: | :---: |
| R\&O Statistics | 8.76 | 99.91 |
| Difference | 0.00 | 0.00 |

COMMERCIAL:Both qualitative measures reflect good assessment uniformity and meet performance standards. It is believed that the commercial properties in Chase County are being treated in a uniform and proportionate manner by the County.

## VII. Analysis of Change in Statistics Due to Assessor Actions

This section compares the statistical indicators from the Preliminary Statistical Reports to the same statistical indicators from the R\&O Statistical Reports. The analysis that follows explains the changes in the statistical indicators in consideration of the assessment actions taken by the county assessor.

|  | Preliminary Statistics | R\&O Statistics | Change |
| :--- | :---: | :---: | :---: |
| Number of Sales | 22 | 22 | 0 |
| Median | 97 | 97 | 0 |
| Wgt. Mean | 98 | 98 | 0 |
| Mean | 98 | 98 | 0 |
| COD | 8.39 | $\mathbf{8 . 7 6}$ | 0.37 |
| PRD | 99.75 | 99.91 | $\mathbf{0 . 1 6}$ |
| Minimum | 65.49 | 65.49 | $\mathbf{0 . 0 0}$ |
| Maximum | 144.72 | 152.56 | $\mathbf{7 . 8 4}$ |

COMMERCIAL:Small differences shown on Table VII shows the minor review and clean up work in the commercial file after a countywide reappraisal was applied in 2008 by the county and contracted appraiser. This is consistent with the reported actions for 2009.

## PAD 2009 Preliminary Statistics

Date Range: 07/01/2005 to 06/30/2008 Posted Before: 01/22/2009


## PAD 2009 Preliminary Statistics




Exhibit 15 - Page 50

## PAD 2009 Preliminary Statistics

## AGRICULTURAL UNIMPROVED

## Type: Qualified <br> Date Range: 07/01/2005 to 06/30/2008 Posted Before: 01/22/2009



## PAD 2009 Preliminary Statistics



## PAD 2009 Preliminary Statistics



Exhibit 15 - Page 53

## PAD 2009 Preliminary Statistics



Exhibit 15 - Page 54

## PAD 2009 Preliminary Statistics



# Chase County 2009 Assessment Actions taken to address the following property classes/subclasses: 

## Agricultural

Chase County analyzed the county agricultural sales along with neighboring counties and the steady number of sales showed increased market values compared to 2008. Every LCG in irrigated, dry and grass increased for 2009 to equalize the property class. The highest increases are 4A1 and 4A in the irrigated subclasses; $\$ 140$ per acre per land classification group. The classes of $1 \mathrm{~A}, 2 \mathrm{~A}$, and 2 A all increased $\$ 90$ per acre and $3 \mathrm{~A} 1+\$ 130 ; 3 \mathrm{~A}$ increased $\$ 80$ per acre. The dry classifications each raised $\$ 25$ per acre whereas the grass classes increased between \$22-\$45 per acre. Water availability through the Upper Republican Natural Resource District continues to be a large market factor shown through the sales in Chase County.

## 2009 Assessment Survey for Chase County

## Agricultural Appraisal Information

| 1. | Data collection done by: |
| :---: | :---: |
|  | Assessor and Staff |
| 2. | Valuation done by: |
|  | Assessor |
| 3. | Pickup work done by whom: |
|  | Assessor and Staff |
| 4. | Does the county have a written policy or written standards to specifically define agricultural land versus rural residential acreages? |
|  | No |
| a. | How is agricultural land defined in this county? |
|  | By the primary use of the parcel |
| 5. | When was the last date that the Income Approach was used to estimate or establish the market value of the properties in this class? |
|  | N/A |
| 6. | If the income approach was used, what Capitalization Rate was used? |
|  | N/A |
| 7. | What is the date of the soil survey currently used? |
|  | 2008 |
| 8. | What date was the last countywide land use study completed? |
|  | 2009 |
| a. | By what method? (Physical inspection, FSA maps, etc.) |
|  | GIS, NRD maps and certifications |
| b. | By whom? |
|  | Assessor and Staff |
| c. | What proportion is complete / implemented at this time? |
|  | 100\% |
| 9. | Number of Market Areas/Neighborhoods/Assessor Locations in the agricultural property class: |
|  | 1 |
| 10. | How are Market Areas/Neighborhoods/Assessor Locations developed? |
|  | By the county boundaries |
| 11. | In the assessor's opinion, are there any other class or subclass groupings, other than LCG groupings, that are more appropriate for valuation? <br> Yes or No |
|  | No |
| a. | If yes, list. |
|  | N/A |

12. In your opinion, what is the level of value of these groupings? $69-75 \%$ of market value
13. Has the county implemented (or is in the process of implementing) special valuation for agricultural land within the county?
No

Agricultural Permit Numbers:

| Permits | Information Statements | Other | Total |
| :---: | :---: | :---: | :---: |
| 8 | 7 | 6 | 21 |

PAD 2009 R\&O Statistics
Type: Qualified
Date Range: 07/01/2005 to 06/30/2008 Posted Before: 01/23/2009


PAD 2009 R\&O Statistics
Type: Qualified
Date Range: 07/01/2005 to 06/30/2008 Posted Before: 01/23/2009


# PAD 2009 R\&O Statistics 



Exhibit 15 - Page 61

PAD 2009 R\&O Statistics
Type: Qualified
Date Range: 07/01/2005 to 06/30/2008 Posted Before: 01/23/2009


PAD 2009 R\&O Statistics
Type: Qualified
Date Range: 07/01/2005 to 06/30/2008 Posted Before: 01/23/2009


PAD 2009 R\&O Statistics
Type: Qualified
Date Range: 07/01/2005 to 06/30/2008 Posted Before: 01/23/2009


Exhibit 15 - Page 64

## Type: Qualified <br> Date Range: 07/01/2005 to 06/30/2008 Posted Before: 01/23/2009



Exhibit 15 - Page 65

PAD 2009 R\&O Statistics
Type: Qualified
Date Range: 07/01/2005 to 06/30/2008 Posted Before: 01/23/2009
NUMBER of Sales:
TOTAL Sales Price: TOTAL Adj Sales Price TOTAL Assessed Value: AVG. Adj. Sales Price:
AVG. Assessed Value:
NUMBER of Sales
83
$21,376,470$
$21,230,571$
$14,756,449$
255,790
177,788

## MEDIAN:

72 CoV: 22.30 95\% Median C.I.: 69.04 to 74.23
$\begin{array}{llrrrrr}\text { MEAN: } & 70 & \text { STD: } & 16.48 & 95 \% \text { Wgt. Mean C.I.: } & 65.14 \text { to } 73.87 \\ \text { MEAN: } & 74 & \text { AVG.ABS.DEV: } & 12.07 & 95 \% \text { Mean C.I.: } & 70.35 \text { to } 77.44\end{array}$
COD: 16.87 MAX Sales Ratio: 135.75
PRD: 106.31 MIN Sales Ratio: 43.26
Printed: 03/21/2009 13:05:55
MAJORITY LAND USE > 50\%

| RANGE | COUNT |
| :--- | ---: |
| DRY | 28 |
| GRASS | 11 |
| IRRGTD | 44 |
| $\square$ | 83 |


| SALE PRICE * | 83 |
| :--- | ---: |
| RANGE |  |
| LOW \$ COUNT |  |

$\qquad$
$\qquad$ Total \$_ $\quad$ To

3000 TO | 29999 | 2 |
| :--- | :--- | :--- |
| 59999 | 7 |

6000 TO $99999 \quad 1$

150000 TO $\quad 249999 \quad 23 \quad$| 149.67 |
| :--- | :--- | :--- |

250000 тO $499999 \quad 24$
$\qquad$


## RANGE

$\qquad$
$\qquad$ [Total \$ $\quad \begin{aligned} & \text { To } \\ & 10000 \text { TO } \\ & 5\end{aligned}$
30000 TO
6000 TO $99999 \quad 13$
100000 TO $149999 \quad 7$

