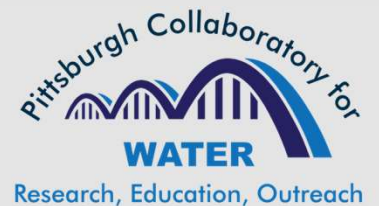


Measuring Up: Grading Drinking Water Quality, Affordability, and Transparency Practices in Allegheny County

Megan Guy, Pittsburgh Water Collaboratory

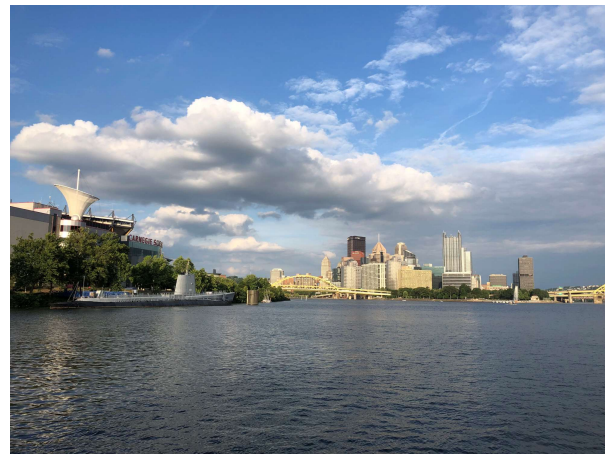
Dana Donovan, Women for a Healthy Environment



About the Pittsburgh Water Collaboratory

What is the Water Collaboratory?

Founded in 2018, we bridge efforts in water research, governance, and action. By connecting universities, local governments, non-profits, & community groups, we aim to align efforts across the region. We work to ensure that data & expertise are accessible to those who need it, that research responds to real needs, & that students are prepared to solve real challenges.



About Women for a Healthy Environment


- Women for a Healthy Environment addresses environmental risks that impact public health through educational programming, community support, technical assistance, and advocacy
- Four program areas:
 - Healthy Homes
 - Healthy Schools
 - Healthy Early Learning Centers
 - Policy



Meet the team!



- University of Pittsburgh
 - Megan Guy, Pittsburgh Water Collaboratory
 - Caitlin Schroering, Pittsburgh Water Collaboratory
 - Daniel J. Bain, Geology & Environmental Science
 - Emily M. Elliott, Geology & Environmental Science
 - Marcela González Rivas, GSPIA
 - Noble Maseru, School of Health Sciences
 - Jackie Smith, Sociology
- Women for a Healthy Environment
 - Dana Donovan
 - Talor Musil
 - Ava Roberts
 - Michelle Naccarati-Chapkis
 - Maureen Hartwell
 - Hanna Beightley



Not all research
collaborations are
straight paths

History of this project

In June 2021, the Pittsburgh Water Collaboratory received Pitt Momentum Funds teaming grant to create a transdisciplinary team at the University of Pittsburgh

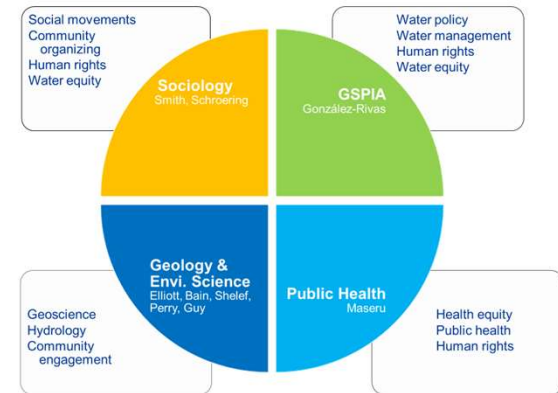


Transcending Disciplines to Advance Regional Water Equity

We will use community engagement as a mechanism to break down barriers across disciplines, academics, and local communities.

We will host four consensus-building meetings dedicated to the theme “Community and Campus: Water is a Human Right”.

These meetings will bring together community organizations, civil society organizations, and citizens to discuss water equity challenges, identify knowledge and advocacy-intervention gaps, and create equity-oriented solutions to water challenges.



September 2021

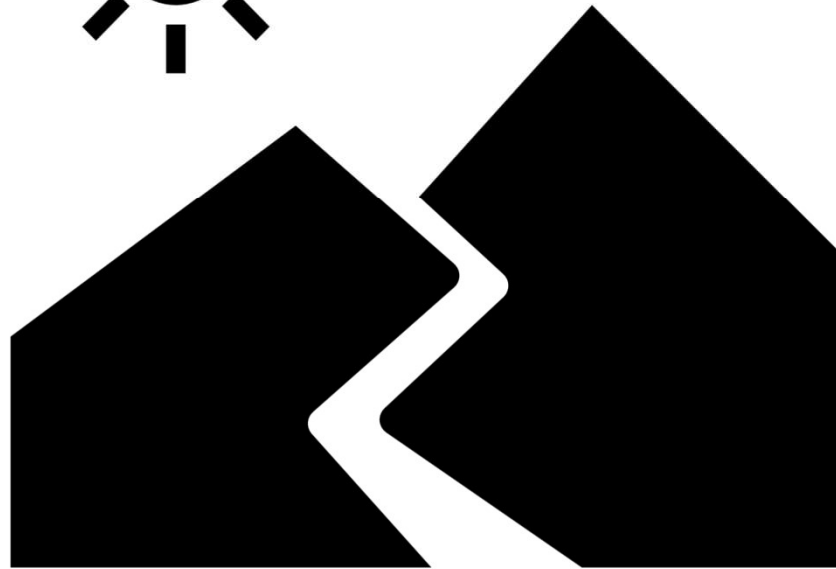
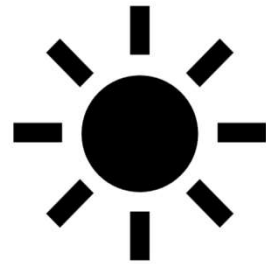
Let the work
begin!



