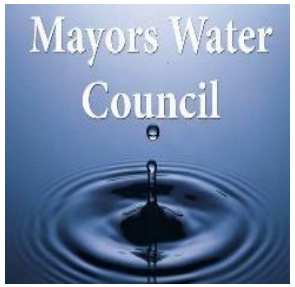
Trends in Local Government Spending on Public Water and Sewer Utilities in the Great Lakes States Compared to National Spending Levels

2000 to 2017



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Working Paper – Great Lakes Local Government Public Water and Sewer Utilities

A pre-Covid-19 pandemic assessment of water and sewer utility spending by local government in the Great Lakes states (GL8) and their local economies:

This assessment examines local government:
(1) water/sewer utility spending in 2000 and 2017; and,
(2) local government revenues, intergovernmental transfers and long-term debt during the same period; and,
(3) the effect of population trends on the level and growth of utility spending.

The findings suggest that expectations that all local governments in the GL8 can meet national growth rates for local revenues and spending on public utilities in order to meet federal mandates are overly optimistic, even though some communities will be able to match or exceed national indicators.

- Cities and their customers are paying more now than ever before on water and sewer utilities but continue to fall behind national levels of utility spending and growth in spending.
- In the GL8 Per Capita spending on water is half the level of national trends, but Per Capita spending on sewer often exceeds the national level.
- Growth in local government revenues in the GL8 states has fallen far behind national growth levels with the exception of New York.
- Local government in the GL8 states have increased all categories of taxes and charges/fees for public services and the sluggish population growth in these localities helps explain why the region is not keeping up with national trends and is falling behind economically.
- Sluggish population growth in combination with increased rates (charges/fees) has the effect of magnifying the affordability burden on a substantial and widespread basis.

A pre-Covid-19 pandemic assessment of water and sewer utility spending by local government in the Great Lakes states (GL8) and their local economies:

Given these economic realities and growth limitations it is not a realistic expectation that all of the communities in these states can meet a national level of water and sewer utility expenditures, or, national water quality goals and Unfunded State and Federal Mandates without a serious state and federal financial stimulus intervention.

The gap between local economies in the GL8 and the national level is growing, and short of a substantial population explosion or sizable federal and state subsidy the pressure on utility rates will too. Affordability issues for customer households will worsen – especially where population growth is slow and unfunded mandates require spending increases.

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Why look at national levels of spending and growth in spending?

- Provides a way to Compare GL8 utility spending to a reference group
- Is a crude proxy for the status of performance and compliance

4 Important Questions

1. What is the level and trajectory of local water and sewer utility expenditures in the Great Lakes States, 2000 – 2017, and how does it compare to the national trends?

2. How has per capita utility (water and sewer) spending in the GL8 changed from 2000 to 2017; and how does that compare to the national trend?

3. What is the level and trajectory of local government finances in the Great Lakes States, 2000 – 2017, and how does it compare to the national trends?

4. Does increased local spending have disproportionate affordability impacts as a result of population trends?

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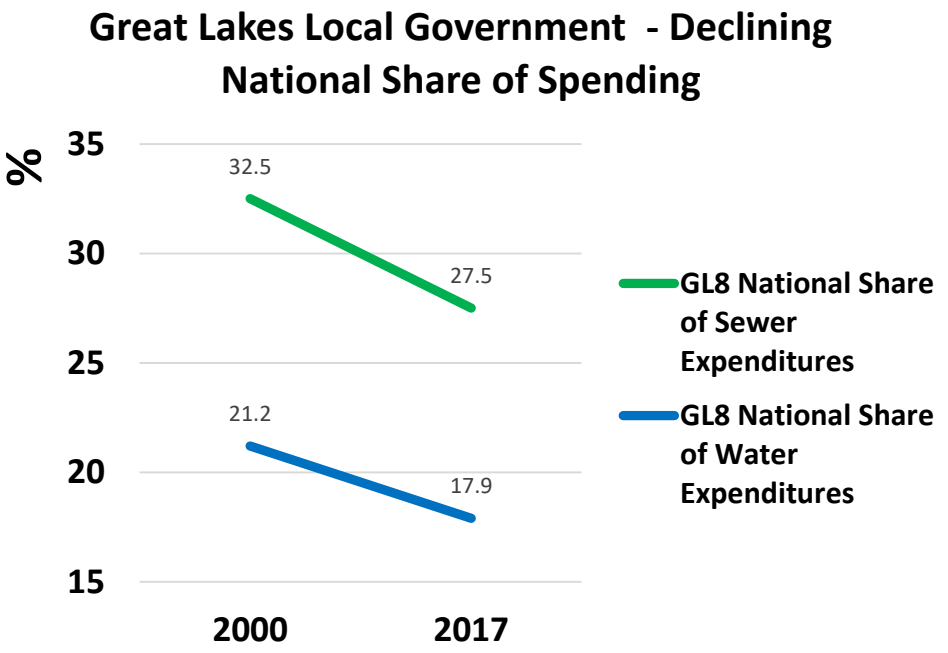
1. Local Water and Sewer Utility Expenditures in the Great Lakes States, 2000 – 2017

