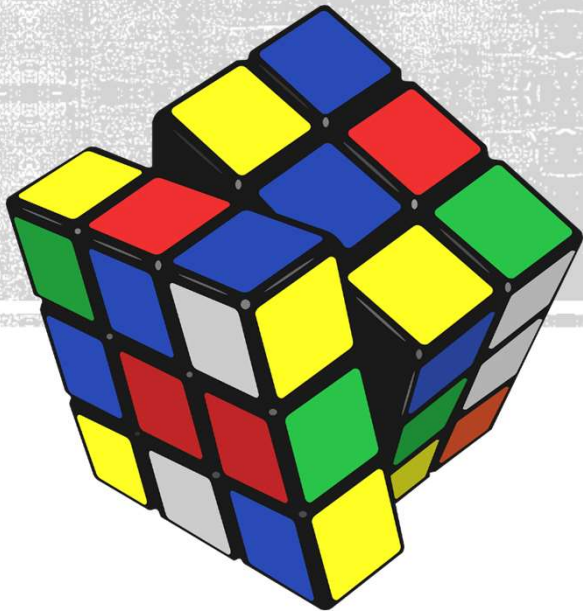


Setting the Annual Assessment is like solving a

RUBIX CUBE



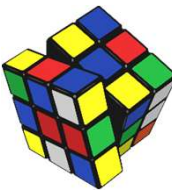


HOW IS THE ANNUAL ASSESSMENT LIKE A RUBIX CUBE?

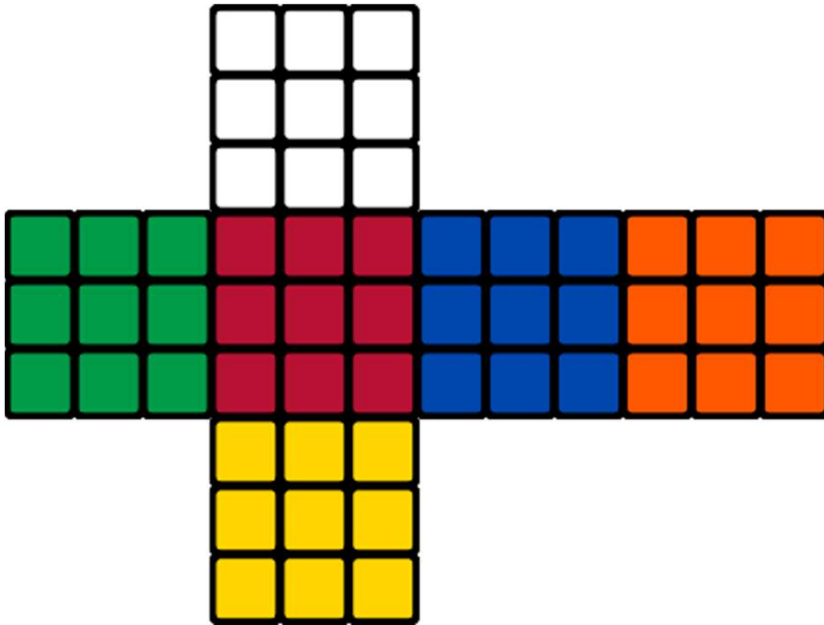
We need all the colors and sides to come together so everything is in proper alignment.

SETTING THE ANNUAL ASSESSMENT CAN OFTEN SEEM **OVERWHELMING AND DAUNTING** — LIKE A RUBIK'S CUBE!

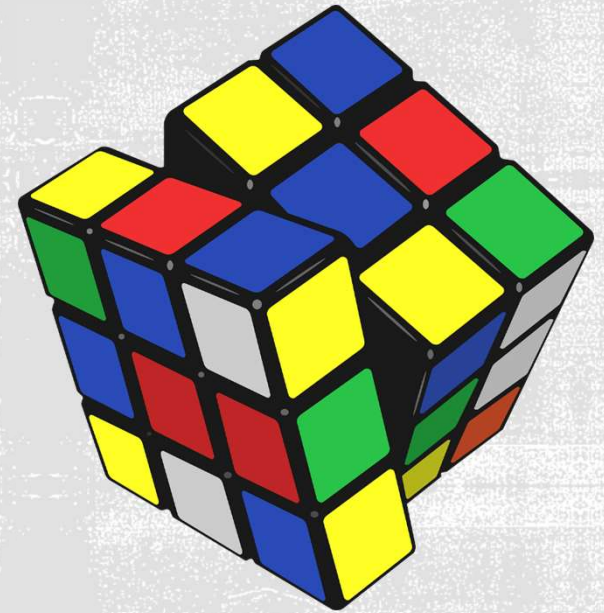
- There are so many different “sides” to this task:
 - Different markets (residential, ag, commercial)
 - ratio studies
 - PRD's
 - COD's
 - previous year State Board follow-ups
 - And those dreaded time trends!
- How does we wrangle (or untangle) all of these various items together and come out with an equitable assessment and hopefully no State Board Orders?
- First, let's take a look at a Rubix Cube!



- Originally called the Magic Cube, it's a 3-D combination puzzle.
- Tips to solving:
 - Pick one side and start there – Start with White
 - First tackle the plus sign (+), then the corners
 - Once that side is done, go to the color on the opposite site (yellow).
 - Once white and yellow are done, then work on the 4 sides.
 - There are 6 major steps



THE RUBIX CUBE



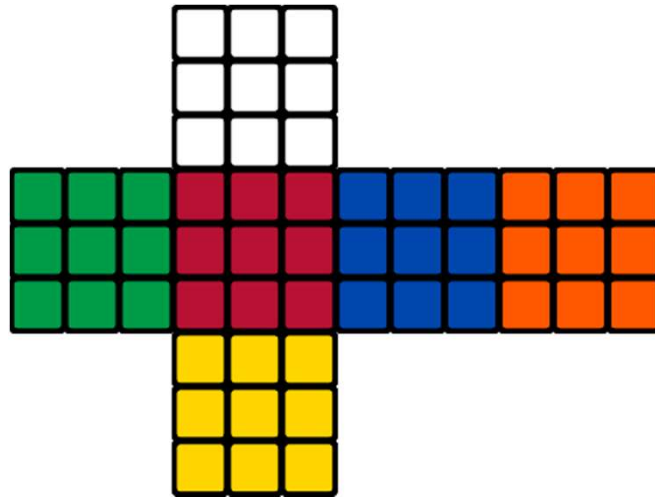
10 LESSONS FROM THE RUBIX CUBE: A METAPHOR FOR APPROACHING LIFE'S PROBLEMS

1. It is easier to create chaos than to create order.
 - Creating chaos/randomness is easy, restoring order is way more challenging, yet that is what we as humans prefer.
2. To the uninitiated, systematic applications of complex patterns look like magic.
 - You need a strategy that works.
3. Don't think "Can I?" Rather, think "**How Can I?**"
4. Approaching order sometimes involves creating more chaos.
 - Sometimes our work needs to be temporarily dismantled (which seems like steps backward) but is often necessary to move forward in the goal of proper order.
5. You cannot resolve chaos all at once. **Pick your battles.**
6. **Keep Things Simple**
 - Looking for simple solutions to problems isn't always the quickest route, but it's often the most efficient. Keeping things simple makes them easy for others to understand and adopt.
7. **Don't Cut Corners**
8. **Patience and Persistence Pays Off**
9. **Have a Goal in Mind**
10. **Mastering the Basics enables you to take on bigger challenges.**

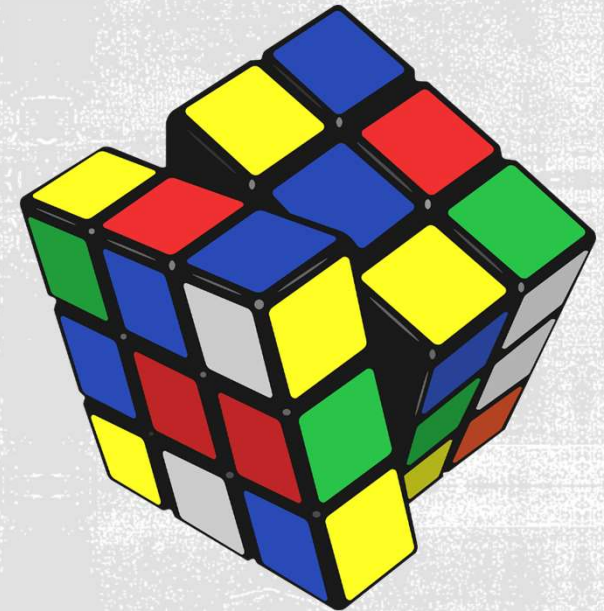


We need to break all of it
down to manageable parts!

Break it down
ya'll!



**THE ASSESSMENT,
LIKE A RUBIX CUBE**



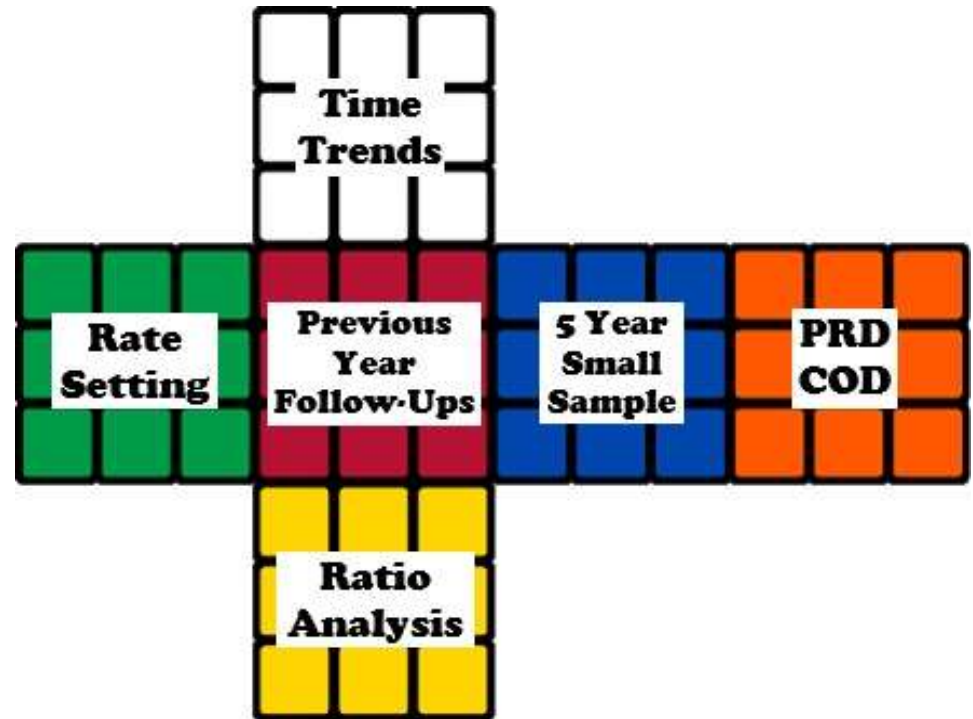
BREAK DOWN THE MAJOR PROBLEMS TO BE SOLVED AND ORDER THEM FROM **LARGEST** TO **SMALLEST**

- Time Trends
- Ratio Analysis
- Rate Setting
 - Ag Land
 - Residential
- Other Issues to Consider
 - Follow Up from Previous Year's State Board of Equalization
 - 5 year small sample issues for this year
 - PRD, COD
- Commercial, Apartment, Industrial
- Between the major market segments, start with the ones that have the **largest impact on others.**
- For Roseau County, we look at Ag land first because that is a large share of our county and much of the Residential properties have some acres in this category that would impact their rates.
- We look at Commercial last because we do not have a large number of parcels in this category.