We contacted consultants to
get quotes facilitate meetings



We reached out to
community organizations
willing to be a partner



**If the plan doesn't work
change the plan not the goal
- Unknown**

April 2021

WHE Create Change

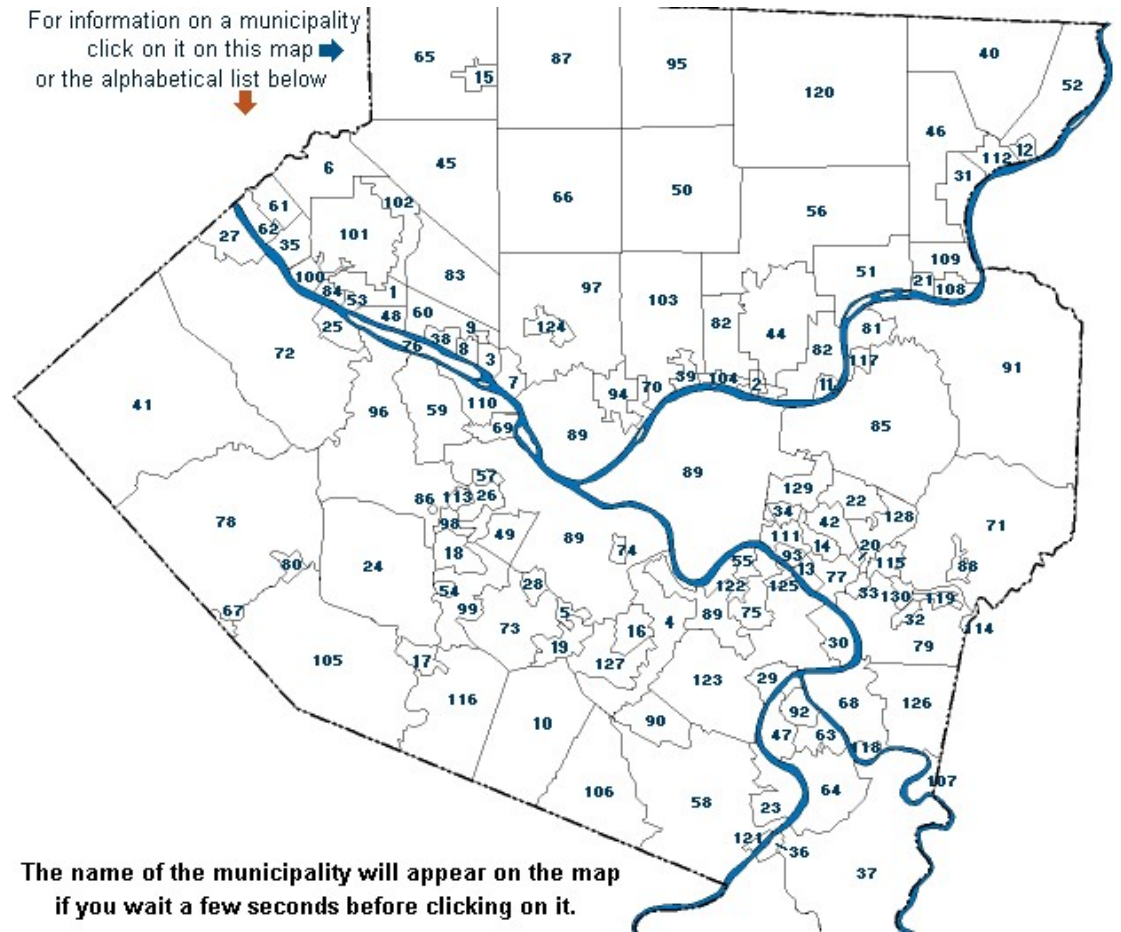
SOMETHING'S IN THE WATER



WOMEN 
for a Healthy
ENVIRONMENT
— *Healthy Homes*

Just like there are municipal jurisdictions...