150000 TO | 149999 |  | 56.22 |
| :--- | :--- | :--- | :--- |
| 249999 | 34 | 72.88 |

250000 TO $499999 \quad 15$
$500000+$ ALI $\qquad$
$\qquad$
EDIAN
72.80
67.19
71.29
71.58
.80
.19
.29
MEAN WGI.
-
Avg. Adj. Avg.
.

| ale Price | Assd Val |
| ---: | ---: |
| 97,392 | 66,830 |
| 331,063 | 258,453 |

71.58

| 75.66 | 68.62 |
| :--- | :--- |
| 78.72 | 78.07 |
| 71.56 | 67.57 |

COD
18.86
22.63
14.15
PRD
110.26
100.83
105.90
MIN
COD PRD
MIN
135

MEDIAN MEAN WGT. MEAN
COD
PRD
MIN
$7.48 \quad 98.90$
$69.37 \quad 80.58$ N/A

| 255,790 | 177,788 |
| :---: | :---: |
| Adj. | Avg. |
| Price | Assd Val |

$\qquad$
83

| 74.91 | 75.82 | 76.26 |
| :--- | :--- | :--- |
| 82.98 | 83.99 | 74.16 |
| 70.91 | 73.15 | 70.44 |
| 56.22 | 61.43 | 57.50 |
| 72.88 | 75.68 | 72.73 |
| 69.09 | 71.81 | 70.15 |
| 67.33 | 67.33 | 59.15 |
|  |  |  |
| 71.58 | 73.89 | 69.51 |


| 5.19 | 99.43 |
| ---: | ---: |
| 24.76 | 113.26 |
| 13.43 | 103.85 |
| 22.58 | 106.83 |
| 14.11 | 104.06 |
| 14.66 | 102.37 |
| 35.18 | 113.84 |
|  |  |
| 16.87 | 106.31 |

69.37
48.96
44.28
43.26
44.36
55.
43.
43.
48.9
65.
43.26
69.
59.

| 31,000 | 23,639 |
| ---: | ---: |
| 61,961 | 45,948 |
| 99,851 | 70,339 |
| 225,239 | 129,520 |
| 253,039 | 184,024 |
| 496,231 | 348,081 |
| 860,140 | 508,742 |
|  |  |
| 255,790 | 177,788 |

Exhibit 15 - Page 66

## Agricultural Land

## I. Correlation

AGRICULTURAL UNIMPROVED:Chase County has implemented high increases for irrigated subclasses to meet the statutory requirements of agricultural land values for 2009. A higher and stronger market continues to be shown through the 74 sales within this three year study period. Water availability and the Republican River issues continue to be factors driving the market in Chase County. Through the preliminary statistics at $66 \%$ and the individual majority land use subclasses, the assessor implemented increases to irrigated land $\$ 80-\$ 140$ per acre. As you review the study years, the oldest sales are at $80 \%$, the middle at $73 \%$ and the most recent year at approximately $60 \%$. This is a reflection of the increased agricultural market despite the overall national economy. Dry classifications did not require as much of an increase, holding to $\$ 25$ per acre and grass increases ranged between $\$ 22-45$ per acre. Chase County has implemented GIS which has been a large asset to update land uses by ownership. The minimal agricultural statistics include nine additional sales, but also support the assessors actions to increased land values. The median for both sets of statistics is at 72 , which will be used to describe the level of value. Through the equalization achieved in Chase County it is believed the county has also obtained uniform and proportionate assessment practices.

## II. Analysis of Percentage of Sales Used

This section documents the utilization of total sales compared to qualified sales in the sales file. Neb. Rev. Stat. 77-1327(2) (R. S. Supp., 2007) provides that all sales are deemed to be arm's length transactions unless determined to be otherwise under professionally accepted mass appraisal techniques. The county assessor is responsible for the qualification of the sales included in the residential sales file. The Division periodically reviews the procedures utilized by the county assessor to qualify/disqualify sales.

The Standard on Ratio Studies, International Association of Assessing Officials, (2007), indicates that low levels of sale utilization may indicate excessive trimming by the county assessor. Excessive trimming, the arbitrary exclusion or adjustment of arm's length transactions, may indicate an attempt to inappropriately exclude arm's length transactions to create the appearance of a higher level of value and quality of assessment. The sales file, in a case of excess trimming, will fail to properly represent the level of value and quality of assessment of the population of residential real property.

|  | Total Sales | Qualified Sales | Percent Used |
| :---: | :---: | :---: | :---: |
| 2009 | 136 | 74 | $\mathbf{5 4 . 4 1}$ |
| 2008 | 151 | 91 | $\mathbf{6 0 . 2 6}$ |
| 2007 | 130 | 75 | 57.69 |
| 2006 | 128 | 72 | 56.25 |
| 2005 | 107 | 60 | 56.07 |

AGRICULTURAL UNIMPROVED:Chase County has remained utilizing over $50 \%$ of the total qualified sales for statistical measures. The total number, like the qualified has decreased from the 2008 numbers. The county has experienced factors in the agricultural land sales that show water is applied when allocation is allowed by the NRD. Several acres have been changed from dryland to irrigated land uses through the transfer of water certification payments with the NRD programs.

## III. Analysis of the Preliminary, Trended Preliminary and R\&O Median Ratio

The trended preliminary ratio is an alternative method to calculate a point estimate as an indicator of the level of value. This table compares the preliminary median ratio, trended preliminary median ratio, and $\mathrm{R} \& \mathrm{O}$ median ratio, presenting four years of data to reveal any trends in assessment practices. The analysis that follows compares the changes in these ratios to the assessment actions taken by the county assessor. If the county assessor's assessment practices treat all properties in the sales file and properties in the population in a similar manner, the trended preliminary ratio will correlate closely with the R\&O median ratio. The following is the justification for the trended preliminary ratio:

## Adjusting for Selective Reappraisal

The reliability of sales ratio statistics depends on unsold parcels being appraised in the same manner as sold parcels. Selective reappraisal of sold parcels distorts sales ratio results, possibly rendering them useless. Equally important, selective reappraisal of sold parcels (sales chasing) is a serious violation of basic appraisal uniformity and is highly unprofessional. Oversight agencies must be vigilant to detect the practice if it occurs and take necessary corrective action.
[To monitor sales chasing] A preferred approach is to use only sales that occur after appraised values are determined. However, as long as values from the most recent appraisal year are used in ratio studies, this is likely to be impractical. A second approach is to use values from the previous assessment year, so that most (or all) sales in the study follow the date values were set. In this approach, measures of central tendency must be adjusted to reflect changes in value between the previous and current year. For example, assume that the measure of central tendency is 0.924 and, after excluding parcels with changes in use or physical characteristics, that the overall change in value between the previous and current assessment years is 6.3 percent. The adjusted measure of central tendency is $0.924 \times 1.063=0.982$. This approach can be effective in determining the level of appraisal, but measures of uniformity will be unreliable if there has been any meaningful reappraisal activity for the current year.

Gloudemans, Robert J., Mass Appraisal of Real Property, International Association of Assessing Officers, (1999), p. 315.

## III. Analysis of the Preliminary, Trended Preliminary and R\&O Median Ratio

 Continued| Preliminary <br> Median | \% Change in Assessed <br> Value (excl. growth) | Trended <br> Preliminary Ratio | R\&O <br> Median |  |
| :---: | :---: | :---: | :---: | :---: |
| 2009 | $\mathbf{6 6}$ | $\mathbf{1 0 . 6 6}$ | $\mathbf{7 3}$ | 72 |
| 2008 | $\mathbf{6 8 . 3 2}$ | $\mathbf{1 1 . 5 2}$ | $\mathbf{7 6}$ | $\mathbf{7 2 . 1 2}$ |
| 2007 | 74 | $\mathbf{- 1 . 7 2}$ | $\mathbf{7 3}$ | 72 |
| 2006 | 74 | 7.19 | $\mathbf{8 0}$ | 75 |
| 2005 | 76 | 1.56 | 77 | 77 |

AGRICULTURAL UNIMPROVED:The large increase in the percent change in assessed value is representing the increased agricultural land values in every land use for 2009. Raises varied on the land classification group, which ranged from $\$ 25-\$ 140$ per acre. The R\&O Ratio is fairly representing the overall county level of value and supports the fair treatment to the sample and base uniformly.