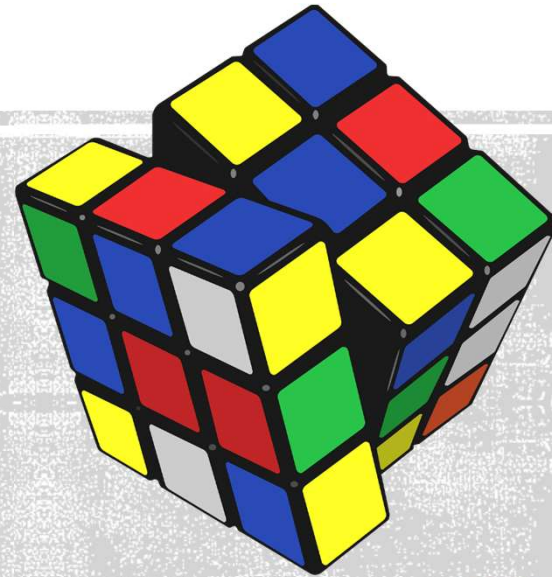


BREAK DOWN THE MAJOR PROBLEMS TO BE SOLVED AND ORDER THEM FROM **LARGEST** TO **SMALLEST**

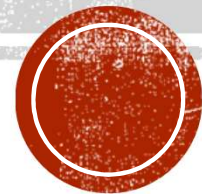
- Time Trends
- Ratio Analysis
- Rate Setting
 - Ag Land
 - Residential
- Other Issues to Consider
 - Follow Up from Previous Year's State Board of Equalization
 - 5 year small sample issues for this year
 - PRD, COD
- Commercial, Apartment, Industrial



TIME TRENDS



Don't try to finalize any of your rates before you know if you have a time trend... it is futile.



WHAT IS THE TIME TREND ANALYSIS?

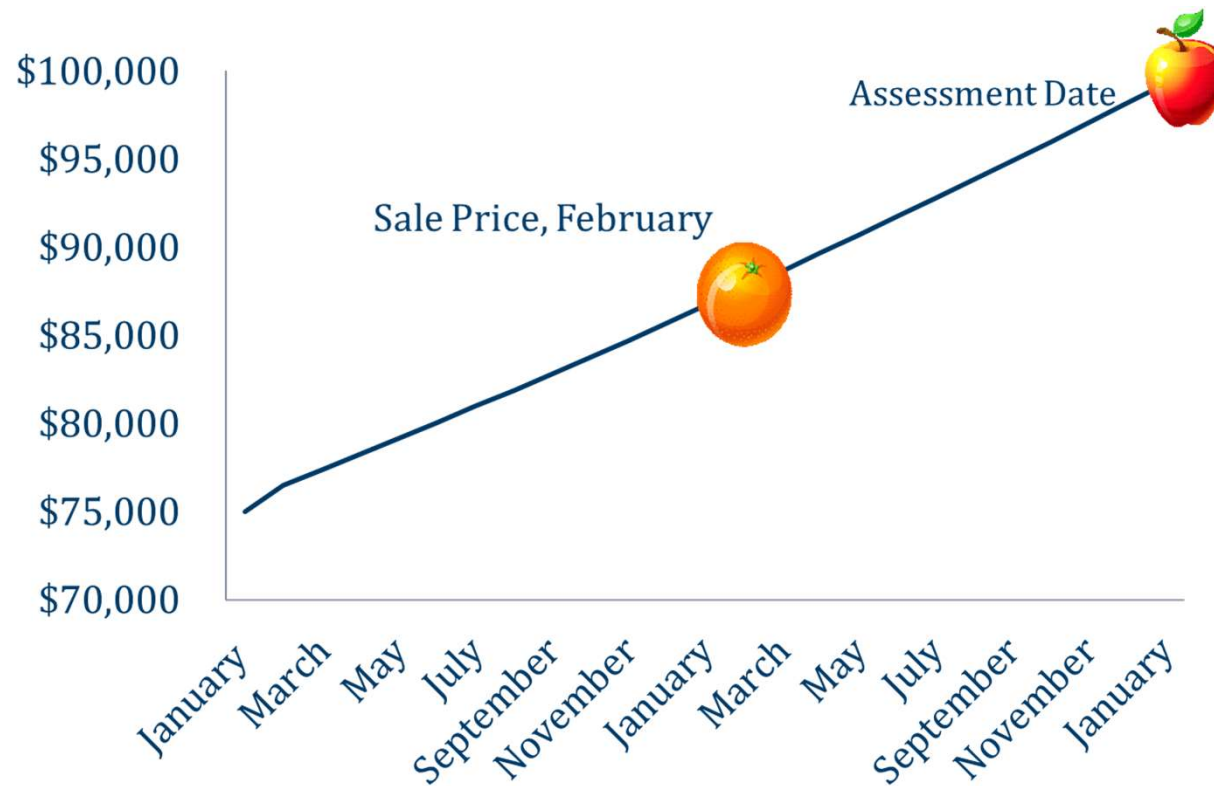
- Assessment Date is January 2nd.
- We're using sales from up to 15 months prior to this date.



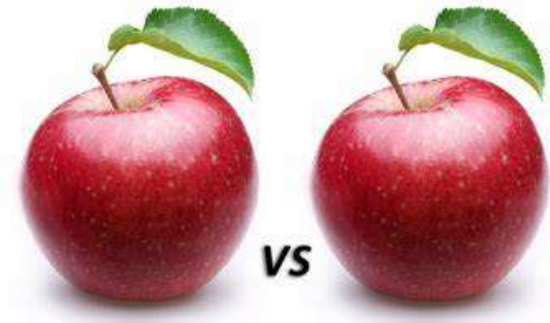
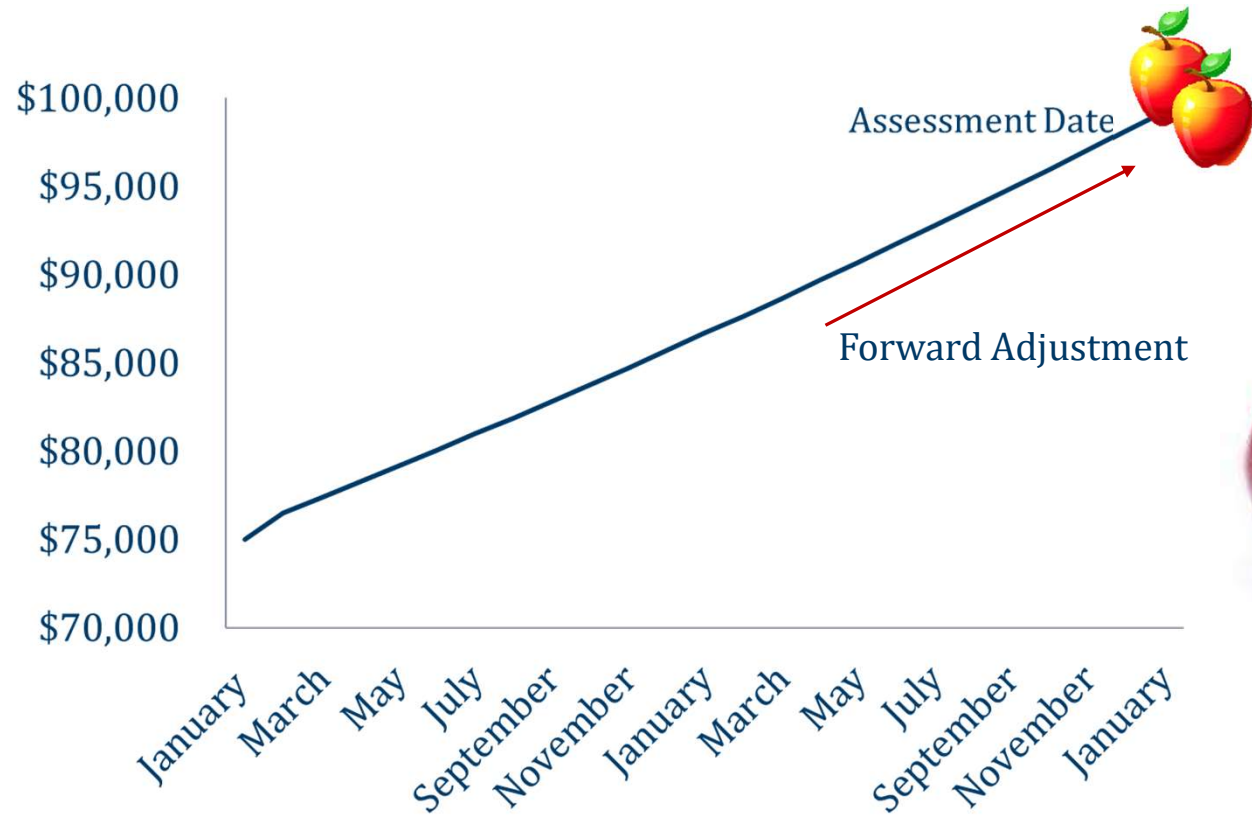
- Time trend analysis is done by DOR to see if our market is getting **stronger or weaker over time**. They go back 20 months for this analysis.
- If there is a trend, DOR will adjust the sale prices forward to the assessment date so that when doing ratio analysis, it's as if all of the properties **sold on the assessment date**.



SALES RATIOS *WITHOUT* TRENDS: COMPARING **APPLES** TO **ORANGES**



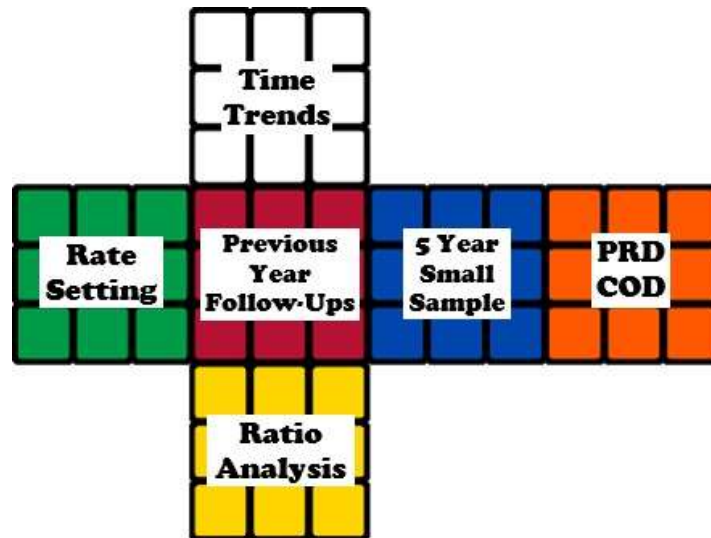
SALES RATIOS *WITH* TRENDS: COMPARING **APPLES TO APPLES**



Rules of Engagement: Time Trends

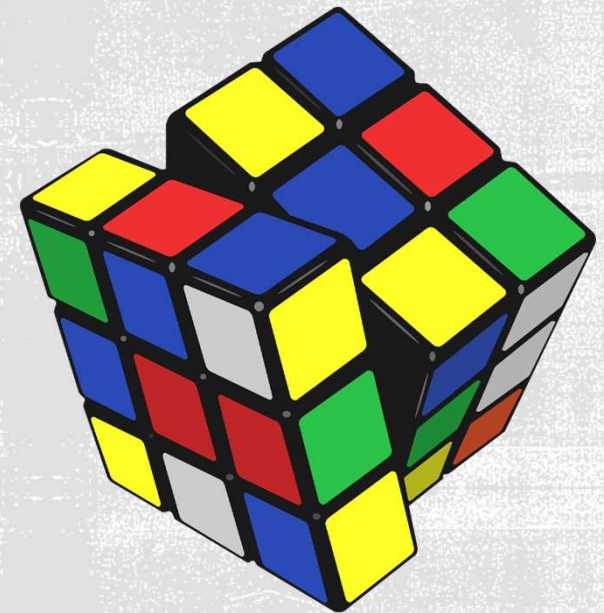
- Only Certain Property Type Aggregations Get Trends
- In those categories, you must have:
 - 30 Sales or More
 - A significance level of 90% or more
 - No matter how bad the data, there can always be a trend calculated.
 - **SIGNIFICANCE** tells us how **RELIABLE** the trend is.