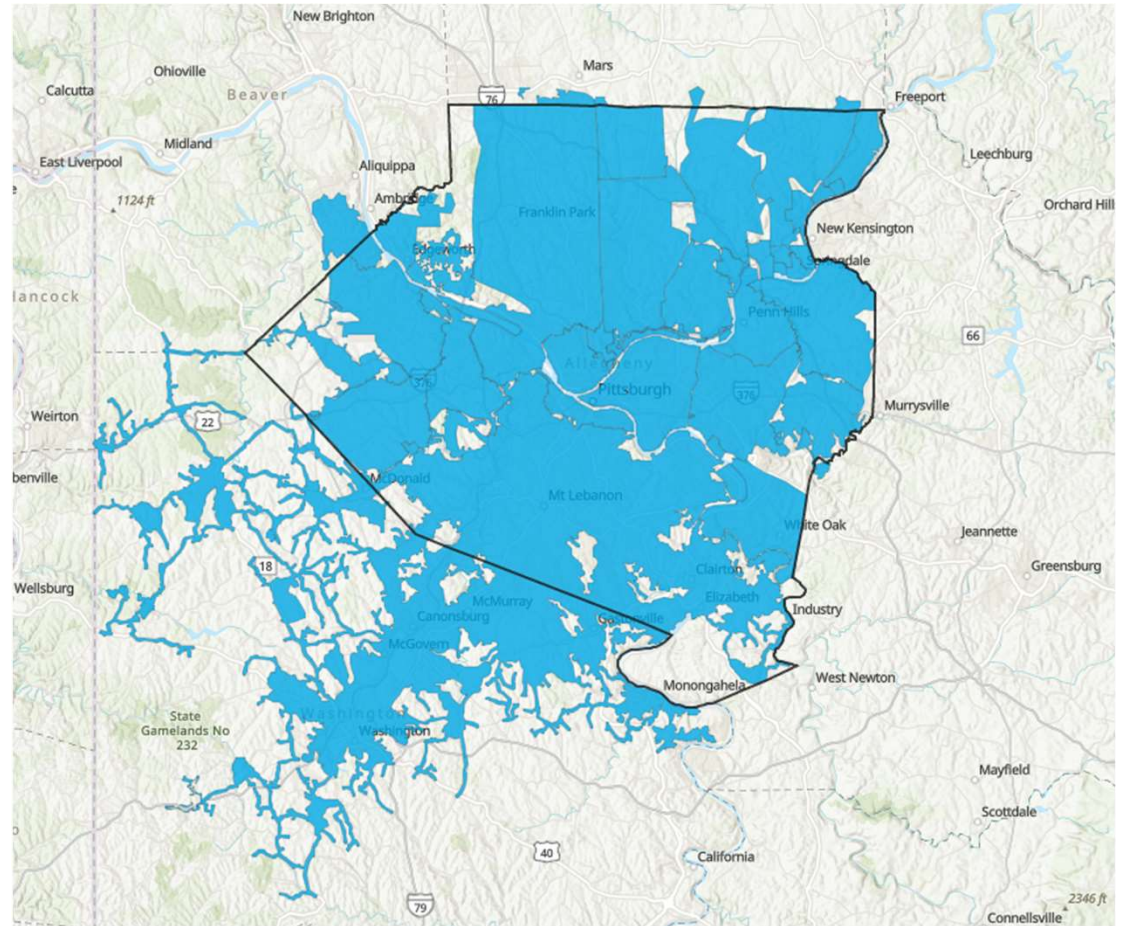
For information on a municipality click on it on this map or the alphabetical list below



The name of the municipality will appear on the map if you wait a few seconds before clicking on it.

Photo from Allegheny County Website (<https://apps.alleghenycounty.us/website/munimap.asp>)

...there are
water system
jurisdictions.





Audience Participation

- Do you know your water provider?
- Do you know where your water comes from?
- Do you know how decisions are made about your drinking water?

Differences Between Water Systems

Though many water systems share similarities in practices and reporting, understanding key differences allows individuals to know their rights.

| Investor-Owned (private) | Authority (public) | Municipal (public) |
|--|---|--|
|  |  |  |
| <ul style="list-style-type: none">• Run <u>by investors</u>• <u>Not legally</u> obligated to respond to a Right to Know Request• Meetings tend to be <u>closed</u> to the public | <ul style="list-style-type: none">• Run by an <u>independent Board of Directors</u>• <u>Legally obligated</u> to respond to a Right to Know Request• Meetings <u>open</u> to the public | <ul style="list-style-type: none">• Run by a <u>municipal department</u>• <u>Legally obligated</u> to respond to a Right to Know Request• Meetings <u>open</u> to the public |
| Ex: Pennsylvania American Water Authority | Ex: Pittsburgh Water and Sewer Authority | Ex: Municipal Water Authority of Westmoreland County |

Complexity of Water Systems

36 water systems across Allegheny County

23 authorities

12 municipal

1 investor-owned

Public > private

In any type of system, decision-making process can be difficult to navigate + understand

Something's in the Water Report

- Most water systems in Allegheny County are publicly owned.
- Water systems serving Allegheny County may be understaffed and under-resourced.
- In 2016, more than half of the water systems had water quality-related violations.
- 80% of water systems reported detectable levels of lead in their drinking water in their 2019 Consumer Confidence Reports.
- Water systems could improve their accessibility and risk communication to ratepayers.





Partnership Began to
create 2.0

Why address equitable water governance?

- Pittsburgh calls itself the most livable city, but other human right inequities exist
- City of Pittsburgh gender equity report documents the need for policy improvement in employment, poverty, and other livability indicators
- 2016 Pittsburgh Lead Crisis highlighted important transparency in water practices
- These issues are not specific to Pittsburgh, they're found in across the county
- Regional sustainability goals will not be met without equitable governance.



