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Data Developed in 2023 Philadelphia Water Department Rate Case Shows Success of PWD's Tiered Assistance Program (TAP).

NOTE TO READERS

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Fisher, Sheehan & Colton
Public Finance and General Economics
34 Warwick Road, Belmont, MA 02478
(voice) 617-484-0597 *** (fax) 617-484-0594
(e-mail) roger@fsconline.com

Six Years of Operation Show Philadelphia TAP to Be Successful at Improving Low-Income Payments.

In the Fall of 2015, the City of Philadelphia became the first major urban center to adopt a water affordability program structured on percentage of income principles. Adopted unanimously by the Philadelphia City Council on November 19, 2015, the Philadelphia initiative was titled the Income-based Water Rate Affordability Program ("IWRAP"). IWRAP opened for business on July 1, 2017. It later became operationally known as the Tiered Assistance Program (TAP).

Philadelphia's IWRAP legislation provides that: "monthly IWRAP bills shall be affordable for low-income households, based on a percentage of the household's income. . ." Each low-income customer's bill, the legislation directed, shall be "based upon each Customer's actual income" and "shall be charged in lieu of the Department's service, usage, and stormwater charges."

The Structure of Philadelphia's TAP

Philadelphia's IWRAP legislation provides that: "monthly IWRAP bills shall be affordable for low-income households, based on a percentage of the household's income. . ."[1] Each low-income customer's bill, the legislation directed, shall be "based upon each Customer's actual income" and "shall be charged in lieu of the Department's service, usage, and stormwater

[1] Amended Philadelphia City Code, Section 19-1605(3)(a) (2017).

charges."[2] The following major policy decisions are incorporated into this language:

- Bills "shall be affordable." The purpose of the Philadelphia legislation, in other words, was not merely to provide "some" level of discount to low-income customers. There is, instead, a legislatively-mandated outcome. The level of discount must result in an *affordable* bill for low-income customers. This policy works two ways. First, if a customer has a lower income (or a higher bill), the amount of assistance should be increased to reflect the increased dollars needed to make a bill affordable. Second, if a customer has an affordable bill without assistance, the customer does not receive a discount merely because he or she is "poor." The bill assistance, in other words, should be an amount that is sufficient, but only that amount which is sufficient, to make a bill affordable.

- Affordability is to be "based on a percentage of the household's income." Affordability, in other words, was not some generic concept included in the legislation. Instead, Philadelphia specifically mandated that affordability was to be determined as a function of a "percentage of income."

- Affordability is to be "based upon each Customer's actual income." According to the Philadelphia City Council, in other words, affordability was not to be determined "on average" or on a City-wide basis. Affordability could not be set, for example, based on median income or even on some percentage of Federal Poverty Level. Affordability was not to be based on some estimated or imputed income. Rather, pursuant to the legislation, affordable IWRAP bills in Philadelphia are to be determined based upon "each customer's actual income."

  The Philadelphia legislation directly addresses the treatment of arrearages that had been incurred by low-income customers before those customers entered IWRAP. The legislation recognizes that collection efforts by the Philadelphia Water Department are based on total bills, not on whether a customer's arrears were incurred before or after the effective date of the water affordability program. Moreover, the City Council recognized, it was not only *possible*, but indeed it was *likely* that low-income customers would have incurred arrears during that time period prior to the point where the City Council moved to incorporate affordability into the City's rate structure.

Accordingly, the Philadelphia legislation mandates that "low-income customers who are enrolled in IWRAP shall be required to make no additional payment in respect to any pre-IWRAP arrears to maintain service."[3] In fact, the legislation explicitly provides that "earned forgiveness of arrearages shall be available under such terms and conditions as are adopted by regulation."[4]