Remember, the goal is manageable parts



Break it down ya'll!

WHAT ARE THE DOR REPORTS TELLING ME?



UNDERSTAND BASE VS DEFAULT REGION

▪ Base Region Trend

- This is often your County or a sub grouping within your County. To have a trend applied, you must have:
 - 30 sales or more
 - A significance level of 90% or more
 - No matter how bad the data, there can always be a trend determined. SIGNIFICANCE tells us how RELIABLE the trend is.
- This is Columns K-P in the trend listing report from DOR/Data & Analysis.

▪ Default Region Trend

- Same rules apply (30+ sales & 90% significance minimum)
- Default trends are considered ONLY if there is not a base trend.
- This is Columns Q-V in the trend listing report from DOR/Data & Analysis.
- Default Ag Region Time Trends are currently being reviewed by DOR.

**Column J tells us which “Trend Type is Applied”
(None, Base, Default, etc)**



Property Type Aggregations

Various sales ratio property types are combined into like groups to form property type aggregations. The Sales Ratio Property Type Aggregation table below describes which property types are combined to form these aggregations. A high resolution version of this table is available on our [website](#).

Market condition trends are determined based on the following property types/aggregations:

- 02 – Apartments
- 06 – Commercial
- 07 – Industrial
- 91 – Residential/Seasonal Residential Recreational
- 93 – Agricultural/Rural Vacant Bare Land

All the sales in each of these property types will then be separated by region. See [Regions](#) for more information.

Note that some property types fall within more than one aggregation. The aggregations noted with an asterisk (*) in the table below include property types that also fall in the 93 aggregation. The PT93 trend is applied to all PT95 sales and, by default, to all PT92 sales. The 96 aggregation is used as a catch-all aggregation for property types which are not used to calculate market condition trends and ratios. Although sales in the 96 aggregation will not be used in the Sales Ratio Study, they may be good sales studied in other ways.

If it is determined that the improvement value had minimal impact on the price paid for the land (general rule of thumb is 5% or less of the total EMV), these sales should be considered as land only sales (PT 93).

WHAT GROUPS OF SALES HAVE TRENDS CALCULATED?

2024 Sales Ratio Study Criteria

Page 29



Sales Ratio Property Type Aggregations

Use	Aggregation Code	Aggregation Description	Property Type Code	Description
Ratio + Trend	02	Apartments	02	Apartments
Ratio + Trend	06	Commercial	06	Commercial
Ratio + Trend	07	Industrial	07	Industrial
Ratio	90	Bare Land LESS than 34.5 acres 2a, 2b, 2c, and mixed	37	Agriculture 2a - bare land less than 34.5 acres
			39	Rural Vacant 2b - bare land less than 34.5 acres
			40	Managed Forest 2c - bare land less than 34.5 acres
			50	Mixed 2a, 2b - bare land less than 34.5 acres
Ratio + Trend	91	Residential/Seasonal Recreational Residential	01	Residential (less than 4 units)
			03	Non-commercial seasonal residential recreational
Ratio	92	Bare Land MORE than 34.5 acres 2b, 2c, and mixed	34	Rural Vacant 2b - bare land more than 34.5 acres
			35	Managed Forest 2c - bare land more than 34.5 acres
			48	Mixed 2a, 2b - bare land more than 34.5 acres
Ratio + Trend	93	Bare Land MORE than 34.5 acres 2a, 2b, 2c and mixed	32	Agriculture 2a - bare land more than 34.5 acres
			34	Rural Vacant 2b - bare land more than 34.5 acres
			35	Managed Forest 2c - bare land more than 34.5 acres
			48	Mixed 2a, Rural 2b - bare land more than 34.5 acres
Tax Court	94	Commercial / Industrial	06	Commercial
			07	Industrial
Ratio + Trend	95	Bare Land + Land with Buildings MORE than 34.5 acres 2a, 2b, 2c, and mixed	31	Agriculture 2a - land with buildings more than 34.5 acres
			32	Agriculture 2a - bare land more than 34.5 acres
			33	Rural Vacant 2b - land with buildings more than 34.5 acres
			34	Rural Vacant 2b - bare land more than 34.5 acres
			35	Managed Forest 2c - bare land more than 34.5 acres
			47	Mixed 2a, 2b - land with buildings more than 34.5 acres
			48	Mixed 2a, 2b - bare land more than 34.5 acres
NOT USED	96	Miscellaneous property type codes. Sales not included in ratios or trends	08	Public utility
			09	Railroads
			10	Mineral
			14	Seasonal recreational commercial and resorts
			20	Personal property
			21	Residential bare land
			22	Apartment bare land
			23	Seasonal recreational bare land
			26	Commercial bare land
			27	Industrial bare land
			30	Exempt
			36	Agriculture 2a - land with buildings less than 34.5 acres
			38	Rural Vacant 2b - land with buildings less than 34.5 acres
			49	Mixed 2a, 2b - land with buildings less than 34.5 acres
51	Manufactured Home Parks			

WHAT GROUPS OF SALES HAVE TRENDS CALCULATED?

2024 Sales Ratio Study Criteria

Page 29



WHAT GROUPS OF SALES HAVE TRENDS CALCULATED?

Get familiar with what categories could possibly have trends in your county and when default region trends are a possibility.

What does that mean?

Other neighboring counties who's sales may impact your trend.



Base and Default Regions by Property Type Aggregation

Property Type Aggregation	Base Region	Default Region
02 – Apartments*	County	None
06 – Commercial*	County	None
07 – Industrial*	County	None
91W – Residential/SRR On-Water	Residential region	Countywide on-water OR combined on-/off-water base region
91N – Residential/SRR Off-Water	Residential region	Countywide off-water
93 – Agricultural/Rural Vacant	County	Agricultural/rural vacant region

*Indicates aggregations for which metro counties and first class cities have different regions. See below for details.

Agricultural/Rural Vacant Region Map



CURRENT AG/RVL TIME TREND REGION MAP

DOR is reviewing these and possibly proposing some changes.

Follow this information as it comes to you so that you understand what your new default region may be.



J=TREND APPLIED

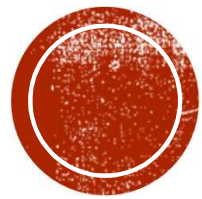
BASE

DEFAULT

CityTown Name	Water Status	PT Aggregation	PT Aggregation Name	Applied Monthly Trend	Applied Annual Trend	Trend Type Applied	Base Code	Base Region	Base Significance	Base Sale Count Without Prelim Extremes	Base Monthly Trend	Base Annual Trend	Default Code	Default Region	Default Significance	Default Sale Count Without Prelim Extremes	Default Monthly Trend	Default Annual Trend
Roseau		2	Apartments			None	416800	Roseau		1	0.0000%	0.0000%						
Greenbush		6	Commercial			None	416800	Roseau	55.908%	13	2.1527%	29.121%						
Roseau		6	Commercial			None	416800	Roseau	55.908%	13	2.1527%	29.121%						
Warroad		6	Commercial			None	416800	Roseau	55.908%	13	2.1527%	29.121%						
Greenbush		7	Industrial			None	416800	Roseau		2	0.0924%	1.1150%						
Roseau		7	Industrial			None	416800	Roseau		2	0.0924%	1.1150%						
Jadis	N	91	Residential/SRR	0.3735%	4.5750%	Default	126801	Roseau County	83.461%	222	0.2858%	3.4838%	186801	Roseau On and Off Water	92.268%	225	0.3735%	4.5750%
Lake	N	91	Residential/SRR	0.3735%	4.5750%	Default	126801	Roseau County	83.461%	222	0.2858%	3.4838%	186801	Roseau On and Off Water	92.268%	225	0.3735%	4.5750%
Lake	W	91	Residential/SRR	0.3735%	4.5750%	Default	136801	Roseau County	42.649%	3	3.8346%	57.075%	186801	Roseau On and Off Water	92.268%	225	0.3735%	4.5750%
Roseau	N	91	Residential/SRR	0.3735%	4.5750%	Default	126801	Roseau County	83.461%	222	0.2858%	3.4838%	186801	Roseau On and Off Water	92.268%	225	0.3735%	4.5750%
Warroad	N	91	Residential/SRR	0.3735%	4.5750%	Default	126801	Roseau County	83.461%	222	0.2858%	3.4838%	186801	Roseau On and Off Water	92.268%	225	0.3735%	4.5750%
Warroad	W	91	Residential/SRR	0.3735%	4.5750%	Default	136801	Roseau County	42.649%	3	3.8346%	57.075%	186801	Roseau On and Off Water	92.268%	225	0.3735%	4.5750%
Jadis		93	Ag/RVL bare > 34.5 acres	1.1939%	15.306%	Default	816800	Roseau County	86.825%	71	1.0724%	13.655%	910600	Kittson & Roseau	98.313%	119	1.1939%	15.306%
Ross		93	Ag/RVL bare > 34.5 acres	1.1939%	15.306%	Default	816800	Roseau County	86.825%	71	1.0724%	13.655%	910600	Kittson & Roseau	98.313%	119	1.1939%	15.306%
Spruce		93	Ag/RVL bare > 34.5 acres	1.1939%	15.306%	Default	816800	Roseau County	86.825%	71	1.0724%	13.655%	910600	Kittson & Roseau	98.313%	119	1.1939%	15.306%
Lake		93	Ag/RVL bare > 34.5 acres	1.1939%	15.306%	Default	816800	Roseau County	86.825%	71	1.0724%	13.655%	910600	Kittson & Roseau	98.313%	119	1.1939%	15.306%

BOTH ARE ALWAYS CALCULATED, ONLY ONE (OR NONE) IS APPLIED



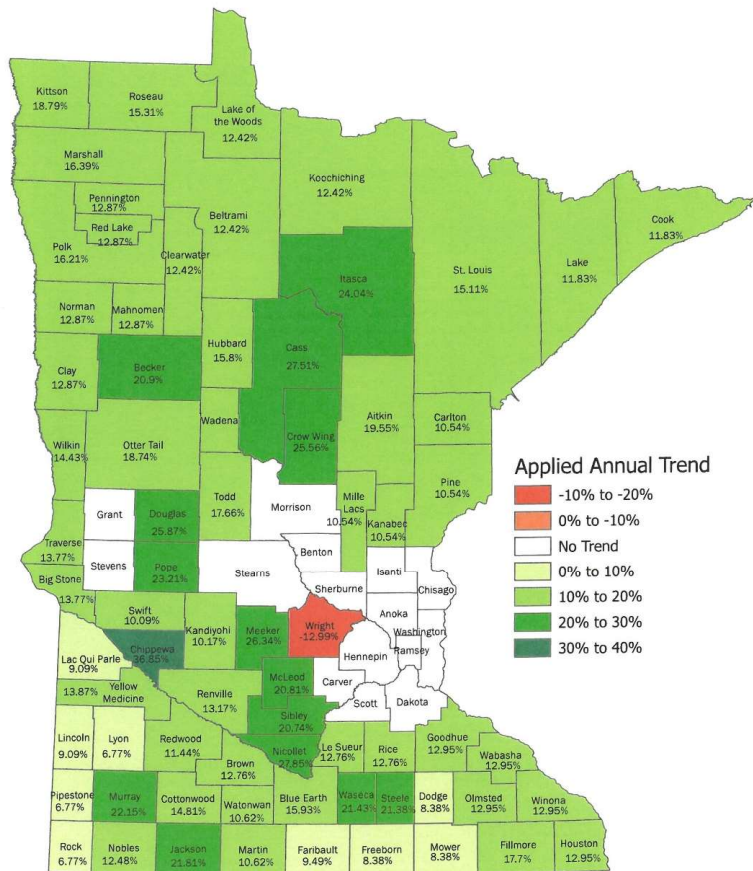


WHEN DO TIME TRENDS GET FINALIZED?

