Chapter 18

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A TALE OF TWO WATER OPERATORS: LEGACIES OF PUBLIC VERSUS PRIVATE AMIDST COVID-19 IN PITTSBURGH

Pittsburgh has positioned itself as a city with a strong commitment to sustainable development. This paper analyzes the challenges the city faces concerning its specific commitment to water services, which have been at the core of public health responses to the Covid-19 pandemic. After comparing the responses of the two major water operators in the city – one public, one private – the paper identifies the key challenges for enhancing public water protections in the long run. It concludes with a call for increased government support for water bill assistance for low-income groups who are at increased risk of losing access to water services in the future.

INTRODUCTION

The Covid-19 pandemic brings renewed urgency to water access and its direct connection to public health. This paper analyzes the responses to Covid-19 of water operators in Pittsburgh, Pennsylvania, in the United States of America, focusing on protections designed to ensure water access for groups facing difficulties paying

their water bills during the pandemic. It includes a comparison of the Covid-19 response efforts implemented by water operators in Pittsburgh and an analysis of the extent to which programs adequately address the needs of vulnerable groups. The analysis also highlights the key challenges water operators face in making assistance programs more permanent beyond the Covid-19 pandemic in the context of local commitment to sustainability and equity.

Specifically, the paper argues that while there has been widespread implementation of protections related to public health, there are numerous obstacles to implementing full water access protections in the longer term – notably protections against the economic effects of the pandemic. One of the key obstacles is the ongoing increase of water services rates taking place because of decades of infrastructure neglect and a lack of state and federal resources. As a result, water operators face the complexity of compliance with water quality and environmental standards as well as expansion of assistance programs to ensure low-income customers have access to safe and affordable water.

The paper offers a comparison of Pittsburgh's two major water service providers: one public (Pittsburgh Water and Sewer Authority - PWSA) and one private (the Pennsylvania American Water Company - PAWC). It demonstrates that PWSA's response to Covid-19 has been better than that of the private water company in terms of protections related to public health (such as ensuring access to water during the pandemic) but that neither operator has implemented full protections designed to counter the economic impact of Covid-19. Moreover, the prospects of expanding those extensions imply daunting challenges for the public operator in particular, due to the historical legacies of public-private water systems in the city. The paper concludes with a call for increased federal and state government support for water bill assistance for low-income groups who are at increased risk of losing access to water services in the future.

Using a combination of online interviews and secondary mate-

rials, the paper analyzes the measures taken by water operators as a response to the Covid-19 pandemic and the challenges of making them permanent, with a focus on those measures which aim to ensure access to safe water (notably water shutoff moratoria and customer assistance programs). Interviews include structured and unstructured consultations conducted over the phone and in online meetings as well as email exchanges with leaders of the city's main water system operators, former members of PWSA's Board of Directors, civil society organizations and local policy makers, among others (a full list of interviews is provided at the end of the paper). The paper also reviews official documents, census data, newspaper articles, surveys of civil society organizations, and website content from water operators as well as the Pennsylvania Utility Commission. The research was conducted from May to July 2020.

WATER OPERATORS IN PITTSBURGH

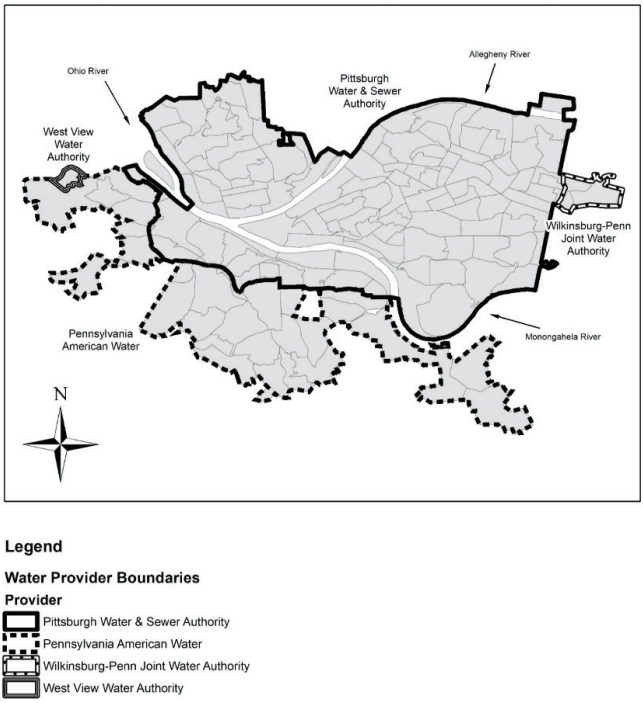
Pittsburgh is the second-largest city in Pennsylvania, with approximately 300,000 residents. The city's economy has seen important transformations, from being a steel production powerhouse (with supportive industries, like coal) to becoming an economy based on higher education, innovation and research. Located at the confluence of three rivers, Pittsburgh is often cited as an example of a rust belt economy that rebuilt itself and developed concerted efforts to clean the land, air and waterways damaged as part of the legacy of its industrial past (Beery 2018).