<https://www.bloomberg.com/news/articles/2019-09-20/how-pittsburgh-fails-black-women-in-6-charts>



<https://www.rollingstone.com/politics/politics-news/flint-newark-pittsburgh-lead-in-drinking-water-873584/>

Research Questions

How do water systems transition to prioritizing environmental justice in policy formulation including financial cost/benefits?

How do water systems govern in ways that center environmental justice and water equity now and in the future?



Report cards

Pittsburgh Water and Sewer Authority (PWSA)

Report Card



| Grading Category | Grading Criteria | Final Grades | | | |
|------------------|--|-------------------|--------------|------------|---------------|
| | | Needs Improvement | Satisfactory | Pro-Active | Best Practice |
| Transparency | Board of Directors Meeting Accessibility | | | ● | |
| | Community Advisory Mechanisms | | | ● | |
| | Ease of Reporting Complaints | | | ● | |
| Affordability | Permanent Water Affordability Protections | | | ● | |
| Water Quality | Lead Service Line Replacements | | | | ● |
| | Lead Service Line Inventory | | | | ● |
| | Access to Free Residential Lead Testing | | | | ● |
| | Compliance with Drinking Water Quality Regulations | | | | ● |



System Snapshot

| | |
|---|--|
| Ratio of Full-Time Employees to Customers <small>Note: Water systems require adequate staffing and financial resources to implement affordability and water quality protections, and transparent operations.</small> | 1: 337 |
| Number of 2019 Shut-Offs | 2,083 <small>(3% of 74,030 service connections)</small> |
| Moratorium on Shut-Offs | Permanent Winter Moratorium on Shut-Offs |
| Number of Service Connections | 74,030 |
| Environmental Justice Population Served (approximate percentage) | 64% |

Provider Summary

Within PWSA's service area, 64 percent of the population resides in environmental justice communities. They have board meeting and participation information on their website, including a requirement for speakers to register 10 days in advance. Before Covid-19, in-person and impromptu public comment was available, but currently only pre-registered virtual attendance is available. A hybrid model is expected to begin in 2022, so we graded them "Pro-Active." Community Advisory Committees (CACs) exist and are described on the website with some stakeholder information; however, greater detail on membership and engagement is necessary to score "best practice." They have a formal online complaint form, as well as general contact information listed, but no in-person complaint process is offered, which scores "pro-active" for Ease of Reporting Complaints. They offer multiple Permanent Affordability Protections, with multiple ways of enrollment, including debt forgiveness, which is noteworthy. PWSA has a permanent winter moratorium on water shut-offs. They scored "best practice" in Lead Service Line Replacements for their public goal date (2026), prioritization of environmental justice, and significant investments in full lead service line replacements. There is a detailed, interactive and public Lead Service Line Inventory on the website and they offer free Residential Lead Testing and interventions, both of which are "best practices." Their 2019 Consumer Confidence Report included lead levels of 17.49 ppb. They recently received more than \$121 million from PennVest and Pittsburgh's American Rescue Plan Act funds for full replacements in high priority households. For Compliance with Drinking Water Quality Regulations, they scored "best practice" for no 2019 drinking water violations and for having a voluntary, DEP-approved Source Water Protection Plan. PWSA purchases a small amount of water from Pennsylvania American Water Company.

[Link to Report](#) | [Link to Water Authority](#) | [Link to Map](#)

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Objectives

Assemble

Assemble best practices used nationally and globally to improve transparency, affordability, and water quality and develop actionable strategies for water systems to improve water access, affordability, and quality.

Compare

Objectively compare performance of Allegheny County water systems across a defined suite of metrics to advance uniform standards.

Accelerate

Accelerate transformation of water systems towards more equitable and uniform practices that protect human health.

Data Collection

Made decision to do voluntary survey vs a right to know request

Sent letter asking to participate

Created video and follow ups for as much response as possible

2022 Water System Report Card Data Survey

[Sign in to Google](#) to save your progress. [Learn more](#)

* Required

Water System Name *

Your answer _____

Do you currently have a lead service line inventory? *

- Yes
- No
- Unsure
- Other: _____

If yes, is your lead service line inventory complete? (Meaning all services lines, private and public, are included)

Your answer _____

Total number of "public side only" lead service line replacements in 2020. *

IMPORTANT: Do NOT report partial replacements if any of the following applies: (1) the private side was NOT lead (meaning only the public side was lead), (2) a homeowner denied you the right to access a private lead line, or (3) the replacement took place in response to an emergency line break

