

Know Your Local Government

White paper, Interpreting your property tax bill

Laura Grube, Ph.D., Associate Professor of Economics, Beloit College and Jeff Adams, Ph.D., Emeritus Professor of Economics, Beloit College ¹

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Part 1: An Introduction

Each December, Beloit property owners receive their tax bill. Property taxes are the foundation for supporting local governments in Wisconsin. Currently, the Beloit tax bill reports the levies from four entities: Rock County, the City of Beloit, the School District of Beloit, and Blackhawk Technical College. The tax revenue from the property tax is an important source of revenue for all four entities. However, it is important to note that the State of Wisconsin, through its long tradition of shared revenue, is the major funder for these units of local government. Indeed, it is *shared revenue* which keeps the tax bill manageable and at the same time difficult to understand (for an illustration of what Beloit property tax bills might look like without this shared revenue, see appendix B). Below is a summary of the total budgets of the four entities, as well as how much of their budgets come from property taxes and what some of the other major sources are.

Table 1. 2022 Total Budgets and Alternative Revenue Sources²

	Total Budget	Property Tax Revenue	Other Revenue Sources
Rock County	\$210,886,083	\$73,677,623; 35% of total budget	intergovernmental revenues (45%), county sales tax (8%), and public charges for services (among other sources)
City of Beloit	\$149,141,606	\$17,425,737; 12% of total budget	a loan from the Clean Water Fund (approximately \$30 million) and state, federal, and intergovernmental aids (among other sources)
School District of Beloit	\$134,968,581	\$19,731,301; 15% of total budget	general aid (\$67 million) and other state and federal sources
Blackhawk Technical College	\$56,352,878	\$16,171,346; 29% of total budget	state aid (\$16,059,833), federal money (\$7,788,401), and program fees (\$5,622,624) (among other sources)

¹ Thank you to Eric Miller, Finance and Administrative Services Director for the City of Beloit, for meeting with us to discuss the material and commenting on this document. Thank you also to Wendy LaPointe, Director of Finance for the School District of Beloit, Sherry Oja, Finance Director of Rock County, and Renea Ranguette, VP for Finance and College Operations/CFO at Blackhawk Technical College for reviewing this document. All remaining errors are our own.

²The information in table 1 can be found in the budget documents, For Rock County <https://www.co.rock.wi.us/home/showpublisheddocument/44142/637811443341170000> ; City of Beloit <http://gouda.beloitwi.gov/WebLink/0/edoc/76671/2022%20Adopted%20Operating%20Budget.pdf>; School District of Beloit <https://www.sdb.k12.wi.us/cms/lib/WI01919658/Centricity/Domain/426/Budget%20Presentation%202021%202022.pdf> ; Blackhawk Technical College <https://www.blackhawk.edu/Portals/0/PDFs/About/Governance/2022-23-Budget-Plan.pdf>

The City and the School District of Beloit receive less than 20 percent of their budget from property taxes and a much larger proportion from shared revenue.

The amount of revenue that the four entities receive from property taxes is determined by a number of factors, including state laws that establish “revenue limits,” or a limit on how much an entity can tax constituents. For example, according to the 2021-2022 state budget, a city is allowed to increase its levy over the amount it levied in the prior year by the percentage increase in equalized value from net new construction, or if there was no new construction, the allowable levy increase is zero percent.³ Table 2 summarizes for each entity the amount that was levied from Beloit property taxes and the corresponding mill rate and tax rate. “2021 Tax Levies” refers to the title of the tax bill; the property owner receives the bill in 2021, however, the underlying budgets being funded are for 2022 and the property owner pays the installments over the year 2022.