## IV. Analysis of Percentage Change in Total Assessed Value in the Sales File to Percentage Change in Assessed Value

This section analyzes the percentage change of the assessed values in the sales file, between the 2009 Preliminary Statistical Reports and the 2009 R\&O Statistical Reports, to the percentage change in the assessed value of all real property base, by class, reported in the 2008 County Abstract of Assessment for Real Property, Form 45, excluding growth valuation, compared to the 2008 Certificate of Taxes Levied (CTL) Report. For purposes of calculating the percentage change in the sales file, only the sales in the most recent year of the study period are used. If assessment practices treat sold and unsold properties consistently, the percentage change in the sales file and assessed base will be similar. The analysis of this data assists in determining if the statistical representations calculated from the sales file are an accurate measure of the population. The following is justification for such an analysis:

## Comparison of Average Value Changes

If sold and unsold properties are similarly appraised, they should experience similar changes in value over time. Accordingly, it is possible to compute the average change in value over a selected period for sold and unsold parcels and, if necessary, test to determine whether observed differences are significant. If, for example, values for vacant sold parcels in an area have increased by 45 percent since the previous reappraisal, but values for vacant unsold parcels have increased only 10 percent, sold and unsold parcels appear to have not been equally appraised. This apparent disparity between the treatment of sold and unsold properties provides an initial indication of poor assessment practices and should trigger further inquiry into the reasons for the disparity.

# IV. Analysis of Percentage Change in Total Assessed Value in the Sales File to Percentage Change in Assessed Value Continued 

\% Change in Total
Assessed Value in the Sales File
\% Change in Total Assessed
Value (excl. growth)

| 7.27 | 2009 | 10.66 |
| :---: | :---: | :---: |
| 9.54 | 2008 | 11.52 |
| -2.12 | 2007 | -1.72 |
| 8.17 | 2006 | 7.19 |
| 1.86 | 2005 | 1.56 |

AGRICULTURAL UNIMPROVED:The percent change in the total county assessed base (escl. growth) is 3.39 percent higher than the sales file change. This is supportive of the substantial valuation increases to irrigated subclassifications, (\$90-\$140). An estimate of $50 \%$ of the unimproved irrigated sales contain irrigated land uses. The irrigated valuation base in the county holds nearly $70 \%$ of the agricultural land value. These percentages are reflecting fair application to all agricultural land valuations.

## V. Analysis of the R\&O Median, Wgt. Mean, and Mean Ratios

There are three measures of central tendency calculated by the Division: median ratio, weighted mean ratio, and mean ratio. Since each measure of central tendency has strengths and weaknesses, the use of any statistic for equalization should be reconciled with the other two, as in an appraisal, based on the appropriateness in the use of the statistic for a defined purpose, the quantity of the information from which it was drawn, and the reliability of the data that was used in its calculation. An examination of the three measures can serve to illustrate important trends in the data if the measures do not closely correlate to each other.

The IAAO considers the median ratio the most appropriate statistical measure for use in determining level of value for direct equalization; the process of adjusting the values of classes or subclasses of property in response to the determination of level of value at a point above or below a particular range. Since the median ratio is considered neutral in relationship to either assessed value or selling price, its use in adjusting the class or subclass of properties will not change the relationships between assessed value and level of value already present within the class or subclass of properties, thus rendering an adjustment neutral in its impact on the relative tax burden to an individual property. Additionally, the median ratio is less influenced by the presence of extreme ratios, commonly called outliers. One outlier in a small sample size of sales can have controlling influence over the other measures of central tendency. The median ratio limits the distortion potential of an outlier.

The weighted mean ratio is viewed by the IAAO as the most appropriate statistical measure for indirect equalization; to ensure proper funding distribution of aid to political subdivisions, particularly when the distribution in part is based on the assessable value in that political subdivision, Standard on Ratio Studies, International Association of Assessing Officers, (2007). The weighted mean, because it is a value weighted ratio, best reflects a comparison of the assessed and market value of property in the political subdivision. If the distribution of aid to political subdivisions must relate to the market value available for assessment in the political subdivision, the measurement of central tendency used to analyze level of value should reflect the dollars of value available to be assessed. The weighted mean ratio does that more than either of the other measures of central tendency.

If the weighted mean ratio, because of its dollar-weighting feature, is significantly different from the median ratio, it may be an indication of other problems with assessment proportionality. When this occurs, an evaluation of the county's assessment practices and procedures is appropriate to discover remedies to the situation.

The mean ratio is used as a basis for other statistical calculations, such as the price related differential and coefficient of variation. However, the mean ratio has limited application in the analysis of level of value because it assumes a normal distribution of the data set around the mean ratio with each ratio having the same impact on the calculation regardless of the assessed value or the selling price.

## V. Analysis of the R\&O Median, Wgt. Mean, and Mean Ratios Continued

|  | Median | Wgt. Mean | Mean |
| :---: | :---: | :---: | :---: |
| R\&O Statistics | 72 | 71 | 74 |

AGRICULTURAL UNIMPROVED:All three statistical measures of central tendency are within the acceptable range and also support the minimal agricultural statistical measures. For direct equalization purposes the median measure for both agricultural classes at 72, best describes the level of value for this assessment year.

## VI. Analysis of R\&O COD and PRD

In analyzing the statistical data of assessment quality, there are two measures primarily relied upon by assessment officials. The Coefficient of Dispersion, COD, is produced to measure assessment uniformity. A low COD tends to indicate good assessment uniformity as there is a smaller spread or dispersion of the ratios in the sales file. A COD of less than 15 suggests that there is good assessment uniformity. Mass Appraisal of Real Property, International Association of Assessing Officers, (1999), pp. 235-237. The IAAO has issued performance standards for major property groups:

Single-family residences: a COD of 15 percent or less.
For newer and fairly homogeneous areas: a COD of 10 or less.
Income-producing property: a COD of 20 or less, or in larger urban jurisdictions, 15 or less. Vacant land and other unimproved property, such as agricultural land: a COD of 20 or less.
Rural residential and seasonal properties: a COD of 20 or less.

Mass Appraisal of Real Property, International Association of Assessing Officers, (1999), p. 246.

The Price Related Differential, PRD, is produced to measure assessment vertical uniformity (progressivity or regressivity). For example, assessments are considered regressive if high value properties are under-assessed relative to low value properties. A PRD of greater than 100 suggests that high value properties are relatively under-assessed. Mass Appraisal of Real Property, International Association of Assessing Officers, (1999), pp. 239-240. A PRD of less than 100 indicates that high value properties are relatively over-assessed. As a general rule, except for small samples, a PRD should range between 98 and 103. This range is centered slightly above 100 to allow for a slightly upward measurement bias inherent in the PRD. Mass Appraisal of Real Property, International Association of Assessing Officers, (1999), p. 247.

The analysis in this section indicates whether the COD and PRD meet the performance standards described above.

|  | COD | PRD |
| :--- | :---: | :---: |
| R\&O Statistics | 16.81 | 104.54 |
| Difference | 0.00 | 1.54 |

AGRICULTURAL UNIMPROVED:The coefficient of dispersion is well within the acceptable standards for qualitative measurement purposes. The assessment actions to increase land values improved the price related differential from the preliminary statistics. Based on the known assessment practices in Chase County, it is believed the unimproved agricultural land is treated in a uniform and proportionate manner.