Pittsburgh currently faces several water-related challenges. Similar to many other cities in the US, Pittsburgh has a decaying water infrastructure. It often experiences flash floods, environmental impacts from a lack of capacity for storm water management, and water quality issues such as boil water advisories, lead contamination and pipe failures. More recently, water affordability is becoming a prominent challenge given the poverty levels in the city. Pittsburgh has its own municipal water authority, but water is provided by four

water operators. While the publicly run Pittsburgh Water and Sewer Authority (PWSA) serves approximately two thirds of the city's population, there are three other water operators serving city residents (and other areas outside the city limits). These include the Pennsylvania American Water Company (PAWC) – a private firm with a large presence throughout the state, serving around a third of the City's residents – and two smaller public water operators serving a small fraction of residents. Figure 18.1 shows the service areas of the water operators.

Figure 18.1

Service areas of water operators in Pittsburgh



Source: Map by Ben Saint-Onge using Western Pennsylvania Regional Data Center, 2010 Census Tracts for shape files; service area boundaries from PWSA's interactive map and corresponding with the WVWA.

Table 18.1 highlights the basic operational characteristics of the two main water operators, PWSA and PAWC.

Table 18.1
Basic characteristics of water operators in Pittsburgh

	PWSA	**PAWC**
City of Pittsburgh population served	73,000 residential customers	27,000 residential customers
Share of city total	53.60%	19.80%
Public/Private	Public, Municipal Authority	Private
Financial assistance from federal or state government for responding to Covid-19 pandemic	No, but are planning on requesting extra expenses reimbursement	No, but are planning on requesting extra expenses reimbursement
Increase in non-payment of bills during Covid-19	107% increase from previous year	21% increase from previous year
Total	*10,551,735*	*2.44*

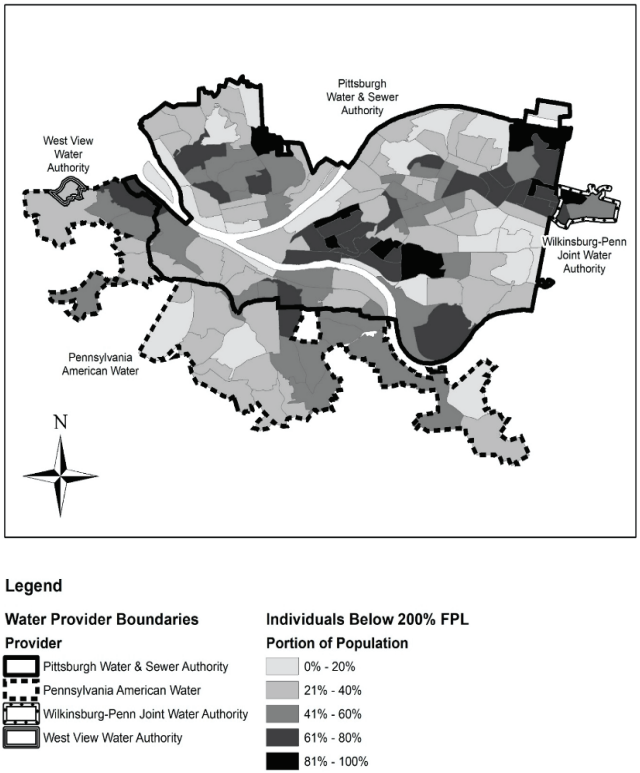
Source: Created by author using information provided by water operator representatives and census data (https://www.census.gov/quickfacts/pittsburghcitypennsylvania).

