



# 2021 MTW Annual Report

(Submitted March 30, 2022)

# Housing Authority City of Pittsburgh

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## I. INTRODUCTION

The Housing Authority of the City of Pittsburgh (HACP) is committed to building better communities and improving the lives of the families who reside at the HACP owned and/or managed housing communities or receive housing assistance payments. Throughout FY 2021 (January through December), the HACP strove to provide its 20,000+ customers with high quality and safe housing, while working to provide additional housing opportunities to the thousands of Pittsburgh families currently waiting to find suitable, affordable housing accommodations.

The HACP has demonstrated a continued, firm commitment to expanding our affordable housing portfolio to help meet the City of Pittsburgh's growing housing demand. In FY 2021, this effort included developing new units in locations throughout the city – including mixed-income developments in the East End, the Hill District, and the North Side, as well as Scattered Site housing located throughout the city limits.

As Pittsburgh's renaissance continues, the HACP is taking measures to ensure that Pittsburgh's most vulnerable residents to include our senior citizens, our disabled individuals and our low-income working families also are able to enjoy the benefits of our city's renaissance. The referenced population groups are just a few of the factors as to why it is essential to rebuild an adequate supply of affordable housing by continuing to improve our existing housing stock. The referenced actions demonstrate the HACP is committed to creating a variety of new, affordable homes.

In addition to our efforts to develop safe, affordable housing, the HACP is also poised to move forward with efforts to assist the Pittsburgh residents who currently reside in Low-Income Public Housing (LIPH), HACP-owned housing or receive support through the Housing Choice Voucher (HCV) program. The resident initiatives, offered through the HACP include the Family Self-Sufficiency (FSS) and the Resident Self-Sufficiency (RSS) Programs. These programs are not limited to case management, linkages to services, employment, education, and training. Our innovative programs and services provide residents with the skills and support they need to attain self-sufficiency, become upwardly mobile and increase livability within the City of Pittsburgh. The HACP provides training and employment opportunities to any HACP resident who is committed to achieving increased self-sufficiency.

Residents continue to enroll in resident opportunity initiatives to provide a better life for their families. Participation in the HACP training programs is designed to produce quality, sustainable, employment opportunities. The HACP is committed to do more than merely offering secure, affordable housing. Our commitment to our residents is embedded in our mission and vision statements. The HACP strives to find effective and innovative ways to improve the quality of life and housing communities.

The HACP MTW Homeownership Program is one (1) example of an initiative that provides the opportunity for people to progress towards homeownership in an affordable manner, while building wealth for their family and supporting economic mobility.

Through comprehensive efforts such as the Rental Assistance Demonstration (RAD) Program, the HACP preserves and improves existing, affordable housing properties, while protecting the existing, affordable housing stock and ensuring that it remains high-quality. Through the Gap Financing Program and other development initiatives, the HACP is expanding our real estate portfolio, increasing the supply of affordable housing in the city of Pittsburgh, and providing more people with stable and affordable housing.

The HACP is changing the face of affordable housing in communities like Sandstone Quarry (previously known as Allegheny Dwellings Phase I), Skyline Terrace and Larimer/East Liberty Choice Neighborhoods. More specifically, through the Larimer/East Liberty Choice Neighborhood Implementation Program, we are working with community stakeholders to build vibrant, inclusive, and affordable neighborhoods that will allow residents to take advantage of East Liberty's recent community and economic developments. More importantly, the HACP is helping to change the lives of the residents who call these communities their home.

It is the HACP's duty to ensure that everyone can afford to live, work, and thrive in the City of Pittsburgh as its renaissance continues. We are taking concrete and innovative measures to guarantee that all of Pittsburgh's residents including the most vulnerable, can share in that prosperity. The HACP efforts are changing what affordable and public housing "looks like" in the City of Pittsburgh, but more importantly, our efforts are changing the lives of the residents, who call our communities, home.

## **A. Overview of HACP's Moving to Work (MTW) Goals and Objectives**

The Housing Authority of the City of Pittsburgh (HACP)'s overarching Moving To Work(MTW) Goals are as follows:

1. To reposition the HACP's housing stock to preserve and expand affordable housing options and stabilize neighborhoods. These efforts are designed to result in housing that is competitive in the local housing market, is cost-effective to operate, provides a positive environment for residents, and provides broader options of high-quality housing for low-income families.
2. To promote independence for residents via programs and policies that promote work and self-sufficiency for those able and promote independent living for the elderly and disabled.
3. To increase housing choices for low-income families through initiatives designed to increase the quality and quantity of housing available to households utilizing tenant-based rental assistance and other available resources.

## B. The HACP Long Term Goals and Objectives

The HACP's vision for its MTW Program is built around three (3) major themes that are included in the goals and together, are designed to achieve the statutory objectives of the MTW Demonstration Program.

- **Theme one** is to reposition the HACP's housing stock to compete in the local market, stabilize neighborhoods, improve operational efficiencies, and expand housing choices for low-income families.
- **Theme two** is to promote self-sufficiency and independent living through a variety of enhanced services and policy adjustments. These programs and policies are designed to provide incentives to work for adult, able-bodied, non-elderly heads of households and family members, and to promote social and academic achievement for children and youth. In addition to increasing economic self-sufficiency among assisted families, these programs and policies are expected to result in increased revenue for the HACP (increasing the cost effectiveness of federal expenditures) while increasing housing choices for families (with increased work and income they will have additional housing choices both within the HACP portfolio and within the larger housing market).
- **Theme three** is to increase housing choices for low-income families through initiatives designed to increase the quality and quantity of housing available to households utilizing rental assistance and other available resources.

### 1. Theme One: Repositioning of HACP's Housing Stock

Since the initial HACP MTW Annual Plan was submitted in 2001, a major component of the HACP's MTW strategy has been to reposition the HACP's housing stock through a) preservation of successful developments and b) revitalization of distressed developments through strategic investments, that integrate public housing properties with their surrounding neighborhoods and serve as a catalyst for the expansion of public and private investments in revitalizing neighborhoods. The HACP has also introduced market rate units into certain communities, such as Oak Hill, Garfield, and Allegheny Dwellings, to enhance their competitiveness and better integrate them into nearby neighborhoods. Initiated prior to MTW, through three (3) HOPE VI redevelopment projects and continued through the MTW Program, the HACP has achieved remarkable success.

A by-product of these redevelopment efforts is a reduced number of traditional, public housing units. This has been balanced by the addition of new affordable units supported by tax credits, project-based Housing Choice Vouchers (HCV) , and new units rented at market rates. In some of the HACP's mixed finance/mixed-income developments, a portion of the market rate units are rented at levels affordable to some low-income (80% of AMI) households. The traditional Housing Choice Voucher (HCV) Program also supports low-income families and occupancy of units available in the private market. It should be noted that our efforts have also reduced housing densities in communities, providing mixed-income housing and housing with modern conveniences.

The City of Pittsburgh experienced rapid growth in the technology and healthcare industries in recent years. This increase in the growth index has resulted in high-end developers meeting the supply and demand of higher income residents moving into the region. Neighborhoods once abundant with affordable, market rate rents experienced a surge in pricing for both new and existing units. low-income families, including those utilizing HCVs, have increasing difficulty locating affordable homes in neighborhoods of opportunity and are increasingly priced-out of additional neighborhoods as the market continues to shift. There is a lack of affordable units in the City of Pittsburgh that disproportionately affects families at and below 30 percent (30%) of area median income. The HACP recognizes the affordable housing need and is working to address these concerns through a variety of strategies, including increasing landlord outreach and the development of a payment standard reflective of the increasing cost of housing. One (1) of the core strategies utilized by the HACP continues to be the creation of new, affordable units supported by tax credits and project-based vouchers. This approach has enabled the HACP to continue serving the same number of families as would have been served, absent the MTW demonstration designation.

The “Step Up To Market Financing Program” initiative was created in 2012 and was initially included in the revised, FY 2012 MTW Annual Plan. This HUD-approved MTW activity has evolved to include several, innovative strategies for re-positioning of the HACP housing stock. Additional by-products and derivatives of this concept were HUD-approved in the FY 2017 MTW Annual Plan and included, the Project-Based Voucher/Gap Financing strategy that garnered the HACP the FY 2019 National Association of Housing and Redevelopment Officials (NAHRO) Award of Merit.

In FY 2021, the HACP was awarded a total of five (5) National Association of Housing and Redevelopment Officials (NAHRO) Awards of Merit. These awards included Cornerstone Village-Phase II; Sandstone Quarry-Phase I; Northview Heights Public Safety Center (with the Pittsburgh Bureau of Police), rededicated as the Officer Calvin Hall Public Safety Center in honor of Officer Hall, a fallen officer assigned to the substation; Mobile Computer Lab 2.0; and for Elimination of Food Insecurity in Public Housing with the 412 Food Rescue. Clean Slate E3, the nonprofit affiliate of the Housing Authority of the City of Pittsburgh (HACP), is pleased to have the opportunity to contribute toward the higher education of the HACP residents. Since 2009, Clean Slate E3 has provided more than \$350,000 in scholarship funds for HACP residents through an ongoing collaboration with the Pittsburgh-based nonprofit NEED. This includes a total of \$67,500 provided to 14 students in 2021. Additionally, Clean Slate E3 raised \$62,000 through a virtual fundraiser event held in summer 2021.

The HACP also further expanded several recent innovative programs in order to increase their reach and impact. This included entering into a formal contract with 412 Food Rescue that allowed the nonprofit to expand their food delivery model to ensure coverage for all LIPH communities, while expanding programming to include HCV households. This collaboration has successfully reduced instances of food insecurity in HACP households, which has been particularly useful during the COVID-19 pandemic. The HACP has also greatly expanded programming related to digital literacy and equity in recent years, including a major expansion of the HACP's Mobile Computer Lab Program and promotion of free internet services, provided through an ongoing collaboration with Comcast.

The HACP has also continued to invest in its housing stock. These activities are summarized in "Status of Projects Summary Relating to Repositioning of the HACP's Housing Stock," beginning on Page 10 of this Annual Report.

The HACP has also implemented an Energy Performance Contract (EPC) for improvements that included but was not limited to the installation of energy efficient and cost-saving geothermal heating (and cooling) systems at several developments. The HACP is committed to continuing these preservation and revitalization efforts to the greatest extent feasible with the funding available throughout the MTW demonstration. The HACP will track its energy, water, and electricity usage through the EPA's Energy Star Portfolio Manager for benchmarking purposes. The data will be used to augment pre-existing tools used to create future projections and pathways to accomplish the energy and water reduction goals of the City of Pittsburgh's Climate Action Plan by 2030. The HACP has also successfully implemented a MTW local, non-traditional, development program, the PBV/Gap Financing program, to support various private developers and or owners in developing and preserving low-income, affordable housing in various mixed-finance projects throughout the city since FY 2016.

The Financial Charts included in this report show projected sources of funds that can be used for capital projects and projected uses of those funds over the next five (5) years. All of these numbers reflect projected obligations (not expenditure) of funds and are projections only and are subject to change based upon funding levels and opportunities, financial and real estate market conditions, new or changing regulations or requirements, or other unforeseen developments.

The status of projects relating to Repositioning of the HACP's Housing Stock are as follows:

Development	FY 2021
<b>Larimer/East Liberty Phase III</b>	Phase III is part of the Larimer/East Liberty Choice Neighborhood Implementation Grant (CNIG) Program. 42 mixed-income rental units are currently under construction with the 9% Low-Income Housing Tax Credit (LIHTC). Construction started in August 2021 and is anticipated to be completed in Q1 2023. The mixed-used building of Phase III includes 4,800-square feet of commercial/retail space on the Larimer Avenue corridor.
<b>Larimer/East Liberty Phase IV</b>	Phase IV of the Larimer/East Liberty CNIG housing development consists of adaptive reuse and mixed-use of the historic Larimer School (35 units) and new construction of townhomes (7 units). This Phase consists of 42 mixed-income rental units financed with a 9% LIHTC which was awarded in July 2019. Construction started in February 2021 and is anticipated to be completed in Q3 2022.
<b>Larimer/East Liberty Phase V</b>	Phase V of the Larimer/East Liberty CNIG housing development consists of large-family scattered site replacement units, two 3-bedroom units and one 5-bedroom under the CNIG program. The HUD Field Office approved the development proposal in December 2021. Urban Redevelopment Authority (URA), the HACP's intergovernmental cooperation partner for this project, and its general contractor plans to start construction in April 2022 and complete it by December 2022.
<b>Bedford Dwellings Redevelopment</b>	Although the 2018 CNIG application was unsuccessful, the HACP and the ARMDC has started a new CNIG application process for Bedford Dwellings public housing and its surrounding neighborhood, Hill District. In 2021, HACP's instrumentality, ARMDC, procured a master co-developer, to prepare both a CNIG application and also started planning and pre-development for Phase 1 of Bedford Dwellings replacement units off-site in the Hill District at Reed Roberts (Phase 1). HACP and ARMDC along with its Co-Developer are working to apply for LIHTC financing for Phase 1 in summer of 2022. The HACP and the City of Pittsburgh and residents/community partners are preparing to submit a CNIG application in 2022.



<b>Northview Heights Midrise</b>	The HACP plans to develop a new replacement building with up to 43 of public housing replacement units on 3.96 acres of vacant land to replace Northview High-rise senior apartments within the Northview Heights community and additional affordable off-site tax credit replacement units. The HACP and the ARMDC submitted a 4% Low Housing Income Tax Credit (LIHTC) application and other various funding applications throughout 2021. The team also completed the design development phase in 2021. Financial closing, land disposition and construction can begin in late 2022. The HACP intends to submit a Section 18 demolition application to HUD's Special Applications Center in 2022 for the demolition of the existing 10-story Northview High-rise building. The high-rise contains 87 public housing units along with management and commercial spaces that support the entire Northview Heights housing community.
<b>Scattered Site Improvement Planning and Implementation</b>	In 2021, the HACP continued to review various asset management and housing acquisition and rehabilitation options to improve the quality of housing stock and preserve long-term affordability of scattered site units.
<b>Manchester</b>	Manchester is an early HOPE VI mixed-finance redevelopment with 86 units. The LIHTC compliance period ended in 2016. The HACP and its partners acquired the property in 2017. The HACP proposes to preserve the 86 affordable rental units with HUD's Rental Assistance Demonstration (RAD) and project-based voucher program. The HACP received HUD's approval of the RAD application (Commitment for Housing Assistance Payment or CHAP) in May 2020. The ARMDC is the developer and submitted a 4% LIHTC application in June 2021. Financial closing is anticipated in the fourth quarter of 2022.
<b>Turnkey Development of Scattered Sites</b>	Two (2) Community Development Groups/Faith-based Organizations were selected in 2016 to develop turnkey units. Turnkey development of twenty (20) scattered sites in the East Liberty Neighborhood was completed in 2020. Amani Christian Community Development Corporation (ACCDC) is separately developing a turnkey project in the Middle Hill District. This is a twenty-two (22) unit scattered site initiative. In 2021, the ACCDC finalized and submitted various planning and site plan documents for the local entitlement process (zoning, city planning, etc.). This project is currently in the pre-development stage.

<b>St. Clair and Vacant Lots</b>	The URA in coordination with Hilltop Alliance and Allegheny Land Trust (ALT) would like to redevelop the property in part with options that include an urban farm with farm facilities and conservation of the steep hillside slope. The HACP finalized the fair market valuation process and a subdivision survey in 2021. A revised disposition application was submitted to SAC, HUD on 1/27/22 with an updated appraisal report, method of sale, and a new survey/legal descriptions.
<b>Disposition, Acquisition and Redevelopment of Properties</b>	In March 2022, the HACP acquired vacant land parcels for scattered site replacement housing development for Larimer/East Liberty Choice Neighborhoods Implementation Grant program. Since 2021, the HACP has been negotiating acquisition of public and private-owned vacant properties for the Phase 1 of Bedford Dwellings Redevelopment in Hill District. The HACP and its development partners started to work with the residents of Bedford Dwellings and community stakeholders to plan for redevelopment of various HACP/City/URA-owned properties in the Hill District.
<b>City's Edge</b>	The development is a new construction, mixed-use, mixed-income, nine-story condominium elevator building. It is proposed to have approximately 110 units; 92 supported by Project-Based Vouchers (PBV) and 18 market-rate units. There is a commercial component of the property that may include a parking garage and proposed space for a MBE/WBE incubation space, medical care facility, and a business lounge. In summer 2021, the project was on hold due to a significant increase of construction cost and financial gap. However, the development team and investment partner diligently worked to fill the financial gap with new funding sources throughout 2021. The team once again will try to close the finance by summer 2022.
<b>Acquisition and Build-Out of New Administrative Space and Disposition of HACP Office</b>	The HACP purchased office space located at 412 Boulevard of the Allies (f.k.a. 420 Boulevard of the Allies) on September 20, 2018. The new space will be renovated to suit the needs of the HACP with COVID conscious public reception/interaction space and modern office space for staff. In FY 2020, the HACP finalized the design of its space. Construction is underway in 2022 instead of when previously intended in 2021 and relocation to the new space should be completed by the end of 2022. The HACP will also dispose of its current administrative space located in the John P. Robin Civic Building, which is expected to take place after 2021.

<b>Oak Hill RAD</b>	A 9% tax credit application will be submitted to the PHFA in FY 2022 for the Oak Hill Major Reconstruction of Obsolete Properties (MROP) units. Based on the resulting award, a closing for this phase should take place by the end of FY 2023. A Converted Awaiting Transfer request has been approved by HUD for early demolition of the units in the meantime. In 2021, The HACP and the owner worked with HUD Office of Public Housing Investment to amend the existing ground lease to transfer the MROP portion of the land to a new ownership entity in anticipation of the demolition and redevelopment of the MROP property.
<b>2017 PBV/GAP Financing RFP</b>	Construction of Lemington Senior Development was completed in Q3 2021 and is currently in the process of lease-up. There are a total of 54 Units with 100% supported by PBVs. Gap financing amount: \$3,984,900.
<b>2018 PBV/GAP Financing RFP</b> <b>(MTW Local Non-Traditional Activity)</b>	<ol style="list-style-type: none"> <li>1. As described separately above, the City's Edge has been converted into a non-traditional mixed-finance project that is sponsored and co-developed by the ARMDC. This project is no longer a PBV/Gap Financing project.</li> <li>2. Financial closing occurred in April 2021 and construction activities are ongoing for North Negley Residences with an estimated completion in October 2022. This project is in the active predevelopment for 10 PBV Units, 45 Total Units. Gap financing amount: \$875,000.</li> <li>3. Financial closing occurred in June 2021 and construction activities are ongoing for the New Granada Square Apartments with an estimated completion in December 2022. This project is in active development consisting of 10 PBV Units, 40 Total Units. Gap financing amount: \$1,000,000.</li> </ol>
<b>2019 PBV/GAP Financing RFP</b> <b>(MTW Local Non-Traditional Activity)</b>	<ol style="list-style-type: none"> <li>1. Gladstone Residences (The Community Builders, Inc.): 20 PBV units, 31 Non-PBV units. Gap financing amount: \$1,000,000. The project team completed a pre development phase and was ready to financially close in mid-2021. However, due to construction cost increase, the project team raised gap financing sources including American Rescue Plan fund. Anticipated to close in Q2 2022.</li> <li>2. Harvard Beatty Street Housing (TREK Development Group, Inc.) is currently under construction for 8 PBV units and 14 Non-PBV units. Estimated project completion is December 2022. The project was under construction in 2021. Gap financing amount: None.</li> <li>3. Hazelwood Phase I (Hazelwood Initiative, Inc.): 8 PBV units and 34 Non-PBV units. Gap financing amount: \$481,000. The owner of this project withdrew their proposal in 2020 due to changes to their development plan.</li> </ol>

	<p>4. In 2021, pre-development activities were ongoing for Fifth and Dinwiddie Redevelopment (Bridging the Gap Development, Inc.); 23 PBV units and 144 Non-PBV units. Gap financing amount: \$2,000,000. This project is currently working to find additional gap financing sources to close the financial gap due to construction cost increase.</p> <p>5. Highland-Stanton Apartments (Action Housing Inc.): 23 PBV units. The Project was affected by project cost increases due to shortage of material and labor conditions. The project was ready to close finance in 2021, but, they had to raise additional gap funds due to construction cost increase. Project closing is anticipated in the second quarter of 2022. Gap financing amount: \$2,070,000 (increased from previous \$1,800,000).</p>
<b>2020/2021 PBV/GAP Financing RFP</b>  <b>(MTW Local Non-Traditional Activity)</b>	<p>In FY 2020, Cedarwood Homes consisted of 24 PBV Units and 22 Non-PBV units with a Gap Financing Amount of \$1,620,000. This project received a 9% tax credit reservation in 2021. Anticipated to close in Q3 2022. In FY 2021, the HACP issued 2021 PBV/Gap Financing RFP in December 2021. Proposals are due by March 29, 2022.</p>
<b>Choice Neighborhood Planning Grant</b>	<p>Allegheny Dwellings public housing is part of a potential Choice Neighborhoods Planning Grant (CNPg) application that is coordinated by Fineview Citizens Council, Allegheny Dwellings Tenant Council and TREK Development Group in partnership with the HACP. The application was submitted 09/14/2020 and the project was awarded on 12/16/21. The purpose of the CNPg application is to complete a comprehensive transformation plan with HUD's financial and technical support for Allegheny Dwellings and the surrounding neighborhood by the end of 2022.</p>

### ***Pursuit of Rental Assistance Demonstration Conversions***

In order to secure the long-term viability of its existing housing stock, the HACP is pursuing conversion of some public housing units to HUD contracts for multi-family housing rental assistance through the Rental Assistance Demonstration (RAD) Program. Although there was no significant activity in FY 2021, The HACP has received approval for the following properties:

- New Pennley Place (CHAP award in March 2022)
- Manchester Redevelopment (CHAP award in March 2020)
- Glen Hazel Family Community and Glen Hazel High Rise (Conversion completed in 2018)
- Oak Hill (Conversion completed in 2017)

The RAD financial closing occurred for Glen Hazel Family Community and Glen Hazel High Rise in 2018. Rehabilitation and relocation activities of Glen Hazel RAD were completed in FY 2020. Oak Hill Phase I and Phase II-Wadsworth sub-phase were converted to HUD Project-based Rental Assistance (PBRA) through the RAD Program in FY 2017. Major Reconstruction of Obsolete Public Housing Projects (MROP) public housing buildings (originally built in 1941) in Oak Hill Phase I have been approved for demolition and replacement of the 80 MROP public housing units. Oak Hill's master developer plans to apply for 2022 low income housing tax credits to finance the replacement of the MROP units. Manchester Redevelopment has been approved by HUD for RAD conversion in order to convert 86-unit public housing portfolio into PBV platform with housing rehabilitation. HACP recently received a Commitment to Enter into Housing Assistance Payment (CHAP) to convert 38 public housing units into PBV units at New Pennley Place (a 20-year old mixed-finance development project in East Liberty neighborhood).

### ***Long Term Development and Redevelopment Funding Projections***

Below are charts showing projected funding obligations over the next five (5) years. Not included in the charts are funding and financing strategies, including those that use MTW funding flexibility, support, and leverage MTW funds to support redevelopment of these properties. As funding opportunities and financing mechanisms change, and creative approaches are devised, the HACP will adapt and adopt the approaches that are most advantageous to the agency. These approaches include but are not limited to the following:

- American Rescue Program Act Fund: *Gladstone Residences (PBV/Gap Financing) received this fund.*
- Low-income Housing Tax Credits, Historic Tax Credits, and/or New Market Tax Credits.
- Federal, State, and Local Housing Trust Funds dollars as available: *Most of the mixed-finance development projects utilize these funds.*
- Other Federal, State, and Local funds such as CDBG, HOME, PA Department of Community and Economic Development Programs, and others as can be secured: *Most of mixed-finance development projects utilize and apply for these funds.*

- Project Based Voucher (PBV): Project basing Housing Choice Vouchers: *Current mixed-finance deals, PBV/gap financing program, and RAD conversion projects utilize this fund.*
- Project Based Rental Assistance (HUD Multifamily): *Two RAD conversion projects utilized this fund.*
- The HACP's Moving to Work *Step Up To Market Financing Program:*
- Gap Financing program, an MTW local non-traditional development sources approved by HUD: *The HACP utilizes this program.*
- Choice Neighborhoods Planning and Implementation Grant Funds. *Most of the HACP's mixed finance development projects utilize these funds.*
- Local Blended Subsidy with MTW block grant operating subsidy: *Northview Midrise project will utilize this subsidy method.*
- Public Housing Authority Mortgaged Transactions (PMT) under section 30 of the United States Housing Act of 1937: *Northview Midrise project will utilize this funding method.*
- Any and all other opportunities and mechanisms that are available or can be identified that will assist the HACP in furthering its goals under MTW and under the LIPH and HCV programs: *The HACP will continue to pursue various existing and new opportunities and funding tools.*

The other sections of the FY 2021 MTW Annual Report include specifics on the funding strategies utilized in specific development phases that closed in FY 2021. The referenced chart was included in its entirety in the HUD-Approved FY 2021 MTW Annual Plan. Future Plans and Reports will include additional details for upcoming or future phases and initiatives. The below are charts show updated project funding obligations for the reporting year and years following for a total of five (5) years.

Sources	Projected Sources	2021	2022	2023	2024	2025	5-Year Subtotals
	MtW Funding (HCV)	6,126,836	1,901,129	1,901,129	1,901,129	1,901,129	13,731,352
	CFP Projected Future Funding	11,138,465	10,814,516	10,000,000	10,000,000	10,000,000	51,952,981
	MtW Reserves	25,050,531	24,026,184	18,022,601	15,459,025	17,933,613	100,491,954
	Total All Projected Sources	42,315,832	36,741,829	29,923,730	27,360,154	29,834,742	166,176,287

Uses	Proposed Uses	2021	2022	2023	2024	2025	5-Year Subtotals
	Subtotal Development	23,552,568	27,500,000	18,000,000	17,000,000	22,500,000	108,552,568
	Subtotal Modernization	18,763,264	9,241,829	11,923,730	10,360,154	7,334,742	57,623,719
	Total All Proposed Uses	42,315,832	36,741,829	29,923,730	27,360,154	29,834,742	166,176,287

**Modernization**

<b>AMP: 1</b> <b>Addison Terrace / Additions</b> <b>(201 Kirkpatrick St Central Maintenance)</b>	<b>2021</b> <b>Projected</b> <b>Obligations</b>	<b>2022</b> <b>Projected</b> <b>Obligations</b>	<b>2023</b> <b>Projected</b> <b>Obligations</b>	<b>2024</b> <b>Projected</b> <b>Obligations</b>	<b>2025</b> <b>Projected</b> <b>Obligations</b>	<b>5-Year</b> <b>Budget</b> <b>Total</b>
<b>Totals</b>	<b>0</b>	<b>200,000</b>	<b>151,258</b>	<b>0</b>	<b>2,215</b>	<b>353,473</b>

<b>AMP: 2</b> <b>Bedford Dwellings</b>	<b>2021</b> <b>Projected</b> <b>Obligations</b>	<b>2022</b> <b>Projected</b> <b>Obligations</b>	<b>2023</b> <b>Projected</b> <b>Obligations</b>	<b>2024</b> <b>Projected</b> <b>Obligations</b>	<b>2025</b> <b>Projected</b> <b>Obligations</b>	<b>5-Year</b> <b>Budget</b> <b>Total</b>
<b>Totals</b>	<b>940,984</b>	<b>500,000</b>	<b>500,000</b>	<b>0</b>	<b>0</b>	<b>1,940,984</b>

<b>AMP: 15</b> <b>Pennsylvania Bidwell</b>	<b>2021</b> <b>Projected</b> <b>Obligations</b>	<b>2022</b> <b>Projected</b> <b>Obligations</b>	<b>2023</b> <b>Projected</b> <b>Obligations</b>	<b>2024</b> <b>Projected</b> <b>Obligations</b>	<b>2025</b> <b>Projected</b> <b>Obligations</b>	<b>5-Year</b> <b>Budget</b> <b>Total</b>
<b>Totals</b>	<b>1,368,006</b>	<b>654,867</b>	<b>530,344</b>	<b>0</b>	<b>1,622,070</b>	<b>4,175,287</b>

<b>AMP: 17</b> <b>Pressley High Rise</b>	<b>2021</b> <b>Projected</b> <b>Obligations</b>	<b>2022</b> <b>Projected</b> <b>Obligations</b>	<b>2023</b> <b>Projected</b> <b>Obligations</b>	<b>2024</b> <b>Projected</b> <b>Obligations</b>	<b>2025</b> <b>Projected</b> <b>Obligations</b>	<b>5-Year</b> <b>Budget</b> <b>Total</b>
<b>Totals</b>	<b>4,402,072</b>	<b>577,524</b>	<b>839,920</b>	<b>577,524</b>	<b>482,536</b>	<b>6,879,576</b>

<b>AMP: 9</b> <b>Northview Heights (Family / Elderly)</b>	<b>2021</b> <b>Projected</b> <b>Obligations</b>	<b>2022</b> <b>Projected</b> <b>Obligations</b>	<b>2023</b> <b>Projected</b> <b>Obligations</b>	<b>2024</b> <b>Projected</b> <b>Obligations</b>	<b>2025</b> <b>Projected</b> <b>Obligations</b>	<b>5-Year</b> <b>Budget</b> <b>Total</b>
<b>Totals</b>	<b>175,000</b>	<b>800,000</b>	<b>0</b>	<b>1,231,079</b>	<b>91,193</b>	<b>2,297,272</b>

<b>AMP: 20</b> <b>Homewood North</b>	<b>2021</b> <b>Projected</b> <b>Obligations</b>	<b>2022</b> <b>Projected</b> <b>Obligations</b>	<b>2023</b> <b>Projected</b> <b>Obligations</b>	<b>2024</b> <b>Projected</b> <b>Obligations</b>	<b>2025</b> <b>Projected</b> <b>Obligations</b>	<b>5-Year</b> <b>Budget</b> <b>Total</b>
<b>Totals</b>	<b>240,000</b>	<b>0</b>	<b>2,336,149</b>	<b>139,075</b>	<b>0</b>	<b>2,715,224</b>

<b>AMP: 4</b> <b>Arlington Heights</b>	<b>2021</b> <b>Projected</b> <b>Obligations</b>	<b>2022</b> <b>Projected</b> <b>Obligations</b>	<b>2023</b> <b>Projected</b> <b>Obligations</b>	<b>2024</b> <b>Projected</b> <b>Obligations</b>	<b>2025</b> <b>Projected</b> <b>Obligations</b>	<b>5-Year</b> <b>Budget</b> <b>Total</b>
<b>Totals</b>	<b>7,375,475</b>	<b>2,609,438</b>	<b>2,592,531</b>	<b>4,892,626</b>	<b>1,128,533</b>	<b>18,598,603</b>

<b>AMP: 22/39</b> <b>Scattered Sites North/South</b> <b>(Includes D.O.C. 1205 Liverpool St. - Direct</b> <b>Opportunities Center)</b> <b>&amp; former AMP-11 Hamilton Larimer</b>	<b>2021</b> <b>Projected</b> <b>Obligations</b>	<b>2022</b> <b>Projected</b> <b>Obligations</b>	<b>2023</b> <b>Projected</b> <b>Obligations</b>	<b>2024</b> <b>Projected</b> <b>Obligations</b>	<b>2025</b> <b>Projected</b> <b>Obligations</b>	<b>5-Year</b> <b>Budget</b> <b>Total</b>
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>1,233,528</b>	<b>530,735</b>	<b>1,575,011</b>	<b>3,339,274</b>



AMP: 40 Mazza Pavillion	2021 Projected Obligations	2022 Projected Obligations	2023 Projected Obligations	2024 Projected Obligations	2025 Projected Obligations	5-Year Budget Total
Totals	10,000	0	0	77,396	17,438	104,834
AMP: 41 Caliguiri Plaza	2021 Projected Obligations	2022 Projected Obligations	2023 Projected Obligations	2024 Projected Obligations	2025 Projected Obligations	5-Year Budget Total
Totals	452,389	160,000	0	286,546	182,687	1,081,622
AMP: 44 Finello Pavillion	2021 Projected Obligations	2022 Projected Obligations	2023 Projected Obligations	2024 Projected Obligations	2025 Projected Obligations	5-Year Budget Total
Totals	19,338	0	0	469,912	14,520	503,770
AMP: 45 Morse Gardens	2021 Projected Obligations	2022 Projected Obligations	2023 Projected Obligations	2024 Projected Obligations	2025 Projected Obligations	5-Year Budget Total
Totals	0	0	0	1,117,967	141,175	1,259,142
AMP: 46 Carrick Regency	2021 Projected Obligations	2022 Projected Obligations	2023 Projected Obligations	2024 Projected Obligations	2025 Projected Obligations	5-Year Budget Total
Totals	0	0	0	208,369	966,737	1,175,106
AMP: 47 Gualtieri Manor	2021 Projected Obligations	2022 Projected Obligations	2023 Projected Obligations	2024 Projected Obligations	2025 Projected Obligations	5-Year Budget Total
Totals	0	0	0	48,925	122,527	171,452
AMP: 999 Authority Wide	2021 Projected Obligations	2022 Projected Obligations	2023 Projected Obligations	2024 Projected Obligations	2025 Projected Obligations	5-Year Budget Total
Totals	14,435,484	16,535,646	3,740,000	780,000	988,100	36,479,230
Grand Total All AMPs	29,418,748	22,037,475	11,923,730	10,360,154	7,334,742	81,074,849

Development Project	2021	2022	2023	2024	2025	5-Year Total
Larimer CN Phase 3	1,600,000		0	0	0	1,600,000
Larimer CN Phase 4	2,075,440		0	0	0	2,075,440
Larimer CN Phase 5 (SS)	1,677,128	300,000	0	0	0	1,977,128
Manchester Rehab+New Construction	200,000	1,000,000	0	0	0	1,200,000
Bedford Dwellings Redevelopment Phase I		4,000,000	0	0	0	4,000,000
Bedford Centre Ave Set-Aside	5,000,000	0	2,000,000	0	0	7,000,000
Northview Highrise Replacement Housing		200,000	0	0	0	200,000
City's Edge (2018)		3,000,000	0	0	0	3,000,000
Light of Life Acquisition/Demo/Rehab		3,000,000				3,000,000
Hill District Acq/New Constr/Rehab		3,000,000				3,000,000
Acquisition Rehabilitation Construction	7,000,000	5,000,000	0	0	0	12,000,000
PBV/Gap Financing Program	6,000,000	7,000,000				13,000,000
Allegheny Dwellings Redevelopment Phases 1-3		0	1,000,000	15,000,000	0	16,000,000
Bedford Dwellings Redevelopment Phases 2-4		0	12,000,000	1,000,000	13,500,000	26,500,000
Arlington Heights Redevelopment		0	2,000,000	0	9,000,000	11,000,000
Infill For-Sale Rehab		1,000,000	1,000,000	1,000,000	0	3,000,000
Total	23,552,568	27,500,000	18,000,000	17,000,000	22,500,000	108,552,568

## 2. **Theme Two:** Promoting Self-Sufficiency and Independent Living Through a Variety of Enhanced Services and Policy Adjustments

The HACP is committed to continuing the pursuit of programs and policies that promote self-sufficiency and independent living. This is pursued and implemented through programs and policy modifications.

The HACP has several supportive service programs that support residents in attaining Self-Sufficiency. Included, but not limited to the: Family Self-Sufficiency Program (FSS), Resident Employment Program (REP), Resident Opportunity for Self-Sufficiency (ROSS), and Computer Programs. These programs and referrals for residents of the LIPH and the HCV programs are designed to assist them in preparing for, seeking, finding, and retaining employment as well as financial literacy and reentry. The program components and the HACP FSS and RSS Staff also work constantly to link residents with other programs, leverage additional services, and create positive environments for families, adults, seniors, and children. The FSS, ROSS, REP and the Computer Programs are complemented by the other resident initiatives provided by the HACP and its partners that focus on youth and adults of varying ages. These other initiatives include the summer programming, programs addressing food insecurity, literacy and training programs, the Clean Slate Drug Free Lifestyles, and the Creative Arts Corner which is a state-of-the-art audio/video studio at Northview Heights and the Bedford Hope Center. The HACP's investments in resident services have leveraged over \$4,000,000 per year in additional programs and services in recent years.

The Service Coordinators are retained through the HUD-funded FSS and ROSS Program Grants. There are also many other ancillary service providers that offer in-kind services to the HACP residents. Some of these providers include but are not limited to: the Pittsburgh Public School District, Comcast Internet Essentials, the Community College of Allegheny County, the Health Professionals Opportunity Grant, the Department of Human Services (Mental Health, Drug and Alcohol, Victims Services, Homeownership and Eviction Prevention), the 412 Food Rescue, City Parks, the Ananias Mission, Grow Pittsburgh, Duquesne University, and 24-hour Early Education Child Care Program, STEM Computer HACP WOW Mobile Program, Financial Literacy programming partners.

The HACP policy modifications are also designed to promote self-sufficiency, and the modified rent policy (as described in Section IV), is designed to encourage families to participate in the FSS program. The broad intent of these initiatives is to create an environment where work is the norm and personal responsibility is expected, and the HACP will continue in FY 2022 to pursue additional policy adjustments toward this end. Such policy changes may include increasing the minimum rent for those able-bodied non-elderly residents who do not work or participate in the FSS program for over one (1) year; partnering with schools to create academic achievement support and/or incentive programs, or other mandatory school attendance programs for residents; or other creative initiatives still to be identified or developed. We are not proposing any new MTW activity; we are enhancing current approved programs.

### 3. **Theme 3: Increasing Housing Choice for Low-Income Families Through Initiatives Designed to Increase the Quality and Quantity of Housing Available to Households Utilizing Rental Assistance and Other Available Resources**

As the City of Pittsburgh's housing market has changed in recent years, the availability of affordable housing has declined. These market changes have affected both naturally occurring affordable units and those available to households utilizing HCVs. In response, the HACP initiated its initial landlord initiatives in an attempt to increase the number of landlords participating in the HCV program, and to increase the number and quality of units available.

The HACP received approval in the FY 2019 MTW Annual Plan for an alternative payment standard to address the limited housing stock and increased rental costs.

During the on-going implementation of this initiative, the HACP seeks to increase housing choice and encourage voucher participants to expand their housing search, particularly in neighborhoods with low levels of poverty. Recognizing that using a single city-wide Voucher Payment Standard (VPS) stimulated voucher holders to reside in low-cost, high-poverty neighborhoods, the HACP devised a robust and comprehensive method for establishing Payment Standards and rent reasonableness determinations. The goals of this activity are to:

1. Expand housing choices by providing access to more neighborhoods;
2. Create additional units from previously sub-standard properties and improve the quality of existing units;
3. Decrease concentration of voucher usage in prevalent poverty areas.
4. The HACP plans to continue further analysis of these market changes and will pursue additional initiatives targeted to increasing the number and quality of housing options for households utilizing tenant-based rental assistance.

## C. Short-Term Goals and Objectives

### The HACP's Short-Term Goals are to:

- Process all applications within thirty (30) days of receipt.
- Effectively improve the Voucher Utilization Rate and lease-up rates in LIPH.
- Ensure that inspections are completed on a timely basis.
- Improve the PIC submission rate.
- Continue to enforce effective policies to minimize any risk for discriminatory practices.
- Seek to continue to remove all barriers to housing for the disabled community.
- Have no fiscal year audit findings.
- Request a waiver for the HUD HCV Mobility Demonstration for HUD-approval of a select number of MTW implemented activities to include pre-inspections, the Preferred Owners Program, Modified Rent Policy on Percentage of Allowable Adjusted Annual Income (rent burden), Biennial Reexaminations, Modified Payment Standard (for reasonable accommodations), and the SAMFR Alternative Payment Standard (rehabilitation).
- Effectively monitor the surveillance equipment to ensure maximum operational efficiency throughout the housing sites.
- Monitor the security resources to include constable, guards and above-baseline services provided by the Pittsburgh Police Department.
- Develop strategic financial plans and revenue forecasts to better accommodate residents.
- Earn positive cash flow.
- Enhance the service provisions for Project-Based Voucher (PBV) recipients.
- Apply for new Resident Opportunity for Supportive Services (ROSS) Grants through the available funding source.
- Maximize the use of virtual resources due to the pandemic and improve the virtual support for residents.
- Ensure all eligible residents have been offered the opportunity for Family Self Sufficiency (FSS).
- Enhance the Eviction Prevention ongoing Partnership Agreement with the provider to include monitoring statistical reports and ensuring residents are receiving services offered.
- Offer Employment Fairs/ Resource Fairs and Workforce Development Meetings.
- Participate in at least five (5) job and career fairs per year.
- Increase the enrollment for Training Programs to include Drivers Ed, Constructions Trade, CNA, CDL, UPMC, and CVS.
- Implement new WOW mobile lab initiatives such as WOW minivan and WOW RV mobile unit.
- Update/upgrade mobile lab program by adding new initiatives.
- Align and improve the HACP Gap Financing program based on local needs and resources.
- Increase professional capacity and expertise of all HACP Staff.
- Review the Opportunity for a "For-Sale Single Family Pilot Program."
- Increase the number of homebuyers through the HACP Homeownership Program.

## II. GENERAL HOUSING AUTHORITY OPERATING INFORMATION

### (I) GENERAL OPERATING INFORMATION

#### A. HOUSING STOCK INFORMATION

##### i. Actual New Project Based Vouchers

Tenant-based vouchers that the MTW PHA project-based for the first time during the Plan Year. These include only those in which at least an Agreement to enter into a Housing Assistance Payment (AHAP) was in place by the end of the Plan Year. Indicate whether the unit is included in the Rental Assistance Demonstration (RAD).

PROPERTY NAME	NUMBER OF VOUCHERS NEWLY PROJECT-BASED (Planned*)	NUMBER OF VOUCHERS NEWLY PROJECT-BASED (Actual)	STATUS AT END OF PLAN YEAR**	RAD?	DESCRIPTION OF PROJECT
Larimer/East Liberty Phase IV	18	0	Committed	No	CNIG replacement units
Northview Mid Rise	40	0	Committed	No	No longer using PBV; only Low Income Public Housing
Bedford Redevelopment Phase I	30	0	Planning	No	PBV + GAP financing, rehabilitation, and/or new construction
City's Edge	77	0	Planning	No	PBV + GAP financing
Lemington Senior Housing	54	9	Leased/Issued	No	PBV + GAP financing
New Granada Square	10	0	Committed	No	PBV + GAP financing
North Negley	10	0	Committed	No	PBV + GAP financing
Manchester Redevelopment	86	0	Committed	Yes	RAD/PBV
<b>Total:</b> Planned or Actual Newly Project-Based	<b>325</b>	<b>9</b>			

\* Figures in the "Planned" column should match the corresponding Annual MTW Plan.

\*\* Select "Status at the End of Plan Year" from: Committed, Leased/Issued

**Please describe differences between the Planned and Actual Number of Vouchers Newly Project-Based:**

The differences between the Planned and Actual number of vouchers newly projected-based can be mainly attributed to financial closing issues as follows:

- **Larimer/East Liberty Phase IV:** Under construction. (Construction started in 2021 and will complete in 2022). This project could not achieve initial financial closing earlier due to construction cost increase.
- **Bedford Redevelopment Phase I:** This project could not achieve initial financial closing earlier due to site control and a new redevelopment strategy in pursuit of a 2022 Choice Neighborhoods Implementation Grant initiative.
- **City's Edge:** This project is still in the predevelopment phase. It has not achieved initial financial due to lack of construction gap financing. HACP and its co-developer are in process of closing the gap in 2022.
- **New Granada Square:** Under construction. (Construction started in 2021 and will complete in 2022). This project could not achieve initial financial closing earlier due to construction cost increase.
- **North Negley:** Under construction. (Construction started in 2021 and will complete in 2022). This project could not achieve initial financial closing earlier due to construction cost increase.
- **Northview Mid Rise:** This project cannot use PBVs any longer per HUD.

ii. **Actual Existing Project Based Vouchers**

Tenant-based vouchers that the MTW PHA is currently project-basing in the Plan Year. These include only those in which at least an AHAP was in place by the beginning of the Plan Year. Indicate whether the unit is included in RAD.

PROPERTY NAME	NUMBER OF PROJECT-BASED VOUCHERS (Planned*)	NUMBER OF PROJECT-BASED VOUCHERS (Actual)	STATUS AT END OF PLAN YEAR**	RAD?	DESCRIPTION OF PROJECT
Skyline Terrace (Addison Phase I)	168	143	Leased/Issued	No	HAP Contract in place. First Phase of Addison Redevelopment
Lofts at Bentley (Addison Phase II)	64	60	Leased/Issued	No	HAP Contract in place. Phase II at Addison Terrace Redevelopment
Addison Phase III (Middle Hill)	37	36	Leased/Issued	No	HAP Contract in place. Third phase of Addison Terrace Redevelopment
Addison Phase IV (Kelly Hamilton Homes)	42	40	Leased/Issue	No	HAP Contract in place. Fourth and final phase of Addison Terrace Redevelopment
Allegheny Dwellings I (Sandstone Quarry)	47	47	Leased/Issued	No	HAP Contract in place. Phase I of Allegheny Dwellings Redevelopment
Allegheny Union Baptist Association (Senior)	36	30	Leased/Issued	No	HAP Contract in place. Senior building
Crawford Square	60	58	Leased/Issued	No	HAP Contract in place.
Dinwiddie III and IV	24	21	Leased/Issued	No	HAP Contract in place.
Doughboy	9	9	Leased/Issued	No	HAP Contract in place.
East Liberty Place South	6	6	Leased/Issued	No	HAP Contract in place.
Hillcrest Apartments (Senior)	16	15	Leased/Issued	No	HAP Contract in place. Senior building
Larimer Pointe	40	39	Leased/Issued	No	HAP Contract in place.
Larimer/East Liberty Phase I	28	23	Leased/Issued	No	HAP Contract in place.
Legacy Apartments (Senior)	18	18	Leased/Issued	No	HAP Contract in place. Senior building
Mackey Lofts	11	9	Leased/Issued	No	HAP Contract in place. Building for hearing-impaired households.
Miller Street Apartments	9	8	Leased/Issued	No	HAP Contract in place.



Elmer Williams Square Phase I	9	9	Leased/Issued	No	PBV/GAP financing. 2020 construction completion.
Elmer Williams Square Phase II	28	27	Leased/Issued	No	PBV/GAP financing
Milliones Manor (Senior)	39	31	Leased/Issued	No	HAP Contract in place. Senior building
Wood Street Commons	65	53	Leased/Issued	No	HAP Contract in place. Single room occupancy (SRO) units located downtown.
<b>Total:</b> Planned and Actual Existing Project-Based	<b>756</b>	<b>682</b>			

\* Figures and text in the "Planned" column should match the corresponding Annual MTW Plan.

\*\* Select "Status at the End of Plan Year" from: Committed, Leased/Issued

**Please describe differences between the Planned and Actual Existing Number of Vouchers Project-Based:**

Developments with lower Actual Numbers are in the lease-up stage and some developments are still under construction.

**iii. Actual Other Changes to MTW Housing Stock in the Plan Year**

Examples of the types of other changes can include (but are not limited to): units held off-line due to relocation or substantial rehabilitation, local, non-traditional units to be acquired/developed, etc.

ACTUAL OTHER CHANGES TO MTW HOUSING STOCK IN THE PLAN YEAR
<ul style="list-style-type: none"> <li>• Possible addition of scattered site units through acquisition and rehabilitation.</li> <li>• Potential disposition of vacant lots and select deteriorating scattered sites properties.</li> <li>• Potential demolition of vacant, obsolete 80 MROP public housing units in Oak Hill pursuant to HUD RAD demolition approval.</li> <li>• PBV/GAP Financing projects will continue to add local non-traditional units (PBV units funded by HACP/ARMDC's gap financing.)</li> <li>• Choice Neighborhoods Planning Grant Application and RAD-PBV application for Allegheny Dwellings public housing.</li> <li>• HACP plans to acquire real estate properties to develop dwelling units that can provide additional safe places for low income residents to stay in light of the COVID-19 pandemic with CARES Act funds and operating subsidies.</li> </ul>

iv. **General Description of All Actual Capital Expenditures During the Plan Year**

Narrative general description of all actual capital expenditures of MTW funds during the Plan Year.

**GENERAL DESCRIPTION OF ALL ACTUAL CAPITAL EXPENDITURES DURING THE PLAN YEAR**

The following activities are those that include capital expenditures during 2021:

**Completed**

**Homewood North** – Windows Replacement

**Arlington Heights** – Exterior Doors Replacement

**Scattered Sites North** – Hamilton Larimer Demolition, Direct Opportunities Center: Scaffolding Rental

**Finello Pavilion** – Trash Compactor Replacement

**Gualtieri Manor** – Heating and Cooling Lines Improvements

**Pressley Street High Rise** – Automatic Door Opener Replacement

**Northview Heights** – Building #74 Upgrades, High Level Maintenance 13 Units

**In Progress**

**Pressley Street High Rise** – Community Room and Corridor Improvements

**Homewood North** – Sprinkler Systems Improvements

**Authority Wide** – Architectural and Engineering Services, Environmental Services, Construction Management Services, Hazardous Materials Work, Exterior Site Work Improvements

**Northview Heights** - Public Safety Center HVAC Improvements

**Office Building(s)** – Central Office Facility Related Services and Build Out

Several activities and projects were slated for FY 2021 implementation, however, have been deferred to FY 2022.

## B. LEASING INFORMATION

### i. Actual Number of Households Served

Snapshot and unit month information on the number of households the MTW PHA actually served at the end of the Plan Year.

NUMBER OF HOUSEHOLDS SERVED THROUGH:	NUMBER OF UNIT MONTHS OCCUPIED or LEASED* Planned^^	NUMBER OF UNIT MONTHS OCCUPIED or LEASED* Actual	NUMBER OF HOUSEHOLDS SERVED** Planned^^	NUMBER OF HOUSEHOLDS SERVED** Actual
MTW Public Housing Units Leased	30,552	33,936	2,546	2,828
MTW Housing Choice Vouchers (HCV) Utilized	71,496	64,128	5,958	5,344
Local, Non-Traditional: Tenant-Based	N/A	N/A	N/A	N/A
Local, Non-Traditional: Property-Based	2,400 <sup>^^^</sup>	876	200 <sup>^^^</sup>	73
Local, Non-Traditional: Homeownership	600 <sup>^^^</sup>	180	50 <sup>^^^</sup>	15
<b>Planned and Actual Totals:</b>	<b>110,052</b>	<b>99,120</b>	<b>9,339</b>	<b>8,260</b>

\* "Planned Number of Unit Months Occupied/Leased" is the total number of months the MTW PHA planned to have leased/occupied in each category throughout the full Plan Year (as shown in the Annual MTW Plan).

\*\* "Planned Number of Households to be Served" is calculated by dividing the "Planned Number of Unit Months Occupied/Leased" by the number of months in the Plan Year (as shown in the Annual MTW Plan).

^^ Figures and text in the "Planned" column should match the corresponding Annual MTW Plan.

<sup>^^^</sup> For this report, the local, non-traditional property based and homeownership "Planned Number of Households to be Served" and "Planned Number of Unit Months Occupied/Leased" were taken from the FY 2022 MTW Plan. The local, non-traditional property-based and homeownership figures were adjusted during the 2020 MTW STS Baseline review because the HACP planned number of local, non-traditional property based numbers mistakenly contained PBV units and the homeownership numbers were not reflective of the actual program. This adjustment took place in fall 2021, which was after the FY 2021 MTW Plan was approved and in implementation. In other words, the FY 2021 MTW Plan contained inaccurate planned figures and the HACP updated this report to reflect these changes during the Plan Year.

#### Please describe any differences between the planned and actual households served:

The difference between the planned and actual activity for the public housing (LIPH) units is a combination of units held for redevelopment and vacant units. The HACP has adopted a turnkey vacant turnover protocol and will continue aggressive lease-up in 2022. The local, non-traditional property-based actual numbers includes 16 Miller Street units and 50 Crawford Square units. While Crawford Square has 134 tax credit only units in total, they are actively leasing 84 units to applicants with HCV vouchers. This accounts for the difference in number 134 versus 50 households served.

LOCAL, NON-TRADITIONAL CATEGORY	MTW ACTIVITY (NAME and NUMBER)	NUMBER OF UNIT MONTHS OCCUPIED or LEASED Planned^^	NUMBER OF UNIT MONTHS OCCUPIED or LEASED Actual	NUMBER OF HOUSEHOLDS SERVED Planned^^	NUMBER OF HOUSEHOLDS SERVED Actual
Tenant-Based	N/A	N/A	N/A	N/A	N/A
Property-Based	Step Up to Market / #9	5,832	792	486	66
Homeownership	Homeownership Program / #6	2,172	180	181	15
<b>Planned and Actual Totals</b>		<b>8,004</b>	<b>972</b>	<b>667</b>	<b>81</b>

\* The sum of the figures provided should match the totals provided for each Local, Non-Traditional category in the previous table. Figures should be given by individual activity. Multiple entries may be made for each category if applicable.