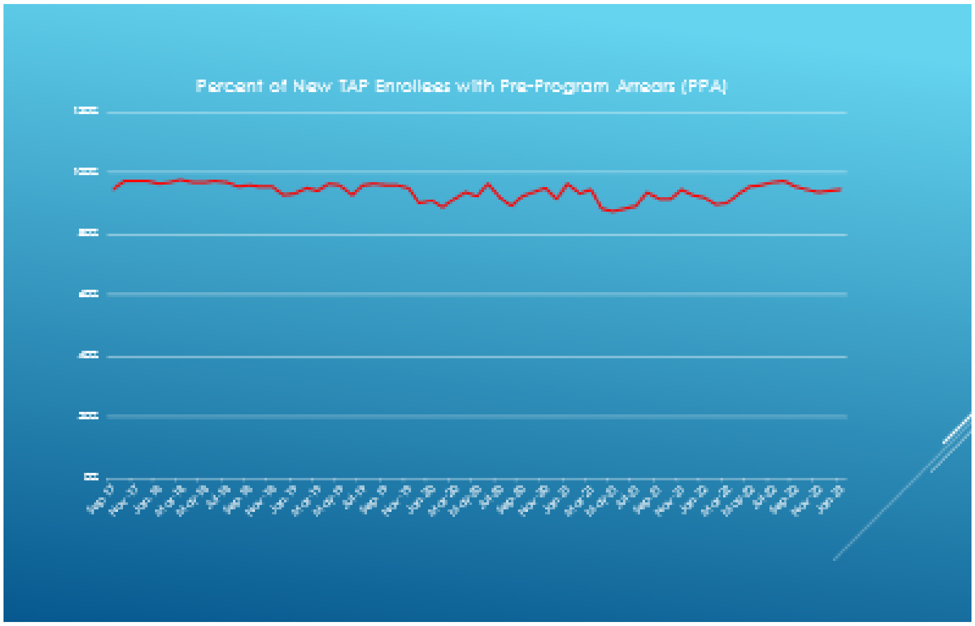
[2] Amended Philadelphia City Code, Section 19-1605(3)(a) (2017).

[3] Amended Philadelphia City Code, Section 19-1605(3)(h) (2017).

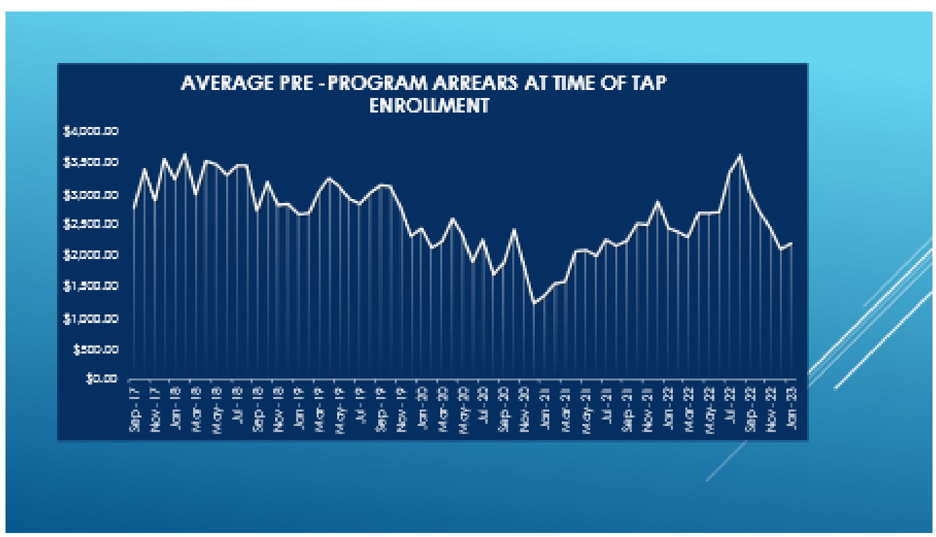
[4] Amended Philadelphia City Code, Section 19-1605(3)(h)(i) (2017).

Six Years Later: What the Data from the Philadelphia TAP Shows

When one examines the impact of Philadelphia's TAP, you need to start with what was happening *before* TAP came into being. That can be examined by looking at the percentage of low-income customers who enter TAP with a pre-existing arrears. This Figure shows that from the very beginning, low-income customers were not able to pay their bills before enrolling in TAP. Consistently close to 100% of TAP participants are entering the program with pre-existing arrears. That observation will be important time and time again, and will be referenced multiple times below.



