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# **2008 Property Values and Assessment Practices Report**

**(Assessment Year 2007)**

A report submitted to the Minnesota State Legislature  
pursuant to  
Laws 2001, First Special Session, Chapter 5, Article 3, Section 92

Property Tax Division  
Minnesota Department of Revenue  
March 1, 2007

Per Minnesota Statute 3.197, any report to the legislature must contain at the beginning of the report the cost of preparing the report, including any costs incurred by another agency or another level of government.

The estimated cost to prepare this report was \$2,500.

# MINNESOTA • REVENUE

March 5, 2008

**To the members of the Legislature of the State of Minnesota:**

I am pleased to present to you the fourth annual Property Values and Assessment Practices Report undertaken by the Department of Revenue in response to Minnesota Laws 2001, First Special Session, Chapter 5, Article 3, Section 92.

This report provides a summary of assessed property values and assessment practices within the state of Minnesota. This year's report does not include summaries of market value trends by county. However, this information is available on request to the Property Tax Division.

Sincerely,



Ward L. Einess  
Commissioner

This is a preliminary version of the fifth annual Property Values and Assessment Practices Report undertaken by the Department of Revenue in response to Minnesota Laws 2001, First Special Session, Chapter 5, Article 3, Section 92. A final version of this report will be presented to the legislature by March 1, 2008.

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## Executive Summary

This report analyzes 6 types of property Residential/Seasonal, Apartments, Commercial-Industrial, Resorts, Farms, and Timber. Assessment quality remained relatively consistent between the 2006 and 2007 assessments. This is reflected in both of the primary measures of assessment quality, the *sales ratio* and the *coefficient of dispersion*.

A sales ratio measures how close assessor's values are to the ultimate sales price of property. The statewide *median sales ratios* were closer to 100% in 2007 than in 2006 for four of the six property classes. For residential/seasonal and apartment properties, the median in 2007 was slightly further from 100% than in 2006. The statewide median sales ratios for all classes of were within the 90% to 105% acceptable range.

The *coefficient of dispersion* measures the uniformity of assessments. The statewide coefficient of dispersion improved for all classes except residential/seasonal and apartment where they increased slightly. The coefficients were within the International Association of Assessing Officers' acceptable ranges in counties that had an adequate sample of sales.

As a general rule, both sales ratios and coefficients of dispersion are better in classes with more sales activity.

The number of sales declined in 2007 for all property classes except commercial/industrial. These trends have continued beyond the reporting period in 2006 and 2007. Assessors must adjust to this slowing market to keep estimated market values from exceeding sales prices.

# **2008 PROPERTY VALUES AND ASSESSMENT PRACTICES REPORT (ASSESSMENT YEAR 2007)**

## **INTRODUCTION**

During the 2001 special legislative session, the state legislature mandated an annual report from the Department of Revenue on property tax values and assessment practices within the state of Minnesota. This year, 2007, is the fifth annual report on such data and practices to the legislature.

As outlined in Laws 2001, First Special Session, Chapter 5, Article 3, Section 92, the report contains information by major types of property on a statewide basis at various jurisdictional levels.

In accordance with that law, this report consists of:

- recent market value trends, including projections;
- trend analysis of excluded market value;
- shift in share analysis of market value trends among major classes of property;
- assessment quality indicators, including sales ratios and coefficients of dispersion for counties;
- a summary of state board orders.

The purpose of the report is to provide to the legislature an accurate snapshot of the current state of property tax assessment as well as an overview of the Department of Revenue's responsibility to oversee the state's property tax assessment process and quality. This report shall provide a vehicle for an ongoing, systematic collection of property value data for the purpose of monitoring and analyzing underlying value trends and assessment quality indicators. This information and analysis will be used to enhance the Department's responsibility to inform and educate government officials and the public about the valuation side of the property tax system.

This report provides legislators with the information to measure the progress of local government's compliance with property tax assessment laws as well as the Property Tax Division's mission to provide oversight of the administration of such laws.

## **Overview of Revenue Department's Role**

As the property tax is a very important source of revenue for all local units of government in the state – cities, townships, school districts, special taxing districts, and counties – the responsibility that it be administered fairly and uniformly is a paramount responsibility of the Department of Revenue. That responsibility is reflected in the objectives of the Property Tax Division of which the primary objective is to ensure the proper administration of and compliance with the property tax laws.

The division measures compliance with property tax laws through:

1. The State Board of Equalization, which ensures that property taxpayers pay only their fair share – no more and no less. The Commissioner of Revenue, acting as the State Board of Equalization, has the authority to issue orders increasing or decreasing market values in order to bring about equalization.
2. Promoting the uniformity of administration among the counties, thereby ensuring that each taxpayer will be treated in the same manner regardless of where the taxpayer lives.

3. Accurate and timely aid calculations, certifications, and actual aid payments.
4. The education and information that is supplied to county officials, including the technical manuals and bulletins, answers to specific questions, and courses that are taught by division personnel. These offerings provide county officials the support and training necessary to administer the property tax laws equitably and uniformly. In addition, education and information that is provided to taxpayers will aid in ensuring that they pay no more and no less than they are required to under the law.

### **System Basics**

In Minnesota, the property tax is an ad valorem tax (a tax in proportion to value). For most property, it is levied in one year –based on the property assessment as of January 2 – and becomes payable in the following calendar year. (For manufactured homes classed as personal property, the tax is levied and payable in the same year.) The property tax on a particular parcel of property is primarily based on its market value, property class, the total value of all property within the taxing areas, and the budgets of all local governmental units located within the taxing area.

Assessors determine the estimated market value of all taxable property within their jurisdiction as of January 2 of each year, except properties such as public utilities, railroads, air-flight property and minerals, which are assessed by Property Tax Division personnel. The estimated market value is what the assessor believes the property would most likely sell for on an open market in a normal “arms length transaction.” That means the selling price in an environment in which the buyer and seller are typically motivated and without influence from special financing considerations or the like.

However, the estimated market value may not be the actual value that the property is taxed on. The legislature has provided various programs that may reduce the market value for certain types of property for purposes of taxation. These reductions are made by deferment, limitation or exclusion, such as the limited market value, green acres or this old house programs. The market value after these reductions is referred to as the *taxable* market value. The example on page 3 shows a possible transition from estimated market value to taxable market value.

The limited market value law limits how much in value certain property may increase from year to year. The limited market value law does not apply to increases in value due to improvements and is scheduled to phase out by assessment year 2009. A more comprehensive picture and analysis of limited market value may be found in the Department of Revenue’s annual report on limited market value due each March 1 to the legislature.

### **Sales Ratio Studies**

There are 87 counties, 854 cities and 1,807 townships in the state, which encompass 2,662,088 taxable real property parcels. Minnesota Statutes require all property to be assessed at fair market value annually. Efforts to comply by the individual taxing jurisdictions results in a combined total of nearly 90 percent of those taxable parcels having changed in value for this last taxable year.

In order to evaluate the accuracy and uniformity of assessments within the state (and thus to ensure compliance with property tax laws), the Property Tax Division conducts annual sales ratio studies. There were approximately 160,000 certificates of real estate value received in 2006 of which 78,000 were considered good current year open market sales. These 78,000 sales provide the basis for the sales ratio studies.



## HIERARCHY OF MARKET VALUE COMPONENTS EXAMPLE

		(a) Prior Year	(b) Current Year
1.	Market Value Irrespective of Contaminants	\$400,000	\$450,000
2.	Contamination Value	120,000	120,000
3.	<b>Estimated Market Value (EMV)</b>	280,000 <b>(1a-2a)</b>	330,000 <b>(1b-2b)</b>
4.	Green Acres Deferment	50,000	50,000
5.	Open Space Deferment	NA	NA
6.	Market Value Subject To Limitation	228,000 <b>(3a-4a-5a-8a)</b>	270,000 <b>(3b-4b-5b-8b)</b>
7.	Limited Market Value Reduction (Formula shown is for assessment year 2005.)	4,000 <b>(calculated in prior year)</b>	10,100 <b>(6b minus the greater of: 9a x 115% or (6b-9a) x 25% + 9a)</b>
8.	Additional Value: (New construction, 1st year increase due to platting, increases when ceasing to qualify for Green Acres or Open Space)	2,000	10,000
9.	<b>Limited Market Value (LMV)</b>	226,000 <b>(6a-7a+8a)</b>	269,900 <b>(6b-7b+8b)</b>
10.	Platted Vacant Land Exclusion	NA	NA
11.	"This Old House" Exclusion	15,000	12,000
12.	"This Old Business" Exclusion	15,000	15,000
13.	<b>Taxable Market Value (TMV)</b>	196,000 <b>(9a-10a-11a-12a)</b>	242,900 <b>(9b-10b-11b-12b)</b>

Note: While this example may be improbable, it assumes a split class homestead/commercial parcel qualifying for Green Acres deferment and limited market value reduction, with qualifying improvements for both "This Old House" and "This Old Business" exclusion, and some additional new construction value in each year. The parcel in this example does not qualify for Open Space deferment or have any platted vacant land exclusion. Their place in the hierarchy and the formula for each is shown in the table to illustrate the possible factors involved in moving from estimated market value to taxable market value.

These ratio studies measure the relationship between appraised values and market values or the actual sales price. As a mathematical expression, a sales ratio is the assessor's estimated market value of a property divided by its actual sales price.

$$\text{SALES RATIO} = \frac{\text{Assessor's Estimated Market Value}}{\text{Sales Price}}$$

The sales ratio study provides an indication of the level of assessment (how close appraisals are to market value on an overall basis) as well as the uniformity of assessment (how close individual appraisals are to the median ratio or to each other).

The results from the studies are then used to assist the equalizing of values within the state. The State Board of Equalization directly equalizes property by ordering jurisdictions to raise or lower values by a certain percentage for a given property type. This is known as a state board order.

The ratios are also used to in calculating state aids and levies to achieve fair distributions to schools and local governments. The ratio studies may also be used in Tax Court proceedings to bolster a claim that property is either fairly or unfairly assessed in a certain region.

In addition, county and city assessors are able to use the results from the division's annual studies to monitor their own jurisdiction's appraisal performance, to establish reappraisal priorities, identify any appraisal procedure problems, and/or to adjust values between reappraisals.

What is involved in a sales ratio study? The basic steps are as follows:

- Define the purpose and scope of the study
- Collect and prepare appraisal and sales data
- Match appraisal and sales data
- Group the data by property types and geographic areas
- Perform statistical analysis
- Evaluate and apply results

In order for the study to be accurate, there are certain considerations that must be addressed. For instance, to ensure that the study is statistically precise, the sample should be of sufficient size and representative of the population. The market data (or actual sales) must be verified and screened. Sale prices may need to be adjusted for such conditions as seller provided financing, inflation or deflation.

The Department of Revenue annually conducts three sales ratio studies. A 12-month study and 9-month study are used to ensure the quality of assessment practices. The Department also conducts a 21-month study for levy and aid purposes which is discussed in Appendix 3.

#### TWELVE-MONTH STUDY

The 12-month study is used mainly to determine State Board of Equalization orders. The 12 months encompass the period from October 1 of one year through September 30 of the next year. The dates are based on the dates of sale as indicated on the Certificate of Real Estate Value (CRV). These certificates are filled out by the buyer or seller whenever property is sold or conveyed and filed with the county. The certificates include the sales price of the property as well as disclosure of any special

financial terms associated with the sale and whether the sale includes personal property. The actual sales price from the CRV is then compared to what the county has reported as the market value.