The current situation thus represents a major challenge for a large segment of the population in the city. According to the US Census, 21% of residents live in poverty –well above the state (12.2%) and national (11.8%) averages – while 40% of the population are eligible for assistance programs (US Census 2018). It is important to note that there are significant dynamics of inequality across race and gender along various dimensions, including health, income, employment and education. For example, a recent report comparing Pittsburgh's race and gender inequality to similar cities in the US shows that the poverty rate among African-American is higher in Pittsburgh than in 85% of similar cities, and more Black children in Pittsburgh grow up in poverty than in 95% of similar cities (Howell et al. 2019, 29). Figure 18.2 shows the variation of percentage of individuals living below the poverty line across census tracts.

Significantly, there are more city census tracts with more people living under the poverty line (shown in darker shades on the map) in the service area of the PWSA (the public water operator) than of the PAWC (the private water operator). This is an important point because in the absence of federal and state funding for water bill assistance, water operators serve larger numbers of households who struggle to pay their bills.

Figure 18.2

Poverty and water services operators in Pittsburgh



Source: Map by Ben Saint-Onge using Western Pennsylvania Regional Data Center, 2010 Census Tracts, poverty Measures, and service areas boundaries from PWSA's interactive map and corresponding with the WVWA.

In the case of Pittsburgh, an old infrastructure system upgrade requires an increase in water rates. In other words, the condition of the water operator impacts the price of water that customers pay, creating a potential water affordability crisis (Pierce et al. 2020). In the context of the Covid-19 pandemic, this historical legacy of water infrastructure is of crucial importance.

WATER OPERATOR RESPONSE TO THE COVID-19 PANDEMIC

The two main operators providing water services in Pittsburgh, PWSA (public) and PAWC (private) set up water shutoff moratoria after the state declared an emergency (see Table 18.2). Specifically, for PWSA, given it had a winter moratorium already in place, it meant that the moratorium would continue, whereas for the private company, PAWC, it only started with Covid-19. The state government issued the mandate on March 16, 2020, for all utilities regulated by the Pennsylvania Utilities Commission (PUC). It is important to note that the PUC only regulates private companies, but as an exception, the publicly run PWSA has fallen under its oversight since 2018.

Both operators also restored service to those accounts that had been previously disconnected, ensuring access to water services for all residents of Pittsburgh during the pandemic, regardless of their ability to pay. Table 18.2 shows that the PWSA (public) established more enhanced elements of these protections (for example, waiving the eligibility requirement for the moratorium and setting it to a higher level from 200% to 250%), drawing perhaps on their experience with winter moratoria on water shutoffs since 2018.

However, none of the protections implemented fully protect water users (see Figure 18.3). Full protections include not only temporary access to water for public health reasons, but also protections for the economic effects of the pandemic (Campbell-Ferrari and Wilson 2020). For example, PWSA and PAWC continue to bill customers and have not set up a grace period for payments. PAWC suspended late fees, but neither have a debt forgiveness program.

Table 18.2
Protections implemented as part of the Covid-19 response by water operators

	PWSA (public)	PAWC (private)
Pre-Covid-19 moratorium in place	Yes, winter moratorium; Dec 1st to March 31st since Jan 2018. Income eligibility 250% of Federal Poverty Level	No
Covid-19 moratorium, start date	March 13, 2020	March 13, 2020
Public/Private	Public, Municipal Authority	Private
Moratorium end date	August 1, 2020 (according to PWSA Board); PUC Emergency Order End Date	PUC Emergency Order End Date (mandated)
Income eligibility, with respect to Federal Poverty Level	Waived income eligibility requirement in response to Covid-19	Must prove financial hardship
Restoration of service	Yes; however, less than 10 accounts reconnected due to Winter Moratorium still in effect.	Yes
Are customers continuing to be billed?	Yes	Yes
Are there late fee charges for customers?	Yes	Suspended late fees until further notice
Post-Moratorium grace payment period	No	No
Debt forgiveness	Considering addressing past due charges accumulation through an arrearage forgiveness program.	No

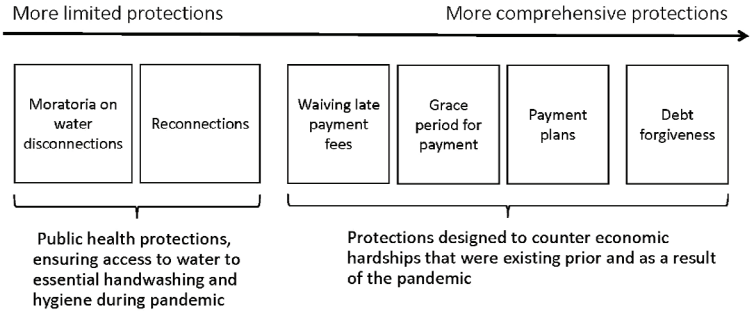
Source: Created by author using information provided by water operator representatives and census data (https://www.census.gov/quickfacts/pittsburghcitypennsylvania).