^^ Figures and text in the "Planned" column should match the corresponding Annual MTW Plan

HOUSEHOLDS RECEIVING LOCAL, NON-TRADITIONAL SERVICES ONLY	AVERAGE NUMBER OF HOUSEHOLDS PER MONTH	TOTAL NUMBER OF HOUSEHOLDS IN THE PLAN YEAR
The HACP does not have any households in this category that are receiving local, non-traditional services only	0	0

ii. **Discussion of Any Actual Issues/Solutions Related to Leasing**

Discussion of any actual issues and solutions utilized in the MTW housing programs listed.

HOUSING PROGRAM	DESCRIPTION OF ACTUAL LEASING ISSUES AND SOLUTIONS
MTW Public Housing	The occupancy rate for the Housing Authority of the City of Pittsburgh (HACP) continues to experience challenges relating to Covid-19. These challenges range from staffing issues to significant delays in material delivery. Additionally, HACP has halted lease up efforts in the following communities in anticipation of demolition/RAD conversion: Northview High Rise and Manchester. The HACP continues to create ready units for occupancy. The Agency is working with HUD and other government entities to provide housing for Afghan refugees. We are also prepared to receive any Ukrainian refugees who may need affordable housing.
MTW Housing Choice Voucher	Challenges are expected as rents continue to rise particularly in emerging neighborhoods once affordable under current FMR. Older housing in Pittsburgh continues to fail HQS inspections and there is a scarcity of landlords. The HACP plans to increase lease up through new landlord incentives and the participation in the HUD Community Choice Demonstration.
Local, Non-Traditional	Small community-based developers are not familiar with HUD and the HACP rules and regulations for the PBV/Gap Financing program. The HACP has created PBV/Gap Financing Program & Underwriting Guidelines and will continue to update the Guidelines as needed. The HACP will continue to share these guidelines with developers so that they are in a position to submit appropriate proposals.

## C. WAITING LIST INFORMATION

### i. Actual Waiting List Information

Snapshot information on the actual status of MTW waiting lists at the end of the Plan Year. The “Description” column should detail the structure of the waiting list and the population(s) served.

WAITING LIST NAME	DESCRIPTION	NUMBER OF HOUSEHOLDS ON WAITING LIST	WAITING LIST STATUS (OPEN, PARTIALLY OPEN OR CLOSED)	WAS THE WAITING LIST OPENED DURING THE PLAN YEAR
Low Income Public Housing	Site Based	2,717	Partially Open	Yes
Housing Choice Voucher	Community Wide	5,657	Closed	No
Homeownership	N/A	N/A	N/A	N/A
Project Based Vouchers	Site Based	10,540 – distinct count; 20,323 total lists count	Partially Open	Yes
Emergency Housing Vouchers	Community Wide	62	Open	Yes

#### Please describe any duplication of applicants across waiting lists:

There may be duplications between the Public Housing and Housing Choice Voucher program lists. The Project-Based Voucher waiting list may also have duplication across lists. Properties are also privately managed and waiting lists open and close based upon demand. No waiting list has been established for this program. Program participation is open to otherwise eligible families. If demand for soft second mortgage assistance approaches budget limit, a waiting list of participants with mortgage pre-approval letters will be established.

ii. **Actual Changes to Waiting List in the Plan Year**

Please describe any actual changes to the organizational structure or policies of the waiting list(s), including any opening or closing of a waiting list, during the Plan Year.

WAITING LIST NAME	DESCRIPTION OF ACTUAL CHANGES TO WAITING LIST
Low Income Public Housing	The LIPH High Rise waiting list opened in August 2021. The non UFAS one-bedroom units in the family communities remained closed during the Plan Year.
Housing Choice Voucher	The HCV waiting list remained closed during the FY 2021 Plan Year.
Homeownership	N/A
Project-Based Vouchers	<p>AUBA (Allegheny Union Baptist Association), Lemington Senior Housing, Milliones Manor, The Legacy, Wood Street Commons and Wood Street Commons – MOD waiting lists were open the entire 2021 calendar year.</p> <p>Cornerstone Village Phase 4 and Hillcrest Senior Residences waiting lists were partially open.</p> <p>Cornerstone Village, Crawford Square Apartments, Dinwiddie Street Housing, Doughboy Square Apartments, East Liberty Place South, Elmer Williams Square, Kelly Hamilton Homes, Larimer Pointe, Mackey Lofts, Mellon's Orchard, Middle Hill Homes, Miller Street Apartments, Sandstone Quarry Apartments, Skyline Terrace, Sycamore Street Apartments and The Lofts at Bentley waiting lists were closed the Plan Year.</p>
Emergency Housing Vouchers	Waiting list was established in August 2021 and remained open for the rest of the Plan Year.

## D. INFORMATION ON STATUTORY OBJECTIVES AND REQUIREMENTS

### i. 75 percent of Families Assisted Are Very Low Income

HUD will verify compliance with the statutory requirement that at least 75 percent of the households assisted by the MTW PHA are very low income for MTW public housing units and MTW HCVs through HUD systems. The MTW PHA should provide data for the actual families housed upon admission during the PHA's Plan Year reported in the "Local, Non-Traditional: Tenant-Based;" "Local, Non-Traditional: Property-Based;" and "Local, Non-Traditional: Homeownership" categories. Do not include households reported in the "Local, Non-Traditional Services Only" category.

INCOME LEVEL	NUMBER OF LOCAL, NON-TRADITIONAL HOUSEHOLDS ADMITTED IN THE PLAN YEAR
80%-50% Area Median Income	22
49%-30% Area Median Income	0
Below 30% Area Median Income	1
<b>Total Local, Non-Traditional Households Admitted</b>	<b>23</b>

### ii. Maintain Comparable Mix

HUD will verify compliance with the statutory requirement that MTW PHAs continue to serve a comparable mix of families by family size by first assessing a baseline mix of family sizes served by the MTW PHA prior to entry into the MTW demonstration (or the closest date with available data) and compare that to the current mix of family sizes served during the Plan Year.

**BASELINE MIX OF FAMILY SIZES SERVED (upon entry to MTW)**

FAMILY SIZE	OCCUPIED PUBLIC HOUSING UNITS	UTILIZED HCVs	NON-MTW ADJUSTMENTS*	BASELINE MIX NUMBER	BASELINE MIX PERCENTAGE
<b>1 Person</b>	1,714	994	0	2,708	29.61%
<b>2 Person</b>	1,721	1,536	0	3,257	35.62%
<b>3 Person</b>	1,427	1,134	0	2,561	28.00%
<b>4 Person</b>	300	208	0	508	5.55%
<b>5 Person</b>	84	27	0	111	1.21%
<b>6+ Person</b>	N/A	N/A	0	N/A	0%
<b>TOTAL</b>	<b>5,246</b>	<b>3,899</b>	<b>0</b>	<b>9,145</b>	<b>100%</b>

- \* "Non-MTW Adjustments" are defined as factors that are outside the control of the MTW PHA and/or unrelated to the MTW PHA's local MTW program. An example of an acceptable "Non-MTW Adjustment" would include demographic changes in the community's overall population. If the MTW PHA includes "Non-MTW Adjustments," a thorough justification, including information substantiating the numbers given, should be included below. MTW PHAs must continue to adhere to all fair housing obligations as detailed in the MTW Certifications of Compliance.

Please describe the justification for any "Non-MTW Adjustments" given above:

N/A



### MIX OF FAMILY SIZES SERVED (in Plan Year)

FAMILY SIZE	BASLINE MIX PERCENTAGE**	NUMBER OF HOUSEHOLDS SERVED IN PLAN YEAR^	PERCENTAGE OF HOUSEHOLDS SERVED IN PLAN YEAR^^	PERCENTAGE CHANGE FROM BASELINE YEAR TO CURRENT PLAN YEAR
1 Person	29.61%	3,122	38.20%	8.59%
2 Person	35.62%	2,512	31.95%	-4.88%
3 Person	28.00%	2,041	25.38%	-3.02%
4 Person	5.55%	413	4.64%	-.50%
5 Person	1.21%	84	1.13%	-.18%
6+ Person	N/A	N/A	N/A	N/A
<b>TOTAL</b>	<b>100%</b>	<b>8,172</b>	<b>100%</b>	<b>0%</b>

\*\* The "Baseline Mix Percentage" figures given in the "Mix of Family Sizes Served (in Plan Year)" table should match those in the column of the same name in the "Baseline Mix of Family Sizes Served (upon entry to MTW)" table.

^ The "Total" in the "Number of Households Served in Plan Year" column should match the "Actual Total" box in the "Actual Number of Households Served in the Plan Year" table in Section II.B.i of this Annual MTW Report.

^^ The percentages in this column should be calculated by dividing the number in the prior column for each family size by the "Total" number of households served in the Plan Year. These percentages will reflect adjustment to the mix of families served that are due to the decisions of the MTW PHA. Justification of percentages in the current Plan Year that vary by more than 5% from the Baseline Year must be provided below.

**Please describe the justification for any variances of more than 5% between the Plan Year and Baseline Year:**

The one (1) person household varied by 8.59%, which is primarily related to the demolition/RAD activity in the LIPH portfolio, GAP financing, and aggressive development activities of the HACP.

**iii. Number of Households Transitioned to Self-Sufficiency in the Plan Year**

Number of households, across MTW activities, which were transitioned to the MTW PHA's local definition of self-sufficiency during the Plan Year.

MTW ACTIVITY (NAME and NUMBER)	NUMBER OF HOUSEHOLDS TRANSITIONED TO SELF SUFFICIENCY*	MTW PHA LOCAL DEFINITION OF SELF-SUFFICIENCY
Modified Rent Policy HCV / #3	16	Graduated from FSS program includes zero cash assistance
Modified Rent Policy LIPH / #4	9	Graduated from FSS program zero cash assistance
Homeownership Program / #6	4	Completed Home Purchase, one (1) was in the HCV Program
	<b>1</b>	<b><i>(Households Duplicated Across MTW Activities)</i></b>
	<b>28</b>	<b>Total Households Transitioned to Self-Sufficiency</b>

- Figures should match the outcome reported for all activities where the goal of increased self-sufficiency is used in Section IV of this Annual MTW Report.

### III. PROPOSED MOVING TO WORK ACTIVITIES: HUD APPROVAL REQUESTED

All proposed activities that have been approved by HUD are reported on in Section IV as “Approved Activities.” There were no proposed activities that were not approved in FY 2021.

#### IV. APPROVED MTW ACTIVITIES: HUD APPROVAL PREVIOUSLY GRANTED

Activity	Plan Year Approved	Plan Year Implemented	Plan Year(s) Amended
1. Pre-Approval Inspection Certification	2015	2015	2019
2. Preferred Owners Program	2015	2015	Has not been amended
3. Modified Rent Policy - Work or FSS Requirement or increased minimum tenant payment for non-exempt HCV households	2011	2011	Has not been amended
4. Modified Rent Policy - Work or FSS Requirement or increased minimum rent for non-exempt LIPH households	2008	2008-2009	Has not been amended
5. HCV Revised Recertification Policy – At least once every other year	2008	2008	Has not been amended
5. LIPH Revised Recertification Policy – At least once every other year	2009	2009	Has not been amended
6. Homeownership Program: Operation of Combined LIPH and HCV Homeownership Program; Program assistance to include soft-second mortgage assistance coupled with closing cost assistance, homeownership and credit counseling, and foreclosure prevention. To establish a soft- second mortgage waiting list; expand eligibility to persons on the LIPH and HCV program waiting lists; expand eligibility to persons eligible for LIPH	2007 (Combined Program)	2007	2010 – Addition of other elements  2014 – Expansion of eligibility to person eligible for LIPH  2020 – Revised program manual

7. Modified Housing Choice Voucher Program policy on maximum percent of Adjusted Monthly Income permitted.	2001	2001	Has not been amended
8. Modified Payment Standard Approval - Establish Exception Payment Standards up to 120% of FMR without prior HUD approval.	2004	2004	2013 – Amended for persons with disabilities for exception areas
9. Step Up To Market Financing Program <i>[Use of Block Grant Funding Authority for Development, Redevelopment, and Modernization to include Local Non-Traditional Development i.e., Project-Based Vouchers and Gap Financing]</i>	2012	2013	2017 – Additional features
10. Local Payment Standard-Housing Choice Voucher Program	2019	2019	Has not been amended

## A. Implemented Activities

### 1. Pre-Approval Certification

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#### i. *Plan Year Approved, Implemented, Amended*

- **FY 2015:** Approved and Implemented
- **FY 2019:** Amended to expand the timeframe in which a landlord can use a pre-inspection to 90 days and to make this activity available for any HCV landlord.

#### ii. *Description*

The Pre-Approval Inspection Certification process will apply to buildings with four (4) or more units located within a single structure and the pre-approval process could not be applied to all Housing Choice Voucher (HCV) unit types. Also, the Pre-Approval Inspection Certification was originally accepted during the 60-day period after the unit passes HQS inspection. However, as stated above, modifications were approved by HUD in FY 2019 to make available Pre-Approval Inspection Certification to all HCV landlords and extend the certification status to a 90-day period after the unit passes HQS inspection. All units seeking Pre-Approval Inspection Certification must be vacant at the time the HQS inspection occurs and must remain vacant until a Request for Tenancy Approval is submitted for the unit. If a Request for Tenancy Approval is submitted after the 90-day qualifying period, a new initial HQS inspection must be performed before the unit is approved for tenancy. HAP payments are not tied to the Pre-Approval Inspection. The HAP payments will begin from the tenancy certification date only.

#### *Impact*

This activity helps to address one of the biggest HCV owner complaints – the time it takes to start paying assistance on a unit. The HACP HCV owners have stated that this activity is a plus even when the unit fails pre-inspection as they learn what repairs need to be made so they can be ready by the time the Request for Tenancy Approval is submitted.

#### *Metrics*

<i>Cost Effectiveness</i>					
<b>Metric Name &amp; #</b>	<b>Unit of Measurement</b>	<b>Baseline</b>	<b>Benchmark</b>	<b>Outcome</b>	<b>Benchmark Achieved?</b>
<b>CE #1: Agency Cost Savings</b>	Total cost of task in dollars (decrease).	Cost of inspections prior to implementation of the activity (in dollars). \$677,300 annually	Expected cost of inspections after implementation of the activity (in dollars). \$674,375 annually	Actual cost of inspections after implementation of the activity (in dollars). <b>\$200,869 annually</b>	Whether the outcome meets or exceeds the benchmark. Yes

<b>CE #2: Staff Time Savings</b>	Total time to complete the task in staff hours (decrease).	Total amount of staff time dedicated to inspections prior to implementation of the activity (in hours). 15,662.5 hours annually	Expected amount of total staff time dedicated to inspections after implementation of the activity (in hours). 15,630 hours annually	Actual amount of total staff time dedicated to inspections after implementation of the activity (in hours). <b>8,888 hours annually</b>	Whether the outcome meets or exceeds the benchmark.  Yes
<b>CE #3: Decrease in Error Rate of Task Execution</b>	Average error rate in completing a task as a percentage (decrease).	Average inspection error rate prior to implementation of the activity (percentage). 0.1%	Expected average inspection error rate after implementation of the activity (percentage). 0.1%	Actual average inspection error rate after implementation of the activity (percentage). <b>0.1%</b>	Whether the outcome meets or exceeds the benchmark.  Yes

<i>Housing Choice</i>					
<b>Metric Name &amp; #</b>	<b>Unit of Measurement</b>	<b>Baseline</b>	<b>Benchmark</b>	<b>Outcome</b>	<b>Benchmark Achieved?</b>
<b>HC #1: Additional Units of Housing Made Available</b>	Number of new housing units made available for households at or below 80% AMI as a result of the activity (increase).	Housing units of this type prior to implementation of the activity (number).  0	Expected housing units of this type after implementation of the activity (number).  30	Actual housing units of this type after implementation of the activity (number).  <b>90</b>	Whether the outcome meets or exceeds the benchmark.  Yes

### ***Comparison of Outcomes to Benchmarks***

As the number of pre-inspections rose, the overall number and cost of all inspections decreased.

The actual total number of pre-inspections conducted during the Plan Year surpassed the benchmark by three times. Now that this activity is in full implementation, HCV landlords have taken advantage of this opportunity to expedite the lease-up process.

### ***Update***

During the first few years of implementation, challenges were noted, and systems were adjusted. Currently, the HACP is now on track with the activity's schedule as shown by the jump in the number of actual pre-inspections during the Plan Year.

**iii. Actual Non-Significant Changes**

The HACP did not make any non-significant changes to this activity during the fiscal year.

**iv. Actual Changes to Metrics/Data Collection**

The HACP did not make any metrics/data collection changes to this activity during the fiscal year.

**v. Actual Significant Changes**

The HACP did not make any significant changes to this activity during the fiscal year.

**vi. Challenges in Achieving Benchmarks and Possible Strategies**

The benchmarks were achieved for this activity and therefore, the HACP will continue to monitor and assess on at least an annual basis for any changes to the metrics. Should the HACP run into any challenges in achieving benchmarks in the upcoming plan years, the HACP will review the program procedures, troubleshoot any unintended obstacles, and update the MTW Plan accordingly.

## 2. Preferred Owners Program

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*i. Plan Year Approved, Implemented, Amended*

- **FY 2015:** Approved and Implemented
- No amendments since initial HUD-approval

*ii. Description*

The Preferred Owners Program provides incentives to landlords to participate in the HCV Program and to provide quality housing units in a variety of neighborhoods. Participating landlords must consistently pass Housing Quality Standards (HQS) inspections and participate in annual training. In return, they will receive priority placement of their listings on the HACP apartment listings website and can be eligible for the following:

(a) Changes in inspection schedule:

- i. Priority inspection scheduling - Preferred Owners will be moved to the top of the waiting list for annual and initial inspections.
- ii. Biennial inspections - Owners who have passed annual inspection on the first inspection for the past three consecutive years will be moved to biennial inspections. If a future inspection results in a fail, the owner will be removed from the Preferred Owners Program and will return to an annual inspection schedule.
- iii. Acceptance of prior inspections for new tenancies if an annual or initial inspection was conducted less than 60 days ago for vacated units - If, after initial inspection and move-in, a unit is vacated for any reason and a new RFTA is returned for a new voucher holder in the same unit within 60 days, the previous inspection will be accepted as the initial inspection for the new RFTA.
- iv. Construction completion inspection to be accepted as initial inspection for project-based voucher units for 60 days - When PBV owners or property managers are Preferred Owners, the construction completion inspection on a new PBV unit can be used as the initial inspection if the unit is occupied within 60 days of that inspection.

(b) Vacancy Payments

When a voucher holder moves out, if the landlord releases the unit to another voucher holder, the HACP will issue vacancy payment of two months of the previous tenant's HAP as a HAP Adjustment Vacancy Payment. The impact of this initiative is to encourage landlords to work with the HACP and the HCV program long-term, preserving housing for families at or below 50% AMI.



The landlord incentives in this activity are only available to landlords who meet the criteria of the HACP preferred owners' program.

### ***Application for Membership***

In order to gain membership to the Preferred Owners Program, an owner or property manager must apply by submitting a form to the HCV office. The HACP requires separate applications to be submitted for each subsidiary of a company/organization and/or each unique tax identification number. This form will include:

1. Landlord's name;
2. Contact information;
3. Addresses of units currently leased to voucher holders;
4. Checklist of the standards for membership, which are:

#### ***a. Consistent HQS Inspection Passes***

Units have passed inspection on the first inspection for the past four (4) consecutive years.

#### ***b. Trainings***

Preferred Owners must complete a minimum of one (1) training per year to maintain membership in the Preferred Owners Program. All trainings will be provided free of charge to all landlords and may be chosen from the following options:

- *Screening Tenants* - Includes information about background checks, references, and Fair Housing law.
- *The Magistrate Process* - Includes information about legal recourse landlords may take if they feel their tenant has broken his or her lease.
- *Mental Health First Aid Training* - This training is provided by Mercy Behavioral Health.
- *Real Estate Continuing Education Credits and/or Other Accredited Property Management Trainings* may also be counted as Preferred Owners trainings, when proof of completion is provided.

### ***Impact***

The preferred owners added twenty-four (24) new units to the HCV program in FY 2021. The HACP for the first time since creating the Preferred Owners Program rescreened the owners that were currently on the program to determine if they were still meeting the eligibility criteria. The rescreening process and subsequent letters sent out to the preferred owners made an impact on their participation and engagement with the program. Many of the owners that were “in the clear” were glad to hear so, and a few of them had forgotten about their benefits. The letters served as a nice reminder that they could utilize benefits such as vacancy payments. The letters also increased engagement from the owners who had entered into the corrective action period. Many of them reached out to say that they really valued the benefits that the Preferred Owners program provided and wanted to know how they could remain on the program. The owners were proactive in seeking out trainings and making sure they were aware of upcoming inspections. Overall, the HCV landlords clearly value the Preferred Owners program and are eager to continue with the program.

### ***Metrics***

<b><i>Cost Effectiveness</i></b>					
<b>Metric Name &amp; #</b>	<b>Unit of Measurement</b>	<b>Baseline</b>	<b>Benchmark</b>	<b>Outcome</b>	<b>Benchmark Achieved?</b>
<b>CE #1: Agency Cost Savings</b>	Total cost of task in dollars (decrease).	Cost of inspections prior to implementation of the activity (in dollars). \$677,300 annually	Expected cost of inspections after implementation of the activity (in dollars). \$674,375 annually	Actual cost of inspections after implementation of the activity (in dollars). <b>\$200,869 annually</b>	Whether the outcome meets or exceeds the benchmark.  Yes
<b>CE #2: Staff Time Savings</b>	Total time to complete the task in staff hours (decrease).	Total amount of staff time dedicated to inspections prior to implementation of the activity (in hours). 15,662.5 hours annually	Expected amount of total staff time dedicated to inspections after implementation of the activity (in hours). 15,630 hours annually	Actual amount of total staff time dedicated to inspections after implementation of the activity (in hours). <b>8,888 hours annually</b>	Whether the outcome meets or exceeds the benchmark.  Yes

<b>CE #3: Decrease in Error Rate of Task Execution</b>	Average error rate in completing a task as a percentage (decrease).	Average inspection error rate prior to implementation of the activity (percentage). 0.1%	Expected average inspection error rate after implementation of the activity (percentage). 0.1%	Actual average inspection error rate after implementation of the activity (percentage). <b>0.1%</b>	Whether the outcome meets or exceeds the benchmark.  Yes
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<i><b>Housing Choice</b></i>					
<b>Metric Name &amp; #</b>	<b>Unit of Measurement</b>	<b>Baseline</b>	<b>Benchmark</b>	<b>Outcome</b>	<b>Benchmark Achieved?</b>
<b>HC #1: Additional Units of Housing Made Available</b>	Number of new housing units made available for households at or below 80% AMI as a result of the activity (increase).	Housing units of this type prior to implementation of the activity (number).  0	Expected housing units of this type after implementation of the activity (number).  120	Actual housing units of this type after implementation of the activity (number).  <b>24</b>	Whether the outcome meets or exceeds the benchmark.  No
<b>HC #2: Units of Housing Preserved</b>	Number of housing units preserved for households at or below 80% AMI that would otherwise not be available (increase).	Housing units preserved prior to implementation of the activity (number).  0	Expected housing units preserved after implementation of the activity (number).  120	Actual housing units preserved after implementation of the activity (number).  <b>608</b>	Whether the outcome meets or exceeds the benchmark.  Yes

<i><b>HACP Specific Metrics</b></i>					
<b>Metric Name &amp; #</b>	<b>Unit of Measurement</b>	<b>Baseline</b>	<b>Benchmark</b>	<b>Outcome</b>	<b>Benchmark Achieved?</b>
<b>Landlords enrolled in Preferred Owners Program</b>	Landlords enrolled in Preferred Owners Program (number).	Landlords enrolled in Preferred Owners Program before the start of the program  0	Expected number of landlords enrolled in Preferred Owners Program  20	Actual number of landlords enrolled in Preferred Owners Program  <b>27</b>	Whether the outcome meets or exceeds the benchmark.  Yes



The scarcity of affordable rental housing in the City of Pittsburgh is still a growing issue exacerbated by the COVID 19 pandemic. Owners can select the best rental candidate from a large pool of applicants and oftentimes that includes overlooking voucher holders. Even the HACP's Preferred Owners are hesitant to add more of their units to the program with the current incentives offered when they do not have to deal with the HCV program altogether. The HACP is hoping that the HUD Community Choice Demonstration will attract new landlords who bring new units to the Preferred Owners program. If not, the HACP may research new incentives that could better motivate owners to rent to more voucher holders.

### 3. Modified Rent Policy with Work/FSS Requirement for the Housing Choice Voucher Program

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**i. Plan Year Approved, Implemented, Amended**

- **FY 2011:** Approved and Implemented
- No amendments since initial HUD-approval

**ii. Description**

Requires that any non-elderly, able-bodied head of household who is not working to either: a) participate in a self-sufficiency program, including but not limited to the HACP FSS program, other Local Self-Sufficiency program (LSS), welfare to work, or other employment preparation and/or training/educational program or b) pay a minimum tenant payment of \$150.00 per month. This policy provides additional incentives for families to work or prepare for work and increases overall accountability.

**Impact**

The provision of the modified policy has increased the percentage of families reporting earned income and increased the number of families pursuing training and preparation for work through Local Self-Sufficiency program (LSS), welfare to work, or other employment preparation and/or training/educational program.

**Metrics**

Self Sufficiency					
Metric Name & #	Unit of Measurement	Baseline	Benchmark	Outcome	Benchmark Achieved?
SS #1: Increase in Household Income	Average earned income of households affected by this policy in dollars (increase).	Average earned income of households affected by this policy prior to implementation of the activity (in dollars). \$11,802	Expected average earned income of households affected by this policy prior to implementation of the activity (in dollars). \$12,000	Actual average earned income of households affected by this policy prior to implementation (in dollars). <b>\$24,040</b>	Whether the outcome meets or exceeds the benchmark.  Yes
SS #2: Increase in Household Savings	Average amount of savings/escrow of households affected by this policy in dollars (increase).	Average savings/escrow amount of households affected by this policy prior to implementation of the activity (in dollars). \$3,789.66	Expected average savings/escrow amount of households affected by this policy after implementation of the activity (in dollars). \$2,900	Actual average savings/escrow amount of households affected by this policy after implementation of the activity (in dollars). <b>\$3,981</b>	Whether the outcome meets or exceeds the benchmark.  Yes

<b>SS #3: Increase in Positive Outcomes in Employment Status</b>	Report the following information separately for each category:	Head(s) of households in FSS prior to implementation of the activity (number).	Expected head(s) of work-able households in FSS after implementation of the activity (number).	Actual head(s) of work-able households in FSS after implementation of the activity (number).	Whether the outcome meets or exceeds the benchmark.
	(1) Employed Full- Time	736	736	<b>115</b>	No
	(2) Employed Part- Time	737	737	<b>54</b>	No
	(3) Enrolled in Educational Program	50	27	<b>41</b>	Yes
	(4) Enrolled in Job Training Program	51	28	<b>22</b>	No
	(5) Unemployed	N/A	N/A	<b>100</b>	N/A
	(6) Other	N/A	N/A	<b>N/A</b>	N/A
	Report the following information separately for each category:	Percentage of total work-able households in FSS prior to implementation of activity (percent).	Expected percentage of total work-able households in FSS after implementation of the activity (percent).	Actual percentage of total work-able households in FSS after implementation of the activity (percent).	Whether the outcome meets or exceeds the benchmark.
	(1) Employed Full- Time	14.305%	20%	<b>35%</b>	Yes
	(2) Employed Part- Time	14.305%	20%	<b>16%</b>	Yes
	(3) Enrolled in Educational Program	11.27%	7.5%	<b>12%</b>	Yes
	(4) Enrolled in Job Training Program	11.27%	7.5%	<b>7%</b>	Yes
	(5) Unemployed	48.5%	45%	<b>30%</b>	Yes
	(6) Other	0%	0	<b>N/A</b>	N/A
<b>SS #4: Households Removed from Temporary Assistance for Needy Families (TANF)</b>	Number of households receiving TANF assistance (decrease).	Households receiving TANF prior to implementation of the activity (number). 774	Expected number of households receiving TANF after implementation of the activity (number). 800	Actual households receiving TANF after implementation of the activity (number). <b>494</b>	Whether the outcome meets or exceeds the benchmark. Yes

<b>SS #5: Households Assisted by Services that Increase Self Sufficiency</b>	Number of households receiving services aimed to increase self-sufficiency (increase).	Households receiving self-sufficiency services prior to implementation of the activity (number). 353	Expected number of households receiving self-sufficiency services after implementation of the activity (number). 200	Actual number of households receiving self-sufficiency services after implementation of the activity (number). <b>269</b>	Whether the outcome meets or exceeds the benchmark. Yes
<b>SS #6: Reducing Per Unit Subsidy Costs for Participating Households</b>	Average amount of Section 8 and/or 9 subsidy (or local, non-traditional subsidy) per household affected by this policy in dollars (decrease).	Average subsidy per household affected by this policy prior to implementation of the activity (in dollars). \$466.24	Expected average subsidy per household affected by this policy after implementation of the activity (in dollars). \$575	Actual average subsidy per household affected by this policy after implementation of the activity (in dollars). <b>\$644</b>	Whether the outcome meets or exceeds the benchmark. No
<b>SS #8: Households Transitioned to Self Sufficiency</b>	Number of households transitioned to self-sufficiency (increase).	Households transitioned to self-sufficiency (a household's ability to maintain financial, housing, and personal/family stability) prior to implementation of the activity (number). 12	Expected households transitioned to self-sufficiency (a household's ability to maintain financial, housing, and personal/family stability) after implementation of the activity (number). 50	Actual households transitioned to self-sufficiency (a household's ability to maintain financial, housing, and personal/family stability) after implementation of the activity (number). <b>25</b>	Whether the outcome meets or exceeds the benchmark. No

<i>HACP Metrics</i>					
<b>Metric Name</b>	<b>Unit of Measurement</b>	<b>Baseline</b>	<b>Benchmark</b>	<b>Outcome</b>	<b>Benchmark Achieved?</b>
<b>Non-elderly, Non-disabled Families with TTPs Less than \$150</b>	Number of non-elderly, non-disabled families with TTPs <\$150 (decrease)	Total Non-elderly, Non-disabled families with TTPs less than \$150 before this activity was implemented in 2010 (number) 1,988	Expected total Non-elderly, Non-disabled families with TTPs less than \$150 from this activity (number) 530	Actual non-elderly, Non-disabled families with TTPs less than \$150 added (number) <b>434</b>	Whether the outcome meets or exceeds the benchmark. No



<b>Average Overall HAP</b>	Average HAP dollar amount for all families (increase)	Average HAP for all HCV families before this activity was implemented (in dollars) \$486	Expected Average HAP for all HCV families after the activity is implemented (in dollars) \$615	Actual average HAP for all HCV families (in dollars) <b>\$692</b>	Whether the outcome meets or exceeds the benchmark. Yes
<b>Average HAP for Non-elderly, Non-disabled</b>	Average HAP dollar amount for non-elderly, non-disabled families (increase)	Average HAP for non-elderly, non-disabled HCV families before this activity was implemented (in dollars) \$538	Expected average HAP for non-elderly, non-disabled HCV families after this activity was implemented (in dollars) \$618	Actual average HAP for non-elderly, non-disabled HCV families (in dollars) <b>\$717</b>	Whether the outcome meets or exceeds the benchmark. Yes
<b>Average HAP for Non-elderly, Non-disabled TTPs &lt;\$150</b>	Average HAP dollar amount for non-elderly, non-disabled families with TTPs <\$150 (decrease)	Average HAP for non-elderly, non-disabled HCV families with TTPs <\$150 before this activity was implemented (in dollars) \$657	Expected average HAP for non-elderly, non-disabled HCV families with TTPs <\$150 after this activity was implemented (in dollars) \$642	Actual average HAP for non-elderly, non-disabled HCV families with TTPs <\$150 (in dollars) <b>\$731</b>	Whether the outcome meets or exceeds the benchmark. No
<b>Total HCV FSS Participants</b>	Number of HCV FSS participant families (increase)	Total FSS participants before this activity was implemented (number) 448	Expected new FSS participants added from this activity (number) 250	Actual new FSS participants added (number) <b>166</b>	Whether the outcome meets or exceeds the benchmark. No
<b>HCV FSS Participant Families Working</b>	Number of HCV FSS participant families working (increase)	Total FSS participant families working before this activity was implemented (number) 248	Expected new FSS participant families working added from this activity (number). 160	Actual new FSS participant families working added (number) <b>115</b>	Whether the outcome meets or exceeds the benchmark. No
	Percentage of HCV FSS participant families working (increase)	Total FSS participant families working before this activity was implemented (percentage) 55%	Expected new FSS participant families working added from this activity (percentage). 75%	Actual new FSS participant families working added (percentage) <b>69%</b>	Whether the outcome meets or exceeds the benchmark. No
<b>HCV FSS Participant Families Graduating from FSS</b>	Number of HCV FSS participant families graduating from FSS (increase)	Total FSS participant families graduating from FSS before this activity was implemented (number) 12	Expected new FSS participant families graduating from FSS added from this activity (number). 51	Actual new FSS participant families graduated from FSS added (number) <b>16</b>	Whether the outcome meets or exceeds the benchmark. No

HCV FSS Participant Families with Escrow Accounts	Number of HCV FSS participant families with escrow accounts (increase)	Total FSS participant families with escrow accounts before this activity was implemented (number)	Expected new FSS participant families with escrow accounts added from this activity (number).	Actual new FSS participant families with escrow accounts added (number)	Whether the outcome meets or exceeds the benchmark.
		191	200	106	No

### ***Comparison of Outcomes to Benchmarks***

The outcomes had mixed results in FY 2021. Some of the outcomes met the benchmarks such as household income, household savings, households transitioning off of TANF, and households assisted by services that increase self-sufficiency. Other outcomes such as the total number of HCV FSS participants, the number of HCV FSS participants working, number of HCV FSS participants graduating from FSS, and number of HCV FSS families with escrow accounts did not meet the benchmarks.

### ***Update***

This MTW activity was fully implemented during the Plan Year and is on schedule for FY 2022.

#### ***iii. Actual Non-Significant Changes***

The HACP did not make any non-significant changes to this activity during the fiscal year.

#### ***iv. Actual Changes to Metrics/Data Collection***

The HACP did not make any metrics/data collection changes to this activity during the fiscal year.

#### ***v. Actual Significant Changes***

The HACP did not make any significant changes to this activity during the fiscal year.

#### ***vi. Challenges in Achieving Benchmarks and Possible Strategies***

The HACP's HCV families faced several challenges that affected the FY 2021 outcomes. Firstly, the HCV families were still facing the effects of the COVID-19 pandemic on the job market. Overall employment rates mirrored the pandemic outbreaks with multiple difficulties; however, despite the unemployment rate declining in the latter half of FY 2021, it is still significantly above pre-pandemic levels. This is reflected in the self-sufficiency metrics. Current strategies to improve the metrics for future Plan Years include marketing the FSS program more to HCV families, further enhancing and focusing on the services offered to HCV families, and opening up more public housing services to HCV families.

## 4. Modified Rent Policy with Work/FSS Requirement for the Public Housing Program

### i. *Plan Year Approved, Implemented, Amended*

- **FY 2008-2009:** Approved and Implemented
- No amendments since initial HUD-approval

### ii. *Description*

This activity requires that any non-elderly, able-bodied head of household who is not working to either participate in the FSS Program or pay a minimum rent of \$150.00 per month. Hardship exemptions are permitted. This policy provides additional incentives for families to work or prepare for work. The HACP's objectives for this program include increased participation in the FSS Program, increased rent collections, and increased level of families working.

### *Impact*

The provision of the modified policy has increased the percentage of families reporting earned income and increased the number of families pursuing training and preparation for work through Local Self-Sufficiency program (LSS), welfare to work, or other employment preparation and/or training/educational program.

### *Metrics*

<i>Self Sufficiency</i>					
<b>Metric Name &amp; #</b>	<b>Unit of Measurement</b>	<b>Baseline</b>	<b>Benchmark</b>	<b>Outcome</b>	<b>Benchmark Achieved?</b>
<b>SS #1: Increase in Household Income</b>	Average earned income of households affected by this policy in dollars (increase).	Average earned income of households affected by this policy prior to implementation of the activity (in dollars). \$11,802	Expected average earned income of households affected by this policy prior to implementation of the activity (in dollars). \$12,000	Actual average earned income of households affected by this policy after implementation of this activity (in dollars). <b>\$15,375</b>	Whether the outcome meets or exceeds the benchmark.  Yes
<b>SS #2: Increase in Household Savings</b>	Average amount of savings/escrow of households affected by this policy in dollars (increase).	Average savings/escrow amount of households affected by this policy prior to implementation of the activity (in dollars). \$3,789.66	Expected average savings/escrow amount of households affected by this policy after implementation of the activity (in dollars). \$2,900	Actual average savings/escrow amount of households affected by this policy after implementation of the activity (in dollars). <b>\$3,310</b>	Whether the outcome meets or exceeds the benchmark.  Yes

<b>SS #3: Increase in Positive Outcomes in Employment Status</b>	Report the following information separately for each category:	Head(s) of households in FSS prior to implementation of the activity (number).	Expected head(s) of work-able households in FSS after implementation of the activity (number).	Actual head(s) of work-able households in FSS after implementation of the activity (number).	Whether the outcome meets or exceeds the benchmark.
	(1) Employed Full- Time	736	736	<b>122</b>	No
	(2) Employed Part- Time	737	737	<b>47</b>	No
	(3) Enrolled in Educational Program	50	27	<b>56</b>	Yes
	(4) Enrolled in Job Training Program	51	28	<b>45</b>	Yes
	(5) Unemployed	N/A	N/A	<b>N/A</b>	N/A
	(6) Other	N/A	N/A	<b>N/A</b>	N/A
	Report the following information separately for each category:	Percentage of total work-able households in FSS prior to implementation of activity (percent).	Expected percentage of total work-able households in FSS after implementation of the activity (percent).	Actual percentage of total work-able households in FSS after implementation of the activity (percent).	Whether the outcome meets or exceeds the benchmark.
	(1) Employed Full- Time	14.305%	20%	<b>45%</b>	Yes
	(2) Employed Part- Time	14.305%	20%	<b>17%</b>	No
	(3) Enrolled in Educational Program	11.27%	7.5%	<b>21%</b>	Yes
	(4) Enrolled in Job Training Program	11.27%	7.5%	<b>17%</b>	Yes
	(5) Unemployed	48.5%	45%	<b>N/A</b>	N/A
	(6) Other	0%	0	<b>N/A</b>	N/A
<b>SS #4: Households Removed from Temporary Assistance for Needy Families (TANF)</b>	Number of households receiving TANF assistance (decrease).	Households receiving TANF prior to implementation of the activity (number).	Expected number of households receiving TANF after implementation of the activity (number).	Actual households receiving TANF after implementation of the activity (number).	Whether the outcome meets or exceeds the benchmark.
		774	800	<b>168</b>	Yes

<b>SS #5: Households Assisted by Services that Increase Self Sufficiency</b>	Number of households receiving services aimed to increase self-sufficiency (increase).	Households receiving self-sufficiency services prior to implementation of the activity (number). 353	Expected number of households receiving self-sufficiency services after implementation of the activity (number). 200	Actual number of households receiving self-sufficiency services after implementation of the activity (number). <b>88</b>	Whether the outcome meets or exceeds the benchmark.  No
<b>SS #6: Reducing Per Unit Subsidy Costs for Participating Households</b>	Average amount of Section 8 and/or 9 subsidy (or local, non-traditional subsidy) per household affected by this policy in dollars (decrease).	Average subsidy per household affected by this policy prior to implementation of the activity (in dollars).  \$466.24	Expected average subsidy per household affected by this policy after implementation of the activity (in dollars).  \$575	Actual average subsidy per household affected by this policy after implementation of the activity (in dollars).  <b>\$643</b>	Whether the outcome meets or exceeds the benchmark.  No
<b>SS #7: Increase in Agency Rental Revenue</b>	Total Household contributions towards housing assistance (increase).	Household contributions prior to implementation of the activity (in dollars). \$626,041	Expected household contributions after implementation of the activity (in dollars). \$656,166	Actual household contributions after implementation of the activity (in dollars). <b>\$687,643</b>	Whether the outcome meets or exceeds the benchmark. Yes
<b>SS #8: Households Transitioned to Self Sufficiency</b>	Number of households transitioned to self-sufficiency (increase).	Households transitioned to self-sufficiency (a household's ability to maintain financial, housing, and personal/family stability) prior to implementation of the activity (number). 12	Expected households transitioned to self-sufficiency (a household's ability to maintain financial, housing, and personal/family stability) after implementation of the activity (number). 50	Actual households transitioned to self-sufficiency (a household's ability to maintain financial, housing, and personal/family stability) after implementation of the activity (number). <b>25</b>	Whether the outcome meets or exceeds the benchmark.  No

<b>HACP Metrics</b>					
<b>Metric Name</b>	<b>Unit of Measurement</b>	<b>Baseline</b>	<b>Benchmark</b>	<b>Outcome</b>	<b>Benchmark Achieved?</b>
<b>Total LIPH FSS Participants</b>	Number of LIPH FSS participant families (increase)	Total FSS participants before this activity was implemented (number) 658	Expected new FSS participants added from this activity (number) 500	Actual new FSS participants added (number) <b>103</b>	Whether the outcome meets or exceeds the benchmark.  No

<b>LIPH FSS Participant Families Working</b>	Number of LIPH FSS participant families working (increase)	Total FSS participant families working before this activity was implemented (number) 181	Expected new FSS participant families working added from this activity (number). 300	Actual new FSS participant families working added (number) <b>54</b>	Whether the outcome meets or exceeds the benchmark. No
	Percentage of LIPH FSS participant families working (increase)	Total FSS participant families working before this activity was implemented (percentage) 28%	Expected new FSS participant families working added from this activity (percentage). 65%	Actual new FSS participant families working added (percentage) <b>48%</b>	Whether the outcome meets or exceeds the benchmark. No
<b>LIPH FSS Participant Families Graduating from FSS</b>	Number of LIPH FSS participant families graduating from FSS (increase)	Total FSS participant families graduating from FSS before this activity was implemented (number) n/a	Expected new FSS participant families graduating from FSS added from this activity (number). 40	Actual new FSS participant families graduated from FSS added (number) <b>9</b>	Whether the outcome meets or exceeds the benchmark. No
<b>LIPH FSS Participant Families with Escrow Accounts</b>	Number of LIPH FSS participant families with escrow accounts (increase)	Total FSS participant families with escrow accounts before this activity was implemented (number) 29	Expected new FSS participant families with escrow accounts added from this activity (number). 251	Actual new FSS participant families with escrow accounts added (number) <b>88</b>	Whether the outcome meets or exceeds the benchmark. No
<b>HACP Rent Roll Amounts</b>	Dollar amount of LIPH Rent Rolls (increase)	Total rent charged before this activity was implemented (in dollars) \$685,682	Expected total rent charged after this activity was implemented (in dollars) \$645,000	Actual rent charged for LIPH participant families (in dollars) <b>\$676,638</b>	Whether the outcome meets or exceeds the benchmark. Yes
<b>HACP Rent Collection Amounts</b>	Dollar Amount of LIPH Rent Collected (increase)	Total rent collected before this activity was implemented (in dollars) \$612,027	Expected total rent collected after this activity was implemented (in dollars) \$665,000	Actual rent collected for LIPH participant families (in dollars) <b>\$687,643</b>	Whether the outcome meets or exceeds the benchmark. Yes
<b>Average Rent All Communities</b>	Average Rent dollar amount (increase)	Average rent amount for all communities before this activity was implemented (in dollars) \$198.88	Expected average rent amount for all communities after this activity was implemented (in dollars) \$225	Actual average rent amount for all communities (in dollars) <b>\$317</b>	Whether the outcome meets or exceeds the benchmark. Yes

<b>Number of Families Working</b>	Number of families reporting wage income (increase)	Families reporting wage income before this activity was implemented (number)	Expected families reporting wage income after this activity was implemented (number)	Actual families reporting wage income (number)	Whether the outcome meets or exceeds the benchmark.
		713	730	<b>49</b>	No
<b>Percentage of Families Working</b>	Percentage of families reporting wage income (increase)	Families reporting wage income before this activity was implemented (percentage)	Expected families reporting wage income after this activity was implemented (percentage)	Actual families reporting wage income (percentage)	Whether the outcome meets or exceeds the benchmark.
		22%	30%	<b>48%</b>	Yes

### ***Comparison of Outcomes to Benchmarks***

The HACP did not meet the benchmark for the number of low-income public housing (LIPH) participants in the FSS program. Stricter guidelines for continued participation in FSS modified rent program resulted in many residents choosing not to continue in the program. Coupled with COVID-19 shutdowns/restrictions, a decrease in new-lease ups, the shrinking of the Low-Income Public Housing (LIPH) portfolio from Rental Assistance Demonstration (RAD) conversions, and no policy permitting re-enrollment into FSS; these factors prevented the HACP from reaching its benchmark. Many program participants completed the program and exceeded the income guidelines, but due to COVID-19, this lowered the percentage of active participants working. However, the increase in the average escrow accounts and wage income indicate that residents were finding and obtaining better employment.

### ***Update***

This MTW activity was fully implemented during the Plan Year and is on schedule for FY 2022.

### ***iii. Actual Non-Significant Changes***

The HACP did not make any non-significant changes to this activity during the fiscal year.

### ***iv. Actual Changes to Metrics/Data Collection***

The HACP did not make any metrics/data collection changes to this activity during the fiscal year.

### ***v. Actual Significant Changes***

The HACP did not make any significant changes to this activity during the fiscal year.

**vi. *Challenges in Achieving Benchmarks and Possible Strategies***

The HACP remains committed to maximizing the number of people successfully participating in the FSS program. The HACP has increased its outreach and marketing efforts to increase participation, as well as partnered with the University of Pittsburgh to evaluate the HACP's rent policies and the FSS program. The study analyzes the effects of the modified rent policy and FSS program over the ten-year span of the activity. The HACP looks forward to the results and the development of a new activity that will further housing choice and increase self-sufficiency.



## 5. Revised Recertification Requirements Policy

### i. *Plan Year Approved, Implemented, Amended*

- **FY 2008:** Approved and implemented for LIPH
- **FY 2009:** Approved and Implemented for HCV
- No amendments since initial HUD-approval

### ii. *Description*

The HACP may operate both the LIPH and the HCV Programs with a recertification requirement modified to at least once every two (2) years. Changes in income still must be reported, and standard income disregards continue to apply. This policy change reduces administrative burdens on the Authority, thereby reducing costs and increasing efficiency. The HACP's objectives for this initiative are reduced staff time and thus reduced costs, and improved compliance with recertification requirements by tenants and the HACP.

### *Impact*

This initiative provides positive outcomes in accommodating the HACP's majority population of elderly and disabled persons in both programs, who often have fixed incomes from year to year. This policy alleviates some burden from the impediment of transportation and harsh climate in the City of Pittsburgh, particularly during the winter months when the elderly and disabled face additional burden when traveling.

### *Metrics*

<i>Cost Effectiveness</i>					
<b>Metric Name &amp; #</b>	<b>Unit of Measurement</b>	<b>Baseline</b>	<b>Benchmark</b>	<b>Outcome</b>	<b>Benchmark Achieved?</b>
<b>CE #1: Agency Cost Savings</b>	Total cost of task in dollars (decrease).	Cost of task prior to implementation of the activity (in dollars).  \$294,965 (HCV) \$208,942 (LIPH)	Expected cost of task after implementation of the activity (in dollars). \$246,698 (HCV) \$112,623 (LIPH)	Actual cost of task after implementation of the activity (in dollars). <b>\$193,926 (HCV)</b> <b>\$139,063 (LIPH)</b>	Whether the outcome meets or exceeds the benchmark. Yes for both
<b>CE #2: Staff Time Savings</b>	Total time to complete the task in staff hours (decrease).	Total amount of staff time dedicated to the task prior to implementation of the activity (in hours).  11,000 hours (HCV) 7,792 hours (LIPH)	Expected amount of total staff time dedicated to the task after implementation of the activity (in hours). 9,200 hours (HCV) 4,200 hours (LIPH)	Actual amount of total staff time dedicated to the task after implementation of the activity (in hours). <b>7,232 (HCV) – 2 hours per certification</b> <b>2,593 (LIPH) – 1 hour per certification</b>	Whether the outcome meets or exceeds the benchmark.  Yes for HCV Yes for LIPH

<b>HACP Metrics</b>					
<b>Metric Name</b>	<b>Unit of Measurement</b>	<b>Baseline</b>	<b>Benchmark</b>	<b>Outcome</b>	<b>Benchmark Achieved?</b>
<b>Number of Annual Recertifications</b>	Total number of annual recertifications (decrease).	Total annual recertifications prior to implementation of the activity (number) 2,698 (HCV) 2,587 (LIPH)	Expected annual recertifications after implementation of the activity (number) 2,650 (HCV) 1,200 (LIPH)	Actual annual recertifications conducted in the plan year (number)  <b>2,451 (HCV)</b> <b>1,714 (LIPH)</b>	Whether the outcome meets or exceeds the benchmark.  Yes for HCV No for LIPH
<b>Number of Interim Recertifications</b>	Total number of interim recertifications (decrease).	Total interim recertifications prior to implementation of the activity (number) 1,889 (HCV) 1,052 (LIPH)	Expected interim recertifications after implementation of the activity (number) 2,300 (HCV) 1,250 (LIPH)	Actual interim recertifications conducted in the plan year (number)  <b>1,165 (HCV)</b> <b>879 (LIPH)</b>	Whether the outcome meets or exceeds the benchmark.  Yes for both
<b>Total Recertifications</b>	Total number of recertifications (decrease)	Total recertifications prior to implementation of the activity (number) 4,596 (HCV) 3,639 (LIPH)	Expected recertifications after implementation of the activity (number) 4,950 (HCV) 2,450 (LIPH)	Actual recertifications conducted in the plan year (number)  <b>3,616 (HCV)</b> <b>2,593 (LIPH)</b>	Whether the outcome meets or exceeds the benchmark.  Yes for HCV No for LIPH
<b>Average Cost per Recertification</b>	Average cost per recertification	Average cost per recertification prior to implementation of the activity (dollar) \$53.63 (HCV & LIPH)	Average cost per recertification after implementation of the activity (dollar) \$53.63 (HCV & LIPH)	Actual average cost per recertification conducted in the plan year (dollar)  <b>\$53.63 (HCV &amp; LIPH)</b>	Whether the outcome meets or exceeds the benchmark.  Yes
<b>Total Estimated Costs</b>	Total estimated costs (decrease)	Total cost per recertification prior to implementation of the activity (dollar) \$246,487 (HCV) \$195,160 (LIPH)	Total cost per recertification after implementation of the activity (dollar) \$265,468 (HCV) \$131,393 (LIPH)	Actual total cost per recertification conducted in the plan year (dollar)  <b>\$193,926 (HCV)</b> <b>\$139,063 (LIPH)</b>	Whether the outcome meets or exceeds the benchmark.  Yes for HCV No for LIPH

### ***Comparison of Outcomes to Benchmarks***

As the purpose of this initiative was to reduce administrative burden and cost, the decreased number of interims from benchmark in both the HCV and LIPH programs would indicate that the goal of this policy is successful. The increase in cost was likely attributable to recertification schedule based on the anniversary date. Additionally, the LIPH program saw a delay in recertification completion due to the eviction moratorium. Furthermore, the HCV program has experienced an increase in lease-up in large part due to additional PBV vouchers coming online. Our program in general has continued to expand over the years as implementation of this activity resulted in additional certifications being needed. Also, recent HCV staff turnover affected the cost to perform a recertification. HCV staff wages are based on a sliding scale that increases with seniority. In the base year, HCV staff had been employed with the HACP on average for a minimum of 10 years as opposed to the FY 2021 HCV staff's approximate average of 1.5 years of employment. Therefore, the base year HCV staff earned more than the FY 2021 HCV staff due to seniority.

### ***Update***

This MTW activity was fully implemented in FY 2021 and is on schedule for FY 2022.

#### ***iii. Actual Non-Significant Changes***

The HACP did not make any non-significant changes to this activity during the fiscal year.

#### ***iv. Actual Changes to Metrics/Data Collection***

The HACP did not make any metrics/data collection changes to this activity during the fiscal year.

#### ***v. Actual Significant Changes***

The HACP did not make any significant changes to this activity during the fiscal year.

#### ***vi. Challenges in Achieving Benchmarks and Possible Strategies***

In 2021 the LIPH program continued to experience challenges related to Covid 19. Some residents were reluctant to recertify. The eviction moratorium limited the Agency's ability to enforce the recertification requirement. This situation caused some carry over in 2020 recertifications and delay in 2021 certifications. The HACP continues to work with our eviction prevention partners to help residents complete this requirement. This activity along with the lifting of the moratorium should improve our recertification efforts.