## VII. Analysis of Change in Statistics Due to Assessor Actions

This section compares the statistical indicators from the Preliminary Statistical Reports to the same statistical indicators from the R\&O Statistical Reports. The analysis that follows explains the changes in the statistical indicators in consideration of the assessment actions taken by the county assessor.

|  | Preliminary Statistics | R\&O Statistics | Change |
| :--- | :---: | :---: | :---: |
| Number of Sales | 74 | 74 | 0 |
| Median | 66 | 72 | 6 |
| Wgt. Mean | 64 | 71 | 7 |
| Mean | 67 | 74 | 7 |
| COD | 16.79 | 16.81 | 0.02 |
| PRD | 105.06 | 104.54 | $\mathbf{- 0 . 5 2}$ |
| Minimum | 125.84 | 43.26 | 3.42 |
| Maximum | 135.75 | 9.87 |  |

AGRICULTURAL UNIMPROVED:Analyses of the changes made in the statistics in the unimproved agricultural property class are very supportive of the changes made by the assessor for 2009. These included new land values in every land use to equalize this property class.

| Total Real Property | Records : 4,809 | Value : 538,919,773 | Growth 2,251,647 |
| ---: | :--- | :--- | :--- |
| Sum Lines 17, 25, \& 30 |  |  |  |



Exhibit 15 - Page 77

Schedule II : Tax Increment Financing (TIF)

|  | Records | Urban <br> Value Base | Value Excess | Records | SubUrban Value Base | Value Excess |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 18. Residential | 0 | 0 | 0 | 0 | 0 | 0 |
| 19. Commercial | 0 | 0 | 0 | 0 | 0 | 0 |
| 20. Industrial | 0 | 0 | 0 | 0 | 0 | 0 |
| 21. Other | Records | 0 <br> Rural <br> Value Base | 0 Value Excess | 0 <br> Records | 0 <br> Total <br> Value Base | $0$ <br> Value Excess |
| 18. Residential | 0 | 0 | 0 | 0 | 0 | 0 |
| 19. Commercial | 0 | 0 | 0 | 0 | 0 | 0 |
| 20. Industrial | 0 | 0 | 0 | 0 | 0 | 0 |
| 21. Other | 0 | 0 | 0 | 0 | 0 | 0 |
| 22. Total Sch II |  |  |  | 0 | 0 | 0 |

Schedule III : Mineral Interest Records

| Mineral Interest | Records Urban | Value | Records | SubUrban Value | Records Rural | Value | Records | Total | Value | Growth |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 23. Producing | 0 | 0 | 0 | 0 | 26 | 3,867,250 | 26 |  | 3,867,250 | 0 |
| 24. Non-Producing | 0 | 0 | 0 | 0 | 28 | 14,391 | 28 |  | 14,391 | 0 |
| 25. Total | 0 | 0 | 0 | 0 | 54 | 3,881,641 | 54 |  | 3,881,641 | 0 |


| Schedule IV : Exempt Records : Non-Agricultural |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Urban Records | SubUrban Records | Rural Records | Total Records |
| 26. Producing | 232 | 27 | 63 | 322 |


| Schedule V : Agricultural Records |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Urban |  | SubUrban |  | Rural |  | Total |  |
|  | Records | Value | Records | Value | Records | Value | Records | Value |
| 27. Ag-Vacant Land | 1 | 37,235 | 32 | 4,622,380 | 1,916 | 258,034,514 | 1,949 | 262,694,129 |
| 28. Ag-Improved Land | 2 | 21,689 | 16 | 2,061,299 | 541 | 92,541,238 | 559 | 94,624,226 |
| 29. Ag Improvements | 2 | 2,630 | 16 | 1,161,812 | 575 | 28,706,473 | 593 | 29,870,915 |
| 30. Ag Total |  |  |  |  |  |  | 2,542 | 387,189,270 |

Exhibit 15 - Page 78


Exhibit 15 - Page 79

|  | Urban |  |  | SubUrban |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Records | Acres | Value | Records | Acres | Value |
| 42. Game \& Parks | 0 | 0.00 | 0 | 0 | 0.00 | 0 |
|  | Records | ${ }_{\text {Acres }} \quad \text { Rural }$ | Value | Records | Total Acres | Value |
| 42. Game \& Parks | 0 | 0.00 | 0 | 0 | 0.00 | 0 |
| Schedule VIII : Agricultural Records : Special Value |  |  |  |  |  |  |
|  | Records | Urban Acres | Value | Records | Sub <br> Acres | Value |
| 43. Special Value | 0 | 0.00 | 0 | 0 | 0.00 | 0 |
| 44. Recapture Value N/A | 0 <br> Records |  | 0 Value | 0 Records |  |  |
| 43. Special Value | 0 | 0.00 | 0 | 0 | 0.00 | 0 |
| 44. Recapture Value | 0 | 0 | 0 | 0 | 0 | 0 |

* LB 968 (2006) for tax year 2009 and forward there will be no Recapture value.


## County 15 Chase

2009 County Abstract of Assessment for Real Property, Form 45
Schedule IX : Agricultural Records : Ag Land Market Area Detail Market Area 1

| Irrigated | Acres | \% of Acres* | Value | \% of Value* | Average Assessed Value* |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 45. 1A1 | 0.00 | 0.00\% | 0 | 0.00\% | 0.00 |
| 46. 1A | 34,910.74 | 21.08\% | 45,034,899 | 21.36\% | 1,290.00 |
| 47. 2A1 | 32,338.20 | 19.52\% | 41,687,949 | 19.77\% | 1,289.12 |
| 48. 2A | 12,166.86 | 7.35\% | 15,694,566 | 7.44\% | 1,289.94 |
| 49.3A1 | 31,269.33 | 18.88\% | 40,328,518 | 19.13\% | 1,289.71 |
| 50.3A | 15,072.07 | 9.10\% | 18,684,873 | 8.86\% | 1,239.70 |
| 51.4A1 | 27,075.98 | 16.35\% | 33,561,793 | 15.92\% | 1,239.54 |
| 52. 4A | 12,799.90 | 7.73\% | 15,861,133 | 7.52\% | 1,239.16 |
| 53. Total | 165,633.08 | 100.00\% | 210,853,731 | 100.00\% | 1,273.02 |
| Dry |  |  |  |  |  |
| 54. 1D1 | 0.00 | 0.00\% | 0 | 0.00\% | 0.00 |
| 55. 1D | 52,242.29 | 52.60\% | 22,986,605 | 58.45\% | 440.00 |
| 56. 2D1 | 14,277.22 | 14.38\% | 6,281,990 | 15.97\% | 440.00 |
| 57. 2D | 7,591.95 | 7.64\% | 2,847,045 | 7.24\% | 375.01 |
| 58.3D1 | 10,500.13 | 10.57\% | 3,412,623 | 8.68\% | 325.01 |
| 59.3D | 4,800.95 | 4.83\% | 1,320,322 | 3.36\% | 275.01 |
| 60.4D1 | 7,093.26 | 7.14\% | 1,773,488 | 4.51\% | 250.02 |
| 61.4D | 2,813.80 | 2.83\% | 703,561 | 1.79\% | 250.04 |
| 62. Total | 99,319.60 | 100.00\% | 39,325,634 | 100.00\% | 395.95 |
| Grass |  |  |  |  |  |
| 63. 1G1 | 0.00 | 0.00\% | 0 | 0.00\% | 0.00 |
| 64. 1G | 3,563.05 | 1.52\% | 979,891 | 1.58\% | 275.01 |
| 65. 2G1 | 3,579.24 | 1.53\% | 984,350 | 1.58\% | 275.02 |
| 66. 2G | 11,186.30 | 4.78\% | 3,076,313 | 4.94\% | 275.01 |
| 67.3G1 | 5,093.90 | 2.18\% | 1,400,876 | 2.25\% | 275.01 |
| 68. 3G | 6,968.66 | 2.98\% | 1,846,704 | 2.97\% | 265.00 |
| 69.4G1 | 43,533.34 | 18.61\% | 11,536,367 | 18.54\% | 265.00 |
| 70. 4G | 159,964.69 | 68.39\% | 42,390,715 | 68.14\% | 265.00 |
| 71. Total | 233,889.18 | 100.00\% | 62,215,216 | 100.00\% | 266.00 |
| Irrigated Total | 165,633.08 | 33.11\% | 210,853,731 | 67.49\% | 1,273.02 |
| Dry Total | 99,319.60 | 19.86\% | 39,325,634 | 12.59\% | 395.95 |
| Grass Total | 233,889.18 | 46.76\% | 62,215,216 | 19.91\% | 266.00 |
| Waste | 979.49 | 0.20\% | 14,695 | 0.00\% | 15.00 |
| Other | 377.81 | 0.08\% | 5,668 | 0.00\% | 15.00 |
| Exempt | 0.00 | 0.00\% | 0 | 0.00\% | 0.00 |
| Market Area Total | 500,199.16 | 100.00\% | 312,414,944 | 100.00\% | 624.58 |