The data contained in the report is based upon the 12-month study using sales from October 1, 2005, through September 30, 2006. These sales are compared with values from assessment year 2006, taxes payable 2007. The sale prices are adjusted for time and financial terms back to the date of the assessment, which is January 2 of each year. So for the latest study, the sales are adjusted to January 2, 2006. In areas with few sales, it is very difficult to adjust for inflation or deflation because we use the sales sample to develop time trends. For example, based on an annual inflation rate of 6 percent (.5 percent monthly), if a house were purchased in August 2006 for \$200,000, it would be adjusted back to a January 2006 value of \$193,000, or the sales price would be adjusted downward by 3.5 percent for the seven-month timeframe back to January.

The State Board of Equalization orders changes in assessment when the level of assessment, as measured by the median sales ratio, falls below 90 percent or above 105 percent. The orders are usually on a county-, city-, or township-wide basis for a particular classification of property. All state board orders must be implemented by the county. The changes will be made to the current assessment under consideration, for taxes payable the following year.

The equalization process, including issuing state board orders, is designed not only to equalize values on a county-, town- or city-wide basis but also to equalize values across county lines to ensure a fair valuation process across taxing districts, county lines, and by property type. State board orders are implemented only after a review of values and sales ratios, discussions with the county assessors in the county affected by the state board orders, county assessors in adjacent counties, and the commissioner.

#### 2006 and 2007 assessment year results

PROPERTY TYPE	FINAL ADJUSTED MEDIAN RATIO		COEFFICIENT OF DISPERSION		SAMPLE SIZE	
	2006	2007	2006	2007	2006	2007
State Board Year	2006	2007	2006	2007	2006	2007
Residential/Seasonal	104.1	104.7	9.8	9.9	84,136	71,973
Apartment	97.9	95.6	13.6	14.5	674	555
Commercial/Industrial	97.5	100.9	30.5	19.6	1,599	1,710
Resorts	91.6	93.5	29.2	28.5	40	24
Farm	91.6	99.1	20.7	19.1	2,540	2,439
Timber	88.6	95.3	42.9	31.1	318	256

The table shows median sales ratios and coefficients of dispersion (COD) by property type for 2006 and 2007. The lower the COD, the more uniform are the assessments. A high coefficient suggests a lack of equality among individual assessments, with some parcels being assessed at a considerably higher ratio than others. Note that property types with smaller sample sizes tend to have lower sales ratios and higher CODs.

The International Association of Assessing Officers recommends trimming the most extreme outliers from the sample before calculating the COD. The trimming method is to exclude sales that are outside 1.5 times the interquartile range. This eliminates a few extreme sales that would distort the COD. Per the International Association of Assessing Officers, the acceptable ranges for the COD are as follows:

Newer, homogenous residential properties	10.0 or less
Older residential areas	15.0 or less
Rural residential and seasonal properties	20.0 or less
Income producing: larger, urban area	15.0 or less
smaller, rural area	20.0 or less
Vacant land	20.0 or less

The Property Tax Division is working collaboratively with the local assessment community to explore alternatives in aligning the actual COD to within the acceptable ranges displayed above.

## NINE-MONTH STUDY

The nine-month study is a subset of the 12-month study and is used primarily by the Minnesota Tax Court. It is exactly the same as the 12-month study except for the sales during the fall months (October, November and December) are excluded from the study. Therefore, the latest nine-month study examines sales from January 1, 2006, through September 30, 2006. The Tax Court uses the sales ratio from the nine-month study when determining disputed market values.

## STATEWIDE VALUES AND ASSESSMENT PRACTICES INDICATORS

The following pages contain statewide charts and maps showing information regarding property values sales ratio measures in Minnesota.

Chart 1 shows the statewide growth in estimated market and property value exclusions from 1994 through 2006.

Charts 2 through 6 show the statewide growth in estimated market value by major property types from 2003 through 2007.

Map 1, "Growth in Estimated Market Value," displays the percent change from assessment years 2006 to 2007 in estimated market value for each county.

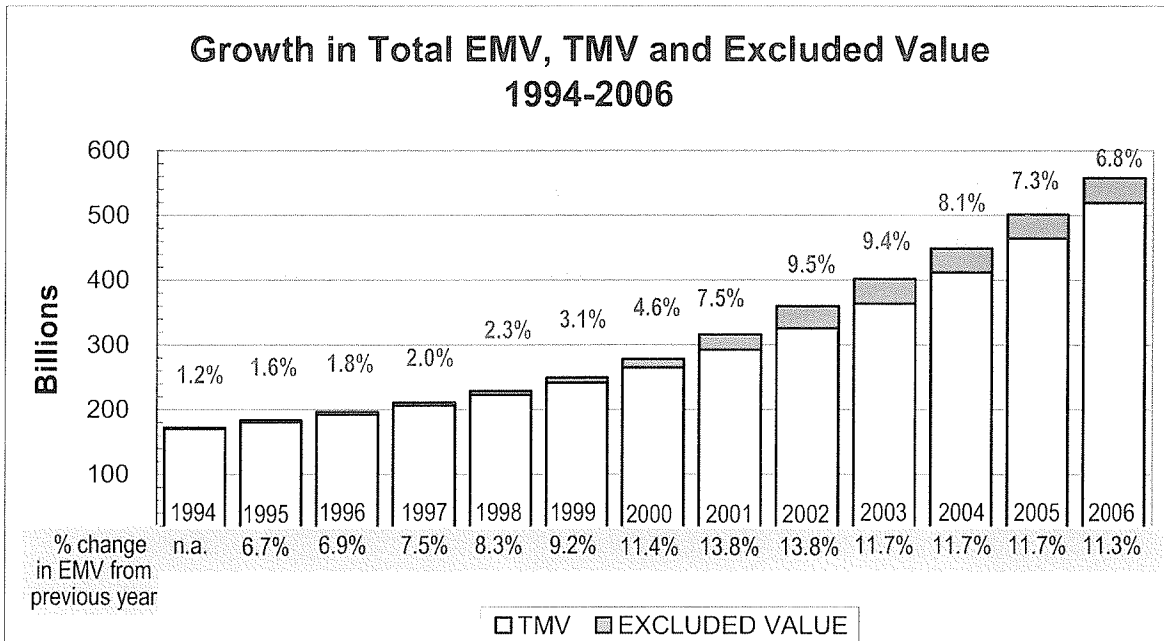
Map 2, "New Construction Percentage of Total Estimated Market Value," displays the average percentage that new construction composes of estimated market value for each county from assessment years 2006 to 2007.

Maps 3 to 6 show the 2007 State Board sales ratios and coefficients of dispersion (COD) for residential, apartment, farm, and commercial industrial property. The maps show the number of sales for the county and the shading indicates whether the median countywide sales ratio and COD were within the standard ranges. The median sales ratio should be within the 90 percent to 105 percent range. The COD is smaller when there are more sales in a property type or when the properties are more similar. Residential CODs are within the standard range when they are between 0 percent and 15 percent. Other property types are within the standard range when they have CODs between 0 percent and 20 percent. It is important to remember that countywide ratios and CODs are more stable within areas that have larger samples and similar real estate markets. In counties with fewer sales spread out over large areas, different market forces may be moving sales prices in opposite directions so that it is harder to uniformly value property. The COD is the average difference of individual sales ratios from the median ratio. In areas with small sales samples or lower priced properties the COD may be large due to a few outlier sales. For example, if an assessor is off by \$5,000 on a property, the error would be 2 percent on a \$250,000 sale, but 20 percent on a \$25,000 sale. If most of the properties in the sales sample were higher priced properties, the average difference would be small and the COD would be within the standard range. If most of the properties were lower priced it becomes more likely that the COD would be outside the standard range.

Map 7 shows the residential outlier index or percent of residential or seasonal sales that are considered outliers. Outliers are defined as sales that have ratios less than 65% or greater than 135%. The counties with darker shading have a higher percent of outliers. Counties with few sales or with sales in areas with very different markets tend to have a higher percentage of outliers than counties with large sales samples.

Map 8 shows the distributions of 2007 state board orders by county. Map 9 shows the percent of cities or townships within a county that received a state board order. State board orders are blanket adjustments to values in a property type to get the level of assessment within the 90% to 105% acceptable range.

# Chart 1



Note: Most of the excluded value is Limited Market Value (LMV). In 2006, for example, LMV accounted for approximately 75% of the total excluded value.

