WATER RESILIENCE IN GOOD TIMES & BAD
An event series exploring water resilience, now and post-COVID-19

WATER AFFORDABILITY IN NORTHEASTERN ILLINOIS
Trends, policies, and a path forward

MAY 12, 2020
TUESDAY @ 3:30 PM CST
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ESSENTIAL INVESTMENT
Why water infrastructure should be part of stimulus and economic recovery
MAY 5, 2020
TUESDAY @ 3:30 PM CST

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CLEAN, SAFE, AND ABUNDANT
Solutions for stormwater and water quality
MAY 19, 2020
TUESDAY @ 3:30 PM CST
Water Affordability: Rates and Remedies

Josh Ellis, Metropolitan Planning Council, @MPCJosh, @metroplanners
Margaret Schneemann, Illinois-Indiana Sea Grant
Caroline Pakenham, Elevate Energy, @CCarolineWater, @elevate_energy
Danielle Gallet, Metropolitan Planning Council
Dan Cooper, Metropolitan Planning Council
Margaret Garascia, Elevate Energy
Olivia Tse, Elevate Energy
Issue Background

Northeastern Illinois Escalating Residential Water Rates 2000 – 2018

- Replacement era
- Supply constraints
- Source water pollution
- Need to price water appropriately
Study Geography

- 7 counties
- 284 communities
  - Data available for 215
- Community disparities
Research Objectives

1. Assess what today’s best methodologies for determining water affordability are;
2. analyze and identify where in the northeastern Illinois region water affordability is a concern; and
3. jump start regional dialog on best practices in addressing affordability for those that need it most.
Method Summary

Water affordability measurements used in this analysis:

1. Percent median household income (MHI)
2. Percent of mean household income at the lowest earning quintile
3. Water affordability matrix
4. Number of hours worked to pay the water bill
5. Online dashboard tool for outreach

![Water Affordability Matrix](image-url)
Considerations for Methods Selected

• Use of income quintiles
• Use of smaller geographic units (census tracts)
• Express water burden in more intuitive terms
• Comparison to other socio-economic factors

Data sources: ILSG Rate survey, U.S. Census Bureau ACS 2016 5-year estimates B19013, ACS 2016 5-year estimates B19081
Water Burden by Census Tract

Municipalities with at least one high burdened tract using 4.5% threshold of Median Household Income

Municipalities with at least one high burdened tract for lowest quintile earners
### Water Burden Comparison

<table>
<thead>
<tr>
<th></th>
<th>Lowest Income Quintile Threshold</th>
<th>MHI Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Tract % Combined Expenditure</td>
<td>9.59%</td>
<td>1.06%</td>
</tr>
<tr>
<td>Median Tract % Combined Expenditure</td>
<td>3.60%</td>
<td>0.91%</td>
</tr>
<tr>
<td>Tract Burden Percent Range</td>
<td>0.58% - 100%</td>
<td>0.16% - 5.52%</td>
</tr>
<tr>
<td>Number of High Burdened Tracts (Over 4.5%)</td>
<td>682</td>
<td>4</td>
</tr>
<tr>
<td>Percent of Tracts That Are High Burdened</td>
<td>36.47%</td>
<td>&lt; 1.00%</td>
</tr>
<tr>
<td>Municipalities with at Least One High Burdened Tract</td>
<td>109</td>
<td>4</td>
</tr>
<tr>
<td>Percent of Municipalities with at Least One High Burdened Tract</td>
<td>51.66%</td>
<td>1.90%</td>
</tr>
</tbody>
</table>
Water Matrix Burden Levels for Census Tracts
Hours Worked Analysis

- The lowest quintile income earners in **72 municipalities** have to work more than 8 hours to afford their combined water/sewer bill.
Water Affordability Dashboard Tool

**Choose a City**

<table>
<thead>
<tr>
<th>Regional Median Income</th>
<th>Median Monthly Income</th>
<th>Essential Monthly Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>$5,667</td>
<td>$4,461</td>
<td></td>
</tr>
</tbody>
</table>