Exhibit 15 - Page 81

## County 15 Chase

2009 County Abstract of Assessment for Real Property, Form 45
Schedule IX : Agricultural Records : Ag Land Market Area Detail Market Area 12

| Irrigated | Acres | \% of Acres* | Value | \% of Value* | Average Assessed Value* |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 45. 1A1 | 0.00 | 0.00\% | 0 | 0.00\% | 0.00 |
| 46. 1A | 4,410.92 | 37.35\% | 4,805,063 | 36.78\% | 1,089.36 |
| 47. 2A1 | 1,459.69 | 12.36\% | 1,622,609 | 12.42\% | 1,111.61 |
| 48. 2A | 650.91 | 5.51\% | 737,306 | 5.64\% | 1,132.73 |
| 49.3A1 | 1,781.90 | 15.09\% | 2,000,675 | 15.31\% | 1,122.78 |
| 50.3A | 461.66 | 3.91\% | 492,057 | 3.77\% | 1,065.84 |
| 51.4A1 | 2,014.23 | 17.05\% | 2,270,872 | 17.38\% | 1,127.41 |
| 52. 4A | 1,031.40 | 8.73\% | 1,136,648 | 8.70\% | 1,102.04 |
| 53. Total | 11,810.71 | 100.00\% | 13,065,230 | 100.00\% | 1,106.22 |
| Dry |  |  |  |  |  |
| 54. 1D1 | 0.00 | 0.00\% | 0 | 0.00\% | 0.00 |
| 55. 1D | 1,027.90 | 31.69\% | 452,273 | 36.81\% | 440.00 |
| 56. 2D1 | 743.91 | 22.94\% | 327,318 | 26.64\% | 440.00 |
| 57. 2D | 298.09 | 9.19\% | 111,789 | 9.10\% | 375.02 |
| 58.3D1 | 501.25 | 15.45\% | 162,913 | 13.26\% | 325.01 |
| 59.3D | 249.51 | 7.69\% | 68,618 | 5.58\% | 275.01 |
| 60.4D1 | 268.10 | 8.27\% | 67,032 | 5.46\% | 250.03 |
| 61.4D | 154.78 | 4.77\% | 38,701 | 3.15\% | 250.04 |
| 62. Total | 3,243.54 | 100.00\% | 1,228,644 | 100.00\% | 378.80 |
| Grass |  |  |  |  |  |
| 63. 1G1 | 0.00 | 0.00\% | 0 | 0.00\% | 0.00 |
| 64. 1G | 90.31 | 1.22\% | 24,837 | 1.27\% | 275.02 |
| 65. 2G1 | 93.20 | 1.26\% | 25,632 | 1.31\% | 275.02 |
| 66. 2G | 179.97 | 2.43\% | 49,496 | 2.52\% | 275.02 |
| 67. 3G1 | 271.64 | 3.66\% | 74,702 | 3.81\% | 275.00 |
| 68.3G | 198.59 | 2.68\% | 52,627 | 2.68\% | 265.00 |
| 69.4G1 | 1,694.05 | 22.84\% | 448,925 | 22.88\% | 265.00 |
| 70.4G | 4,890.61 | 65.93\% | 1,285,483 | 65.53\% | 262.85 |
| 71. Total | 7,418.37 | 100.00\% | 1,961,702 | 100.00\% | 264.44 |
| Irrigated Total | 11,810.71 | 52.45\% | 13,065,230 | 80.37\% | 1,106.22 |
| Dry Total | 3,243.54 | 14.40\% | 1,228,644 | 7.56\% | 378.80 |
| Grass Total | 7,418.37 | 32.94\% | 1,961,702 | 12.07\% | 264.44 |
| Waste | 26.60 | 0.12\% | 400 | 0.00\% | 15.04 |
| Other | 18.25 | 0.08\% | 274 | 0.00\% | 15.01 |
| Exempt | 0.00 | 0.00\% | 0 | 0.00\% | 0.00 |
| Market Area Total | 22,517.47 | 100.00\% | 16,256,250 | 100.00\% | 721.94 |

Exhibit 15 - Page 82

## County 15 Chase

2009 County Abstract of Assessment for Real Property, Form 45
Schedule IX : Agricultural Records : Ag Land Market Area Detail Market Area 15

| Irrigated | Acres | \% of Acres* | Value | \% of Value* | Average Assessed Value* |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 45. 1A1 | 0.00 | 0.00\% | 0 | 0.00\% | 0.00 |
| 46. 1A | 3,753.29 | 20.01\% | 4,101,809 | 18.64\% | 1,092.86 |
| 47. 2A1 | 2,542.81 | 13.55\% | 3,117,009 | 14.17\% | 1,225.81 |
| 48. 2A | 1,530.15 | 8.16\% | 1,849,892 | 8.41\% | 1,208.96 |
| 49.3A1 | 3,483.70 | 18.57\% | 4,185,700 | 19.03\% | 1,201.51 |
| 50.3A | 2,356.79 | 12.56\% | 2,810,408 | 12.77\% | 1,192.47 |
| 51.4A1 | 3,148.35 | 16.78\% | 3,727,717 | 16.94\% | 1,184.02 |
| 52.4A | 1,945.89 | 10.37\% | 2,208,038 | 10.04\% | 1,134.72 |
| 53. Total | 18,760.98 | 100.00\% | 22,000,573 | 100.00\% | 1,172.68 |
| Dry |  |  |  |  |  |
| 54. 1D1 | 0.00 | 0.00\% | 0 | 0.00\% | 0.00 |
| 55. 1D | 1,954.61 | 40.21\% | 860,029 | 47.25\% | 440.00 |
| 56. 2D1 | 662.98 | 13.64\% | 291,713 | 16.03\% | 440.00 |
| 57.2D | 330.93 | 6.81\% | 124,104 | 6.82\% | 375.02 |
| 58.3D1 | 712.10 | 14.65\% | 231,439 | 12.72\% | 325.01 |
| 59.3D | 502.84 | 10.34\% | 138,284 | 7.60\% | 275.01 |
| 60.4D1 | 450.42 | 9.27\% | 112,623 | 6.19\% | 250.04 |
| 61.4D | 247.29 | 5.09\% | 61,836 | 3.40\% | 250.05 |
| 62. Total | 4,861.17 | 100.00\% | 1,820,028 | 100.00\% | 374.40 |
| Grass |  |  |  |  |  |
| 63. 1G1 | 0.00 | 0.00\% | 0 | 0.00\% | 0.00 |
| 64. 1G | 144.77 | 2.02\% | 39,815 | 2.09\% | 275.02 |
| 65. 2G1 | 101.06 | 1.41\% | 27,794 | 1.46\% | 275.02 |
| 66.2G | 349.71 | 4.88\% | 96,173 | 5.04\% | 275.01 |
| 67. 3G1 | 262.35 | 3.66\% | 72,152 | 3.78\% | 275.02 |
| 68. 3G | 423.23 | 5.91\% | 112,157 | 5.88\% | 265.00 |
| 69.4G1 | 1,571.08 | 21.94\% | 416,335 | 21.84\% | 265.00 |
| 70.4G | 4,309.18 | 60.17\% | 1,141,933 | 59.90\% | 265.00 |
| 71. Total | 7,161.38 | 100.00\% | 1,906,359 | 100.00\% | 266.20 |
| Irrigated Total | 18,760.98 | 60.86\% | 22,000,573 | 85.51\% | 1,172.68 |
| Dry Total | 4,861.17 | 15.77\% | 1,820,028 | 7.07\% | 374.40 |
| Grass Total | 7,161.38 | 23.23\% | 1,906,359 | 7.41\% | 266.20 |
| Waste | 23.98 | 0.08\% | 360 | 0.00\% | 15.01 |
| Other | 20.24 | 0.07\% | 304 | 0.00\% | 15.02 |
| Exempt | 0.00 | 0.00\% | 0 | 0.00\% | 0.00 |
| Market Area Total | 30,827.75 | 100.00\% | 25,727,624 | 100.00\% | 834.56 |