# Chart 2

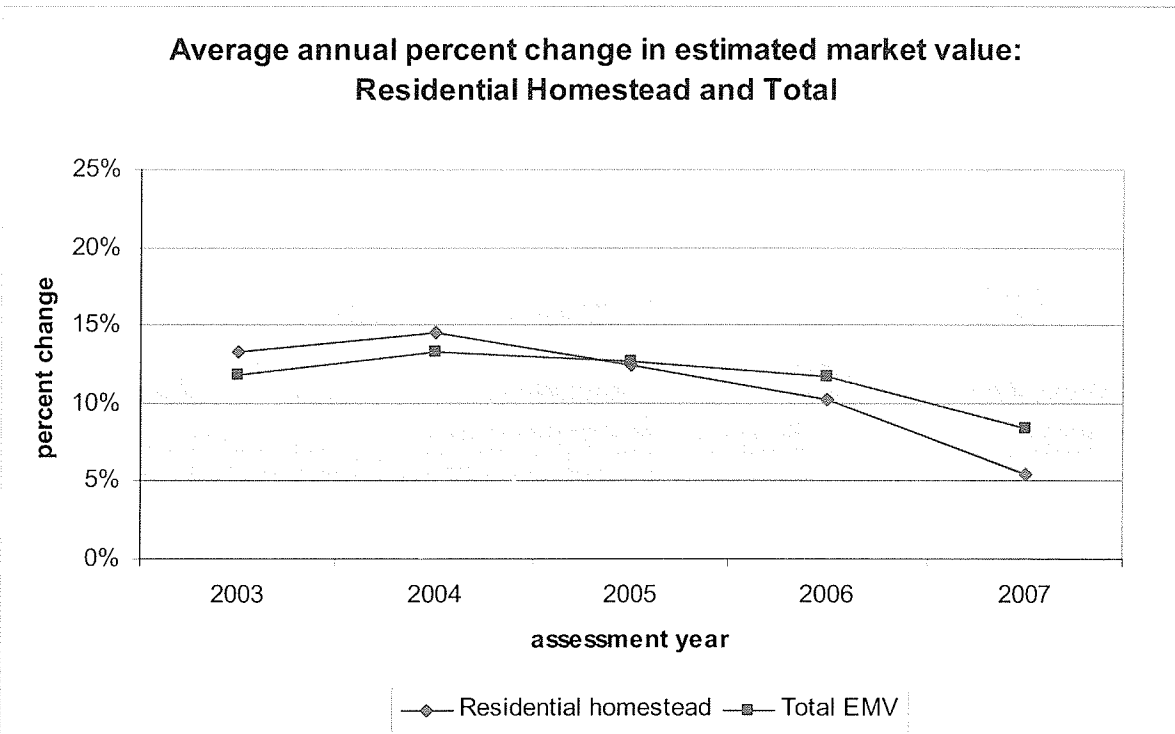


Chart 3

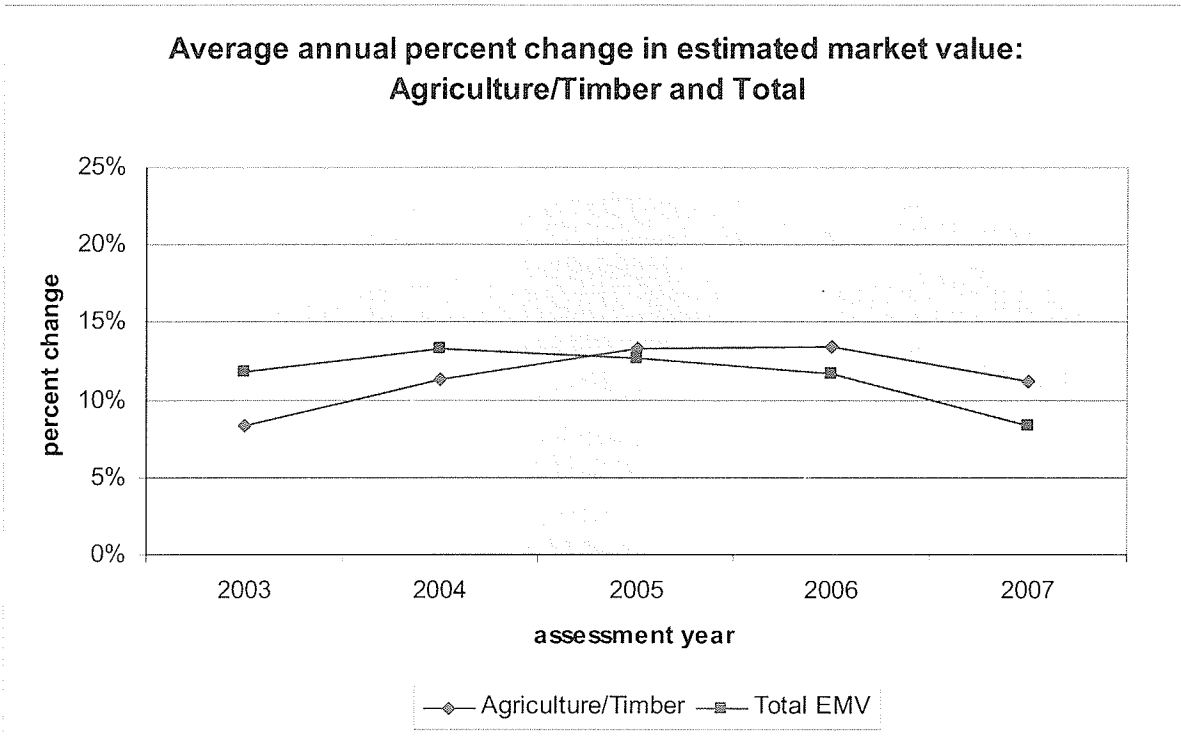


Chart 4

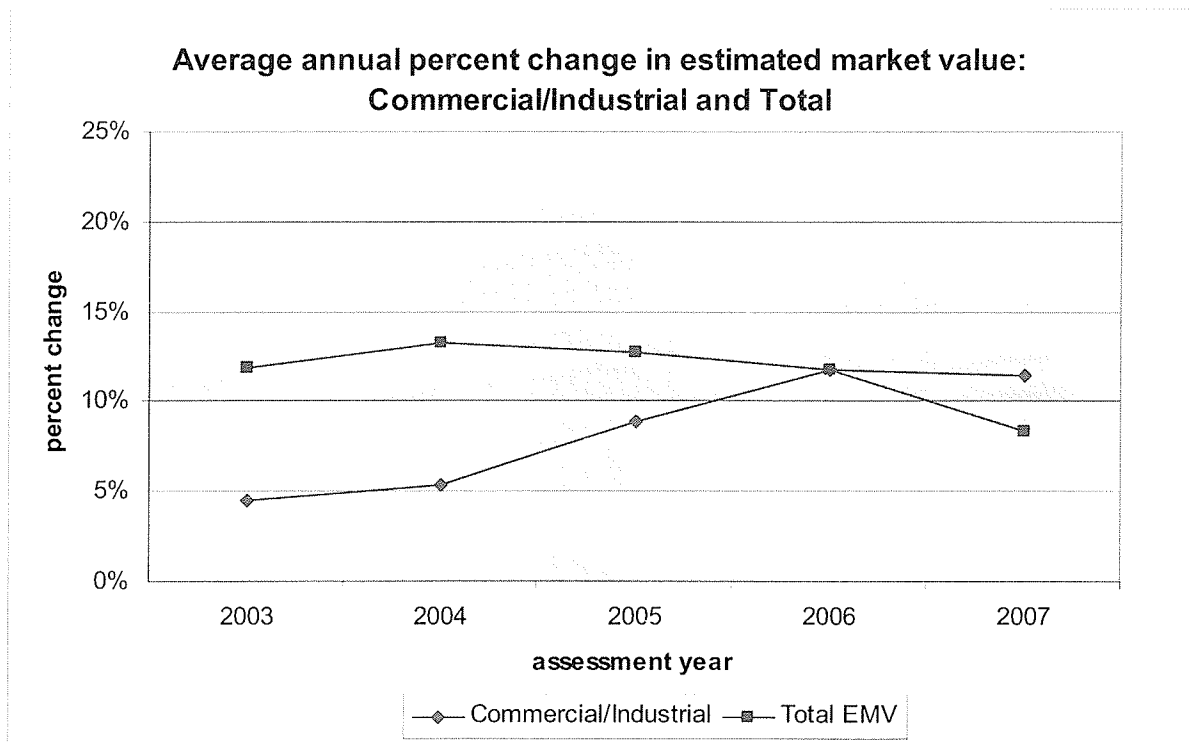


Chart 5

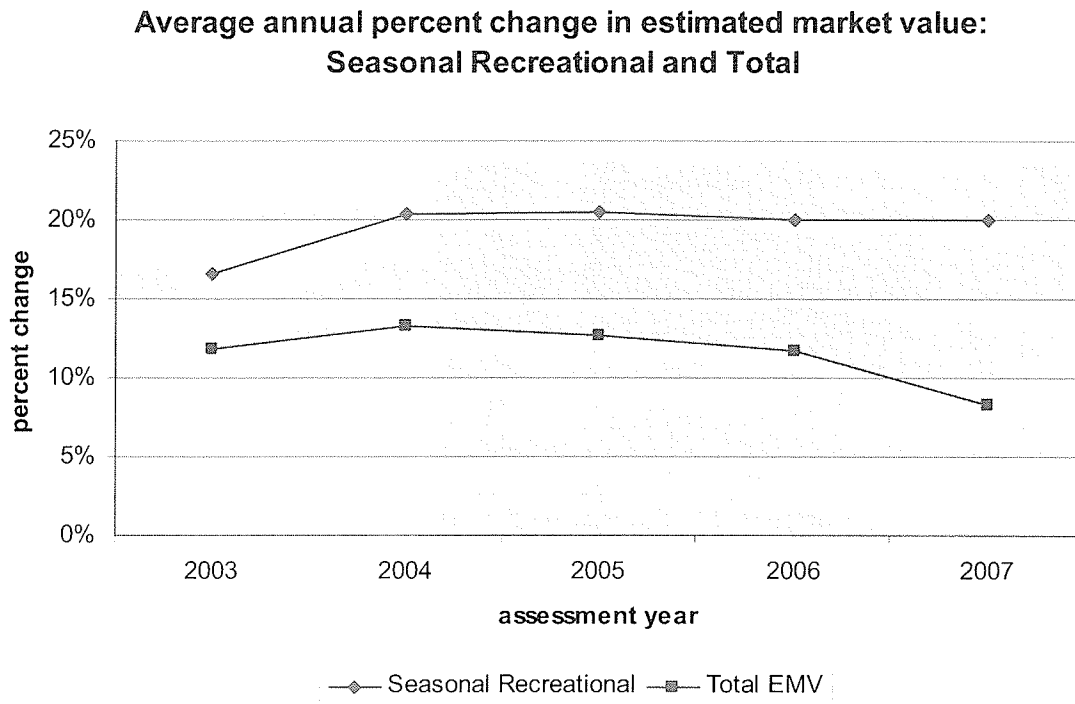
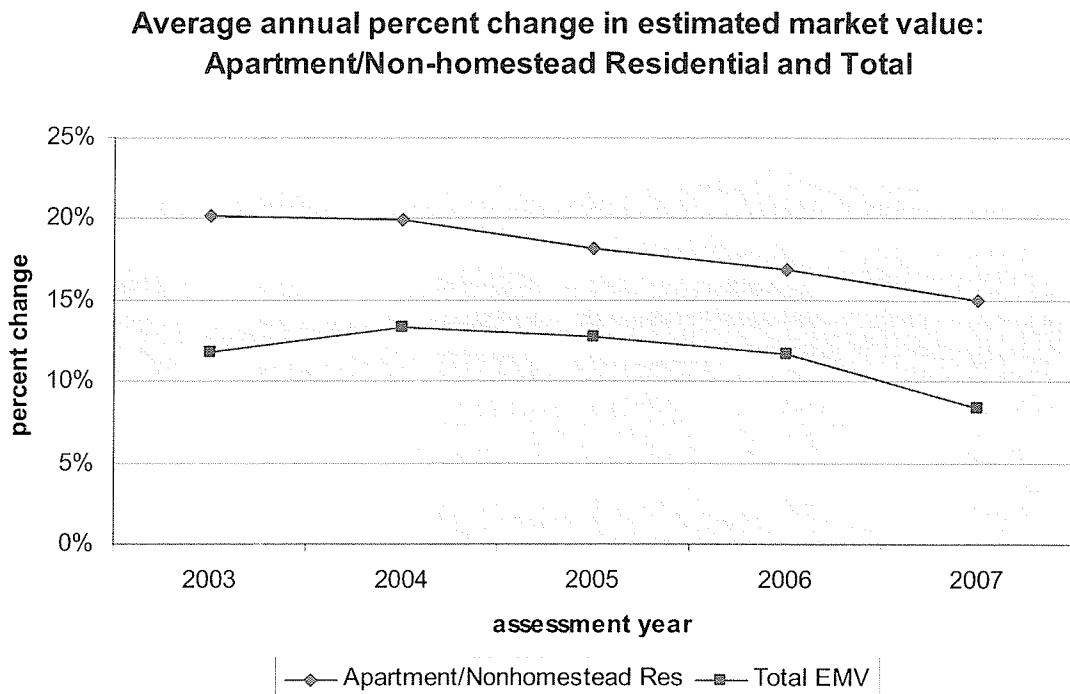
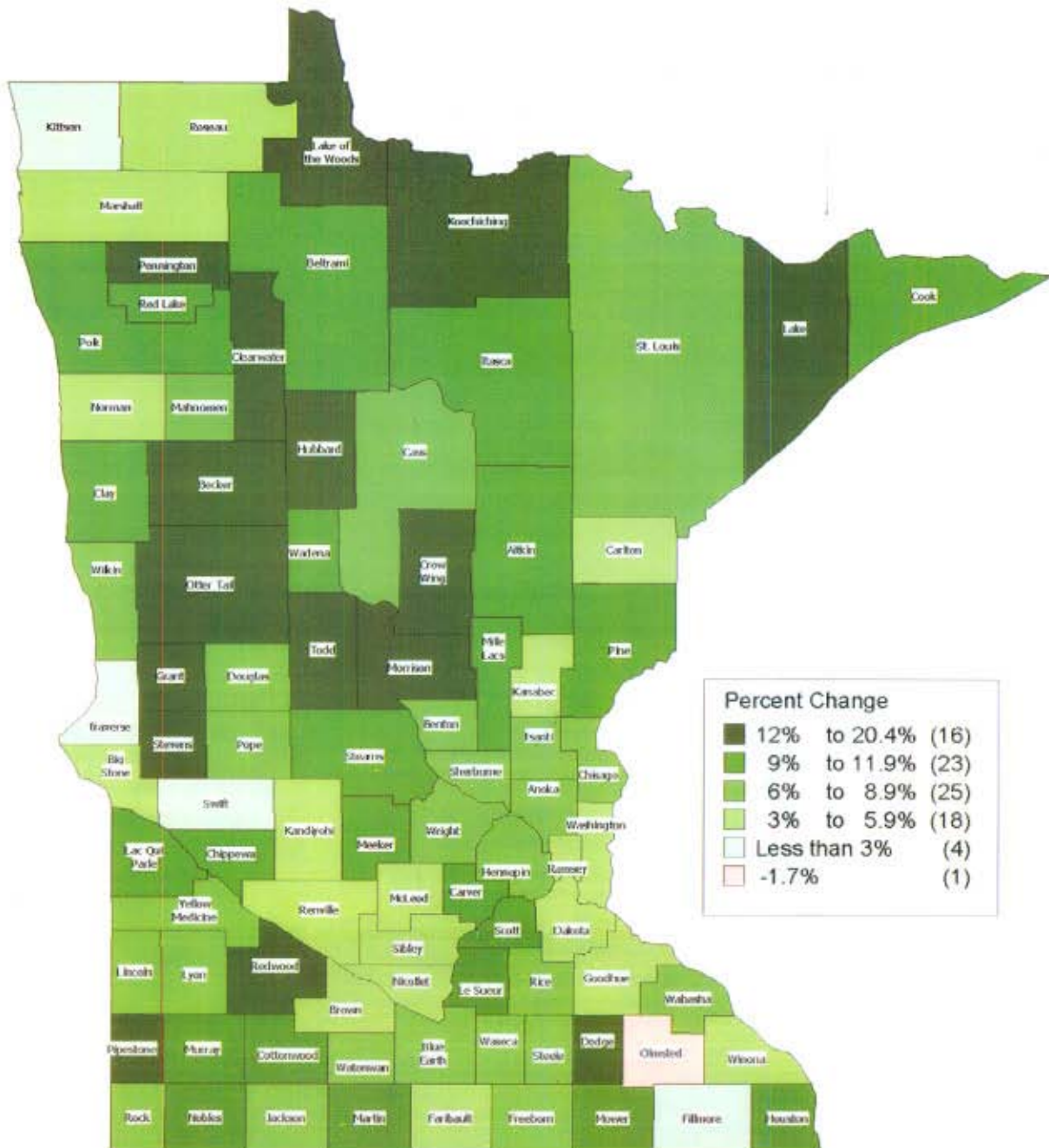