The implication is that current protections are merely postponing the financial burden of low-income households once moratoria

are lifted. This is true not only for low-income families but also for households recently unable to pay for water service because of the economic impacts of the pandemic. As a result, moratoria on water shutoffs fall short of offering adequate protection.

Figure 18.3

Covid-19 protections implemented by water utilities



Source: Author's own analysis, incorporating information from Campbell-Ferrari and Wilson (2020).

It is also important to look at other programs in place to provide assistance to low-income households.[1] Table 18.3 shows that the two main water operators, PWSA and PAWC, set up programs before the pandemic (in fact, the PAWC programs have been running for two decades), and made expansions afterwards. However, enrollment rates in these programs are low, even during the Covid-19 crisis. As part of the research for this paper, the author interviewed community leaders and community organizers, and conducted a survey of community-based organizations, and found some of the

[1] Specifically, the TAP tiers are as follows: participants are charged 2% of monthly income if they are earning 50% of Federal Poverty Level (FPL) or less; 2.5% of monthly income for residents making between 51% and 100% of FPL; and 3% for residents earning between 101% and 150% of FPL. This program is therefore consistent with the United Nation's affordability standard of 3% of household income by making sure low-income households are able to afford and pay their own bills. (Czewinski et al. 2017, 151).

reasons that might explain the low enrollment of the programs. The discussion focuses on PWSA because it serves most of Pittsburgh's residents and because it is the operator for which more information was available.

Table 18.3
Customer assistance programs offered by water operators

Water operator/assistance program		Prior to Covid-19	Expansions during Covid-19	Process of registration
PWSA (public)	Winter Shutoff Moratorium	Income eligibility 250% of Federal Poverty Level	Waived income eligibility requirement throughout 2020	Call PWSA, Dollar Energy or Community-Based
	Bill Discount Program	150% of the Federal Poverty Level	Waived the 12-month	
	Hardship Grant Program (Annual up to $300)	150% of the Federal Poverty Level	Waived the sincere effort of payment requirement throughout 2020	
PAWC (private)	H2O Help to Others Program	Payment arrangement, proof of financial hardship	NA	Call water operator directly
	Grant Programs (Annual up to $500)	200% of the Federal Poverty Level	NA	
	Service Fee Discounts	150% of the Federal Poverty Level	NA	

Source: Author's own analysis based on information from water operators' representatives and their websites.

The low enrollment in the PWSA's programs is related to the fact that these programs – which are similar to other utility assistance programs – do not provide enough assistance (Czewinski et al. 2017,

148). For example, they exclude customers with incomes not low enough to qualify but who still struggle to pay their water bills, such as elderly residents on a fixed income. Furthermore, the programs require customers to pay past-due charges or make a sincere effort of payment, which usually means paying a portion of the past bills and committing to paying the rest within a set amount of time. Without at least partial debt forgiveness, accrued bills represent a severe financial burden.

Another reason for the program's low enrollment is a lack of information about them. PWSA have engaged in community outreach – holding public information meetings across neighbourhoods in response to spikes of lead in the water and boil water advisories that took place in 2016 and 2017 – and have included information inserts in customer bills, but it would appear that most people are unaware of the programs. Survey responses indicated a general lack of information about municipal assistance programs by customers and by community-based organizations, with comments such as "residents not having access to a computer," "water and sewer companies not having these assistance programs," and "not understanding information about programs."

It is also evident that registration for the programs is not a straightforward process. For example, the PWSA's customer assistance programs website lacks simple directions for enrolling. At the time of writing (July 2020), the website stated that people in need should call them directly to see if customers are eligible for getting help paying their bill. However, when one calls, one is directed to make another call to the organization administering the programs, Dollar Energy. But the process of signing up for assistance through Dollar Energy is also confusing because one could do it through a community-based organization, choosing the organization based on the customer's zip code and by phoning them directly. When calling them directly, the process should be straightforward: a representative helps customers fill out an application, indicating income of all household residents. The paper is submitted and it takes two to

three months to get processed, if approved. But if customers try signing up through a community-based organization, the process varies widely across organizations; some of them respond promptly and provide help over the phone, while others were not informed about water assistance programs or did not answer the phone after several days of trying.