Exhibit 15 - Page 83

## Schedule X : Agricultural Records :Ag Land Total

|  | Urban |  | SubUrban |  | Rural |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Acres | Value | Acres | Value | Acres | Value | Acres | Value |
| 76. Irrigated | 27.68 | 35,561 | 4,599.52 | 5,854,327 | 191,577.57 | 240,029,646 | 196,204.77 | 245,919,534 |
| 77. Dry Land | 4.59 | 1,674 | 995.79 | 399,799 | 106,423.93 | 41,972,833 | 107,424.31 | 42,374,306 |
| 78. Grass | 62.60 | 16,589 | 1,338.89 | 355,689 | 247,067.44 | 65,710,999 | 248,468.93 | 66,083,277 |
| 79. Waste | 0.00 | 0 | 21.58 | 324 | 1,008.49 | 15,131 | 1,030.07 | 15,455 |
| 80. Other | 0.00 | 0 | 4.81 | 73 | 411.49 | 6,173 | 416.30 | 6,246 |
| 81. Exempt | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 |
| 82. Total | 94.87 | 53,824 | 6,960.59 | 6,610,212 | 546,488.92 | 347,734,782 | 553,544.38 | 354,398,818 |


|  | Acres | \% of Acres* | Value | \% of Value* | Average Assessed Value* |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Irrigated | 196,204.77 | 35.45\% | 245,919,534 | 69.39\% | 1,253.38 |
| Dry Land | 107,424.31 | 19.41\% | 42,374,306 | 11.96\% | 394.46 |
| Grass | 248,468.93 | 44.89\% | 66,083,277 | 18.65\% | 265.96 |
| Waste | 1,030.07 | 0.19\% | 15,455 | 0.00\% | 15.00 |
| Other | 416.30 | 0.08\% | 6,246 | 0.00\% | 15.00 |
| Exempt | 0.00 | 0.00\% | 0 | 0.00\% | 0.00 |
| Total | 553,544.38 | 100.00\% | 354,398,818 | 100.00\% | 640.24 |

Exhibit 15 - Page 84

## 2009 County Abstract of Assessment for Real Property, Form 45 Compared with the 2008 Certificate of Taxes Levied (CTL)

| 15 Chase | E3 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & 2008 \text { CTL } \\ & \text { County Total } \end{aligned}$ | 2009 Form 45 County Total | Value Difference <br> (2009 form 45-2008 CTL) | Percent <br> Change | 2009 Growth <br> (New Construction Value) | Percent Change excl. Growth |
| 01. Residential | 87,441,275 | 90,139,473 | 2,698,198 | 3.09\% | 753,902 | 2.22\% |
| 02. Recreational | 654,387 | 658,696 | 4,309 | 0.66\% | 0 | 0.66\% |
| 03. Ag-Homesite Land, Ag-Res Dwelling | 20,624,208 | 21,167,598 | 543,390 | 2.63\% | 1,440,420 | -4.35\% |
| 04. Total Residential (sum lines 1-3) | 108,719,870 | 111,965,767 | 3,245,897 | 2.99\% | 2,194,322 | 0.97\% |
| 05. Commercial | 54,296,011 | 57,050,693 | 2,754,682 | 5.07\% | 57,325 | 4.97\% |
| 06. Industrial | 0 | 0 | 0 |  | 0 |  |
| 07. Ag-Farmsite Land, Outbuildings | 11,045,668 | 11,622,854 | 577,186 | 5.23\% | 0 | 5.23\% |
| 08. Minerals | 3,046,561 | 3,881,641 | 835,080 | 27.41 | 0 | 27.41 |
| 09. Total Commercial (sum lines 5-8) | 68,388,240 | 72,555,188 | 4,166,948 | 6.09\% | 57,325 | 6.01\% |
| 10. Total Non-Agland Real Property | 177,108,110 | 184,520,955 | 7,412,845 | 4.19\% | 2,251,647 | 2.91\% |
| 11. Irrigated | 225,046,016 | 245,919,534 | 20,873,518 | 9.28\% |  |  |
| 12. Dryland | 39,403,146 | 42,374,306 | 2,971,160 | 7.54\% |  |  |
| 13. Grassland | 55,777,822 | 66,083,277 | 10,305,455 | 18.48\% |  |  |
| 14. Wasteland | 16,326 | 15,455 | -871 | -5.34\% |  |  |
| 15. Other Agland | 2,746 | 6,246 | 3,500 | 127.46\% |  |  |
| 16. Total Agricultural Land | 320,246,056 | 354,398,818 | 34,152,762 | 10.66\% |  |  |
| 17. Total Value of all Real Property | 497,354,166 | 538,919,773 | 41,565,607 | 8.36\% | 2,251,647 | 7.90\% |
| (Locally Assessed) |  |  |  |  |  |  |

Exhibit 15 - Page 85

# CHASE COUNTY ASSESSOR 

921 BROADWAY P O BOX 1299
IMPERIAL, NE 69033
308-882-5207

Dorothy Bartels, Assessor

Terrie State, Deputy
JUNE 15, 2008

PLAN OF ASSESSMENT FOR CHASE COUNTY
ASSESSMENT YEARS 2009, 2010, AND 2011

## RE: CHASE COUNTY THREE-YEAR PLAN

## INTRODUCTION

PURSUANT TO NEB. LAWS 2005, LB 263, SECTION 9. The former provisions relating to the assessor's 5-year plan of assessment in Neb. Rev. Stat. 771311(8) were repealed and the new language of LB 263 Section 9 instituted a 3year plan of assessment. LB 263 passed with an emergency clause and was signed by the governor on March 9, 2005 and therefore, these changes are effective immediately.

The County Assessor shall prepare a plan of Assessment each year, shall describe the assessment actions planned for the next assessment year and two years thereafter. A copy of the plan will be submitted to the Department of Property Assessment and Taxation on or before October 31 each year. The plan shall be presented to the county board of equalization on or before July 31. If amendments are made to this plan they must be sent to the Department on or before October 31.

Chase County's office has the Assessor, a deputy assessor, and one full time clerk. Most all of the Appraisal work is done by this staff. Educational requirements set out in Regulation 71 require continuing education for certificate holders approved by the Property Tax Administrator for re-certification. Our budget has adequate funding for the certificate holders in our office to maintain these requirements and be certified.

## GENERAL DESCRIPTION OF REAL PROPERTY FOR CHASE COUNTY

Chase County for the year 2008 has 4796 Records, a Total Value of $\$ 495,378,602$, and Total growth of $\$ 2,489,018$, as of March 19, 2008

Parcels \% of total Parcels \% of Taxable Value Base

| Residential | 1692 | 35.28 | 17.64 |
| :--- | :---: | ---: | :---: |
| Commercial | 494 | 10.30 | 11.07 |
| Recreational | 29 | .60 | .13 |
| Agricultural | 2537 | 52.90 | 70.54 |
| Mineral | 44 | .92 | .62 |

Chase County for the year 2008 has a total of 553,783.10 Acres, with a total value of $\$ 317,940,634$.

|  | Acres | \% of total Ag Acres | \% of total Ag Value Base |
| :--- | ---: | :---: | :---: |
| Irrigation | $193,388.79$ | 34.92 | 69.72 |
| Dry | $109,739.59$ | 19.82 | 12.67 |
| Grassland | $249,340.52$ | 45.02 | 17.61 |
| Waste | $1,149.47$ | .21 | .0001 |
| Other | 164.73 | .03 |  |

Exempt Records for 2008 is 321.
Personal Property Schedules filed for Commercial is 243 and for Ag is 397 for a total of 640 schedules for 2008.

Homestead Exemptions for the year 2007 totaled 169 parcels.