Chart 6





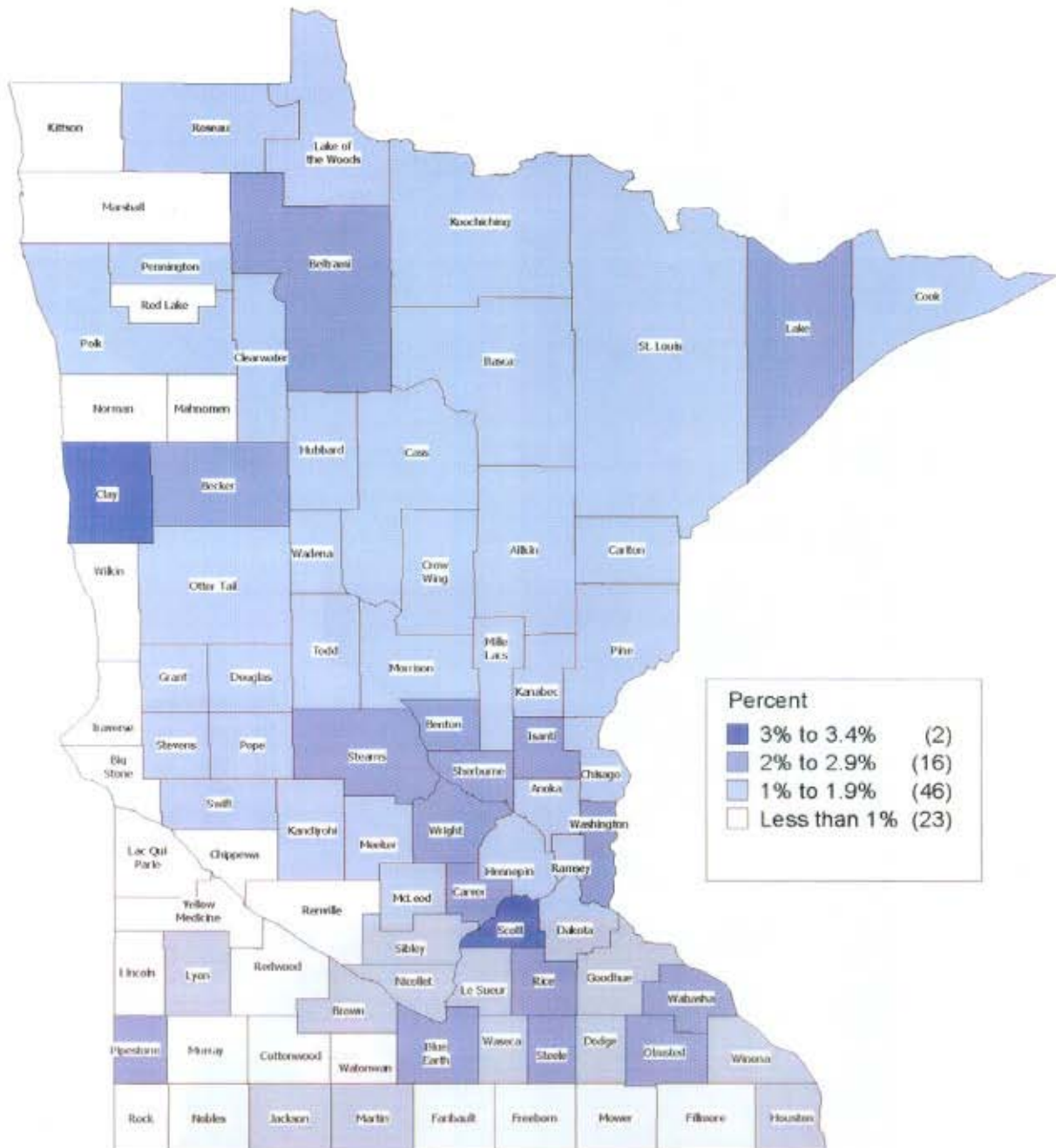
## Growth in Estimated Market Value 2006-2007



Source: Minnesota Revenue Property Tax Division  
Market Value by Parcel File  
Date Prepared: November 6, 2007  
Map colors based on [www.ColorBrewer.org](http://www.ColorBrewer.org)

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## New Construction as a Percent of Total Estimated Market Value 2007

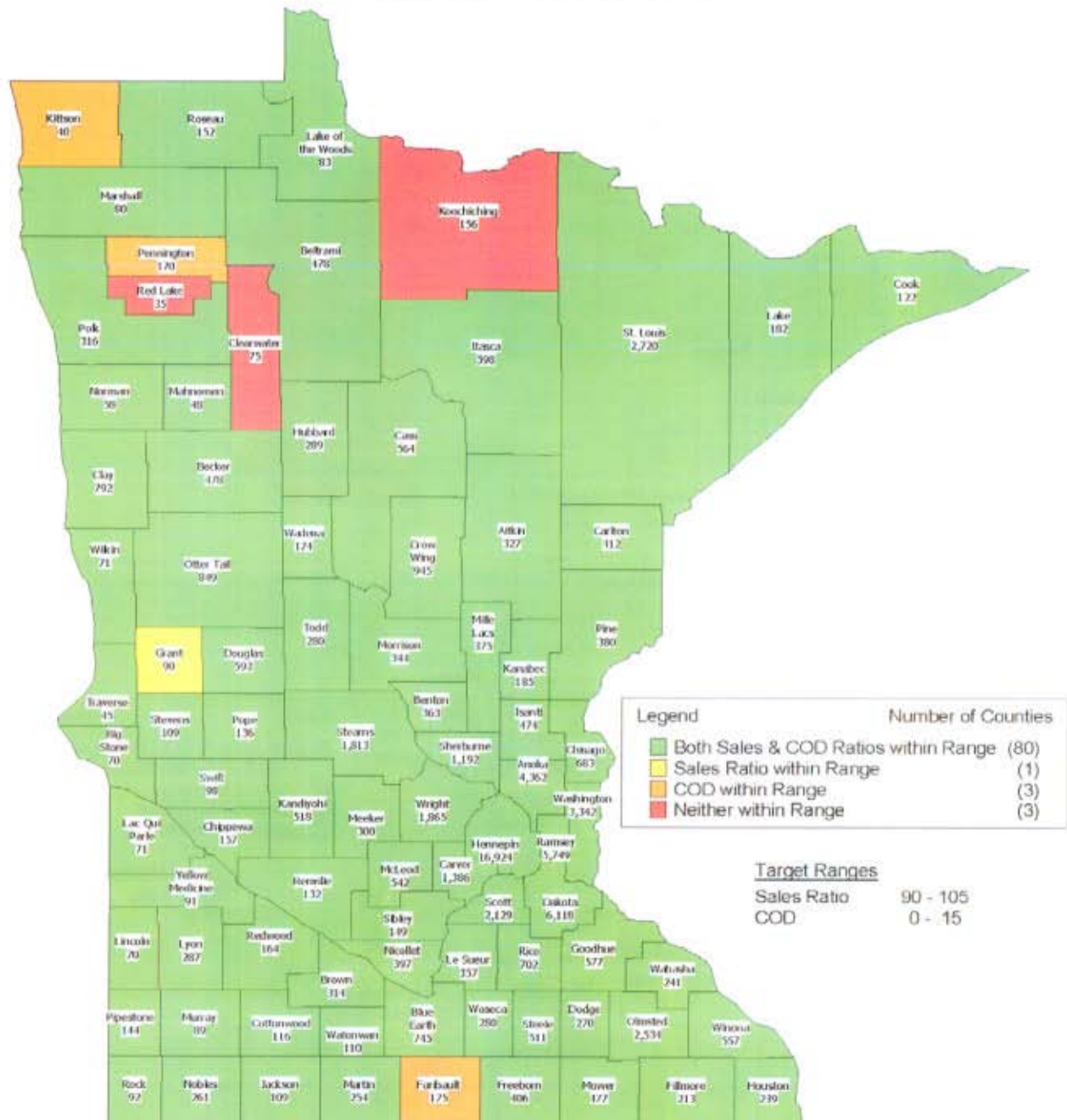


Source: Minnesota Revenue Property Tax Division  
Market Value by Parcel File  
Date Prepared: November 6, 2007  
Map colors based on [www.ColorBrewer.org](http://www.ColorBrewer.org)