Table 2. 2021 Tax Levies for Four Government Entities⁴

	Total property tax levy	TIF Amount	Assessed value	Mill rate/Tax rate
Rock County	\$12,662,588	\$2,556,381	\$1,765,108,030	7.17 / .717%
City of Beloit	\$21,833,606	\$4,407,869	\$1,765,108,030	12.37 / 1.237%
School Dist of Beloit	\$20,649,102	\$2,090,883	\$1,517,719,350	13.61 / 1.361%
Blackhawk Tech	\$2,379,535	\$477,908	\$1,765,108,030	1.35 / .135%

The tax rate is calculated by taking the total property tax levy and dividing by the assessed value. Alternatively, “millage,” or a “mill rate,” can be used to describe property tax liability. A mill is one one-thousandth of a dollar, and in property tax terms is equal to \$1.00 of tax for each \$1,000 of assessment. The mill rate can be calculated by multiplying the tax rate by 1,000.⁵

Because of an economic development tool known as tax incremental financing, or a “TIF”, the City can exclude the tax revenue from a segment of property (designated as a tax incremental district, TID), setting it aside to fund the infrastructure improvements necessary to enable development. **In table 2, the levy figures in column 2 then include a TIF amount that will be set aside and not used to fund the entities’ operating budget.** For example, the City of Beloit has a total property tax levy of \$21,833,606. However, \$4,407,869 is TIF, and \$17,425,737 is used to support general city government funds. The mill rates, or tax rates also differ: with the TIF, the mill rate is 12.37, without the TIF it would be 9.87 (or .987%). **See appendix A for a table that reflects what each entity receives from the tax levy, not including the TIF and that corresponding mill rate.**

Rock County and Blackhawk Technical College also receive property tax revenue from other municipalities. For example, Rock County levied in total over \$73.68 million from property taxes; only about 14 % came from Beloit. Rock County reports a different mill rate or tax rate in their budget

³ Source, <https://www.lwm-info.org/823/Levy-Limits-Explanation-and-Strategies>

⁴ The information in this table is compiled by the City Clerk-Treasurer and is available upon request.

⁵ For example, 29 mills, therefore, is equal to \$29 for every \$1,000 of assessed value, or 2.9%. The tax liability can also be calculated by multiplying the taxable value of the property by the mill rate and then dividing by 1,000. For more information, see The Tax Foundation, <https://taxfoundation.org/how-calculate-property-tax-liability-2/#:~:text=%E2%80%9Cmillage%2C%E2%80%9D%20or%20%E2%80%9Cmill,for%20each%20%241%2C000%20of%20assessment.>

documents, taking the \$73.68 million in total property tax levy, and dividing it by the total (equalized) value of all property in Rock County (approximately \$13.59 billion). That calculation yields a mill rate of 5.42, or tax rate of .542%.

Note that these numbers do not reflect the first dollar credit or lottery and gaming credit.

Part 2: Interpreting Your Property Tax Bill

Below is an example of a 2021 property tax bill (again, it is called a “2021 Real Estate Property Tax Bill”, however, the revenues support 2022 budgets and are paid over the 2022 calendar year). The payment schedule has been omitted; columns denoted by letters and rows denoted by numbers have been added for reference purposes. According to the bill this property owner owes **\$6,321.08** (E11). This is based on the levy determined by each level of government (four entities listed), the individual property owners’ assessed valuation (noted in C1, \$203,200), and relevant credits.

	A	B	C	D	E	F
	CITY OF БЕLOIT					
	2021 Real Estate Property Tax Bill					
	Assessed Value Land	Assessed Value Improvements	Total Assessed Value	Ave. Assmt. Ratio	Net Assessed Value Ratio	
1	24,400	178,800	203,200	0.7423	0.03280261	
	Est. Fair Mkt. Land	Est. Fair Mkt. Improvements	Total Est. Fair Mkt.	<input type="checkbox"/> A star in this box means unpaid prior year taxes	School Taxes reduced by school levy tax credit	
2	32,900	240,900	273,800		344.27	
		2020	2021	2020	2021	
3	Taxing Jurisdiction	Est. State Aids Allocated Tax Dist.	Est. State Aids Allocated Tax Dist.	Net Tax	Net Tax	% Tax Change
4	ROCK COUNTY	1,151,020	1,357,331	1,382.30	1,457.72	5.46%
5	CITY OF БЕLOIT	18,349,683	18,319,539	2,351.12	2,513.49	6.91%
6	SCH DIST OF БЕLOIT	75,694,322	75,621,219	2,070.09	2,420.34	16.92%
7	TCDB - BLACKHAWK	1,566,359	1,711,790	262.08	273.93	4.52%
8	Total	96,761,384	97,009,879	6,065.59	6,665.48	9.90%
9			First Dollar Credit	71.68	75.75	5.70%
10			Lottery & Gaming Credit	175.67	268.65	52.90%
11	Tax ID Number: (omitted)		Net Property Tax	5,818.24	6,321.08	8.60%