Your answer _____

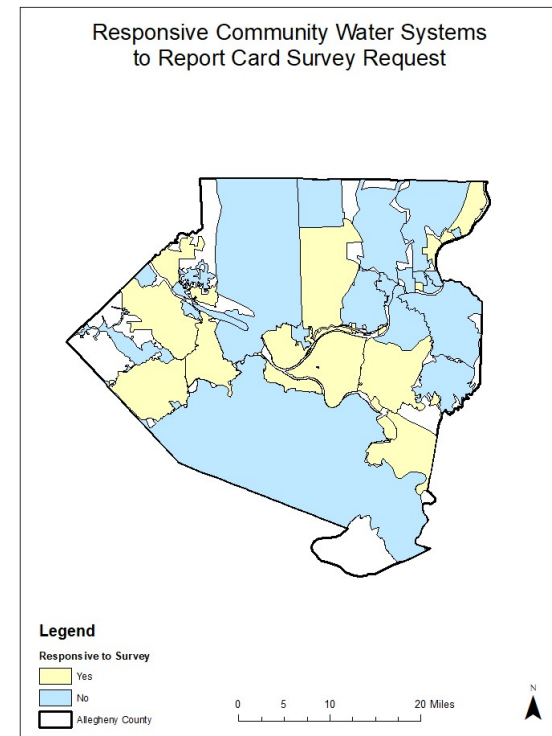
Total number of full (public and private side) lead service line replacements in 2020. *

Your answer _____

Response Rate

17 Systems (47%) responded to our voluntary survey

Obtained data for other systems through data collected in the 2021 WHE report and on system websites.



Our Vision for Transparency

Public and open board meetings with agenda, minutes, and participation options easily accessible.

Formation of a community advisory committee consisting of multiple stakeholders including content and context experts (residents)

Easy-to-find formal consumer grievance form or other method with quick response time

Open and honest communication with ratepayers on projects, billing, and water quality reports.

Our Vision for Affordability

Provide affordability protections for consumers going through rough financial patch

Have strong outreach program to ensure ratepayers are aware of programs provided

Remove barriers to enrollment in affordability protection programs including multiple ways to enroll and information in community-relevant language

Year-round moratorium on shut-offs

Our Vision for Water Quality

Free residential lead testing for all rate payers

Publicly available information on lead service line inventories

Full lead service line replacements to prioritize public health

Comply with state and federal drinking water quality requirements


Routinely update Source Water Protection Plans

Turning the vision into expectations

Water Authority Report Card



| Grading Category | Grading Criteria | Final Grades | | | |
|------------------|--|-------------------|--------------|------------|---------------|
| | | Needs Improvement | Satisfactory | Pro-Active | Best Practice |
| Transparency | Board of Directors Meeting Accessibility | | | | |
| | Community Advisory Mechanisms | | | | |
| | Ease of Reporting Complaints | | | | |
| Affordability | Permanent Water Affordability Protections | | | | |
| Water Quality | Lead Service Line Replacements | | | | |
| | Lead Service Line Inventory | | | | |
| | Access to Free Residential Lead Testing | | | | |
| | Compliance with Drinking Water Quality Regulations | | | | |

| System Snapshot | |
|--|---|
|  | <p>Ratio of Full-Time Employees to Customers Note: Water systems require adequate staffing and financial resources to implement affordability and water quality protections, and transparent operations.</p> |
| | Number of 2019 Shut-Offs |
| | Moratorium on Shut-Offs |
| | Number of Service Connections |
| | Environmental Justice Population Served (approximate percentage) |

| Provider Summary |
|------------------|
| |

Turning the vision into expectations

Water Authority Transparency Grading Rubric



| | Needs Improvement | Satisfactory | Pro-Active | Best Practice |
|---|--|---|---|---|
| <p>Board of Directors (BOD) Meeting Accessibility</p> <p>Note: The Board of Directors focuses on governance and fiduciary responsibilities. Community Advisory Committees (CAC) are focused on advice and insight, including from the lived shared experience of community members</p> | <p>No public board meetings</p> <p>No in-person or virtual mechanism in place for public participation in board of directors meetings (public comment, etc.)</p> <p>OR</p> <p>Insufficient information on one of the categories below</p> <p>Type(s) of board meeting participation</p> <p>Meeting process description on the website</p> <p>Registration requirements for speakers</p> <p>Public comment placement on the meeting agenda</p> | <p>Practices 4 of the following:</p> <p>In-person board meeting</p> <p>Virtual board meeting</p> <p>Sufficient information on website</p> <p>Public comment at beginning of meeting</p> <p>Public comment for registered speakers</p> <p>Public comment for unregistered speakers</p> | <p>Practices 5 of the following:</p> <p>In-person board meeting</p> <p>Virtual board meeting</p> <p>Sufficient information on website</p> <p>Public comment at beginning of meeting</p> <p>Public comment for registered speakers</p> <p>Public comment for unregistered speakers</p> | <p>Practices all of the following:</p> <p>In-person board meeting</p> <p>Virtual board meeting</p> <p>Sufficient information on website</p> <p>Public comment at beginning of meeting</p> <p>Public comment for registered speakers</p> <p>Public comment for unregistered speakers</p> |
| <p>Community Advisory Mechanisms</p> | <p>No community advisory committees (CAC) separate from the Board of Directors</p> | <p>Community advisory committee(s) exist</p> <p>Membership consists of multiple stakeholders in the community</p> | <p>Community advisory committee(s) exist</p> <p>Membership consists of multiple stakeholders in the community including content experts and context experts (residents)</p> | <p>Community advisory committee(s) exist</p> <p>Membership consists of multiple stakeholders in the community including content experts and context experts (residents)</p> <p>The public is able to engage with and participate in committee decisions in two-way dialogues</p> |
| <p>Ease of Reporting Complaints</p> | <p>None of these complaint submission methods exist: by phone, online form, or in-person form</p> <p>OR</p> <p>Written complaint form is not on the front page of the website</p> | <p>One formal method to submit a complaint (e.g. phone, online form, or in-person form)</p> | <p>Two formal methods to submit a complaint (e.g. phone, online form, or in-person form)</p> | <p>Formal complaints can be submitted by phone, online form, and in-person form</p> |