## 6. MTW Homeownership

### a. Operation of a Combined Public Housing and Housing Choice Voucher Homeownership Program

#### i. *Plan Year Approved, Implemented, Amended*

- **FY 2007:** Approved and implemented (operation of combined program)
- **FY 2009:** Other elements approved and implemented
- **FY 2014:** Expansion of eligibility to person eligible for LIPH
- **FY 2020:** Revised program manual

#### ii. *Description*

The HACP operates a single Homeownership Program open to both the LIPH and HCV Programs households. This approach reduces administrative costs, expands housing choices for participating households, and provides incentives for families to pursue employment and self-sufficiency through the diverse benefits offered. By combining the programs,' increased benefits are available to some families.

#### *Impact*

In 2021, the homeownership assisted 15 households purchase their first home. Of the 15 closings, 4 of the households were HCV participants prior to the closing. While no LIPH participants purchased homes in 2021, we anticipate greater participation in 2022.

#### *Metrics*

<i>Cost Effectiveness</i>					
<b>Metric Name &amp; #</b>	<b>Unit of Measurement</b>	<b>Baseline</b>	<b>Benchmark</b>	<b>Outcome</b>	<b>Benchmark Achieved?</b>
<b>CE #1: Agency Cost Savings</b>	Total cost of task in dollars (decrease).	Cost of task prior to implementation of the activity (in dollars). \$380.00 (\$19/hr.)	Expected cost of task after implementation of the activity (in dollars). \$764	Actual cost of task after implementation of the activity (in dollars). <b>\$764.00</b>	Whether the outcome meets or exceeds the benchmark. Yes
<b>CE #2: Staff Time Savings</b>	Total time to complete the task in staff hours (decrease).	Total amount of staff time dedicated to the task prior to implementation of the activity (in hours). 20	Expected amount of total staff time dedicated to the task after implementation of the activity (in hours). 30	Actual amount of total staff time dedicated to the task after implementation of the activity (in hours). <b>40</b>	Whether the outcome meets or exceeds the benchmark.  No

<b>CE #4: Increase in Resources Leveraged</b>	Amount of funds leveraged in dollars (increase).	Amount leveraged prior to implementation of the activity (in dollars). 0	Expected amount leveraged after implementation of the activity (in dollars). 0	Actual amount leveraged after implementation of the activity (in dollars). <b>0</b>	Whether the outcome meets or exceeds the benchmark. Yes
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<b>Housing Choice</b>					
<b>Metric Name &amp; #</b>	<b>Unit of Measurement</b>	<b>Baseline</b>	<b>Benchmark</b>	<b>Outcome</b>	<b>Benchmark Achieved?</b>
<b>HC #5: Increase in Resident Mobility</b>	Number of households able to move to a better unit and/or neighborhood of opportunity as a result of the activity (increase).	Households able to move to a better unit and/or neighborhood of opportunity prior to implementation of the activity (number).  0	Expected households able to move to a better unit and/or neighborhood of opportunity after implementation of the activity (number).  50	Actual increase in households able to move to a better unit and/or neighborhood of opportunity after implementation of the activity (number). <b>15 (4 HCV, 11 non-resident)</b>	Whether the outcome meets or exceeds the benchmark.  No
<b>HC #6: Increase In Homeownership Opportunities</b>	Number of households that purchased a home as a result of the activity (increase).	Number of households that purchased a home prior to implementation of the activity (number). 0	Expected number of households that purchased a home after implementation of the activity (number). 50	Actual number of households that purchased a home after implementation of the activity (number). <b>15 (4 HCV, 11 non-resident)</b>	Whether the outcome meets or exceeds the benchmark.  No
<b>HC #7: Households Assisted by Services that Increase Housing Choice</b>	Number of households receiving services aimed to increase housing choice (increase).	Households receiving this type of service prior to implementation of the activity (number).  0	Expected number of households receiving these services after implementation of the activity (number).  50	Actual number of households receiving these services after implementation of the activity (number). <b>15 (4 HCV, 11 non-resident)</b>	Whether the outcome meets or exceeds the benchmark.  No

<b>HACP Metrics</b>					
<b>Metric Name &amp; #</b>	<b>Unit of Measurement</b>	<b>Baseline</b>	<b>Benchmark</b>	<b>Outcome</b>	<b>Benchmark Achieved?</b>
<b>Closings / Purchase</b>	Number of closing/purchases as a result of the activity (increase).	Closings/purchases prior to implementation of the activity (number).  0	Expected closings/purchases after implementation of the activity (number). 30 (HCV) 20 (LIPH)	Actual closings/purchases (number).  <b>15 (4 HCV, 11 non-resident)</b>	Whether the outcome meets or exceeds the benchmark.  No

<b>Applicants Completing Course &amp; First Pre-approval</b>	Number of applicants completing course & first mortgage pre-approval (increase).	Applicants completing course & first mortgage pre-approval prior to implementation of the activity (number). 0	Expected applicants completing course & first mortgage pre-approval after implementation of the activity (number). 20 (HCV) 10 (LIPH)	Actual applicants completing course & first mortgage pre-approval after implementation of the activity (number). <b>15 (4 HCV, 11 non-resident)</b>	Whether the outcome meets or exceeds the benchmark.  No
<b>Total HACP Closing Funds</b>	Total dollar amount of HACP closing funds (increase)	HACP closing fund amount prior to implementation of the activity (in dollars) \$0	Expected HACP closing fund amount after to implementation of the activity (in dollars) \$210,000 (HCV) \$140,000 (LIPH)	Actual HACP closing fund amount (in dollars)  <b>\$100,302</b>	Whether the outcome meets or exceeds the benchmark. No
<b>Average HACP Second Mortgage Amount</b>	Total average HACP second mortgage dollar amount (increase)	Average HACP second mortgage amount prior to implementation of the activity (in dollars)  \$0	Expected average HACP second mortgage amount after to implementation of the activity (in dollars) \$25,750 (HCV) \$25,750 (LIPH)	Actual HACP second mortgage amount (in dollars)  <b>\$28,840</b>	Whether the outcome meets or exceeds the benchmark.  Yes
<b>Average Purchase Price</b>	Total average purchase price dollar amount (increase)	Average purchase price amount prior to implementation of the activity (in dollars) 0	Expected average purchase price after to implementation of the activity (in dollars)  \$165,000 (HCV) \$165,000 (LIPH)	Actual average purchase price amount (in dollars)  <b>\$134,053</b>	Whether the outcome meets or exceeds the benchmark.  No
<b>Amount of non-HACP Assistance</b>	Total amount of non-HACP assistance dollar amount (increase)	Total non-HACP assistance amount prior to implementation of the activity (in dollars) \$0	Expected non-HACP assistance after to implementation of the activity (in dollars)  \$115,500 (HCV) \$0 (LIPH) \$319,800 (Non-resident)	Actual non-HACP assistance amount (in dollars)  <b>\$164,889</b>	Whether the outcome meets or exceeds the benchmark.  No
<b>Foreclosures</b>	Total number of foreclosures (decrease)	Total foreclosures prior to implementation of the activity (number) 0	Expected foreclosures after to implementation of the activity (number)  0 (HCV) 0 (LIPH)	Actual foreclosures amount (number)  <b>0</b>	Whether the outcome meets or exceeds the benchmark. Yes

<b>Homebuyer Education Referrals</b>	Number of homebuyer education referrals (increase).	Homebuyer education referrals prior to implementation of the activity (number). 0	Expected homebuyer education referrals after implementation of the activity (number). 0 (HCV) 0 (LIPH)	Actual homebuyer education referrals (number).  <b>18 referrals</b>	Whether the outcome meets or exceeds the benchmark.  Yes
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### ***Comparison of Outcomes to Benchmarks***

The HACP homeownership program activity met some of its benchmarks during the Plan Year. The number of families assisted increased by 4 between the FY 2020 to the FY 2021 Plan Year. The total HACP closing funds, average purchase price, and amount of non-HACP assistance did not meet the benchmarks neither did the applicants completing the course and first pre-approval. It should be noted that the program was paused effective June 30, 2021 in order for the Agency to assess the efficiency of the program and to streamline program process. Had the program remained active throughout 2021, it is quite possible that the remaining benchmarks would have been met. Additionally, HACP has partnered with the Urban Redevelopment Authority and launched the OwnPGH pilot with allows for non HACP contribution of up to \$50,000.00 per purchase.

### ***Update***

The HACP homeownership program closed to new participants on June 30, 2021, which changed the activity's focus somewhat during the plan year. The purpose of the closure was to evaluate and update the program components. The plan is expected to relaunch in June 2022.

### ***iii. Actual Non-Significant Changes***

The HACP homeownership program closed on June 30, 2021 to evaluate and update the program components. The plan is expected to relaunch in June 2022.

The HACP added a full time Homeownership & Real Estate Opportunities Administrator. This position will work exclusively with eligible homebuyers.

### ***iv. Actual Changes to Metrics/Data Collection***

The HACP did not make any metrics/data collection changes to this activity during the fiscal year.

### ***v. Actual Significant Changes***

The HACP did not make any significant changes to this activity during the fiscal year.

**vi. *Challenges in Achieving Benchmarks and Possible Strategies***

The HACP focused on strengthening the homeownership program components in FY 2021 so that in future Plan Years, the program will be better equipped to meet the activity's benchmarks. It is anticipated that the goal of 50 homes will be achieved by utilizing the enhanced product as well as the OwnPGH product in future Plan Years. Additionally, HACP is committed to working more closely with eligible HCV and LIPH households to educate them regarding the program and the benefits of homeownership. The HACP is committed to working closely with the homeownership FSS team to ensure that participants have a full complement of resources to assist them in their home buying experience.



## 6. MTW Homeownership

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- b. Homeownership Assistance to include soft-second mortgage assistance coupled with closing cost assistance, homeownership and credit counseling, foreclosure prevention only; expand eligibility to persons on the LIPH and HCV program waiting list and person eligible; and establish a Homeownership Soft-Second mortgage waiting list
- 

*i. Plan Year Approved, Implemented, Amended*

- **FY 2010:** Other elements approved and implemented
- **FY 2014:** Expansion of eligibility to person eligible for LIPH
- **FY 2020:** Revised program manual

*ii. Description*

The provisions of the HACP homeownership program are as follows:

- a. Provide soft-second mortgage financing for home purchases to eligible participants, calculated as follows: eligible monthly rental assistance x 12 months x 10 years, but in no case shall exceed \$52,000. The second mortgage is forgiven on a prorated basis over a ten-year period.
- b. Expand Homeownership Program eligibility to include persons on the HACP's LIPH and HCV waiting lists who have received a letter of eligibility for those programs from the HACP or persons otherwise eligible but currently not on a wait list.
- c. Establish a Homeownership Waiting List to assist in determining the order of eligibility for second mortgage Homeownership benefits.

**Impact**

The HACP was successful in assisting 15 families purchase their first home within the City of Pittsburgh. The HACP's average contribution in the form of deferred second mortgage was \$28,840.00. The waiting list has proven effective in the areas of planning and follow up.

## Metrics

<i>Self-Sufficiency</i>					
<b>Metric Name &amp; #</b>	<b>Unit of Measurement</b>	<b>Baseline</b>	<b>Benchmark</b>	<b>Outcome</b>	<b>Benchmark Achieved?</b>
<b>SS #8: Households Transitioned to Self Sufficiency</b>	Number of households transitioned to self-sufficiency (increase).	Households transitioned to self-sufficiency (a household's ability to maintain financial, housing, and personal/family stability) prior to implementation of the activity (number). This number may be zero. 1	Expected households transitioned to self-sufficiency (a household's ability to maintain financial, housing, and personal/family stability) after implementation of the activity (number). 10	Actual households transitioned to self-sufficiency (a household's ability to maintain financial, housing, and personal/family stability) after implementation of the activity (number). 15	Whether the outcome meets or exceeds the benchmark.  Yes

<i>Housing Choice</i>					
<b>Metric Name &amp; #</b>	<b>Unit of Measurement</b>	<b>Baseline</b>	<b>Benchmark</b>	<b>Outcome</b>	<b>Benchmark Achieved?</b>
<b>HC #6: Increase in Homeownership Opportunities</b>	Number of households that purchased a home as a result of the activity (increase).	Number of households that purchased a home prior to implementation of the activity (number). This number may be zero. 0	Expected number of households that purchased a home after implementation of the activity (number). 50	Actual number of households that purchased a home after implementation of the activity (number). 15	Whether the outcome meets or exceeds the benchmark.  No
<b>HC #7: Households Assisted by Services that Increase Housing Choice</b>	Number of households receiving services aimed to increase housing choice (increase).	Households receiving this type of service prior to implementation of the activity (number). This number may be zero. 0	Expected number of households receiving these services after implementation of the activity (number). 50	Actual number of households receiving these services after implementation of the activity (number). 15	Whether the outcome meets or exceeds the benchmark.  No

### ***Comparison of Outcomes to Benchmarks***

The HACP did not meet the metrics for number of households served during the Plan Year. While the HACP did not meet the metrics in 2021, it is anticipated that they will be met in 2022. The HACP strategically paused the program in June, 2021 in order to assess and revise the plan and also took that opportunity to assess and revise all processes and protocols to ensure a more efficient, effective, and transparent program.

### ***Update***

While the homeownership program did not meet its expected outcomes, the preparatory work in 2021 for a 2022 relaunch puts the program on track to meet the goals set forth in the plan. It should be noted that the program assisted 15 families and was only active for six months of the year. The full time homeownership & Real Estate Opportunities Administrator joined the team in October 2021. In 2022, the program will open with a full team, a revised and enhanced plan that offers additional product to assist eligible home buyers. It is anticipated that the expected outcomes will be met in 2022.

#### ***iii. Actual Non-Significant Changes***

The HACP did not make any non-significant changes to this activity during the fiscal year.

#### ***iv. Actual Changes to Metrics/Data Collection***

The HACP did not make any metrics/data collection changes to this activity during the fiscal year.

#### ***v. Actual Significant Changes***

The HACP did not make any significant changes to this activity during the fiscal year.

#### ***vi. Challenges in Achieving Benchmarks and Possible Strategies***

The HACP focused on strengthening the home ownership program components in FY 2021 so that in future Plan Years, the program will be better equipped to meet the activity's benchmarks. It is anticipated that the goal of 50 homes will be achieved by utilizing the enhanced product as well as the OwnPGH product in future Plan Years.

## 7. Modified Housing Choice Voucher Program Policy on Maximum Percent of Adjusted Monthly Income Permitted

### i. *Plan Year Approved, Implemented, Amended*

- **FY 2001:** Approved and implemented
- No amendments since initial HUD-approval

### ii. *Description*

The HACP's operation of the HCV Program allows flexibility in the permitted rent burden (affordability) for new tenancies. Specifically, the limit of 40% of Adjusted Monthly Income allowed for the tenant portion of rent is used as a guideline, not a requirement. The HACP continues to counsel families on the dangers of becoming overly rent burdened, however, a higher rent burden may be acceptable in some cases. This policy increases housing choice for participating families by giving them the option to take on additional rent burden for units in more costly neighborhoods.

### *Impact*

Since its inception in 2001, this activity has allowed the HACP to serve hundreds of families who otherwise would have their Request for Tenancy Approval (RFTA) denied thus risking termination from the HCV program. FY 2021 was no different.

### *Metrics*

<i>Cost Effectiveness</i>					
<b>Metric Name &amp; #</b>	<b>Unit of Measurement</b>	<b>Baseline</b>	<b>Benchmark</b>	<b>Outcome</b>	<b>Benchmark Achieved?</b>
<b>HC #1: Additional Units of Housing Made Available</b>	Number of new housing units made available for households at or below 80% AMI as a result of the activity (increase).	Housing units of this type prior to implementation of the activity (number).  0	Expected housing units of this type after implementation of the activity (number).  60	Actual housing units of this type after implementation of the activity (number).  <b>182</b>	Whether the outcome meets or exceeds the benchmark.  Yes
<b>HC #5: Increase in Resident Mobility</b>	Number of households able to move to a better unit and/or neighborhood of opportunity as a result of the activity (increase).	Households able to move to a better unit and/or neighborhood of opportunity prior to implementation of the activity (number).  0	Expected households able to move to a better unit and/or neighborhood of opportunity after implementation of the activity (number).  60	Actual increase in households able to move to a better unit and/or neighborhood of opportunity after implementation of the activity (number).  <b>182</b>	Whether the outcome meets or exceeds the benchmark.  Yes

### ***Comparison of Outcomes to Benchmarks***

The HACP met and exceeded both of the metrics for the Plan Year.

### ***Update***

This MTW activity was fully implemented in FY 2021 and is on schedule for FY 2022.

#### ***iii. Actual Non-Significant Changes***

The HACP did not make any non-significant changes to this activity during the fiscal year.

#### ***iv. Actual Changes to Metrics/Data Collection***

The HACP did not make any metrics/data collection changes to this activity during the fiscal year.

#### ***v. Actual Significant Changes***

The HACP did not make any significant changes to this activity during the fiscal year.

#### ***vi. Challenges in Achieving Benchmarks and Possible Strategies***

As the City of Pittsburgh's economy continues to grow, housing costs continue to increase across the city. These increased cost burdens are making it increasingly difficult for HCV voucher holders to find housing that falls within the current payment standard and does not exceed the current allowable rent burden. The HACP is hoping that the FY 2022 changes to its payment standards will decrease the total number of rent burdened families significantly, as the HACP realizes that this policy sometimes puts the family at risk of losing their housing if they cannot afford to pay the higher rent. The HACP is planning to assess the number of rent-burdened families and possibly cap the allowable rent burden percentage in future MTW Plan submissions. However, the HACP recognizes the importance of this activity and plans to continue offering it to HCV families as applicable.

## 8. Modified HCV Payment Standard Approval

### i. *Plan Year Approved, Implemented, Amended*

- **FY 2004:** Approved and implemented
- **FY 2013:** Amended to include UFAS and project-based voucher units as eligible for the modified payment standard

### ii. *Description*

The HACP is authorized to establish Exception Payment Standards up to 120% of FMR (Fair Market Rent) without prior HUD approval. The HACP has utilized this authority to establish an Exception Payment Standard at 120% of FMR as a Reasonable Accommodation for a person with disabilities. Allowing the Authority to conduct its own analysis and establish Exception Payment Standards reduces administrative burdens on both the HACP and HUD (as no HUD submission and approval is required) while expanding housing choices for participating families.

In FY 2013, the HACP received approval for a modification to this activity allowing the HACP to establish an Exception Payment Standard of up to 120% of FMR for fully Accessible Units meeting the Requirements of the Uniform Federal Accessibility Standard (UFAS). This Exception Payment Standard can be used by tenants who require the features of a UFAS unit and locate such a unit on the open market; and may also be used by the HACP in the Project-Based Voucher Program or other rehabilitation or new construction initiatives that create additional fully accessible UFAS units.

### *Impact*

Due to lack of interest and despite increased HACP marketing activities, this activity did not have any impact on the HCV program during the Plan Year. In FY 2021, the HACP mailed a letter to every family that requested a reasonable accommodation to make them aware of this payment standard. However, despite the increased marketing efforts, the HACP has not received any requests for a higher payment standard to make the unit accessible.

### *Metrics*

<i>Housing Choice</i>					
Metric Name & #	Unit of Measurement	Baseline	Benchmark	Outcome	Benchmark Achieved?
HC #1: Additional Units of Housing Made Available	Number of new housing units made available for households at or below 80% AMI as a result of the activity (increase).	Housing units of this type prior to implementation of the activity (number).  0	Expected housing units of this type after implementation of the activity (number).  25	Actual housing units of this type after implementation of the activity (number).  0	Whether the outcome meets or exceeds the benchmark.  No

<b>HC #2: Units of Housing Preserved</b>	Number of housing units preserved for households at or below 80% AMI that would otherwise not be available (increase).	Housing units preserved prior to implementation of the activity (number). 0	Expected housing units preserved after implementation of the activity (number). 25	Actual housing units preserved after implementation of the activity (number). <b>0</b>	Whether the outcome meets or exceeds the benchmark. No
<b>HC #3: Decrease in Wait List Time</b>	Average applicant time on wait list in months (decrease).	Average applicant time on wait list prior to implementation of the activity (in months). 0	Expected average applicant time on wait list after implementation of the activity (in months). 25	Actual average applicant time on wait list after implementation of the activity (in months). <b>0</b>	Whether the outcome meets or exceeds the benchmark. No
<b>HC #4: Displacement Prevention</b>	Number of households at or below 80% AMI that would lose assistance or need to move (decrease).	Households losing assistance/moving prior to implementation of the activity (number). 0	Expected households losing assistance/moving after implementation of the activity (number). 25	Actual households losing assistance/moving after implementation of the activity (number). <b>0</b>	Whether the outcome meets or exceeds the benchmark. No
<b>HC #5: Increase in Resident Mobility</b>	Number of households able to move to a better unit and/or neighborhood of opportunity as a result of the activity (increase).	Households able to move to a better unit and/or neighborhood of opportunity prior to implementation of the activity (number). 0	Expected households able to move to a better unit and/or neighborhood of opportunity after implementation of the activity (number). 25	Actual increase in households able to move to a better unit and/or neighborhood of opportunity after implementation of the activity (number). <b>0</b>	Whether the outcome meets or exceeds the benchmark. No

<i>HACP Metrics</i>					
<b>Metric Name &amp; #</b>	<b>Unit of Measurement</b>	<b>Baseline</b>	<b>Benchmark</b>	<b>Outcome</b>	<b>Benchmark Achieved?</b>
<b>New Housing Units Made Available (New Construction)</b>	Number of new housing units made available for households at or below 80% AMI as a result of the activity (increase).	Housing units of this type prior to implementation of the activity (number). 0	Expected housing units of this type after implementation of the activity (number). 7	Actual housing units of this type after implementation of the activity (number). <b>0</b>	Whether the outcome meets or exceeds the benchmark. No

### ***Comparison of Outcomes to Benchmarks***

The HACP did not meet any of the MTW standard metrics listed above for this activity.

### ***Update***

With other MTW payment standards outpacing percentage of FMR allowable for reasonable accommodations and due to current rental market conditions, the HACP has decided to submit an amendment to the FY 2022 MTW Plan to include significant changes to this activity and will report on such changes in the FY 2022 Report.

#### ***iii. Actual Non-Significant Changes***

The HACP did not make any non-significant changes to this activity during the fiscal year.

#### ***iv. Actual Changes to Metrics/Data Collection***

The HACP did not make any metrics/data collection changes to this activity during the fiscal year.

#### ***v. Actual Significant Changes***

The HACP did not make any significant changes to this activity during the fiscal year.

#### ***vi. Challenges in Achieving Benchmarks and Possible Strategies***

None of the benchmarks were met due to the fact the City of Pittsburgh is comprised of mainly older housing stock, which often requires significant investment to bring units to Housing Quality Standards (HQS). The cost of rehabilitation in addition to UFAS requirements is too costly for landlords, even at the modified payment standard. The HACP intends to remedy this obstacle through revising the policies and procedures in the FY 2022 MTW Plan forthcoming amendment to re-determine the payment standard eligibility requirements, study the rental market to determine whether 120% of FMR is enough to sustain accessible unit construction and redevelopment by private landlords, and aggressively market changes to this payment standard option to landlords and the public.



## 9. Step Up to Market Financing Program – Use of Block Grant Funding Authority for Development, Redevelopment, and Modernization

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### *i. Plan Year Approved, Implemented, Amended*

- **FY 2012-2013:** Approved and implemented
- **FY 2017:** Amended to include additional features

### *ii. Description*

The HACP will expand its use of the Block Grant authority authorized in the MTW Agreement to leverage debt to fund public housing redevelopment and modernization and affordable housing development and preservation. The goal is to address additional distressed properties in the HACP's housing stock prior to the end of the current MTW agreement expiring in FY 2028 and increase the variety and quality of available affordable housing in the City of Pittsburgh. Specifically, the HACP will identify properties for participation in the Step Up To Market Program and subsequent other local, non-traditional development, redevelopment, and modernization strategies to include, Gap Financing and Project-Based Vouchers and RAD conversion. The HACP will utilize one (1) or more of the referenced strategies, subject to any required HUD approvals, to achieve its development, modernization, and redevelopment goals. This broad list of authorities, including but not limited to, the following, have been generally approved but must be specifically identified for each planned project in future submissions:

- a. Project-basing HACP units without competitive process.
- b. Determining a percentage of units that may be project-based at a development up to 100% of units and permitting the initiation of site work prior to execution of the Agreement to Enter Into a Housing Assistance Payments (AHAP) Contract.
- c. Project basing units at levels not to exceed 150% of the FMR as needed to ensure viability of identified redevelopment projects. Actual subsidy levels will be determined on a property-by-property basis and will be subject to a rent reasonableness evaluation for the selected site, and a subsidy layering review by HUD. When units are HACP-owned, the rent reasonableness evaluation will be conducted by an independent third party.
- d. Project basing certain RAD PBV units up to 110% of Small Area Fair Market Rent (SAFMR) if the owner proposes to set RAD rent at SAFMR unless the 110% of SAFMR exceeds RAD rent level allowed by HUD.
- e. Project basing certain units up to 110% of Small Area Fair Market Rent (SAFMR) if the units are located in a mixed-finance development that is owned wholly or partially by HACP, ARMDC or their subsidiaries.
- f. Extending eligibility for project-based units to families with incomes up to 80% of AMI.

- g. Establishing criteria for expending funds for physical improvements on PBV units that differ from the requirements currently mandated in the 1937 Act and implementing regulations. Any such alternate criteria will be included in an MTW Plan or Amendment submission for approval prior to implementation.
- h. Establishing income targeting goals for the project-based voucher program, and/or for specific project-based voucher developments, which have a goal of promoting a broad range of incomes in project based developments.
- i. Other actions as determined to be necessary to fund development and/or modernization subject to any required HUD approvals, including, but not limited to, combining financial investments permitted under Section 9 of the Act with PBV Assistance permitted under Section 8 of the act, as identified in this section. The HACP will follow HUD protocol and submit mixed- finance development proposals to HUD for review and approval.
- j. Acquisition of property without prior HUD approval as needed to take advantage of opportunities as they arise, with specific focus on parcels needed for site assembly for redevelopment and development projects. The HACP will ensure that all HUD site acquisition requirements are met.

#### **Specific Strategies and Properties:**

The HACP and its partners have identified the following strategies that will leverage Low-income Housing Tax Credits (LIHTC) and capital contributions by the HACP in order to complete the financing necessary for:

- Addison Terrace Redevelopment Phases I, II, III, and IV
- Allegheny Dwellings Redevelopment Phase I and subsequent phases
- Larimer/ East Liberty Redevelopment Phase I, III, and IV
- Bedford Dwellings Redevelopment Phase I and subsequent phases
- Oak Hill Phase II
- Manchester Redevelopment
- Scattered Site preservation or conversion project
- Northview Heights High-Rise Replacement
- City's Edge mixed-income/mixed-use development
- Projects identified through the Project-Based Voucher Plus Gap Financing competitive selection process

1. Project-basing the HACP units without competitive process (As authorized under Attachment C. Section B. Part 1. b. vi. and Part 1. c.; Attachment C. Section D. 7. a.. authorizing the HACP “to project-base Housing Choice Voucher assistance at properties owned directly or indirectly by the agency that are not public housing, subject to HUD’s requirement regarding subsidy layering.”).
2. Determining a percentage of units that may be project based at a development, up to 100% of units and permitting the initiation of site work prior to execution of the Agreement to Enter into a Housing Assistance Payments (AHAP) Contract. (As authorized under Attachment C. Section B. Part 1. b. vi. (authorizing the provision of HCV assistance or project-based assistance alone or in conjunction with other private or public sources of assistance) and vii. (authorizing the use of MTW funds for the development of new units for people of low- income) and Part 1. c. (authorizing these activities to be carried out by the Agency, of by an entity, agent, instrumentality of the agency or a partnership, grantee, contractor or other appropriate party or entity); Attachment C. Section D. 7. c. (authorizing the agency to adopt a reasonable policy for project basing Housing Choice Voucher assistance) and Attachment D. Section D. 1.c. (authorizing the HACP to determine property eligibility criteria).
3. Extending Eligibility for project-based units to families with incomes up to 80% of AMI. (As authorized under Attachment C. Section B. Part 1. b. vi. and Part 1. c.; Attachment C. Section D. 7. (authorizing the agency to establish a project-based voucher program) and Attachment D. Section D. 1. a. (authorizing the agency to determine reasonable contract rents.).
4. Acquisition of property without prior HUD approval in order to complete site assembly for these projects. As authorized under Attachment C. Section C. 13. (authorizing the acquisition of sites without prior HUD approval). Site work for acquired properties will begin upon completion of environmental review and/or any required development approvals when necessary.
5. Combining PBV Commitments with (LIHTC) and/or HACP Capital Investments and/or other financial resources to support the development, rehabilitation, or preservation of affordable housing units, as authorized under Attachment C., Section B. 1. b. (authorizing the use of MTW funds for any eligible activity under Section 9(d)(1), 9(e)(1) and Section 8(0) of the 1937 Act), and Attachment D. Section B. 1. (authorizing the acquisition, new construction, reconstruction or moderate or substantial rehabilitation of housing which may include financing and other related activities.)

The HACP will submit a full development proposal, including Rental Term Sheet, Pro Formas, Sources and Uses, schedules, and other detailed project information or local Non-traditional activity proposals as required based on each project's financing to HUD's Office of Public Housing Investments or other HUD office as directed for approval as part of the mixed finance approval process as per HUD's protocol, and will ensure completion of a subsidy layering review as required.

**Local Non-Traditional Development: Development, rehabilitation, and/or preservation through Project-Based Vouchers plus Gap Financing (PBV/Gap Financing)**

In response to the growing demand for affordable housing, the HACP developed the PBV/Gap financing tool. Using this financing tool, the HACP, through its instrumentality ARMDC, can provide gap funding (soft or hard debts) attached to PBV units. Funds are awarded through a competitive request for proposal process among developers/owners committed to the creation of additional affordable units within the city. In FY 2021, the HACP will continue to work with previous year's PBV/Gap Financing awardees and will issue Request for Proposals (RFPs) subject to budget availability. This initiative combines authorizations permitted under Section 8 PBV and Section 9 (capital investments). The investment will spur the development, rehabilitation, or preservation of high-quality affordable housing units by leveraging a spectrum of public and private investments. This approach maximizes the impact of existing available resources, incentivizes leveraging of other public and private financial resources, and supports the completion of projects at a lower cost to the HACP than is possible through other mixed-finance strategies employed by the HACP/ARMDC's co-developers or ARMDC's self-development team. Collaborating with various development teams and project owners, the PBV/Gap Financing program will support more housing choices throughout the city.

With the submittal of the FY 2019 MTW Annual Plan, the HACP made one (1) non-significant change to this section, adding the specific provision "permitting the initiation of site work prior to Execution of the Agreement to Enter Into a Housing Assistance Payments (AHAP) Contract" into the description of this initiative, and into the specific authorizations section, in conjunction with the authorization to project base up to 100% of the units in a development. This change assisted with streamlining the processes and expediting completion of replacement developments.

### ***Impact***

This policy has allowed the redevelopment of obsolete properties resulting in improved living conditions and quality of life for residents, preservation and development of mixed-income and affordable housing, innovative/local non-traditional development projects, increases in leveraged resources, improvement and investment in surrounding neighborhoods, reduced crime in redeveloped properties, and increased housing choice for assisted families. For the 2021 activities, please refer to the development updates chart in Section 1.B.1 of the Report.

### ***Metrics***

<b><i>Housing Choice</i></b>					
<b>Metric Name &amp; #</b>	<b>Unit of Measurement</b>	<b>Baseline</b>	<b>Benchmark</b>	<b>Outcome</b>	<b>Benchmark Achieved?</b>
<b>HC #1: Additional Units of Housing Made Available</b>	Number of new housing units made available for households at or below 80% AMI as a result of the activity (increase).	Housing units of this type prior to implementation of the activity (number).  0	Expected housing units of this type after implementation of the activity (number).  100	Actual housing units of this type after implementation of the activity (number).  <b>54 (Lemington Senior Housing)</b>	Whether the outcome meets or exceeds the benchmark.  No
<b>HC #5: Increase in Resident Mobility</b>	Number of households able to move to a better unit and/or neighborhood of opportunity as a result of the activity (increase).	Households able to move to a better unit and/or neighborhood of opportunity prior to implementation of the activity (number).  0	Expected households able to move to a better unit and/or neighborhood of opportunity after implementation of the activity (number).  100	Actual increase in households able to move to a better unit and/or neighborhood of opportunity after implementation of the activity (number).  <b>54 (Lemington Senior Housing)</b>	Whether the outcome meets or exceeds the benchmark.  No
<b>HC #6: Increase in Homeownership Opportunities</b>	Number of households that purchased a home as a result of the activity (increase).	Number of households that purchased a home prior to implementation of the activity (number). 0  0	Expected number of households that purchased a home after implementation of the activity (number).  10	Actual number of households that purchased a home after implementation of the activity (number).  <b>15</b>	Whether the outcome meets or exceeds the benchmark.  Yes

### ***Comparison of Outcomes to Benchmarks***

The HACP did not meet the HC #1 and HC #5 metrics listed above for this activity. Four (4) affordable housing development projects were anticipated to be completed. Lemington Senior Housing (54 PBV units) were completed in 2021. Two (2) of them (i.e., New Granada Apartment (40 affordable units) and North Negley Residences (45 affordable units)) delayed their financial closing due to construction cost increase, but started construction in summer 2021 and will complete the construction by 2022. Larimer/East Liberty Phase 5 (3 affordable units) could not achieve initial financial closing in 2021 due to construction cost increase, but achieved the financial closing in March 2022.

### ***Update***

Some activities for this policy that were planned to reach certain milestones in FY 2021 were delayed due to construction cost increases as described above and at item VI below. FY 2021 activities were met with unprecedented challenges due to impacts associated with the pandemic. This affected the ability to make additional housing available and increase resident mobility. Regarding homeownership, the activities for FY 2021 did not include homeownership opportunities associated with the “Step Up to Market” Financing Program.

#### ***iii. Actual Non-Significant Changes***

The HACP did not make any non-significant changes to this activity during the fiscal year.

#### ***iv. Actual Changes to Metrics/Data Collection***

The HACP did not make any metrics/data collection changes to this activity during the fiscal year.

#### ***v. Actual Significant Changes***

The HACP did not make any significant changes to this activity during the fiscal year.

#### ***vi. Challenges in Achieving Benchmarks and Possible Strategies***

The challenges in achieving benchmarks during the Plan Year were as follows:

- Larimer/East Liberty Phase IV: Under construction. (Construction started in 2021 and will complete in 2022). This project could not achieve initial financial closing earlier due to construction cost increase.
- Bedford Redevelopment Phase I: This project could not achieve initial financial closing earlier due to site control and a new redevelopment strategy in pursuit of a 2022 Choice Neighborhoods Implementation Grant initiative.

- City's Edge: This project is still in the predevelopment phase. It has not achieved initial financial due to lack of construction gap financing. HACP and its co-developer are in process of closing the gap in 2022.
- New Granada Square: Under construction. (Construction started in 2021 and will complete in 2022). This project could not achieve initial financial closing earlier due to construction cost increase.
- North Negley: Under construction. (Construction started in 2021 and will complete in 2022). This project could not achieve initial financial closing earlier due to construction cost increase.

Future benchmarks will be met with modifications to projections, plans, and schedules as necessary to meet the needs of the activities within the pandemic climate. This may result in time extensions, cost adjustments as necessary, which will affect making units available at the quantities that may be projected in the plans.

## 10. Local Payment Standard – Housing Choice Voucher Program

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### *i. Plan Year Approved, Implemented, Amended*

- **FY 2019:** Approved and implemented
- No amendments since initial HUD-approval

### *ii. Description*

The HACP seeks to increase housing choice and encourage voucher participants to expand their housing search, particularly in neighborhoods with low levels of poverty. Recognizing that using a single city-wide voucher payment standard stimulated voucher holders to reside in low-cost, high-poverty neighborhoods, the HACP devised a robust and comprehensive method for establishing voucher payment standards and rent reasonableness determinations. The goals of this activity are to:

1. Expand housing choices by providing access to more neighborhoods;
2. Create additional units from previously sub-standard properties and improve the quality of existing units;
3. Decrease concentration of voucher usage in prevalent poverty areas.

In response to the current housing climate and the low voucher utilization rate, the HACP has received HUD-approval for two (2) alternative payment standards to replace the HUD SAFMR requirement. Both alternative payment standards exceed the program-wide baseline payment standard of 110% FMR and will give families access to more housing choice. All units in the HACP's jurisdiction will utilize the baseline payment standard of 110% of FMR unless approved for one of the alternative payment standard options cited in this activity.

### Rehabilitation Voucher Payment Standard

The goal of this option is to incentivize landlords to rehabilitate substandard units that otherwise would not be able to be on the HCV program thereby increasing the affordable housing stock. Units in this payment option can receive up to 130 percent of Metropolitan Statistical Area Fair Market Rent (MSAFMR). This payment option is neither indefinite nor for one (1) time use but rather remains available to the landlord should the approved unit change voucher holders.



## Eligibility Requirements

The Rehabilitation Voucher Payment Standard will be available to all current voucher holders or new admissions to the Housing Choice Voucher (HCV) program. Participants that are elderly, disabled or currently employed and possess a minimum of six (6) months of employment will receive preference for this option. However, this preference only applies to persons on the HCV wait list and not current voucher holders. If a participant is unemployed or becomes unemployed during their tenancy under this option they are immediately required to enroll in the Family Self Sufficiency (FSS) program.

For a unit to qualify for this option the property must meet at least one (1) of the following criteria:

- i. Undergo significant upgrades and/or investments that improve the quality of the unit. These include but are not limited to complete electrical, plumbing HVAC installation, roof replacement, and building envelope resurfacing. Green or energy efficient infrastructure is encouraged but at this time will not qualify as an approved investment due to lack of capacity. This will be assessed based upon the following standards:
  - a. System upgrades, and/or
  - b. Rehabilitation of previously substandard units, and/or
  - c. Renovation (investments of \$ 6,000 or more per unit for labor and/or materials)
- ii. The unit passes the International Property Maintenance Code inspection standard.
- iii. Units built to be affordable under any Inclusionary Zoning (IZ) policy determined by the Department of City Planning. The City of Pittsburgh's Inclusionary Zoning (IZ) policy is a tool to incentivize and encourage developers to build new affordable housing in neighborhoods that have priced out low-income renters. The current IZ policy is only applicable to the Lawrenceville neighborhood which has seen rapid increases in market unit prices.

**Note:** Low-income Housing Tax Credit (LIHTC) units are ineligible for this payment standard during the initial fifteen (15) year affordability period. Following the initial affordability period units in LIHTC developments qualify for the rehabilitation payment standard if they meet the eligibility requirements. Substantial rehabilitation or modernization under \$6,000 may be eligible for this standard dependent upon review, on a case-by-case basis.

## Owner Documentation & Verification Requirements

The type and nature of the upgrades and/or investments will constitute the specific types of documentation that the HACP will require to determine if the unit qualifies for the rehabilitation payment standard. However, the HACP will generally require the following:

- i. The owner/landlord will submit copies of all construction and/or rehabilitation invoices, plans, etc. to the HACP Landlord Outreach and Support Coordinator or Inspections Department with the Request for Tenancy Approval (RFTA).
- ii. The proper inspection type/verification must be requested at the same time by the owner/landlord to include:
  - a. International Property Maintenance Code inspection
  - b. Request for the HACP to review with the Department of City Planning to confirm eligibility of any units built to be affordable under any inclusionary zoning policy
- iii. The HACP or designated third party will then verify the completed work and deem the property owner eligible to receive the rehabilitation payment standard.

## Mobility (Location-Based) Payment Standard

The Mobility (Location-Based) Payment Standard will provide opportunities for low-income families to live in areas with lower concentrations of poverty. Using a combination of zip code and neighborhood level data, including areas of low voucher use, to define the selected areas, the HACP identified the city neighborhoods listed below as eligible for the Mobility Voucher Payment Standard; the payment standard for this option is 130 percent of the average of the designated mobility zone Small Area Fair Market Rent (SAFMR) for the zip codes associated with the identified areas.

Neighborhood	Zip Codes
Shadyside	15206, 15213, 15232
Lower Lawrenceville	15201, 15213, 15224
Strip District	15201
Southside Flats	15203
Downtown	15219, 15222
Squirrel Hill	15213, 15217, 15232

**Note:** Low-income Housing Tax Credit (LIHTC) units are ineligible for this payment standard during the initial fifteen (15) year affordability period. Following the initial affordability period units in LIHTC developments qualify for the Mobility unit payment option if they meet the eligibility requirements.

## Eligibility Requirements

The Mobility Voucher Payment Standard will be available to all current voucher holders and new admissions to the Housing Choice Voucher (HCV) program. Participants that are elderly, disabled or currently employed and possess a minimum of six (6) months of employment will receive preference for this option. However, this preference only applies to persons on the HCV wait list and not current voucher holders. If a participant is unemployed or becomes unemployed during their tenancy under this option they are immediately required to enroll in the Family Self-Sufficiency (FSS) program.

The HACP is also exploring options to develop a tenant training course to better prepare voucher holders. The course will cover such topics as budgeting, understanding the lease agreement, utilities, maintaining a safe and healthy home, and how to communicate with your landlord and neighbors. Participants seeking to utilize the Mobility Voucher Payment Standards will be required to complete the tenant training course.

- i. Rent Reasonableness: The HACP has developed a scorecard that will consider factors that enhance the quality of life and safety of the household. The resulting score will be used to more accurately reflect the quality of unit and incentivizes landlords by rewarding higher rent adjustments based on unit ratings.
- ii. In addition to the HACP's current process, the score card will include the following subcategories:
  - a. Location based factors: access to transit, food options, business districts green spaces, educational centers, environmental factors, and employment
  - b. Safety features: buzzed entry/secure entrances, surveillance, and guards
  - c. Amenities: recreational centers, gyms, parking, business centers, Wi-Fi access, air conditioning, garage, a front or back yard investments / substantial rehabilitation or modernization

## ***Impact***

This activity had both landlords and tenants confused and frustrated during the Plan Year, especially the Mobility Payment Standards. There was a learning curve for HCV staff to implement the Mobility Payment Standards, which made some units disapproved through the affordability process for those families with zero income. Once this issue was identified and fixed, the owners still were confused about the opportunity zone criteria. Coupling this with the selection of the HACP (along with Allegheny County Housing Authority) to participate in the HUD Community Choice Demonstration, the HACP agreed to eliminate the Mobility Payment Standards in FY 2022 to align with the Demonstration and replace them with an easier, all-encompassing general payment standard with opportunity zones selected through census tract data analysis.

The Rehabilitation Payment Standards' implementation policies were solidified and the HACP marketed the Rehabilitation Payment Standards during the Plan Year. The results were that the HACP did receive and approve eight (8) requests for this payment standard.

### **Metrics**

<b><i>Housing Choice</i></b>					
<b>Metric Name &amp; #</b>	<b>Unit of Measurement</b>	<b>Baseline</b>	<b>Benchmark</b>	<b>Outcome</b>	<b>Benchmark Achieved?</b>
<b>HC #2: Units of Housing Preserved</b>	Number of housing units preserved for households at or below 80% AMI that would otherwise not be available (increase).	Housing units preserved prior to implementation of the activity (number). 0	Expected housing units preserved after implementation of the activity (number). 250	Actual housing units preserved after implementation of the activity (number). <b>86</b>	Whether the outcome meets or exceeds the benchmark.  No
<b>HC #5: Increase in Resident Mobility</b>	Number of households able to move to a better unit and/or neighborhood of opportunity as a result of the activity (increase).	Households able to move to a better unit and/or neighborhood of opportunity prior to implementation of the activity (number). 0	Expected households able to move to a better unit and/or neighborhood of opportunity after implementation of the activity (number). 250	Actual increase in households able to move to a better unit and/or neighborhood of opportunity after implementation of the activity (number). <b>86</b>	Whether the outcome meets or exceeds the benchmark.  No

<b><i>Self Sufficiency</i></b>					
<b>Metric Name &amp; #</b>	<b>Unit of Measurement</b>	<b>Baseline</b>	<b>Benchmark</b>	<b>Outcome</b>	<b>Benchmark Achieved?</b>
<b>SS #5: Households Assisted by Services that Increase Self Sufficiency</b>	Number of households receiving services aimed to increase self-sufficiency (increase).	Households receiving self-sufficiency services prior to implementation of the activity (number). 0	Expected number of households receiving self-sufficiency services after implementation of the activity (number). 250	Actual number of households receiving self-sufficiency services after implementation of the activity (number). <b>1</b>	Whether the outcome meets or exceeds the benchmark.  No

<i>HACP Specific Metrics</i>					
Metric Name	Unit of Measurement	Baseline	Benchmark	Outcome	Benchmark Achieved?
<b>New landlords attracted to HCV program</b>	Number of new landlords leasing units to HCV participants. That would otherwise not be available (increase).	Total number of new landlords prior to implementation of the activity (number).  0	Expected number of new landlords after implementation of the activity (number).  93	Actual number of new landlords enrolled after implementation of the activity  6	Whether the outcome meets or exceeds the benchmark.  No

### ***Comparison of Outcomes to Benchmarks***

The HACP did not meet any of the benchmark metrics for this activity. However, the number of units made available and preserved increased significantly from FY 2020 to FY 2021, which was mostly due to the HACP's Landlord Support and Coordinator staff's dedication to find new landlords and new unit/developments that qualify for these payment standards.

### ***Update***

This activity is not on schedule as originally anticipated and due to its ineffectivity, the HACP is removing the Mobility Payment Standard altogether in a forthcoming amendment to the FY 2022 MTW Plan.

### ***iii. Actual Non-Significant Changes***

The HACP did not make any non-significant changes to this activity during the fiscal year.

### ***iv. Actual Changes to Metrics/Data Collection***

The HACP did not make any metrics/data collection changes to this activity during the fiscal year.

### ***v. Actual Significant Changes***

The HACP did not make any significant changes to this activity during the fiscal year.

**vi. *Challenges in Achieving Benchmarks and Possible Strategies***

The HACP did not achieve any benchmarks during the Plan Year due to several factors including a lack of marketing and advertising, implementation hurdles, landlords with units located in low poverty neighborhoods screening requirements, landlords' preference to rent to market rate tenants when available, and the increase in housing cost particularly in low poverty neighborhoods that exceed even the higher mobility payment standards. Families in the HCV program either didn't know about the mobility payment standards, knew but didn't qualify under the landlord's screen requirements, and/or encountered difficulties finding landlords who were willing to participate in the HCV program in the designated zip codes. In FY 2021, the HACP and Allegheny County Housing Authority (ACHA) was one (1) of the nine (9) sites nationwide chosen to participate in the HUD Community Choice Demonstration. As a result of this activity and partnership with the Allegheny County Department of Human Services (DHS) and ACHA, the HACP had the unique opportunity to study the American Community Survey (ACS) rental data over the course of two (2) years and formulate new payment standards altogether. The new, tiered payment standard methodology will include opportunity zones eliminating the need for an additional payment standard targeted for mobility efforts. Changes to the payment standards are forthcoming and will be submitted to the MTW Office through an amendment to the FY 2022 MTW Plan.

The Rehabilitation Payment Standards will also change to complement the new, tiered payment standards. The eligibility criteria will remain the same for the Rehabilitation Payment Standards. The changes in methodology, additional of Demonstration's mobility-related services offered, and additional marketing efforts are aimed to increase this activity's outcomes for the FY 2022 Annual Report.

## B. Not Yet Implemented Activities

The HACP does not currently have any approved, non-in implementation activities.

## C. On-Hold Activities

The HACP does not currently have any approved MTW activities On-Hold.

## D. Closed Out Activities

Since entering the Moving To Work Program in 2000, the HACP has also instituted several Moving To Work initiatives that in FY 2021 still no longer require specific Moving To Work (MTW) Authority. Some of those initiatives are:

### 1. Establishment of Site-Based Waiting Lists

#### i. Plan Year Approved, Implemented and Closed Out

- *Approved and implemented before Standard Agreement was executed*
- **FY 2006:** Closed out

#### ii. Close-Out Explanation

This activity was closed out prior to execution of the Standard Agreement, as MTW authority was no longer required for this activity.

### 2. Establishment of a Variety of Local Waiting List Preferences, including a working/elderly/disabled preference and a special working preference for scattered site units

#### i. Plan Year Approved, Implemented and Closed Out

- *Approved and implemented before Standard Agreement was executed*
- **FY 2008:** Closed out

#### ii. Close-Out Explanation

This activity was closed out prior to execution of the Standard Agreement, as MTW authority was no longer required for this activity.

### 3. Modified Rent Reasonableness Process

#### i. Plan Year Approved, Implemented and Closed Out

- *Approved and implemented before Standard Agreement was executed*
- **FY 2008:** Closed out

ii. Close-Out Explanation

This activity was closed out prior to execution of the Standard Agreement, as MTW authority was no longer required for this activity.

4. **Transition to Site-Based Management and Asset Management, including Site-Based Budgeting and Accounting**

i. **Plan Year Approved, Implemented and Closed Out**

- *Approved and implemented before Standard Agreement was executed*
- **FY 2005:** *Closed out*

ii. Close-Out Explanation

This activity was closed out prior to execution of the Standard Agreement, as MTW authority was no longer required for this activity.



## E. Other Activities

Several activities that utilized MTW Authority but are not specified as specific initiatives waiving specific regulations were previously included in the initiative section but no longer require that separate listing. They are as follows:

**1. Use of Block Grant Funding Authority to Support MTW Initiatives** - Use of Block Grant Funding Authority to support Development and Redevelopment, Enhanced and Expanded Family Self-sufficiency and related programming, and the HACP MTW Homeownership Program.

- a. Originally approved with the initial MTW Program and expanded to include homeownership and resident service programs in subsequent years, the HACP continues to use MTW block grant funding to support its MTW Initiatives. Additional information on the use of Single Fund block grant authority is included in other sections of this MTW Plan, particularly Section V on Sources and Uses of funds.

**2. Energy Performance Contracting**

- a. Under the HACP's MTW Agreement, the HACP may enter into Energy Performance Contracts (EPC) without prior HUD approval. The HACP will continue its current EPC, executed in 2008, to reduce costs and improve the efficient use of federal funds.
- b. The HACP's current EPC included installation of water saving measures across the authority, installation of more energy efficient lighting throughout the authority, and installation of geo-thermal heating and cooling systems at select communities. It was completed in 2010, with final payments made in 2011. Monitoring and Verification work began in 2011, with the first full Monitoring and Verification report completed for the 2012 year. The HACP's objectives include realizing substantial energy cost savings. The HACP reports on the EPC in the MTW Annual Report. (Please see all applicable documentation in the Appendix to include the Honeywell Report.)

**3. Establishment of a Local Asset Management Program**

- a. In 2004, prior to HUD's adoption of a site-based asset management approach to public housing operation and management, the HACP embarked on a strategy to transition its centralized management to more decentralized site-based management capable of using an asset management approach. During the HACP's implementation, HUD adopted similar policies and requirements for all Housing Authorities. Specific elements of the HACP's Local Asset Management Program were approved in 2010, as described in the Appendix, Local Asset Management Program. The HACP will continue to develop and refine its Local Asset Management Program to reduce costs and increase effectiveness.

#### **4. Acquisition of Property and Build-Out to be Utilized for Administrative Offices**

- a. The HACP along with its partners, the City of Pittsburgh, and the Urban Redevelopment Authority (URA), jointly purchased new office space located at 412 Boulevard of the Allies on September 20, 2018. The HACP intended to commence building-out the office space and relocation during FY 2021. However, actual construction began in January of 2022 for which then the relocation schedule was updated to occur thereafter (4th quarter 2022 – 1st quarter 2023). The HACP plans to submit an application for disposition for its current offices in the John P. Robin Civic Building in FY 2022 instead of the previously planned submission in FY 2021.

## V. PLANNED APPLICATION OF MTW FUNDS

### A. FINANCIAL REPORTING

**i. Available MTW Funds in the Plan Year**

The MTW PHA shall submit unaudited and audited information in the prescribed Financial Data Schedule (FDS) format through the Financial Assessment System – PHA (FASPHA), or its successor system.

**ii. Expenditures of MTW Funds in the Plan Year**

The MTW PHA shall submit unaudited and audited information in the prescribed FDS format through the FASPHA, or its successor system.

**iii. Describe Application of MTW Funding Flexibility**

The MTW PHA shall provide a thorough narrative of actual activities that use only the MTW funding flexibility. Where possible, the MTW PHA may provide metrics to track the outcomes of these programs and/or activities. Activities that use other MTW authorizations in Attachment C and/or D of the Standard MTW Agreement (or analogous section in a successor MTW Agreement) do not need to be described here, as they are already found in Section (IV) of the Annual MTW Report. The MTW PHA shall also provide a thorough description of how it used MTW funding flexibility to direct funding towards specific housing and/or service programs and/or other MTW activity, as included in an approved MTW Plan.