## PROCEDURES MANUAL

Chase County has updated the Office Procedure Manual. This manual outlines Office and Assessment procedures such as: Mail, Appraisal Cards, Soil Codes, and Values per Acre, Minerals, Photo copies, Faxes, Searching Fees, and Misc. issues in our office. Assessment procedures will include but not limited too:

Assessment of Real Property and Personal Property Jan.1, 12:01 am to list and value. 77-1301 \& 77-1201
Permissive Exemption Recommendations. 77-202.01
Assessor notifies Gov't subdivisions of intent to Tax property not used for public purpose \& not paying an In Lieu of Tax. 77-202.12
Inspect and review a portion of the real property parcels in the county such that all real property parcels in the county are inspected and reviewed no less than every 6 years. 77-1311.03
Mail Homestead Exemption on or before February 1st with all the statutory requirements 77-3513, 77-3514
Assessor completes assessment of real property 77-1301

Abstract of Real Property to PA\&T. 77-1514
Certify Completion of Real Property Roll and Publish in Newspaper. 77-1315
Send Notice of Valuation Change to Taxpayers. 77-1315
Recertifies Abstract to PA\&T from TERC action. 77-5029
Assessor mails assessment /sales ratio statistics (as determined by TERC) to media and posts in assessor's office 77-1315
Personal Property Abstract filed with PA\&T. 77-1514
Prepare Plan of Assessment for Next 3 assessment years, files with Board of equalization by July 31 and sent to Dept. of Rev. with all amendments by Oct.31. 77-1311.02
Accept Application \& Waiver for late permissive exemptions 77-202.01
County Board of Equalization \& Protest Hearings. 77-1502
CBE equalizes overvalued, undervalued, and omitted real property 77-1504
Assessor approves or denies Special Value Application and notifies applicant On or before July 22. 77-1345.01
Homestead Applications to TC. 77-3517
Send Homestead Exemption rejection letters 77-3516
Apply Penalty's applicable to Personal Property Schedules not filed or filed Late -77-1233.04
Reject Homestead exemption claimants based on Owner/Occupancy through August 15. 77-3502
Make a review of the ownership and use of all cemetery real property and reports such to the County Board. 77-202.10
Certifies School District Taxable Report to PTA. 79-1016
Certifies Taxable Valuations to Political subdivisions \& all school district valuations to Dept. of Education. 13-509 \& 13-518
Present annual inventory list to County Board. 23-347
Average Residential value for Homestead Exemptions \& Send to Department of Revenue. 77-3506.02
Certify Trusts owning Agland to Secretary of State. 76-1517
Tax List to Treasurer for Real and Personal Property. 77-1616
Certificate of Taxes Levied Report to the Property Tax Commissioner. 77-1613.01
Certified Homestead Tax Loss to Tax Commissioner. 77-3523
Qualifications and duties of the Chase County Assessor
Job Descriptions and qualifications of Office Staff
521 Procedures and Sales verifications
Valuations and Definitions
Accelerations
Soil Conversion Table
Greenbelt 77-1345
CBE procedures for hearings 77-1502
Mineral Interests
County Policies to follow City Ordinances
"Steps in a Revaluation" found in the text, Mass Appraisal of Real Property This office will value property using Appraisal Techniques according to Nebraska Statues 77-112, 77-1301.01, and all other rules and regulations set forth from Property Assessment and Taxation. Marshall and Swift programs and manuals are used in our office. The Standards on Ratio Studies approved July 1999 by IAAO is also used for appraisal purposes. All the Reports are generated on the administrative software.

Homestead Exemptions: Chase County accepts form 458 for filing between the dates set forth by the Nebraska Department of Revenue. 77-3510 through 77-3528

Personal Property: Chase County accepts filings from January I to on or before May I of each year. Penalties are applied if applicable. The Assessor files abstract timely. (77-1514)

## REAL PROPERTY

Property review by Classification in Chase County is done by the assessor's office.

RESIDENTIAL: Chase County has completed all subdivisions urban, suburban, and rural residential properties to reflect Marshall \& Swift cost tables for June 2005 for the Abstract in 2008. All data has been updated, complete with sketches and photo's attached to the Property Record Card. The reappraisal on all Residential Properties, Urban, Suburban, and Rural will begin in 2009 using Marshall \& Swift cost tables for June 2008. New cost will begin for the 2009 Abstract. As the residential properties are inspected, measured, and reviewed in each location, value will be implemented as of January 1, of the following year. New depreciation factor will be applied per study from the market in each location. The list of 'Steps in a Revaluation' drawn from the textbook, "Mass Appraisal of Real Property", by International Association of Assessing Officers, 1999, Chapter 2, in particular, will be utilized whether this project is completed by the Assessor's Office or a contracted Appraisal Company. All Residential Properties will be completed by the Abstract for 2011. New construction and additions will be picked up annually and added to the valuation for the following assessment year. We will maintain and study the market and Statistical Measures each year to stay in compliance. As part of the Equalization process, Property Tax Administrator has filed a Statistical \& Narrative Report to The Tax Equalization \& Review Commission. The Commission, after reviewing the report, certifies the level and quality of assessment for each class of property to each County. The "findings of fact", for Chase County Residential Class by the Tax Equalization and

Review Commission for 2008 is as follows: Median indicated level of value is $98.00 \%$ of actual or fair market value. Coefficient of Dispersion (COD) is 10.19, and Price Related Differential is 101.77. Chase County Residential Property based upon the accomplishments of the county assessor and the Median measure of Central tendency, the statistics indicate that the median is a reliable measure of the level of value for 2008 in Chase County. Both qualitative measures are well within the prescribed parameters for the 2008 assessment year and reflect the good assessment practices used by the Chase County Assessor and staff to equalize the residential properties within the county. With 128 sales used which is over $72 \%$ of the total sales, shows the county has not trimmed the sample and has used a very adequate portion of the sales.

COMMERCIAL: All Commercial properties were reappraised for 2008 Abstract. Marshall and Swift cost table June 2007 were implemented. All the data information, photos, sketches, and valuation is completed on the electronic Record Card. We will maintain and study the market and Statistical Measures each year to stay in compliance. We will plan another Reappraisal to begin in 2011. All New Construction and additions are picked-up annually, valued, and added to the tax roll the following year. As part of the Equalization process, Property Tax Administrator has filed a Statistical \& Narrative Report to The Tax Equalization and Review Commission. The Commission, after reviewing the report, certifies the level and quality of assessment for Chase County Commercial class of property. The "findings of fact", for Chase County Commercial Class for 2008 is as follows: Median indicated level of value is $97.00 \%$ of actual or fair market value. Coefficient of Dispersion (COD) is $8.41 \%$, and Price Related Differential is $98.37 \%$. The statistical studies of the level of value and the quality of assessments are reliable and representative of the level of value and the quality of assessments for the commercial class of real property. The qualitative measures are within the acceptable ranges and supports that the county has uniform and proportionate assessment practices for equalization within the County. With 22 sales qualified for commercial sales, this indicates a decline in arms length sales used, due to substantially changed properties since the date of sale. If the 13 eliminated sales that had substantially changed could have been used the percent would be approximately $61 \%$. A thorough review to verify each sale is used in Chase County.

UNIMPROVED AGLAND: The Assessor's Staff has kept all Agland maps current with changes and surveys. We use many resources available to keep the land use current. We physically inspect periodically for sales inspections, pivots, and other concerns in the office. Our Soil survey is dated 1980 and the County uses the 1995 conversion. Soil types and

LVG's are captured in the TerraScan Computer System. Electronic Land sheets are placed in each parcel and updated each year. Agland subclasses of Irrigation, Dry, and Grass are studied for level of value and quality of assessment each year. The unimproved Agland Sales qualified by PA\&T are monitored for Statistical Information to set Agricultural Land Values. We currently keep our daily records updated on our Cadasteral Maps. GIS Workshop has downloaded our Record Cards from Terra Scan on the Website in October 2007. We have completed the process of applying our parcel ID numbers, surveys, land use layer, registered well, and the soil layer on our GIS System. We will have the new Soil Survey from the State implemented on our Terra Scan System by March 2009. Chase County has been in the process of updating land use acres in conjunction with the certified allocation Natural Resource District Acres. Our GIS has been an extreme asset in this process. We have experienced several agricultural market stimulators in the past year due to the Republican River issues. We will continue to monitor very closely this water issue. As a part of the Equalization Process, Property Tax Administrator has filed a Statistical and Narrative Report to The Tax Equalization and Review Commission. The Commission, after reviewing the report, certifies the level and quality of assessment for each class of property to each County. The "findings of fact", for Chase County Agland Class by The Tax Equalization and Review Commission for 2008 is as follows: Median indicated level of value is $72.00 \%$ of actual or fair market value. The coefficient of Dispersion (COD) is $15.01 \%$. Price Related Differential (PRD) is 101.95 . Based on the accomplishment of the county and the known assessment practices of the county assessor, it is believed the county has attained the level of value and proportionate assessment practices. Chase County has 91 unimproved qualified sales. The number of sales and qualified sales has increased proportionately over the past five years. This indicates that the measurements of the class were done as fairly as possible and the county has not excessively trimmed the sample. We conduct a review process to ensure each sale is an arm's length transaction.