Current practice and basis for grade
 Practice recognized
 Not practiced
 [Link to glossary terms](#)

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Additional Outreach with Draft Report Cards

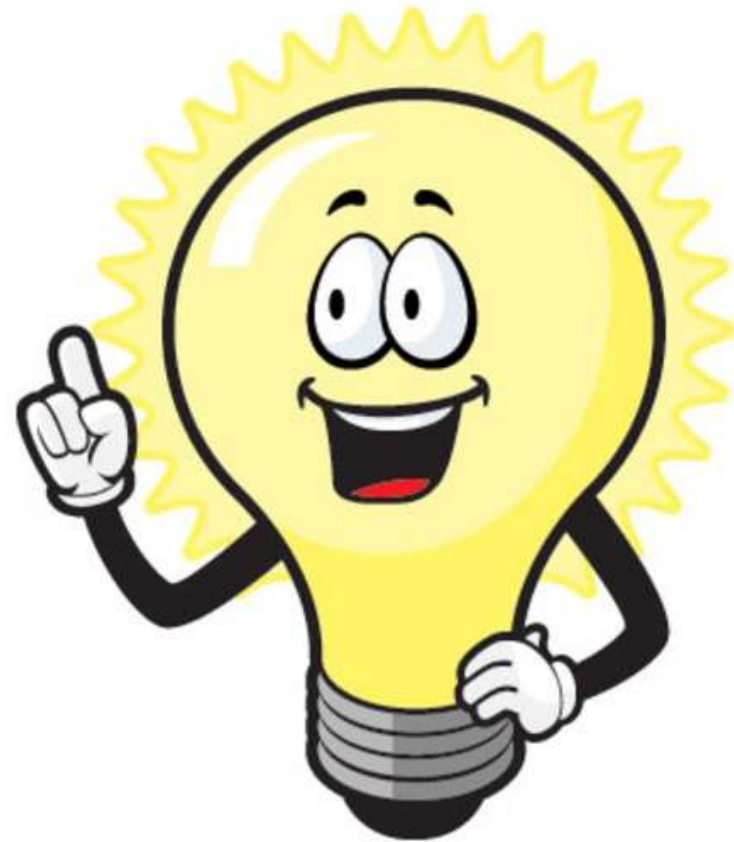
Sent draft report cards to each system to receive feedback which prompted 2 additional responses

4 systems improved their practices and ultimately their grades



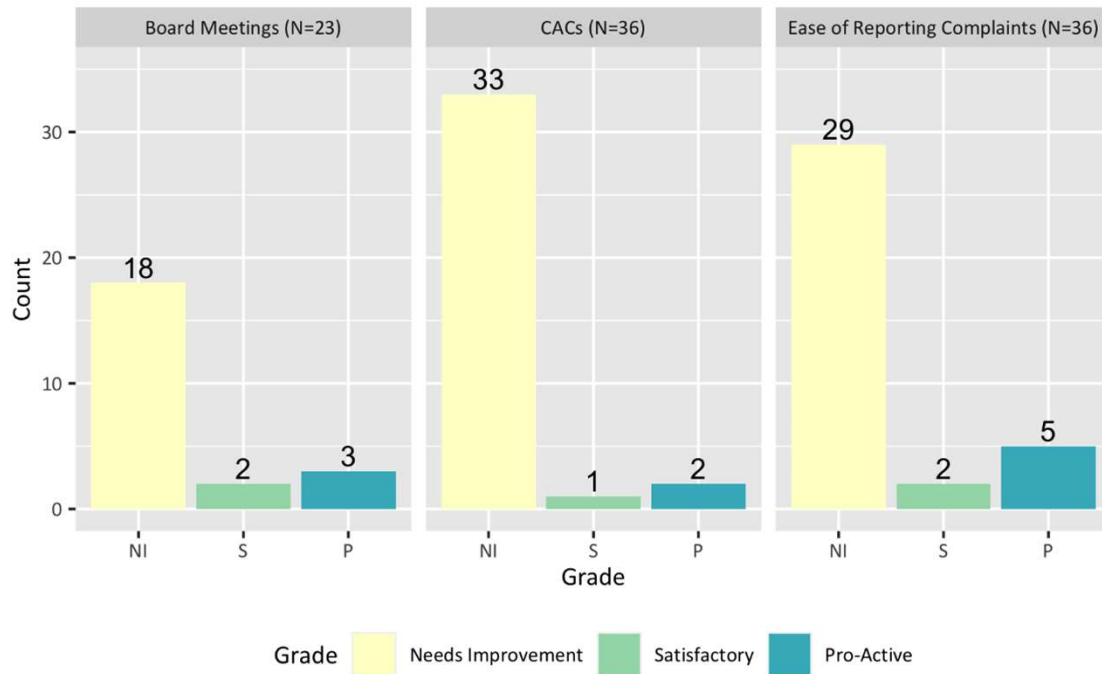
Photo from
<https://www.publicdomainpictures.net/pictures/360000/velka/draft-white-stamp-text-on-green-1594661581b02.jpg>