#### APPLICATION OF “MTW FUNDING” FLEXIBILITY

The HACP budgeted its single fund flexibility from the HCV and LIPH programs to support the Authority's Moving to Work (MTW) initiatives and other activities. This included budgeting \$12,100,822 towards development, \$6,664,161 for Security, \$2,877,476 for Resident Services and \$18,763,264 towards Modernization. During 2021, the HACP used \$12,421,995 from MTW HCV and LIPH. MTW funds were used to support Protective Services (\$4,958,572), Resident Services (2,801,988), LIPH Modernization (\$2,060,032), and the new office space at 412 Blvd. of the Allies (\$2,498,204).

### B. LOCAL ASSET MANAGEMENT PLAN

**i. Did the MTW PHA allocate costs within statute in the Plan Year?**

No

**ii. Did the MTW PHA implement a local asset management plan (LAMP) in the Plan Year?**

Yes

**iii. Did the MTW PHA provide a LAMP in the appendix?**

Yes

**iv. If the MTW PHA has provided a LAMP in the appendix, please provide a brief update on implementation of the LAMP. Please provide any actual changes (which must be detailed in an approved Annual MTW Plan/Plan amendment) or state that the MTW PHA did not make any changes in the Plan Year.**

The HACP does not plan to make any changes in the Plan Year

## VI. ADMINISTRATIVE

### A. REVIEWS, AUDITS, AND INSPECTIONS

- a. Description of any HUD reviews, audits, or physical inspection issues that require action to address the issue.
  - i. The HACP takes appropriate action on any REAC identified Physical Condition issues.
  - ii. The HACP had no other HUD reviews or audits requiring action by HACP at the end of 2021.
- b. Results of PHA-directed evaluations of the demonstration.
  - i. In 2018, the HACP secured the University of Pittsburgh to conduct an evaluation of the effects of the Family Self-Sufficiency Program on the rent reform policy and an Alternative Payment Standard methodology. Using administrative data from January 2010 to October 2017, the first analysis examined the impact of the rent reform policy on individuals who were enrolled in and moved to the Family Self-Sufficiency (FSS) program and the extent to which the rent reform policy achieved its two (2) stated objectives. For the second analysis and in preparation for complying with the Small Area Fair Market Rent (SAFMR) rule, the HACP asked the University Center for Social and Urban Research (UCSUR) to examine geographic patterns in rental market data in Pittsburgh, PA. The entire 2018 evaluation is included in Appendix IV.
- c. Certification that the HACP has met the statutory requirements of the MTW Demonstration.
  - i. The HACP hereby certifies that it has met the three (3) MTW statutory requirements in the Plan Year of FY 2021 by: (1) ensuring that at least 75% of households assisted by the MTW PHA are very low-income, (2) continuing to assist substantially the same total number of households as would have been assisted had the MTW PHA not participated in the MTW demonstration, and (3) maintaining a comparable mix of households (by family size) served as would have been served had the HACP not participated in the MTW demonstration.

### B. EVALUATION RESULTS

- a. The University of Pittsburgh performed a FSS Rent Reform & Alternative Payment Standard study in 2018 as mentioned in VI.A and Appendix IV. As a result of the SAFMR rule, the HACP developed and implemented the HUD-approved MTW activity #10 – Local Payment Standards during the FY 2019 Plan Year. A comprehensive evaluation has not been conducted since the implementation. The HACP will contact the University of Pittsburgh to request a more comprehensive study to cover the updated components of this MTW activity and submit it upon completion in a future MTW Report.

## C. MTW STATUTORY REQUIREMENT CERTIFICATION



### Moving to Work (MTW)

#### STATUTORY REQUIREMENT CERTIFICATION

(SUBMITTED WITH THE FY 2021 MTW REPORT)

**MTW PHA Name:** Housing Authority of the City of Pittsburgh

**MTW PHA Number:** PA001

Acting on behalf of the Housing Authority of the City of Pittsburgh (HACP), as its Executive Director, I approve the submission of the Annual Moving to Work Report for the MTW PHA Plan Year ending (12/31/2021), hereinafter referred to as "the Report," of which this document is a part and make the following certifications with the Department of Housing and Urban Development (HUD) in connection with the submission of the Report and implementation thereof:

- (1) The HACP is ensuring that at least 75% of households assisted are very low-income; and
- (2) The HACP is continuing to assist substantially the same total number of households as would have been assisted had the HACP not participated in the MTW demonstration; and
- (3) The HACP is maintaining a comparable mix of households (by family size) served as would have been served had the HACP not participated in the MTW demonstration.

*I/We, the undersigned, certify under penalty of perjury that the information provided above is true and correct. WARNING: Anyone who knowingly submits a false claim or makes a false statement is subject to criminal and/or civil penalties, including confinement for up to 5 years, fines, and civil administrative penalties. (18 U.S.C. §§ 287, 1001, 1010, 1012, 31 U.S.C. §3729, 3802).*

Caster D. Binion

NAME OF AUTHORIZED OFFICIAL

  
Caster Binion (Mar 28, 2022 09:17 EDT)

SIGNATURE

Executive Director

TITLE

Mar 28, 2022

DATE

**Housing Authority  
City of Pittsburgh**

200 Ross Street, 9th Floor / Pittsburgh, Pennsylvania 15219  
Tel: 412-456-5012  
[www.HACP.org](http://www.HACP.org)

## D. MTW ENERGY PERFORMANCE CONTRACT (EPC) FLEXIBILITY DATA

Under the HACP's MTW Agreement, the HACP may enter into Energy Performance Contracts (EPC) without prior HUD approval. The HACP has continued its EPC, executed in 2008, to reduce energy usage, costs and improve the efficient use of federal funds.

The HACP's EPC included installation of water saving measures across the authority, installation of more energy efficient lighting throughout the authority, and installation of geo-thermal heating and cooling systems at select communities. Installation was completed in 2021, with final payments for work performed in 2011. Monitoring and Verification services for the 12 year guarantee savings term (September 2011 – August 2023) began in 2011, with the most recent Monitoring and Verification report for year 10 was completed for the period of September 2020 – August 2021. The debt service was refinanced in 2013 and completely paid off in 2020. Monitoring and Verification services will continue through the end of the savings guarantee term. The HACP's objectives include realizing substantial energy cost savings. Repayment of debt service concluded in November 2020. Despite portfolio inventory changes to date; the HACP continues to receive energy cost savings that are in excess of the guarantee.

The following are data elements pertaining to the EPC:

Question	Answer
Is the project ESCo or Self-developed	ESCo
What are the number of rehabilitated units in the energy project	3,181
What are the number of rehabilitated AMPS in the energy project	17
What is Total Investment	\$25,006,438.59
What is Total financed	\$25,305,021.55
What is Debt Service (Annual)	2010 \$ 2,654,027.00 2011 \$ 2,595,942.00 2012 \$ 2,708,455.00 2013 \$ 3,196,772.00 2014 \$ 2,544,573.48 2015 \$ 2,613,276.94 2016 \$ 2,683,835.40 2017 \$ 2,756,298.98 2018 \$ 2,830,719.06 2019 \$ 2,907,148.52 2020 \$ 5,502,373.54 (paid off early) Total: \$32,993,421.92
What are Guaranteed savings (Source: Investment Grade Energy Audit)	\$36,056,414
What are Actual Savings (Source: annual Monitoring and Verification report)	\$32,659,341

What is the Investment per unit	\$7,861
What is the Finance per unit	\$7,955
What is the Savings per unit	\$10,267
What is the Savings per project (AMP)	<p>Through year 10:</p> <p>AMP-1 \$743,571.00</p> <p>AMP-2 \$5,432,308.00</p> <p>AMP-4 \$2,070,014.00</p> <p>AMP-5 \$2,468,958.00</p> <p>AMP-9 \$2,682,992.00</p> <p>AMP-11 \$316,305.00</p> <p>AMP-15 \$649,965.00</p> <p>AMP-17 \$1,983,808.00</p> <p>AMP-20 \$4,589,032.00</p> <p>AMP-31 \$804,411.00</p> <p>AMP-32 \$1,112,277.00</p> <p>AMP-40 \$0.00</p> <p>AMP-41 \$405,707.00</p> <p>AMP-44 \$35,254.00</p> <p>AMP-45 \$320,818.00</p> <p>AMP-46 \$91,930.00</p> <p>AMP-47 (\$65,304.00)</p> <p>Subtotal \$23,642,046.00</p> <p>Adjustments \$ 9,017,295.00</p> <p>Total \$32,659,341.00</p>
What is the Term of the contract	12 years
What date was the Request for Proposal issued	December 16, 2006
What was Date audit executed	<p>An initial Energy Audit with a third party was executed September 30, 2006.</p> <p>A subsequent Investment Grade Energy Audit was executed April 25, 2008.</p>
What was Date Energy Services agreement executed	July 30, 2008
What was Date Repayment starts	November 16, 2009
What Types of Energy Conservation Measures were installed at each AMP site	Types of Energy conservation measures by AMP are identified in the chart below.

## ENERGY PERFORMANCE WORK BY COMMUNITY

	AMP	Lighting Retrofit	Water Retrofit	Building Envelope	Roof Insulation	New Roof	Limiting Thermostats	Radiator Valves	Refrigerators	New Boilers	Geo- Thermal	New Rooftop Unit
Addison Terrace	1	Y	Y	Y					Y			
Bedford Dwellings	2	Y		Y					Y			
Arlington Heights	4	Y	Y	Y	Y		Y				Y	
Allegheny Dwellings	5	Y	Y	Y					Y			
Northview Heights	9	Y	Y		Y		Y		Y		Y	
Glen Hazel Family	32	Y	Y				Y		Y			
Hamilton-Larimer	11	Y	Y				Y					
PA-Bidwell	15	Y	Y	Y				Y				
Pressley	17	Y	Y	Y								
Homewood-North	20	Y	Y	Y	Y		Y				Y	
Murray Towers	31	Y	Y	Y		Y		Y				Y
Caliguri Plaza	41	Y	Y	Y			Y					
Finello Pavilion	44	Y		Y			Y					
Morse Gardens	45	Y	Y				Y			Y		
Carrick Regency	46	Y	Y	Y			Y					
Gualtieri Manor	47	Y	Y									
Northview High Rise	9	Y	Y	Y								



## VII. APPENDICES

### A. APPENDIX I: LOCAL ASSET MANAGEMENT PLAN AND FINANCIAL INFORMATION

#### 1. Approach to Asset Management

The HACP followed HUD's guidelines and asset management requirements including AMP- based financial statements. The HACP retained the HUD chart of accounts and the HUD crosswalk to the FDS. Under the local asset management program, the HACP retained full authority to move its MTW funds and project cash flow among projects without limitation. The MTW single fund flexibility, after payment of all program expenses, was utilized to direct funds to the HACP development program, wherein the HACP is worked to redevelop its aging housingstock.

The HACP's plan is consistent with HUD's ongoing implementation of project based budgeting and fiscal management, and project-based management. Operations of the HACP sites were coordinated and overseen by Property Managers on a daily basis, who oversaw the following management and maintenance tasks: maintenance work order completion, rent collection, leasing, community and resident relations, security, unit turnover, capital improvements planning, and other activities to efficiently operate the site. The HACP Property Managers received support in conducting these activities from the Central Office departments, including Operations, Human Resources, Modernization, Resident Self-Sufficiency, Finance, Public Safety, and others.

The HACP Property Managers developed and monitored property budgets with support from the HACP Finance staff. Budget training was held to support the budget development process. The HACP continues to develop and utilize project-based budgets for all its asset management projects (AMPs). Property Managers could produce monthly income, expense statements, and use these as tools to efficiently manage their properties. All direct costs were directly charged to the maximum extent possible to the AMPs.

The HACP utilized a fee for Service and frontline methodology as outlined in 24 CFR 990 and in the HACP Operating Fund Rule binder, which describes the methodology used for allocating its expenses.

## 2. New Initiatives and Deviations from General Part 990 Requirements

During FY 2021, the HACP did not have any new initiatives and/or deviations from General Part 990 Requirements but continued initiatives previously established to improve the effectiveness and efficiency of the Agency to include:

- The HACP maintained the spirit of the HUD site-based asset management model. It retained the COCC and site-based income and expenses in accordance with HUD guidelines, but eliminated inefficient accounting and/or reporting aspects that yielded little or no value from the staff time spent or the information produced.
- The HACP established and maintained an MTW cost center that held all excess MTW funds not allocated to the sites or to the voucher program. This cost center and all activity therein was reported under the newly created Catalog of Federal Domestic Assistance number for the MTW cost center. This cost center also held some of the large balance sheet accounts of the authority as a whole. Most of the banking and investment accounts were maintained within the MTW cost center.
- The MTW cost center essentially represented a mini HUD. All subsidy dollars were initially received and resided in the MTW cost center. Funding was allocated annually to sites based upon their budgetary needs as represented and approved in their annual budget request. Sites were monitored both as to their performance against the budgets and the corresponding budget matrix. They were also monitored based upon the required PUM subsidy required to operate the property. The HACP maintained a budgeting and accounting system that gave each property sufficient funds to support annual operations, including all COCC fee and frontline charges. Actual revenues included those provided by HUD and allocated by the HACP based on annual property-based budgets. As envisioned, all block grants were deposited into a single general ledger fund.
- Site balance sheet accounts were limited to site specific activity, such as fixed assets, tenant receivables, tenant security deposits, unrestricted net asset equity, which were generated by operating surpluses, and any resulting due to/due from balances. Some balance sheet items still reside in the MTW fund accounts, and include such things as workers compensation accrual, investments, A/P accruals, payroll accruals, payroll tax accruals, employee benefit accruals, Family Self-Sufficiency escrow balances, etc. The goal of this approach was to minimize extraneous accounting and reduce unnecessary administrative burden of performing monthly allocation entries for each, while maintaining fiscal integrity.

- All cash and investments remain in the MTW cost center during the year. Sites had a (due to/due from relationship) with the MTW cost center that represented cash until the HACP performed its year-end accounting entries and allocated to each site a share of the cash and investments. This is a one-time entry each year for Financial Data Schedule presentation purposes and is immediately reversed on the first day of the next calendar year. This saves the HACP the time and effort of breaking out the cash and investments monthly on the General Ledger.
- All frontline charges and fees to the central office cost center were reflected on the property reports, as required. The MTW ledger did not pay fees directly to the COCC. As allowable under the asset management model, however, any subsidy needed to pay legacy costs, such as pension or terminal leave payments, were transferred from the MTW ledger or the projects to the COCC.
- The Energy Performance Contract (EPC) accounting was charged directly to the AMPs. The EPC loan, totaling \$25,110,801, was fully paid off in 2020. Currently, the charges incurred per this contract are for a Measurement & Verification Specialist. Please see Appendix II for details.
- No inventory exists on the books at the sites. A “just in time” system has been implemented. This new inventory system has been operational and more efficient, in both time and expense.
- Central Operations staff, many of whom performed direct frontline services such as Home Ownership, Self-Sufficiency, and/or Relocation, were front lined appropriately to the LIPH and/or HCV programs, as these costs are 100 percent (100%) low rent and/or HCV.
- Actual HCV amounts needed for housing assistance payments and administrative costs were allotted to the Housing Choice Voucher (HCV) program, including enough funds to pay asset management fees. Block grant reserves and their interest earnings were not commingled with HCV operations, enhancing the budget transparency. HCV program managers have become more responsible for their budgets in the same manner as public housing site managers.
- Information Technology (IT) costs were directly charged to the programs benefiting from them, e.g., the LIPH module cost was directly charged to AMPs; all indirect IT costs were recharged to all cost centers based on a "per workstation" charge rather than a Fee for Service basis. This allowed for equitable allocation of the expense while saving time and effort on allocating out each invoice at the time of payment.

- MTW initiative funded work, such as contributions to the HACP development program, and also funded a 10 percent administration budget. These are done in order to adequately and commensurately fund the administrative work to support the MTW initiatives. The authority used MTW initiative flexibility to fund various development and modernization projects during FY 2021.

### 3. Flexible Use of Phase in of Management Fees

As a component of its local asset management plan, the HACP elected to make use of phase-in management fees for 2010 and beyond. The HUD prescribed management fees for the HACP are \$57.17 PUM. The HACP proposed and received approval on the following phase-in schedule and approach:

#### *Schedule of Phased-in Management Fees for HACP:*

2008 (Initial Year of Project Based Accounting)	\$91.94
2009 (Year 2)	\$84.99
2010 (Year 3)	\$78.03
2011 (Year 4 and beyond)	\$78.03

The above numbers reflect 2011 dollars. The HACP has diligently worked to reduce its staffing and expenditure levels and reduce unnecessary COCC costs; it continues to do so, to cut costs further, in order to comply with the COCC cost provisions of the operating fund rule. It is also working to increase its management fee revenues in the COCC, through aggressive, and we believe, achievable, development and lease up efforts in both the public housing and leased housing programs. As such, the HACP is continuing to lock in at current level phase in fees as approved in the FY 2017 MTW Annual Plan. The HACP, as indicated above, has made cuts to its COCC staffing, in virtually every department. It has reduced staff, reduced contractors, cut administration, and made substantial budget cuts to move toward compliance with the fee revenue requirements.

Nevertheless, we are not yet able to meet the PUM fee revenue target until we grow our portfolio size. Fortunately, a major component of the HACP strategic plan is to grow its portfolio, namely, its public housing occupancy, both through mixed finance development and management, as well as in house management, so as to better serve our low-income community and to recapture some of the fees lost to demolition. This requires central office staff, talent, and expense. To make this plan work, i.e., to assist in the redevelopment of the public housing portfolio, we will need the continued benefit of the locked in level of phase in management fees.

As further support for this fee lock, we should note that the HACP has historically had above normal central office costs driven by an exceedingly high degree of unionization. The HACP has over a half dozen different collective bargaining units; this has driven up costs in all COCC departments, especially in Human Resources and Legal. In addition, the HACP is governed by City laws that require City residency for all its employees. This has driven up the cost to attract and retain qualified people throughout the agency. This is especially the case in the prohibitive cost COCC areas, where the HACP has had to pay more to attract the necessary talent to perform these critical functions.

The phase in fee flexibility, coupled with the HACP's planned growth in public housing occupancy and increases in voucher utilization, will enable the HACP's COCC to become sustainable in the long term and fully compliant with the operating fund rule. It should also be noted that this fee flexibility will come from the HACP's MTW funds and will require no additional HUD funding. This flexibility is the essence of the MTW program and will go a long way towards enabling the HACP to successfully undertake and complete its aggressive portfolio restructuring efforts.

#### 4. *Deviations in Cost Allocation and Fee For Service Approach - Approach to Asset Management*

In implementing its Moving To Work Initiatives, the HACP's Local Asset Management Approach includes some deviations in cost allocation and fee for service approaches, as well as other variations to HUD asset management regulations. Because these all relate to accounting and sources and uses of funds, the information on the HACP's Local Asset Management Program and Site Based Budgeting and Accounting is included in this section.

#### 5. *Use of Single Fund Flexibility*

The HACP budgeted its single fund flexibility from the HCVP and LIPH programs to support the authority's Moving to Work (MTW) initiatives and other activities. This included budgeting \$12,100,822 towards development, \$18,523,263 for modernization, \$6,664,161 for protective services, and \$2,877,476 for resident services. During 2021, the HACP used \$12,421,995 from MTW HCV and Public Housing. The MTW funds were used to support protective services (\$4,958,572), resident services (\$2,801,988), modernization (\$2,060,032), the new office building (\$2,498,204), and the energy performance contract (\$103,199).

## B. APPENDIX II: ENERGY PERFORMANCE CONTRACT DEBT SERVICE SCHEDULE

Housing Authority of the City of Pittsburgh

Payment #	Date	Debt Service	Interest	Principal	Principal Balance	Termination Amount
1	9/1/2008	\$0.00			\$ 25,110,801.00	\$ 25,709,275.09
2	10/1/2008	\$0.00			\$ 25,110,801.00	\$ 25,805,902.15
3	11/1/2008	\$0.00			\$ 25,110,801.00	\$ 25,902,899.61
4	12/1/2008	\$0.00			\$ 25,110,801.00	\$ 26,000,268.90
5	1/1/2009	\$0.00			\$ 25,110,801.00	\$ 26,098,011.44
6	2/1/2009	\$0.00			\$ 25,110,801.00	\$ 26,196,128.65
7	3/1/2009	\$0.00			\$ 25,110,801.00	\$ 26,294,621.98
8	4/1/2009	\$0.00			\$ 25,110,801.00	\$ 26,393,492.87
9	5/1/2009	\$0.00			\$ 25,110,801.00	\$ 26,492,742.77
10	6/1/2009	\$0.00			\$ 25,110,801.00	\$ 26,592,373.12
11	7/1/2009	\$0.00			\$ 25,110,801.00	\$ 26,692,385.39
12	8/1/2009	\$0.00			\$ 25,110,801.00	\$ 26,792,781.04
13	9/1/2009	\$0.00			\$ 25,110,801.00	\$ 26,893,561.54
14	10/1/2009	\$0.00			\$ 25,110,801.00	\$ 26,994,728.36
15	11/1/2009	\$ 209,319.00	\$ 107,175.06	\$ 102,143.94	\$ 25,008,657.06	\$ 26,884,921.11
16	12/1/2009	\$ 209,319.00	\$ 106,783.51	\$ 102,535.49	\$ 24,906,121.57	\$ 26,774,692.94
17	1/1/2010	\$ 209,319.00	\$ 106,390.45	\$ 102,928.55	\$ 24,803,193.02	\$ 26,664,042.22
18	2/1/2010	\$ 209,319.00	\$ 105,995.89	\$ 103,323.11	\$ 24,699,869.91	\$ 26,552,967.34
19	3/1/2010	\$ 209,319.00	\$ 105,599.82	\$ 103,719.18	\$ 24,596,150.74	\$ 26,441,466.68
20	4/1/2010	\$ 209,319.00	\$ 105,202.23	\$ 104,116.77	\$ 24,492,033.97	\$ 26,329,538.59
21	5/1/2010	\$ 209,319.00	\$ 104,803.12	\$ 104,515.88	\$ 24,387,518.09	\$ 26,217,181.45
22	6/1/2010	\$ 209,319.00	\$ 104,402.47	\$ 104,916.53	\$ 24,282,601.56	\$ 26,104,393.61
23	7/1/2010	\$ 209,319.00	\$ 104,000.29	\$ 105,318.71	\$ 24,177,282.85	\$ 25,991,173.41
24	8/1/2010	\$ 209,319.00	\$ 103,596.57	\$ 105,722.43	\$ 24,071,560.43	\$ 25,877,519.20
25	9/1/2010	\$ 209,319.00	\$ 103,191.30	\$ 106,127.70	\$ 23,965,432.73	\$ 25,763,429.32
26	10/1/2010	\$ 209,319.00	\$ 102,784.48	\$ 106,534.52	\$ 23,858,898.21	\$ 25,648,902.09
27	11/1/2010	\$ 214,893.00	\$ 102,666.81	\$ 112,226.19	\$ 23,746,672.02	\$ 25,528,256.17
28	12/1/2010	\$ 214,893.00	\$ 102,236.61	\$ 112,656.39	\$ 23,634,015.63	\$ 25,407,147.78
29	1/1/2011	\$ 214,893.00	\$ 101,804.76	\$ 113,088.24	\$ 23,520,927.38	\$ 25,285,575.14
30	2/1/2011	\$ 214,893.00	\$ 101,371.25	\$ 113,521.75	\$ 23,407,405.64	\$ 25,163,536.48
31	3/1/2011	\$ 214,893.00	\$ 100,936.09	\$ 113,956.91	\$ 23,293,448.73	\$ 25,041,029.99
32	4/1/2011	\$ 214,893.00	\$ 100,499.25	\$ 114,393.75	\$ 23,179,054.98	\$ 24,918,053.90
33	5/1/2011	\$ 214,893.00	\$ 100,060.74	\$ 114,832.26	\$ 23,064,222.72	\$ 24,794,606.40
34	6/1/2011	\$ 214,893.00	\$ 99,620.55	\$ 115,272.45	\$ 22,948,950.27	\$ 24,670,685.69
35	7/1/2011	\$ 214,893.00	\$ 99,178.67	\$ 115,714.33	\$ 22,833,235.95	\$ 24,546,289.94
36	8/1/2011	\$ 214,893.00	\$ 98,735.10	\$ 116,157.90	\$ 22,717,078.05	\$ 24,421,417.35
37	9/1/2011	\$ 214,893.00	\$ 98,289.83	\$ 116,603.17	\$ 22,600,474.88	\$ 24,296,066.08
38	10/1/2011	\$ 214,893.00	\$ 97,842.85	\$ 117,050.15	\$ 22,483,424.73	\$ 24,170,234.29
39	11/1/2011	\$ 220,635.00	\$ 97,693.63	\$ 122,941.37	\$ 22,360,483.37	\$ 24,038,069.30
40	12/1/2011	\$ 220,635.00	\$ 97,222.36	\$ 123,412.64	\$ 22,237,070.72	\$ 23,905,397.67
41	1/1/2012	\$ 220,635.00	\$ 96,749.28	\$ 123,885.72	\$ 22,113,185.00	\$ 23,772,217.47
42	2/1/2012	\$ 220,635.00	\$ 96,274.38	\$ 124,360.62	\$ 21,988,824.38	\$ 23,638,526.75
43	3/1/2012	\$ 220,635.00	\$ 95,797.66	\$ 124,837.34	\$ 21,863,987.05	\$ 23,504,323.55
44	4/1/2012	\$ 220,635.00	\$ 95,319.12	\$ 125,315.88	\$ 21,738,671.17	\$ 23,369,605.90
45	5/1/2012	\$ 220,635.00	\$ 94,838.74	\$ 125,796.26	\$ 21,612,874.91	\$ 23,234,371.83
46	6/1/2012	\$ 220,635.00	\$ 94,356.53	\$ 126,278.47	\$ 21,486,596.44	\$ 23,098,619.37
47	7/1/2012	\$ 220,635.00	\$ 93,872.46	\$ 126,762.54	\$ 21,359,833.90	\$ 22,962,346.52
48	8/1/2012	\$ 220,635.00	\$ 93,386.53	\$ 127,248.47	\$ 21,232,585.43	\$ 22,825,551.29



49	9/1/2012	\$ 220,635.00	\$ 92,898.75	\$ 127,736.25	\$ 21,104,849.18	\$ 22,688,231.68
50	10/1/2012	\$ 220,635.00	\$ 92,409.09	\$ 128,225.91	\$ 20,976,623.27	\$ 22,550,385.68
51	11/1/2012	\$ 226,549.00	\$ 92,226.00	\$ 134,323.00	\$ 20,842,300.28	\$ 22,405,985.15
52	12/1/2012	\$ 226,549.00	\$ 91,711.10	\$ 134,837.90	\$ 20,707,462.38	\$ 22,261,031.10
53	1/1/2013	\$ 226,549.00	\$ 91,194.22	\$ 135,354.78	\$ 20,572,107.60	\$ 22,115,521.38
54	2/1/2013	\$ 226,549.00	\$ 90,675.36	\$ 135,873.64	\$ 20,436,233.96	\$ 21,969,453.88
55	3/1/2013	\$ 226,549.00	\$ 90,154.51	\$ 136,394.49	\$ 20,299,839.47	\$ 21,822,826.45
56	4/1/2013	\$ 226,549.00	\$ 89,631.67	\$ 136,917.33	\$ 20,162,922.13	\$ 21,675,636.95
57	5/1/2013	\$ 226,549.00	\$ 89,106.82	\$ 137,442.18	\$ 20,025,479.95	\$ 21,527,883.23
58	6/1/2013	\$ 226,549.00	\$ 88,579.95	\$ 137,969.05	\$ 19,887,510.91	\$ 21,379,563.11
59	7/1/2013	\$ 226,549.00	\$ 88,051.07	\$ 138,497.93	\$ 19,749,012.98	\$ 21,230,674.43
60	8/1/2013	\$ 226,549.00	\$ 87,520.16	\$ 139,028.84	\$ 19,609,984.14	\$ 21,081,215.02
61	9/1/2013	\$ 226,549.00	\$ 86,987.22	\$ 139,561.78	\$ 19,470,422.36	\$ 20,931,182.67
62	10/1/2013	\$ 226,549.00	\$ 86,452.23	\$ 140,096.77	\$ 19,330,325.60	\$ 20,780,575.21
63	11/1/2013	\$ 232,641.00	\$ 86,232.92	\$ 146,408.08	\$ 19,183,917.52	\$ 20,623,182.93
64	12/1/2013	\$ 232,641.00	\$ 85,671.69	\$ 146,969.31	\$ 19,036,948.21	\$ 20,465,187.31
65	1/1/2014	\$ 232,641.00	\$ 85,108.31	\$ 147,532.69	\$ 18,889,415.52	\$ 20,306,586.04
66	2/1/2014	\$ 232,641.00	\$ 84,542.77	\$ 148,098.23	\$ 18,741,317.29	\$ 20,147,376.80
67	3/1/2014	\$ 232,641.00	\$ 83,975.06	\$ 148,665.94	\$ 18,592,651.35	\$ 19,987,557.26
68	4/1/2014	\$ 232,641.00	\$ 83,405.17	\$ 149,235.83	\$ 18,443,415.52	\$ 19,827,125.07
69	5/1/2014	\$ 232,641.00	\$ 82,833.10	\$ 149,807.90	\$ 18,293,607.62	\$ 19,666,077.90
70	6/1/2014	\$ 232,641.00	\$ 82,258.84	\$ 150,382.16	\$ 18,143,225.46	\$ 19,504,413.38
71	7/1/2014	\$ 232,641.00	\$ 81,682.37	\$ 150,958.63	\$ 17,992,266.83	\$ 19,342,129.14
72	8/1/2014	\$ 232,641.00	\$ 81,103.70	\$ 151,537.30	\$ 17,840,729.53	\$ 19,179,222.82
73	9/1/2014	\$ 232,641.00	\$ 80,522.81	\$ 152,118.19	\$ 17,688,611.34	\$ 19,015,692.02
74	10/1/2014	\$ 232,641.00	\$ 79,939.69	\$ 152,701.31	\$ 17,535,910.02	\$ 18,851,534.35
75	11/1/2014	\$ 238,915.00	\$ 79,681.55	\$ 159,233.45	\$ 17,376,676.57	\$ 18,680,354.48
76	12/1/2014	\$ 238,915.00	\$ 79,071.15	\$ 159,843.85	\$ 17,216,832.73	\$ 18,508,518.41
77	1/1/2015	\$ 238,915.00	\$ 78,458.42	\$ 160,456.58	\$ 17,056,376.15	\$ 18,336,023.65
78	2/1/2015	\$ 238,915.00	\$ 77,843.34	\$ 161,071.66	\$ 16,895,304.48	\$ 18,162,867.65
79	3/1/2015	\$ 238,915.00	\$ 77,225.89	\$ 161,689.11	\$ 16,733,615.38	\$ 17,989,047.89
80	4/1/2015	\$ 238,915.00	\$ 76,606.09	\$ 162,308.91	\$ 16,571,306.46	\$ 17,814,561.81
81	5/1/2015	\$ 238,915.00	\$ 75,983.90	\$ 162,931.10	\$ 16,408,375.37	\$ 17,639,406.88
82	6/1/2015	\$ 238,915.00	\$ 75,359.33	\$ 163,555.67	\$ 16,244,819.70	\$ 17,463,580.52
83	7/1/2015	\$ 238,915.00	\$ 74,732.37	\$ 164,182.63	\$ 16,080,637.07	\$ 17,287,080.15
84	8/1/2015	\$ 238,915.00	\$ 74,103.00	\$ 164,812.00	\$ 15,915,825.07	\$ 17,109,903.20
85	9/1/2015	\$ 238,915.00	\$ 73,471.22	\$ 165,443.78	\$ 15,750,381.30	\$ 16,932,047.08
86	10/1/2015	\$ 238,915.00	\$ 72,837.02	\$ 166,077.98	\$ 15,584,303.32	\$ 16,753,509.17
87	11/1/2015	\$ 245,377.00	\$ 72,537.41	\$ 172,839.59	\$ 15,411,463.73	\$ 16,567,702.37
88	12/1/2015	\$ 245,377.00	\$ 71,874.86	\$ 173,502.14	\$ 15,237,961.60	\$ 16,381,183.30
89	1/1/2016	\$ 245,377.00	\$ 71,209.77	\$ 174,167.23	\$ 15,063,794.37	\$ 16,193,949.25
90	2/1/2016	\$ 245,377.00	\$ 70,542.13	\$ 174,834.87	\$ 14,888,959.50	\$ 16,005,997.47
91	3/1/2016	\$ 245,377.00	\$ 69,871.93	\$ 175,505.07	\$ 14,713,454.43	\$ 15,817,325.20
92	4/1/2016	\$ 245,377.00	\$ 69,199.16	\$ 176,177.84	\$ 14,537,276.59	\$ 15,627,929.70
93	5/1/2016	\$ 245,377.00	\$ 68,523.81	\$ 176,853.19	\$ 14,360,423.40	\$ 15,437,808.17
94	6/1/2016	\$ 245,377.00	\$ 67,845.87	\$ 177,531.13	\$ 14,182,892.28	\$ 15,246,957.85
95	7/1/2016	\$ 245,377.00	\$ 67,165.34	\$ 178,211.66	\$ 14,004,680.61	\$ 15,055,375.93
96	8/1/2016	\$ 245,377.00	\$ 66,482.19	\$ 178,894.81	\$ 13,825,785.81	\$ 14,863,059.62
97	9/1/2016	\$ 245,377.00	\$ 65,796.43	\$ 179,580.57	\$ 13,646,205.24	\$ 14,670,006.09
98	10/1/2016	\$ 245,377.00	\$ 65,108.04	\$ 180,268.96	\$ 13,465,936.28	\$ 14,476,212.53
99	11/1/2016	\$ 252,034.00	\$ 64,764.20	\$ 187,269.80	\$ 13,278,666.48	\$ 14,274,892.89
100	12/1/2016	\$ 252,034.00	\$ 64,046.33	\$ 187,987.67	\$ 13,090,678.81	\$ 14,072,801.53
101	1/1/2017	\$ 252,034.00	\$ 63,325.72	\$ 188,708.28	\$ 12,901,970.53	\$ 13,869,935.48
102	2/1/2017	\$ 252,034.00	\$ 62,602.33	\$ 189,431.67	\$ 12,712,538.86	\$ 13,666,291.78
103	3/1/2017	\$ 252,034.00	\$ 61,876.18	\$ 190,157.82	\$ 12,522,381.04	\$ 13,461,867.45
104	4/1/2017	\$ 252,034.00	\$ 61,147.24	\$ 190,886.76	\$ 12,331,494.28	\$ 13,256,659.49
105	5/1/2017	\$ 252,034.00	\$ 60,415.51	\$ 191,618.49	\$ 12,139,875.79	\$ 13,050,664.90
106	6/1/2017	\$ 252,034.00	\$ 59,680.97	\$ 192,353.03	\$ 11,947,522.76	\$ 12,843,880.67
107	7/1/2017	\$ 252,034.00	\$ 58,943.62	\$ 193,090.38	\$ 11,754,432.38	\$ 12,636,303.76
108	8/1/2017	\$ 252,034.00	\$ 58,203.44	\$ 193,830.56	\$ 11,560,601.81	\$ 12,427,931.14



109	9/1/2017	\$ 252,034.00	\$ 57,460.42	\$ 194,573.58	\$ 11,366,028.23	\$ 12,218,759.76
110	10/1/2017	\$ 252,034.00	\$ 56,714.55	\$ 195,319.45	\$ 11,170,708.79	\$ 12,008,786.55
111	11/1/2017	\$ 258,890.00	\$ 56,323.40	\$ 202,566.60	\$ 10,968,142.19	\$ 11,791,022.48
112	12/1/2017	\$ 258,890.00	\$ 55,546.90	\$ 203,343.10	\$ 10,764,799.09	\$ 11,572,423.65
113	1/1/2018	\$ 258,890.00	\$ 54,767.42	\$ 204,122.58	\$ 10,560,676.51	\$ 11,352,986.85
114	2/1/2018	\$ 258,890.00	\$ 53,984.95	\$ 204,905.05	\$ 10,355,771.45	\$ 11,132,708.88
115	3/1/2018	\$ 258,890.00	\$ 53,199.48	\$ 205,690.52	\$ 10,150,080.93	\$ 10,911,586.51
116	4/1/2018	\$ 258,890.00	\$ 52,411.00	\$ 206,479.00	\$ 9,943,601.92	\$ 10,689,616.51
117	5/1/2018	\$ 258,890.00	\$ 51,619.49	\$ 207,270.51	\$ 9,736,331.42	\$ 10,466,795.62
118	6/1/2018	\$ 258,890.00	\$ 50,824.96	\$ 208,065.04	\$ 9,528,266.37	\$ 10,243,120.58
119	7/1/2018	\$ 258,890.00	\$ 50,027.37	\$ 208,862.63	\$ 9,319,403.75	\$ 10,018,588.12
120	8/1/2018	\$ 258,890.00	\$ 49,226.73	\$ 209,663.27	\$ 9,109,740.48	\$ 9,793,194.96
121	9/1/2018	\$ 258,890.00	\$ 48,423.02	\$ 210,466.98	\$ 8,899,273.51	\$ 9,566,937.79
122	10/1/2018	\$ 258,890.00	\$ 47,616.23	\$ 211,273.77	\$ 8,687,999.74	\$ 9,339,813.30
123	11/1/2018	\$ 265,952.00	\$ 47,174.67	\$ 218,777.33	\$ 8,469,222.41	\$ 9,104,622.29
124	12/1/2018	\$ 265,952.00	\$ 46,336.02	\$ 219,615.98	\$ 8,249,606.43	\$ 8,868,529.71
125	1/1/2019	\$ 265,952.00	\$ 45,494.16	\$ 220,457.84	\$ 8,029,148.59	\$ 8,631,532.12
126	2/1/2019	\$ 265,952.00	\$ 44,649.07	\$ 221,302.93	\$ 7,807,845.67	\$ 8,393,626.03
127	3/1/2019	\$ 265,952.00	\$ 43,800.75	\$ 222,151.25	\$ 7,585,694.41	\$ 8,154,807.97
128	4/1/2019	\$ 265,952.00	\$ 42,949.17	\$ 223,002.83	\$ 7,362,691.58	\$ 7,915,074.44
129	5/1/2019	\$ 265,952.00	\$ 42,094.32	\$ 223,857.68	\$ 7,138,833.90	\$ 7,674,421.93
130	6/1/2019	\$ 265,952.00	\$ 41,236.20	\$ 224,715.80	\$ 6,914,118.10	\$ 7,432,846.92
131	7/1/2019	\$ 265,952.00	\$ 40,374.79	\$ 225,577.21	\$ 6,688,540.89	\$ 7,190,345.88
132	8/1/2019	\$ 265,952.00	\$ 39,510.08	\$ 226,441.92	\$ 6,462,098.96	\$ 6,946,915.24
133	9/1/2019	\$ 265,952.00	\$ 38,642.05	\$ 227,309.95	\$ 6,234,789.01	\$ 6,702,551.46
134	10/1/2019	\$ 265,952.00	\$ 37,770.69	\$ 228,181.31	\$ 6,006,607.71	\$ 6,457,250.94
135	11/1/2019	\$ 273,225.00	\$ 37,275.32	\$ 235,949.68	\$ 5,770,658.03	\$ 6,203,599.24
136	12/1/2019	\$ 273,225.00	\$ 36,370.85	\$ 236,854.15	\$ 5,533,803.88	\$ 5,948,975.20
137	1/1/2020	\$ 273,225.00	\$ 35,462.91	\$ 237,762.09	\$ 5,296,041.78	\$ 5,693,375.11
138	2/1/2020	\$ 273,225.00	\$ 34,551.49	\$ 238,673.51	\$ 5,057,368.27	\$ 5,436,795.21
139	3/1/2020	\$ 273,225.00	\$ 33,636.57	\$ 239,588.43	\$ 4,817,779.84	\$ 5,179,231.76
140	4/1/2020	\$ 273,225.00	\$ 32,718.15	\$ 240,506.85	\$ 4,577,272.99	\$ 4,920,680.98
141	5/1/2020	\$ 273,225.00	\$ 31,796.20	\$ 241,428.80	\$ 4,335,844.19	\$ 4,661,139.09
142	6/1/2020	\$ 273,225.00	\$ 30,870.73	\$ 242,354.27	\$ 4,093,489.92	\$ 4,400,602.29
143	7/1/2020	\$ 273,225.00	\$ 29,941.70	\$ 243,283.30	\$ 3,850,206.62	\$ 4,139,066.77
144	8/1/2020	\$ 273,225.00	\$ 29,009.12	\$ 244,215.88	\$ 3,605,990.74	\$ 3,876,528.69
145	9/1/2020	\$ 273,225.00	\$ 28,072.96	\$ 245,152.04	\$ 3,360,838.70	\$ 3,612,984.22
146	10/1/2020	\$ 273,225.00	\$ 27,133.21	\$ 246,091.79	\$ 3,114,746.90	\$ 3,348,429.49
147	11/1/2020	\$ 280,717.00	\$ 26,580.60	\$ 254,136.40	\$ 2,860,610.50	\$ 3,075,226.61
148	12/1/2020	\$ 280,717.00	\$ 25,606.41	\$ 255,110.59	\$ 2,605,499.91	\$ 2,800,976.45
149	1/1/2021	\$ 280,717.00	\$ 24,628.49	\$ 256,088.51	\$ 2,349,411.40	\$ 2,525,675.00
150	2/1/2021	\$ 280,717.00	\$ 23,646.81	\$ 257,070.19	\$ 2,092,341.21	\$ 2,249,318.23
151	3/1/2021	\$ 280,717.00	\$ 22,661.38	\$ 258,055.62	\$ 1,834,285.58	\$ 1,971,902.09
152	4/1/2021	\$ 280,717.00	\$ 21,672.16	\$ 259,044.84	\$ 1,575,240.75	\$ 1,693,422.53
153	5/1/2021	\$ 280,717.00	\$ 20,679.16	\$ 260,037.84	\$ 1,315,202.91	\$ 1,413,875.46
154	6/1/2021	\$ 280,717.00	\$ 19,682.35	\$ 261,034.65	\$ 1,054,168.25	\$ 1,133,256.79
155	7/1/2021	\$ 280,717.00	\$ 18,681.71	\$ 262,035.29	\$ 792,132.97	\$ 851,562.41
156	8/1/2021	\$ 280,717.00	\$ 17,677.25	\$ 263,039.75	\$ 529,093.21	\$ 568,788.21
157	9/1/2021	\$ 280,717.00	\$ 16,668.93	\$ 264,048.07	\$ 265,045.14	\$ 284,930.04
158	10/1/2021	\$ 280,701.05	\$ 15,655.91	\$ 265,045.14	\$ 0.00	\$ 0.00



## Housing Authority of the City of Pittsburgh

### Energy Cost Avoidance Report

**Year 10 of 12 Energy Guarantee**  
September 2020 through August 2021



*Helping customers manage energy resources to  
improve financial performance*

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## Housing Authority of the City of Pittsburgh



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## Executive Summary

Housing Authority of the City of Pittsburgh entered into an Energy Services Agreement with Honeywell on July 30, 2008. This program addresses energy improvements. The project is expected to save \$36,056,414 over the term of the agreement and will be in effect for 12 years. Guarantee Phase services provided to Housing Authority of the City of Pittsburgh include an Annual Cost Avoidance Report at the end of each guarantee year.

The results for the Year 10 performance period are a total of \$3,765,425 in utility savings. This is 115% of the Year 10 Guarantee of \$3,285,812.

Year 10	Year 10 Debt Service	Year 10 M&V Service Cost	Total
Guarantee	\$ 3,191,424	\$ 94,388	\$ 3,285,812
Actual	\$ 3,765,425		\$ 3,765,425
Excess/(Shortfall)			\$ 479,613

As of the end of the performance period, this project has delivered \$32,680,773 in cost avoidance, which is 112% of yearly plan guarantee.

Performance Period	Guaranteed Savings	Actual Savings	Excess / (Shortfall)
Year 1	\$ 2,584,170	\$ 2,568,363	\$ (15,807)
Year 2	\$ 2,653,228	\$ 3,038,527	\$ 385,299
Year 3	\$ 2,724,367	\$ 3,151,588	\$ 427,221
Year 4	\$ 2,797,637	\$ 3,046,182	\$ 248,545
Year 5	\$ 2,873,112	\$ 2,985,075	\$ 111,963
Year 6	\$ 2,950,843	\$ 3,183,315	\$ 232,472
Year 7	\$ 3,030,903	\$ 3,385,468	\$ 354,565
Year 8	\$ 3,113,378	\$ 3,883,809	\$ 770,431
Year 9	\$ 3,198,319	\$ 3,673,021	\$ 474,702
Year 10	\$ 3,285,812	\$ 3,765,425	\$ 479,613
Cumulative Totals	\$ 29,211,769	\$ 32,680,773	\$ 3,469,004

During the week of November 8, 2021, Karen Westlick, Honeywell Measurement and Verification Specialist, conducted site visits at several locations within the Housing Authority of the City of Pittsburgh, performing visual inspections and interviewing on-site operations and maintenance staff to verify functionality of the Energy Conservation Measures (ECM's) that were installed. The Site Visit report is within the Appendix of this report.

## Executive Summary

### Environmental Impact

The Energy Savings in Performance Year 10 has the same environmental impact as:

**3,667.3** metric tons of CO2 not being produced.

Which is equivalent to:

**412,659** gallons of gasoline not being consumed

**138,994** incandescent lamps switched to LEDs

**1,247** tons of waste recycled instead of landfilled



On behalf of Honeywell, we look forward to working with you and ensuring your savings are sustainable.

## Program Overview

### Measurement & Verification Services

Honeywell is pleased to provide this comprehensive report of your energy consumption. This report was processed using an industry-standard program based on proven and accepted engineering formulas for energy conservation and analysis.

**Service Contract Number:** 565-89-52029

**Baseline Period:** Calendar Yrs. 2004, 2005 & 2006

**Guarantee Period:** September 2011 - August 2023

**Guarantee Term:** 12 Years

**Report Preparation By:** Honeywell Energy Analysis Team  
 Contact: Ed Rauf, MVS  
 Karen Westlick, EA



### Meters Included in Report



Buildings	Electric Acct #	Gas Acct #	Water Acct #
Addison Terrace		No longer managed by HACP	
Bedford Dwellings		0900608-210691	
		4578803-274077	
Arlington Heights	4000-004-642-001	0900608-196578	201494
Allegheny Dwellings		0900608-169042	201662
		0900608-315595	201663
		0900608-422918	
Northview Heights & High Rise	9000-001-979-001	0900608-116176	201693
			201694
Hamilton-Larimer		No longer managed by HACP	
Pennsylvania-Bidwell		0900608-280359	125461
Pressley Street		0900608-210020	137061
			137062

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## Program Overview



### Meters Included in Report



#### Buildings

Homewood North

#### Electric Acct #

1000-538-716-001  
2000-541-678-001  
3000-538-693-001  
4000-537-155-001  
4000-538-691-001  
5000-537-153-001  
5000-538-717-001  
5000-541-792-001  
5000-542-549-001  
6000-538-715-001  
6001-055-907-001  
7000-538-694-001  
7000-541-679-001  
8000-538-692-001  
8000-538-736-001  
8000-542-550-001  
9000-537-154-001  
9000-541-793-001  
000-537-152-001  
0000-538-718-001

#### Gas Acct #

0900608-120956  
0900608-137716  
0900608-146749  
0900608-183554  
0900608-374664  
2-0000-442-1893

#### Water Acct #

165740  
165741  
211622  
215886  
215887  
215888  
1021-980  
885-852  
93033-88568  
93035-88570  
93037-88572  
93817-980

Murray Towers

Mazza Pavillon (Brookline)

2-0000-387-03414  
0900608-307611

190254  
261244  
24-0733625-0  
24-0750368-5

Caliguiri Plaza (Allentown)

Morse Gardens

0900608-410310  
0900608-200444

201368  
102365  
103336

D.A.P. Carrick Regency

0900608-389302

255656  
24-0704817-8  
24-0750415-4

Gualtieri Manor

1009-2775-001-7

281276  
24-0725936-1

Finello Pavillion

2-0000-382-5003

## **Retrofit Highlights**

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- Lighting
- Water Conservation (showers, faucet aerators, toilets)
- Refrigerators
- Building Envelope
- Roofs and Insulation (attics)
- Limiting Thermostats
- Geothermal Heat Pump Systems
- New Boilers
- Adjust CFMs and New Ventilation Units
- Radiator Control Valves
- Ventilation Unit Heat Recovery
- Insulate Make up Air Ducts

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# Methodology

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## Determination of Energy Savings

### Theory of Energy Management

Energy conservation measures (ECM) include the installation of equipment or systems for the purpose of reducing energy use and/or costs. The cost of ECM implementation is recovered through the savings created by the ECM. The Federal Energy Management Program (F.E.M.P) of the U.S. Department of Energy and its Measurement and Verification Guidelines for Federal Energy Projects classify measurement and verification approaches as Options A, B, C, and D. The F.E.M.P. Guideline is based on the International Performance Measurement and Verification Protocol (I.P.M.V.P.).

*Option A:* Verification techniques determine savings by measuring the performance of a system before and after a retrofit, either through physical measurement or the use of manufacturer data, and multiplying the difference by an agreed-upon or stipulated factor, such as hours of operation.

*Option B:* Verification techniques are designed for projects where long-term continuous measurement of performance is desired. Metering is conducted on an individual system level, and the measured performance is compared with a baseline to determine savings.

*Option C:* Verification techniques involve utility whole building meter analysis, reviewing overall energy use, and identifying the effects of energy projects on a facility. Energy use before and after a retrofit project is compared to determine savings.

*Option D:* Computer models are developed that use calibrated simulations of baseline and post-installation energy use to measure savings.

## Methodology

### Scope of Work

The following page details each ECM and the IPMVP methodology used

ECM	ECM Description	Post-Installation Option	Performance Period Option
1,2	Lighting	B (measured sample set)	A
6	Refrigerators	B (measured sample set)	A
10,11	Water Conservation (showers, faucet aerators, toilets)	B (measured sample set)	A (electric), A (gas & water at Mazza Pavilion) C (gas and water for remaining sites)
16	Building Envelope	A (visual inspection)	A for cooling, C for gas heating
18	Roofs and Insulation (attics)	A (visual inspection)	A for cooling, C for gas heating,
21	Limiting Thermostats	A (visual inspection)	A (tenant paid allowance sites), C (gas at frozen base sites)
26	Geothermal Heat Pump Systems	A (visual inspection)	C (electric and gas)
27	New Boilers	A (visual inspection)	C (gas)
29,30	Adjust CFMs and New Ventilation Units	A (visual inspection)	A (electric), C (gas)
31	Radiator Control Valves	A (visual inspection)	C (gas)
32	Ventilation Unit Heat Recovery	A (visual inspection)	A for electric, C for gas
37	Insulate Make up Air Ducts	A (visual inspection)	A (electric), C (gas)

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## Annual Guarantee Amount

The guarantee table below reflects Honeywell's annual guarantee, which will provide the housing authority the amount needed to cover the principal amount to be paid to a financial institution, the interest amount to be paid to a financial institution, and on-going M&V costs to be paid to Honeywell, for each performance year. The total shown is the cost of the project over the 12-year term.