Low-income customers who are enrolling in TAP not only almost universally bring pre-program arrears into the program with them, but they bring *substantial* pre-program arrears into the program with them. This Figure shows the average pre-program arrearage balance that new TAP enrollees have had at the time of TAP enrollment. At the *lowest* point, new TAP enrollees brought nearly $1,500 of pre-program arrearages into the program at the time of enrollment. More typically, new TAP enrollees were bringing between $2,000 and $3,500 of pre-program arrearages into the program with them.



Low-income customers, in other words, were not just "a little" behind on their bills when they enrolled in TAP. Prior to their enrollment in TAP, these low-income customers had incurred not hundreds, but thousands of dollars in unpaid bills. These first two Figures above thus reveal the fallacy of those who argue that the "cost" of TAP is equal to the amount of the discount that is being provided. This fallacious argument assumes that 100% of low-income bills would have been paid in the absence of TAP. Clearly, however, the data shows that that would not be the case. These Figures also show the fallacy of people who argue the cost of TAP is "too high." Much, if not most, of these costs are *already* being borne by ratepayers in the form of unpaid bills.

Completeness of Bill Payment (TAP and Non-TAP Low-Income (LI))

	Percent Paid in 0–12 Months		Percent Paid in 0–24 Months	
	TAP	Non-TAP LI	TAP	Non-TAP LI
FY22	72.50%	34.30%	N/A	N/A
FY21	72.47%	46.12%	83.83%	62.64%
FY20	72.80%	45.92%	87.13%	59.45%
FY19	72.03%	48.71%	87.89%	61.80%
FY18	73.13%	36.06%	95.69%	45.12%
FY17	No TAP	42.74%	No TAP	54.80%
FY16	No TAP	45.96%	No TAP	59.69%
FY15	No TAP	45.63%	No TAP	59.77%

Knowing that more than 90% of TAP participants enter the program with pre-existing arrears, the next question would be: "does TAP help low-income customers *improve* their bill payment patterns?" This figure shows the percentage of bills paid by the 12-month mark after a bill is received (for TAP participants and for low-income customers not on TAP). It shows the same data (i.e. the percentage of bills paid) by the 24-month mark after a bill is received as well. For years prior to FY2018, of course, there was no TAP, so the numbers show only how much of a low-income bill is paid with*out* TAP.

At the 12-month mark, TAP customers have paid more than 70% of the bills they received. In contrast, at the 12-month mark, low-income customers *not* participating in TAP have paid only 36% (FY2018) to 46% (FY2021) of the bills they have received. At the 24-month mark, TAP customers are paying between 80% and 90% of the bills they have received. In contrast, low-income customers *not* participating in TAP have paid only 45% (FY2018) to 63% (FY2021) of the bills they received by Month 24.

TAP has substantially reduced the number of low-income disconnections. When more people pay more of their bill, the number of nonpayment disconnections decreases. In addition, when PWD issues a bill to a TAP participant, it knows that it will receive a higher percentage of payment in return than when it issues a bill to a low-income customer *not* on TAP.

In contrast to the Figure above, the two Tables presented in the Figure below present a comparison of how _quickly_ TAP customers pay the PWD bills to how quickly low-income customers were paying their bills _before_ TAP existed. First, look at the one-year mark. In the top Table, you can see that TAP participants consistently paid more than 72% of their bills by the end of 12-months. In contrast, in the years _before_ TAP (bottom Table), you can see that in only two years (FY13, FY14), did PWD receive a 72% bill payment (and even this occurs only by the end of 48 months, not the end of 12 months). In FY12, the 72% bill payment did not occur until the end of 60 months. In FY16, the 72% bill payment did not occur until the end of 84 months.