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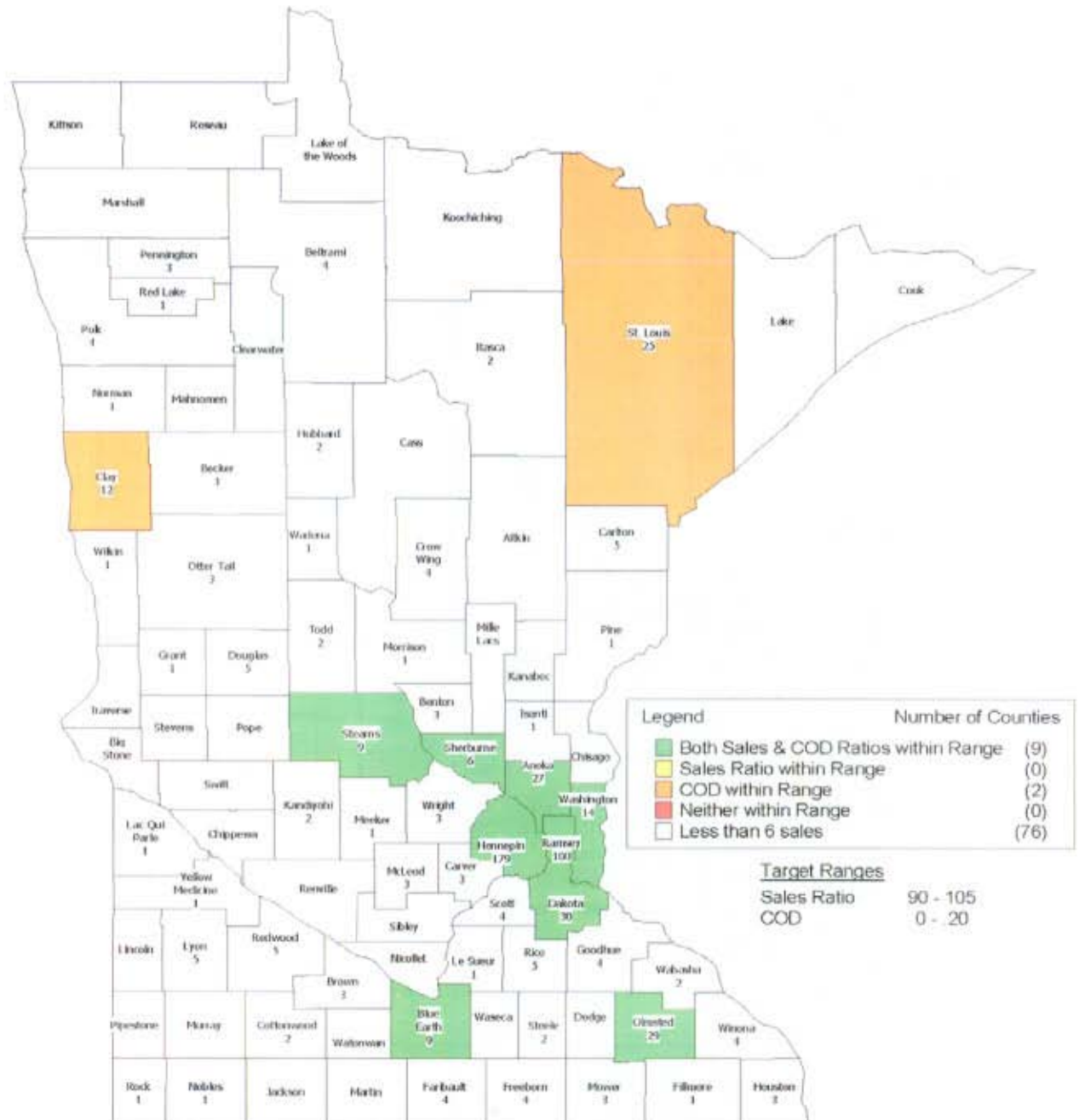
# **Residential - Assessment Year 2007** **Median Sales and Trimmed Coefficient of Dispersion (COD) Ratios**

Counties labeled with number of sales



# **Apartments - Assessment Year 2007** **Median Sales and Coefficient of Dispersion (COD) Ratios**

Counties labeled with number of sales

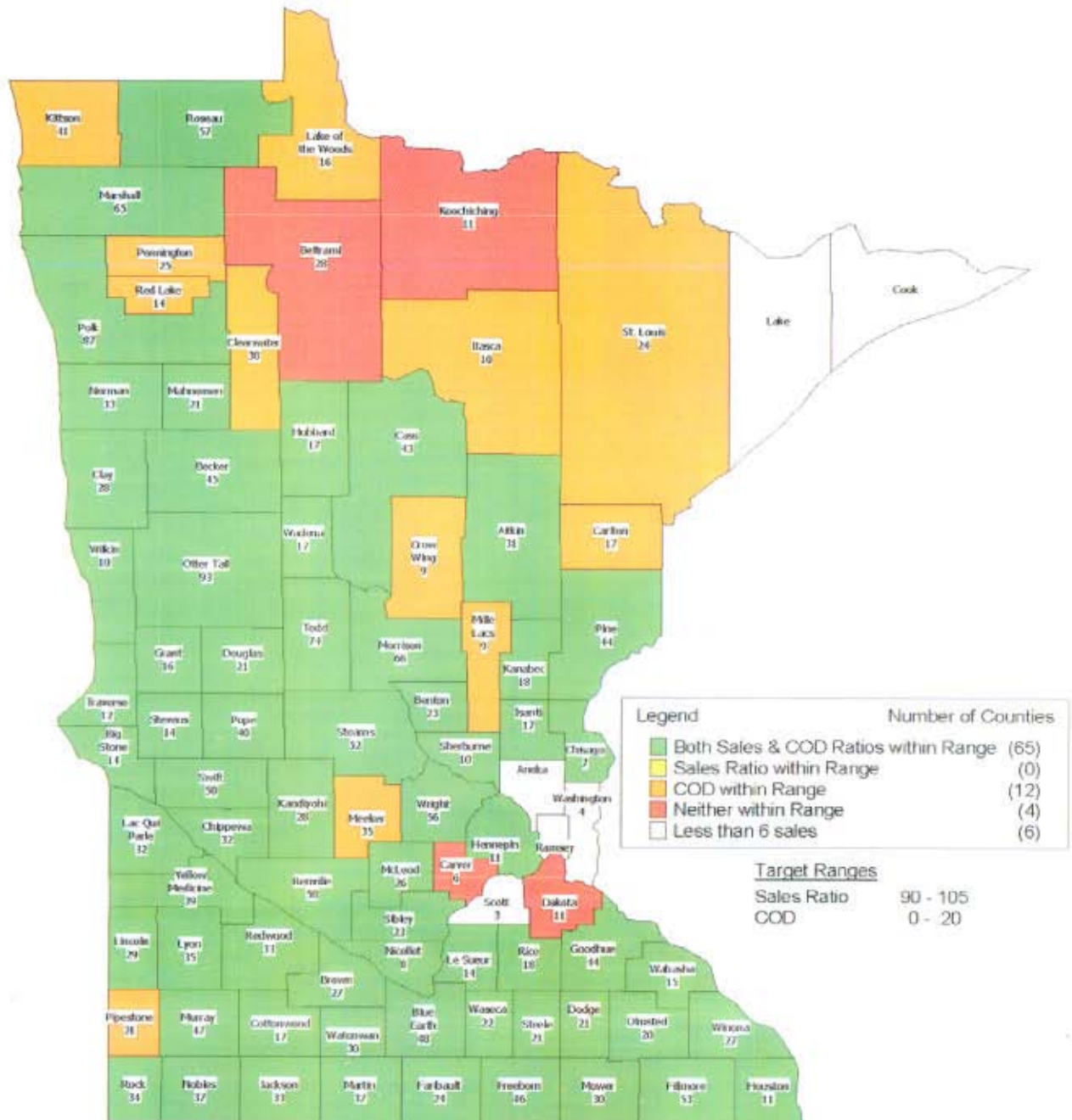


Source: Minnesota Revenue Property Tax Division  
 Date Prepared: May 7, 2007



# **Farm - Assessment Year 2007** **Median Sales and Trimmed Coefficient of Dispersion (COD) Ratios**

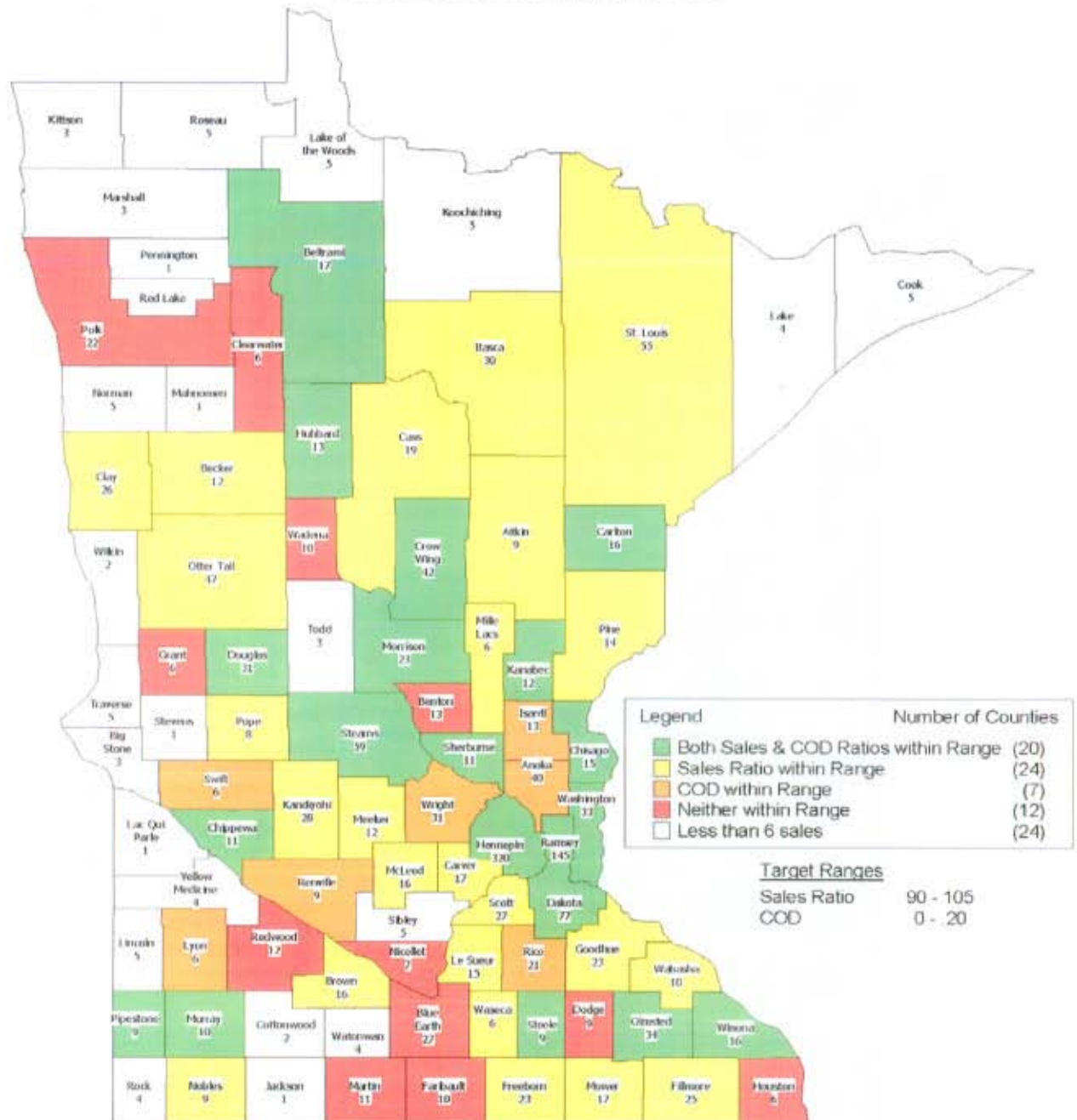
Counties labeled with number of sales



Source: Minnesota Revenue Property Tax Division  
 Date Prepared: May 7, 2007

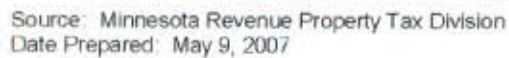
# **Commercial Industrial - Assessment Year 2007** **Median Sales and Coefficient of Dispersion (COD) Ratios**