This lack of clarity is clearly an obstacle to enrollment. This is especially true for those experiencing poverty, as research shows that navigating assistance programs can be difficult for families living with chronically limited budgets (Mani et al. 2013). In Pittsburgh, low-income communities include communities of colour, refugees and immigrants. In surveys of organizations providing services to refugees and immigrants in the summers of 2019 and 2020, water affordability was identified as the number one challenge, and there is lack of information about assistance programs (González Rivas 2019, 2020). Language is sometimes a barrier leading to a lack of knowledge about the programs, even though PWSA has contracted out interpretation services for customers who do not speak English.

In sum, the current PWSA programs could make improvements to enhance their existing assistance programs. Aside from simplifying and clarifying the enrollment process and improving outreach to low-income groups, seniors and other potential beneficiaries, PWSA could improve program design by dropping enrollment barriers by, for example, incorporating debt forgiveness and payment plans, which give customers a clean slate and an opportunity to catch up on paying their bills in full. The Philadelphia Tiered Assistance Program (TAP) provides an illustration of this approach because it is based on a household's affordability level, available to low-income customers.

The TAP program design also takes into account the extra burden that low-income households face navigating assistance programs and the onerous processes of applying for assistance. By simplifying the process to include a single application, and by offering a variety of ways of registering (online, in person and by mail), the

program aims to remove barriers to access (Lakhani 2020).

THE COSTS OF WATER

As noted earlier, rising water tariffs are a reality across the United States due to lack of federal funding and a growing list of necessary upgrades, with water consumers paying the cost of neglect. Table 18.4 compares PWSA and PAWC's water service charges, showing that PWSA's rates are higher (and likely to increase for the next two years, depending on PUC approval), exacerbating the affordability problem.

Table 18.4
Comparison of monthly service charges by water operators

Charges	PWSA (public)	PAWC (private)
Fixed monthly rate	$27.27	$16.50
Volume charge (per 1000 gallons)	$11.04	$12.20
Typical household bill consuming up to 3000 gallons a month	$60.39	$53.10

Source: Author's own, using information provided by water operators' representatives and from websites. Current rates as of the time of writing, July 2020. Note that PWSA also charges for blocks of 1000 gallons consumed, even if not consumed in its entirety. In comparison, PAWC charges for every 100 gallons

Traditionally, however, PWSA water service rates were not the highest in the city. For decades they were lower than those of PAWC, the privately owned company. It is important to put the current rates in historical perspective, as PWSA's infrastructure conditions and consequently current rates are at least partly explained by an agreement that put PWSA at a disadvantage vis-à-vis PAWC (private). The agreement was signed by the city's legislative body – Pittsburgh City Council – with PAWC's predecessor company in 1958 (which lasted until 2020). The agreement forced all city residents, regardless of their water service provider, to pay the same service rates, effectively subsidizing the private water company for 60 years, amounting to millions of dollars that could have been reinvested in public water

infrastructure.[2] Meanwhile, the private company was using these funds to invest in its own infrastructure (Bauder 2019).

Under growing financial pressure, the PWSA Board of Directors decided to establish a public-private partnership with Veolia Water in 2012 to take over management of water services (WaterWorld 2013). This arrangement soon resulted in a series of problems, including boil water advisories and spikes of lead in water, ending in lawsuits between PWSA and Veolia in 2016 and undermining the trust of consumers in the quality of their water (Rosenfeld 2017). PWSA's management returned to public control, but in 2018 PWSA was put under state regulatory oversight (Hughes 2017), where it had to comply with an ambitious investment plan, resulting in further rate increases.

It is important to note here that one of the advantages of the governance structure of public water operators is that they often set up mechanisms for public participation. For example, the Board of Directors of PWSA traditionally works with civil society organizations on issues related to water, including affordability. When PWSA was placed under PUC oversight, this was formalized. For example, each rate increase must be approved by the PUC and includes participation from a variety of actors. The PUC also requires utilities under its oversight to set up a low-income assistance advisory committee (LIAAC). The role of the LIAAC is to shape assistance programs with members from PUC, the consumer protection office, PWSA staff, board members, as well as members of civil society and community-based organizations, setting up an official participatory process.