- Spending is increasing but national share is declining, (Slide 6).
- GL8 local governments have raised water and sewer revenues over 60% on average from 2000 to 2017, while national water and sewer revenues increased nearly 100% in the same time period.
- Only Indiana and Minnesota exceeded the national percent increase in water spending, (Slide 7).
- Only New York matched the national percent increase in sewer spending , (Slide 7).
- The growth in GL8 local government spending on water and sewer utilities is about 50% to 75% of national growth levels.

Communities in the GL8 are spending more now than ever before on water and sewer and are still falling behind the trends at the national level with few exceptions.

	2000	2017
GL8 Sewer Spend	$8.9B	$15.3B
GL8 Water Spend	$7.5B	$12.5B

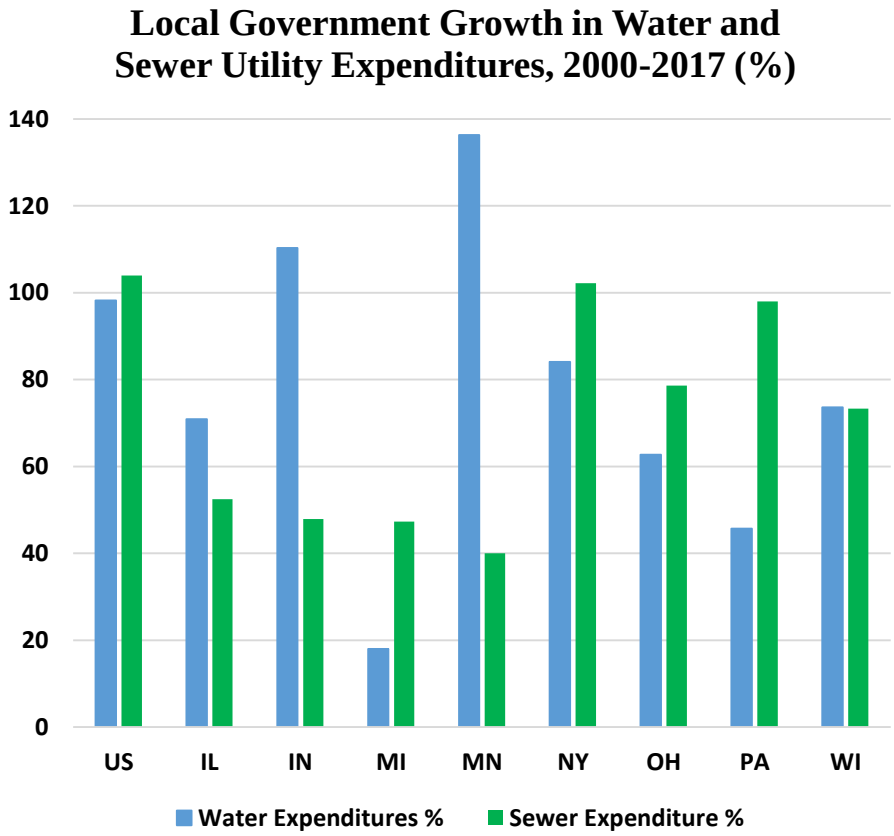


Rate of Growth in Spending is Increasing but Lags the national level with few exceptions.

- Local governments in the GL8 states report positive spending growth from 2000 to 2017 in water and sewer utilities.

- The national growth level in water expenditures was 98%.
  - Only IN (110%) and MN (136%) had higher rates.
  - MI had a water expenditure growth rate of 17%.

- The national growth level in sewer expenditures was 104%.
  - NY (102%) and PA (98%) were close to the national level.
  - IL, IN, MI and MN were all less than half the national level.