Escalation Over Term		Savings					Amortization			P+H+Service = Honeywell Guarantee	Savings % Guaranteed by HW
		Energy	RBV	Total	M&V	Total	Interest	Principal	Balance		
		16.3%	0.0%		3.0%						
0	Year 1	\$2,584,170	\$0	\$2,584,170	\$72,342	\$72,342	\$1,191,040	\$1,320,788	\$25,171,724	\$2,584,170	92.59%
1	Year 2	\$2,653,236	\$0	\$2,653,236	\$74,512	\$74,512	\$1,127,558	\$1,451,158	\$23,720,566	\$2,653,228	92.59%
2	Year 3	\$2,724,373	\$0	\$2,724,373	\$76,747	\$76,747	\$1,057,907	\$1,589,713	\$22,130,853	\$2,724,367	92.59%
3	Year 4	\$2,797,645	\$0	\$2,797,645	\$79,049	\$79,049	\$981,703	\$1,736,885	\$20,393,969	\$2,797,637	92.59%
4	Year 5	\$2,873,114	\$0	\$2,873,114	\$81,420	\$81,420	\$898,539	\$1,893,153	\$18,500,816	\$2,873,112	92.59%
5	Year 6	\$2,950,848	\$0	\$2,950,848	\$83,863	\$83,863	\$807,987	\$2,058,993	\$16,441,823	\$2,950,843	92.59%
6	Year 7	\$3,030,913	\$0	\$3,030,913	\$86,379	\$86,379	\$709,595	\$2,234,929	\$14,206,894	\$3,030,903	92.59%
7	Year 8	\$3,113,381	\$0	\$3,113,381	\$88,970	\$88,970	\$602,887	\$2,421,521	\$11,785,372	\$3,113,378	92.59%
8	Year 9	\$3,198,323	\$0	\$3,198,323	\$91,639	\$91,639	\$487,361	\$2,619,319	\$9,166,053	\$3,198,319	92.59%
9	Year 10	\$3,285,813	\$0	\$3,285,813	\$94,388	\$94,388	\$362,489	\$2,828,935	\$6,337,119	\$3,285,812	92.59%
10	Year 11	\$3,375,927	\$0	\$3,375,927	\$97,220	\$97,220	\$227,716	\$3,050,984	\$3,286,135	\$3,375,920	92.59%
11	Year 12	\$3,468,745	\$0	\$3,468,745	\$100,137	\$100,137	\$82,453	\$3,286,135	\$0	\$3,468,725	92.58%
Total		\$36,056,488	\$0	\$36,056,488	\$1,026,666	\$1,026,666	\$8,537,236	\$26,492,512		\$36,056,414	92.59%

## Cost Avoidance Summary

Year 10 Savings		
Option A Cost Avoidance	\$	368,403
Option C Cost Avoidance	\$	2,550,695
Adjustments	\$	846,327
<b>Total Year 10 Savings</b>	<b>\$</b>	<b>3,765,425</b>

Year 10 Savings		
Year 10 Debt Service	\$	3,191,424
Year 10 M&V Service Cost	\$	94,388
<b>Total Year 10 Energy Guarantee</b>	<b>\$</b>	<b>3,285,812</b>

Net Results **\$ 479,613**

Percent of Plan 115%

## Yearly Results

TIME PERIOD		COST AVOIDANCE	ANNUAL GUARANTEE	AMOUNT RECONSIDERED	NET RESULTS
Year 1	9/11 - 8/12	\$ 2,568,363	\$ 2,584,170	\$ 15,807	\$ -
Year 2	9/12 - 8/13	\$ 3,038,527	\$ 2,653,228		\$ 385,299
Year 3	9/13 - 8/14	\$ 3,151,588	\$ 2,724,367		\$ 427,221
Year 4	9/14 - 8/15	\$ 3,046,182	\$ 2,797,637		\$ 248,545
Year 5	9/15 - 8/16	\$ 2,985,075	\$ 2,873,112		\$ 111,963
Year 6	9/16 - 8/17	\$ 3,183,315	\$ 2,950,843		\$ 232,472
Year 7	9/17 - 8/18	\$ 3,385,468	\$ 3,030,903		\$ 354,565
Year 8	9/18 - 8/19	\$ 3,883,809	\$ 3,113,378		\$ 770,431
Year 9	9/19 - 8/20	\$ 3,673,021	\$ 3,198,319		\$ 474,702
Year 10	9/20 - 8/21	\$ 3,765,425	\$ 3,285,812		\$ 479,613
<b>TOTAL</b>		<b>\$ 32,680,773</b>	<b>\$ 29,211,769</b>	<b>\$ 15,807</b>	<b>\$ 3,500,618</b>

2.1

## Energy Avoidance Summary by Site

Site	Project Number	Project Name	Cost Summary	Electrical		Natural Gas		Water		Total Energy Savings
				Yearly Energy Savings				Yearly Savings		
			Description of ECM	(KWH)	(\$)	(MCF)	(\$)	(Kgals)	(\$)	(\$)
1	PA 1-01	Addison Terrace	Retrofit Tenant Area Lighting							
1	PA 1-01	Addison Terrace	Retrofit Common Area Lighting							
1	PA 1-01	Addison Terrace	High Efficiency Refrigerators							
1	PA 1-01	Addison Terrace	Building Envelope							
1	PA 1-01	Addison Terrace	Option C Savings							

			Rate Applied		\$0.1138		\$25.9265		\$12.0952	
			Totals:	0	\$0	0	\$0	0	\$0	\$0

2	PA 1-02	Bedford Dwellings	Retrofit Tenant Area Lighting	380,228	\$43,270		\$0		\$0	\$43,270
2	PA 1-02	Bedford Dwellings	Retrofit Common Area Lighting	106,355	\$12,103		\$0		\$0	\$12,103
2	PA 1-02	Bedford Dwellings	High Efficiency Refrigerators	28,516	\$3,245		\$0		\$0	\$3,245
2	PA 1-02	Bedford Dwellings	Building Envelope	3,075	\$350		\$0		\$0	\$350
2	PA 1-02	Bedford Dwellings	Option C Savings			18,070	\$468,491		\$0	\$468,491

			Rate Applied		\$0.1138		\$25.9265		\$12.0952	
			Totals:	\$18,174	\$58,968	18,070	\$468,491		\$0	\$527,459

3	PA 1-04	Arlington Heights	Option C Savings	(\$643,459)	(\$73,256)	7,209	\$186,904	6,822	\$82,508	\$196,156
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			Rate Applied		\$0.1138		\$25.9265		\$12.0952	
			Totals:	(\$643,459)	(\$73,256)	7,209	\$186,904	6,822	\$82,508	\$196,156

4	PA 1-05	Allegheny Dwellings	Retrofit Tenant Area Lighting	295,457	\$33,623		\$0		\$0	\$33,623
4	PA 1-05	Allegheny Dwellings	Retrofit Common Area Lighting	31,790	\$3,618		\$0		\$0	\$3,618
4	PA 1-05	Allegheny Dwellings	High Efficiency Refrigerators	14,062	\$1,600		\$0		\$0	\$1,600
4	PA 1-05	Allegheny Dwellings	Water Conservations	222,931	\$25,370		\$0		\$0	\$25,370
4	PA 1-05	Allegheny Dwellings	Building Envelope	7,255	\$826		\$0		\$0	\$826
4	PA 1-05	Allegheny Dwellings	Option C Savings			9,496	\$246,203	5,258	\$63,594	\$309,797

			Rate Applied		\$0.1138		\$25.9265		\$12.0952	
			Totals:	\$71,495	\$65,036	9,496	\$246,203	5,258	\$63,594	\$374,834

2.2



## Energy Avoidance Summary by Site

Site	Project Number	Project Name	Cost Summary	Electrical		Natural Gas		Water		Total Energy Savings
				Yearly Energy Savings				Yearly Savings		
			Description of ECM	(KWH)	(\$)	(MCF)	(\$)	(Kgals)	(\$)	(\$)
5	PA 1-09	Northview Heights	Option C Savings	2,493,226	\$283,854	38,179	\$989,858	(32,662)	(\$395,049)	\$878,663

5	PA 1-09	Northview Heights	Option C Savings	2,493,226	\$283,854	38,179	\$989,858	(32,662)	(\$395,049)	\$878,663
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Rate Applied					\$0.1138		\$25,9265		\$12.0952	
Totals:	2,493,226				\$283,854	38,179	\$989,858	(32,662)	(\$395,049)	\$878,663

7	PA 1-11	Hamilton-Larimer	Retrofit Tenant Area Lighting	41,956	\$4,772		\$0		\$0	\$4,772
7	PA 1-11	Hamilton-Larimer	Retrofit Common Area Lighting	32,079	\$3,651		\$0		\$0	\$3,651
7	PA 1-11	Hamilton-Larimer	High Efficiency Refrigerators	19,494	\$2,218		\$0		\$0	\$2,218
7	PA 1-11	Hamilton-Larimer	Option C Savings	0	\$0	0	\$0	0	\$0	\$0

Rate Applied					\$0.1138		\$25,9265		\$12.0952	
Totals:	93,509				\$10,641	0	\$0	0	\$0	\$10,641

8	PA 1-15	Pennsylvania-Bidwell	Retrofit Tenant Area Lighting	84,959	\$9,668		\$0		\$0	\$9,668
8	PA 1-15	Pennsylvania-Bidwell	Retrofit Common Area Lighting	15,929	\$1,813		\$0		\$0	\$1,813
8	PA 1-15	Pennsylvania-Bidwell	Building Envelope	3,688	\$420		\$0		\$0	\$420
8	PA 1-15	Pennsylvania-Bidwell	Option C Savings	0	\$0	1,782	\$46,193	(198)	(\$2,397)	\$43,796

Rate Applied					\$0.1138		\$25,9265		\$12.0952	
Totals:	104,576				\$11,901	1,782	\$46,193	(198)	(\$2,397)	\$55,697

9	PA 1-17	Pressley Street	Retrofit Tenant Area Lighting	68,020	\$7,741		\$0		\$0	\$7,741
9	PA 1-17	Pressley Street	Retrofit Common Area Lighting	278,784	\$31,726		\$0		\$0	\$31,726
9	PA 1-17	Pressley Street	Building Envelope	4,321	\$492		\$0		\$0	\$492
9	PA 1-17	Pressley Street	Option C Savings	0	\$0	1,088	\$28,217	1,226	\$14,830	\$43,047

Rate Applied					\$0.1138		\$25,9265		\$12.0952	
Totals:	351,125				\$39,958	1,088	\$28,217	1,226	\$14,830	\$83,005

10	PA 1-20	Homewood North	Option C Savings	(518,719)	(\$59,030)	20,876	\$541,244	15,614	\$188,855	\$671,069
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Rate Applied					\$0.1138		\$25,9265		\$12.0952	
Totals:	(518,719)				(\$59,030)	20,876	\$541,244	15,614	\$188,855	\$671,069

2.3

## Energy Avoidance Summary by Site

Site	Project Number	Project Name	Cost Summary	Electrical		Natural Gas		Water		Total Energy Savings
				Yearly Energy Savings				Yearly Savings		
			Description of ECM	(KWH)	(\$)	(MCF)	(\$)	(K gals)	(\$)	(\$)
11	PA 1-31	Murray Towers	Retrofit Tenant Area Lighting	46,433	\$5,284		\$0		\$0	\$5,284
11	PA 1-31	Murray Towers	Retrofit Common Area Lighting	67,034	\$7,628		\$0		\$0	\$7,628
11	PA 1-31	Murray Towers	Building Envelope	674	\$77		\$0		\$0	\$77
11	PA 1-31	Murray Towers	Roof Replacement with Added Insulation	146	\$17		\$0		\$0	\$17
11	PA 1-31	Murray Towers	New Ventilation Unit	13,243	\$1,507		\$0		\$0	\$1,507
11	PA 1-31	Murray Towers	New Ventilation Unit	3,842	\$437		\$0		\$0	\$437
11	PA 1-31	Murray Towers	Insulated Duct	212	\$24		\$0		\$0	\$24
11	PA 1-31	Murray Towers	Option C Savings	0	\$0	3,922	\$101,689	1,494	\$18,072	\$119,761

Rate Applied		\$0.1138		\$25.9265		\$12.0952	
Totals:	131,585	\$14,974	3,922	\$101,689	1,494	\$18,072	\$134,736

12	PA 1-32	Glen Hazel Family	Retrofit Tenant Area Lighting	153,182	\$17,432		\$0		\$0	\$17,432
12	PA 1-32	Glen Hazel Family	Retrofit Common Area Lighting	0	\$0		\$0		\$0	\$0
12	PA 1-32	Glen Hazel Family	High Efficiency Refrigerators	34,071	\$3,877		\$0		\$0	\$3,877
12	PA 1-32	Glen Hazel Family	Water Conservations	0	\$0	840	\$21,769	1,797	\$21,731	\$43,500
12	PA 1-32	Glen Hazel Family	Limiting Thermostats	0	\$0	2,294	\$59,463			\$59,463

Rate Applied		\$0.1138		\$25.9265		\$12.0952	
Totals:	187,253	\$21,309	3,133	\$81,231	1,797	\$21,731	\$124,272

13	PA 1-40	Mazza Pavilion	Retrofit Tenant Area Lighting							
13	PA 1-40	Mazza Pavilion	Retrofit Common Area Lighting							
13	PA 1-40	Mazza Pavilion	Building Envelope							
13	PA 1-40	Mazza Pavilion	Option C Savings							

Rate Applied		\$0.1138		\$25.9265		\$12.0952	
Totals:	0	\$0	0	\$0	0	\$0	\$0

## Energy Avoidance Summary by Site

Site	Project Number	Project Name	Cost Summary	Electrical		Natural Gas		Water		Total Energy Savings
				Yearly Energy Savings				Yearly Savings		
			Description of ECM	(KWH)	(\$)	(MCF)	(\$)	(Kgals)	(\$)	(\$)
14	PA 1-41	Caluguri Plaza	Retrofit Tenant Area Lighting	53,296	\$6,065		\$0		\$0	\$6,065
14	PA 1-41	Caluguri Plaza	Retrofit Common Area Lighting	30,311	\$3,449		\$0		\$0	\$3,449
14	PA 1-41	Caluguri Plaza	Building Envelope	1,161	\$132		\$0		\$0	\$132
14	PA 1-41	Caluguri Plaza	Limiting Thermostats	30,433	\$3,463		\$0		\$0	\$3,463
14	PA 1-41	Caluguri Plaza	Option C Savings	0	\$0	1,295	\$33,583	(17)	(\$206)	\$33,377
Rate Applied					\$0.1138		\$25.9265		\$12.0952	
Totals:				115,201	\$13,110	1,295	\$33,583	(17)	(\$206)	\$46,487
15	PA 1-44	Finello Pavilion	Retrofit Tenant Area Lighting	24,773	\$2,819		\$0		\$0	\$2,819
15	PA 1-44	Finello Pavilion	Retrofit Common Area Lighting	17,579	\$2,000		\$0		\$0	\$2,000
15	PA 1-44	Finello Pavilion	Building Envelope	668	\$76		\$0		\$0	\$76
15	PA 1-44	Finello Pavilion	Limiting Thermostats	19,733	\$2,246		\$0		\$0	\$2,246
15	PA 1-44	Finello Pavilion	Option C Savings	0	\$0	(179)	(\$4,639)		\$0	(\$4,639)
Rate Applied					\$0.1138		\$25.9265		\$12.0952	
Totals:				62,753	\$7,141	(179)	(\$4,639)	0	\$0	\$2,502
16	PA 1-45	Morse Gardens	Retrofit Tenant Area Lighting	7,332	\$834		\$0		\$0	\$834
16	PA 1-45	Morse Gardens	Retrofit Common Area Lighting	9,164	\$1,043		\$0		\$0	\$1,043
16	PA 1-45	Morse Gardens	Limiting Thermostats	19,469	\$2,216		\$0		\$0	\$2,216
16	PA 1-45	Morse Gardens	Option C Savings	0	\$0	681	\$17,651	791	\$9,567	\$27,218
Rate Applied					\$0.1138		\$25.9265		\$12.0952	
Totals:				35,965	\$4,093	681	\$17,651	791	\$9,567	\$31,311
17	PA 1-46	Carrick Regency	Retrofit Tenant Area Lighting	33,678	\$3,833		\$0		\$0	\$3,833
17	PA 1-46	Carrick Regency	Retrofit Common Area Lighting	53,933	\$6,138		\$0		\$0	\$6,138
17	PA 1-46	Carrick Regency	Building Envelope	1,170	\$133		\$0		\$0	\$133
17	PA 1-46	Carrick Regency	Limiting Thermostats	15,161	\$1,725		\$0		\$0	\$1,725
17	PA 1-46	Carrick Regency	Option C Savings	0	\$0	(47)	(\$1,214)	(2,686)	(\$32,485)	(\$33,699)
Rate Applied					\$0.1138		\$25.9265		\$12.0952	
Totals:				103,941	\$11,829	(47)	(\$1,214)	(2,686)	(\$32,485)	(\$21,871)

2.5



## Energy Avoidance Summary by Site

Site	Project Number	Project Name	Cost Summary	Electrical		Natural Gas		Water		Total Energy Savings
				Yearly Energy Savings				Yearly Savings		
			Description of ECM	(KWH)	(\$)	(MCF)	(\$)	(Kgals)	(\$)	(\$)
18	PA 1-47	Gualtieri Manor	Retrofit Tenant Area Lighting	16,158	\$1,839		\$0		\$0	\$1,839
18	PA 1-47	Gualtieri Manor	Retrofit Common Area Lighting	33,036	\$3,759		\$0		\$0	\$3,759
18	PA 1-47	Gualtieri Manor	Limiting Thermostats	7,751	\$882		\$0		\$0	\$882
18	PA 1-47	Gualtieri Manor	Option C Savings	0	\$0	(7,904)	(\$204,934)	214	\$2,592	(\$202,342)

Rate Applied		\$0.1138	\$25,9265	\$12.0952	
Totals:	56,945	\$6,480	(7,904)	(\$204,934)	214
				\$2,592	(\$195,861)

### Total ALL Sites:

(KWH)	(\$)	(MCF)	(\$)	(Water)	(\$)	Total Energy Savings
3,663,568	\$417,008	97,602	\$2,530,478	(2,347)	(\$28,388)	\$2,919,098

## Utility Rate

The Rate table below outlines the rates applied throughout this report per the contractual agreement.

**Utility Rate Escalation Table:**

Guarantee Year	Gas Rate (MCF)	Agreed to Escalation	Water Rate (1000 gal)	Agreed to Escalation	Electricity Rate (kWh)	Agreed to Escalation
Year 1	\$19.8705		\$9.2700		\$0.1138	
Year 2	\$20.4666	3%	\$9.5481	3%	\$0.1138	0%
Year 3	\$21.0806	3%	\$9.8345	3%	\$0.1138	0%
Year 4	\$21.7130	3%	\$10.1296	3%	\$0.1138	0%
Year 5	\$22.3644	3%	\$10.4335	3%	\$0.1138	0%
Year 6	\$23.0354	3%	\$10.7465	3%	\$0.1138	0%
Year 7	\$23.7264	3%	\$11.0689	3%	\$0.1138	0%
Year 8	\$24.4382	3%	\$11.4009	3%	\$0.1138	0%
Year 9	\$25.1714	3%	\$11.7430	3%	\$0.1138	0%
Year 10	\$25.9265	3%	\$12.0952	3%	\$0.1138	0%
Year 11	\$26.7043	3%	\$12.4581	3%	\$0.1138	0%
Year 12	\$27.5054	3%	\$12.8318	3%	\$0.1138	0%

## Option C Savings

Year 10 Option C Savings

HA Site #	Site Name	Electric Savings		Gas Savings		Water / Sewer Savings		Total Savings
		kWh	Annual Savings	MCF	Annual Savings	1000 Gal/yr.	Annual Savings	Savings/yr.
PA 1-01	Addison Terrance	No longer HACP Managed						\$0
PA 1-02	Bedford Dwellings			18,070	\$468,491			\$468,491
PA 1-04	Arlington Heights	(643,459)	(\$73,256)	7,209	\$186,904	6,822	\$82,508	\$196,156
PA 1-05	Allegheny Dwellings			9,496	\$246,203	5,258	\$63,594	\$309,797
PA 1-09	Northview Heights	2,493,226	\$283,854	38,179	\$989,858	(32,662)	(\$395,049)	\$878,663
PA 1-11	Hamilton-Larimer	No longer HACP Managed						\$0
PA 1-15	Pennsylvania-Bidwell			1,782	\$46,193	(198)	(\$2,397)	\$43,796
PA 1-17	Pressley Street			1,088	\$28,217	1,226	\$14,830	\$43,047
PA 1-20	Homewood North	(\$18,719)	(\$59,030)	20,876	\$541,244	15,614	\$188,855	\$671,069
PA 1-31	Murray Tower			3,922	\$101,689	1,494	\$18,072	\$119,761
PA 1-41	Caliguiri Plaza (Allentown)			1,295	\$33,583	(17)	(\$206)	\$33,377
PA 1-44	Finello Pavilion (South Oakland)			(179)	(\$4,639)			(\$4,639)
PA 1-45	Morse Gardens			681	\$17,651	791	\$9,567	\$27,218
PA 1-46	Carriack Regency			(47)	(\$1,214)	(2,686)	(\$32,485)	(\$33,699)
PA 1-47	Gualtieri Manor			(7,904)	(\$204,934)	214	\$2,592	(\$202,342)
		1,331,047	\$151,567	94,469	\$2,449,247	(4,144)	(\$50,120)	\$2,550,695

3.1

# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

## Meter: PA 102 Gas

### Reference

	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	943	2,955	4,627	5,527	8,609	7,752	8,555	6,034	4,153	1,271	1,008	783
YTD Use	943	3,898	8,525	14,052	22,661	30,413	38,968	45,002	49,153	50,426	51,434	52,217
Month \$	\$ 18,738	\$ 58,718	\$ 91,948	\$ 109,823	\$ 171,066	\$ 154,037	\$ 169,993	\$ 119,899	\$ 82,523	\$ 25,256	\$ 20,030	\$ 15,559
YTD \$	\$ 18,738	\$ 77,456	\$ 169,404	\$ 279,227	\$ 450,293	\$ 604,330	\$ 774,323	\$ 894,222	\$ 976,745	\$ 1,002,001	\$ 1,022,031	\$ 1,037,590
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	134	442	604	812	833	969	832	349	236	47	4	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 19.871	\$ 19.871	\$ 19.872	\$ 19.870	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871
YTD Rate	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871

### Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	1,827	3,424	5,447	8,208	8,282	9,604	5,683	4,405	3,076	1,529	1,220	1,331
YTD Use	1,827	5,251	10,699	19,007	27,289	36,893	42,576	46,981	50,057	51,586	52,807	54,137
Month \$	\$ 47,364	\$ 88,784	\$ 141,227	\$ 215,407	\$ 214,728	\$ 249,003	\$ 147,336	\$ 114,210	\$ 79,747	\$ 39,645	\$ 31,643	\$ 34,497
YTD \$	\$ 47,364	\$ 136,148	\$ 277,375	\$ 492,782	\$ 707,510	\$ 956,513	\$ 1,103,850	\$ 1,218,060	\$ 1,297,807	\$ 1,337,452	\$ 1,369,095	\$ 1,403,592
BP Length	30	30	31	31	29	30	30	31	30	30	30	33
HDD	85	305	578	972	980	1,156	616	435	257	44	2	-
CDD	84	7	-	-	-	-	-	15	61	181	248	302
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

### SimActual

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	831	2,835	4,067	5,414	5,222	5,357	4,388	3,072	2,001	1,076	875	929
YTD Use	831	3,666	7,733	13,147	18,369	23,725	28,114	31,186	33,187	34,263	35,138	36,067
Month \$	\$ 21,545	\$ 73,502	\$ 105,443	\$ 140,369	\$ 135,375	\$ 138,886	\$ 113,773	\$ 79,657	\$ 51,882	\$ 27,900	\$ 22,686	\$ 24,086
YTD \$	\$ 21,545	\$ 95,047	\$ 200,490	\$ 340,858	\$ 476,233	\$ 615,119	\$ 728,892	\$ 808,549	\$ 860,430	\$ 888,330	\$ 911,016	\$ 935,101
BP Length	30	30	31	31	29	30	30	31	30	30	30	33
HDD	85	305	578	972	980	1,156	616	435	257	44	2	-
CDD	84	7	-	-	-	-	-	15	61	181	248	302
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

### SimActual vs. Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	-54.5%	-17.2%	-25.3%	-34.8%	-37.0%	-44.2%	-22.8%	-30.3%	-34.9%	-29.6%	-28.3%	-30.2%
YTD Use	-54.5%	-30.2%	-27.7%	-30.8%	-32.7%	-35.7%	-34.0%	-33.6%	-33.7%	-33.6%	-33.5%	-33.4%
Month \$	-54.5%	-17.2%	-25.3%	-34.8%	-37.0%	-44.2%	-22.8%	-30.3%	-34.9%	-29.6%	-28.3%	-30.2%
YTD \$	-54.5%	-30.2%	-27.7%	-30.8%	-32.7%	-35.7%	-34.0%	-33.6%	-33.7%	-33.6%	-33.5%	-33.4%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

### Use Avoidance

Month Use	996	589	1,380	2,894	3,061	4,247	1,295	1,333	1,075	453	345	402
YTD Use	996	1,585	2,966	5,860	8,920	13,168	14,462	15,795	16,870	17,323	17,668	18,070

### Cost Avoidance

Month Use \$	\$ 25,819	\$ 15,282	\$ 35,784	\$ 75,038	\$ 79,353	\$ 110,118	\$ 33,563	\$ 34,554	\$ 27,865	\$ 11,745	\$ 8,958	\$ 10,411
YTD \$	\$ 25,819	\$ 41,101	\$ 76,886	\$ 151,924	\$ 231,276	\$ 341,394	\$ 374,957	\$ 409,511	\$ 437,376	\$ 449,122	\$ 458,079	\$ 468,491



# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

## Meter: PA 1-04 Electric

### Reference

	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	53,333	57,067	60,000	64,823	55,994	53,667	57,000	51,533	51,133	51,067	62,867	56,533
YTD Use	53,333	110,400	170,400	235,223	291,217	344,884	401,884	453,417	504,550	555,617	618,484	675,017
Month \$	\$ 6,072	\$ 6,497	\$ 6,831	\$ 7,280	\$ 6,375	\$ 6,110	\$ 6,489	\$ 5,867	\$ 5,821	\$ 5,814	\$ 7,157	\$ 6,436
YTD \$	\$ 6,072	\$ 12,569	\$ 19,400	\$ 26,780	\$ 33,155	\$ 39,265	\$ 45,754	\$ 51,621	\$ 57,442	\$ 63,256	\$ 70,413	\$ 76,849
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	134	442	604	812	833	969	832	349	236	47	4	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114
YTD Rate	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114

### Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	55,157	57,067	60,000	64,823	55,994	53,667	57,000	51,533	51,133	51,067	62,867	56,533
YTD Use	55,157	112,224	172,224	237,047	293,041	346,708	403,708	455,241	506,374	557,441	620,308	676,841
Month \$	\$ 6,279	\$ 6,497	\$ 6,831	\$ 7,380	\$ 6,375	\$ 6,110	\$ 6,489	\$ 5,867	\$ 5,821	\$ 5,814	\$ 7,157	\$ 6,436
YTD \$	\$ 6,279	\$ 12,776	\$ 19,607	\$ 26,987	\$ 33,362	\$ 39,472	\$ 45,961	\$ 51,828	\$ 57,649	\$ 63,463	\$ 70,620	\$ 77,057
BP Length	31	31	30	31	31	28	31	30	31	30	31	31
HDD	85	332	552	972	1,071	1,065	628	423	271	31	2	-
CDD	85	7	-	-	-	-	-	15	61	198	245	288
Month Rate	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114
YTD Rate	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114

### SimActual

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	83,395	86,075	100,666	150,822	146,887	149,424	98,734	99,036	103,820	88,219	103,164	110,058
YTD Use	83,395	169,470	270,136	420,958	567,845	717,269	816,003	915,039	1,018,859	1,107,078	1,210,242	1,320,300
Month \$	\$ 9,494	\$ 9,799	\$ 11,461	\$ 17,171	\$ 16,723	\$ 17,012	\$ 11,241	\$ 11,275	\$ 11,820	\$ 10,044	\$ 11,745	\$ 12,530
YTD \$	\$ 9,494	\$ 19,294	\$ 30,754	\$ 47,925	\$ 64,648	\$ 81,659	\$ 92,900	\$ 104,175	\$ 115,995	\$ 126,038	\$ 137,783	\$ 150,313
BP Length	31	31	30	31	31	28	31	30	31	30	31	31
HDD	85	332	552	972	1,071	1,065	628	423	271	31	2	-
CDD	85	7	-	-	-	-	-	15	61	198	245	288
Month Rate	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114
YTD Rate	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114

### SimActual vs. Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	51.2%	50.8%	67.8%	132.7%	162.3%	178.4%	73.2%	92.2%	103.0%	72.8%	64.1%	94.7%
YTD Use	51.2%	51.0%	56.9%	77.6%	93.8%	106.9%	102.1%	101.0%	101.2%	98.6%	95.1%	95.1%
Month \$	51.2%	50.8%	67.8%	132.7%	162.3%	178.4%	73.2%	92.2%	103.0%	72.8%	64.1%	94.7%
YTD \$	51.2%	51.0%	56.9%	77.6%	93.8%	106.9%	102.1%	101.0%	101.2%	98.6%	95.1%	95.1%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

### Use Avoidance

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	(28,238)	(29,008)	(40,666)	(83,999)	(90,893)	(93,757)	(41,734)	(47,503)	(52,687)	(37,152)	(40,297)	(53,525)
YTD Use	(28,238)	(57,246)	(97,912)	(183,911)	(274,804)	(370,561)	(412,295)	(459,798)	(512,485)	(549,637)	(589,934)	(643,459)

### Cost Avoidance

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use \$	\$ (3,215)	\$ (3,302)	\$ (4,630)	\$ (9,791)	\$ (10,348)	\$ (10,902)	\$ (4,751)	\$ (5,408)	\$ (5,998)	\$ (4,230)	\$ (4,588)	\$ (6,094)
YTD \$	\$ (3,215)	\$ (6,517)	\$ (11,147)	\$ (20,938)	\$ (31,286)	\$ (42,187)	\$ (46,939)	\$ (52,347)	\$ (58,345)	\$ (62,575)	\$ (67,163)	\$ (73,256)

# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

Meter: PA 1-04 Gas

Reference	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	253	1,199	1,067	1,765	1,747	1,650	1,537	1,010	470	214	405	174
YTD Use	253	1,452	2,519	4,284	6,031	7,681	9,218	10,228	10,698	10,912	11,317	11,491
Month \$	\$ 5,027	\$ 23,825	\$ 21,202	\$ 35,072	\$ 34,714	\$ 32,786	\$ 30,541	\$ 20,069	\$ 9,339	\$ 4,252	\$ 8,048	\$ 3,457
YTD \$	\$ 5,027	\$ 28,852	\$ 50,054	\$ 85,126	\$ 119,840	\$ 152,626	\$ 183,167	\$ 203,236	\$ 212,575	\$ 216,827	\$ 224,875	\$ 228,332
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	214	535	694	905	926	1,053	925	439	313	92	11	3
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 19.870	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.870	\$ 19.871	\$ 19.870	\$ 19.870	\$ 19.869	\$ 19.872	\$ 19.868
YTD Rate	\$ 19.870	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871

Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	292	718	1,194	1,853	1,851	2,154	1,277	910	637	163	85	73
YTD Use	292	1,010	2,204	4,057	5,908	8,063	9,339	10,249	10,886	11,049	11,134	11,207
Month \$	\$ 7,581	\$ 18,606	\$ 30,949	\$ 48,051	\$ 47,998	\$ 55,848	\$ 33,097	\$ 23,598	\$ 16,516	\$ 4,217	\$ 2,114	\$ 1,888
YTD \$	\$ 7,581	\$ 26,187	\$ 57,136	\$ 105,186	\$ 153,183	\$ 209,033	\$ 242,130	\$ 265,728	\$ 282,244	\$ 286,461	\$ 288,575	\$ 290,564
BP Length	30	30	31	31	29	30	31	30	31	30	31	31
HDD	134	388	671	1,065	1,067	1,246	721	503	339	57	9	2
CDD	84	7	-	-	-	-	-	15	61	198	245	288
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

SimActual	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	206	270	368	528	521	547	409	295	227	222	195	208
YTD Use	206	476	844	1,372	1,893	2,441	2,850	3,145	3,372	3,595	3,790	3,998
Month \$	\$ 5,341	\$ 7,000	\$ 9,541	\$ 13,697	\$ 13,508	\$ 14,190	\$ 10,614	\$ 7,648	\$ 5,893	\$ 5,763	\$ 5,063	\$ 5,400
YTD \$	\$ 5,341	\$ 12,341	\$ 21,882	\$ 35,579	\$ 49,087	\$ 63,276	\$ 73,891	\$ 81,539	\$ 87,432	\$ 93,195	\$ 98,259	\$ 103,659
BP Length	30	30	31	31	29	30	31	30	31	30	31	31
HDD	134	388	671	1,065	1,067	1,246	721	503	339	57	9	2
CDD	84	7	-	-	-	-	-	15	61	198	245	288
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

SimActual vs. Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	-29.5%	-62.4%	-69.2%	-71.5%	-71.9%	-74.6%	-67.9%	-67.6%	-64.3%	-36.7%	128.7%	186.0%
YTD Use	-29.5%	-52.9%	-61.7%	-66.2%	-68.0%	-69.7%	-69.5%	-69.3%	-69.0%	-67.5%	-66.0%	-64.3%
Month \$	-29.5%	-62.4%	-69.2%	-71.5%	-71.9%	-74.6%	-67.9%	-67.6%	-64.3%	-36.7%	128.7%	186.0%
YTD \$	-29.5%	-52.9%	-61.7%	-66.2%	-68.0%	-69.7%	-69.5%	-69.3%	-69.0%	-67.5%	-66.0%	-64.3%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

Use Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	86	448	926	1,325	1,330	1,607	967	615	410	(60)	(110)	(135)
YTD Use	86	534	1,360	2,685	4,015	5,622	6,489	7,104	7,514	7,454	7,344	7,209

Cost Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use \$	\$ 2,240	\$ 11,606	\$ 21,408	\$ 34,354	\$ 34,491	\$ 41,639	\$ 22,483	\$ 15,949	\$ 10,623	\$ (1,547)	\$ (2,850)	\$ (3,512)
YTD \$	\$ 2,240	\$ 13,846	\$ 35,254	\$ 69,607	\$ 104,098	\$ 145,757	\$ 168,240	\$ 184,189	\$ 194,812	\$ 193,266	\$ 190,416	\$ 186,904

# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

## Meter: PA 1-04 Water

### Reference

	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	342	373	386	483	511	1,491	685	5,634	1,639	490	685	635
YTD Use	342	715	1,101	1,584	2,095	3,586	4,271	9,905	11,544	12,034	12,720	13,355
Month \$	\$ 3,170	\$ 3,458	\$ 3,578	\$ 4,478	\$ 4,737	\$ 13,822	\$ 6,350	\$ 52,227	\$ 15,194	\$ 4,542	\$ 6,359	\$ 5,886
YTD \$	\$ 3,170	\$ 6,628	\$ 10,206	\$ 14,684	\$ 19,421	\$ 33,243	\$ 39,593	\$ 91,820	\$ 107,014	\$ 111,556	\$ 117,915	\$ 123,801
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	134	442	604	812	833	969	832	349	236	47	4	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 9.269	\$ 9.271	\$ 9.269	\$ 9.271	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.269	\$ 9.270	\$ 9.269
YTD Rate	\$ 9.269	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270

### Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	331	360	397	480	510	1,507	663	5,656	1,586	543	664	637
YTD Use	331	691	1,088	1,568	2,079	3,586	4,249	9,905	11,491	12,034	12,698	13,335
Month \$	\$ 3,999	\$ 4,358	\$ 4,804	\$ 5,809	\$ 6,170	\$ 18,233	\$ 8,018	\$ 68,412	\$ 19,185	\$ 6,566	\$ 8,030	\$ 7,700
YTD \$	\$ 3,999	\$ 8,357	\$ 13,161	\$ 18,970	\$ 25,140	\$ 43,374	\$ 51,392	\$ 119,803	\$ 138,988	\$ 145,554	\$ 153,584	\$ 161,284
BP Length	29	30	31	31	31	29	30	31	30	31	30	31
HDD	77	296	571	973	1,049	1,111	616	435	257	44	2	-
CDD	84	7	-	-	-	-	-	15	61	198	239	283
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

### SimActual

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	532	495	523	508	508	793	525	553	512	500	535	529
YTD Use	532	1,027	1,550	2,058	2,566	3,359	3,884	4,437	4,949	5,449	5,984	6,513
Month \$	\$ 6,435	\$ 5,987	\$ 6,326	\$ 6,144	\$ 6,144	\$ 9,592	\$ 6,350	\$ 6,689	\$ 6,193	\$ 6,048	\$ 6,471	\$ 6,398
YTD \$	\$ 6,435	\$ 12,422	\$ 18,748	\$ 24,892	\$ 31,036	\$ 40,628	\$ 46,978	\$ 53,667	\$ 59,859	\$ 65,907	\$ 72,378	\$ 78,776
BP Length	29	30	31	31	31	29	30	31	30	31	30	31
HDD	77	296	571	973	1,049	1,111	616	435	257	44	2	-
CDD	84	7	-	-	-	-	-	15	61	198	239	283
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

### SimActual vs. Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	60.9%	37.4%	31.7%	5.8%	-0.4%	-17.4%	-20.8%	-90.2%	-67.7%	-7.9%	-19.4%	-16.9%
YTD Use	60.9%	48.6%	42.4%	31.2%	23.5%	-6.3%	-8.6%	-55.2%	-56.9%	-54.7%	-52.9%	-51.2%
Month \$	60.9%	37.4%	31.7%	5.8%	-0.4%	-17.4%	-20.8%	-90.2%	-67.7%	-7.9%	-19.4%	-16.9%
YTD \$	60.9%	48.6%	42.4%	31.2%	23.5%	-6.3%	-8.6%	-55.2%	-56.9%	-54.7%	-52.9%	-51.2%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

### Use Avoidance

Month Use	(201)	(135)	(126)	(28)	2	714	138	5,103	1,074	43	129	108
YTD Use	(201)	(336)	(462)	(490)	(487)	227	365	5,468	6,542	6,585	6,714	6,822

### Cost Avoidance

Month Use \$	\$ (2,436)	\$ (1,629)	\$ (1,532)	\$ (335)	\$ 25	\$ 8,642	\$ 1,668	\$ 61,723	\$ 12,992	\$ 519	\$ 1,559	\$ 1,302
YTD \$	\$ (2,436)	\$ (4,065)	\$ (5,596)	\$ (5,922)	\$ (5,896)	\$ 2,746	\$ 4,414	\$ 66,137	\$ 79,129	\$ 79,647	\$ 81,206	\$ 82,508



# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

Meter: PA 1-05 Gas

Reference	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	173	828	1,700	2,652	3,391	2,598	3,244	1,336	921	134	80	157
YTD Use	173	1,001	2,701	5,353	8,744	11,342	14,586	15,922	16,843	16,977	17,057	17,214
Month \$	\$ 3,438	\$ 16,453	\$ 33,780	\$ 52,696	\$ 67,381	\$ 51,624	\$ 64,460	\$ 36,547	\$ 18,301	\$ 2,663	\$ 1,590	\$ 3,120
YTD \$	\$ 3,438	\$ 19,891	\$ 53,671	\$ 106,367	\$ 173,748	\$ 225,372	\$ 289,832	\$ 316,379	\$ 334,680	\$ 337,343	\$ 338,933	\$ 342,053
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	92	382	544	750	771	913	770	293	188	30	-	-
CDD	12	-	-	-	-	-	-	42	83	263	266	-
Month Rate	\$ 19.873	\$ 19.871	\$ 19.871	\$ 19.870	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.873	\$ 19.875	\$ 19.873
YTD Rate	\$ 19.873	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871

Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	90	602	1,489	2,541	3,659	4,143	2,524	1,243	1,143	200	81	53
YTD Use	90	691	2,181	4,721	8,380	12,523	15,046	16,290	17,433	17,633	17,714	17,768
Month \$	\$ 2,326	\$ 15,498	\$ 38,610	\$ 63,875	\$ 94,852	\$ 107,406	\$ 65,427	\$ 32,239	\$ 29,638	\$ 5,195	\$ 2,101	\$ 1,383
YTD \$	\$ 2,326	\$ 17,924	\$ 56,534	\$ 122,409	\$ 217,261	\$ 324,667	\$ 390,093	\$ 422,332	\$ 451,970	\$ 457,165	\$ 459,266	\$ 460,649
BP Length	31	28	32	30	34	31	30	30	30	30	30	30
HDD	10	160	414	719	1,040	1,182	714	344	315	43	8	-
CDD	182	11	4	-	-	-	-	8	17	164	244	235
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

SimActual	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	29	247	729	1,152	1,601	1,557	1,246	894	742	28	27	21
YTD Use	29	276	1,005	2,157	3,757	5,314	6,560	7,454	8,195	8,223	8,250	8,271
Month \$	\$ 752	\$ 6,404	\$ 18,900	\$ 29,854	\$ 41,498	\$ 40,363	\$ 32,291	\$ 23,183	\$ 19,230	\$ 723	\$ 692	\$ 552
YTD \$	\$ 752	\$ 7,156	\$ 26,056	\$ 55,910	\$ 97,408	\$ 137,773	\$ 170,065	\$ 193,248	\$ 212,478	\$ 213,201	\$ 213,894	\$ 214,446
BP Length	31	28	32	30	34	31	30	30	30	30	30	30
HDD	10	160	414	719	1,040	1,182	714	344	315	43	8	-
CDD	182	11	4	-	-	-	-	8	17	164	244	235
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

SimActual vs. Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	-67.7%	-58.9%	-51.0%	-54.7%	-56.2%	-62.4%	-50.6%	-28.1%	-35.1%	-86.1%	-67.0%	-60.1%
YTD Use	-67.7%	-60.1%	-53.9%	-54.3%	-55.2%	-57.6%	-56.4%	-54.2%	-53.0%	-53.4%	-53.4%	-53.4%
Month \$	-67.7%	-58.9%	-51.0%	-54.7%	-56.2%	-62.4%	-50.6%	-28.1%	-35.1%	-86.1%	-67.0%	-60.1%
YTD \$	-67.7%	-60.1%	-53.9%	-54.3%	-55.2%	-57.6%	-56.4%	-54.2%	-53.0%	-53.4%	-53.4%	-53.4%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

Use Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	61	355	760	1,389	2,058	2,586	1,278	349	401	172	54	32
YTD Use	61	415	1,176	2,565	4,623	7,209	8,487	8,836	9,237	9,410	9,464	9,496

Cost Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use \$	\$ 1,574	\$ 9,194	\$ 19,709	\$ 36,021	\$ 53,354	\$ 67,041	\$ 33,135	\$ 9,055	\$ 10,408	\$ 4,472	\$ 1,408	\$ 831
YTD \$	\$ 1,574	\$ 10,768	\$ 30,477	\$ 66,498	\$ 119,852	\$ 186,893	\$ 220,029	\$ 229,084	\$ 239,492	\$ 243,964	\$ 245,372	\$ 246,203



# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

Sim/Actual: Actual usage and calculated costs for current Year.

Meter: PA 1-05 Water

Reference	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	821	680	613	831	1,120	678	415	1,364	558	1,490	845	906
YTD Use	821	1,501	2,114	2,945	4,065	4,743	5,158	6,522	7,080	8,570	9,415	10,321
Month \$	\$ 7,611	\$ 6,304	\$ 5,683	\$ 7,706	\$ 10,382	\$ 6,285	\$ 3,847	\$ 12,644	\$ 5,173	\$ 13,812	\$ 7,833	\$ 8,399
YTD \$	\$ 7,611	\$ 13,915	\$ 19,598	\$ 27,304	\$ 37,686	\$ 43,971	\$ 47,818	\$ 60,462	\$ 65,635	\$ 79,447	\$ 87,280	\$ 95,679
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	134	442	604	812	833	969	832	349	236	47	4	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 9.270	\$ 9.271	\$ 9.271	\$ 9.273	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.271	\$ 9.270	\$ 9.270	\$ 9.270
YTD Rate	\$ 9.270	\$ 9.270	\$ 9.271	\$ 9.271	\$ 9.271	\$ 9.271	\$ 9.271	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270

Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	863	740	602	813	1,064	749	440	1,075	823	1,286	920	916
YTD Use	863	1,603	2,205	3,018	4,082	4,832	5,271	6,347	7,170	8,456	9,376	10,292
Month \$	\$ 10,441	\$ 8,950	\$ 7,276	\$ 9,836	\$ 12,870	\$ 9,065	\$ 5,320	\$ 13,006	\$ 9,957	\$ 15,559	\$ 11,129	\$ 11,074
YTD \$	\$ 10,441	\$ 19,391	\$ 26,667	\$ 36,503	\$ 49,373	\$ 58,438	\$ 63,758	\$ 76,764	\$ 86,721	\$ 102,279	\$ 113,408	\$ 124,482
BP Length	31	32	29	32	31	28	28	30	32	31	28	32
HDD	75	232	504	914	1,053	1,144	678	396	365	65	6	-
CDD	152	15	-	-	-	-	-	8	30	171	232	253
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

Sim/Actual	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	382	396	345	410	502	383	395	381	442	408	437	353
YTD Use	382	778	1,123	1,533	2,035	2,418	2,813	3,194	3,636	4,044	4,481	5,034
Month \$	\$ 4,620	\$ 4,790	\$ 4,173	\$ 4,959	\$ 6,072	\$ 4,632	\$ 4,778	\$ 4,608	\$ 5,346	\$ 4,935	\$ 5,286	\$ 6,689
YTD \$	\$ 4,620	\$ 9,410	\$ 13,583	\$ 18,542	\$ 24,614	\$ 29,246	\$ 34,024	\$ 38,632	\$ 43,978	\$ 48,913	\$ 54,199	\$ 60,887
BP Length	31	32	29	32	31	28	28	30	32	31	28	32
HDD	75	232	504	914	1,053	1,144	678	396	365	65	6	-
CDD	152	15	-	-	-	-	-	8	30	171	232	253
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

Sim/Actual vs. Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	-55.7%	-46.5%	-42.7%	-49.6%	-52.8%	-48.9%	-10.2%	-64.6%	-46.3%	-68.3%	-52.5%	-39.6%
YTD Use	-55.7%	-51.5%	-49.1%	-49.2%	-50.1%	-50.0%	-46.6%	-49.7%	-49.3%	-52.2%	-52.2%	-51.1%
Month \$	-55.7%	-46.5%	-42.7%	-49.6%	-52.8%	-48.9%	-10.2%	-64.6%	-46.3%	-68.3%	-52.5%	-39.6%
YTD \$	-55.7%	-51.5%	-49.1%	-49.2%	-50.1%	-50.0%	-46.6%	-49.7%	-49.3%	-52.2%	-52.2%	-51.1%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

Use Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	481	344	257	403	562	366	45	694	381	878	483	363
YTD Use	481	825	1,082	1,485	2,047	2,414	2,458	3,153	3,534	4,412	4,895	5,258

Cost Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use \$	\$ 5,821	\$ 4,160	\$ 3,103	\$ 4,877	\$ 6,798	\$ 4,433	\$ 542	\$ 8,398	\$ 4,611	\$ 10,624	\$ 5,843	\$ 4,385
YTD \$	\$ 5,821	\$ 9,981	\$ 13,084	\$ 17,961	\$ 24,759	\$ 29,192	\$ 29,734	\$ 38,132	\$ 42,742	\$ 53,366	\$ 59,209	\$ 63,594

# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

## Meter: PA 1-09 Electric

### Reference

	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	341,938	352,979	383,458	443,435	381,098	375,752	371,218	327,657	363,217	368,472	380,818	374,790
YTD Use	341,938	694,917	1,078,375	1,521,810	1,903,508	2,279,260	2,650,478	2,978,135	3,341,352	3,709,824	4,090,642	4,465,432
Month \$	\$ 38,929	\$ 40,186	\$ 43,656	\$ 50,484	\$ 43,456	\$ 42,779	\$ 42,262	\$ 37,303	\$ 41,352	\$ 41,950	\$ 43,355	\$ 42,669
YTD \$	\$ 38,929	\$ 79,115	\$ 122,771	\$ 173,255	\$ 216,711	\$ 259,490	\$ 301,752	\$ 339,055	\$ 380,407	\$ 422,357	\$ 465,712	\$ 508,381
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	134	442	604	812	833	969	832	349	236	47	4	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114
YTD Rate	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114

### Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	354,028	352,979	383,458	429,131	396,002	375,752	371,218	327,657	363,217	368,472	380,818	396,188
YTD Use	354,028	707,007	1,090,465	1,519,596	1,915,598	2,291,350	2,662,568	2,990,225	3,353,442	3,721,914	4,102,732	4,488,920
Month \$	\$ 40,306	\$ 40,187	\$ 43,657	\$ 48,857	\$ 45,085	\$ 42,779	\$ 42,263	\$ 37,304	\$ 41,352	\$ 41,951	\$ 43,356	\$ 43,967
YTD \$	\$ 40,306	\$ 80,493	\$ 124,149	\$ 173,006	\$ 218,091	\$ 260,870	\$ 303,133	\$ 340,437	\$ 381,789	\$ 423,740	\$ 467,096	\$ 511,064
BP Length	31	31	30	30	32	28	31	30	31	30	31	32
HDD	85	332	552	948	1,095	1,065	628	423	271	31	2	-
CDD	85	7	-	-	-	-	-	15	61	198	245	294
Month Rate	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114
YTD Rate	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114

### SimActual

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	169,258	175,378	170,888	149,327	139,660	149,327	172,118	168,969	173,662	167,915	178,384	190,809
YTD Use	169,258	344,636	515,524	664,851	804,511	953,838	1,125,956	1,294,925	1,468,586	1,636,502	1,814,886	1,995,694
Month \$	\$ 19,270	\$ 19,967	\$ 19,456	\$ 17,001	\$ 15,900	\$ 17,001	\$ 19,596	\$ 19,237	\$ 19,771	\$ 19,117	\$ 20,309	\$ 20,585
YTD \$	\$ 19,270	\$ 39,237	\$ 58,692	\$ 75,693	\$ 91,594	\$ 108,594	\$ 128,190	\$ 147,427	\$ 167,199	\$ 186,316	\$ 206,625	\$ 227,210
BP Length	31	31	30	30	32	28	31	30	31	30	31	32
HDD	85	332	552	948	1,095	1,065	628	423	271	31	2	-
CDD	85	7	-	-	-	-	-	15	61	198	245	294
Month Rate	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114
YTD Rate	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114

### SimActual vs. Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	-52.2%	-50.3%	-55.4%	-65.2%	-64.7%	-60.3%	-53.6%	-48.4%	-52.2%	-54.4%	-53.2%	-53.2%
YTD Use	-52.2%	-51.3%	-52.7%	-56.2%	-58.0%	-58.4%	-57.7%	-56.7%	-56.2%	-56.0%	-55.8%	-55.5%
Month \$	-52.2%	-50.3%	-55.4%	-65.2%	-64.7%	-60.3%	-53.6%	-48.4%	-52.2%	-54.4%	-53.2%	-53.2%
YTD \$	-52.2%	-51.3%	-52.7%	-56.2%	-58.0%	-58.4%	-57.7%	-56.7%	-56.2%	-56.0%	-55.8%	-55.5%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

### Use Avoidance

Month Use	184,770	177,601	212,570	279,804	256,342	226,425	199,100	158,688	189,556	200,557	202,434	205,379
YTD Use	184,770	362,371	574,941	854,745	1,111,087	1,337,512	1,536,612	1,695,300	1,884,856	2,085,412	2,287,846	2,493,226

### Cost Avoidance

Month Use \$	\$ 21,036	\$ 20,220	\$ 24,201	\$ 31,856	\$ 29,183	\$ 25,778	\$ 22,668	\$ 18,067	\$ 21,581	\$ 22,833	\$ 23,047	\$ 23,382
YTD \$	\$ 21,036	\$ 41,256	\$ 65,457	\$ 97,313	\$ 126,497	\$ 152,276	\$ 174,943	\$ 193,010	\$ 214,591	\$ 237,424	\$ 260,471	\$ 283,854

# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

Meter: PA 1.09 Gas

Reference	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	1,194	3,730	5,635	9,143	10,940	9,587	9,357	5,211	3,527	1,684	1,130	1,100
YTD Use	1,194	4,924	10,559	19,702	30,642	40,229	49,586	54,797	58,324	60,008	61,138	62,238
Month \$	\$ 23,725	\$ 74,117	\$ 111,971	\$ 181,671	\$ 217,384	\$ 190,499	\$ 185,929	\$ 103,546	\$ 70,084	\$ 33,462	\$ 22,454	\$ 21,858
YTD \$	\$ 23,725	\$ 97,842	\$ 209,813	\$ 391,484	\$ 608,868	\$ 799,367	\$ 985,296	\$ 1,088,842	\$ 1,158,926	\$ 1,192,388	\$ 1,214,842	\$ 1,236,700
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	111	412	574	781	802	941	801	321	211	38	2	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 19.870	\$ 19.871	\$ 19.871	\$ 19.870	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871
YTD Rate	\$ 19.870	\$ 19.870	\$ 19.871	\$ 19.870	\$ 19.870	\$ 19.870	\$ 19.870	\$ 19.870	\$ 19.870	\$ 19.870	\$ 19.870	\$ 19.870

Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	1,573	3,460	6,878	10,272	12,197	11,880	6,704	4,810	3,076	1,114	931	873
YTD Use	1,573	5,033	11,911	22,183	34,381	46,260	52,964	57,774	60,850	61,964	62,895	63,768
Month \$	\$ 40,778	\$ 89,704	\$ 178,331	\$ 266,321	\$ 316,234	\$ 307,997	\$ 173,811	\$ 124,702	\$ 79,750	\$ 28,874	\$ 24,145	\$ 22,668
YTD \$	\$ 40,778	\$ 130,482	\$ 308,813	\$ 575,134	\$ 891,368	\$ 1,199,365	\$ 1,373,176	\$ 1,497,879	\$ 1,577,629	\$ 1,606,503	\$ 1,630,648	\$ 1,653,284
BP Length	31	29	33	30	33	30	30	30	29	30	32	30
HDD	66	256	578	918	1,098	1,075	570	385	218	24	-	-
CDD	93	7	-	-	-	-	-	15	61	198	247	285
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