Know where you actually sit with your time trends (if any) that are being applied before you move on to Ratio Analysis and Rate Setting!

2023 Preliminary Agricultural Trends

December 6, 2023



DOR CREATES STATEWIDE AG TREND MAPS

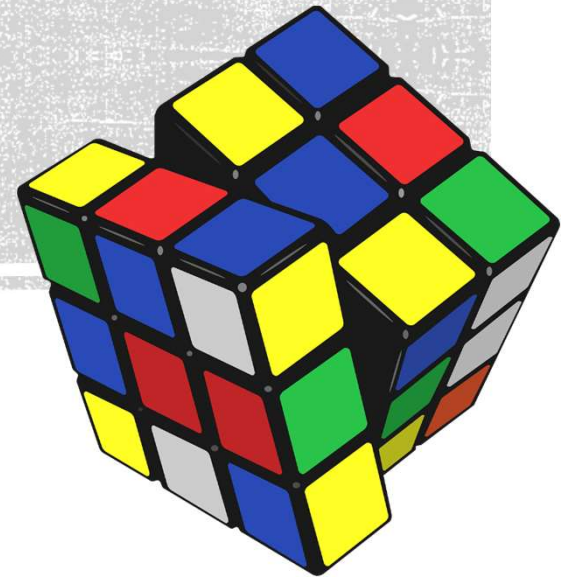
Preliminary are helpful visually for internal analysis.

Applied trend maps are helpful when trying to communicate with the public that “It’s not just our county”



RATIO ANALYSIS

You must never forget ...
Go to the Source for data!

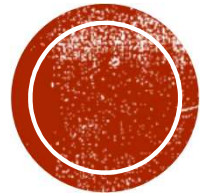


- Go to the Source
- Always start with the DOR's lists
- Correct errors there
- Do data analysis there
- This is the data you will be audited against!

WHEN DOING RATIO ANALYSIS & SETTING RATES

Never forget to ...





THIS CLASS WILL NOT GET INTO THE NUTS AND BOLTS OF SALES LISTING EDITS

Reference the Sales Ratio Study Criteria Guide

and work with your PTCO on specific issues.

Keep in mind: Extreme Ratios (Outliers) are NOT included in Time Trend calculations, but are included in the Ratio Study.

FILTER DOWN TO SOMETHING MORE MANAGEABLE – AT LEAST THE REQUIRED 6 OR MORE IN JURISDICTIONS (I TYPICALLY DO 4 OR MORE)

2023 Study PRELIM Ratio Print. Run on December 06, 2023												
District Type	CityTown	PT Aggregation	PT Aggregation Name	Median Ratio	Minimum Ratio	Maximum Ratio	Coefficient of Dispersion	Price Related Differentia	Price Related Bias	Sale Count	Trended Sale Count	
CO		2	Apartments	58.85%	58.85%	58.85%	-	-	-	1	0	
CO		6	Commercial	91.74%	64.61%	172.14%	-	-	-	5	0	
CO		7	Industrial	41.24%	40.56%	41.92%	-	-	-	2	0	
CO		91	Residential/SRR	94.49%	42.08%	183.66%	16.9464	1.02767	-	134	134	
CO		92	RVL bare > 34.5	77.26%	55.03%	96.60%	-	-	-	11	11	
CO		93	Ag/RVL bare > 34.5 acres	71.74%	32.68%	113.30%	20.9947	1.15180	-0.96781	39	39	
CO		95	Ag/RVL improved > 34.5 acres	72.20%	32.68%	116.11%	22.6631	1.11911	-0.66927	51	51	
COCT	Jadis	91	Residential/SRR	121.58%	81.83%	138.73%	-	-	-	4	4	
COCT	Laona	91	Residential/SRR	86.48%	55.20%	123.16%	-	-	-	5	5	
COCT	Moranville	91	Residential/SRR	82.12%	61.95%	98.09%	-	-	-	5	5	
COCT	Lake	91	Residential/SRR	95.43%	42.08%	134.64%	-	-	-	24	24	
COCT	Badger	91	Residential/SRR	90.59%	81.70%	152.92%	-	-	-	5	5	
COCT	Greenbush	91	Residential/SRR	91.87%	74.17%	131.03%	-	-	-	7	7	
COCT	Roseau	91	Residential/SRR	96.76%	69.11%	138.30%	12.7104	1.00294	-	39	39	
COCT	Warroad	91	Residential/SRR	93.93%	64.15%	147.78%	-	-	-	16	16	
COCT	Golden Valley	93	Ag/RVL bare > 34.5 acres	71.53%	62.73%	72.20%	-	-	-	4	4	
COCT	Huss	93	Ag/RVL bare > 34.5 acres	71.73%	60.88%	81.60%	-	-	-	4	4	
COCT	Lake	93	Ag/RVL bare > 34.5 acres	80.73%	77.44%	96.60%	-	-	-	4	4	
COCT	Golden Valley	95	Ag/RVL improved > 34.5 acres	71.53%	62.73%	72.20%	-	-	-	4	4	
COCT	Huss	95	Ag/RVL improved > 34.5 acres	70.59%	60.88%	81.60%	-	-	-	5	5	
COCT	Mickinock	95	Ag/RVL improved > 34.5 acres	56.75%	32.68%	69.01%	-	-	-	5	5	
COCT	Lake	95	Ag/RVL improved > 34.5 acres	80.73%	77.44%	96.60%	-	-	-	4	4	
Preliminary Ratios = 2023 EMV / Sale Price Trended to 2024												
Final Ratios = 2024 EMV / Sale Price Trended to 2024												
PT Aggregations that could receive a trend												



2024 Prelim Residential Changes

Township	% Decrease	# of Sales	Ratio w/ 2023 EMV	NEW Ratio w/2024 EMV
Jadis		4	124.23%	(very high)
Lake		23	99.26%	(high)
Laona		4	83.09%	
Moranville		5	85.56%	
Badger		5	95.71%	
Greenbush		7	94.70%	
Roseau		39	100.11%	(high)
Warroad		16	97.60%	(high)
All others-Jurisdictions w/1-3 sales		26	94.06%	
Single Wide MH's		8	109.29%	
Double Wide MH's		9	89.73%	
Countywide		129	97.71%	
No Residential Time Trend				
		Goal:	2023	2024
Coefficient of Dispersion (COD)		Under 15	16.92	
Price Related Differential (PRD)		0.98% - 1.03%	1.029%	



CREATE YOUR OWN INTERNAL SUMMARY OF THE MAIN ISSUES FOR THE YEAR

Helps provide focus to the main issues & make it manageable.

Break it down ya'll!



2024 Residential Changes

Township	% Decrease	# of Sales	Ratio w/ 2023 EMV	NEW Ratio w/2024 EMV
Jadis	-10%	4	124.23%	114.20%
Lake	-5%	23	99.26%	94.93%
Laona	no change	4	83.09%	82.60%
Moranville	no change	5	85.56%	81.61%
Badger	no change	5	95.71%	94.74%
Greenbush	no change	7	94.70%	94.54%
Roseau	-10%	39	100.11%	92.48%
Warroad	-5%	16	97.60%	96.17%
All others-Jurisdictions w/1-3 sales		26	94.06%	95.54%
Single Wide MH's		8	109.29%	103.2%
Double Wide MH's		9	89.73%	86.69%
Countywide		129	97.71%	94.54%
No Residential Time Trend				
		Goal:	2023	2024
Coefficient of Dispersion (COD)		Under 15	16.92	15.07
Price Related Differential (PRD)		0.98% - 1.03%	1.029%	1.028%



CREATE YOUR OWN INTERNAL SUMMARY OF THE MAIN ISSUES FOR THE YEAR

When rates are finalized, complete the summary and use as a record keeping and communication tool with staff.

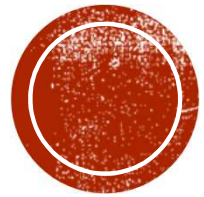


ANOTHER HELPFUL VISUAL SHOWING THE RESIDENTIAL CHANGES FOR THE YEAR

ROSEAU COUNTY 2024 CAMA MAP FACTORS

	R-44-W	R-43-W	R-42-W	R-41-W	R-40-W	R-39-W	R-38-W	R-37-W	R-36-W	R-35-W
T-164-N	50									<i>Other Map Factors</i>
	BLOOMING VALLEY	UNORGANIZED	POHLITZ	DIETER	UNORGANIZED	SPRUCE VALLEY	NORLAND	LAKE	LAKE - 15	Lake Res River - 115%
T-163-N	46	45	24	07	44	43	42	15	WARROAD - 56	Springsteel/ Elm Pt - 125% (-5%)
	80%	80%	80%	95%	Jadis Addn & Unorg 100%	100%	105%	115% (-5%)		MFD Home PP/WATER 80%
	JUNE BERRY	SOLER	MOOSE	ROSS	JADIS - 14	SPRUCE	ENSTROM	CEDARBEND	MORANVILLE	MFD Home DW/PP 40%
T-162-N	41	30	20	28	ROSEAU - 54	31	08	04	21	MFD Home SW/PP 40%
	80%	80%	100%	90%	110% (-10%)	115%	120%	110%	115%	Cabin Stand Alone - 75%
	POLONIA	BARTO	SKAGEN - 29	STOKES	STAFFORD	MALUNG	FALUN	AMERICA	CLEAR RIVER	Cabin State Land - 90%
T-161-N	25	02	BADGER - 51	33	32	18	09	40	39	Cabin Beltrami - 100%
	85%	95%	100%	110%	110%	120%	105%	105%	105%	
	DEWEY	HEREIM - 12	BARNETT	NERESON	GRIMSTAD	MICKNOCK	BEAVER	UNORGANIZED	BADGER	115%
T-160-N	06	GREENBUSH - 52	01	22	11	19	03	36	GREENBUSH	105%
	85%	95%	90%	90%	110%	110%	115%	95%	ROOSEVELT	105%
	LIND	DEER - 05	HUSS	POPLAR GROVE	PALMVILLE	GOLDEN VAL.	REINE	ELKWOOD	ROSEAU	115% (-10%)
T-159-N	17	STRATHCONA - 55	13	26	23	10	27	34	STRATHCONA	80%
	85%	85%	85%	90%	90%	90%	90%	95%	WARROAD	125% (-5%)

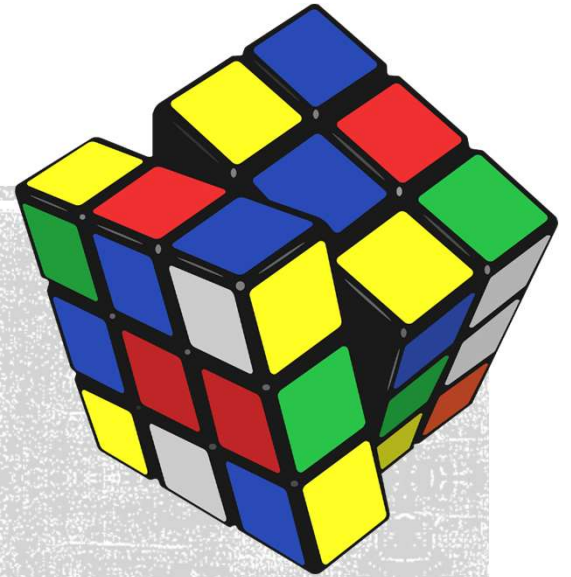




WHOA LIZZY!