Results



This Photo by Unknown Author is licensed under [CC BY](#)

Distribution of Transparency Grades



Transparency

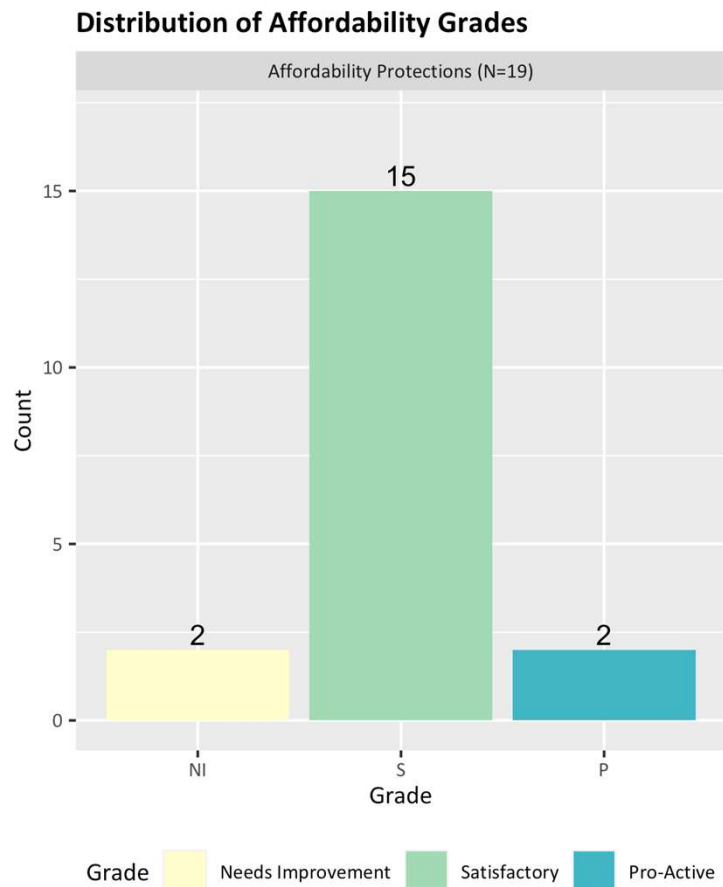
No system scored best practice in any transparency category

Lots of information regarding Board of Directors meetings is missing from website

Only 3 systems have community advisory committees:

Moon Township Municipal Authority
Pittsburgh Water & Sewer Authority
Municipal Authority of Westmoreland County

Reporting complaints is often unnecessarily difficult



Affordability

Missing a lot of data, could only assess systems that responded to survey or had info on website