SimActual	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	1,293	1,869	2,681	3,132	3,599	3,261	2,540	1,977	1,837	1,158	1,233	1,099
YTD Use	1,293	3,162	5,843	8,975	12,575	15,836	18,376	20,353	22,189	23,348	24,580	25,589
Month \$	\$ 33,523	\$ 48,457	\$ 69,509	\$ 81,207	\$ 93,317	\$ 84,549	\$ 65,858	\$ 51,254	\$ 47,619	\$ 30,028	\$ 31,957	\$ 26,147
YTD \$	\$ 33,523	\$ 81,980	\$ 151,489	\$ 232,695	\$ 326,013	\$ 410,562	\$ 476,420	\$ 527,674	\$ 575,293	\$ 605,321	\$ 637,278	\$ 663,425
BP Length	31	29	33	30	33	30	30	30	29	30	32	30
HDD	66	256	578	918	1,098	1,075	570	385	218	24	-	-
CDD	93	7	-	-	-	-	-	15	61	198	247	285
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

SimActual vs. Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	-17.8%	-46.0%	-61.0%	-49.5%	-70.5%	-72.5%	-62.1%	-58.9%	-40.3%	-4.0%	32.4%	15.5%
YTD Use	-17.8%	-37.2%	-50.9%	-49.5%	-63.4%	-65.8%	-65.3%	-64.8%	-43.5%	-62.3%	-60.9%	-59.9%
Month \$	-17.8%	-46.0%	-61.0%	-49.5%	-70.5%	-72.5%	-62.1%	-58.9%	-40.3%	-4.0%	32.4%	15.5%
YTD \$	-17.8%	-37.2%	-50.9%	-49.5%	-63.4%	-65.8%	-65.3%	-64.8%	-43.5%	-62.3%	-60.9%	-59.9%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

Use Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	280	1,591	4,197	7,140	8,598	8,619	4,164	2,833	1,239	(45)	(301)	(135)
YTD Use	280	1,871	6,068	13,208	21,806	30,425	34,588	37,421	38,661	38,616	38,315	38,179

Cost Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use \$	\$ 7,255	\$ 41,248	\$ 108,822	\$ 185,114	\$ 222,916	\$ 223,448	\$ 107,953	\$ 73,448	\$ 32,131	\$ (1,154)	\$ (7,812)	\$ (3,511)
YTD \$	\$ 7,255	\$ 48,502	\$ 157,325	\$ 342,439	\$ 565,355	\$ 788,804	\$ 896,756	\$ 970,204	\$ 1,002,335	\$ 1,001,181	\$ 993,369	\$ 989,858



# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

## Meter: PA 1 09 Water

### Reference

	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	2,204	1,345	1,282	1,042	3,317	4,498	1,743	3,344	3,286	1,507	1,890	1,744
YTD Use	2,204	3,549	4,831	5,873	9,190	13,688	15,431	18,775	22,161	23,668	25,558	27,302
Month \$	\$ 20,431	\$ 12,468	\$ 11,884	\$ 9,661	\$ 30,749	\$ 41,696	\$ 16,158	\$ 30,999	\$ 31,388	\$ 13,970	\$ 17,520	\$ 16,167
YTD \$	\$ 20,431	\$ 32,899	\$ 44,783	\$ 54,444	\$ 85,193	\$ 126,889	\$ 143,047	\$ 174,046	\$ 205,434	\$ 219,404	\$ 236,924	\$ 253,091
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	134	442	604	812	833	969	832	349	236	47	4	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270
YTD Rate	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270

### Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	2,144	1,344	1,264	1,403	3,532	4,249	2,018	3,221	2,991	1,722	1,749	1,739
YTD Use	2,144	3,488	4,751	6,154	9,686	13,935	15,953	19,174	22,165	23,887	25,636	27,375
Month \$	\$ 25,930	\$ 16,252	\$ 15,285	\$ 16,967	\$ 42,715	\$ 51,393	\$ 24,411	\$ 38,963	\$ 36,172	\$ 20,829	\$ 21,157	\$ 21,038
YTD \$	\$ 25,930	\$ 42,183	\$ 57,468	\$ 74,435	\$ 117,150	\$ 168,543	\$ 192,954	\$ 231,917	\$ 268,088	\$ 288,918	\$ 310,075	\$ 331,113
BP Length	30	31	30	33	31	31	30	29	29	33	29	30
HDD	105	361	564	1,021	1,112	1,120	555	328	243	22	1	3
CDD	72	7	-	-	-	-	-	19	57	232	223	282
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

### SimActual

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	4,740	4,960	4,259	5,667	5,167	4,569	4,414	4,824	4,049	4,563	6,943	5,882
YTD Use	4,740	9,700	13,959	19,626	24,793	29,362	33,776	38,600	42,649	47,212	54,155	60,037
Month \$	\$ 57,331	\$ 59,992	\$ 51,514	\$ 68,544	\$ 62,496	\$ 55,263	\$ 53,388	\$ 58,347	\$ 48,974	\$ 55,191	\$ 83,977	\$ 71,144
YTD \$	\$ 57,331	\$ 117,324	\$ 168,838	\$ 237,381	\$ 299,877	\$ 355,141	\$ 408,529	\$ 466,877	\$ 515,850	\$ 571,041	\$ 655,018	\$ 726,162
BP Length	30	31	30	33	31	31	30	29	29	33	29	30
HDD	105	361	564	1,021	1,112	1,120	555	328	243	22	1	3
CDD	72	7	-	-	-	-	-	19	57	232	223	282
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

### SimActual vs. Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	121.1%	269.1%	237.0%	304.0%	46.3%	7.5%	118.7%	49.8%	35.4%	165.0%	296.9%	238.2%
YTD Use	121.1%	178.1%	193.8%	218.9%	156.0%	110.7%	111.7%	101.3%	92.4%	97.6%	111.2%	119.3%
Month \$	121.1%	269.1%	237.0%	304.0%	46.3%	7.5%	118.7%	49.8%	35.4%	165.0%	296.9%	238.2%
YTD \$	121.1%	178.1%	193.8%	218.9%	156.0%	110.7%	111.7%	101.3%	92.4%	97.6%	111.2%	119.3%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

### Use Avoidance

Month Use	(2,596)	(3,616)	(2,995)	(4,264)	(1,635)	(320)	(2,396)	(1,603)	(1,058)	(2,841)	(5,194)	(4,143)
YTD Use	(2,596)	(6,212)	(9,208)	(13,472)	(15,107)	(15,427)	(17,823)	(19,426)	(20,484)	(23,325)	(28,519)	(32,662)

### Cost Avoidance

Month Use \$	\$ (31,401)	\$ (43,740)	\$ (36,228)	\$ (51,577)	\$ (19,781)	\$ (3,870)	\$ (28,978)	\$ (19,385)	\$ (12,802)	\$ (34,361)	\$ (62,820)	\$ (50,106)
YTD \$	\$ (31,401)	\$ (75,141)	\$ (111,369)	\$ (162,946)	\$ (182,727)	\$ (186,598)	\$ (215,575)	\$ (234,960)	\$ (247,762)	\$ (282,123)	\$ (344,943)	\$ (395,049)

# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

## Meter: PA 1-15 Gas

### Reference

	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	130	592	842	1,616	1,863	1,852	1,666	948	855	232	337	304
YTD Use	130	722	1,564	3,180	5,043	6,895	8,561	9,509	10,364	10,596	10,933	11,237
Month \$	\$ 2,583	\$ 11,763	\$ 16,731	\$ 32,106	\$ 37,019	\$ 36,800	\$ 33,104	\$ 18,837	\$ 16,989	\$ 4,610	\$ 6,696	\$ 6,041
YTD \$	\$ 2,583	\$ 14,346	\$ 31,077	\$ 63,183	\$ 100,202	\$ 137,002	\$ 170,106	\$ 188,943	\$ 205,932	\$ 210,542	\$ 217,238	\$ 223,279
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	92	382	544	750	771	913	770	293	188	30	-	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 19,869	\$ 19,870	\$ 19,871	\$ 19,868	\$ 19,871	\$ 19,870	\$ 19,870	\$ 19,870	\$ 19,870	\$ 19,871	\$ 19,869	\$ 19,872
YTD Rate	\$ 19,869	\$ 19,870	\$ 19,870	\$ 19,869	\$ 19,870	\$ 19,870	\$ 19,870	\$ 19,870	\$ 19,870	\$ 19,870	\$ 19,870	\$ 19,870

### Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	176	455	1,011	1,469	2,155	2,327	1,559	820	779	238	173	157
YTD Use	176	632	1,642	3,111	5,266	7,594	9,153	9,973	10,752	10,990	11,163	11,320
Month \$	\$ 4,572	\$ 11,805	\$ 26,199	\$ 38,076	\$ 55,884	\$ 60,343	\$ 40,430	\$ 21,257	\$ 20,197	\$ 6,174	\$ 4,474	\$ 4,080
YTD \$	\$ 4,572	\$ 16,377	\$ 42,577	\$ 80,653	\$ 136,537	\$ 196,879	\$ 237,309	\$ 258,566	\$ 278,763	\$ 284,937	\$ 289,411	\$ 293,491
BP Length	30	29	33	29	34	30	30	30	30	30	30	30
HDD	10	160	441	693	1,040	1,142	738	349	327	43	8	-
CDD	182	11	4	-	-	-	-	8	12	161	245	235
Month Rate	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926
YTD Rate	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926

### SimActual

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	126	462	692	1,230	2,128	1,837	1,170	621	871	160	127	115
YTD Use	126	588	1,280	2,510	4,638	6,475	7,645	8,267	9,138	9,297	9,424	9,538
Month \$	\$ 3,267	\$ 11,978	\$ 17,941	\$ 31,887	\$ 55,177	\$ 47,630	\$ 30,334	\$ 16,111	\$ 22,582	\$ 4,135	\$ 3,382	\$ 2,974
YTD \$	\$ 3,267	\$ 15,245	\$ 33,186	\$ 65,073	\$ 120,250	\$ 167,879	\$ 198,213	\$ 214,324	\$ 236,906	\$ 241,041	\$ 244,324	\$ 247,297
BP Length	30	29	33	29	34	30	30	30	30	30	30	30
HDD	10	160	441	693	1,040	1,142	738	349	327	43	8	-
CDD	182	11	4	-	-	-	-	8	12	161	245	235
Month Rate	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926
YTD Rate	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926

### SimActual vs. Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	-28.6%	1.5%	-31.5%	-16.3%	-1.3%	-21.1%	-25.0%	-24.2%	11.8%	-33.0%	-26.6%	-27.1%
YTD Use	-28.6%	-6.9%	-22.1%	-19.3%	-11.9%	-14.7%	-16.5%	-17.1%	-15.0%	-15.4%	-15.6%	-15.7%
Month \$	-28.6%	1.5%	-31.5%	-16.3%	-1.3%	-21.1%	-25.0%	-24.2%	11.8%	-33.0%	-26.6%	-27.1%
YTD \$	-28.6%	-6.9%	-22.1%	-19.3%	-11.9%	-14.7%	-16.5%	-17.1%	-15.0%	-15.4%	-15.6%	-15.7%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

### Use Avoidance

Month Use	50	(7)	319	239	27	490	389	198	(92)	79	46	43
YTD Use	50	44	362	601	628	1,119	1,508	1,706	1,614	1,693	1,739	1,782

### Cost Avoidance

Month Use \$	\$ 1,306	\$ (173)	\$ 8,258	\$ 6,189	\$ 707	\$ 12,713	\$ 10,096	\$ 5,146	\$ (2,385)	\$ 2,039	\$ 1,192	\$ 1,106
YTD \$	\$ 1,306	\$ 1,133	\$ 9,391	\$ 15,580	\$ 16,287	\$ 29,000	\$ 39,096	\$ 44,242	\$ 41,837	\$ 43,896	\$ 45,088	\$ 46,193

# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

Sim/Actual: Actual usage and calculated costs for current Year.

## Meter: PA 1-15 Water

### Reference

	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	379	407	375	390	335	340	361	454	331	400	299	502
YTD Use	379	786	1,161	1,551	1,886	2,226	2,587	3,041	3,372	3,772	4,071	4,573
Month \$	\$ 3,513	\$ 3,773	\$ 3,476	\$ 3,620	\$ 3,105	\$ 3,152	\$ 3,346	\$ 4,209	\$ 3,068	\$ 3,708	\$ 2,772	\$ 4,654
YTD \$	\$ 3,513	\$ 7,286	\$ 10,762	\$ 14,382	\$ 17,487	\$ 20,639	\$ 23,985	\$ 28,194	\$ 31,262	\$ 34,970	\$ 37,742	\$ 42,396
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	134	442	604	812	833	969	832	349	236	47	4	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 9.269	\$ 9.270	\$ 9.269	\$ 9.282	\$ 9.269	\$ 9.271	\$ 9.269	\$ 9.271	\$ 9.269	\$ 9.270	\$ 9.271	\$ 9.271
YTD Rate	\$ 9.269	\$ 9.270	\$ 9.270	\$ 9.273	\$ 9.272	\$ 9.272	\$ 9.271	\$ 9.271	\$ 9.271	\$ 9.271	\$ 9.271	\$ 9.271

### Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	420	417	366	402	346	332	329	407	397	392	296	453
YTD Use	420	837	1,203	1,605	1,951	2,283	2,612	3,019	3,416	3,808	4,104	4,557
Month \$	\$ 5,081	\$ 5,040	\$ 4,430	\$ 4,862	\$ 4,181	\$ 4,015	\$ 3,980	\$ 4,928	\$ 4,801	\$ 4,742	\$ 3,579	\$ 5,476
YTD \$	\$ 5,081	\$ 10,121	\$ 14,551	\$ 19,414	\$ 23,594	\$ 27,610	\$ 31,590	\$ 36,518	\$ 41,319	\$ 46,061	\$ 49,640	\$ 55,116
BP Length	31	32	29	32	31	28	28	29	33	31	28	32
HDD	75	232	504	914	1,053	1,144	678	382	379	65	6	-
CDD	152	15	-	-	-	-	-	8	30	171	232	253
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

### Sim/Actual

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	373	413	331	359	316	292	327	341	371	418	572	642
YTD Use	373	786	1,117	1,476	1,792	2,084	2,411	2,752	3,123	3,541	4,113	4,755
Month \$	\$ 4,512	\$ 4,995	\$ 4,004	\$ 4,342	\$ 3,822	\$ 3,532	\$ 3,955	\$ 4,124	\$ 4,487	\$ 5,056	\$ 6,918	\$ 7,765
YTD \$	\$ 4,512	\$ 9,507	\$ 13,510	\$ 17,853	\$ 21,675	\$ 25,206	\$ 29,162	\$ 33,286	\$ 37,773	\$ 42,829	\$ 49,748	\$ 57,513
BP Length	31	32	29	32	31	28	28	29	33	31	28	32
HDD	75	232	504	914	1,053	1,144	678	382	379	65	6	-
CDD	152	15	-	-	-	-	-	8	30	171	232	253
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

### Sim/Actual vs. Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	-11.2%	-0.9%	-9.6%	-10.7%	-8.6%	-12.0%	-0.6%	-16.3%	-6.5%	6.0%	93.3%	41.8%
YTD Use	-11.2%	-6.1%	-7.2%	-8.0%	-8.1%	-8.7%	-7.7%	-8.9%	-8.6%	-7.0%	0.2%	4.3%
Month \$	-11.2%	-0.9%	-9.6%	-10.7%	-8.6%	-12.0%	-0.6%	-16.3%	-6.5%	6.0%	93.3%	41.8%
YTD \$	-11.2%	-6.1%	-7.2%	-8.0%	-8.1%	-8.7%	-7.7%	-8.9%	-8.6%	-7.0%	0.2%	4.3%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

### Use Avoidance

Month Use	47	4	35	43	30	40	2	66	26	(26)	(276)	(189)
YTD Use	47	51	86	129	159	199	201	267	293	267	(9)	(198)

### Cost Avoidance

Month Use \$	\$ 570	\$ 44	\$ -427	\$ 520	\$ 359	\$ 494	\$ 25	\$ 804	\$ 313	\$ (313)	\$ (3,340)	\$ (2,290)
YTD \$	\$ 570	\$ 614	\$ 1,041	\$ 1,561	\$ 1,920	\$ 2,403	\$ 2,428	\$ 3,232	\$ 3,545	\$ 3,232	\$ (108)	\$ (2,397)



# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

Meter: PA 1-17 Gas

Reference	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	154	553	1,282	2,169	2,447	2,198	2,177	1,062	572	216	143	129
YTD Use	154	707	1,989	4,158	6,605	8,803	10,980	12,042	12,614	12,830	12,973	13,102
Month \$	\$ 3,060	\$ 10,988	\$ 25,476	\$ 43,099	\$ 48,623	\$ 43,676	\$ 43,258	\$ 21,103	\$ 11,366	\$ 4,292	\$ 2,841	\$ 2,563
YTD \$	\$ 3,060	\$ 14,048	\$ 39,524	\$ 82,623	\$ 131,246	\$ 174,922	\$ 218,180	\$ 239,283	\$ 250,649	\$ 254,941	\$ 257,782	\$ 260,345
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	63	326	484	688	709	857	709	243	144	20	-	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 19.870	\$ 19.870	\$ 19.871	\$ 19.870	\$ 19.870	\$ 19.871	\$ 19.870	\$ 19.871	\$ 19.871	\$ 19.870	\$ 19.867	\$ 19.868
YTD Rate	\$ 19.870	\$ 19.870	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871

Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	119	437	1,102	1,931	2,814	3,105	1,983	929	877	186	112	101
YTD Use	119	556	1,658	3,590	6,404	9,508	11,491	12,420	13,297	13,483	13,596	13,697
Month \$	\$ 3,074	\$ 11,343	\$ 28,577	\$ 50,073	\$ 72,959	\$ 80,493	\$ 51,405	\$ 24,082	\$ 22,750	\$ 4,822	\$ 2,914	\$ 2,626
YTD \$	\$ 3,074	\$ 14,416	\$ 42,993	\$ 93,066	\$ 166,025	\$ 246,518	\$ 297,923	\$ 322,005	\$ 344,754	\$ 349,576	\$ 352,490	\$ 355,116
BP Length	31	28	32	30	34	30	30	30	30	30	30	30
HDD	5	124	358	659	972	1,082	678	298	280	31	4	-
CDD	182	11	4	-	-	-	-	8	12	161	245	235
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

SimActual	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	157	547	1,176	1,766	2,406	2,500	1,837	1,023	773	159	141	125
YTD Use	157	704	1,880	3,646	6,052	8,552	10,389	11,411	12,184	12,343	12,483	12,609
Month \$	\$ 4,070	\$ 14,182	\$ 30,490	\$ 45,786	\$ 62,379	\$ 64,816	\$ 47,627	\$ 26,510	\$ 20,033	\$ 4,109	\$ 3,648	\$ 3,249
YTD \$	\$ 4,070	\$ 18,252	\$ 48,742	\$ 94,528	\$ 156,907	\$ 221,723	\$ 269,350	\$ 295,860	\$ 315,894	\$ 320,003	\$ 323,651	\$ 326,899
BP Length	31	28	32	30	34	30	30	30	30	30	30	30
HDD	5	124	358	659	972	1,082	678	298	280	31	4	-
CDD	182	11	4	-	-	-	-	8	12	161	245	235
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

SimActual vs. Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	32.4%	25.0%	6.7%	-8.6%	-14.5%	-19.5%	-7.3%	10.1%	-11.9%	-14.8%	25.2%	23.7%
YTD Use	32.4%	26.6%	13.4%	1.6%	-5.5%	-10.1%	-9.6%	-8.1%	-8.4%	-8.5%	-8.2%	-7.9%
Month \$	32.4%	25.0%	6.7%	-8.6%	-14.5%	-19.5%	-7.3%	10.1%	-11.9%	-14.8%	25.2%	23.7%
YTD \$	32.4%	26.6%	13.4%	1.6%	-5.5%	-10.1%	-9.6%	-8.1%	-8.4%	-8.5%	-8.2%	-7.9%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

Use Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	(38)	(110)	(74)	165	408	605	146	(94)	105	27	(28)	(24)
YTD Use	(38)	(148)	(222)	(56)	352	956	1,102	1,008	1,113	1,141	1,112	1,088

Cost Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use \$	\$ (997)	\$ (2,839)	\$ (1,913)	\$ 4,287	\$ 10,580	\$ 15,677	\$ 3,778	\$ (2,428)	\$ 2,716	\$ 713	\$ (734)	\$ (623)
YTD \$	\$ (997)	\$ (3,836)	\$ (5,749)	\$ (1,462)	\$ 9,118	\$ 24,795	\$ 28,573	\$ 26,145	\$ 28,861	\$ 29,574	\$ 28,840	\$ 28,217

# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

Meter: PA 1-17 Water

Reference	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	244	346	400	452	318	557	489	763	585	695	572	866
YTD Use	244	590	990	1,442	1,760	2,317	2,806	3,569	4,154	4,849	5,421	6,287
Month \$	\$ 2,262	\$ 3,207	\$ 3,708	\$ 4,194	\$ 2,948	\$ 5,163	\$ 4,533	\$ 7,073	\$ 5,423	\$ 6,443	\$ 5,202	\$ 8,028
YTD \$	\$ 2,262	\$ 5,469	\$ 9,177	\$ 13,371	\$ 16,319	\$ 21,482	\$ 26,015	\$ 33,088	\$ 38,511	\$ 44,954	\$ 50,256	\$ 58,284
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	134	442	604	812	833	969	832	349	236	47	4	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 9.270	\$ 9.269	\$ 9.270	\$ 9.279	\$ 9.270	\$ 9.269	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.271	\$ 9.269	\$ 9.270
YTD Rate	\$ 9.270	\$ 9.269	\$ 9.270	\$ 9.273	\$ 9.272	\$ 9.271	\$ 9.271	\$ 9.271	\$ 9.271	\$ 9.271	\$ 9.271	\$ 9.271

Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	411	336	360	471	334	490	471	666	688	661	554	818
YTD Use	411	747	1,107	1,578	1,912	2,401	2,872	3,538	4,227	4,887	5,442	6,259
Month \$	\$ 4,966	\$ 4,064	\$ 4,358	\$ 5,699	\$ 4,036	\$ 5,921	\$ 5,691	\$ 8,060	\$ 8,326	\$ 7,991	\$ 6,705	\$ 9,888
YTD \$	\$ 4,966	\$ 9,029	\$ 13,387	\$ 19,086	\$ 23,122	\$ 29,044	\$ 34,734	\$ 42,795	\$ 51,121	\$ 59,111	\$ 65,816	\$ 75,705
BP Length	31	32	28	33	30	28	28	30	33	30	28	33
HDD	75	232	489	929	1,008	1,142	706	401	379	57	14	-
CDD	152	15	-	-	-	-	-	8	30	171	224	261
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

SimActual	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	437	474	384	424	408	387	381	412	400	395	400	531
YTD Use	437	911	1,295	1,719	2,127	2,514	2,895	3,307	3,707	4,102	4,502	5,033
Month \$	\$ 5,286	\$ 5,733	\$ 4,645	\$ 5,128	\$ 4,935	\$ 4,681	\$ 4,608	\$ 4,983	\$ 4,838	\$ 4,778	\$ 4,838	\$ 6,423
YTD \$	\$ 5,286	\$ 11,019	\$ 15,663	\$ 20,792	\$ 25,727	\$ 30,407	\$ 35,016	\$ 39,999	\$ 44,837	\$ 49,615	\$ 54,453	\$ 60,875
BP Length	31	32	28	33	30	28	28	30	33	30	28	33
HDD	75	232	489	929	1,008	1,142	706	401	379	57	14	-
CDD	152	15	-	-	-	-	-	8	30	171	224	261
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

SimActual vs. Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	6.4%	41.1%	6.6%	-10.0%	22.3%	-20.9%	-19.0%	-38.2%	-41.9%	-40.2%	-27.8%	-35.0%
YTD Use	6.4%	22.0%	17.0%	8.9%	11.3%	4.7%	0.8%	-6.5%	-12.3%	-16.1%	-17.3%	-19.6%
Month \$	6.4%	41.1%	6.6%	-10.0%	22.3%	-20.9%	-19.0%	-38.2%	-41.9%	-40.2%	-27.8%	-35.0%
YTD \$	6.4%	22.0%	17.0%	8.9%	11.3%	4.7%	0.8%	-6.5%	-12.3%	-16.1%	-17.3%	-19.6%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

Use Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	(26)	(138)	(24)	47	(74)	103	90	254	288	266	154	287
YTD Use	(26)	(164)	(188)	(141)	(215)	(113)	(23)	231	520	785	940	1,226

Cost Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use \$	\$ (320)	\$ (1,670)	\$ (287)	\$ 571	\$ (899)	\$ 1,240	\$ 1,083	\$ 3,077	\$ 3,488	\$ 3,213	\$ 1,867	\$ 3,466
YTD \$	\$ (320)	\$ (1,989)	\$ (2,276)	\$ (1,705)	\$ (2,604)	\$ (1,364)	\$ (281)	\$ 2,796	\$ 6,284	\$ 9,497	\$ 11,364	\$ 14,830



# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

## Meter: PA 1-20 Electric

### Reference

	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	84,432	73,196	70,953	76,009	90,147	75,593	74,397	70,170	66,203	70,897	83,634	91,172
YTD Use	84,432	157,628	228,581	304,590	394,737	470,330	544,727	614,897	681,100	751,997	835,631	926,803
Month \$	\$ 9,612	\$ 8,333	\$ 8,078	\$ 8,654	\$ 10,263	\$ 8,606	\$ 8,470	\$ 7,989	\$ 7,537	\$ 8,071	\$ 9,522	\$ 10,380
YTD \$	\$ 9,612	\$ 17,945	\$ 26,023	\$ 34,677	\$ 44,940	\$ 53,546	\$ 62,016	\$ 70,005	\$ 77,542	\$ 85,613	\$ 95,135	\$ 105,515
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	134	442	604	812	833	969	832	349	236	47	4	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114
YTD Rate	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114

### Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	73,818	70,874	76,725	84,390	90,140	66,595	78,344	65,187	71,526	75,582	81,156	92,467
YTD Use	73,818	144,692	221,417	305,806	395,946	462,542	540,886	606,072	677,598	753,180	834,336	926,803
Month \$	\$ 8,400	\$ 8,065	\$ 8,731	\$ 9,604	\$ 10,258	\$ 7,579	\$ 8,916	\$ 7,418	\$ 8,140	\$ 8,601	\$ 9,236	\$ 10,523
YTD \$	\$ 8,400	\$ 16,466	\$ 25,197	\$ 34,801	\$ 45,059	\$ 52,637	\$ 61,553	\$ 68,971	\$ 77,111	\$ 85,712	\$ 94,947	\$ 105,470
BP Length	28	30	32	32	32	26	33	29	32	30	29	32
HDD	194	378	757	1,029	1,215	803	496	437	99	23	-	12
CDD	15	4	-	-	-	-	8	11	153	206	228	226
Month Rate	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114
YTD Rate	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114

### SimActual

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	82,950	95,789	136,365	137,513	205,251	158,226	99,595	98,220	95,316	108,209	110,725	117,363
YTD Use	82,950	178,739	315,104	452,617	657,868	816,094	915,690	1,013,909	1,109,226	1,217,435	1,328,160	1,445,522
Month \$	\$ 9,440	\$ 10,901	\$ 15,518	\$ 15,649	\$ 23,358	\$ 18,006	\$ 11,334	\$ 11,177	\$ 10,847	\$ 12,314	\$ 12,600	\$ 13,356
YTD \$	\$ 9,440	\$ 20,340	\$ 35,859	\$ 51,508	\$ 74,865	\$ 92,872	\$ 104,205	\$ 115,383	\$ 126,230	\$ 138,544	\$ 151,145	\$ 164,500
BP Length	28	30	32	32	32	26	33	29	32	30	29	32
HDD	194	378	757	1,029	1,215	803	496	437	99	23	-	12
CDD	15	4	-	-	-	-	8	11	153	206	228	226
Month Rate	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114
YTD Rate	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114	\$ 0.114

### SimActual vs. Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	12.4%	35.2%	77.7%	62.9%	127.7%	137.6%	27.1%	50.7%	33.3%	43.2%	36.4%	26.9%
YTD Use	12.4%	23.5%	42.3%	48.0%	66.2%	76.4%	69.3%	67.3%	63.7%	61.6%	59.2%	56.0%
Month \$	12.4%	35.2%	77.7%	62.9%	127.7%	137.6%	27.1%	50.7%	33.3%	43.2%	36.4%	26.9%
YTD \$	12.4%	23.5%	42.3%	48.0%	66.2%	76.4%	69.3%	67.3%	63.7%	61.6%	59.2%	56.0%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

### Use Avoidance

Month Use	(9,132)	(24,915)	(59,640)	(53,123)	(115,111)	(91,631)	(21,251)	(33,033)	(23,791)	(32,627)	(29,569)	(24,896)
YTD Use	(9,132)	(34,047)	(93,688)	(146,811)	(261,922)	(353,553)	(374,804)	(407,837)	(431,628)	(464,255)	(493,823)	(518,719)

### Cost Avoidance

Month Use \$	\$ (1,039)	\$ (2,835)	\$ (6,787)	\$ (6,045)	\$ (13,100)	\$ (10,428)	\$ (2,418)	\$ (3,739)	\$ (2,707)	\$ (3,713)	\$ (3,365)	\$ (2,833)
YTD \$	\$ (1,039)	\$ (3,875)	\$ (10,662)	\$ (16,707)	\$ (29,907)	\$ (40,234)	\$ (42,653)	\$ (46,412)	\$ (49,119)	\$ (52,832)	\$ (56,197)	\$ (59,030)

# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

Meter: PA 1-20 Gas

Reference	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	212	867	1,714	3,700	4,290	4,764	4,436	2,036	1,058	461	146	159
YTD Use	212	1,079	2,793	6,493	10,783	15,547	19,983	22,019	23,077	23,538	23,684	23,843
Month \$	\$ 4,213	\$ 17,228	\$ 34,059	\$ 73,522	\$ 85,247	\$ 94,665	\$ 88,148	\$ 40,457	\$ 21,024	\$ 9,161	\$ 2,901	\$ 3,159
YTD \$	\$ 4,213	\$ 21,441	\$ 55,500	\$ 129,022	\$ 214,269	\$ 308,934	\$ 397,082	\$ 437,539	\$ 458,563	\$ 467,724	\$ 470,625	\$ 473,784
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	53	300	454	657	678	829	679	221	125	16	-	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 19.873	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.872	\$ 19.870	\$ 19.868
YTD Rate	\$ 19.873	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871

Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	280	958	2,389	4,730	5,320	5,709	2,561	1,830	941	252	88	85
YTD Use	280	1,238	3,627	8,357	13,677	19,386	21,947	23,777	24,718	24,970	25,058	25,144
Month \$	\$ 7,270	\$ 24,828	\$ 61,944	\$ 122,625	\$ 137,923	\$ 148,020	\$ 66,399	\$ 47,448	\$ 24,389	\$ 6,339	\$ 2,287	\$ 2,211
YTD \$	\$ 7,270	\$ 32,098	\$ 94,042	\$ 216,667	\$ 354,590	\$ 502,610	\$ 569,009	\$ 616,458	\$ 640,846	\$ 647,385	\$ 649,672	\$ 651,883
BP Length	32	29	31	32	32	31	28	30	29	32	30	29
HDD	33	155	407	821	926	995	439	309	152	28	-	-
CDD	112	11	-	-	-	-	-	15	61	181	248	250
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

SimActual	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	290	280	374	467	480	511	386	338	311	313	258	260
YTD Use	290	570	944	1,411	1,891	2,402	2,788	3,126	3,436	3,749	4,007	4,267
Month \$	\$ 7,519	\$ 7,259	\$ 9,697	\$ 12,110	\$ 12,442	\$ 13,241	\$ 10,018	\$ 8,750	\$ 8,055	\$ 8,112	\$ 6,686	\$ 6,749
YTD \$	\$ 7,519	\$ 14,778	\$ 24,475	\$ 36,585	\$ 49,027	\$ 62,268	\$ 72,286	\$ 81,036	\$ 89,091	\$ 97,204	\$ 103,890	\$ 110,639
BP Length	32	29	31	32	32	31	28	30	29	32	30	29
HDD	33	155	407	821	926	995	439	309	152	28	-	-
CDD	112	11	-	-	-	-	-	15	61	181	248	250
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

SimActual vs. Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	3.4%	-70.8%	-84.3%	-90.1%	-91.0%	-91.1%	-84.9%	-81.6%	-67.0%	24.1%	192.3%	205.2%
YTD Use	3.4%	-54.0%	-74.0%	-83.1%	-86.2%	-87.6%	-87.3%	-86.9%	-86.1%	-85.0%	-84.0%	-83.0%
Month \$	3.4%	-70.8%	-84.3%	-90.1%	-91.0%	-91.1%	-84.9%	-81.6%	-67.0%	24.1%	192.3%	205.2%
YTD \$	3.4%	-54.0%	-74.0%	-83.1%	-86.2%	-87.6%	-87.3%	-86.9%	-86.1%	-85.0%	-84.0%	-83.0%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

Use Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	(10)	678	2,015	4,263	4,840	5,199	2,175	1,493	630	(61)	(170)	(175)
YTD Use	(10)	668	2,683	6,946	11,786	16,984	19,159	20,652	21,282	21,221	21,051	20,876

Cost Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use \$	\$ (248)	\$ 17,569	\$ 52,247	\$ 110,515	\$ 125,480	\$ 134,780	\$ 56,381	\$ 38,698	\$ 16,333	\$ (1,574)	\$ (4,399)	\$ (4,538)
YTD \$	\$ (248)	\$ 17,320	\$ 69,568	\$ 180,082	\$ 305,563	\$ 440,342	\$ 496,724	\$ 535,422	\$ 551,755	\$ 550,181	\$ 545,782	\$ 541,244

# Meter Detail Report

Reference: Actual usage and costs for past Year.  
SimActual: Actual usage and calculated costs for current Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

## Meter: PA 1-20 Water

Reference	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	1,363	821	1,139	1,023	1,287	907	1,340	1,219	3,533	1,488	1,179	1,018
YTD Use	1,363	2,184	3,323	4,346	5,633	6,540	7,880	9,099	12,632	14,120	15,299	16,317
Month \$	\$ 12,635	\$ 7,611	\$ 10,559	\$ 9,482	\$ 11,930	\$ 8,408	\$ 12,422	\$ 11,300	\$ 31,751	\$ 13,794	\$ 10,929	\$ 9,437
YTD \$	\$ 12,635	\$ 20,246	\$ 30,805	\$ 40,287	\$ 52,217	\$ 60,625	\$ 73,047	\$ 84,347	\$ 117,098	\$ 130,892	\$ 141,821	\$ 151,258
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	134	442	604	812	833	969	832	349	236	47	4	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.269	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270
YTD Rate	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270

Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	1,363	821	1,139	1,023	1,287	907	1,340	1,219	3,533	1,488	1,179	1,018
YTD Use	1,363	2,184	3,323	4,346	5,633	6,540	7,880	9,099	12,632	14,120	15,299	16,317
Month \$	\$ 16,486	\$ 9,930	\$ 13,776	\$ 12,373	\$ 15,567	\$ 10,970	\$ 16,208	\$ 14,744	\$ 42,733	\$ 17,998	\$ 14,260	\$ 12,313
YTD \$	\$ 16,486	\$ 26,416	\$ 40,193	\$ 52,566	\$ 68,133	\$ 79,103	\$ 95,311	\$ 110,055	\$ 152,787	\$ 170,785	\$ 185,045	\$ 197,358
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	85	332	552	972	1,071	1,065	628	423	271	31	2	-
CDD	84	7	-	-	-	-	-	15	61	198	245	288
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

SimActual	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	47	54	55	64	61	65	63	61	66	79	62	26
YTD Use	47	101	156	220	281	346	409	470	536	615	677	703
Month \$	\$ 568	\$ 653	\$ 665	\$ 774	\$ 738	\$ 786	\$ 762	\$ 738	\$ 798	\$ 956	\$ 750	\$ 314
YTD \$	\$ 568	\$ 1,222	\$ 1,887	\$ 2,661	\$ 3,399	\$ 4,185	\$ 4,947	\$ 5,685	\$ 6,483	\$ 7,439	\$ 8,188	\$ 8,503
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	85	332	552	972	1,071	1,065	628	423	271	31	2	-
CDD	84	7	-	-	-	-	-	15	61	198	245	288
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

SimActual vs. Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	-96.6%	-93.4%	-95.2%	-93.7%	-95.3%	-92.8%	-95.3%	-95.0%	-98.1%	-94.7%	-94.7%	-97.4%
YTD Use	-96.6%	-95.4%	-95.3%	-94.9%	-95.0%	-94.7%	-94.8%	-94.8%	-95.8%	-95.6%	-95.6%	-95.7%
Month \$	-96.6%	-93.4%	-95.2%	-93.7%	-95.3%	-92.8%	-95.3%	-95.0%	-98.1%	-94.7%	-94.7%	-97.4%
YTD \$	-96.6%	-95.4%	-95.3%	-94.9%	-95.0%	-94.7%	-94.8%	-94.8%	-95.8%	-95.6%	-95.6%	-95.7%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

Use Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	1,316	767	1,084	959	1,226	842	1,277	1,158	3,467	1,409	1,117	992
YTD Use	1,316	2,083	3,167	4,126	5,352	6,194	7,471	8,629	12,096	13,505	14,622	15,614

Cost Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use \$	\$ 15,917	\$ 9,277	\$ 13,111	\$ 11,599	\$ 14,829	\$ 10,184	\$ 15,446	\$ 14,006	\$ 41,934	\$ 17,042	\$ 13,510	\$ 11,998
YTD \$	\$ 15,917	\$ 25,194	\$ 38,306	\$ 49,905	\$ 64,734	\$ 74,918	\$ 90,364	\$ 104,370	\$ 146,304	\$ 163,346	\$ 176,857	\$ 188,855



# Meter Detail Report

Reference: Actual usage and costs for past Year.  
SimActual: Actual usage and calculated costs for current Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

## Meter: PA 1-31 Gas

### Reference

	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	64	467	738	1,111	1,151	1,444	1,160	333	168	15	-	-
YTD Use	64	531	1,269	2,380	3,531	4,975	6,135	6,468	6,636	6,651	6,651	6,651
Month \$	\$ 1,262	\$ 9,288	\$ 14,664	\$ 22,088	\$ 22,868	\$ 28,696	\$ 23,054	\$ 6,608	\$ 3,341	\$ 297	\$ -	\$ -
YTD \$	\$ 1,262	\$ 10,550	\$ 25,214	\$ 47,302	\$ 70,170	\$ 98,866	\$ 121,920	\$ 128,528	\$ 131,869	\$ 132,166	\$ 132,166	\$ 132,166
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	34	250	395	595	616	773	621	178	90	8	-	-
CDD	12	-	-	-	-	-	-	42	42	83	263	266
Month Rate	\$ 19.719	\$ 19.889	\$ 19.870	\$ 19.881	\$ 19.868	\$ 19.873	\$ 19.874	\$ 19.844	\$ 19.887	\$ 19.800	\$ -	\$ -
YTD Rate	\$ 19.719	\$ 19.868	\$ 19.869	\$ 19.875	\$ 19.873	\$ 19.873	\$ 19.873	\$ 19.871	\$ 19.872	\$ 19.872	\$ 19.872	\$ 19.872

### Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	3	195	491	1,078	1,630	1,793	1,121	419	390	33	2	1
YTD Use	3	197	688	1,767	3,397	5,190	6,311	6,730	7,120	7,154	7,155	7,156
Month \$	\$ 65	\$ 5,054	\$ 12,728	\$ 27,958	\$ 42,270	\$ 46,480	\$ 29,072	\$ 10,864	\$ 10,113	\$ 865	\$ 41	\$ 16
YTD \$	\$ 65	\$ 5,119	\$ 17,847	\$ 45,806	\$ 88,075	\$ 134,556	\$ 163,628	\$ 174,492	\$ 184,605	\$ 185,471	\$ 185,512	\$ 185,528
BP Length	30	31	30	30	34	29	31	30	29	32	30	29
HDD	1	104	263	577	873	960	600	224	209	18	1	-
CDD	177	11	4	-	-	-	-	8	12	180	241	227
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

### SimActual

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	66	250	307	384	465	523	452	284	251	92	78	81
YTD Use	66	316	623	1,007	1,472	1,996	2,448	2,732	2,982	3,074	3,153	3,234
Month \$	\$ 1,711	\$ 6,482	\$ 7,959	\$ 9,953	\$ 12,066	\$ 13,567	\$ 11,716	\$ 7,366	\$ 6,497	\$ 2,390	\$ 2,027	\$ 2,103
YTD \$	\$ 1,711	\$ 8,193	\$ 16,152	\$ 26,105	\$ 38,172	\$ 51,739	\$ 63,455	\$ 70,821	\$ 77,318	\$ 79,708	\$ 81,736	\$ 83,839
BP Length	30	31	30	30	34	29	31	30	29	32	30	29
HDD	1	104	263	577	873	960	600	224	209	18	1	-
CDD	177	11	4	-	-	-	-	8	12	180	241	227
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

### SimActual vs. Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	2520.1%	28.3%	-37.5%	-64.4%	-71.5%	-70.8%	-59.7%	-32.2%	-35.8%	176.2%	4833.3%	12782.5%
YTD Use	2520.1%	60.0%	-9.5%	-43.0%	-56.7%	-61.5%	-61.2%	-59.4%	-58.1%	-57.0%	-55.9%	-54.8%
Month \$	2520.1%	28.3%	-37.5%	-64.4%	-71.5%	-70.8%	-59.7%	-32.2%	-35.8%	176.2%	4833.3%	12782.5%
YTD \$	2520.1%	60.0%	-9.5%	-43.0%	-56.7%	-61.5%	-61.2%	-59.4%	-58.1%	-57.0%	-55.9%	-54.8%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

### Use Avoidance

Month Use	(63)	(55)	184	694	1,165	1,269	669	135	139	(59)	(77)	(80)
YTD Use	(63)	(119)	65	760	1,925	3,194	3,864	3,999	4,138	4,079	4,003	3,922

### Cost Avoidance

Month Use \$	\$ (1,646)	\$ (1,428)	\$ 4,769	\$ 18,005	\$ 30,204	\$ 32,913	\$ 17,356	\$ 3,498	\$ 3,616	\$ (1,525)	\$ (1,986)	\$ (2,086)
YTD \$	\$ (1,646)	\$ (3,074)	\$ 1,693	\$ 19,700	\$ 49,904	\$ 82,817	\$ 100,173	\$ 103,671	\$ 107,287	\$ 105,762	\$ 103,776	\$ 101,689

# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

## Meter: PA 1-31 Water

Reference	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	341	267	258	267	255	181	382	411	97	491	325	381
YTD Use	341	608	866	1,133	1,388	1,569	1,951	2,362	2,459	2,950	3,275	3,656
Month \$	\$ 3,161	\$ 2,475	\$ 2,392	\$ 2,471	\$ 2,364	\$ 1,678	\$ 3,541	\$ 3,810	\$ 899	\$ 4,552	\$ 3,013	\$ 3,532
YTD \$	\$ 3,161	\$ 5,636	\$ 8,028	\$ 10,499	\$ 12,863	\$ 14,541	\$ 18,082	\$ 21,892	\$ 22,791	\$ 27,343	\$ 30,356	\$ 33,888
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	134	442	604	812	833	969	832	349	236	47	4	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 9.270	\$ 9.270	\$ 9.271	\$ 9.255	\$ 9.271	\$ 9.271	\$ 9.270	\$ 9.270	\$ 9.268	\$ 9.271	\$ 9.271	\$ 9.270
YTD Rate	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.267	\$ 9.267	\$ 9.268	\$ 9.268	\$ 9.268	\$ 9.268	\$ 9.269	\$ 9.269	\$ 9.269

Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	380	302	258	258	246	229	252	411	284	239	426	333
YTD Use	380	683	941	1,199	1,445	1,674	1,926	2,337	2,621	2,860	3,287	3,619
Month \$	\$ 4,601	\$ 3,658	\$ 3,123	\$ 3,123	\$ 2,970	\$ 2,772	\$ 3,047	\$ 4,969	\$ 3,437	\$ 2,897	\$ 5,156	\$ 4,023
YTD \$	\$ 4,601	\$ 8,259	\$ 11,382	\$ 14,505	\$ 17,474	\$ 20,246	\$ 23,293	\$ 28,262	\$ 31,699	\$ 34,596	\$ 39,752	\$ 43,774
BP Length	32	30	30	30	29	30	29	32	30	30	30	30
HDD	2	205	399	742	940	1,122	962	477	445	115	23	-
CDD	230	11	4	-	-	-	-	8	11	130	197	240
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

SimActual	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	182	168	170	178	152	180	155	137	180	185	208	230
YTD Use	182	350	520	698	850	1,030	1,185	1,322	1,502	1,687	1,895	2,125
Month \$	\$ 2,201	\$ 2,032	\$ 2,056	\$ 2,153	\$ 1,838	\$ 2,177	\$ 1,875	\$ 1,657	\$ 2,177	\$ 2,238	\$ 2,516	\$ 2,782
YTD \$	\$ 2,201	\$ 4,233	\$ 6,290	\$ 8,442	\$ 10,281	\$ 12,458	\$ 14,333	\$ 15,990	\$ 18,167	\$ 20,405	\$ 22,920	\$ 25,702
BP Length	32	30	30	30	29	30	29	32	30	30	30	30
HDD	2	205	399	742	940	1,122	962	477	445	115	23	-
CDD	230	11	4	-	-	-	-	8	11	130	197	240
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

SimActual vs. Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	-52.2%	-44.5%	-34.2%	-31.1%	-38.1%	-21.5%	-38.5%	-66.7%	-36.7%	-22.8%	-51.2%	-30.8%
YTD Use	-52.2%	-48.7%	-44.7%	-41.8%	-41.2%	-38.5%	-38.5%	-43.4%	-42.7%	-41.0%	-42.3%	-41.3%
Month \$	-52.2%	-44.5%	-34.2%	-31.1%	-38.1%	-21.5%	-38.5%	-66.7%	-36.7%	-22.8%	-51.2%	-30.8%
YTD \$	-52.2%	-48.7%	-44.7%	-41.8%	-41.2%	-38.5%	-38.5%	-43.4%	-42.7%	-41.0%	-42.3%	-41.3%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

Use Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	198	134	88	80	94	49	97	274	104	54	218	103
YTD Use	198	333	421	501	595	644	741	1,015	1,119	1,173	1,392	1,494

Cost Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use \$	\$ 2,399	\$ 1,626	\$ 1,067	\$ 970	\$ 1,131	\$ 595	\$ 1,172	\$ 3,312	\$ 1,260	\$ 659	\$ 2,640	\$ 1,241
YTD \$	\$ 2,399	\$ 4,025	\$ 5,092	\$ 6,062	\$ 7,193	\$ 7,788	\$ 8,960	\$ 12,272	\$ 13,532	\$ 14,191	\$ 16,831	\$ 18,072

# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

Meter: PA 1-40 Gas

Reference	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	64	213	291	390	401	466	400	168	114	23	2	-
YTD Use	64	277	568	958	1,359	1,825	2,225	2,393	2,507	2,530	2,532	2,532
Month \$	\$ 1,281	\$ 4,226	\$ 5,775	\$ 7,766	\$ 7,965	\$ 9,265	\$ 7,955	\$ 3,337	\$ 2,257	\$ 449	\$ 38	\$ -
YTD \$	\$ 1,281	\$ 5,507	\$ 11,282	\$ 19,048	\$ 27,013	\$ 36,278	\$ 44,233	\$ 47,570	\$ 49,827	\$ 50,276	\$ 50,314	\$ 50,314
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	134	442	604	812	833	969	832	349	236	47	4	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 20.016	\$ 19.840	\$ 19.845	\$ 19.913	\$ 19.863	\$ 19.882	\$ 19.888	\$ 19.863	\$ 19.798	\$ 19.522	\$ 19.000	\$ -
YTD Rate	\$ 20.016	\$ 19.881	\$ 19.863	\$ 19.883	\$ 19.877	\$ 19.878	\$ 19.880	\$ 19.879	\$ 19.875	\$ 19.872	\$ 19.871	\$ 19.871

Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	1	93	182	355	504	546	457	206	210	48	11	0
YTD Use	1	95	277	631	1,136	1,681	2,139	2,345	2,555	2,603	2,614	2,615
Month \$	\$ 32	\$ 2,423	\$ 4,715	\$ 9,195	\$ 13,077	\$ 14,153	\$ 11,861	\$ 5,332	\$ 5,450	\$ 1,241	\$ 293	\$ 12
YTD \$	\$ 32	\$ 2,455	\$ 7,170	\$ 16,365	\$ 29,442	\$ 43,595	\$ 55,456	\$ 60,788	\$ 66,239	\$ 67,479	\$ 67,772	\$ 67,785
BP Length	30	30	29	31	33	30	31	30	29	32	30	29
HDD	2	194	378	737	1,049	1,135	951	427	437	99	23	-
CDD	220	21	4	-	-	-	-	8	11	153	206	228
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

SimActual	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	13	66	149	142	116	113	82	53	105	33	15	13
YTD Use	13	79	228	370	486	599	681	733	838	871	885	899
Month \$	\$ 337	\$ 1,711	\$ 3,863	\$ 3,682	\$ 3,015	\$ 2,922	\$ 2,118	\$ 1,364	\$ 2,715	\$ 848	\$ 381	\$ 342
YTD \$	\$ 337	\$ 2,048	\$ 5,911	\$ 9,593	\$ 12,608	\$ 15,530	\$ 17,648	\$ 19,012	\$ 21,726	\$ 22,574	\$ 22,955	\$ 23,298
BP Length	30	30	29	31	33	30	31	30	29	32	30	29
HDD	2	194	378	737	1,049	1,135	951	427	437	99	23	-
CDD	220	21	4	-	-	-	-	8	11	153	206	228
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

SimActual vs. Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	-	-29.4%	-18.1%	-60.0%	-76.9%	-79.4%	-82.1%	-74.4%	-50.2%	-31.7%	30.0%	2662.6%
YTD Use	969.9%	-16.6%	-17.6%	-41.4%	-57.2%	-64.4%	-68.2%	-68.7%	-67.2%	-66.5%	-66.1%	-65.6%
Month \$	969.9%	-29.4%	-18.1%	-60.0%	-76.9%	-79.4%	-82.1%	-74.4%	-50.2%	-31.7%	30.0%	2662.6%
YTD \$	969.9%	-16.6%	-17.6%	-41.4%	-57.2%	-64.4%	-68.2%	-68.7%	-67.2%	-66.5%	-66.1%	-65.6%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

Use Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	(12)	27	33	213	388	433	376	153	106	15	(3)	(13)
YTD Use	(12)	16	49	261	649	1,082	1,458	1,611	1,717	1,732	1,729	1,716

Cost Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use \$	\$ (306)	\$ 712	\$ 852	\$ 5,513	\$ 10,061	\$ 11,231	\$ 9,743	\$ 3,969	\$ 2,736	\$ 393	\$ (88)	\$ (330)
YTD \$	\$ (306)	\$ 407	\$ 1,259	\$ 6,772	\$ 16,834	\$ 28,065	\$ 37,808	\$ 41,776	\$ 44,512	\$ 44,905	\$ 44,817	\$ 44,487



# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

Meter: PA 1-40 Water

## Reference

	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	179	112	78	110	75	100	130	95	107	192	89	39
YTD Use	179	291	369	479	554	654	784	879	986	1,178	1,267	1,326
Month \$	\$ 1,659	\$ 1,038	\$ 723	\$ 1,022	\$ 695	\$ 927	\$ 1,205	\$ 881	\$ 992	\$ 1,780	\$ 825	\$ 547
YTD \$	\$ 1,659	\$ 2,697	\$ 3,420	\$ 4,442	\$ 5,137	\$ 6,064	\$ 7,269	\$ 8,150	\$ 9,142	\$ 10,922	\$ 11,747	\$ 12,294
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	134	442	604	812	833	969	832	349	236	47	4	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 9.268	\$ 9.268	\$ 9.260	\$ 9.291	\$ 9.267	\$ 9.270	\$ 9.260	\$ 9.274	\$ 9.271	\$ 9.271	\$ 9.270	\$ 9.271
YTD Rate	\$ 9.268	\$ 9.268	\$ 9.268	\$ 9.273	\$ 9.273	\$ 9.272	\$ 9.272	\$ 9.272	\$ 9.272	\$ 9.272	\$ 9.272	\$ 9.271

## Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	151	110	87	105	84	102	121	101	117	173	80	108
YTD Use	151	261	347	452	536	638	759	860	977	1,150	1,230	1,338
Month \$	\$ 1,821	\$ 1,332	\$ 1,047	\$ 1,266	\$ 1,017	\$ 1,234	\$ 1,461	\$ 1,222	\$ 1,419	\$ 2,093	\$ 971	\$ 1,300
YTD \$	\$ 1,821	\$ 3,153	\$ 4,200	\$ 5,466	\$ 6,483	\$ 7,717	\$ 9,178	\$ 10,400	\$ 11,818	\$ 13,911	\$ 14,882	\$ 16,183
BP Length	28	33	30	33	30	27	31	31	28	32	31	33
HDD	174	390	690	1,031	1,122	939	493	418	149	22	1	10
CDD	41	7	-	-	-	-	6	13	84	240	230	250
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