Counties labeled with number of sales



Source: Minnesota Revenue Property Tax Division  
 Date Prepared: May 7, 2007

Counties labeled with number of trimmed and total sales





## Frequency of 2007 State Board Orders by Percent Adjustment by County \*

	Number with a class of property adjusted by: (%)														Affected cities/towns			Type of orders															
	Countywide orders						City/Town orders								Total # affected <sup>1</sup>	Total # of cities/ towns <sup>2</sup>	% Affected (excluding countywide)	Type of orders															
	+5%	+10%	15%	20%	25%	40%	-15%	-10%	-5%	+5%	+10%	+15%	+20%	+25%				Ag-L	Ag-S	Ag-LS	Apt-LS	Res-L	Res-S	Res-LS	SRR-L	SRR-S	SRR-LS	Tim-L	Com-L	Com-S	Com-LS	Ind-L	Ind-S
Statewide	1	4	0	1	0	3	0	0	2	35	58	4	8	0	107	2,609	4%																
2 ANOKA											1				1	21	5%																
4 BELTRAMI												9			9	60	15%																
6 BIG STONE										1					1	22	5%																
9 CARLTON											1				1	34	3%																
15 CLEARWATER		1								1	19				20	26	77%																
18 CROW WING										2			1		3	33	9%																
22 FARIBAUT										1	2				3	31	10%																
24 FREEBORN											1				1	34	3%																
25 GOODHUE											1				1	31	3%																
26 GRANT										2					2	23	9%																
30 ISANTI										2	2				4	32	13%																
36 KOOSCHICHING *		2		1		3				2			4		6	11	55%																
39 LAKEWOODS													3		3	31	10%																
41 LINCOLN										1					1	18	5%																
43 MC LEOD										1					1	30	3%																
44 MAHONOMEN											1				1	26	4%																
45 MARSHALL										3					3	19	16%																
47 MEEKER *	1									1	1				2	47	4%																
52 NICOLLET										1					1	31	3%																
53 NOBLES											1				1	26	4%																
57 PENNINGTON										4	13				17	29	59%																
58 PINE										1	1				2	16	13%																
60 POLK										2	1				3	41	7%																
61 POPE											2				2	21	10%																
63 RED LAKE		1								1					1	19	5%																
67 ROCK												1			1	17	6%																
69 ST LOUIS										5	2	2			9	65	14%																
79 WABASHA										1	2				3	31	10%																
80 WADENA										1		1			2	30	7%																
82 WASHINGTON											1				1	33	3%																
83 WATONWAN													1		1	20	5%																
TOTALS	1	4	0	1	0	3	0	0	2	35	58	4	8	0	107	2,609	4%																

\* Total includes counties without orders (not shown).

<sup>2</sup> \$100 per acre on base values outside land value zone one.

\* No changes to Green Acre (low) value.

\* Excluding some cities and townships.

### Example Interpretation

Marshall County had multiple board order adjustments ranging from 5% to 15% affecting timber land, residential, seasonal recreational residential, and agricultural properties. The orders affected 38 (or 63%) of the jurisdictions in Marshall County. (See

### Key

Ag-L	Agricultural Land Only
Ag-LS	Agricultural Land and Structures
Apt-LS	Apartment Land and Structures
Res-L	Residential Land Only
Res-S	Residential Structures Only
Res-LS	Residential Land and Structures
SRR-L	Seasonal Recreational Residential Land Only
SRR-S	Seasonal Rec. Residential Structures Only
SRR-LS	Seasonal Rec. Residential Land and Structures
Tim-L	Timber Land Only

Com-L	Commercial Land Only
Com-S	Commercial Structures Only
Com-LS	Commercial Land and Structures
Ind-LS	Industrial Land and Structures
Ind-L	Industrial Land Only
Ind-S	Industrial Structures Only

• At least one of the orders was all parcels of this property type.  
 ■ An order applied only to a subset of this property type -- includes or excludes certain plots, areas, parcels, lakes, lakeshore, property type codes, value ranges, parcel sizes, etc.



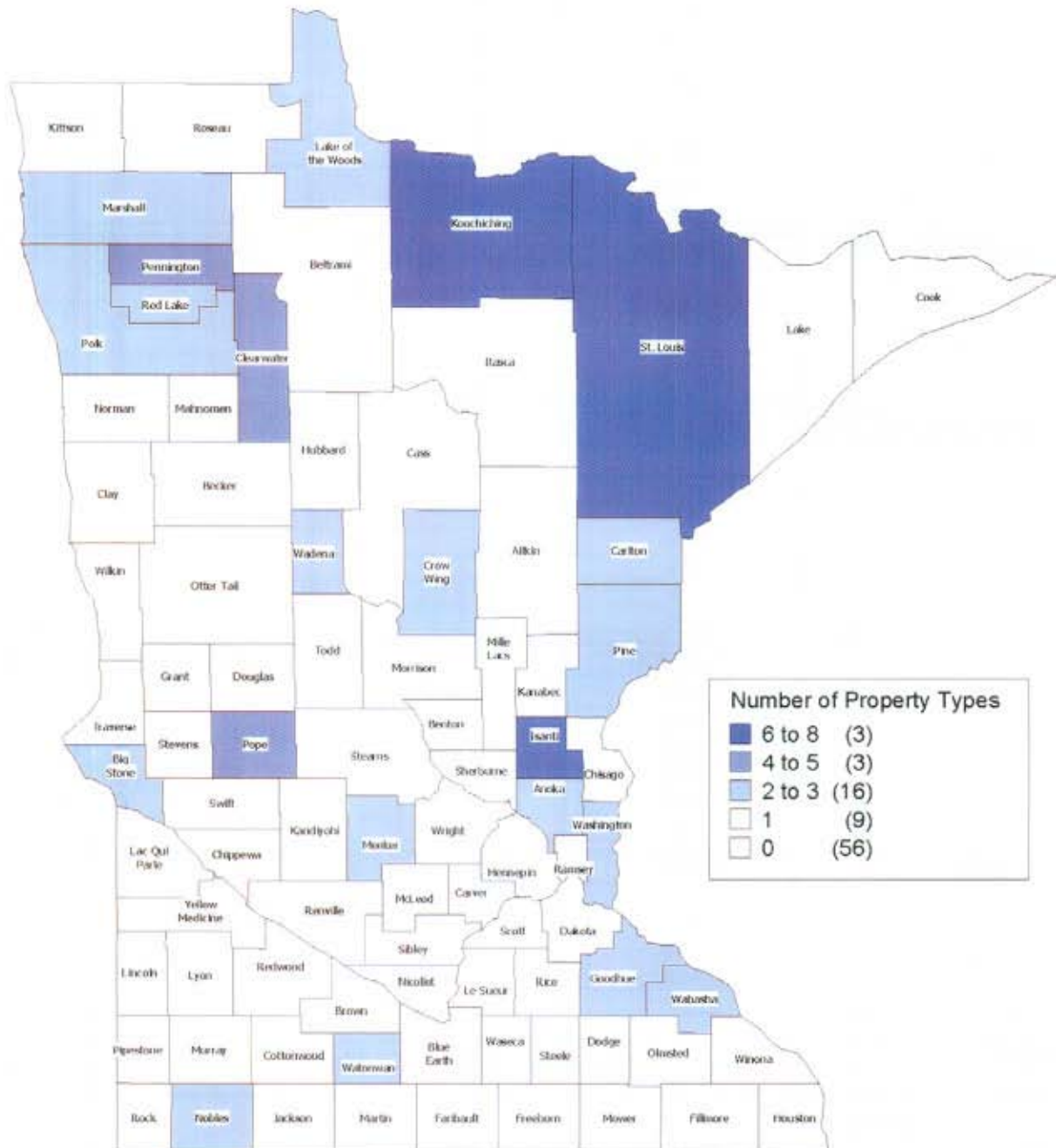
### Summary of 2007 State Board Orders by Property Classification and Jurisdictions\*

PROPERTY CLASSIFICATION	BOARD ORDER (% increase or decrease)	JURISDICTIONS AFFECTED BY ORDER				Percent of Total
		Countywide	City	Township	Total	
Residential	Subtotal	3	18	39	60	39.5%
	+40	1			1	0.7%
	+20		1	4	5	3.3%
	+15			4	4	2.6%
	+10	2	6	9	17	11.2%
	+5		10	21	31	20.4%
	-5		1	1	2	1.3%
	-10				0	0.0%
Apartment	Subtotal	0	2	0	2	1.3%
	+10		2		2	1.3%
	+5	0		0	0	0.0%
Commercial-Industrial	Subtotal	0	4	0	4	2.6%
	+20		1			
	+15				0	0.0%
	+10		4		4	2.6%
	+5				0	0.0%
	-5				0	0.0%
Seasonal-Recreational	Subtotal	2	3	23	28	18.4%
	+40	1			1	0.7%
	+20		1	4	5	3.3%
	+15			3	3	2.0%
	+10	1	2	4	7	4.6%
	+5			12	12	7.9%
	-5				0	0.0%
	-10				0	0.0%
Agricultural	Subtotal	3	0	48	51	33.6%
	+40	1			0	0.0%
	+25				0	0.0%
	+20				0	0.0%
	+15			2	2	1.3%
	+10	1		42	43	28.3%
	+5	1		4	5	3.3%
Timberland	Subtotal	2	0	5	7	4.6%
	+40				0	0.0%
	+20	1			1	0.7%
	+15			1	1	0.7%
	+10	1		1	2	1.3%
	+5			3	0	0.0%
Totals		10	27	115	152	100.0%

**\*Example Interpretation**

Seventeen (or 11.2%) of the 152 State Board Orders issued in 2007 were + 10% adjustments to residential property.

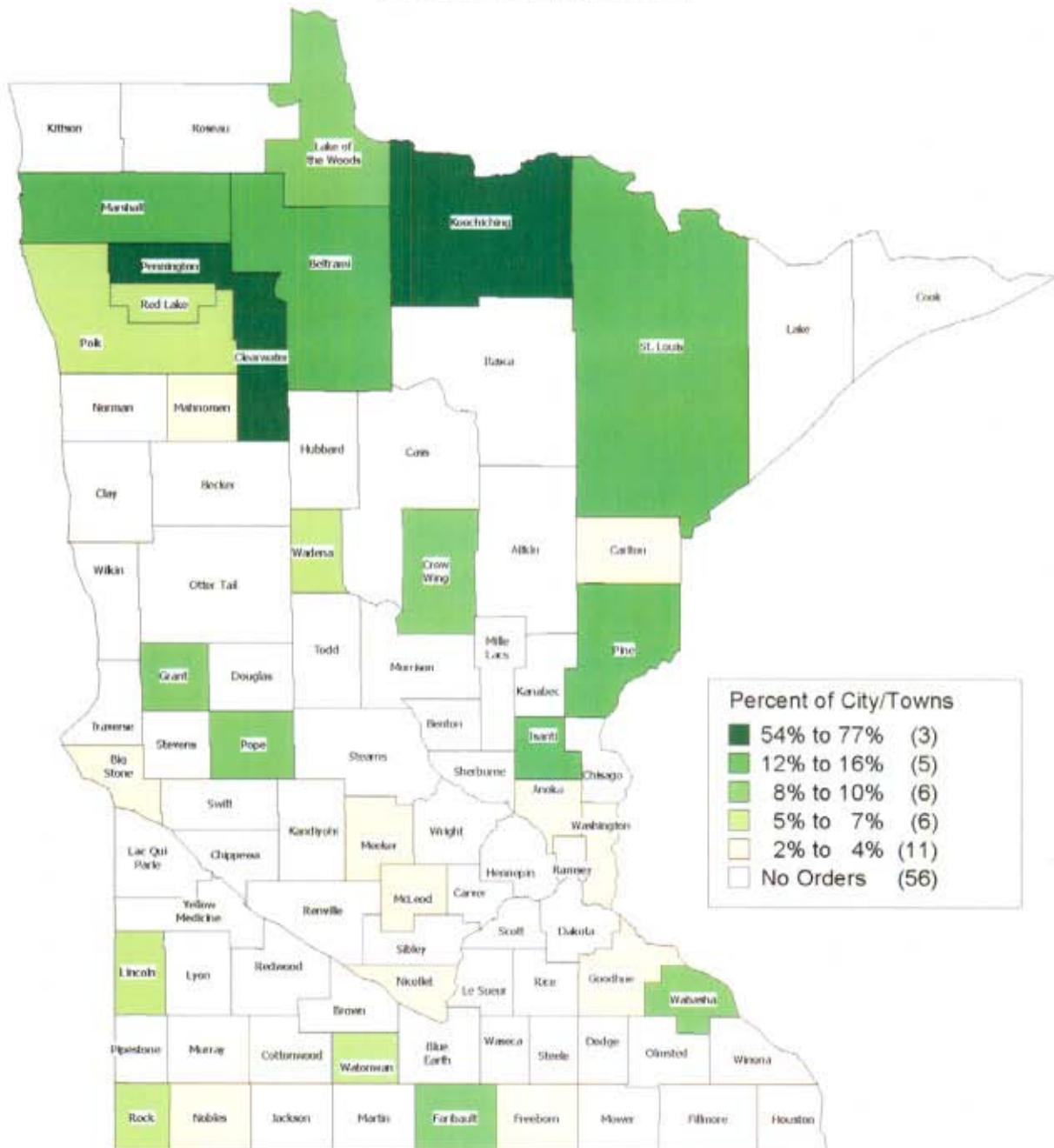
## Number of Property Types in Counties Affected by 2007 Board Orders