How did you just get from here to there?

RATE SETTING



Let's go back to Science Class!



A SCIENCE EXPERIMENT IDENTIFIES A PROBLEM AND TESTS A HYPOTHESIS

Independent Variable

- You change the independent variable and record the effect it has on the dependent variable.
- It's important to change only one variable per experiment, rather than try to combine the effects of variables in one experiment.



Dependent Variable

- Sometimes called the Responding variable, it is the variable that depends on the changes made to the independent variable.



PROBLEM: COUNTYWIDE RATIO IS HIGHER THAN I WANT IT (97.7%)

HYPOTHESIS: IF I LOWER A FEW AREAS WITH EXTREMELY HIGH RATIOS, I WILL IMPROVE MY COUNTYWIDE RATIO

- **Experiment:** Decrease the improvement values of residential buildings in the City of Roseau (39 sales with Median of 100.11%)
- **Independent Variable:** The Map Factor (% of building construction cost table)
- **Dependent Variable:** The new ratio of the Residential Sales in City of Roseau

- I then perform the “Experiment” and apply a 10% decrease to the Map Factor.
- I use the Good Sales listing from the DOR
 - Filter it down to just 12 months PT 91 residential sales (I delete all other sales)
 - Add a column for my new value by parcel and re-calculate new medians.
- I do this for each Jurisdiction I feel is out of alignment and could cause a state board order or even just jurisdictions with poor PRD or COD.



					Manually Add In	From CAMA	Formula	Manually Add In
MULTI PARCEL	Primary Parcel ID	Net Sale Price	Adjusted 2023 EMV	2023 RATIO	2023 MEDIA	2024 EMV	2024 RATIO	2024 MEDIA
	54.0077800	\$148,000	\$107,000	72.30%		\$101,400	68.51%	
	54.0078100	\$165,000	\$148,100	89.76%		\$135,400	82.06%	
	54.0082000	\$119,250	\$112,200	94.09%		\$104,400	87.55%	
	54.0099100	\$140,000	\$115,100	82.21%		\$106,100	75.79%	
	54.0105100	\$150,000	\$136,900	91.27%		\$125,400	83.60%	
	54.0108100	\$105,000	\$124,200	118.29%		\$114,500	109.05%	
	54.0131800	\$165,350	\$120,400	72.82%		\$108,100	65.38%	
	54.0140800	\$203,425	\$207,100	101.81%		\$191,200	93.99%	
	54.0145000	\$105,000	\$110,200	104.95%		\$102,000	97.14%	
	54.0164200	\$158,000	\$123,100	77.91%		\$123,200	77.97%	
	54.0175300	\$162,500	\$162,600	100.06%		\$148,700	91.51%	
	54.0179200	\$167,000	\$158,400	94.85%		\$146,100	87.49%	
	54.0181000	\$195,000	\$185,300	95.03%		\$171,100	87.74%	
	54.0200500	\$267,000	\$311,200	116.55%		\$287,200	107.57%	
	54.0204100	\$126,100	\$151,100	119.83%		\$138,000	109.44%	
MULTI-PARCEL	54.0208300	\$74,690	\$66,000	88.37%		\$61,200	81.94%	
	54.0214600	\$130,000	\$150,000	115.38%		\$140,500	108.08%	
	54.0238600	\$164,900	\$191,700	116.25%		\$163,100	98.91%	
	54.0282400	\$205,000	\$200,600	97.85%		\$187,700	91.56%	
	54.0285400	\$435,000	\$516,400	118.71%		\$477,100	109.68%	
	54.0288400	\$75,000	\$99,900	133.20%		\$73,600	98.13%	
MULTI-PARCEL	54.0291630	\$325,000	\$335,400	103.20%		\$310,400	95.51%	
	54.0291673	\$199,500	\$177,100	88.77%		\$163,300	81.85%	
	54.0291674	\$217,000	\$182,300	84.01%		\$168,200	77.51%	
	54.0298617	\$290,000	\$301,000	103.79%		\$277,900	95.83%	
	54.0298656	\$350,000	\$369,600	105.60%		\$341,000	97.43%	
MULTI-PARCEL	54.0302916	\$405,000	\$395,900	97.75%		\$366,400	90.47%	
	54.0302920	\$435,000	\$436,900	100.44%		\$417,500	95.98%	
	54.0303074	\$248,000	\$230,500	92.94%		\$210,600	84.92%	
	54.0303076	\$250,000	\$225,400	90.16%	100.11%	\$205,900	82.36%	92.48%

CITY OF ROSEAU 10% DECREASE

Have a way to track multi parcel sales so you get the correct new “experiment” total EMV for a sale.

Have a way to track “New Construction” so your formula replicates how DOR will handle those sales.

Quiz Question! Why did the new median ratio only go down approx. 8% if I decreased the values by 10%?



KEEP REPEATING THE PROCESS...

1 independent variable at a time, until you get that “side” of your Rubix cube all the same color.

If you try and do all of the changes at once, you are not isolating the problems and solving them.



Break it down ya'll!



		From CAMA					Formula Manually M/K	From Add In CAMA	Formula P/K	Copy Column O			
Primary Parcel ID	Multi parcel	New Constru ction	Net Sale Price	Net Sale Price Adj. to 2023	Adjusted 2021 EMV	Adjusted 2022 EMV	2022 Trended Ratio	Median 2022	Adjusted 2023 EMV	2023 Trend ed Ratio	Median 2023	NON TRENDED 2023 RATIO	NON TRENDED Median 2023
31.0066715			\$275,000	\$295,810	\$215,000	\$241,100	81.5%		\$289,900	98.0%		105.4%	
31.0083300			\$299,000	\$321,626	\$194,200	\$221,500	68.9%	78.2%	\$298,700	92.9%	94.0%	99.9%	106.5%
51.0000400			\$160,000	\$172,108	\$96,500	\$122,000	70.9%		\$161,900	94.1%		101.2%	
51.0007000			\$153,000	\$190,429	\$93,600	\$121,000	63.5%		\$160,500	84.3%		104.9%	
51.0008200			\$170,000	\$191,046	\$115,600	\$145,400	76.1%		\$193,800	101.4%		114.0%	
51.0008500			\$111,766	\$121,990	\$84,400	\$106,700	87.5%		\$142,000	116.4%		127.1%	
51.0021400			\$124,900	\$134,352	\$73,400	\$90,700	67.5%		\$121,300	90.3%		97.1%	
51.0022600			\$189,000	\$200,358	\$142,900	\$167,800	83.8%		\$226,300	112.9%		119.7%	
51.0077800			\$140,000	\$150,594	\$84,600	\$105,900	70.3%	70.9%	\$142,200	94.4%	94.4%	101.6%	104.9%
52.0014500			\$110,486	\$122,365	\$45,300	\$52,600	43.0%		\$109,500	89.5%		99.1%	
52.0032800		49600	\$40,000	\$49,064	\$54,100	\$68,600	139.8%		\$89,800	183.0%		224.5%	
52.0036400			\$26,000	\$27,562	\$31,800	\$34,100	123.7%		\$40,100	145.5%		154.2%	
52.0057400			\$40,000	\$45,613	\$28,400	\$35,400	77.6%		\$45,400	99.5%		113.5%	
52.0068500			\$145,000	\$177,858	\$84,600	\$109,000	61.3%		\$141,100	79.3%		97.3%	
52.0088900			\$165,000	\$205,364	\$108,500	\$146,000	71.1%		\$190,200	92.6%		115.3%	
52.0092800			\$215,000	\$252,426	\$120,900	\$167,800	66.5%		\$217,900	86.3%		101.3%	
52.0106600			\$26,900	\$33,481	\$11,300	\$10,600	31.7%		\$13,700	40.9%		50.9%	
52.0109600			\$365,000	\$410,186	\$248,700	\$300,100	73.2%		\$372,400	90.8%		102.0%	
52.0131900			\$230,000	\$254,730	\$196,700	\$231,300	90.8%	72.1%	\$302,800	118.9%	91.7%	131.7%	107.8%

	ALL		74.9%			93.3%		105.9%
	6 or more only		75.3%			93.7%		106.4%
	less than 6 only		72.6%			91.7%		105.3%

DEVELOP A RESIDENTIAL SALES LIST WITH ALL SALES IN THE COUNTY

Complete the process for each jurisdiction with concerns and have a countywide median formula that can adjust as you work each jurisdiction to see the progress at the countywide level.

Dissect your data in any other ways you want to slice and dice!

You're just about to get another side of that Rubix cube complete!



ROSEAU COUNTY
2024 CAMA MAP FACTORS

	R-44-W	R-43-W	R-42-W	R-41-W	R-40-W	R-39-W	R-38-W	R-37-W	R-36-W	R-35-W
T-164-N	50									<i>Other Map Factors</i>
	BLOOMING VALLEY	UNORGANIZED	POHLITZ	DIETER	UNORGANIZED	SPRUCE VALLEY	NORLAND	LAKE	LAKE - 15	Lake Res River - 115% Springsteel/ Elm Pt - 125% (-5%)
T-163-N	46	45	24	07	44	43	42	15	WARROAD - 56	MFD/Home PP/WATER 80% MFD/Home DW/PP 40% MFD/Home SW/PP 40%
	80%	80%	80%	95%	Jadis Addn & Unorg 100%	100%	105%	115% (-5%)		Cabin Stand Alone - 75% Cabin State Land - 90% Cabin Beltrami -100%
T-162-N	JUNE BERRY	SOLER	MOOSE	ROSS	JADIS - 14	SPRUCE	EN STROM	CEDARBEND	MORANVILLE	LAONA - 16
	41	30	20	28	ROSEAU - 54	31	08	04	21	ROOSEVELT - 53
	80%	80%	100%	90%	110% (-10%)	115%	120%	110%	115%	105%
T-161-N	POLONIA	BARTO	SKAGEN - 29	STOKES	STAFFORD	MALUNG	FALUN	AMERICA	CLEAR RIVER	OAKS
	25	02	BADGER - 51	33	32	18	09	40	39	38
	85%	95%	100%	110%	110%	120%	105%	105%	105%	105%
T-160-N	DEWEY	HEREIM - 12	BARNETT	NERESON	GRIMSTAD	MICKINOCK	BEAVER	UNORGANIZED	BADGER	115%
	06	GREENBUSH - 52	01	22	11	19	03	36	GREENBUSH	105%
	85%	95%	90%	90%	110% WANNASKA:105%	110% WANNASKA:105%	115%	95%	ROOSEVELT	105%
T-159-N	LIND	DEER - 05	HUSS	POPLAR GROVE	PALMVILLE	GOLDEN VAL.	REINE	ELKWOOD	ROSEAU	115% (-10%)
	17	STRATHCONA - 55	13	26	23	10	27	34	STRATHCONA	80%
	85%	85%	85%	90%	90%	90%	90%	95%	WARROAD	125% (-5%)