IMPROVEMENTS: The rural area improvements reappraisal will be completed in 2009. Inspection, measurement, sketches, and photos will be completed. New Electronic Property Record Cards will be in our TerraScan Administrative Cama System. We will then review all the data for accuracy, study and complete a new depreciation study from the market. Updated costing table from Marshall \& Swift to June 2005 will be implemented. New values will be implemented for the Abstract for 2009. A strong effort will be made to do Statistical Measurements on Agricultural Homes, and Outbuildings, to assure the assessment of $100 \%$ and not $80 \%$ as allowed for unimproved Land. Ail new construction such as
machine sheds, bins, etc. are picked-up annually and valued each year for the next assessment year.

Legislative changes effecting classification of Real Property is implemented and the assessment of Real Property is completed by March 19, (77-1301) each year. Real Property Abstract is filed with Property Assessment and Taxation in a timely manner. (77-1514)

## RESPONSIBILITIES OF ASSESSMENT

## Record Maintenance

Chase County Record Cards are kept in plastic file folders and contain information as set forth in Regulation 10-004.01 including legal description, current owner and address, previous owner, situs address, sketch, photo, book and page of last deed of record, sale date, property type, geo code, map reference data, parcel ID, property classification code, ( $10-004.02$ ) taxing district, land value and size, building characteristics and annual value postings. New Electronic Record Cards are being used now from our Administrative System. The Assessor's Staff keeps the Record Cards current.

Mapping
Chase County Cadastral Maps are dated 1966 and are kept current by the assessor's staff. The Geographic Information Systems has the capability to create maps and updating is immediate when the 521 transfer is processed. The Assessor's office staff maintains, updates, and continues to keep very current and accurate Records.

## Software

On August 22, 2001, Chase County converted to TerraScan Administrative System. The Marshall and Swift cost tables for Residential and Outbuildings is June 2005. Residential cost tables will change in June 2008 as we begin our new cycle of reappraisal. Commercial is June 2007. The cost table will be updated prior to a complete reappraisal for the Commercial Property to be completed by January 2013. Chase County will continue over the next three years to stay current with the Cost Tables.

Computerized
Chase County has all the equipment to use our TerraScan System. Our PCs are less than four years old. We have four laser printers, four brothers, and one Hewlett Packard. We also have a Fax Machine for our office. Our digital camera is a Sony. We take all of our photos for our record cards. Our budget allows us to update our equipment as needed to keep our records current and up-to-date.

Depreciation
Our Sales Analysis is done in the subdivisions in Residential, Commercial, and Agland to determine the depreciation. Our vacant land in each subdivision is analyzed by the sales in Residential, Commercial, and Agland to determine lot or land values.

Pick-up
Defined in Reg 50-001.06
The Assessor does Chase County pick-up work. Residential, Commercial, and Ag Outbuilding improvements are reported by Rural Zoning administrator, City building inspectors, personal knowledge, and third party or self reporting. In our local newspapers we publish, 77-1318.01. Our pick-up work is completed by December 31 each year.

## Sales Review

Timely filing of the 521's-Reg. 12-003
The Assessor and Staff verify Chase County sales. Verification forms from the Assessor's Office are sent to the buyer of each sale. If no information is returned, or the information is questionable, the Assessor contacts personally or via telephone, the seller, buyer, broker, or any other party knowledgeable of the sale. The use of this information is to confirm an "arms length transaction", and qualification or non-qualification of the Sale. Other resources used for verification are personal knowledge of sale property and publicized information from broker. The Assessor makes physical inspection after the sale to confirm the data information. Corrections to the sale property data, if necessary, are made at the proper time.

Staff
Chase County has an Assessor, Deputy Assessor, and one Clerk. Responsibilities are shared to achieve our work satisfactorily for all deadlines and reports. The Assessor and the Deputy Assessor attend IAAO classes, workshops, and mandatory educational classes to keep their Certifications current and up-todate. The Clerk attends educational classes to assist her in her office duties. Assessor and Staff prepare and file all reports required by law/regulation, in a timely manner.

Conclusion
Chase County will continue in the next three years to implement the latest technology, maintain assessment records, and follow Assessment procedures as set forth by The Department of Revenue, Property Assessment and Taxation Division, and the Tax Equalization and Review Commission. The Commissioners, the Board of Equalization, for Chase County continues to support the Assessor's

Office to maintain the resources needed for the future achievement of the assessment actions planned. The Assessor's budget has \$10,000 adopted for outside appraisal work and consulting.

Respectfully submitted,

Dorothy Bartels<br>Chase County Assessor

## 2009 Assessment Survey for Chase County

## I. General Information

## A. Staffing and Funding Information

| 1. | Deputy(ies) on staff |
| :--- | :--- |
| 2. | 1 |
| 3. | Appraiser(s) on staff |
|  | Other full-time employees |
| 4. | Other part-time employees |
|  | 0 |
| 5. | Number of shared employees |
|  | 0 |
| 6. | Assessor's requested budget for current fiscal year |
| 7. | P134,130 |
| 8. | Part of the budget that is dedicated to the computer system |
|  | Adopted budget, or granted budget if different from above |
| 9. | Amount of the total budget set aside for appraisal work |
| 10. | 0 |
|  | Amount of the total budget set aside for education/workshops |
| 11. | Ap,500 |
|  | N/A |
| 12. | Other miscellaneous funds |
|  | 0 |
| 13. | Total budget |
|  | $\$ 124,130 ;$ The Chase County Board cut the requested amount by $\$ 10,000$ |
| a. | Was any of last year's budget not used: |
|  | Yes, a minimum amount which is allocated back into the GIS budget within the <br> General Fund. |
|  |  |

## B. Computer, Automation Information and GIS

| 1. | Administrative software |
| :--- | :--- |
| 2. | TerraScan |


|  | TerraScan |
| :--- | :--- |
| 3. | Cadastral maps: Are they currently being used? |
| 4. | Yes |
|  | Who maintains the Cadastral Maps? |
| 5. | Assessor's Staff |
|  | Does the county have GIS software? |
| 6. | Yes |
| 7. | Staff maintains the GIS software and maps? |
| 7. | Personal Property software: |
|  | TerraScan |

## C. Zoning Information

| 1. | Does the county have zoning? |
| :--- | :--- |
| 2. | Yes |
|  | If so, is the zoning countywide? |
| 3. | Yes |
|  | What municipalities in the county are zoned? <br> Countywide zoning. |
| 4. | When was zoning implemented? |
|  | 2000 |

## D. Contracted Services

| 1. | Appraisal Services |
| :--- | :--- |
| Stanard Appraisal Service and Pritchard and Abbott for producing mineral <br> properties. |  |
| 2. | Other services |
|  | TerraScan and GIS are contracted services for Chase County. |

## Certification

This is to certify that the 2009 Reports and Opinions of the Property Tax Administrator have been sent to the following:

Four copies to the Tax Equalization and Review Commission, by hand delivery.
One copy to the Chase County Assessor, by hand delivery.

Dated this 7th day of April, 2009.



Ruth A. Sorensen
Property Tax Administrator