Total assessed value (C1): \$203,200. Each municipality is responsible for assessing the value of each parcel of real estate (land and improvements). The City of Beloit completed a revaluation in 2022, which was communicated to property owners at the end of August 2022. The last city-wide revaluation was completed in 2009.

Total estimated fair market (also referred to as equalized value) (C2): **\$273,800.** The second row of property assessments are those calculated by the State of Wisconsin for the purpose of providing an equitable distribution of state aids. Importantly, this estimated fair market value is updated every year, and therefore, the difference between the total assessed value (\$203,200) and the estimated fair market value is driven, in part, because the former assessed value may not have been revalued since 2009.

Average assessment ratio (D1): 0.7423. This is the ratio of the total assessed value in a municipality divided by the estimated fair market value. This ratio should be close to 1.

Net assessed value ratio (EF1): .03280261. This is the total levy from each of the four taxing units of local government divided by the assessed value. That is to say, the net assessed value ratio is a tax rate. This includes the school levy tax credit, but does not incorporate the first dollar credit or lottery & gaming credit. (See table 2 above for how this ratio is calculated.)

Table 3. 2022 Tax Levies for Four Government Entities, Based on Illustration

	Net property tax levy	Assessed value	Mill rate/Tax rate
Rock County	1,457.72	203,200	7.17 / .717%
City of Beloit	2,513.49	203,200	12.37 / 1.237%
School Dist of Beloit	2,420.34	203,200	11.91 / 1.191% ⁶
Blackhawk Tech	273.93	203,200	1.35 / .135%

Summing these tax rates together then generates the **net assessed value ratio** of .0328. Alternatively, you could add the total net property tax levy amount (total \$6,665.48) and then divide this number by the assessed value.

School taxes reduced by school levy tax credit (EF2): \$344.27. This is a tax credit paid to the municipality (first to the county and then to the municipality) to reduce the school tax bill for the property owner. This credit has been applied to the net tax figure of \$2,420.34; without the credit the amount owed would be \$2,764.61.

Estimated State Aids Allocated to Tax District: Whereas columns D and E represent the property owners’ payment to each taxing unit, columns B and C are total aid allocated to each unit. To understand how each of these aids reduces an individual property owners’ payment, multiply these totals by the property owners’ share of total assessed value (this is demonstrated in appendix A).

Net tax: In column E (current year), the taxes owed to each entity is given. The school levy tax credit has been applied, however, again, these amounts do not include credits added at the end – the first dollar credit and lottery and gaming credits.

⁶ The mill rate in the table 2 is 13.6. Here, it is 11.91 because the school levy tax credit has been applied. The tax payer pays \$2,420.34 to the School District of Beloit; without the school levy tax credit of \$344.27, the tax payer would pay \$2,764.61, which divided by \$203,200 is the mill rate of 13.61.

Part 3: The Process and Timeline⁷

Of course, there is a budget process that generates the tax levies for each of the entities and determines how much a property owner pays in their tax bill. Below is a simplified timeline.

January 1: Equalization Process Begins

The WI Department of Revenue (DOR) begins estimating equalized (also referred to as fair market) values for all taxing jurisdictions in the state.⁸ These equalized values are used to apportion state money throughout the taxing jurisdictions and determine state aids.

Spring: Local Assessments

Municipal assessment updates are completed in the spring. Assessed values are used to distribute to local property owners all property taxes apportioned to the municipality, including those for schools, counties, and technical colleges. Recall the property tax illustration from part 2 suggests a home – let’s refer to the owners as the Turtles - of assessed value \$203,200. If the assessed value of all property (residential and commercial) in Beloit is \$1,765,108,030, then the Turtles’ home represents just .0115% of all property taxes that Beloit collects.