A	B	C	D	E	H	I	J	K	L	M	N	O	P	Q	R
PLIT OR COMBINE	PARCEL #	MULTI	ECRV #	PROP TYP	SALE DATE	DEED TY	SALE PRICE	2023 EMV	2023 RATIO %	TOTAL ACRES	Trended Sale Price	Trended Ratio	Trended \$/ACRE	2024 EMV	2024 RATIO
	10.0014300		1506305	32	12/9/2022	CD	\$ 300,000	\$ 204,500	68.2%	155.54	\$286,763	71.3%	\$ 1,844	\$ 235,700	82.2%
	10.0024100	M	1497904	34	12/12/2022	WD	\$ 94,000	\$ 68,800	73.2%	80.00	\$109,682	62.7%	\$ 1,371	\$ 82,500	75.2%
	10.0024702		1583667	34	9/22/2023	WD	\$ 49,000	\$ 37,100	75.7%	40.00	\$51,382	72.2%	\$ 1,285	\$ 50,800	98.9%
	10.0031600		1511029	32	2/9/2023	WD	\$ 240,000	\$ 196,200	81.8%	240.00	\$273,470	71.7%	\$ 1,132	\$ 256,300	93.7%
PLIT	11.0000400		1498857	32	12/12/2022	TD	\$ 600,000	\$ 245,400	40.9%	160.87	\$700,096	35.1%	\$ 4,352	\$ 342,600	48.9%
	11.0075100		1575931	31	8/31/2023	WD	\$ 219,000	\$ 241,000	110.0%	40.00	\$232,389	103.7%	\$ 1,382	\$ 258,300	111.1%
	12.0014200		1510399	31	2/22/2023	WD	\$ 400,000	\$ 297,500	74.4%	160.00	\$455,783	65.3%	\$ 2,667	\$ 308,900	67.8%
	13.0040500	M	1490993	48	11/15/2022	WD	\$ 345,000	\$ 269,700	78.2%	240.00	\$407,361	66.2%	\$ 1,697	\$ 313,400	76.9%
	13.0049000	M	1583494	31	9/18/2023	WD	\$ 500,000	\$ 370,100	74.0%	240.00	\$524,309	70.6%	\$ 1,875	\$ 394,300	75.2%
	13.0059400		1494685	34	11/29/2022	WD	\$ 41,000	\$ 37,400	91.2%	40.00	\$48,411	77.3%	\$ 1,210	\$ 44,700	92.3%
	13.0066300	M	1475836	48	10/4/2022	WD	\$ 300,000	\$ 292,500	97.5%	240.00	\$358,456	81.6%	\$ 1,494	\$ 338,400	94.4%
	14.0162201		1578437	32	9/8/2023	WD	\$ 45,000	\$ 43,500	96.7%	40.00	\$47,188	92.2%	\$ 1,180	\$ 45,800	97.1%
	16.0088000		1485077	34	10/26/2022	WD	\$ 80,000	\$ 78,000	97.5%	80.00	\$95,588	81.6%	\$ 1,195	\$ 93,600	97.9%
PLIT	19.0076000		1547776	47	6/20/2023	WD	\$ 493,000	\$ 369,700	75.0%	40.00	\$535,707	69.0%	\$ 5,678	\$ 413,800	77.2%
	20.0061300		1569134	32	8/11/2023	WD	\$ 132,000	\$ 110,700	83.9%	80.00	\$140,070	79.0%	\$ 1,751	\$ 132,500	94.6%
	21.0049300		1498637	32	12/15/2022	TD	\$ 179,550	\$ 106,200	59.1%	70.62	\$209,504	50.7%	\$ 2,967	\$ 116,900	55.8%
PLIT	22.0033400		1547008	48	6/16/2023	PD	\$ 150,000	\$ 89,700	59.8%	80.00	\$162,994	55.0%	\$ 2,037	\$ 110,900	68.0%
	25.0037100		1506655	32	1/17/2023	WD	\$ 94,000	\$ 85,500	91.0%	80.00	\$108,388	78.9%	\$ 1,355	\$ 102,500	94.6%
	26.0041201		1506660	32	1/13/2023	WD	\$ 257,300	\$ 193,500	75.2%	166.97	\$296,682	65.2%	\$ 1,777	\$ 232,500	78.4%
	27.0018700		1510014	31	2/9/2023	WD	\$ 100,000	\$ 132,300	132.3%	80.00	\$113,946	116.1%	\$ 1,071	\$ 145,200	127.4%
	27.0044500	M	1509998	31	2/9/2023	WD	\$ 225,000	\$ 262,200	116.5%	100.62	\$256,378	102.3%	\$ 1,458	\$ 275,600	107.5%
	29.0007000		1496870	32	12/8/2022	WD	\$ 80,000	\$ 63,600	79.5%	40.00	\$93,346	68.1%	\$ 2,334	\$ 82,700	88.6%
PLIT	29.0020201	M	1496866	32	12/8/2022	WD	\$ 882,000	\$ 699,900	79.4%	441.00	\$1,029,141	68.0%	\$ 2,334	\$ 910,200	88.4%
	29.0037400	M	1500631	47	12/16/2022	CD	\$ 500,000	\$ 672,300	134.5%	160.00	\$583,413	115.2%	\$ 712	\$ 687,000	117.8%
PLIT	31.0047501		1580067	32	9/14/2023	WD	\$ 95,180	\$ 88,300	92.8%	95.38	\$99,807	88.5%	\$ 1,046	\$ 95,000	95.2%
	31.0072700		1523825	32	2/10/2023	CD	\$ 200,870	\$ 232,000	115.5%	142.00	\$223,187	103.9%	\$ 1,572	\$ 217,700	97.5%
	32.0023200		1487626	32	10/31/2022	WD	\$ 328,000	\$ 131,500	40.1%	80.00	\$391,912	33.6%	\$ 4,899	\$ 183,900	46.9%
	33.0004900	M	1494607	32	12/13/2022	TD	\$ 1,450,000	\$ 1,160,900	80.1%	633.20	\$1,691,899	68.6%	\$ 2,656	\$ 1,495,900	88.4%
	43.0015800		1500629	32	12/9/2022	CD	\$ 32,000	\$ 36,600	114.4%	40.00	\$32,309	113.3%	\$ 808	\$ 38,000	117.6%
									Non Trended	Non Trended		Trended	Trended		NEW RATIO
									32 AG 2a only (BARE)	28	79.4%	\$1,656	68.4%	\$1,810	90.4%
									34 RVL 2b only (BARE)	6	91.0%	\$1,100	79.4%	\$1,247	97.8%
									34, 35, 48 RVL Combined (BARE) 92	11	85.2%	\$1,219	77.3%	\$1,299	92.8%
									32, 34, 35, 48 AG/RVL Combined 93	39	79.5%	\$1,446	71.7%	\$1,689	92.3%
									31, 47 Improved AG	12	94.2%	\$1,240	86.2%	\$1,507	93.6%
									33 IMPROVED SRR						
									31, 33, 47 Improved	12	94.2%	\$1,240	86.2%	\$1,507	93.6%
									ALL SALES 95	51	80.1%	\$1,438	72.2%	\$1,609	92.3%

DEVELOP AN AG LAND SALES LIST

Break
it
down
ya'll!



2024 Ag Land & Building Changes

COUNTYWIDE AG TIME TREND: 15.306% ANNUALLY (2024)							
TILLABLE LAND: All received 15% increase, unless otherwise noted:	0%	5%	10%	20%	30%	35%	40%
	Dieter	Enstrom	Malung	Deer	Nereson	Barto	Grimstad
	Laona	Lind	Falun	Huss	Skagen		Mickinock
	Sp Valley	Jadis	Moranville	Moose	Stokes		Stafford
		Norland		Polonia			
	Spruce		Poplar Grove				
NON-TILLABLE LAND	2023	2024	\$ Change	% Change			
Woods (West)	\$975	\$1,170	+\$195	20%			
Woods (East)	\$1,000	\$1,200	+\$200	20%			
Low Brush	\$690	\$830	+\$140	20%			
Pasture	\$750	\$900	+\$150	20%			
Waste	\$350	\$420	+\$70	20%			
State Study Groupings:	# of Sales	Original Trended Ratio	New Trended Ratio	OLD PRD	NEW PRD	OLD COD	NEW COD
92-Rural Vacant Land	11	77.3%	92.8%				
93-Ag & RVL - No Improvements	39	71.7%	92.3%	1.152%	1.141%	20.995	16.63
95-Ag Improved & Unimproved	51	72.2%	92.3%	1.119%	1.115%	22.663	17.69

INTERNAL SUMMARY OF AG LAND ISSUES & DECISION FOR THE YEAR

I always get the ratios, PRD and COD from the DOR ratio print



ROSEAU COUNTY

TILLABLE LAND RATES FOR 2024 ASSESSMENT YEAR

	R-44-W	R-43-W	R-42-W	R-41-W	R-40-W	R-39-W	R-38-W	R-37-W	R-36-W	R-35-W
T-164-N	50	UNORGANIZED								
	\$910									
	BLOOMING VALLEY 15%		POHLITZ 15%	DIETER	UNORGANIZED 15%	SPRUCE VALLEY	NORLAND 5%	LAKE 15%	LAKE	
T-163-N	46	45	24	07	44	43	42	15	WARROAD - 56	
			\$1,370	\$1,670	\$1,160		\$1,410	\$2,000		
			\$1,240	\$1,490	\$1,065	\$995	\$1,235	\$1,765		
	\$910		\$1,150	\$1,190		\$925	\$1,035	\$1,470		
T-162-N	41	30	20	28	ROSEAU - 54	31	08	04	21	LAONA - 16 ROOSEVELT - 53
	JUNE BERRY 15%	SOLER 15%	MOOSE 20%	ROSS 15%	JADIS 5%	SPRUCE 5%	ENSTROM 5%	CEDARBEND 15%	MORANVILLE 10%	
	\$1,145	\$1,810	\$1,770	\$1,810	\$2,060	\$1,910	\$1,640	\$1,735	\$1,745	\$1,730
	\$1,095	\$1,300	\$1,490	\$1,480	\$1,820	\$1,705	\$1,485	\$1,575	\$1,575	\$1,585
		\$1,065	\$1,190	\$1,180	\$1,390	\$1,340	\$1,170	\$1,240	\$1,360	\$1,270
T-161-N	25	02	BADGER - 51	33	32	18	09	40	39	38
	\$1,830	\$2,080	\$2,120	\$2,160	\$2,420	\$1,960	\$1,680	\$1,420	\$1,665	\$1,420
	\$1,480	\$1,700	\$1,685	\$1,780	\$2,085	\$1,835	\$1,440	\$1,275	\$1,525	\$1,275
	\$1,290	\$1,375	\$1,470	\$1,495	\$1,880	\$1,430	\$1,225	\$1,095	\$1,340	\$1,095
T-160-N	06	GREENBUSH - 52	01	22	11	19	03	36		
	DEWEY 15%	HEREIM 15%	BARNETT 15%	NERESON 30%	GRIMSTAD 40%	MICKINOCK 40%	BEAVER 15%	UNORGANIZED		
	\$2,035	\$1,955	\$1,895	\$2,340	\$2,360	\$2,340	\$1,695			
	\$1,720	\$1,655	\$1,600	\$1,965	\$2,185	\$2,185	\$1,445			
	\$1,470	\$1,415	\$1,325	\$1,640	\$1,780	\$1,765	\$1,160			
T-159-N	17	STRATHCONA - 55	13	26	23	10	27	34		
	LIND 5%	DEER 20%	HUSS 20%	POPLAR GROVE 20%	PALMVILLE 15%	GOLDEN VAL. 15%	REINE 15%	ELKWOOD		
	\$1,925	\$2,310	\$1,975	\$1,840	\$1,695	\$1,560	\$1,695			
	\$1,635	\$1,975	\$1,685	\$1,555	\$1,325	\$1,310	\$1,445			
	\$1,355	\$1,615	\$1,375	\$1,250	\$1,035	\$1,025	\$1,160			