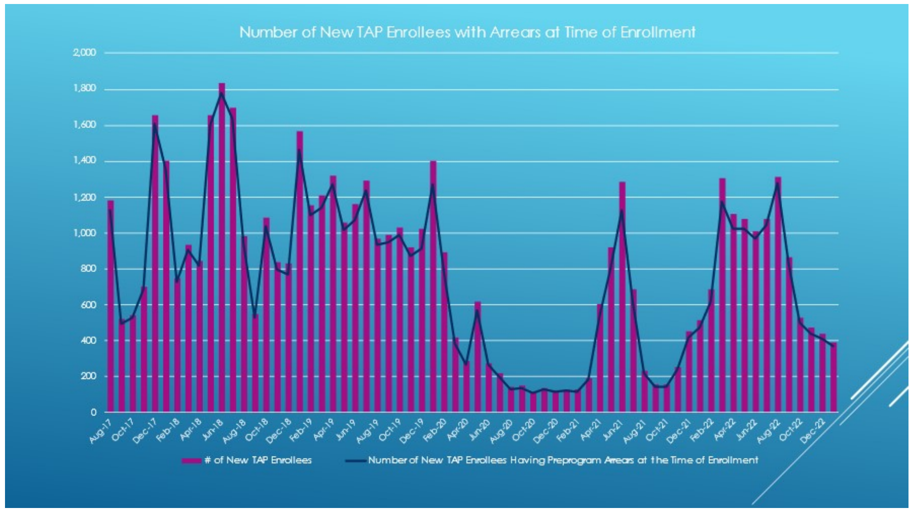
TAP Collectability at Identified Points in Time by Fiscal Year								
TAP FY 18: 1-Year	TAP FY19: 1-Year	TAP FY20: 1-Year	TAP FY21: 1-Year	TAP FY22* 1-Year	TAP FY-18: 2-Years	TAP FY19: 2-Years	TAP FY20: 2-Years	TAP FY21: 2 Years
73.13%	72.0%	72.8%	72.5%	72.5%	95.7%	87.9%	87.1%	83.8%

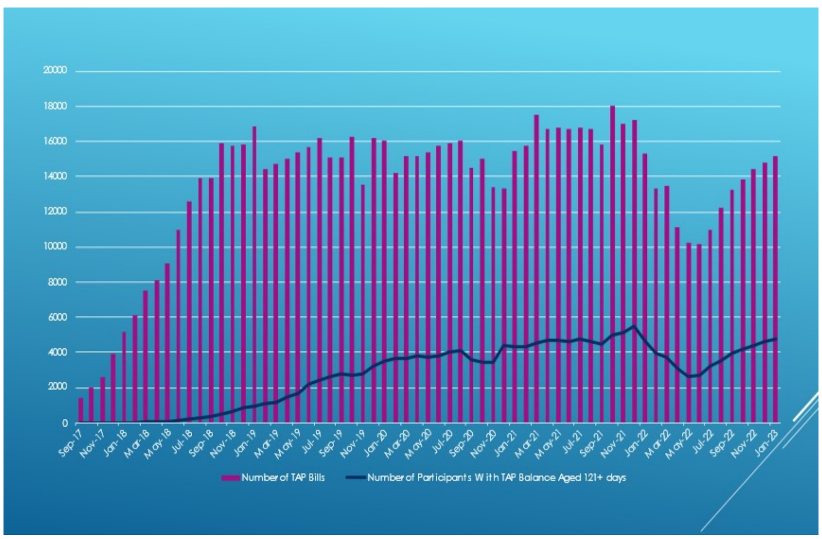
Cumulative Collectability for Low-Income Customers in Pre-TAP Years									
	0 – 12 Mos	13 – 24 Mos	25 – 36 Mos	37 – 48 Mos	49 – 60 Mos	61 – 72 Mos	73 - 84 Mos	85 - 96 Mos	>96 Mos
FY17	42.7%	54.8%	58.1%	61.3%	64.1%	69.2%			
FY16	46.0%	59.7%	64.5%	66.8%	69.3%	71.2%	75.0%		
FY15	45.6%	59.8%	65.7%	69.5%	71.3%	73.2%	74.8%	77.8%	
FY14	46.6%	61.4%	67.6%	72.2%	75.1%	76.4%	77.7%	79.0%	81.5%
FY13	49.7%	64.2%	69.7%	74.3%	77.8%	79.9%	81.0%	82.0%	83.0%
FY12	46.3%	60.2%	65.2%	69.3%	72.9%	75.6%	77.3%	78.1%	79.0%

Remember, again, the TAP participant population is a population of low-income customers where every month, more than 90% of the customers enrolling in TAP were entering the program with pre-existing arrears. And those pre-existing arrears were in the thousands, not hundreds, of dollars. In contrast, under TAP, 72% of the bill is being paid within 12 months.