August 15: Equalized Values Set

The DOR reports equalized values for local taxing jurisdictions. These values are used to apportion tax levies from schools, counties, and technical colleges to underlying municipalities. For example, Beloit has approximately \$1.90 billion in total equalized value.⁹ Rock County has \$13.59 billion of equalized value. Since Beloit’s values are 14% of the county total, it is responsible for 14% of the county levy.

October/November: Property Tax Levies Set

The budget process for most local governments begins in the spring or summer, and concludes in October or November. This includes the budget process for the school district, city, and technical college. A tax levy is the total amount of money that the entity is asking for through property taxes in order to cover their expenses; this amount must be approved by the appropriate governing body.

School District of Beloit – the proposed budget is voted on by the school board

City of Beloit – the proposed budget is voted on by the City Council

Blackhawk Tech – the proposed budget is voted on by the board

⁷ This document is from “Navigating the Property Tax: Understanding Property Valuation and Taxation in Wisconsin” The Wisconsin Taxpayer, a service of the Wisconsin Taxpayers Alliance, Vol. 82, Number 9, September 2014 pg. 7.

⁸ Equalized and fair market value are the same. On your tax bill it is called “fair market” value. The term equalized points to the purpose of the calculation: the state is trying to assess property values throughout the state to have values which it can meaningfully compare (“apples to apples”; municipalities only do assessed value calculations every few years, thus using assessed values would be “apples to oranges”). These values are used to determine how general state funds are apportioned throughout taxing jurisdictions.

⁹ Equalized values by county and year are available at <https://www.revenue.wi.gov/Pages/Report/soc-egv.aspx>.

November/December: Tax Levies Apportioned

After all local governments have set their levies (and have been approved by the pertinent bodies) those tax totals are apportioned to underlying municipalities.



December: Property Tax Bills Prepared and Mailed

After total levies have been apportioned to municipalities, local officials use assessed values to calculate individual property tax bills. The municipality also adds in the TIF. These are determined by a mill rate. The mill rate = tax levy/total assessed value and is reported per \$1,000 of assessed value.



Appendix A: Levy amounts received by entities (not including TID)

	Total Property Tax Collected (Beloit only)	TIF Amount	Tax Levy minus TIF	Property Value	Mill rate/Mill rate w/o TIF
Rock County	\$12,662,588	\$2,556,381	\$10,106,207	\$1,765,108,030	7.17 / 5.73
City of Beloit	\$17,425,737	\$4,407,869	\$13,017,868	\$1,765,108,030	9.87 / 7.37
School Dist of Beloit	\$18,558,219	\$2,090,883	\$16,467,336	\$1,517,719,350	12.23 / 10.85
Blackhawk Tech	\$1,901,627	\$477,908	\$1,423,719	\$1,765,108,030	1.08 / 0.81

Appendix B: An illustration assuming no state aids

These calculations take the assessed value of the property from our illustration, \$203,200, and divide by the total assessed value of all property, \$1,765,108,030. This is 0.000115, or 0.0115%. If we take this percentage of each of the "2021 Est. State Aids Allocated Tax Dist" figures, we arrive at "My portion of state aids." If total property tax is \$6,665.48 (without applying credits), without state aids, it would balloon to \$17,833.30 (again, without applying credits).

Taxing Jurisdiction	2021 Est. State Aids Allocated Tax Dist.	My portion of state aids	2021 Net Tax	2021 Net Tax without state aids	Difference
ROCK COUNTY	1,357,331	156.26	1,457.72	1,613.98	1.1X
CITY OF BELOIT	18,319,539	2,108.95	2,513.49	4,622.44	1.84X
SCH DIST OF BELOIT	75,621,219	8,705.55	2,420.34	11,125.89	4.60X
TCDB - BLACKHAWK	1,711,790	197.06	273.93	470.99	1.72X
		Totals	6,665.48	17,833.30	2.68X