KEY

= GRADE A PRICE RANGE
 = GRADE B PRICE RANGE
 = GRADE C PRICE RANGE



ROSEAU COUNTY

RURAL VACANT LAND RATES FOR 2024 ASSESSMENT YEAR

	R-44-W	R-43-W	R-42-W	R-41-W	R-40-W	R-39-W	R-38-W	R-37-W	R-36-W	R-35-W			
T-164-N	50	UNORGANIZED	POHLITZ	DIETER	UNORGANIZED	SPRUCE VALLEY	NORLAND	LAKE	LAKE - 15				
	BLOOMING VALLEY												
T-163-N	46	45	24	07	44	43	42	15	WARROAD - 56				
T-162-N	JUNE BERRY 41	SOLER 30	MOOSE 20	ROSS 28	JADIS - 14 ROSEAU - 54	SPRUCE 31	EN STROM 08	CEDARBEND 04	MORANVILLE 21	LAONA - 16 ROOSEVELT - 53			
T-161-N	POLONIA 25	BARTO 02	SKAGEN - 29 BADGER - 51	STOKES 33	STAFFORD 32	MALUNG 18	FALUN 09	AMERICA 40	CLEAR RIVER 39	OAKS 38			
T-160-N	DEWEY 06	HEREIM - 12 GREENBUSH - 52	BARNETT 01	NERE SON 22	GRIMSTAD 11	MICKINOCK 19	BEAVER 03	UNORGANIZED 36	Non-Tillable Rates				
										2022	2023	2024	
										WOODS (WEST)	\$850	\$975	\$1,170
										WOODS (EAST)	\$870	\$1,000	\$1,200
T-159-N	LIND 17	DEER - 05 STRATHCONA - 55	HUSS 13	POPLAR GROVE 26	PALMVILLE 23	GOLDEN VAL. 10	REINE 27	ELKWOOD 34	LOW BRUSH	\$575	\$690	\$830	
									PASTURE	\$625	\$750	\$900	
									WASTE	\$300	\$350	\$420	



NEWS ALERT'S

**THERE ARE MANY
FANCY & MORE
HIGH TECH WAYS
TO DO THIS!**

This class is just showing the Nuts and Bolts to understand the basics of what needs to be done.

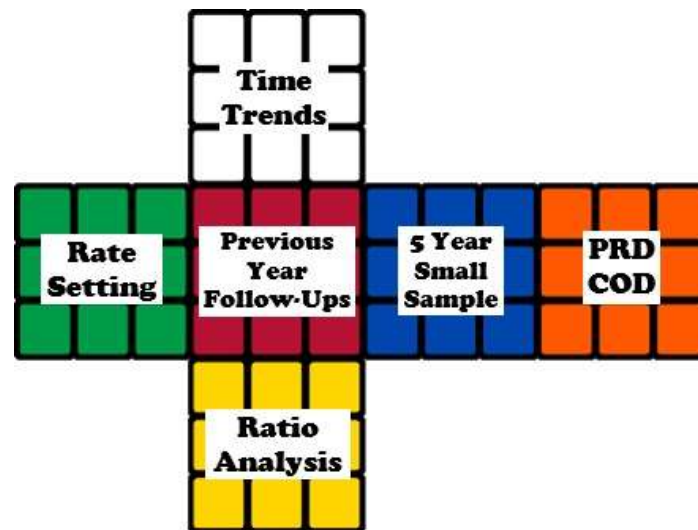


Rules of Engagement: Rate Setting

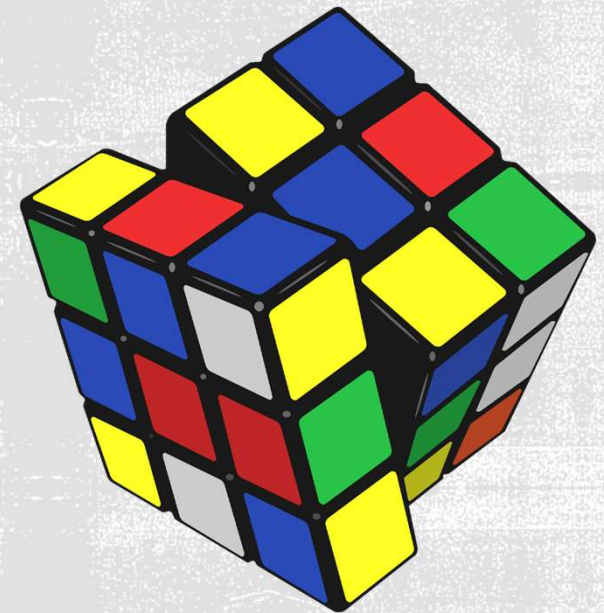
- Set Rates in the Following Order
 - Ag & Rural Vacant Land Rates
 - Site/Excess Site or Residential (front foot/square foot rates)
 - Set Building Rates (Map Factors)

Remember, a 15% decrease on buildings will not produce a 15% decrease on the entire parcel if land is unchanged.

Break it down
ya'll!



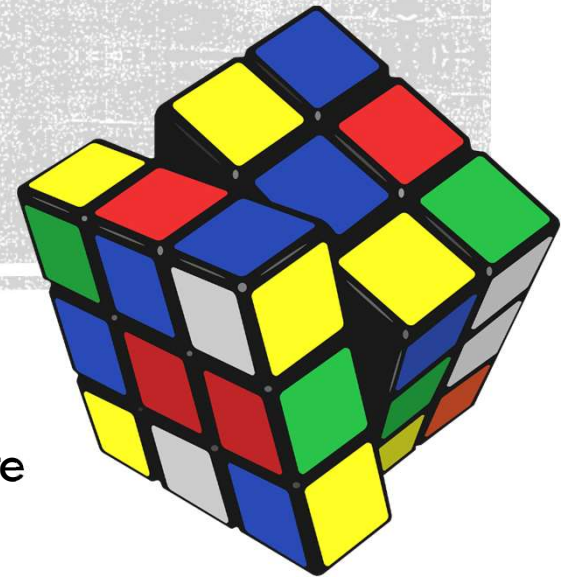
**THE ASSESSMENT,
LIKE A RUBIX CUBE**



OTHER ISSUES TO CONSIDER

Follow Up Order... what Follow Up Order?

Keep them Handy and Don't forget to look at them before finalizing your rates!



REVIEW OF FOLLOW-UP ISSUES IDENTIFIED FROM 2023 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
County/City/Township:		County			
Property Type			Identified Issue		
<input type="checkbox"/> Res/SRR	<input checked="" type="checkbox"/> Agricultural	<input type="checkbox"/> Rural Vacant	<input type="checkbox"/> Ag Borders	<input type="checkbox"/> Ratio	<input type="checkbox"/> COD
<input type="checkbox"/> Ag/RVL	<input type="checkbox"/> Apartment	<input type="checkbox"/> Comm/Ind	<input checked="" type="checkbox"/> PRD	<input type="checkbox"/> PRB	<input type="checkbox"/> Other
Remarks: The PRD for PT 93 was 1.10 and for PT 95 was 1.08. A PRD at this level indicates the possibility of a regressive assessment where high value properties are under-appraised. For 2024 the PRD worsened slightly (1.14) and the PRD for PT 95 is also outside of the desirable range (1.14). Therefore, both will be follow-ups for 2025.					



2024 STATE BOARD RECOMMENDATIONS <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Assessment District	Classification and Kind (Land, Structures) of Property	Increase	Decrease

FOLLOW-UP ISSUES FOR 2025 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
County/City/Township:		County			
Property Type			Identified Issue		
<input type="checkbox"/> Res/SRR	<input checked="" type="checkbox"/> Agricultural	<input type="checkbox"/> Rural Vacant	<input type="checkbox"/> Ag Borders	<input type="checkbox"/> Ratio	<input type="checkbox"/> COD
<input type="checkbox"/> Ag/RVL	<input type="checkbox"/> Apartment	<input type="checkbox"/> Comm/Ind	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> PRD	<input type="checkbox"/> PRB
Remarks: This was a follow-up last year. See above discussion.					



County/City/Township:		County			
Property Type			Identified Issue		
<input type="checkbox"/> Res/SRR	<input type="checkbox"/> Agricultural	<input type="checkbox"/> Rural Vacant	<input type="checkbox"/> Ag Borders	<input checked="" type="checkbox"/> Ratio	<input type="checkbox"/> COD
<input type="checkbox"/> Ag/RVL	<input checked="" type="checkbox"/> Apartment	<input type="checkbox"/> Comm/Ind	<input type="checkbox"/> Other	<input type="checkbox"/> PRD	<input type="checkbox"/> PRB
Remarks: The small sample report is indicating that values might be low for PT 2 (apartments). This year there was one sale with a ratio of 58.8% and -0.3% local effort. All five years have sales and 4 of those years have low median ratios.					

County/City/Township:		Enstrom Township			
Property Type			Identified Issue		
<input checked="" type="checkbox"/> Res/SRR	<input type="checkbox"/> Agricultural	<input type="checkbox"/> Rural Vacant	<input type="checkbox"/> Ag Borders	<input checked="" type="checkbox"/> Ratio	<input type="checkbox"/> COD
<input type="checkbox"/> Ag/RVL	<input type="checkbox"/> Apartment	<input type="checkbox"/> Comm/Ind	<input type="checkbox"/> Other	<input type="checkbox"/> PRD	<input type="checkbox"/> PRB
Remarks: The small sample report is indicating that values might be low for PT 91. There were two sales this year with a median ratio of 79.4% and -1.1% local effort. All five years have sales and 4 of those years have low median ratios.					



SBAE COUNTY SUMMARY REPORT

3 main sections:

- Review of previous year issues
- State Board Recommendations
- Follow-Up Issues for the next year (If you don't fix these, they could become a State Board Order)

Where does DOR get these issues from?

5 Year/Small Sample Report





WHAT AM I SUPPOSED TO DO WITH THE 5 YEAR/ SMALL SAMPLE REPORT?

Lots of information!

What should we focus in on?

HOW TO FOCUS IN ON WHAT'S IMPORTANT

What is the report doing?

- Weighted Median takes sales from previous 5 years and gives more importance to the more recent years of sales.
- 2024: 30%
- 2023: 25%
- 2022: 20%
- 2021: 15%
- 2020: 10%
- Weighted Median is only calculated in Jurisdictions with 6 or more sales in the 5 year span

Filters are your Friend!

- Use the “Small Sample” Report
- Filter down to Weighted Median Flag “X”
- A Weighted Median Flagged line has 6 or more sales in 5 years and a weighted median outside of the 90%-105% range.
 - Don't automatically get follow ups on every one that's flagged.
 - Look closer at the sales and see if they are consistently all high or all low.
 - Have you made any “local effort” to improve the ratios?
 - Was there a sale in this jurisdiction in the most recent previous year?

**THIS REPORT CAN TELL US MANY OTHER IMPORTANT THINGS,
BUT THIS IS A GREAT PLACE TO START!**



REMEMBER THOSE FOLLOW UP'S I HAD?