**1,035,181 Households**

<table>
<thead>
<tr>
<th>Owner Occupied</th>
<th>Rent Occupied</th>
</tr>
</thead>
<tbody>
<tr>
<td>44%</td>
<td>56%</td>
</tr>
</tbody>
</table>

**Percent Change Since 2008**

<table>
<thead>
<tr>
<th>Income</th>
<th>Water Bill</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

**Racial Representation**

- White: 33%
- Black: 30%
- Latino: 29%
- Asian: 6%

**Work Hours Required to Pay the Water Bill**

- Households in the lowest earning quintile: 11.0 hours
- Households earning median income: 1.8 hours

"Water bill" is the estimated combined water and sewer costs.

Racial groups are defined as White non-Hispanic, Black non-Hispanic, Asian non-Hispanic, and Hispanic. All dollar amounts were adjusted to 2018 dollars. Regional Low (80%) AMI Income Limit was determined by averaging 21-38% and 3-person household income limits for the Chicago-Joliet-Naperville region. Some communities have missing water bill data, and some therefore excluded from the analysis. Others were just missing 2008 bill data, for which estimates were imputed.

**Sources:** Illinois State Fair Grant (2008 and 2016 water bill estimates), CMAP (2008 income estimates), ACS (2017 5-year income estimates, household counts, and racial representation), HUD (2018 Income Limits), and CNHPs MHT Index (2013 monthly owner and transportation costs)

metroplanning.org/waterdashboard
Community Typologies and Corresponding Water Affordability Solutions

- Foundational actions for all communities
- Communities with high water costs/bill
- Communities facing an overarching low-income issue
- Communities with large hard-to-reach populations
Water Affordability
Resources
metroplanning.org/WaterAffordability
Water Shutoffs and Reconnections

What we know, don’t know, and where to go from here
Water Access in the United States

- Millions lack access
- Water access predictors: race and economic status
- Water access backsliding in some parts of the country
- Lack of access = public health crisis

Source: 2019 Dig Deep and US Water Alliance Study
Water Shutoffs and Reconnections – COVID 19

- More than a dozen states suspending water shutoffs
- ICC COVID-19 Order
- Chicago issued moratorium in 2019
- ILAWWA Survey:
  - All utilities plan to abide by ICC order
  - 56% plan to reconnect
Water Reconnections – Who needs access?

- Incomplete data on scope of problem
- Many non-metered customers
- Many undercounted
- Fear and hesitancy self identifying
- How can you manage what you don’t know?
Water Reconnections – Health and Safety

- Are there leaks?
- Is the wastewater piping in tact?
- Are flushing protocols being followed?
- Concerns with heavy metals and organisms
Where do we go from here?

- What happens when moratoriums end?
- Need for immediate and long-term relief and affordability solutions
- Complete understanding of scope of problem
- Infrastructure upgrades
Caroline Pakenham, Elevate Energy
Senior Manager, Water Programs
caroline.pakenham@elevateenergy.org
WATER AFFORDABILITY IN NE ILLINOIS
TRENDS, POLICIES, AND A PATH FORWARD

Jeremy Orr, Attorney
Natural Resources Defense Council
Safe Water Initiative
REGIONAL ACCESS & AFFORDABILITY

- COVID Disparities
- Michigan
- Ohio
- Indiana
- Post-COVID
NORTHEAST ILLINOIS

- Water Rates
- Disparities in safe drinking water enforcement
- Poor Infrastructure
- Water Loss & Water Waste (in-home)
- Legal/Policy Barriers
ILLINOIS OPPORTUNITIES

- State Study on Affordability
- Shutoff Moratoriums (ex. Chicago)
- Rate Restructuring and Income-based Rates
- Assistance Programs
- Establish Local Funds
- Broad Investments in Water Infrastructure to drive down the cost

Water is NOT just for the WEALTHY
Jeremy Orr, Attorney
Natural Resources Defense Council
Safe Water Initiative
jorr@nrdc.org
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