## SimActual

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	52	67	52	53	63	58	81	57	60	158	158	234
YTD Use	52	119	171	224	287	344	425	482	542	699	857	1,091
Month \$	\$ 629	\$ 810	\$ 629	\$ 641	\$ 757	\$ 699	\$ 974	\$ 687	\$ 728	\$ 1,905	\$ 1,905	\$ 2,834
YTD \$	\$ 629	\$ 1,439	\$ 2,068	\$ 2,709	\$ 3,466	\$ 4,166	\$ 5,139	\$ 5,826	\$ 6,554	\$ 8,459	\$ 10,364	\$ 13,198
BP Length	28	33	30	33	30	27	31	31	28	32	31	33
HDD	174	390	690	1,031	1,122	939	493	418	149	22	1	10
CDD	41	7	-	-	-	-	6	13	84	240	230	250
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

## SimActual vs. Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	-65.5%	-39.2%	-39.9%	-49.4%	-25.6%	-43.3%	-33.3%	-43.8%	-48.7%	-9.0%	96.2%	117.9%
YTD Use	-65.5%	-54.4%	-50.8%	-50.4%	-46.5%	-46.0%	-44.0%	-44.0%	-44.5%	-39.2%	-30.4%	-18.4%
Month \$	-65.5%	-39.2%	-39.9%	-49.4%	-25.6%	-43.3%	-33.3%	-43.8%	-48.7%	-9.0%	96.2%	117.9%
YTD \$	-65.5%	-54.4%	-50.8%	-50.4%	-46.5%	-46.0%	-44.0%	-44.0%	-44.5%	-39.2%	-30.4%	-18.4%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

## Use Avoidance

	99	43	35	52	22	44	40	44	57	16	(77)	(127)
Month Use	99	142	176	228	249	294	334	378	435	451	374	247

## Cost Avoidance

	\$ 1,492	\$ 521	\$ 418	\$ 625	\$ 260	\$ 535	\$ 487	\$ 535	\$ 690	\$ 188	\$ (934)	\$ (1,534)
Month Use \$	\$ 1,492	\$ 1,714	\$ 2,132	\$ 2,757	\$ 3,017	\$ 3,552	\$ 4,039	\$ 4,573	\$ 5,264	\$ 5,452	\$ 4,518	\$ 2,984
YTD \$												

# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

## Meter: PA 1-41 Gas

### Reference

	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	68	224	445	748	745	727	635	272	142	90	39	63
YTD Use	68	292	737	1,485	2,230	2,957	3,592	3,864	4,006	4,096	4,135	4,198
Month \$	\$ 1,351	\$ 4,451	\$ 8,842	\$ 14,869	\$ 14,804	\$ 14,446	\$ 12,618	\$ 5,405	\$ 2,822	\$ 1,788	\$ 775	\$ 1,252
YTD \$	\$ 1,351	\$ 5,802	\$ 14,644	\$ 29,513	\$ 44,317	\$ 58,763	\$ 71,381	\$ 76,786	\$ 79,608	\$ 81,396	\$ 82,171	\$ 83,423
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	53	300	454	657	678	829	679	221	125	16	-	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 19,868	\$ 19,871	\$ 19,870	\$ 19,878	\$ 19,871	\$ 19,871	\$ 19,871	\$ 19,871	\$ 19,873	\$ 19,867	\$ 19,872	\$ 19,873
YTD Rate	\$ 19,868	\$ 19,870	\$ 19,870	\$ 19,874	\$ 19,873	\$ 19,873	\$ 19,872	\$ 19,872	\$ 19,872	\$ 19,872	\$ 19,872	\$ 19,872

### Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	43	136	346	618	907	973	628	332	274	64	45	39
YTD Use	43	179	525	1,143	2,050	3,023	3,651	3,983	4,257	4,321	4,366	4,405
Month \$	\$ 1,112	\$ 3,519	\$ 8,970	\$ 16,022	\$ 23,520	\$ 25,228	\$ 16,285	\$ 8,600	\$ 7,115	\$ 1,648	\$ 1,169	\$ 1,006
YTD \$	\$ 1,112	\$ 4,631	\$ 13,600	\$ 29,622	\$ 53,142	\$ 78,370	\$ 94,655	\$ 103,255	\$ 110,370	\$ 112,018	\$ 113,188	\$ 114,193
BP Length	30	29	32	30	34	29	29	32	29	30	32	29
HDD	3	106	330	629	938	1,017	642	315	257	26	3	-
CDD	182	11	4	-	-	-	-	8	11	158	255	228
Month Rate	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926
YTD Rate	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926

### SimActual

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	55	122	255	374	524	503	418	351	290	80	73	67
YTD Use	55	177	432	806	1,330	1,832	2,250	2,600	2,890	2,970	3,042	3,109
Month \$	\$ 1,426	\$ 3,163	\$ 6,611	\$ 9,694	\$ 13,583	\$ 13,028	\$ 10,824	\$ 9,087	\$ 7,511	\$ 2,064	\$ 1,882	\$ 1,737
YTD \$	\$ 1,426	\$ 4,589	\$ 11,200	\$ 20,894	\$ 34,477	\$ 47,505	\$ 58,329	\$ 67,417	\$ 74,928	\$ 76,991	\$ 78,874	\$ 80,611
BP Length	30	29	32	30	34	29	29	32	29	30	32	29
HDD	3	106	330	629	938	1,017	642	315	257	26	3	-
CDD	182	11	4	-	-	-	-	8	11	158	255	228
Month Rate	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926
YTD Rate	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926	\$ 25,926

### SimActual vs. Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	28.2%	-10.1%	-26.3%	-39.5%	-42.2%	-48.4%	-33.5%	5.7%	5.6%	25.2%	60.9%	72.7%
YTD Use	28.2%	-0.9%	-17.6%	-29.5%	-35.1%	-39.4%	-38.4%	-34.7%	-32.1%	-31.3%	-30.3%	-29.4%
Month \$	28.2%	-10.1%	-26.3%	-39.5%	-42.2%	-48.4%	-33.5%	5.7%	5.6%	25.2%	60.9%	72.7%
YTD \$	28.2%	-0.9%	-17.6%	-29.5%	-35.1%	-39.4%	-38.4%	-34.7%	-32.1%	-31.3%	-30.3%	-29.4%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

### Use Avoidance

	(12)	14	91	244	383	471	211	(19)	(15)	(16)	(27)	(28)
Month Use	(12)	2	93	337	720	1,190	1,401	1,382	1,367	1,351	1,324	1,295

### Cost Avoidance

	\$ (314)	\$ 356	\$ 2,358	\$ 6,328	\$ 9,937	\$ 12,200	\$ 3,460	\$ (487)	\$ (396)	\$ (416)	\$ (713)	\$ (731)
Month Use \$	\$ (314)	\$ 42	\$ 2,400	\$ 8,728	\$ 18,665	\$ 30,865	\$ 36,325	\$ 35,838	\$ 35,443	\$ 35,027	\$ 34,314	\$ 33,583



# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

## Meter: PA 1-41 Water

### Reference

	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	271	251	323	253	269	271	167	321	514	277	270	267
YTD Use	271	522	845	1,098	1,367	1,638	1,805	2,126	2,640	2,917	3,187	3,454
Month \$	\$ 2,512	\$ 2,327	\$ 2,994	\$ 2,341	\$ 2,494	\$ 2,512	\$ 1,548	\$ 2,976	\$ 4,765	\$ 2,568	\$ 2,503	\$ 2,475
YTD \$	\$ 2,512	\$ 4,839	\$ 7,833	\$ 10,174	\$ 12,668	\$ 15,180	\$ 16,728	\$ 19,704	\$ 24,469	\$ 27,037	\$ 29,540	\$ 32,015
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	134	442	604	812	833	969	832	349	236	47	4	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 9.269	\$ 9.271	\$ 9.269	\$ 9.253	\$ 9.271	\$ 9.269	\$ 9.269	\$ 9.271	\$ 9.270	\$ 9.271	\$ 9.270	\$ 9.270
YTD Rate	\$ 9.269	\$ 9.270	\$ 9.270	\$ 9.266	\$ 9.267	\$ 9.267	\$ 9.268	\$ 9.268	\$ 9.269	\$ 9.269	\$ 9.269	\$ 9.269

### Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	262	244	328	264	269	282	167	343	481	286	270	258
YTD Use	262	506	834	1,098	1,367	1,649	1,816	2,159	2,640	2,926	3,196	3,454
Month \$	\$ 3,169	\$ 2,949	\$ 3,972	\$ 3,190	\$ 3,254	\$ 3,408	\$ 2,019	\$ 4,154	\$ 5,816	\$ 3,456	\$ 3,265	\$ 3,125
YTD \$	\$ 3,169	\$ 6,118	\$ 10,090	\$ 13,281	\$ 16,534	\$ 19,942	\$ 21,961	\$ 26,116	\$ 31,931	\$ 35,387	\$ 38,652	\$ 41,777
BP Length	29	30	31	32	31	30	30	31	29	31	31	30
HDD	77	296	571	997	1,071	1,104	603	443	236	31	2	-
CDD	84	7	-	-	-	-	-	15	61	210	236	285
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

### SimActual

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	241	265	289	281	279	312	272	287	274	306	301	364
YTD Use	241	506	795	1,076	1,355	1,667	1,939	2,226	2,500	2,806	3,107	3,471
Month \$	\$ 2,915	\$ 3,205	\$ 3,496	\$ 3,399	\$ 3,375	\$ 3,774	\$ 3,290	\$ 3,471	\$ 3,314	\$ 3,701	\$ 3,641	\$ 4,403
YTD \$	\$ 2,915	\$ 6,120	\$ 9,616	\$ 13,014	\$ 16,389	\$ 20,163	\$ 23,453	\$ 26,924	\$ 30,238	\$ 33,939	\$ 37,580	\$ 41,983
BP Length	29	30	31	32	31	30	30	31	29	31	31	30
HDD	77	296	571	997	1,071	1,104	603	443	236	31	2	-
CDD	84	7	-	-	-	-	-	15	61	210	236	285
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

### SimActual vs. Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	-8.0%	8.7%	-12.0%	6.5%	3.7%	10.7%	62.9%	-16.4%	-43.0%	7.1%	11.5%	40.9%
YTD Use	-8.0%	0.0%	-4.7%	-2.0%	-0.9%	1.1%	6.8%	3.1%	-5.3%	-4.1%	-2.8%	0.5%
Month \$	-8.0%	8.7%	-12.0%	6.5%	3.7%	10.7%	62.9%	-16.4%	-43.0%	7.1%	11.5%	40.9%
YTD \$	-8.0%	0.0%	-4.7%	-2.0%	-0.9%	1.1%	6.8%	3.1%	-5.3%	-4.1%	-2.8%	0.5%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

### Use Avoidance

Month Use	21	(21)	39	(17)	(10)	(30)	(105)	56	207	(20)	(31)	(106)
YTD Use	21	(0)	39	22	12	(18)	(123)	(67)	140	120	89	(17)

### Cost Avoidance

Month Use \$	\$ 254	\$ (256)	\$ 477	\$ (208)	\$ (121)	\$ (366)	\$ (1,271)	\$ 683	\$ 2,502	\$ (245)	\$ (376)	\$ (1,277)
YTD \$	\$ 254	\$ (2)	\$ 475	\$ 266	\$ 145	\$ (220)	\$ (1,491)	\$ (808)	\$ 1,693	\$ 1,448	\$ 1,072	\$ (206)

# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

## Meter: PA 1-44 Gas

### Reference

	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	60	114	213	197	300	233	129	149	67	61	29	42
YTD Use	60	174	387	584	884	1,117	1,246	1,395	1,462	1,523	1,552	1,594
Month \$	\$ 1,192	\$ 2,265	\$ 4,232	\$ 3,919	\$ 5,961	\$ 4,630	\$ 2,563	\$ 2,961	\$ 1,331	\$ 1,212	\$ 576	\$ 835
YTD \$	\$ 1,192	\$ 3,457	\$ 7,689	\$ 11,608	\$ 17,569	\$ 22,199	\$ 24,762	\$ 27,723	\$ 29,054	\$ 30,266	\$ 30,842	\$ 31,677
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	243	566	724	936	957	1,081	956	469	339	112	17	7
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 19.867	\$ 19.868	\$ 19.869	\$ 19.893	\$ 19.870	\$ 19.871	\$ 19.868	\$ 19.872	\$ 19.866	\$ 19.869	\$ 19.862	\$ 19.881
YTD Rate	\$ 19.867	\$ 19.868	\$ 19.868	\$ 19.877	\$ 19.874	\$ 19.874	\$ 19.873	\$ 19.873	\$ 19.873	\$ 19.873	\$ 19.872	\$ 19.873

### Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	52	97	157	250	254	275	179	138	88	51	29	26
YTD Use	52	149	307	557	811	1,086	1,265	1,403	1,490	1,541	1,570	1,596
Month \$	\$ 1,352	\$ 2,519	\$ 4,078	\$ 6,488	\$ 6,580	\$ 7,132	\$ 4,651	\$ 3,567	\$ 2,269	\$ 1,330	\$ 740	\$ 664
YTD \$	\$ 1,352	\$ 3,871	\$ 7,950	\$ 14,437	\$ 21,017	\$ 28,149	\$ 32,800	\$ 36,367	\$ 38,636	\$ 39,965	\$ 40,706	\$ 41,370
BP Length	30	31	30	33	31	29	31	30	29	32	30	29
HDD	134	357	664	1,120	1,146	1,262	771	565	317	121	15	5
CDD	116	14	-	-	-	-	-	8	67	166	253	247
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

### SimActual

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	31	96	164	280	288	302	216	174	115	38	35	35
YTD Use	31	127	291	571	859	1,161	1,377	1,551	1,666	1,704	1,740	1,775
Month \$	\$ 804	\$ 2,489	\$ 4,252	\$ 7,267	\$ 7,456	\$ 7,827	\$ 5,603	\$ 4,519	\$ 2,976	\$ 996	\$ 918	\$ 902
YTD \$	\$ 804	\$ 3,293	\$ 7,545	\$ 14,812	\$ 22,268	\$ 30,095	\$ 35,698	\$ 40,217	\$ 43,194	\$ 44,189	\$ 45,107	\$ 46,009
BP Length	30	31	30	33	31	29	31	30	29	32	30	29
HDD	134	357	664	1,120	1,146	1,262	771	565	317	121	15	5
CDD	116	14	-	-	-	-	-	8	67	166	253	247
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

### SimActual vs. Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	-40.6%	-1.2%	4.3%	12.0%	13.3%	9.7%	20.5%	26.7%	31.2%	-25.1%	24.0%	35.9%
YTD Use	-40.6%	-14.9%	-5.1%	2.0%	6.0%	6.9%	8.8%	10.6%	11.8%	10.6%	10.8%	11.2%
Month \$	-40.6%	-1.2%	4.3%	12.0%	13.3%	9.7%	20.5%	26.7%	31.2%	-25.1%	24.0%	35.9%
YTD \$	-40.6%	-14.9%	-5.1%	2.6%	6.0%	6.9%	8.8%	10.6%	11.8%	10.6%	10.8%	11.2%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

### Use Avoidance

Month Use	21	1	(7)	(30)	(34)	(27)	(37)	(37)	(27)	13	(7)	(9)
YTD Use	21	22	16	(14)	(48)	(75)	(112)	(149)	(176)	(163)	(170)	(179)

### Cost Avoidance

Month Use \$	\$ 549	\$ 30	\$ (174)	\$ (780)	\$ (877)	\$ (695)	\$ (952)	\$ (952)	\$ (707)	\$ 334	\$ (178)	\$ (238)
YTD \$	\$ 549	\$ 579	\$ 405	\$ (375)	\$ (1,251)	\$ (1,946)	\$ (2,898)	\$ (3,850)	\$ (4,558)	\$ (4,224)	\$ (4,401)	\$ (4,639)

# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

Meter: PA 1-45 Gas

## Reference

	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	80	162	288	498	486	428	461	152	137	187	67	53
YTD Use	80	242	530	1,028	1,514	1,942	2,403	2,555	2,692	2,879	2,946	2,999
Month \$	\$ 1,590	\$ 3,219	\$ 5,723	\$ 9,892	\$ 9,657	\$ 8,505	\$ 9,160	\$ 3,020	\$ 2,722	\$ 3,716	\$ 1,331	\$ 1,053
YTD \$	\$ 1,590	\$ 4,809	\$ 10,532	\$ 20,424	\$ 30,081	\$ 38,586	\$ 47,746	\$ 50,766	\$ 53,488	\$ 57,204	\$ 58,535	\$ 59,588
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	92	382	544	750	771	913	770	293	188	30	-	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 19.875	\$ 19.870	\$ 19.872	\$ 19.863	\$ 19.870	\$ 19.871	\$ 19.870	\$ 19.868	\$ 19.869	\$ 19.872	\$ 19.866	\$ 19.868
YTD Rate	\$ 19.875	\$ 19.872	\$ 19.872	\$ 19.868	\$ 19.869	\$ 19.869	\$ 19.869	\$ 19.869	\$ 19.869	\$ 19.869	\$ 19.869	\$ 19.869

## Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	73	166	249	404	559	576	419	227	211	92	72	66
YTD Use	73	239	488	892	1,451	2,027	2,445	2,672	2,884	2,976	3,048	3,113
Month \$	\$ 1,883	\$ 4,307	\$ 6,465	\$ 10,472	\$ 14,486	\$ 14,935	\$ 10,854	\$ 5,884	\$ 5,478	\$ 2,390	\$ 1,859	\$ 1,704
YTD \$	\$ 1,883	\$ 6,190	\$ 12,655	\$ 23,127	\$ 37,613	\$ 52,549	\$ 63,403	\$ 69,287	\$ 74,765	\$ 77,154	\$ 79,013	\$ 80,717
BP Length	30	31	30	30	34	29	31	30	29	32	30	29
HDD	10	208	393	727	1,043	1,105	754	344	315	43	8	-
CDD	177	11	4	-	-	-	-	8	12	180	241	227
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

## SimActual

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	60	125	194	299	418	426	329	210	185	71	59	57
YTD Use	60	185	379	678	1,095	1,521	1,850	2,060	2,246	2,317	2,376	2,433
Month \$	\$ 1,556	\$ 3,241	\$ 5,030	\$ 7,747	\$ 10,827	\$ 11,037	\$ 8,532	\$ 5,450	\$ 4,807	\$ 1,843	\$ 1,527	\$ 1,470
YTD \$	\$ 1,556	\$ 4,796	\$ 9,826	\$ 17,573	\$ 28,400	\$ 39,437	\$ 47,969	\$ 53,419	\$ 58,226	\$ 60,069	\$ 61,596	\$ 63,066
BP Length	30	31	30	30	34	29	31	30	29	32	30	29
HDD	10	208	393	727	1,043	1,105	754	344	315	43	8	-
CDD	177	11	4	-	-	-	-	8	12	180	241	227
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

## SimActual vs. Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	-17.4%	-24.8%	-22.2%	-26.0%	-25.3%	-26.1%	-21.4%	-7.4%	-12.2%	-22.9%	-17.8%	-13.7%
YTD Use	-17.4%	-22.5%	-22.4%	-24.0%	-24.5%	-25.0%	-24.3%	-22.9%	-22.1%	-22.1%	-22.0%	-21.9%
Month \$	-17.4%	-24.8%	-22.2%	-26.0%	-25.3%	-26.1%	-21.4%	-7.4%	-12.2%	-22.9%	-17.8%	-13.7%
YTD \$	-17.4%	-22.5%	-22.4%	-24.0%	-24.5%	-25.0%	-24.3%	-22.9%	-22.1%	-22.1%	-22.0%	-21.9%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

## Use Avoidance

Month Use	13	41	55	105	141	150	90	17	26	21	13	9
YTD Use	13	54	109	214	355	506	595	612	638	659	672	681

## Cost Avoidance

Month Use \$	\$ 327	\$ 1,067	\$ 1,435	\$ 2,725	\$ 3,660	\$ 3,898	\$ 2,322	\$ 434	\$ 671	\$ 546	\$ 332	\$ 234
YTD \$	\$ 327	\$ 1,394	\$ 2,829	\$ 5,554	\$ 9,214	\$ 13,112	\$ 15,434	\$ 15,868	\$ 16,539	\$ 17,085	\$ 17,417	\$ 17,651



# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

Meter: PA 1-45 Water

Reference	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	203	229	215	186	240	245	184	645	239	174	249	207
YTD Use	203	432	647	833	1,073	1,318	1,502	2,147	2,406	2,580	2,829	3,036
Month \$	\$ 1,882	\$ 2,123	\$ 1,993	\$ 1,724	\$ 2,225	\$ 2,271	\$ 1,706	\$ 5,979	\$ 2,401	\$ 1,613	\$ 2,308	\$ 1,919
YTD \$	\$ 1,882	\$ 4,005	\$ 5,998	\$ 7,722	\$ 9,947	\$ 12,218	\$ 13,924	\$ 19,903	\$ 22,304	\$ 23,917	\$ 26,225	\$ 28,144
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	134	442	604	812	833	969	832	349	236	47	4	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 9.271	\$ 9.271	\$ 9.270	\$ 9.269	\$ 9.271	\$ 9.269	\$ 9.272	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.269	\$ 9.271
YTD Rate	\$ 9.271	\$ 9.271	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270	\$ 9.270

Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	196	221	223	193	232	265	194	640	242	182	248	200
YTD Use	196	417	640	833	1,065	1,330	1,524	2,164	2,406	2,588	2,836	3,036
Month \$	\$ 2,373	\$ 2,673	\$ 2,692	\$ 2,336	\$ 2,809	\$ 3,201	\$ 2,342	\$ 7,743	\$ 2,931	\$ 2,202	\$ 2,995	\$ 2,423
YTD \$	\$ 2,373	\$ 5,046	\$ 7,739	\$ 10,075	\$ 12,885	\$ 16,085	\$ 18,427	\$ 26,171	\$ 29,101	\$ 31,303	\$ 34,298	\$ 36,721
BP Length	29	30	31	32	30	31	30	31	29	31	31	30
HDD	77	296	571	997	1,025	1,150	603	443	236	31	2	-
CDD	84	7	-	-	-	-	-	15	61	210	236	285
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

SimActual	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	293	237	187	181	174	194	155	168	153	160	170	173
YTD Use	293	530	717	898	1,072	1,266	1,421	1,589	1,742	1,902	2,072	2,245
Month \$	\$ 3,544	\$ 2,867	\$ 2,262	\$ 2,189	\$ 2,105	\$ 2,346	\$ 1,875	\$ 2,032	\$ 1,851	\$ 1,935	\$ 2,056	\$ 2,092
YTD \$	\$ 3,544	\$ 6,410	\$ 8,672	\$ 10,862	\$ 12,966	\$ 15,313	\$ 17,187	\$ 19,219	\$ 21,070	\$ 23,005	\$ 25,061	\$ 27,154
BP Length	29	30	31	32	30	31	30	31	29	31	31	30
HDD	77	296	571	997	1,025	1,150	603	443	236	31	2	-
CDD	84	7	-	-	-	-	-	15	61	210	236	285
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

SimActual vs. Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	49.3%	7.2%	-16.0%	-6.3%	-25.1%	-26.7%	-20.0%	-73.8%	-36.9%	-12.1%	-31.4%	-13.6%
YTD Use	49.3%	27.0%	12.1%	7.8%	0.6%	-4.8%	-6.7%	-26.6%	-27.6%	-26.5%	-26.9%	-26.1%
Month \$	49.3%	7.2%	-16.0%	-6.3%	-25.1%	-26.7%	-20.0%	-73.8%	-36.9%	-12.1%	-31.4%	-13.6%
YTD \$	49.3%	27.0%	12.1%	7.8%	0.6%	-4.8%	-6.7%	-26.6%	-27.6%	-26.5%	-26.9%	-26.1%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

Use Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	(97)	(16)	36	12	58	71	39	472	89	22	78	27
YTD Use	(97)	(113)	(77)	(65)	(7)	64	103	575	664	686	764	791

Cost Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use \$	\$ (1,170)	\$ (194)	\$ 431	\$ 147	\$ 705	\$ 854	\$ 467	\$ 5,711	\$ 1,080	\$ 266	\$ 939	\$ 330
YTD \$	\$ (1,170)	\$ (1,364)	\$ (933)	\$ (786)	\$ (82)	\$ 773	\$ 1,240	\$ 6,951	\$ 8,031	\$ 8,298	\$ 9,237	\$ 9,567

3.26

# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

## Meter: PA 1-46 Gas

### Reference

	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	29	99	278	415	489	488	363	130	88	17	36	24
YTD Use	29	128	406	821	1,310	1,798	2,161	2,291	2,379	2,396	2,432	2,456
Month \$	\$ 576	\$ 1,967	\$ 5,524	\$ 8,256	\$ 9,717	\$ 9,697	\$ 7,213	\$ 2,583	\$ 1,749	\$ 338	\$ 715	\$ 477
YTD \$	\$ 576	\$ 2,543	\$ 8,067	\$ 16,323	\$ 26,040	\$ 35,737	\$ 42,950	\$ 45,533	\$ 47,282	\$ 47,620	\$ 48,335	\$ 48,812
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	16	184	312	502	523	689	534	120	50	2	+	+
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 19.862	\$ 19.869	\$ 19.871	\$ 19.894	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.869	\$ 19.875	\$ 19.882	\$ 19.861	\$ 19.875
YTD Rate	\$ 19.862	\$ 19.867	\$ 19.869	\$ 19.882	\$ 19.878	\$ 19.876	\$ 19.875	\$ 19.875	\$ 19.875	\$ 19.875	\$ 19.875	\$ 19.875

### Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	38	124	248	526	612	548	265	129	89	34	31	31
YTD Use	38	162	411	937	1,549	2,096	2,361	2,490	2,579	2,613	2,644	2,675
Month \$	\$ 981	\$ 3,226	\$ 6,442	\$ 13,631	\$ 15,868	\$ 14,196	\$ 6,867	\$ 3,347	\$ 2,312	\$ 879	\$ 796	\$ 796
YTD \$	\$ 981	\$ 4,207	\$ 10,649	\$ 24,281	\$ 40,149	\$ 54,345	\$ 61,212	\$ 64,559	\$ 66,871	\$ 67,749	\$ 68,546	\$ 69,342
BP Length	30	31	31	33	31	28	32	29	30	32	29	29
HDD	9	129	303	689	813	727	324	138	81	-	-	-
CDD	72	7	-	-	-	-	-	19	58	230	223	282
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

### SimActual

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	54	183	270	443	476	404	320	278	158	51	42	42
YTD Use	54	237	507	950	1,426	1,830	2,151	2,429	2,586	2,639	2,680	2,721
Month \$	\$ 1,400	\$ 4,745	\$ 7,000	\$ 11,491	\$ 12,346	\$ 10,474	\$ 8,304	\$ 7,205	\$ 4,091	\$ 1,325	\$ 1,099	\$ 1,076
YTD \$	\$ 1,400	\$ 6,145	\$ 13,145	\$ 24,635	\$ 36,982	\$ 47,456	\$ 55,760	\$ 62,965	\$ 67,056	\$ 68,381	\$ 69,480	\$ 70,556
BP Length	30	31	31	33	31	28	32	29	30	32	29	29
HDD	9	129	303	689	813	727	324	138	81	-	-	-
CDD	72	7	-	-	-	-	-	19	58	230	223	282
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

### SimActual vs. Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	42.7%	47.1%	8.7%	-15.7%	-22.2%	-26.2%	20.9%	115.3%	77.0%	50.8%	38.0%	35.1%
YTD Use	42.7%	46.0%	23.4%	1.5%	-7.9%	-12.7%	-8.9%	-2.5%	0.3%	0.9%	1.4%	1.8%
Month \$	42.7%	47.1%	8.7%	-15.7%	-22.2%	-26.2%	20.9%	115.3%	77.0%	50.8%	38.0%	35.1%
YTD \$	42.7%	46.0%	23.4%	1.5%	-7.9%	-12.7%	-8.9%	-2.5%	0.3%	0.9%	1.4%	1.8%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

### Use Avoidance

	(16)	(59)	(22)	83	136	144	(55)	(149)	(69)	(17)	(12)	(11)
Month Use	(16)	(59)	(22)	83	136	144	(55)	(149)	(69)	(17)	(12)	(11)
YTD Use	(16)	(75)	(96)	(14)	122	266	210	61	(7)	(24)	(36)	(47)

### Cost Avoidance

	(419)	(1,518)	(558)	2,141	3,522	3,722	(1,437)	(3,858)	(1,780)	(446)	(303)	(280)
Month Use \$	(419)	(1,518)	(558)	2,141	3,522	3,722	(1,437)	(3,858)	(1,780)	(446)	(303)	(280)
YTD \$	(419)	(1,937)	(2,495)	(355)	3,167	6,889	5,452	1,594	(186)	(632)	(935)	(1,214)

# Meter Detail Report

Reference: Actual usage and costs for past Year.  
SimActual: Actual usage and calculated costs for current Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

## Meter: PA 1-46 Water

Reference	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	173	111	184	174	153	370	165	262	179	714	208	168
YTD Use	173	284	468	642	795	1,165	1,330	1,592	1,771	2,485	2,693	2,861
Month \$	\$ 1,604	\$ 1,029	\$ 1,706	\$ 1,616	\$ 1,418	\$ 3,430	\$ 1,530	\$ 2,429	\$ 1,659	\$ 6,619	\$ 1,928	\$ 1,557
YTD \$	\$ 1,604	\$ 2,633	\$ 4,339	\$ 5,955	\$ 7,373	\$ 10,803	\$ 12,333	\$ 14,762	\$ 16,421	\$ 23,040	\$ 24,968	\$ 26,525
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	134	442	604	812	833	969	832	349	236	47	4	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 9.272	\$ 9.270	\$ 9.272	\$ 9.287	\$ 9.268	\$ 9.270	\$ 9.273	\$ 9.271	\$ 9.268	\$ 9.270	\$ 9.269	\$ 9.268
YTD Rate	\$ 9.272	\$ 9.271	\$ 9.271	\$ 9.276	\$ 9.274	\$ 9.273	\$ 9.273	\$ 9.273	\$ 9.272	\$ 9.272	\$ 9.271	\$ 9.271

Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	173	110	160	143	205	385	154	267	156	713	218	176
YTD Use	173	282	443	586	791	1,176	1,330	1,597	1,753	2,467	2,685	2,861
Month \$	\$ 2,088	\$ 1,326	\$ 1,941	\$ 1,729	\$ 2,478	\$ 4,659	\$ 1,867	\$ 3,233	\$ 1,886	\$ 8,628	\$ 2,641	\$ 2,129
YTD \$	\$ 2,088	\$ 3,414	\$ 5,355	\$ 7,084	\$ 9,562	\$ 14,221	\$ 16,088	\$ 19,321	\$ 21,207	\$ 29,834	\$ 32,476	\$ 34,603
BP Length	30	30	27	25	40	31	29	31	27	33	30	32
HDD	77	296	494	712	1,342	1,173	599	435	232	69	2	-
CDD	85	7	-	-	-	-	-	15	60	182	248	291
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

SimActual	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	607	547	271	379	323	323	460	304	567	772	418	576
YTD Use	607	1,154	1,425	1,804	2,127	2,450	2,910	3,214	3,780	4,553	4,971	5,547
Month \$	\$ 7,342	\$ 6,616	\$ 3,278	\$ 4,588	\$ 3,906	\$ 3,906	\$ 5,565	\$ 3,671	\$ 6,853	\$ 9,340	\$ 5,058	\$ 6,968
YTD \$	\$ 7,342	\$ 13,958	\$ 17,236	\$ 21,823	\$ 25,729	\$ 29,635	\$ 35,200	\$ 38,870	\$ 45,724	\$ 55,064	\$ 60,122	\$ 67,090
BP Length	30	30	27	25	40	31	29	31	27	33	30	32
HDD	77	296	494	712	1,342	1,173	599	435	232	69	2	-
CDD	85	7	-	-	-	-	-	15	60	182	248	291
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

SimActual vs. Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	251.6%	399.1%	68.9%	165.4%	57.6%	-16.2%	198.1%	13.5%	263.4%	8.3%	91.5%	227.3%
YTD Use	251.6%	308.8%	221.9%	208.1%	169.1%	108.4%	118.8%	101.2%	115.6%	84.6%	85.1%	93.9%
Month \$	251.6%	399.1%	68.9%	165.4%	57.6%	-16.2%	198.1%	13.5%	263.4%	8.3%	91.5%	227.3%
YTD \$	251.6%	308.8%	221.9%	208.1%	169.1%	108.4%	118.8%	101.2%	115.6%	84.6%	85.1%	93.9%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

Use Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	(434)	(437)	(111)	(236)	(118)	62	(306)	(36)	(411)	(59)	(200)	(400)
YTD Use	(434)	(872)	(982)	(1,219)	(1,337)	(1,274)	(1,580)	(1,616)	(2,027)	(2,086)	(2,286)	(2,686)

Cost Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use \$	\$ (5,254)	\$ (5,290)	\$ (1,337)	\$ (2,859)	\$ (1,428)	\$ 753	\$ (3,698)	\$ (438)	\$ (4,967)	\$ (712)	\$ (2,417)	\$ (4,839)
YTD \$	\$ (5,254)	\$ (10,544)	\$ (11,881)	\$ (14,740)	\$ (16,167)	\$ (15,414)	\$ (19,112)	\$ (19,549)	\$ (24,517)	\$ (25,229)	\$ (27,646)	\$ (32,485)



# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

Meter: PA 1.47 Gas

## Reference

	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	31	91	174	164	267	251	192	106	54	27	28	23
YTD Use	31	122	296	460	727	978	1,170	1,276	1,330	1,357	1,385	1,408
Month \$	\$ 616	\$ 1,808	\$ 3,457	\$ 3,260	\$ 5,305	\$ 4,988	\$ 3,815	\$ 2,106	\$ 1,073	\$ 537	\$ 556	\$ 457
YTD \$	\$ 616	\$ 2,424	\$ 5,881	\$ 9,141	\$ 14,446	\$ 19,434	\$ 23,249	\$ 25,355	\$ 26,428	\$ 26,965	\$ 27,521	\$ 27,978
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	34	250	395	595	616	773	621	178	90	8	-	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 19.871	\$ 19.868	\$ 19.968	\$ 19.878	\$ 19.869	\$ 19.873	\$ 19.870	\$ 19.868	\$ 19.870	\$ 19.889	\$ 19.857	\$ 19.870
YTD Rate	\$ 19.871	\$ 19.869	\$ 19.868	\$ 19.872	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871	\$ 19.871

## Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	41	84	134	283	275	280	160	88	68	32	35	32
YTD Use	41	125	258	541	816	1,096	1,256	1,344	1,412	1,444	1,479	1,511
Month \$	\$ 1,062	\$ 2,168	\$ 3,462	\$ 7,336	\$ 7,140	\$ 7,249	\$ 4,157	\$ 2,279	\$ 1,764	\$ 823	\$ 904	\$ 819
YTD \$	\$ 1,062	\$ 3,231	\$ 6,693	\$ 14,029	\$ 21,169	\$ 28,418	\$ 32,575	\$ 34,854	\$ 36,619	\$ 37,441	\$ 38,345	\$ 39,164
BP Length	30	30	30	35	29	29	32	29	30	29	32	29
HDD	29	175	347	841	838	852	431	194	122	1	-	-
CDD	72	7	-	-	-	-	-	19	57	213	239	285
Month Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

## SimActual

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	-	-	-	2,319	356	2,136	1,820	1,143	585	293	304	259
YTD Use	-	-	-	2,319	2,875	5,011	6,831	7,974	8,559	8,852	9,156	9,415
Month \$	\$ -	\$ -	\$ -	\$ 60,124	\$ 14,415	\$ 55,379	\$ 47,186	\$ 29,634	\$ 15,167	\$ 7,596	\$ 7,882	\$ 6,715
YTD \$	\$ -	\$ -	\$ -	\$ 60,124	\$ 74,539	\$ 129,918	\$ 177,104	\$ 206,738	\$ 221,905	\$ 229,501	\$ 237,383	\$ 244,098
BP Length	30	30	30	35	29	29	32	29	30	29	32	29
HDD	29	175	347	841	838	852	431	194	122	1	-	-
CDD	72	7	-	-	-	-	-	19	57	213	239	285
Month Rate	\$ -	\$ -	\$ -	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926
YTD Rate	\$ -	\$ -	\$ -	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926	\$ 25.926

## SimActual vs. Baseline

	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	-100.0%	-100.0%	-100.0%	719.6%	101.9%	663.9%	1035.2%	1200.0%	759.7%	823.2%	772.1%	719.8%
YTD Use	-100.0%	-100.0%	-100.0%	328.6%	252.1%	357.2%	443.7%	493.1%	506.0%	513.0%	519.1%	523.3%
Month \$	-100.0%	-100.0%	-100.0%	719.6%	101.9%	663.9%	1035.2%	1200.0%	759.7%	823.2%	772.1%	719.8%
YTD \$	-100.0%	-100.0%	-100.0%	328.6%	252.1%	357.2%	443.7%	493.1%	506.0%	513.0%	519.1%	523.3%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

## Use Avoidance

Month Use	41	84	134	(2,036)	(281)	(1,856)	(1,660)	(1,055)	(517)	(261)	(269)	(227)
YTD Use	41	125	258	(1,778)	(2,059)	(3,915)	(5,575)	(6,630)	(7,147)	(7,408)	(7,677)	(7,904)

## Cost Avoidance

Month Use \$	\$ 1,062	\$ 2,168	\$ 3,462	\$ (52,788)	\$ (7,275)	\$ (48,130)	\$ (43,030)	\$ (27,355)	\$ (13,403)	\$ (6,774)	\$ (6,978)	\$ (5,896)
YTD \$	\$ 1,062	\$ 3,231	\$ 6,693	\$ (46,095)	\$ (53,370)	\$ (101,500)	\$ (144,529)	\$ (171,884)	\$ (185,286)	\$ (192,060)	\$ (199,038)	\$ (204,934)

# Meter Detail Report

Reference: Actual usage and costs for past Year.

Baseline: Current usage and costs based upon historic patterns of Unit use.

SimActual: Actual usage and calculated costs for current Year.

Meter: PA 1-47 Water

Reference	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Jul 2006	Aug 2006
Month Use	147	105	139	95	66	84	202	111	174	128	146	132
YTD Use	147	252	391	486	552	636	838	949	1,123	1,251	1,397	1,529
Month \$	\$ 1,263	\$ 973	\$ 1,283	\$ 881	\$ 612	\$ 779	\$ 1,873	\$ 1,029	\$ 1,613	\$ 1,187	\$ 1,353	\$ 1,224
YTD \$	\$ 1,263	\$ 2,336	\$ 3,619	\$ 4,500	\$ 5,112	\$ 5,891	\$ 7,764	\$ 8,793	\$ 10,406	\$ 11,593	\$ 12,946	\$ 14,170
BP Length	30	31	30	31	31	28	31	30	31	30	31	31
HDD	134	442	604	812	833	969	832	349	236	47	4	-
CDD	12	-	-	-	-	-	-	-	42	83	263	266
Month Rate	\$ 9.272	\$ 9.267	\$ 9.230	\$ 9.274	\$ 9.273	\$ 9.274	\$ 9.272	\$ 9.270	\$ 9.270	\$ 9.273	\$ 9.267	\$ 9.273
YTD Rate	\$ 9.272	\$ 9.270	\$ 9.256	\$ 9.259	\$ 9.261	\$ 9.263	\$ 9.265	\$ 9.266	\$ 9.266	\$ 9.267	\$ 9.267	\$ 9.267

Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	127	123	122	94	70	116	177	128	162	132	142	143
YTD Use	127	250	371	465	535	651	827	955	1,117	1,249	1,391	1,534
Month \$	\$ 1,531	\$ 1,488	\$ 1,473	\$ 1,136	\$ 842	\$ 1,399	\$ 2,137	\$ 1,551	\$ 1,958	\$ 1,596	\$ 1,717	\$ 1,726
YTD \$	\$ 1,531	\$ 3,019	\$ 4,492	\$ 5,628	\$ 6,470	\$ 7,869	\$ 10,005	\$ 11,556	\$ 13,514	\$ 15,110	\$ 16,827	\$ 18,553
BP Length	28	33	29	34	29	28	31	30	31	30	31	32
HDD	174	390	657	1,064	1,083	979	493	394	173	22	1	8
CDD	41	7	-	-	-	-	6	13	110	214	230	250
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

SimActual	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	65	59	72	40	39	69	66	50	140	122	270	328
YTD Use	65	124	196	236	275	344	410	460	600	722	992	1,320
Month \$	\$ 786	\$ 714	\$ 871	\$ 481	\$ 469	\$ 838	\$ 795	\$ 605	\$ 1,693	\$ 1,476	\$ 3,266	\$ 3,967
YTD \$	\$ 786	\$ 1,500	\$ 2,371	\$ 2,852	\$ 3,321	\$ 4,160	\$ 4,954	\$ 5,559	\$ 7,252	\$ 8,728	\$ 11,994	\$ 15,961
BP Length	28	33	29	34	29	28	31	30	31	30	31	32
HDD	174	390	657	1,064	1,083	979	493	394	173	22	1	8
CDD	41	7	-	-	-	-	6	13	110	214	230	250
Month Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095
YTD Rate	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095	\$ 12.095

SimActual vs. Baseline	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	-48.7%	-52.0%	-40.9%	-57.6%	-44.2%	-40.1%	-62.8%	-61.0%	-13.5%	-7.6%	90.2%	129.9%
YTD Use	-48.7%	-50.3%	-47.2%	-49.3%	-48.7%	-47.1%	-50.5%	-51.9%	-46.3%	-42.2%	-28.7%	-14.0%
Month \$	-48.7%	-52.0%	-40.9%	-57.6%	-44.2%	-40.1%	-62.8%	-61.0%	-13.5%	-7.6%	90.2%	129.9%
YTD \$	-48.7%	-50.3%	-47.2%	-49.3%	-48.7%	-47.1%	-50.5%	-51.9%	-46.3%	-42.2%	-28.7%	-14.0%
BP Length	-	-	-	-	-	-	-	-	-	-	-	-
HDD	-	-	-	-	-	-	-	-	-	-	-	-
CDD	-	-	-	-	-	-	-	-	-	-	-	-

Use Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use	62	64	50	54	31	46	111	78	22	10	(128)	(185)
YTD Use	62	126	175	230	260	307	418	496	518	528	400	214

Cost Avoidance	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Aug 2021
Month Use \$	\$ 745	\$ 774	\$ 603	\$ 654	\$ 372	\$ 561	\$ 1,342	\$ 946	\$ 265	\$ 121	\$ (1,549)	\$ (2,242)
YTD \$	\$ 745	\$ 1,519	\$ 2,122	\$ 2,776	\$ 3,148	\$ 3,709	\$ 5,051	\$ 5,997	\$ 6,262	\$ 6,383	\$ 4,834	\$ 2,592



## Option A Savings

This section of the report provides Housing Authority of the City of Pittsburgh with a breakdown of the savings achieved from the Option A ECMs.

Annual cost avoidance is calculated based on the stipulated & one-time reconciliation.

ECM #	ECM Description	kWh	kWh \$	MCF	MCF \$	Water	Water \$	Total \$
1	Retrofit Tenant Area Lighting	1,729,869	\$ 137,180					\$ 137,180
2	Retrofit Common Area Lighting	884,399	\$ 76,928					\$ 76,928
6	High Efficiency Refrigerators	96,142	\$ 10,941					\$ 10,941
10, 11	Water Conservation	222,931	\$ 25,370	840	\$ 21,769	1,797	\$ 21,731	\$ 68,869
16	Building Envelope Improvements	22,012	\$ 2,505					\$ 2,505
18	Roof Replacement and/or Added Insulation	146	\$ 17					\$ 17
21	Limiting Thermostats	92,546	\$ 10,532	2,294	\$ 59,463			\$ 69,994
30	Replace Rooftop Ventilations Units	13,243	\$ 1,507					\$ 1,507
32	Ventilation Unit Heat Recovery	3,842	\$ 437					\$ 437
37	Insulate Make Up Air Duct on Roof	212	\$ 24					\$ 24
<b>Total</b>		<b>3,065,343</b>	<b>\$ 265,441</b>	<b>3,133</b>	<b>\$ 81,231</b>	<b>1,797</b>	<b>\$ 21,731</b>	<b>\$ 368,403</b>

3.35

## Lighting Savings

### ECM: Interior Tenant Area Lighting Retrofit

HA Site #	Site Name	Proposed Savings		As Installed Savings		Difference	
		Electric kWh	Electric \$	Electric kWh	Electric \$	Electric kWh	Electric \$
PA 1-02	Bedford Dwellings	280,238	\$ 31,891	380,228	\$ 43,270	99,990	\$ 11,379
PA 1-04	Arlington Heights						
PA 1-05	Allegheny Dwellings	293,553	\$ 33,406	295,457	\$ 33,623	1,904	\$ 217
PA 1-09	Northview Heights*						
PA 1-09H	Northview High Rise*						
PA 1-11	Hamilton-Larimer	36,147	\$ 4,114	41,936	\$ 4,772	5,789	\$ 659
PA 1-15	Pennsylvania-Bidwell	84,245	\$ 9,587	84,959	\$ 9,668	714	\$ 81
PA 1-17	Pressley Street	82,441	\$ 9,382	68,020	\$ 7,741	-14,421	\$ (1,641)
PA 1-20	Homewood North*						
PA 1-31	Murray Tower	26,150	\$ 2,976	46,433	\$ 5,284	20,283	\$ 2,308
PA 1-32	Glen Hazel Family	162,295	\$ 18,469	153,182	\$ 17,432	-9,113	\$ (1,037)
PA 1-40	Mazza Pavilion (Brookline)						
PA 1-41	Caliguiri Plaza (Allentown)	42,285	\$ 4,812	53,296	\$ 6,065	11,011	\$ 1,253
PA 1-44	Finello Pavilion (South Oakland)	20,869	\$ 2,375	24,773	\$ 2,819	3,904	\$ 444
PA 1-45	Morse Gardens	2,572	\$ 293	7,332	\$ 834	4,760	\$ 542
PA 1-46	Carrick Regency	26,293	\$ 2,992	33,678	\$ 3,833	7,385	\$ 840
PA 1-47	Gualtieri Manor	13,122	\$ 1,493	16,158	\$ 1,839	3,036	\$ 345
		1,493,088	\$169,913	1,729,869	\$ 137,180	236,781	\$ 26,946

### ECM: Interior Common Area Lighting Retrofit

HA Site #	Site Name	Proposed Savings		As Installed Savings		Difference	
		Electric kWh	Electric \$	Electric kWh	Electric \$	Electric kWh	Electric \$
PA 1-02	Bedford Dwellings	194,663	\$ 22,153	106,355	\$ 12,103	-88,308	\$ (10,049)
PA 1-04	Arlington Heights						
PA 1-05	Allegheny Dwellings	273,650	\$ 31,141	31,790	\$ 3,618	-241,860	\$ (27,524)
PA 1-09	Northview Heights*						
PA 1-09H	Northview High Rise*						
PA 1-11	Hamilton-Larimer	6,905	\$ 786	32,079	\$ 3,651	25,174	\$ 2,865
PA 1-15	Pennsylvania-Bidwell	39,943	\$ 4,546	15,929	\$ 1,813	-24,014	\$ (2,733)
PA 1-17	Pressley Street	213,553	\$ 24,302	278,784	\$ 31,726	65,231	\$ 7,423
PA 1-20	Homewood North*						
PA 1-31	Murray Tower	98,968	\$ 11,263	67,034	\$ 7,628	-31,934	\$ (3,634)
PA 1-32	Glen Hazel Family	0	\$ -	0	\$ -	0	\$ -
PA 1-40	Mazza Pavilion (Brookline)						
PA 1-41	Caliguiri Plaza (Allentown)	28,301	\$ 3,221	30,311	\$ 3,449	2,010	\$ 229
PA 1-44	Finello Pavilion (South Oakland)	33,577	\$ 3,821	17,579	\$ 2,000	-15,998	\$ (1,821)
PA 1-45	Morse Gardens	10,159	\$ 1,156	9,164	\$ 1,043	-995	\$ (113)
PA 1-46	Carrick Regency	41,723	\$ 4,748	53,933	\$ 6,138	12,210	\$ 1,389
PA 1-47	Gualtieri Manor	58,996	\$ 6,714	33,036	\$ 3,759	-25,960	\$ (2,954)
		1,306,960	\$148,732	884,399	\$ 76,928	-422,561	\$ (48,087)

Cost per kWh \$0.1138

\* Buildings are Opt C, therefore savings not included in lighting savings totals

## High Efficiency Refrigerators

The table below shows a summary of the proposed number of high efficiency refrigerators and their locations along with the actual installed number and locations of the refrigerators.