Source: Minnesota Revenue  
 Date Prepared: August 28, 2007  
 Map colors based on [www.ColorBrewer.org](http://www.ColorBrewer.org)

## Percent of City/Town Jurisdictions in Counties Affected by 2007 Board Orders

(Excludes Countywide Orders)



Source: Minnesota Revenue  
 Date Prepared: August 28, 2007  
 Map colors based on [www.ColorBrewer.org](http://www.ColorBrewer.org)

**APPENDIX I**  
**SUMMARY OF 2007 STATE BOARD ORDERS**

**2007 State Board of Equalization  
Summary of Board Orders**

<u>County</u>	<u>Assessment District</u>	<u>Type of Property</u>	<u>State Board Changes</u>	
			<u>Percent Increase</u>	<u>Percent Decrease</u>
Aitkin		No Changes		
Anoka	City of: Bethel	Residential Land Only Zone 2 Only Seasonal Residential Recreational Land Only Zone 2 Only	+10  +10	
Becker		No Changes		
Beltrami	Townships of: Battle	Agricultural Land Only	+10	
	Cormant	Agricultural Land Only	+10	
	Hornet	Agricultural Land Only	+10	
	Kelliher	Agricultural Land Only	+10	
	Langor	Agricultural Land Only	+10	
	O'Brien	Agricultural Land Only	+10	
	Quiring	Agricultural Land Only	+10	
	Shooks	Agricultural Land Only	+10	
	Woodrow	Agricultural Land Only	+10	
Benton		No Changes		
Big Stone	Township of: Prior	Residential Land Only Seasonal Residential Recreational Land Only	+5 +5	
Blue Earth		No Changes		

**2007 State Board of Equalization  
Summary of Board Orders**

<u>County</u>	<u>Assessment District</u>	<u>Type of Property</u>	<u>State Board Changes</u>	
			<u>Percent Increase</u>	<u>Percent Decrease</u>
Brown		No Changes		
Carlton	Township of: Perch Lake	Residential Land Only On Big Lake Only Seasonal Residential Recreational Land Only On Big Lake Only	+10  +10	
Carver		No Changes		
Cass		No Changes		
Chippewa		No Changes		
Chisago		No Changes		
Clay		No Changes		
Clearwater	Countywide	Timber	+10	
	City of: Bagley	Residential Land and Structures Seasonal Residential Recreational Land and Structures	+5 +5	
	Townships of: Bear Creek	Agricultural Land Only	+10	
	Clover	Agricultural Land Only	+10	
	Copley	Agricultural Land Only	+10	
	Dudley	Agricultural Land Only	+10	
	Eddy	Agricultural Land Only	+10	
	Falk	Agricultural Land Only	+10	
	Greenwood	Agricultural Land Only	+10	
	Holst	Agricultural Land Only	+10	

**2007 State Board of Equalization  
Summary of Board Orders**

<u>County</u>	<u>Assessment District</u>	<u>Type of Property</u>	<u>State Board Changes</u>	
			<u>Percent Increase</u>	<u>Percent Decrease</u>
Clearwater (continued)	Itasca	Agricultural Land Only	+10	
	La Prairie	Agricultural Land Only	+10	
	Leon	Agricultural Land Only	+10	
	Minerva	Agricultural Land Only	+10	
	Moose Creek	Agricultural Land Only	+10	
	Nora	Agricultural Land Only	+10	
	Pine Lake	Agricultural Land Only	+10	
	Popple	Agricultural Land Only	+10	
	Rice	Agricultural Land Only	+10	
	Shevlin	Agricultural Land Only	+10	
	Sinclair	Agricultural Land Only	+10	
<hr/>				
Cook		No Changes		
<hr/>				
Cottonwood		No Changes		
<hr/>				
Crow Wing	City of: Pequot Lakes	Commercial Land and Structures East of Highway #371 Only	+20	
	Townships of: Center	Residential Land Only	+5	
		On Upper Mission Lake Only		
		Seasonal Residential Recreational Land Only On Upper Mission Lake Only	+5	
	Mission	Residential Land Only	+5	
		On Upper Mission and Horseshoe Lakes Only Seasonal Residential Recreational Land Only On Upper Mission and Horseshoe Lakes Only	+5	

**2007 State Board of Equalization  
Summary of Board Orders**

<u>County</u>	<u>Assessment District</u>	<u>Type of Property</u>	<u>State Board Changes</u>	
			<u>Percent Increase</u>	<u>Percent Decrease</u>
Dakota		No Changes		
Dodge		No Changes		
Douglas		No Changes		
Faribault	Cities of: Bricelyn	Residential Land and Structures	+5	
	Minnesota Lake	Residential Land and Structures	+10	
	Winnebago	Residential Land and Structures	+10	
Fillmore		No Changes		
Freeborn	City of: Albert Lea	Apartment Land and Structures 4-8 Unit Properties Only	+10	
Goodhue	Township of: Hay Creek	Residential Land Only	+5	
		Seasonal Residential Recreational Land Only	+5	
Grant	Cities of: Ashby	Residential Land and Structures	+5	
	Hoffman	Residential Land and Structures	+5	
Hennepin		No Changes		
Houston		No Changes		
Hubbard		No Changes		



**2007 State Board of Equalization  
Summary of Board Orders**

<u>County</u>	<u>Assessment District</u>	<u>Type of Property</u>	<u>State Board Changes</u>	
			<u>Percent Increase</u>	<u>Percent Decrease</u>
Isanti	Townships of: Athens	Residential Land Only	+5	
		Residential Structures Only	+10	
		Seasonal Residential Recreational Land Only	+5	
		Seasonal Residential Recreational Structures Only	+10	
	Springvale	Residential Structures Only	+5	
		Seasonal Residential Recreational Structures Only	+5	
	Wyanett	Residential Land and Structures	+10	
		Seasonal Residential Recreational Land and Structures	+10	
Itasca		No Changes		
Jackson		No Changes		
Kanabec		No Changes		
Kandiyohi		No Changes		
Kittson		No Changes		
Koochiching	Countywide: Excluding all cities, townships 71-22, 71-23, 71-24 in unorganized 96 and the following plats, Eagle Place on Rainy River 78- 50, Scotts Land 78-82, Riverside Acres 78-81, Mannausau River Estates 50-83, Manitou Shores 57-80, Manitou Shores 1st Addition 57-82	Agricultural Land Only	+40	
		Residential Land Only	+40	
		Seasonal Residential Recreational Land Only	+40	
		Timber Land Only	+20	
		Residential Structures Only	+10	
		Seasonal Residential Recreational Structures Only	+10	

**2007 State Board of Equalization  
Summary of Board Orders**

			<u>State Board Changes</u>	
<u>County</u>	<u>Assessment District</u>	<u>Type of Property</u>	<u>Percent Increase</u>	<u>Percent Decrease</u>
Koochiching (continued)	Cities of: International Falls	Residential Land and Structures	+5	
		Seasonal Residential Recreational Land and Structures	+5	
	Ranier	Residential Land Only	+20	
		Seasonal Residential Recreational Land Only	+20	
	Township of: Unorganized 96 Excluding the plat of West Gold Shores (07-61)	Residential Land and Structures	+20	
		On 71-22, 71-23 and 71-24 Only		
		Seasonal Residential Recreational Land and Structures	+20	
		On 71-22, 71-23 and 71-24 Only		
Lac qui Parle		No Changes		
Lake		No Changes		
Lake of the Woods	Townships of: Baudette	Residential Land Only	+20	
		Seasonal Residential Recreational Land Only	+20	
		On Water Front Parcels Only		
	Wabanica	Residential Land Only	+20	
		Seasonal Residential Recreational Land Only	+20	
		On Water Front Parcels Only		
	Wheeler	Residential Land Only	+20	
		Seasonal Residential Recreational Land Only	+20	
		On Water Front Parcels Only		
	LeSueur		No Changes	
Lincoln	Township of: Alta Vista	Agricultural Land Only	+5	
Lyon		No Changes		
Mahnomen	City of: Waubun	Residential Structures Only	+10	
Marshall	Townships of: Excel	Residential Land and Structures	+5	

**2007 State Board of Equalization  
Summary of Board Orders**

<u>County</u>	<u>Assessment District</u>	<u>Type of Property</u>	<u>State Board Changes</u>	
			<u>Percent Increase</u>	<u>Percent Decrease</u>
	Vega	Seasonal Residential Recreational Land and Structures	+5	
		Residential Land and Structures	+5	
Martin		No Changes		
McLeod	City of: Stewart	Residential Land Only	+5	
Meeker	Countywide Excluding Township of Manannah	Agricultural Land Only	+5	
	Townships of: Ellsworth	Residential Structures Only	+5	
		Seasonal Residential Recreational Structures Only	+5	
	Manannah	Agricultural Land Only	+10	
Mille Lacs		No Changes		
Morrison		No Changes		
Mower		No Changes		
Murray		No Changes		
Nicollet	City of: Nicollet	Residential Structures Only	+5	
Nobles	Township of: Westside	Agricultural House and Garage Structures Only	+10	
		Residential Structures Only	+10	

**2007 State Board of Equalization  
Summary of Board Orders**

<u>County</u>	<u>Assessment District</u>	<u>Type of Property</u>	<u>State Board Changes</u>	
			<u>Percent Increase</u>	<u>Percent Decrease</u>
Norman		No Changes		
Olmsted		No Changes		
Otter Tail		No Changes		
Pennington	City of: Thief River Falls	Residential Land Only Commercial Land Only Apartment Land and Structures	+5 +10 +10	
	Townships of: Clover Leaf	Agricultural Land Only	+10	
	Deer Park	Agricultural Land Only	+10	
	Goodridge	Agricultural Land Only	+10	
	Hickory	Agricultural Land Only	+10	
	Highlanding	Agricultural Land Only	+10	
	Kratka	Agricultural Land Only	+10	
	Mayfield	Agricultural Land Only	+10	
	Norden	Residential Land and Structures Seasonal Residential Recreational Land and Structures	+5 +5	
	North	Residential Land and Structures	+5	
	Reiner	Agricultural Land Only	+10	
	Rocksbury	Residential Land Only	+5	
	Silverton	Agricultural Land Only	+10	
	Smiley	Agricultural Land Only	+10	
	Star	Agricultural Land Only	+10	
	Wyandotte	Agricultural Land Only	+10	