Of those we assessed, most had at least one affordability protection

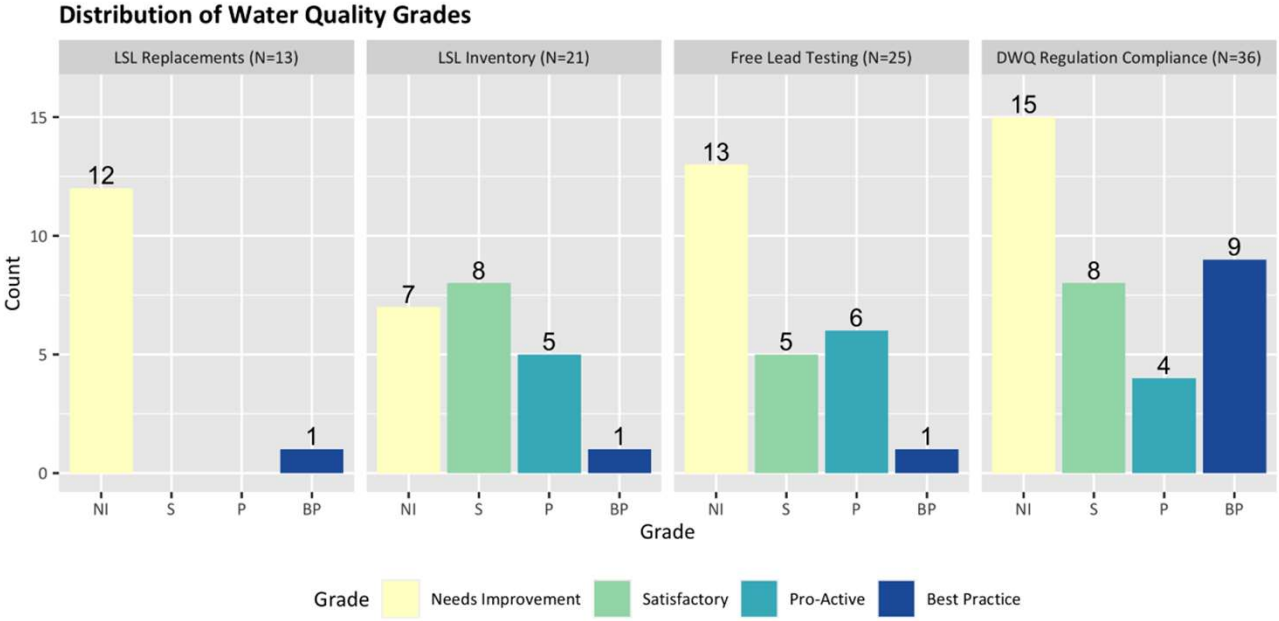
Max: PWSA with 8 protections

Payment plans, grace periods were most common

No one has a permanent year-round moratorium on all shut-offs

Most systems do not have information on website

Water Quality

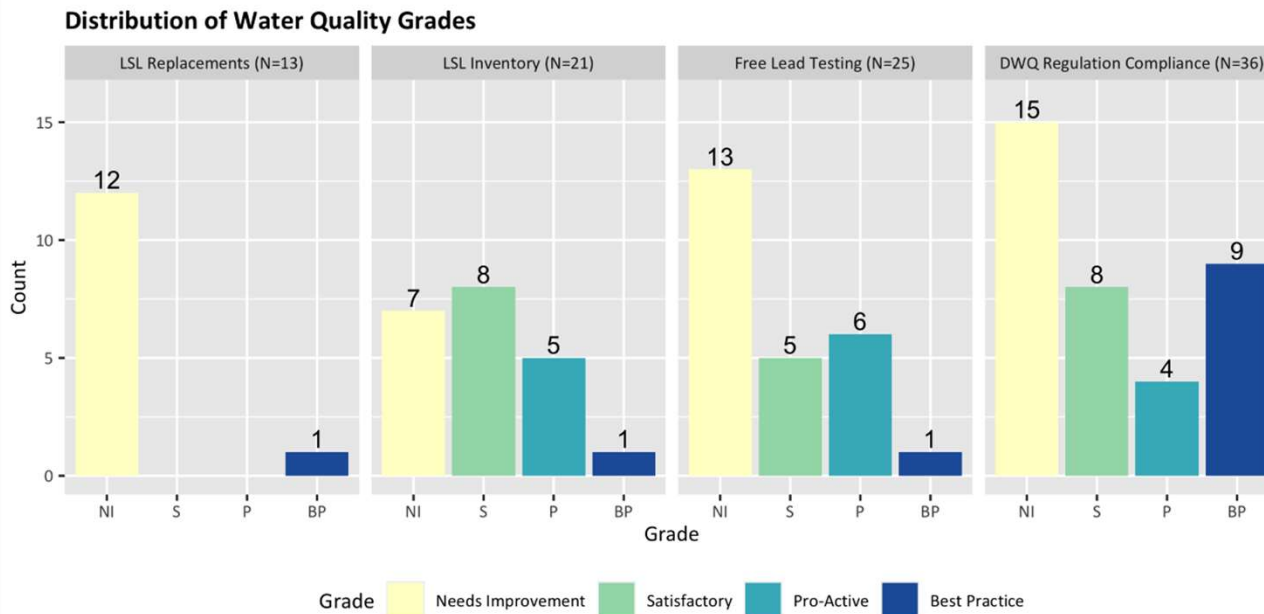


Missing a lot of data for lead service line replacements

Low scores a result of no replacements done at all

Lead Service Line inventories now required by law

Mostly in progress



Water Quality

Most systems do not provide lead testing

Compliance with drinking water quality regulations had highest average grades

Likely because these are enforceable regulations

100% of systems have source water protection plan

Capacity

Big variation in water systems

Found a slight correlation between consumers per staff and grades

More staff per consumer = higher grades

Size and resources of system can pose challenges to transparency, affordability, and water quality

| Descriptive Statistics of Water Systems in Allegheny County | | | | |
|---|-------|---------|---------|--------|
| | Min | Max | Average | Median |
| Consumers per one staff | 147 | 1,364 | 439 | 400 |
| Total Connections | 617 | 210,964 | 14,485 | 2,376 |
| Environmental Justice Population Served | 0% | 100% | 17% | 0% |
| Total Population Served | 1,459 | 686,000 | 55,469 | 6,800 |

Recommendations

More Funding

- Create structures that allow systems who cannot meet PENNVEST funding requirements to **take advantage of PENNVEST opportunities and new federal funding**

Remain Public

- Create collaborative/supportive structures to enable small and otherwise challenged systems to **remain public**, improving access to high quality, affordable water

Address Inequities

- Continue and expand efforts to address existing inequities in drinking water access. **Tie drinking water access to wider measures of health and economic progress** to integrate it into comprehensive planning efforts

Consider Climate Change

- Redouble **integration of climate change scenarios** into all current and future planning frameworks

Address emerging contaminants

- Transform source water protections structures into entities that can **evaluate and mitigate emerging contaminant threats** to water quality

Lessons Learned

Process is more important than product.

Aim for transformative, not transactional, partnerships.

Interdisciplinary work is hard. Takes time to understand each other's language.

We all have expertise in our own areas, and we can learn from each other.

University-community partnerships are valuable, but it's necessary to outline an understanding of capacity prior to project starting.

Be adaptable and flexible in approaching the project.

Dialogue with water systems produced more meaningful information and opportunities for improvement in contrast with formal Right to Know processes.

Report Coming
Soon!



Measuring Up:

Grading drinking water
quality, affordability, and
transparency practices in
Allegheny County Water
Systems

Questions