2. Per Capita Water and Sewer Spending in the GL8 , 2000 – 2017

- Only Illinois matched the national per capita water spending in 2017, (Slide 9).
- Three states have per capita water spending levels in 2017 that are half or less of the national per capita level, (Slide 9).
- Five states exceeded the national per capita sewer spending in 2017, (Slide 9).
- Michigan is estimated to have a $250 per capita spend on sewer in 2017 – (47% higher than the national per capita sewer spending).

Growth in Local Utility Expenditures in the GL8 is Reflected in Per Capita Spending Levels.

- Per capita spending on municipal water and sewer has increased in each state from 2000 to 2017.

Per Capita Spending on Water

- Increased in GL8 communities but do not reach the $216 per capita national average.
- IL was closest to the national level at $214 per capita.
- IN, MI, PA and WI are all at about half the 2017 per capita national level.

Per Capita Spending on Sewer

- Increased in each GL8 state in 2017.
- 5 States exceeded the $170 2017 national per capita level - MI (stands out at $250), NY, OH, PA and WI, (ranging between $182 and $199 per capita).
- IN $123, IL $129 and MN $156 trailed the national level.

Unit	Water		Sewer	
	2000 Per Capita	2017 Per Capita	2000 Per Capita	2017 Per Capita
	$	$	$	$
US	125.9	216.0	96.3	170.0
IL	129.1	214.3	87.0	128.9
IN	51.7	99.3	91.2	123.2
MI	101.9	119.8	170.5	250.1
MN	75.8	158.3	126.4	156.4
NY	89.2	159.2	93.1	182.3
OH	100.6	159.3	114.6	199.3
PA	79.6	111.3	103.6	197.0
WI	75.0	120.5	113.9	182.7

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3. Expectations that all local governments in the GL8 can meet national growth rates for revenues and spending on public utilities are overly optimistic, even though some communities will be able to match national indicators.

- Five key local finance indicators are compared to utility spending levels and per capita utility spending levels, (Slide 11).

- Trends in local government finances reveals underlying economic weakness compared to national levels, New York is the only exception, (Slide 12).

- Except for New York, the remaining GL8 states and their local governments are underperforming national trends in local government finances.

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Local Government Finances: Change from 2000 to 2017 (%)

Unit	Expenditures (%)	Revenues (%)	Intergovernmental Transfers (%)	Own Source Revenue (%)	Long Term Debt (%)
US	91.9	91.2	72.2	102.4	112.0
IL	76.4	78.9	67.3	89.5	137.2
IN	58.2	67.9	81.8	53.9	123.8
MI	32.4	33.8	23.1	46.2	38.9
MN	76.6	67.3	70.1	69.1	71.8
NY	97.2	94.1	86.4	105.1	117.7
OH	64.6	56.0	42.2	63.4	135.2
PA	78.4	82.7	81.5	84.3	37.9
WI	57.7	57.4	42.3	65.5	66.7

- 5 key local finance indicators provide context for understanding municipal water and sewer expenditures.
- Expenditures and revenues in a Fiscal Year determine the balance of a budget (Surplus – Deficit).
- Water and sewer are on both sides of the ledger (expenditures and revenues).

Every GL8 state increased local taxes and charges from 46% to 105% (Own Source Revenue)

Every GL8 state increased Long Term Debt, and 4 states exceeded the national level

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7 of the GL8 states lagged in growth of revenues and own source revenues compared to the national level

New York is the exception – besting the national level on every finance indicator

3 states exceeded the national level for Long Term Debt, and NY was within 5% of the national level.

Illinois, Indiana and Ohio exceeded the national level for Long Term Debt

3 states exceeded the national level for growth in Intergovernmental Transfers

Indiana, New York and Pennsylvania exceeded the national level for Intergovernmental Transfers

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Growth in GL8 Local Government Finances and Municipal Water and Sewer Spending, 2000-2017

(Cells in green background signify local government values exceed national levels)