An even more dramatic difference can be seen if you look at the percentage of bill paid by the end of two years. Under TAP, low-income participants paid between 84% (FY21) and 96% (FY18) of the bills by the end of two years. Before TAP, low-income customers _never_ achieved an 84% percentage payment of their bills, even after eight years (>96 months).

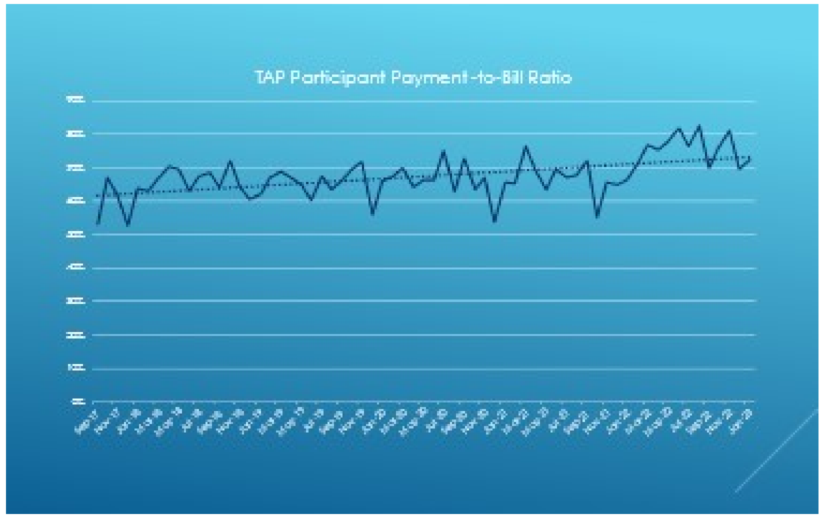
The next set of data compares the difference in low-income payment patterns before and after TAP participation as well. This top Figure shows the number of new TAP enrollees (the bars) compared to the number of new TAP enrollees with arrears (the line). As observed earlier, nearly all low-income customers enrolling in TAP bring unpaid bills with them.





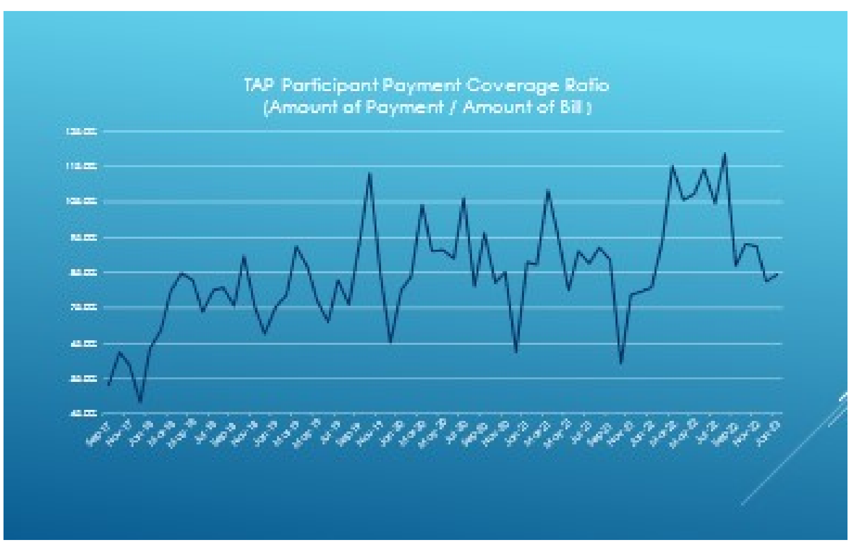
In contrast, this lower Figure shows the number of TAP bills issued each month (the bars) against the number of TAP bills that were issued that carried a long-term (120+ days) unpaid balance at the time the bill was issued. TAP has not entirely eliminated unpaid bills by low-income customers. However, as can be seen, the improvement has been dramatic.