**2007 State Board of Equalization  
Summary of Board Orders**

<u>County</u>	<u>Assessment District</u>	<u>Type of Property</u>	<u>State Board Changes</u>	
			<u>Percent Increase</u>	<u>Percent Decrease</u>
Pine	City of: Brook Park	Residential Land Only	+10	
		Seasonal Residential Recreational Land Only	+10	
	Township of: Dell Grove	Residential Land Only	+5	
		Seasonal Residential Recreational Land Only	+5	
Pipestone		No Changes		
Polk	Cities of: East Grand Forks	Residential Structures Only	+5	
	Fertile	Commercial Land and Structures	+10	
	Township of: Huntsville	Residential Structures Only	+5	
Pope	City of: Starbuck	Residential Land Only	+10	
		Seasonal Residential Recreational Land Only	+10	
		Commercial Land Only	+10	
		Industrial Land Only	+10	
	Township of: Gilchrist	Residential Land Only	+10	
		Seasonal Residential Recreational Land Only	+10	
Ramsey		No Changes		
Red Lake	Countywide	Agricultural Land Only	+10	
	City of: Plummer	Residential Land and Structures On Properties With Total EMV of \$50,000 or Greater	+5	
Redwood		No Changes		
Renville		No Changes		

**2007 State Board of Equalization  
Summary of Board Orders**

<u>County</u>	<u>Assessment District</u>	<u>Type of Property</u>	<u>State Board Changes</u>	
			<u>Percent Increase</u>	<u>Percent Decrease</u>
Rice		No Changes		
Rock	Township of: Martin	Residential Structures Only	+15	
Roseau		No Changes		
St. Louis	City of: Eveleth	Residential Land Only	+5	
	Townships of: Balkan	Residential Land Only	+5	
		Seasonal Residential Recreational Land Only	+5	
	Clinton	Agricultural Structures Only	+15	
		Residential Structures Only	+15	
		Seasonal Residential Recreational Structures Only	+15	
	Crane Lake	Residential Land and Structures	+10	
		Seasonal Residential Recreational Land and Structures	+10	
	New Independence	Agricultural Land Only	+15	
		On Parcels Over 34.5 Acres Only		
		Residential Land Only	+15	
		On Parcels Over 34.5 Acres Only		
		Seasonal Residential Recreational Land Only	+15	
		On Parcels Over 34.5 Acres Only		
		Timber Land Only	+15	
		On parcels Over 34.5 Acres Only		
	Owens	Agricultural Land Only	+5	
		On Parcels over 34.5 Acres Only		
		Residential Land Only	+5	
		On Parcels Over 34.5 Acres Only		
		Seasonal Residential Recreational Land Only	+5	
		On Parcels Over 34.5 Acres Only		
		Timber Land Only	+5	
		On Parcels Over 34.5 Acres Only		

**2007 State Board of Equalization  
Summary of Board Orders**

			State Board Changes		
County	Assessment District	Type of Property	Percent Increase	Percent Decrease	
St. Louis (continued)	Portage	Agricultural Land Only	+5		
		On Parcels Over 34.5 Acres Only			
		Residential Land Only	+5		
		On Parcels Over 34.5 Acres Only			
		Seasonal Residential Recreational Land Only	+5		
		On Parcels Over 34.5 Acres Only			
	Timber Land Only	+5			
		On Parcels Over 34.5 Acres Only			
		Waasa	Agricultural Land Only	+5	
			On Parcels Over 34.5 Acres Only		
			Residential Land Only	+5	
			On Parcels Over 34.5 Acres Only		
	Seasonal Residential Recreational Land Only		+5		
	On Parcels Over 34.5 Acres Only				
	Timber Land Only	+5			
		On Parcels Over 34.5 Acres Only			
		White	Agricultural Land Only	+10	
			On Parcels Over 34.5 Acres Only		
			Residential Land Only	+10	
			On Parcels Over 34.5 Acres Only		
	Seasonal Residential Recreational Land Only		+10		
	On Parcels Over 34.5 Acres Only				
	Timber Land Only	+10			
		On Parcels Over 34.5 Acres Only			
Scott		No Changes			
Sherburne		No Changes			
Sibley		No Changes			
Stearns		No Changes			
Steele		No Changes			
Stevens		No Changes			
Swift		No Changes			

**2007 State Board of Equalization  
Summary of Board Orders**

<u>County</u>	<u>Assessment District</u>	<u>Type of Property</u>	<u>State Board Changes</u>	
			<u>Percent Increase</u>	<u>Percent Decrease</u>
Todd		No Changes		
Traverse		No Changes		
Wabasha	City of: Lake City Excluding the Jewel Subdivisions	Residential Land and Structures	+5	
	Townships of: Lake	Residential Land Only	+5	
	Mazeppa	Residential Land and Structures		-5
Wadena	City of: Wadena	Residential Land and Structures		-5
		Commercial Land and Structures	+10	
Waseca		No Changes		
Washington	Township of: Baytown	Residential Land Only	+5	
		Seasonal Residential Recreational Land Only	+5	
Watonwan	Township of: Long Lake	Residential Land and Structures	+15	
		Lakeshore Only		
		Seasonal Residential Recreational Land and Structures Lakeshore Only	+15	
Wilkin		No Changes		
Winona		No Changes		
Wright		No Changes		
Yellow Medicine		No Changes		



## APPENDIX II

### GLOSSARY

**Estimated Market Value (EMV)** The estimated market value is the assessor's estimate of what a property would sell for on the open market with a typically motivated buyer and seller without special financial terms. This is the most probable price, in terms of money, that a property would bring in an open and competitive market. The EMV for a property is finalized on the assessment date, which is January 2 of each year.

**Certificate of Real Estate Value (CRV)** A certificate of real estate value must be filed with the county auditor whenever real property is sold or conveyed in Minnesota. Information reported on the CRV includes the sales price, the value of any personal property, if any, included in the sale, and the financial terms of the sale. The CRV is eventually filed with the Property Tax Division of the Department of Revenue.

**Coefficient of Dispersion (COD)** The coefficient of dispersion is a measurement of variability (the spread or dispersion) and provides a simple numerical value to describe the distribution of sales ratios in relationship to the median ratio of a group of properties sold. The COD is also known as the "index of assessment inequality" and is the percentage by which the various sales ratios differ, on average, from the median ratio.

**Limited Market Value (LMV)** The limited market value is the market value of a property after statutory limits are imposed on the value of the property. The law surrounding the LMV is meant to limit how much the value of a property may increase from year to year.

**Median Ratio** The median ratio is a measure of central tendency. It is the sales ratio that is the midpoint of all ratios. Half of the ratios fall above this point and the other half fall below this point. The median ratio is used for the State Board of Equalization and the Minnesota Tax Court studies after all final adjustments.

**Sales Ratio** A sales ratio is the ratio comparing the market value of a property with the actual sales price of the property. The market value is determined by the county assessor and reported annually to the Department of Revenue. The actual sales price is reported on the Certificate of Real Estate Value (CRV).

**State Board of Equalization** The State Board of Equalization consists of the Commissioner of Revenue, who has the power to review sales ratios for counties and make adjustments in order to bring estimated market values within the accepted range of 90 to 105 percent.

**State Board Order** A state board order is issued by the State Board of Equalization to adjust the market values of certain property within certain jurisdictions.

**Taxable Market Value (TMV)** The taxable market value is the value that a property is actually taxed on after all limits, deferrals and exclusions are calculated. It may or may not be the same as the property's estimated market value or limited market value.

**Trimming Method** The trimming method used here is to exclude sales that are outside 1.5 times the inter-quartile range. This method starts by sorting the sample by ascending ratio then dividing the sample into quarters (quartiles). The first quarter is at the 25% point of sample. The second quartile is the 50% or median point. The third quartile is at the 75% point. The fourth quartile includes the highest ratios. The inter quartile range is the difference between the values at the first and third quartiles. This number is multiplied by 1.5 to calculate the trimming point for the upper and lower bounds when calculating the COD.

**Adjusted Median Ratio** The adjusted median ratio is calculated by multiplying the median ratio by one plus the overall percent change in value made by the local assessor between the prior and current assessment year. The change in assessors value is also called local effort.

**Adjusted median ratio= Median ratio x (1+local effort).**

## APPENDIX III TWENTY-ONE-MONTH STUDY

The 21-month study is completely different from the other two studies. Its purpose is to adjust values used for state aid calculations so that all jurisdictions across the state are equalized. In order to build stability into the system, a longer term of 21 months is used. This allows for a greater number of sales. While the nine- and 12-month studies compare the actual sales to the assessor's *estimated* market value, the 21-month study compares actual sales to the assessor's *taxable* market value. As with the nine- and 12-month studies, the sale prices are adjusted for time and terms of financing.

The 21-month study is used to calculate adjusted net tax capacities that are used in the foundation aid formula for school funding. It is also used to calculate tax capacities used for local government aid (commonly referred to as LGA) and various smaller aids such as library aid. This study is also utilized by bonding companies to rate the fiscal capacity of different governmental jurisdictions.

The adjusted net tax capacity is used to eliminate differences in levels of assessment between taxing jurisdictions for state aid distributions. All property is supposed to be valued at its selling price in an open market, but many factors make that goal hard to achieve. The sales ratio study can be used to eliminate differences caused by local markets or assessment practices.

The adjusted net tax capacity is calculated by dividing the net tax capacity of a class of property by the sales ratio for the class. In the example below, the residential net tax capacity would be divided by the residential sales ratio to produce the residential adjusted net tax capacity. The process would be repeated for all of the property types. The total adjusted net tax capacity would be used in state aid calculations. The table shows the calculation of adjusted net tax capacity in a school district.

PROPERTY TYPE NAME	TAXABLE NET TAX CAPACITY	SALES RATIO	ADJUSTED NET TAX CAPACITY
Residential	46,907,743	0.914	51,321,929
Apartment	1,318,862	0.916	1,439,884
Seasonal/Recreational	63,969	0.675	94,821
Farms	2,897,256	0.560	5,170,714
Commercial Only	12,929,619	0.806	16,039,526
Industrial Only	7,173,236	0.766	9,360,114
Timber	000	0	000
Public Utility	725,291	1.000	725,291
Railroad	58,374	1.000	58,374
Mineral	000	1.000	000
Personal	966,946	1.000	966,946
<b>TOTAL</b>	<b>73,041,296</b>	<b>0.858</b>	<b>85,177,599</b>

## REFERENCES

Dornfest, Alan S. 2001. Ratio Study Class. Course Manual used for the Minnesota Department of Revenue Sales Ratio Study Class, St. Paul, MN, Nov. 28-30, 2001.

International Association of Assessing Officers. 1999. *Standard on Ratio Studies*. Rev. ed., Chicago, IL: International Association of Assessing Officers.

Minnesota Department of Revenue. 2002. *Property Taxes Levied in Minnesota: 2000 Assessments Taxes Payable in 2001*. St. Paul, MN: Minnesota Department of Revenue.

Minnesota House of Representatives Research Department. 1993. *Property Tax Assessment and Sales Ratio Studies: Presentation to Property Tax Task Force*. St. Paul, MN: Minnesota House of Representatives.