Roseau 2023 Study FINAL Small Sample Report. Run on April 2, 2024
Minnesota Department of Revenue, Property Tax Data & Analysis Unit

District Type	CT Code	CT Name	PT Aggregation	Weighted Median Flag	Five Year Sale Count	Five Year Weighted Median	2024 % Value Change	2024 Parcel Count	2023 Sale Count	FINAL Median Ratio 2023	2023 % Value Change	2022 Sale Count	Median Ratio 2022	2021 Sale Count	Median Ratio 2021	2021 % Value Change	2020 Sale Count	Median Ratio 2020	2020 % Value Change	2019 Sale Count	Median Ratio 2019
CO	0000	Roseau	02 Apartment	X	14	75.6%	-0.3%	51	1	58.8%	2.4%	1	71.3%	2	89.2%	3.0%	3	87.9%	9.3%	7	91.0%
COCT	0900	Roseau	02 Apartment	X	6	72.2%	-0.7%	21	1	58.8%	-0.7%	1	71.3%	1	84.3%	5.3%	1	64.4%	8.3%	2	101.8%
COCT	1600	Warroad	06 Commercial	X	7	83.1%	1.1%	82	1	71.5%	17.7%	1	97.9%	2	84.6%	1.9%	3	79.7%	4.4%	0	
COCT	0009	Enstrom	91 Res/SRR Combined	X	17	84.0%	-1.1%	125	2	79.4%	25.2%	4	80.0%	2	87.3%	6.7%	4	92.6%	6.8%	5	88.5%
COCT	0016	Laona	91 Res/SRR Combined	X	20	88.0%	-2.7%	185	4	82.6%	25.2%	4	90.5%	4	95.0%	4.4%	6	92.8%	7.7%	2	76.3%
COCT	0018	Malung	91 Res/SRR Combined	X	15	83.8%	-0.1%	117	1	81.7%	22.3%	3	73.3%	6	91.8%	4.8%	5	94.6%	0.8%	0	
COCT	0021	Moranville	91 Res/SRR Combined	X	27	87.7%	1.1%	288	5	81.6%	16.0%	5	95.3%	5	89.6%	1.8%	1	80.4%	9.4%	11	94.2%
COCT	0031	Spruce	91 Res/SRR Combined	X	18	89.3%	0.6%	172	2	82.6%	21.9%	7	94.0%	4	88.4%	1.9%	4	93.3%	2.3%	1	93.4%
COCT	0033	Stokes	91 Res/SRR Combined	X	12	122.0%	6.0%	56	2	148.4%	23.6%	2	129.6%	2	87.6%	-8.6%	0		16.1%	6	92.0%
COCT	0087	Unorg. 161-36	91 Res/SRR Combined	X	7	105.4%	-4.7%	49	1	103.5%	23.3%	1	130.5%	1	105.5%	1.6%	3	86.3%	19.0%	1	76.8%

Notes:
 1. Low Total Sales Flag indicates there are less than 6 sales over 5 years.
 2. Value Change Flag indicates that less than 2 years had value changes.
 3. Weighted Median Flag indicates where the five year weighted median is out of the .90-1.05 range. A five-year weighted median is calculated to provide a snapshot of median ratios over the 5 years. The weighted median gives more weight to the median ratios from more recent years and less weight to the median ratios from older years. The five-year weighted median is not calculated
 Weight: 2023 30% 2022 25% 2021 20% 2020 15% 2019 10%

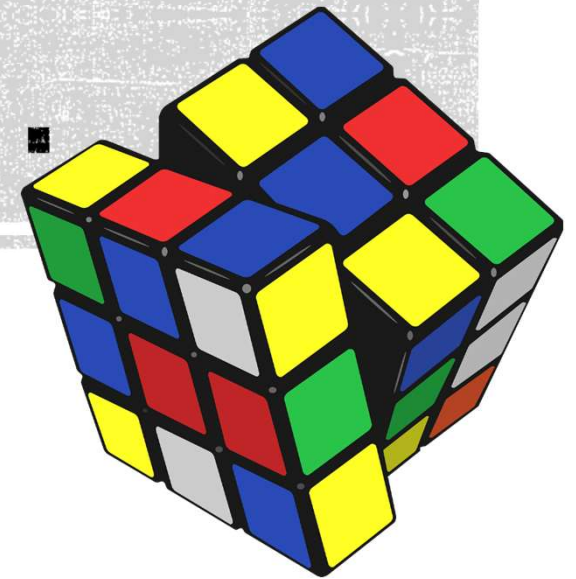
PRD AND COD FOLLOW UP'S WILL COME FROM THE FINAL RATIO PRINT REPORTS



OTHER ISSUES TO CONSIDER CONT...

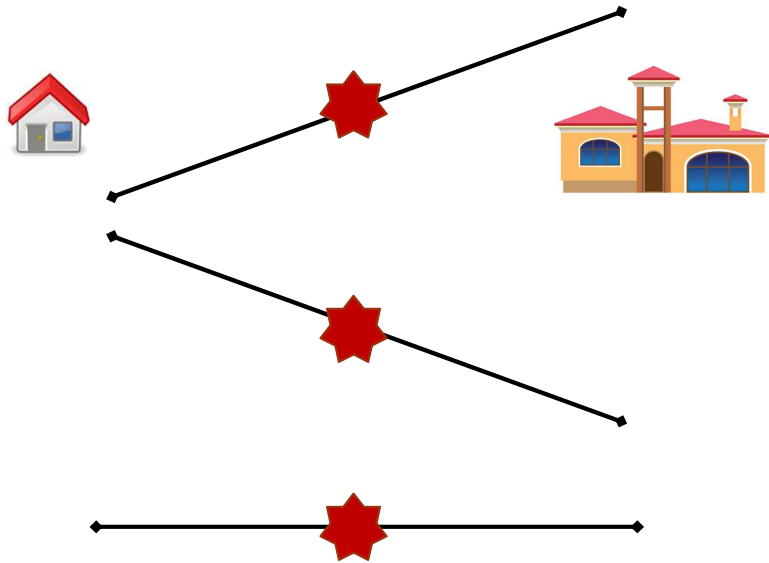
PRD and COD... too many abbreviations!

Where's that Mass Appraisal Binder?!



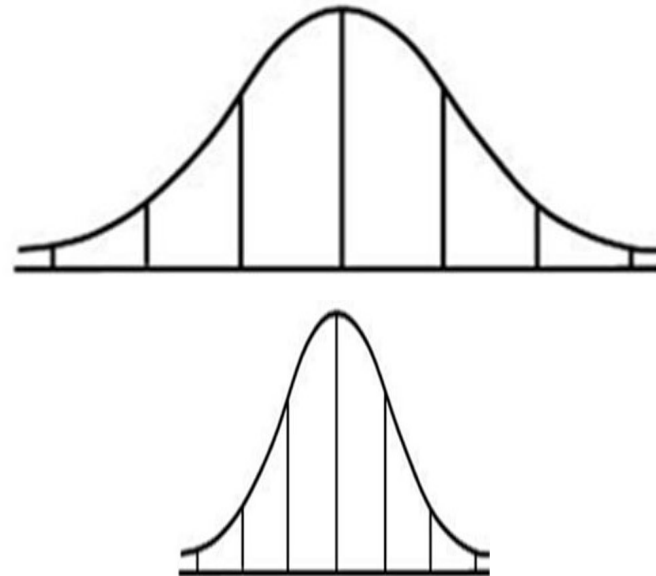
QUALITY OF ASSESSMENT: STATISTICS!

**PRICE RELATED
DIFFERENTIAL**



MEASURE OF BIAS

**COEFFICIENT
OF DISPERSION**



MEASURE OF UNIFORMITY





Greater than 1.03

Regressive Tax

Under Valuing Higher valued homes
Over Valuing Lower valued homes

1.03



Acceptable
Range is
BETWEEN

1.00

0.98

and

1.03

0.98

Less than 0.98

Progressive Tax

Under Valuing Lower valued homes
Over Valuing Higher valued homes



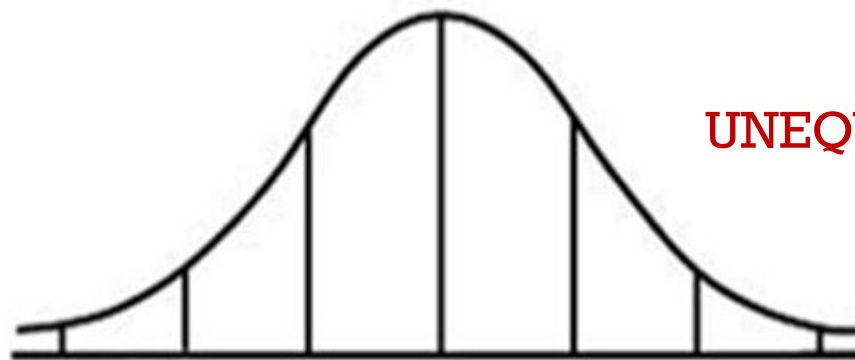
PRICE RELATED DIFFERENTIAL:

**(MEAN / WEIGHTED
MEAN)**

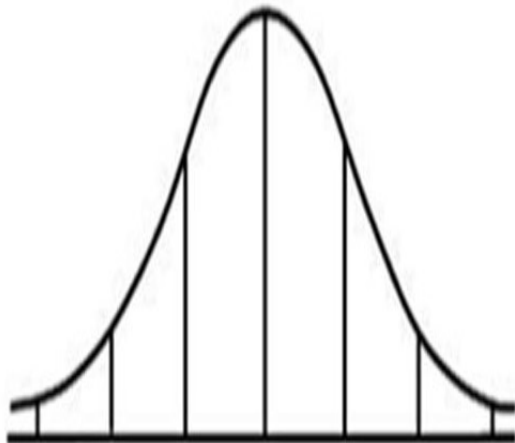
A Measure of Bias between
higher and lower valued
homes

Work on this Improves the
QUALITY of your
Assessment!





UNEQUALIZED!



**LESS THAN
15 is
Acceptable**

COEFFICIENT OF DISPERSION:

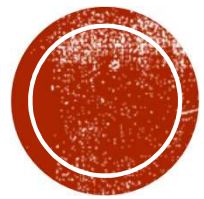
(AAD / MEDIAN X 100)

A Measure of Uniformity.

**How dispersed around the
median are the other ratios.**

**Work on this Improves the
QUALITY of your
Assessment!**





**TO SOLVE THESE ISSUES,
GO BACK TO RATE SETTING**

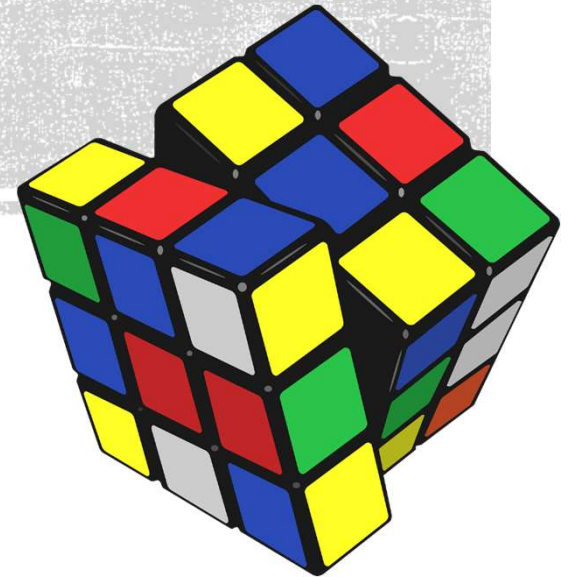
One independent variable at a time!

COMMERCIAL, APARTMENT, INDUSTRIAL

Same concepts, different side of the cube.

This category is very specific to each county and will not be covered in this class.

Just remember “**Break It Down Ya’ll!**”



YOU CAN SOLVE YOUR "CUBE" & MASTER THE ANNUAL ASSESSMENT!

Liz Lund

Roseau County Assessor

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218-463-1861