Unit	Expenditures (%)	Revenues (%)	Inter-Governmental Transfers (%)	Own Source Revenue (%)	Long Term Debt (%)	Change Water Expenditures (%)	Change Sewer Expenditures (%)	Change in Per Capita Water Spending (%)	Change in Per Capita Sewer Spending (%)	Change in Population (%)
US	91.9	91.2	72.2	102.4	112.0	98.2	104.0	71.5	76.6	15.5
IL	76.4	78.9	67.3	89.5	137.2	70.9	52.5	66.0	48.1	2.9
IN	58.2	67.9	81.8	53.9	123.8	110.3	47.9	92.0	35.0	9.5
MI	32.4	33.8	23.1	46.2	38.9	18.0	47.3	17.5	46.7	0.4
MN	76.6	67.3	70.1	69.1	71.8	136.3	40.0	108.8	23.7	13.2
NY	97.2	94.1	86.4	105.1	117.7	84.1	102.2	78.4	95.8	3.2
OH	64.6	56.0	42.2	63.4	135.2	62.7	78.6	58.3	73.9	2.7
PA	78.4	82.7	81.5	84.3	37.9	45.7	98.0	39.9	90.1	4.1
WI	57.7	57.4	42.3	65.5	66.7	73.6	73.3	60.8	60.5	8.0

STAND OUT LOCAL GOVERNMENT

New York

- **Exceeds, but is close to, the national level for local government expenditures, revenues, intergovernmental transfers and long-term debt.**
  - **NY more than doubled revenue from Own Sources – increasing local taxes and charges.**
  - **The level of long-term debt and intergovernmental transfers is close to the national level for all local government.**
  - **NY is balancing taxes, transfers and debt.**
- **NY has kept pace with the national level for growth in sewer but not water expenditures.**
- **NY local governments have managed to:**
  - **Increase per capita water spending just above the national level.**
  - **Nearly double per capita spending on sewer, and higher than the national level.**

STAND OUT LOCAL GOVERNMENT

Michigan

- **Had the lowest growth in all local finance indicators, except for long term debt – PA was 1% lower than MI.**
  - **MI growth in general revenues, intergovernmental transfers and long-term debt were about one-third of the national level.**
  - **Own source revenue increased 46%, (local taxes and charges).**
- **MI had the lowest increase in per capita spending on sewer at 17%, but at a $250 per capita level it is the highest in the GL8 and is 47% higher than the national level.**
- **MI local governments water and sewer expenditures grew:**
  - **18% for water from 2000 to 2017, the lowest in the GL8.**
  - **47% for sewer, among the lowest in the GL8 and less than half the national level.**

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- NY matched, if not set, increases in the national level of local revenues and long-term debt, but fell short of national levels for increases in water and sewer spending - both lower than the national level.
- The 7 remaining GL8 states and their local governments are underperforming national trends in water and sewer spending:
  - The national growth level in **water** expenditures was 98%.
    - ✓ Only IN (110%) and MN (136%) had higher rates.
    - ✓ MI had a water expenditure growth rate of 17%.
  - The national growth level in **sewer** expenditures was 104%.
    - ✓ NY (102%) and PA (98%) were close to the national level.
    - ✓ IL, IN, MI and MN were all less than half the national level.
- The remaining GL8 states and their local governments are underperforming national trends in local government finances.
- The underlying local government finance conditions of 7 of the GL8 states in combination with substantially lower than national population growth helps explain why spending lags national levels and increased spending is pressuring per capita levels.

4. **The underlying local government finance conditions of 7 of the GL8 states in combination with substantially lower than national population growth helps explain why spending lags national levels and increased spending is pressuring increased per capita levels,** (Slide 18)**.**

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Population size plays a significant role in local public finances, especially when citizens as utility customers comprise the rate base.

Expected economies of scale depend on the increase in rates and population growth.

MI local governments spent $2.7 billion on water and sewer utilities in 2000 and $3.7 billion in 2017 – a $983 million increase.

- MI experienced population growth less than a half percent (~38,000 people).
- If MI experienced the regional population growth level of 5.5% the sewer per capita in 2017 would be $239 instead of $250, and the water per capita would be $114 instead of $120.
- Sluggish population growth, in this case, leads to higher consumer cost due to the absence of economies of scale.
- Spending increases required by federal/state mandates does not adequately consider the increasing concentrated financial burden on consumers.

	Population		Change	Change
	2000	2017	People	%
US	281,421,906	325,147,121	43,725,215	15.5
IL	12,419,927	12,786,196	366,269	2.9
IN	6,080,485	6,660,082	579,597	9.5
MI	9,938,444	9,976,447	38,003	0.4
MN	4,919,479	5,568,155	648,676	13.2
NY	18,976,457	19,590,719	614,262	3.2
OH	11,353,140	11,664,129	310,989	2.7
PA	12,281,054	12,790,447	509,393	4.1
WI	5,363,675	5,792,051	428,376	8.0

Source: Census.gov- Annual Estimates of the Resident Population