One can see that the number (and percent) of TAP participants with an arrearage of 120 or more days appearing on their bill has levelled off at around 25% of the TAP population. While the availability of COVID-related emergency federal water assistance in 2021 helped bring those arrearages down even further, the proportion of low-income accounts with long-term TAP arrears over time relative to the proportion of low-income accounts entering TAP with pre-existing arrears is dramatically lower than the percentage of low-income customers enrolling in TAP with huge pre-existing arrears.



Most of the data presented above involves looking at dollars. For example, dollars of bills, dollars of payments, or dollars of arrears. The Figure here does not look at dollars, but rather looks at the number of bills and the number of payments. This Figure presents the payment-to-bill ratio. This is a simple ratio: the number of bills issued to TAP participants each month is placed in the denominator. The number of payments received to be applied against TAP bills is placed in the numerator. If the ratio is 90%, that means that PWD is receiving 90 TAP payments for every 100 TAP bills that PWD issued. A Payment to Bill Ratio of 60% means that PWD is receiving 60 TAP payments for every 100 TAP bills PWD issued.

Again, it is important to remember where the TAP participant population started. 95% plus of new TAP enrollees entered TAP with a pre-existing arrears averaging in the thousands of dollars. In contrast, the Figure above documents that over the six year operation of TAP, PWD is consistently receiving more than 60 TAP payments for every 100 TAP bills it issues. Moreover, as the trendline shows, the payment-to-bill ratio has improved over time. The dramatic improvement in payment patterns is even more evident when this Chart is viewed in conjunction with the data in the Figure below.



TAP payments substantially improve as measured by the "Payment Coverage Ratio" shown in this Figure. The Payment Coverage Ratio is also a simple ratio. It calculates the percentage of a bill that is being paid by placing the dollars of payments in the numerator and the dollars of bills in the denominator.

The Figure presented here shows that TAP has taken that low-income population, nearly 100% of which was behind on their bill payments upon entering the program, and converted those low-income customers into reasonably good-paying customers. The Chart here shows two important things: (1) TAP customers are consistently paying 80% (or more) of their bills; and (2) the Bill Payment Coverage ratio demonstrates a noticeable *upward* trend. The longer a TAP participant remains on TAP, the better their bill payment patterns become.

The data in this Chart is even more compelling when viewed with the immediately preceding Chart. The immediately preceding Chart shows that TAP participants in the most recent year are making roughly 70 to 80 payments in response to every 100 bills they receive. The Chart above, however, shows that those payments cover 85% or more of the TAP participant bills. That demonstrates one of two things on the part of TAP participants: (1) either TAP participants routinely make partial payments, which are made up by a subsequent payment; or (2) when a TAP participant gets behind by skipping a payment, that missed payment is subsequently made-up by a later payment. The further fact that so few TAP participants experience long-term arrears also documents this observation.

Summary and Conclusions

The primary purpose of Philadelphia's TAP initiative was to make bills affordable for low-income customers. The program is succeeding in accomplishing that goal. It begins with a population of low-income customers, nearly 100% of whom are behind on their bills. These are not small arrears, but rather arrears that reach thousands of dollars per customer on average. Upon entering TAP, the level of arrears dramatically drops. Consistently, only 25% of TAP participants have arrears that are 120 days old (or more). Indeed, while Philadelphia Water receives between 70 and 80 payments for every 100 bills it issues, it is receiving payments of 85% of the revenue it bills. In fact, Philadelphia Water receives more payments in 12 months from TAP participants than it received from low-income non-participants over a period of six to eight years.

Persons interested in more information about the operation and impacts of the Philadelphia Water Department's Tiered Assistance Program (TAP) can write for more information at:

roger [at] fsconline.com

Fisher, Sheehan and Colton, Public Finance and General Economics (FSC) provides economic, financial and regulatory consulting. The areas in which *FSC* has worked include energy law and economics, fair housing, local planning and zoning, energy efficiency planning, community economic development, poverty, regulatory economics, and public welfare policy.