According to interviews with members of this committee, there are differences in how to address low enrollment levels in assis-

[2] For the period 1985 to 2001, PWSA paid $44.8 million in reimbursements. This does not include the first 12 years of the agreement, where the City Water Department paid the subsidy directly from the city budget. Over time, there were several attempts to revise this subsidy without success, facing political opposition from representatives in affected neighborhoods but also from the PAWC (private). For more information see: McNulty 2001 and Nootbaar 2010.

tance programs. PWSA is focused on improving community outreach and is preparing to launch a new initiative (being vetted by PUC) to help reach potential beneficiaries by setting up a team designed to work solely on increasing program enrollment in low-income neighborhoods. Civil society and community-based organizations in the committee are advocating for full protections: making water shutoff moratoria permanent and implementing a debt forgiveness program. Although neither one of these protections has been implemented, interviews with PWSA members suggested that a debt forgiveness program is being considered (as shown in Table 18.2 above).

This is not to say that PWSA did not have good governance before PUC oversight. In fact, the PWSA's Board of Directors had instituted water protections for low-income customers in late 2017 working closely with civil society organizations as part of "Our Water Campaign" efforts. However, the procedures instituted under the oversight formalize a more democratic process, providing a record of participation and increasing transparency, which are all steps in the right direction within PWSA.

CONCLUSION

This paper shows that although the public water operator (PWSA) set up more enhanced water access protections during the pandemic than its private counterpart (PAWC), neither operator has offered the extent of assistance required for long-term water affordability in Pittsburgh. Furthermore, the prospects for implementing the necessary policies are particularly daunting for the public water operator due to historical legacies, such as the agreement from 1958 that served to starve them of funds, a lack of federal funding, and the fact that it is responsible for the majority of low-income households in the city.

Water operators can nevertheless utilize the Covid-19 crisis to highlight the essential nature of the water and sanitation sector and

to elevate calls for prioritizing resources to ensure water affordability as part of the rescue packages being implemented by the US Senate. Even though the role of the federal government for water infrastructure has decreased since the mid-1970s, and there have been failed attempts at passing national legislation for assistance for drinking water service in the US (Pierce et al 2020), the current water affordability crisis is a national problem that requires federal government intervention (see Warner et al in this volume).

The current aid packages to alleviate the economic effects of the Covid-19 pandemic in the United States should include water infrastructure upgrading as an essential part of public health and as an economic stimulus. Public water operators should be part of a coalition of actors advocating for federal funding for clean, safe and affordable water access. Specifically, for PWSA, this means working closer with organizations that have been advocating for clean affordable water and joining other networks that are working towards the same goal. This is not new to PWSA (for example, it has joined the US Water Alliance and has been working with local organizations like the Our Water Campaign Coalition) but could be a central part of its mission. The progress PWSA is making in catching up with badly needed infrastructure investment should put water affordability at the center of its mandates.

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LIST OF INTERVIEWS

- Nick Bianchi, Executive Director, Wilkinsburg-Pen Joint Water Authority, July 10, 13 and 15, 2020.
- Patrick Dowd, former Pittsburgh City Council member and former member of PWSA's Board of Directors, July 9, 2020.
- Michele Garvey, Director of Administration, West View Water Authority, June 15 and 30, 2020.
- Glenn Graysone, member of PWSA's Low Income Assistance Advisory Committee, July 9, 2020.
- Deborah Gross, Pittsburgh City Council member and former member of PWSA's Board of Directors, June 25, 2020.
- Krystle M. Knight, member of PWSA's Low Income Assistance Advisory Committee, July 20, 2020.
- Gary Lobaugh, External Affairs Manager for Western Pennsylvania, Pennsylvania American Water Company, July 6 and 21 and August 8, 2020.
- Noble Maseru, member of PWSA's Low Income Assistance Advisory Committee, June 30, 2020.
- William Pickering, PWSA's Executive Director, July 13, 2020.
- Jennifer Presutti, PWSA's Deputy Director, July 13, 2020.
- Julie Quigley, Director of Administration, PWSA, June 19, June 26, July 13, 2020, and multiple email exchanges.
- Monica Ruiz, Casa San José's Executive Director, May 19, 2020.
- Allyson Shaw, former campaign leader of clear rivers and our water campaign, Pittsburgh UNITED, July 13, 2020.
- Megan Stanley, Director of Pittsburgh Commission on Human Relations, June 30 and July 13, 2020.
- Madeline Weiss, Environmental Justice Organizer, Pittsburgh UNITED, July 7, 2020.

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