Locations	# of Proposed Installations	# of Actual Installations
Addison Terrace	61	75
Bedford Dwellings	51	45
Allegheny Dwellings	29	40
Northview Heights	65	72
Hamilton-Larimer	30	0
Glen Hazel Family	69	70
Totals	305	302

HA Site #	Site Name	% of Units Occupied	Existing Refrig. Code #	Quan.	Existing Refrigerators		New Refrigerators			Annual Electric Savings
					Annual kWh	Annual Cost	Refrig. Code #	Annual kWh	Annual Cost	
PA 1-02	Bedford Dwellings	93.1%	10	18	11,696	\$ 1,331	1	6,468	\$ 736	5,228
PA 1-02	Bedford Dwellings	93.1%	12	8	10,360	\$ 1,179	1	2,875	\$ 327	7,485
PA 1-02	Bedford Dwellings	93.1%	13	25	24,787	\$ 2,821	1	8,984	\$ 1,022	15,803
PA 1-05	Allegheny Dwellings	92.9%	14	17	12,588	\$ 1,433	1	6,097	\$ 694	6,491
PA 1-05	Allegheny Dwellings	92.9%	13	12	11,874	\$ 1,351	1	4,303	\$ 490	7,570
PA 1-09	Northview Heights*	83.6%	4	30	20,247	\$ 2,304	1	9,685	\$ 1,102	10,563
PA 1-09	Northview Heights*	83.6%	5	7	7,095	\$ 807	1	2,260	\$ 257	4,836
PA 1-09	Northview Heights*	83.6%	6	28	26,930	\$ 3,065	1	9,039	\$ 1,029	17,891
PA 1-11	Hamilton-Larimer	93.3%	8	3	2,859	\$ 325	1	1,081	\$ 123	1,778
PA 1-11	Hamilton-Larimer	93.3%	11	27	27,443	\$ 3,123	1	9,727	\$ 1,107	17,716
PA 1-32	Glen Hazel Family	96.9%	1	61	51,234	\$ 5,830	1	22,810	\$ 2,596	28,424
PA 1-32	Glen Hazel Family	96.9%	2	1	1,138	\$ 130	1	374	\$ 43	764
PA 1-32	Glen Hazel Family	96.9%	3	7	7,500	\$ 854	1	2,618	\$ 298	4,883
		88.6%		305	206,394	23,488		83,737	9,529	96,142

Electrical Savings - kWh 96,142  
Electrical Savings - \$ \$ 10,941

\* Building is Opt C, therefore savings not included in refrigerator savings total

## Water Conservation Savings

ECM: **Low Flow Faucet Restrictors & Shower Heads**

HA Site #	Site Name	Annual Savings				Savings % of Total			
		Natural Gas - MCF	Electric - kWh	Water - Mgals	Sewer - Mgals	Natural Gas - MCF	Electric - kWh	Water - Mgals	Sewer - Mgals
PA 1-01	Addison Terrace	3,958	0	8,469	8,469	7.05%	0.00%	16.13%	0.00%
PA 1-04	Arlington Heights	919	0	1,967	1,967	8.00%	0.00%	14.73%	0.00%
PA 1-05	Allegheny Dwellings	0	222,931	3,011	3,011	0.00%	9.64%	29.17%	0.00%
PA 1-09	Northview Heights	3,550	0	7,596	7,596	6.34%	0.00%	30.91%	0.00%
PA 1-09H	Northview High Rise	355	0	759	759	5.70%	0.00%	27.81%	0.00%
PA 1-11	Hamilton-Larimer	268	0	574	574	13.43%	0.00%	16.52%	0.00%
PA 1-15	Pennsylvania-Bidwell	433	0	928	928	3.86%	0.00%	20.28%	0.00%
PA 1-17	Pressley Street	533	0	1,141	1,141	4.07%	0.00%	18.14%	0.00%
PA 1-20	Homewood North	1,222	0	2,614	2,614	5.12%	0.00%	16.02%	0.00%
PA 1-31	Murray Towers	196	0	418	418	2.94%	0.00%	11.45%	0.00%
PA 1-32	Glen Hazel Family	840	0	1,797	1,797	6.35%	0.00%	16.30%	0.00%
PA 1-40	Mazza Pavilion (Brookline)	89	0	190	190	3.51%	0.00%	14.35%	0.00%
PA 1-41	Caliguiri Plaza (Allentown)	341	0	730	730	8.12%	0.00%	21.13%	0.00%
PA 1-45	Morse Gardens	227	0	485	485	7.56%	0.00%	15.98%	0.00%
PA 1-46	Carrick Regency	198	0	424	424	8.06%	0.00%	14.81%	0.00%
PA 1-47	Gualtieri Manor	96	0	205	205	6.82%	0.00%	13.44%	0.00%
		<b>1,194</b>	<b>222,931</b>	<b>2,556</b>	<b>2,556</b>	<b>0.42%</b>	<b>0.98%</b>	<b>1.59%</b>	<b>0.00%</b>

ECM	Electric Savings kWh	Electric Savings Dollars	Water Savings Mgal	Water Savings Dollars	Natural Gas Savings MCF	Natural Gas Savings Dollars
Low Flow Aerators & Showerheads	222,931	\$25,370	1,797	\$21,731	840	\$21,769
Total	222,931	\$25,370	1,797	\$21,731	840	\$21,769

3.38

## Roof Replacement and Added Insulation Savings

HA Site #	Site Name	Annual Savings		Savings % of Total	
		Natural Gas - MCF	Electric - kWh	Natural Gas - MCF	Electric - kWh
PA 1-02	Bedford Dwellings	0	0	0.00%	0.00%
PA 1-04	Arlington Heights	123		1.07%	0.20%
PA 1-09	Northview Heights*	425	4,548	0.76%	0.11%
PA 1-20	Homewood North*	219	2,336	0.92%	0.25%
PA 1-31	Murray Towers	12	146	0.18%	0.03%
		<b>779</b>	<b>146</b>		

**\*Heating MBH Saved Calcs**

Roof MBH/yr. =  $DDh \times 24 / 1000 \times A \times dU$   
 Facade MBH/yr. =  $DDh \times 24 / 1000 \times A \times dU$

**\*Cooling MBH Saved Calcs**

Roof MBH/yr. =  $DDc \times 24 / 1000 \times A \times dU$   
 Facade MBH/yr. =  $DDc \times 24 / 1000 \times A \times dU$

Where:

DDh= Heating Degree Days per Year  
 DDc= Cooling Degree Days per Year  
 dU= Change in Heat Transmission (U) Value  
 A= Total Area, sf

Area	Electric kWh Saved	Electric \$ Saved	Natural Gas Saved MCF	Natural Gas \$ Saved	Total \$
All Areas	146	\$17	Option C Savings		<b>\$17</b>

\* Buildings are Opt C, therefore savings not included in roof replacement savings totals



## Limiting Thermostats Proposed Savings

HA Site #	Site Name	Annual Savings		Savings % of Total	
		Natural Gas - MCF	Electric - kWh	Natural Gas - MCF	Electric - kWh
PA 1-04	Arlington Heights	1,194	14,973	10.39%	2.22%
PA 1-09	Northview Heights	5,678	88,252	10.14%	2.20%
PA 1-11	Hamilton-Larimer	318	0	15.89%	0.00%
PA 1-20	Homewood North	1,715	0	7.19%	0.00%
PA 1-32	Glen Hazel Family*	2,294	0	17.35%	0.00%
PA 1-40	Mazza Pavilion (Brookline)		0	0.00%	0.00%
PA 1-41	Caliguiri Plaza (Allentown)	893	30,433	21.27%	3.73%
PA 1-44	Finello Pavilion (South Oaks)	452	19,733	28.34%	4.02%
PA 1-45	Morse Gardens	835	19,469	27.84%	3.39%
PA 1-46	Carriok Regency	755	15,161	30.74%	2.33%
PA 1-47	Gualtieri Manor	453	7,751	32.14%	2.68%
		<b>2,294</b>	<b>92,546</b>	<b>0.81%</b>	<b>0.47%</b>

\* All sites are Opt C, Gas except Glen Hazel Family, therefore the savings above are only for Glen Hazel Family, Option A

HA Site #	Site Name	Present Modified* Gas Heating MCF/yr	Present Modified* Electric Cooling kWh/yr	% of Cooling Controlled by Tenant Tstats	Indoor Temp. Heating	Indoor Temp. Cooling	Gas Savings MCF/yr	Electric Clg Savings kWh/yr
PA 1-04	Arlington Heights	9,486	62,618	100%	75	74	1,194	14,973
PA 1-09	Northview Heights	48,596	397,647	100%	75	74	6,118	95,085
PA 1-11	Hamilton-Larimer	1,893	19,858	0%	76	74	318	0
PA 1-20	Homewood North	20,429	76,634	0%	74	74	1,715	0
PA 1-32	Glen Hazel Family*	10,931	186,049	0%	77	74	2,294	0
PA 1-40	Mazza Pavilion (Brookline)	2,082	33,545	0%	77	74	437	0
PA 1-41	Caliguiri Plaza (Allentown)	3,547	165,286	77%	78	74	893	30,433
PA 1-44	Finello Pavilion (South Oaks)	1,346	98,241	84%	80	74	452	19,733
PA 1-45	Morse Gardens	2,487	119,734	68%	80	74	835	19,469
PA 1-46	Carriok Regency	2,250	91,887	69%	80	74	755	15,161
PA 1-47	Gualtieri Manor	1,348	55,891	58%	80	74	453	7,751

Heating Degree Days @ 60=	4606	Cooling Degree Days @ 70=	292
Heating Degree Days @ 65=	5829	Cooling Degree Days @ 65=	726
DD/Deg.F=	245	DD/Deg.F=	87
% reduction per Deg.F=	4%	% reduction per Deg.F=	12%
Target indoor Temp.=	72	Target indoor Temp.=	76

Area	Electrical Savings kWh	Electrical Savings \$	Natural Gas Savings MCF	Natural Gas Savings \$	Total \$
All Areas	92,546	\$10,532	2,294	\$59,463	\$69,994

3.41



# Replace Ventilation Units, New Chiller & Insulate Duct Savings

ECM: Replace Existing Gas Fired Rooftop Corridor Ventilation Units

HA Site #	Site Name	Annual Savings		Savings % of Total	
		Natural Gas - MCF	Electric - kWh	Natural Gas - MCF	Electric - kWh
PA1-31	Murray Towers	103	13,243	1.55%	3.06%
PA 1-40	Mazza Pavilion (Brookline)	60	6,445	2.35%	2.72%
	Totals	163	19,688	0.06%	0.09%

HA Site #	Site Name	Current Ventilation Units			New Ventilation Units		
		CFM	Heating Efficiency	MCF per Year*	Heating Efficiency	MCF per Year*	Cooling kW per Ton
PA1-31	Murray Towers	8,445	0.75	1,652	0.80	1,548	1
PA 1-40	Mazza Pavilion (Brookline)	4,110	0.75	804	0.81	744	1
	Totals	12,555		2,456		2,293	

\*MCF per Year Calcs  $MCF/yr. = cfm \times Ca \times H \times dT / Eh / 1030000$

\*kWh per Year Calcs  $kWh/yr. = cfm \times Ca \times Ec \times H \times dT / 12000$

Where:

- Ca= Heat capacity factor for air
- dT= Change in Temperature, Deg.F
- cfm= Airflow Cubic Feet per Minute
- H= Hours of Operation at Design Capacity per Year
- Eh= Heating Efficiency
- Ec= Cooling Efficiency, kW/Ton

ECM: Insulate Exterior Duct Runs of Make Up Air Handling Unit

HA Site #	Site Name	Annual Savings		Savings % of Total	
		Natural Gas - MCF	Electric - kWh	Natural Gas - MCF	Electric - kWh
PA1-31	Murray Towers	20	212	0.31%	0.05%

MAU Heating Temp: 85  
MAU Cooling Temp: 70  
Heating Efficiency: 70.0%  
EER: 10

HA Site #	Site Name	Total Surface Area Sq. Ft.	Present U-Factor	Current MCFs	Current kWh	New U-Factor	Heating MCFs Saved	Cooling kWhs Saved
PA1-31	Murray Towers	100	1	23	236	0	21	212

\*MCF Saved Calcs  $MCF/yr. = A \times dU \times H \times dT / Bmcf / Eh$

\*kWh Saved Calcs  $kWh/yr. = A \times dU \times H \times dT / K / EER$

Where:

- dU= Change in Heat Transmission (U) Value
- H= Equivalent Hours of Operation at Design Capacity per Year
- A= Total SF of Duct Surface
- dT= Change in Temperature, Deg.F
- EER= Energy Efficiency Ratio, MBtu/kWh
- Eh= Heating Efficiency
- Bmcf= Btus per MCF of natural gas= 1,040,000
- K= Watts per Kilowatt= 1000

ECM Number	Electrical Savings kWh	Electrical Savings \$	Natural Gas Savings MCF	Natural Gas Savings \$	Total \$
30 New Unit	13,243	\$1,507	Option C Savings		\$1,507
32 Heat Recovery / New Chiller*	3,842	\$437			\$437
37 Insulate Duct	212	\$24			\$24

\*Note: As per change order 1, the new chiller's potential to save is estimated to be the same as the originally proposed heat recovery savings. The original proposed savings are shown.

3.42

## Adjustment Summary

Adjustment 1 - Elimination of Mazza Pavilion	\$28,047
Adjustment 2 - Elimination of Heat Pump Units	\$132,077
Adjustment 3 - Elimination of Addison Terrace	\$371,785
Adjustment 4 - Limiting Thermostats	\$180,702
Adjustment 5 - Northview Heights Excess Water Use	\$133,717
	<u>\$846,327</u>

4.1

# Adjustment Detail

## 1. Change Order 2 - Elimination of Mazza Pavilion

### Discussion:

During installation Mazza Pavilion was removed from the project via Change Order #2 Rev #2 dated 30 July, 2008. This Change Order required that the effect of that elimination to be noted as savings adjustment. The following values are adjustments to comply with that requirement.

Mazza Pavilion	Electric Savings	\$2,816
	Gas Savings	\$22,886
	Water Savings	\$2,345
	Total Savings	<u>\$28,047</u>

## 2. Change Order 2 - Elimination of Geothermal Units

### Discussion:

During the installation it was determined that a modification in the scope and number of geothermal units was in order. These changes are detailed in Change Order #2 Rev # 2 dated 30 July 2008. In this order, the savings guarantee was not adjusted, but it was stated that a Baseline Adjustment would be made to compensate for the lost savings due to these units being eliminated. The calculation below quantify those adjustments.

### Calculations:

Geothermal deduction savings:

HA Site #	Site Name	Common Sq. Feet	Bldg Sq. Feet	Year Built	# of Flrs	# of Units	# of Bldgs	2 BR	3 BR	4 BR	5 BR	6 BR		
PA 1-09	Northview Heights	30,000	595,100	1960	2	501	75	36	353	87	25	0		
Gas Savings per BR (MCF):								2,714	26,613	6,559	1,885			
Electric Savings per BR (kWh):								(137,490)	(1,348,162)	(352,267)	(95,479)			
Units Eliminated:								66	27	3				
% units Eliminated:								0.19	0.31	0.12				
Gas Savings Eliminated (MCF):								4,976	2,036	226				
Electric Savings Eliminated (kWh):								(252,064)	(103,117)	(11,457)				
PA 1-20	Homewood North	8,000	145,550	1970	2 & 3	135	20	38	58	30	0	9		
Gas Savings per BR (MCF):								4,952	7,558	3,909	0	1,173		
Electric Savings per BR (kWh):								(238,706)	(364,340)	(188,452)	0	(56,556)		
Units Eliminated:								13	2			1		
% units Eliminated:								22%	7%			11%		
Gas Savings Eliminated (MCF):								1,694	261			130		
Electric Savings Eliminated (kWh):								(81,662)	(12,563)			(6,282)		
								Natural Gas		Electric		Water		
								MCF	\$	kWh	\$	kGal	\$	
Delete 96 units, Northview Heights								7,238	\$ 143,810	\$ 19,87	-366,639	\$ (41,724)	\$ 0.1138	
Delete 16 units, Homewood North								2,085	\$ 41,428	\$ 19,87	-100,508	\$ (11,438)	\$ 0.1138	
								\$ 185,238		\$ (53,161)				

4.2

## Adjustment Detail

### 3. Elimination of Addison Terrace

#### Discussion:

Addison Terrace was removed from use due to HA no longer manages property.

This change required that the affect of that elimination be noted as an adjustment to savings.

The following values are adjustments to comply with that requirement. Savings are based on 2011-12 demonstrated performance

Addison Terrace	Electric Savings	\$88,451
	Gas Savings	\$275,643
	Water Savings	\$7,691
	Total Savings	<u>\$371,785</u>

### 4. Limiting Thermostats Adjustment

	Gas Savings (MCF)	Savings Adjustment (\$)
Northview Heights	5,678	\$126,986
Arlington Heights	1,194	\$26,706
Gualtieri Manor	453	\$10,121
Carrick Regency	755	\$16,889
<b>Total</b>	<b>7,325</b>	<b><u>\$180,702</u></b>

### 5. Northview Heights Excess Water Use Resulting in Reduced Gas and Water Savings Due to Legionella High Temperature Water Purge

	Water Savings (kGal)	Savings Adjustment (\$)
Northview Heights (Water)	8,355	\$133,717

## Building Utilities Baselines

HA Site #	Site Name	Natural Gas - MCF			Electric - kWh			Water - Mgal			Total	AMP #
		MCF/yr.	Cost/yr.	\$ per MCF	kWh/yr.	Cost/yr.	\$ per kWh	Mgal/yr.	Cost/yr.	\$ per Mgal	Cost/yr.	
PA 1-01	Addison Terrace	56,106	\$ 1,114,862	\$ 19.87	4,288,267	\$ 488,211	\$ 0.11	52,514	\$ 486,808	\$ 9.27	\$ 2,089,881	1
PA 1-02	Bedford Dwellings	52,217	\$ 1,037,590	\$ 19.87	3,209,330	\$ 365,376	\$ 0.11	-	\$ -	\$ -	\$ 1,402,966	2
PA 1-04	Arlington Heights	11,491	\$ 228,332	\$ 19.87	675,017	\$ 76,849	\$ 0.11	13,355	\$ 123,801	\$ 9.27	\$ 428,982	4
PA 1-05	Allegheny Dwellings	17,214	\$ 342,053	\$ 19.87	2,312,239	\$ 263,244	\$ 0.11	10,321	\$ 95,679	\$ 9.27	\$ 700,975	5
PA 1-09	Northview Heights	56,014	\$ 1,113,030	\$ 19.87	4,018,889	\$ 457,543	\$ 0.11	24,572	\$ 227,782	\$ 9.27	\$ 1,798,355	9
PA 1-09H	Northview High Rise	6,224	\$ 123,670	\$ 19.87	446,543	\$ 50,838	\$ 0.11	2,730	\$ 25,309	\$ 9.27	\$ 199,817	9
PA 1-11	Hamilton-Larimer	1,999	\$ 39,716	\$ 19.87	143,352	\$ 16,320	\$ 0.11	3,476	\$ 32,222	\$ 9.27	\$ 88,259	11
PA 1-15	Pennsylvania-Bidwell	11,237	\$ 223,279	\$ 19.87	667,553	\$ 76,000	\$ 0.11	4,573	\$ 42,396	\$ 9.27	\$ 341,674	15
PA 1-17	Pressley Street	13,102	\$ 260,345	\$ 19.87	1,439,800	\$ 163,918	\$ 0.11	6,287	\$ 58,284	\$ 9.27	\$ 482,547	17
PA 1-20	Homewood North	23,843	\$ 473,784	\$ 19.87	926,803	\$ 105,515	\$ 0.11	16,317	\$ 151,258	\$ 9.27	\$ 730,556	20
PA 1-31	Murray Towers	6,651	\$ 132,166	\$ 19.87	433,333	\$ 49,334	\$ 0.11	3,656	\$ 33,888	\$ 9.27	\$ 215,388	31
PA 1-32	Glen Hazel Family	13,222	\$ 262,732	\$ 19.87	1,128,794	\$ 128,511	\$ 0.11	11,021	\$ 102,168	\$ 9.27	\$ 493,411	10
PA 1-40	Mazza Pavilion (Brookline)	2,532	\$ 50,314	\$ 19.87	236,747	\$ 26,953	\$ 0.11	1,326	\$ 12,294	\$ 9.27	\$ 89,560	40
PA 1-41	Caliguiri Plaza (Allentown)	4,198	\$ 83,423	\$ 19.87	814,918	\$ 92,777	\$ 0.11	3,454	\$ 32,015	\$ 9.27	\$ 208,216	41
PA 1-44	Finello Pavilion (South Oakland)	1,594	\$ 31,677	\$ 19.87	491,377	\$ 55,942	\$ 0.11	-	\$ -	\$ -	\$ 87,619	44
PA 1-45	Morse Gardens	2,999	\$ 59,588	\$ 19.87	574,185	\$ 65,370	\$ 0.11	3,036	\$ 28,144	\$ 9.27	\$ 153,101	45
PA 1-46	Carrick Regency	2,456	\$ 48,812	\$ 19.87	650,483	\$ 74,056	\$ 0.11	2,861	\$ 26,525	\$ 9.27	\$ 149,392	46
PA 1-47	Gualtieri Manor	1,408	\$ 27,980	\$ 19.87	288,945	\$ 32,896	\$ 0.11	1,529	\$ 14,170	\$ 9.27	\$ 75,046	47
		284,508	\$ 5,653,351	\$ 19.87	22,746,575	\$ 2,589,654	\$ 0.114	161,029	\$ 1,492,741	\$ 9.27	\$ 9,735,745	

Natural Gas Cost: \$19.8706 per MCF  
 Electric Cost: \$0.1138 per Kwh  
 WaterCost: \$9.2700 Per Mgal.  
 Combined Water/Sewer: \$9.2700 Per Mgal.

## Site Inspection

The site visit inspection was conducted at that sites listed below.

Qty	Site	Address	Lighting (Bath & Kitchen)	Water Kitchen	Water Bathroom	Water Shower	Water WC	Window & Air Sealing	Refrig
				1.5 GPM	.5 GPM	2.0 GPM	1.6 GPM		
1	Northview Heights	344 Mt. Pleasant Rd.	X	Water in kitchen was not working	X	X	X		X
2	Northview Heights	818 Mt. Pleasant Rd.	X	X	X	X	X		Vacant, no refrig.
3	Northview Heights	861 Mt. Pleasant Rd.	X	X	X	X	X		Vacant, no refrig.
4	Northview Heights	863 Mt. Pleasant Rd.	X	X	X	X	X		Vacant, no refrig.
5	Northview Heights	879 Mt. Pleasant Rd.	X	X	Missing aerator	No shower	X		Vacant, no refrig.
6	Northview Heights	1415 Chicago	X	X	X	X	X		Vacant, no refrig.
7	Northview Heights	415 Mt. Pleasant Rd. #882	X	X	X	No shower	X		Vacant, no refrig.
8	Northview Heights	614 Mt. Pleasant Rd.	X	X	X	X	X		X
1	Pressley	601 Pressley #617	X	X	X	X	X	X	
2	Pressley	601 Pressley #610	X	X	X	X	X	X	
3	Pressley	601 Pressley #609	X	X	X	X	X	X	
1	Carrick	2129 Brownsville Rd #1G			Not able to gain entry				
2	Carrick	2129 Brownsville Rd #2B	X	X	X	2.5	X	X	
3	Carrick	2129 Brownsville Rd #2K	X	X	X	X	X	X	
1	Caliguiri Plaza	803 E. Warrington #809	X	Faucet leaks	X	X	X	X	
2	Caliguiri Plaza	803 E. Warrington #715	X	X	X	2.5	X	X	
3	Caliguiri Plaza	803 E. Warrington #710	X	X	X	X	X	X	
1	Murray Towers	2825 Murray Ave #808	X	X	X	2.5	X	X	
2	Murray Towers	2825 Murray Ave #510	X	X	X	X	X	X	
3	Murray Towers	2825 Murray Ave #102	X	X	X	X	X	X	

5.2



## Site Inspection

The site visit inspection was conducted at that sites listed below.

Qty	Site	Address	Lighting (Bath & Kitchen)	Water Kitchen	Water Bathroom	Water Shower	Water WC	Window & Air Sealing	Refrig
				1.5 GPM	.5 GPM	2.0 GPM	1.6 GPM		
1	Arlington	3155 Cordell #611	X	X	X	X	X	X	
2	Arlington	3132 Cordell #646	X	X	X	X	X	X	
3	Arlington	3053 Arlington #561	X	X	X	X	X	X	

Notes: Shower heads should be a maximum of 2.0 GPM

### Limiting Thermostats

Qty	Site	Address	Occ Heat	Limit Heat	Occ Cool	Limit Cool	Current Temp
1	Northview Heights	344 Mt. Pleasant Rd.	65°				65°
2	Northview Heights	818 Mt. Pleasant Rd.			73°		60°
3	Northview Heights	861 Mt. Pleasant Rd.	65°				65°
4	Northview Heights	863 Mt. Pleasant Rd.	65°				65°
5	Northview Heights	879 Mt. Pleasant Rd.	62°				68°
6	Northview Heights	1415 Chicago	67°				69°
7	Northview Heights	415 Mt. Pleasant Rd. 882	Thermostat was shut off				
8	Northview Heights	614 Mt. Pleasant Rd.	Thermostat was shut off				
1	Caliguiri Plaza	803 E. Warrington #809	Thermostat was shut off				
2	Caliguiri Plaza	803 E. Warrington #715	75°	75°			75°
3	Caliguiri Plaza	803 E. Warrington #710			68°		79°

Notes:

## Glossary of Terms

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actual cost	Actual energy cost taken directly from utility bill.
actual savings	Savings derived through the Metrix™ program; baseline less actual costs. Positive actual savings indicate utility costs have been reduced after adjusting for weather and other variables in dollars.
balance point	(HtgDD), the outdoor temperature below which space heating is required or (ClgDD), the outdoor temperature above which space cooling is required.
baseline	The adjusted, tuned pre-retrofit bills (usually 1 year) used to compare to post-installation usage in order to calculate savings.
baseline cost	Cost calculated for the baseline using current rates.
billed dollars	Amount billed from utility company.
bill matching	Adjustment made by Metrix™ to account for differing number of days in the billing period before calculating cost avoidance.
cost avoidance	The difference between the baseline cost and the actual or SimActual cost in dollars.
degree-day	Unit representing one degree of difference between the balance point selected and the average temperature during one day.
EER	Energy Efficiency Ratio of cooling equipment defined as the cooling effect in BTU's divided by the power use in watts
guarantee period	Time period specified in contract for which Honeywell will guarantee energy savings.
guarantee year	Number identifying for which year the review is performed based on the number of years the guarantee is in effect.
guaranteed savings	Those savings Honeywell promises the customer through the use of maintenance programs, retrofits, upgrades and energy management systems.

## Glossary of Terms

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HVAC	Industry standard abbreviation for Heating, Ventilating and Air Conditioning.
HtgDD/ClgDD	HtgDD = Heating degree-days ClgDD = Cooling degree-days
kW	Kilowatt - a unit of electrical power, equal to 1000 watts.
kWh	Kilowatt hours - a unit of electrical energy or work, equal to that done by one kilowatt acting for one hour.
modification	An allowance for changes in the facility which affect utility usage that occur while tracking the performance of a meter. Modifications correct both the actual and baseline usage and cost for meters.
pre-installation	Time period (start month and stop month, typically one year's time) that is used as a benchmark for comparison which consists of all energy bills applicable to the retrofit.
$R^2$	A measure of how well the independent variable in a regression can explain changes in the dependent variable. An $R^2 = "1.0"$ indicates a perfect correlation.
rate tariff	Actual amount the utility company charges per unit of energy or demand; used by Metrix™ to calculate utility costs for the SimActual & Baseline scenarios.
reference year	The actual usage for designated baseline period.
review period	Time period for which savings are reported.
runtime adjustment	Adjustment made for those hours equipment has run beyond the operating hours specified in the contract.
simactual	The total cost for the billing period as calculated by Metrix™.
weather adjustment	Adjustment made by Metrix™ for weather variations using degree days.



## Report Delivery Receipt

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Honeywell has presented the Cost Avoidance Review for Housing Authority of the City of Pittsburgh; Contract No. 40105935. This report details energy savings results for Year 10 and indicates cost avoidance of \$3,765,425 for the year, as compared to the energy guarantee per the contract of \$3,285,812.

**Please sign below to acknowledge receipt of this report. Your signature does not indicate acceptance of the results.** If the results are not agreed upon, Housing Authority of the City of Pittsburgh has forty-five (45) days from the delivery date of this report to provide a detailed explanation and request for action, in writing, to Honeywell International Inc., Energy Analysis, 4263 Monroe Street, Toledo, Ohio 43606. Otherwise, the cost avoidance results will be deemed accepted.

Received by:

Presented by:

\_\_\_\_\_  
Name (please print)

\_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

## D. APPENDIX IV



University of Pittsburgh

*University Center for Social and Urban Research*

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**TO: Aster Teclay, David Weber**

**FROM: Sabina Deitrick, PhD, and Michael Blackhurst, PhD**

**RE: Two studies for HACP**

**DATE: August 15, 2018**

**The following includes two studies to the Housing Authority of the City of Pittsburgh (HACP):**

1. Analyze the effects of the Family Self Sufficiency Program, and
2. Develop an alternative payment standard methodology to expand geographic choice and access to high-opportunity neighborhoods.

There will also be two datasets sent under separate -- public housing and HCV households that paid the increased minimum rent after exiting the FSS program.

Please send any comments to:

Sabina Deitrick, [sabinad@pitt.edu](mailto:sabinad@pitt.edu)

Mike Blackhurst, [mfb30@pitt.edu](mailto:mfb30@pitt.edu)



## **Minimum Rent Policy**

**Report to HACP  
August 15, 2018**

**Sabina Deitrick and Jennifer Bert**

Contact: Sabina Deitrick, PhD  
(412) 624-3092  
[sabinad@pitt.edu](mailto:sabinad@pitt.edu)

### **Introduction**

The Housing Authority of the City of Pittsburgh (HACP) changed its minimum rent policy in 2010 for both Public Housing and Housing Choice Voucher households. The policy increased minimum rent for Public Housing households from \$25 to \$150 in 2010 and increased the minimum rent for Housing Choice Voucher households from \$50 to \$150.

The minimum rent policy had two objectives:

1. To incentivize households without wage income to participate in the Family Self-Sufficiency (FSS) program; and
2. To increase rent revenue for the HACP.

At first glance, these could be regarded as conflicting goals. Participation in FSS means households pay substantially lower monthly rent payments. That also means that HACP collects less from them in rent.

The increased minimum rent policy affects households that earn less than approximately \$500 per month. The minimum rent policy does not affect households with an adjusted monthly income greater than \$500.<sup>1</sup> Others are exempt from the new minimum rent policy:

1. Households headed by senior citizens;
2. Those with disabilities that prevent them from working;
3. Those with an approved hardship exemption; or
4. Recipients of full Temporary Assistance to Needy Families (TANF) benefits.

Using administrative data from January 2010 to October 2017, this analysis examines the impact of the rent reform policy on individuals who were enrolled in and moved to the FSS program and the extent to which the rent reform policy achieved its two stated objectives. The \$150 increased

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<sup>1</sup> This group continues to pay 30 percent of their adjusted income toward rent, an amount that will be greater than the \$150 per month payment, under current U.S. Department of Housing (HUD) guidelines.



minimum monthly rent payment remained the increased minimum rent payment over the period of the study.

### ***Data***

The data for this study comes from the HUD-50058, Family Report of the HACP. HUD-50058 Family Report is the data collection form for households in Public Housing (PH), Housing Choice Voucher (HCV), and Section 8 Moderate Rehabilitation programs. The following steps were taken to prepare the data for this study:

1. The data were first cleaned to remove duplicate household listings, corrected actions, and voided items. Often a corrected action would be listed, but the original incorrect listing would remain, resulting in the large number of duplicate files, in addition to other errors. The same problem occurred with voids – when something is voided, an entry is re-submitted, but the original remained. All duplicates, triplicates and quadruplicates were cleaned. To clean corrected actions, the original incorrect listing was removed for this study. For voided, the original and the void were removed to result in a clean dataset.
2. With the cleaned data set, next was to determine which households paid the increased minimum monthly rent of \$150 at any point during the study period. These would be included in the study: Households that had a minimum rent of \$150 per month listed in field 9h in HUD-50058 and an income-based rent calculated at an amount less than \$150 in field 9f and a rent payment of \$150 in field 9j were included in the study (see Figure 1).<sup>2</sup> This step eliminated the exempt status households since their monthly rent payment was below \$150 per month, either \$25 for PH households or \$50 for HCV households.

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<sup>2</sup> The \$150 rental payment appears in two columns, with 9j summing up the status.

**Figure 1. Excerpt from HUD Family Report HUD-50058 form**

<b>9:</b>	<b>Total Tenant Payment (TTP)</b>
Line 9a:	Divide total annual income (line 8a) by 12 to get total monthly income.
Line 9c:	Multiply total monthly income (line 9a) by 0.10 to get total tenant payment (TTP) based on annual income.
Line 9d:	Divide adjusted annual income (line 8y) by 12 to get adjusted monthly income.
Line 9e:	Percentage of adjusted monthly income used to determine total tenant payment (TTP).
Note:	Use 30% for Section 8.
Line 9f:	Multiply the adjusted monthly income (line 9d) by percentage of adjusted monthly income (line 9e) and divide by 100 to get total tenant payment (TTP) based on adjusted monthly income.
Line 9g:	The amount the welfare assistance agency specifically designates for shelter and utilities if the family receives welfare assistance. The welfare assistance agency may adjust this amount in accordance with the actual cost of shelter and utilities.
Note:	If no welfare rent, put 0.
Line 9h:	Enter the PHA established monthly minimum rent amount. The PHA may require the tenant to pay a minimum rent amount up to \$50.
Note:	If the PHA waived this payment because of financial hardship, enter 0.
Line 9i:	Enhanced Vouchers only. Enter the monthly rent that the family was paying on the date of the 'eligibility event' for the project.
Line 9j:	The total tenant payment (TTP). The highest amount listed in the lines 9c, 9f, 9g, 9h, or 9i.
Line 9k:	The most recent total tenant payment (TTP) amount for the family.
Note:	This amount is only available if the family previously lived in subsidized housing.
Line 9m:	Indicate if the family qualifies for a minimum rent hardship exemption.
Note:	Under PHRA, a family does not have to pay the PHA established minimum rent if they qualify for a financial hardship exemption.

3. These data were then checked against data on Temporary Assistance to Needy Families (TANF) recipients to ensure that households receiving full TANF benefits were not included in the study. Households receiving full TANF benefits were assumed to be compliant with the TANF self-sufficiency requirements and thus were not subject to the minimum rent policy change. There were no problems of conflict on this measure.

From these steps in cleaning the data, the remaining household data on the 50058 reports were assumed to be correct. These steps resulted 3,094 households that paid minimum rent of \$150 per month at any point in the study period, January 2010 – October 2017. We further divide them into the two groups of our interest:

1. Public Housing (PH) – 974 PH households that paid minimum rent at any time.
2. Housing Choice Voucher (HCV) – 2,120 HCV households that paid minimum rent at any time.

#### **Study Households**

We first examine the figures for Public Housing households that paid the increased \$150 minimum rent at any point during the study period, January 2010 to October 2017. There were 974 public housing households that paid the increased minimum rent of \$150 any time during the study period (see Table 1). Of those 974 households, 447, or 45.9 percent, participated in the Family Self Sufficiency (FSS) program at any time during the study period. Sometimes the

household was in FSS and not paying the \$150 increased minimum rent, while at other times, they were no longer in FSS and were also paying the \$150 increased minimum rent.

The remaining 527 households, or 54.1 percent, paid the \$150 minimum rent at some point in time during the study period but did not participate in the FSS program at any point during the study period. So, for Public Housing households paying the increased minimum rent of \$150 with the minimum rent policy change, over half – 54.1 percent – never participated in FSS. We initially surmise that FSS was not attractive enough for these households to overcome any hardship of paying \$150 per month in rent, versus their previous rent payment of (\$50, \$25). These households also run counter to part of the goals of the increased minimum rent policy – to incentivize participation in FSS. However, their minimum rent payment accomplishes the second goal of raising revenues for HACP.

**Table 1. Public Housing Households Paying Minimum Rent \$150 At Any Time During the Period January 2010 – October 2017**

	N	%
Participated in FSS	447	45.9
Did not participate in FSS	527	54.1
Total Households that paid \$150	974	100.0

We now turn to HCV households. There were 2,120 HCV households that paid increased minimum rent of \$150 at any time during the study period (see Table 2). Of those 2,120 households, only 393, or 18.5% participated in the FSS program at any time during the study period, while 1,728 households, or 81.5% of HCV households paying minimum rent didn't participate in the FSS program at all during the study period.

**Table 2 Housing Choice Voucher Households Paying Minimum Rent \$150 for Any Period of Time During Study Period, January 2010-October 2017**

	N	%
Participated in FSS	393	18.5
Did not participate in FSS	1,728	81.5
Total Households that paid \$150	2,120	100.0

With these two sets of HACP recipients, PH and HCV households, we now examine each separately by their participation in FSS and paying the increased minimum rent and those that did not participate in FSS and paid the increased minimum rent.



### **Households That Paid Increased Minimum Rent and Participated in FSS During the Study Period**

This section examines the enrollment and status of both Public Housing and HCV households in the minimum rent policy and compares those that participated in FSS with those that did not.

#### ***Public Housing Households and Family Self-Sufficiency Participation***

The first stated objective of the increased minimum rent policy is to increase participation in the Family Self-Sufficiency (FSS) program among households that earned less than \$500 per month. Participation in FSS would be a primary means for households to avoid paying \$150 per month in rent and continue to pay the same amount of rent that they paid prior to enrolling in FSS.

From the summary data presented above, we find that of the PH households that paid the increased minimum rent during the study period, less than half -- 447 PH households -- participated in FSS at any time during the study period. To determine whether the minimum rent policy incentivized households to enroll in FSS, it is important to distinguish which households enrolled in FSS after paying minimum rent.

Of the 447 public housing households that participated in FSS and paid the increased minimum rent during the study period, 282 households, or nearly two-thirds of the households (63%) enrolled in FSS immediately after paying the increased minimum rent of \$150 (see Table 3).

**Table 3. Public Housing Households Paying Increased Minimum Rent<sup>1</sup> AND Participating in FSS at Any Period Between January 2010 – October 2017**

Public Housing Households Participating in FSS	Number	Percent	Average Number of Months Paying Minimum Rent
<b>Group 1 – FSS after minimum rent<sup>2</sup></b>			
Enrolled in FSS immediately after paying increased minimum rent	295	66%	4
Enrolled in FSS after a period that included first paying increased minimum rent and then, with new employment, income-based rent	30	7%	6
<b>Group 2 – FSS before minimum rent<sup>3</sup></b>			
Paid increased minimum rent immediately after ending FSS	44	10%	8
Paid increased minimum rent after FSS but paid income-based rent after FSS and before increased minimum rent	73	16%	9
<b>Group 3 – Paid min. rent before and after FSS</b>			
Paid increased minimum rent before and after FSS	5	1%	4
<b>Total</b>	<b>447</b>	<b>100%</b>	<b>5</b>

<sup>1</sup> Minimum rent policy of \$150 per month adopted by HACP in 2010.

<sup>2</sup> Enrolled in FSS after paying increased minimum rent.

<sup>3</sup> Left FSS and then paid increased minimum rent.

<sup>4</sup> Paid increased minimum rent, then enrolled in FSS, then left FSS and returned to paying the increased minimum rent.

A total of 325 households, or 73 percent of this group, enrolled in FSS at some point AFTER paying the increased minimum rent. Thirty of these households paid minimum rent, then, with a new job, paid income-based rent that was higher than the increased minimum rent of \$150 per month, and then enrolled in the FSS program.

It is important to note that not all households enrolled in FSS after paying the increased minimum rent of \$150 per month. The second group of public housing households that participated in the FSS program, 117 households, or 26 percent of this group, paid the increased minimum rent after participating in the FSS program. It is unclear from the data whether these households were dismissed from FSS or left voluntarily. These households may have graduated from FSS, left the FSS program prior to graduation, or had their FSS contracts terminated. Of these 117 households, 44 households moved directly from the FSS program to paying the increased minimum rent. This means that when their participation in FSS ended, for whatever reason, their household income was less than \$500 per month. The other 73 households left FSS, paid income-based rent immediately after that with new employment, then paid the increased

minimum rent after that, presumably after ending their employment. This group of 130 households is also worthy of further analysis to determine why they were unsuccessful in FSS or voluntarily left the program.

Additionally, there are also five households that paid the increased minimum rent before and after participating in FSS, and it is possible that those households joined FSS to avoid paying increased minimum rent but were unsuccessful and either voluntarily left the program or were dismissed. Those households did not have wages before or after participation.

We now turn back to the first households Group 1 of the Public Housing households that enrolled in FSS immediately after paying the increased minimum rent, 295 households. Of these, 193 households, or 65%, enrolled in FSS after being charged minimum rent for three months or less (see Table 4).

**Table 4. Public Housing Households Enrolling in FSS After Paying Increased Minimum Rent**

Length of Time Paying Increased Minimum Rent (\$150/month) Before Enrolling in FSS	Households	
	Number	Percent
1 – 3 Months	193	65%
4 – 6 Months	58	20%
7 – 12 Months	33	11%
13 Months or More	11	4%
<b>Total</b>	<b>295</b>	<b>100%</b>

These households are likely to have enrolled in the FSS program to avoid paying the increased minimum rent of \$150 per month. After that, there was a sharp decrease in the number of households that enrolled in FSS after paying minimum rent for 4 months or more. Nonetheless, a third of the households that enrolled in FSS after paying the increased minimum rent, enrolled after paying \$150 per month for more than 3 months.

The data above suggest that there are a substantial number of households who can pay the increased minimum rent of \$150 despite not having wages of more than \$500 per month. These households either have savings that allow them to make the increased rent payments or they were able to obtain funds from other sources. Not all households that were charged the increased minimum rent immediately or within a few months enrolled in the FSS program, despite the strong financial incentive to do so.

We now return to all Public Housing households that paid participated in FSS AND paid the increased minimum rent at any time during the study period, 447 households. Here we examine the differences in the number of months Public Housing households paid the increased minimum rent as related to the household's highest recorded income during the study period (see Table 5). Households with higher maximum incomes tended to pay the increased minimum rent for a



slightly longer period of time than households that reported no or very low income during the study period.

**Table 5. Income of Public Housing Households Participating in FSS and Paying Increased Minimum Rent at Any Time During Study Period, January 2010 – October 2017**

Maximum Annual Income	Households		Average Months Paying Increased Minimum Rent
	Number	Percent	
\$0	29	6.5%	3.9
\$1 - \$2,500	31	6.9%	2.2
\$2,501 - \$5,000	65	14.5%	5.6
\$5,001 - \$7,500	22	4.9%	2.8
\$7,501 - \$10,000	48	10.7%	4.3
\$10,001 - \$20,000	141	31.5%	5.3
\$20,001 - \$30,000	82	18.3%	5.2
\$30,001 and above	29	6.5%	6.8
<b>Total</b>	<b>447</b>	<b>100%</b>	<b>4.5</b>

There were twenty-nine public housing households that did not report any wages during the study period and enrolled in FSS within the shortest period of time after paying the increased minimum rent of any of the income group. Of these, we found that 10 households had a head of household who was under 20 years of age and 9 households were headed by a resident between the ages of 20 and 30. Three quarters of these households were headed by a woman, and 17 – over half – of these households had only one member. Nine of these households, or 31%, had a pre-school aged child, and these households tended to have a young woman as the head of household.

Most households reported low levels of earned income, but of this group, we also find that, over the course of the study period, 111 households, or one quarter, earned, at one point in time, more than \$20,000 annually, with 29 households earning over \$30,000. These households tended to remain in the minimum rent paying category longer than those who reported low incomes. We can't be clear if this is because the increased minimum rent payment of \$150 per month was lower than the income-based rent payment.

**Tenure in Public Housing Program:** One possible downside of the increased minimum rent policy is that households who cannot not afford to pay the increased minimum rent may have to leave HACP housing, either through evictions or by choice. Households that never reported any income while living in public housing, the 29 households above in Table 5, left HACP housing at a much higher rate than those who did report income at any level (see Table 6). This suggests that those households with no annual income over the study period may have been able to pay

the increased minimum rent for only a short amount of time and then left public housing. On the other side, those with the highest incomes that participated in FSS and paid the increased minimum rent at any time during the study period left public housing at the lowest rates.

**Table 6. Exit from Public Housing by Households that Participated in FSS at Any Time During the Study Period and Paid the Increased Minimum Rent, January 2010 – October 2017**

Maximum Annual Income (any year during study period)	Total Households	Households That Left Public Housing	
		Number	Percent
\$0	29	23	79.3
\$1 - \$2,500	31	12	38.7
\$2,501 - \$5,000	65	35	53.8
\$5,001 - \$7,500	22	10	45.5
\$7,501 - \$10,000	48	15	31.3
\$10,001 - \$20,000	141	63	44.7
\$20,001 - \$30,000	82	26	31.7
\$30,001 and above	29	4	13.7
<b>Total</b>	<b>447</b>	<b>188</b>	<b>42.1</b>

With annual income at any point over the study period, we find that of the remaining households, some of these households left public housing while participating in the FSS program and others left public housing while earning wages and paying income-based rent. On average, we find that the higher the earned income of public housing households that participated in FSS at some point during the 2010 – 2017 study period, they were far less likely to leave public housing than those earning far less.

#### ***Housing Choice Voucher Households and Family Self-Sufficiency Participation***

This section examines the 393 households with housing choice vouchers that paid the increased minimum rent of \$150 at any time during the study period and participated in the FSS program during the study period (see Table 7).<sup>3</sup> Of the 2,120 HCV households that paid the increased minimum rent of \$150, only 393 (18.5%) also participated in the FSS program during the study period, a much lower rate than the Public Housing households above (Tables 1 and 2).

Of these 393 households, we begin with Group 1, those that enrolled in FSS after paying the increased minimum rent. We find that 109 households entered FSS immediately after paying minimum rent. Another 63 households entered FSS after paying minimum rent and then

<sup>3</sup> There are no households that paid the increased minimum rent with PH AND HCV status at any time. These two groups are mutually exclusive.

income-based rent. For these households, the increased minimum rent policy may have been an incentive for enrolling in the FSS program. HCV households that entered the FSS program after paying the increased minimum rent, on average, paid the increased minimum rent for longer than the public housing households above. The average HCV household that enrolled in FSS after paying the increased minimum rent, paid the increased minimum rent for an average nine months, compared to 4 months, on average, for the comparable Public Housing household above. These data show that, on average, public housing households paid the increased minimum rent for a shorter period of time than housing choice voucher households.

**Table 7. Housing Choice Voucher Households Paying Increased Minimum Rent AND Participating in FSS**

HCV Households Participating in FSS	Number	%	Average Number of Months Paying Minimum Rent
<b>Group 1: FSS after paying increased minimum rent.</b>			
Entered FSS immediately after paying increased minimum rent	109	28%	9
Entered FSS after paying increased minimum rent, but paid income-based rent in between	63	16%	9
<b>Group 2: FSS before paying minimum rent.</b>			
Paid minimum rent immediately after ending FSS	70	18%	17
Paid increased minimum rent after FSS but paid income-based rent in between	126	32%	15
<b>Group 3: Min. rent before and after FSS</b>			
Paid increased minimum rent before and after FSS	25	6%	10
<b>Total</b>	<b>393</b>	<b>100%</b>	<b>12</b>

The table also shows that of these 393 HCV households participating in FSS and paying the increased minimum rent of \$150 at any point in the study period, over half of them, 221 or 56%, paid minimum rent after participating in the FSS program.

The below table also shows that those that participated in FSS before paying minimum rent tended to pay the increased minimum rent for a longer period, on average, than those households that entered FSS after paying minimum rent.

We next examine the length of time for the 109 HCV households to enroll in FSS after paying the mandatory minimum rent of \$150. (see Table 8). We find that 41 HCV households (38%)



enrolled in FSS within three months of paying minimum rent. This compares to the much higher figure of 66% of Public Housing households enrolling in FSS after paying minimum rent for 1 – 3 months.

The remaining 68 (62%) HCV households enrolled in FSS after paying minimum rent for longer periods, with 23% of the households enrolling in FSS after paying the increased minimum rent for more than a year.

**Table 8. Housing Choice Voucher Households Enrolling in FSS After Paying Increased Minimum Rent**

Length of Time Paying Increased Minimum Rent Before Joining FSS	Number	Percent
1 – 3 Months	41	37.6
4 – 6 Months	17	15.6
7 – 12 Months	26	23.9
13 Months or More	25	23.0
Total	109	100

Of the HCV households that participated in the FSS program and paid the increased minimum rent at any time during the study period, those who never reported any income paid minimum rent for 3 months on average (See Table 9). Households that reported a low maximum annual income and participated in the FSS program tended to pay the increased minimum rent for a longer period, on average, while households earning a maximum annual income of \$20,000 or more, paid the increased minimum rent for fewer months, at an average of 11 months.

**Table 9. Income of Housing Choice Voucher (HCV) Households Participating in FSS and Paying Increased Minimum Rent at Any Time During Study Period**

Maximum Annual Income	HCV Households		Average Number of Months Paying Increased Minimum Rent
	Number	Percent	
\$0	5	1.3%	3
\$1- \$2,500	11	2.8%	17
\$2,501- \$5,000	14	3.6%	17
\$5,001 - \$7,500	16	4.1%	18
\$7,501 - \$10,000	23	5.9%	15
\$10,001 - \$20,000	134	34.1%	13
\$20,001 - \$30,000	123	31.3%	11
\$30,001 and above	67	17.0%	11
Total	393	100%	12

**Tenure in HCV Program:** Comparable to public housing households leaving HACP, of the five HCV households that participated in the FSS program and reported no income from all sources during the study period,<sup>4</sup> four left the HCV program housing during the study period (and were no longer with HACP) (see Table 10). The exit from publicly assisted housing most likely explains why those households paid the increased minimum rent for a much shorter time. Of the households that earned a maximum income of more than \$30,000, nearly 30% left HACP HCV housing during the study period, a much higher figure than PH households with > \$30,000 departing.

**Table 10. Exit from Housing Choice Voucher Program by Households that Participated in FSS at Any Time During the Study Period**

Maximum Annual Income (any year during study period)	Total Households	Households That Left HCV	
		Number	Percent
\$0	5	4	80.0
\$1 - \$2,500	11	1	9.0
\$2,501 - \$5,000	14	4	28.6
\$5,001 - \$7,500	16	2	12.5
\$7,501 - \$10,000	23	5	21.7
\$10,001 - \$20,000	134	22	16.4
\$20,001 - \$30,000	123	27	22.0
\$30,001 and above	67	20	29.9
<b>Total</b>	<b>393</b>	<b>85</b>	<b>21.6</b>

### ***Discussion***

Households residing in public housing that were affected by the increased minimum rent policy participated in the FSS program at higher rates than their HCV counterparts. Of those public housing households, 45.9% that were affected by the increased minimum rent policy participated in the FSS program during the study period, while only 18.5% of HCV households that paid minimum rent during the study period also participated in the FSS program. While the increased minimum rent policy may have been better at incentivizing public housing tenants to participate in the FSS program, still less than half of public housing households that paid minimum rent during the study period participated in the FSS program.

<sup>4</sup> The households had no reported income of any form in column 8A during the study period. The column entry is "0."

On average, public housing households that enrolled in FSS also paid the increased minimum rent for a shorter period of time than the HCV households. On average, PH households paid the increased minimum rent for an average of 4.5 months, compared with 12 months for the average HCV household.

Public housing households that paid the increased minimum rent and participated in FSS were more likely to leave HACP housing, on average, than HCV households. Of all public housing households, 42.1% left HACP housing during the study period, compared to 21.6% of the voucher households. The exceptions to the average were at the extremes in the income ranges – households with no income during the study period left HACP housing at the same rates, 80%, for both PH and HCV households. For households with incomes greater than \$30,000, PH households were less likely to leave HACP housing than HCV households.

#### **Households That Paid Minimum Rent and Did Not Participate in FSS During the Study Period**

This section examines the public housing and housing choice voucher households that paid the increased minimum rent of \$150 during the study period but never participated in the FSS program during the study period.<sup>5</sup>

##### ***Public Housing Households***

As we saw from Table 1, there were 527 public housing households that paid the increased minimum rent at any time during the study period and did not participate in the FSS program.

We now examine the number of months households paid the minimum rent before, assuming, they got a job and paid income-based rent, or they left HACP (see Table 11). The average number of months paying increased minimum rent is much higher for PH households not enrolling in FSS than for PH households that then enrolled in FSS, not surprisingly. For these PH households not enrolling in FSS, there is also not as much variability by income level, with the average length of time paying the increased minimum rent at slightly less than one year before leaving. These months, however, could have occurred at many points in the study period.

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<sup>5</sup> These household may have participated in FSS before January 2010 or after October 2017.



On average, public housing households that enrolled in FSS also paid the increased minimum rent for a shorter period of time than the HCV households. On average, PH households paid the increased minimum rent for an average of 4.5 months, compared with 12 months for the average HCV household.

Public housing households that paid the increased minimum rent and participated in FSS were more likely to leave HACP housing, on average, than HCV households. Of all public housing households, 42.1% left HACP housing during the study period, compared to 21.6% of the voucher households. The exceptions to the average were at the extremes in the income ranges – households with no income during the study period left HACP housing at the same rates, 80%, for both PH and HCV households. For households with incomes greater than \$30,000, PH households were less likely to leave HACP housing than HCV households.

#### **Households That Paid Minimum Rent and Did Not Participate in FSS During the Study Period**

This section examines the public housing and housing choice voucher households that paid the increased minimum rent of \$150 during the study period but never participated in the FSS program during the study period.<sup>5</sup>

##### ***Public Housing Households***

As we saw from Table 1, there were 527 public housing households that paid the increased minimum rent at any time during the study period and did not participate in the FSS program.

We now examine the number of months households paid the minimum rent before, assuming, they got a job and paid income-based rent, or they left HACP (see Table 11). The average number of months paying increased minimum rent is much higher for PH households not enrolling in FSS than for PH households that then enrolled in FSS, not surprisingly. For these PH households not enrolling in FSS, there is also not as much variability by income level, with the average length of time paying the increased minimum rent at slightly less than one year before leaving. These months, however, could have occurred at many points in the study period.

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<sup>5</sup> These household may have participated in FSS before January 2010 or after October 2017.

**Table 11. Income of Public Housing Households Not Participating in FSS But Paying Increased Minimum Rent at Any Time During Study Period**

Maximum Income	Number of Households		Average Number of Months Paying Increased Minimum Rent
	Number	Percent	
\$0	48	9.1%	11.9
\$1 - \$2,500	26	4.9%	6.6
\$2,501 - \$5,000	56	10.6%	10.7
\$5,001 - \$7,500	28	5.3%	13.9
\$7,501 - \$10,000	36	6.8%	11.7
\$10,001 - \$20,000	166	31.5%	11.7
\$20,001 - \$30,000	107	20.3%	9.4
\$30,001 and above	60	11.4%	8.9
<b>Total</b>	<b>527</b>	<b>100.0</b>	<b>10.7</b>

We can add additional information on this group. Of these households, most were in or moved into paid employment during the study period.

1. 465 households experienced one period where their household income dropped below \$500 per month and the household paid the increased minimum rent policy. The length of the “stint,” however, is variable and could well be five years. The rest of the time, however long or short the period, the household paid income-based rent.
2. There were 52 public housing households that experienced two periods during the study period when the household’s monthly income was less than \$500 per month and the household paid the \$150 monthly rent.
3. There were 10 public housing households that experienced three periods of household monthly income of less than \$500 per month and had three stints where the household paid the increased minimum rent.

This shows that some households experience multiple swings in household income, which reflect income instability within the household as the household moves in and out of employment.

Like the public housing households that participated in the FSS program and paid the increased minimum rent, these PH households never in FSS showed differences in exiting public housing by income (see Table 12). Those with higher maximum incomes were less likely to leave public housing than those with extremely low incomes. Of these public housing households that paid the increased minimum rent but did not participate in the FSS program, 222 (42.1%) households left public housing during the study period. The data show that those households that reported a higher annual income were less likely to leave HACP housing than the households that reported lower incomes.

**Table 12. Exit from Public Housing for Households That Paid the Increased Minimum Rent but Did Not Participate in FSS**

Maximum Income in Any Year	Total Households	Number of Households Left Public Housing	Percent of Households that Left Public Housing
\$0	48	40	83.3
\$1 - \$2,500	26	14	53.5
\$2,501 - \$5,000	56	35	62.5
\$5,001 - \$7,500	28	22	78.6
\$7,501 - \$10,000	36	12	33.3
\$10,001 - \$20,000	166	62	37.3
\$20,001 - \$30,000	107	29	27.1
\$30,001 and above	60	8	13.3
<b>Total</b>	<b>527</b>	<b>222</b>	<b>42.1</b>

Public housing households that did not report any income during the study period left at highest rate whether ever in FSS or not: 79.3% of public housing households that participated in the FSS program and paid increased minimum rent (Table 6) and 83.3% of public housing households that paid increased minimum rent but did not participate in the FSS program during the study period. Of those PH households who left HACP, 117 left while paying the increased minimum rent of \$150 rather than income-based rent.

#### **HCV Households**

Of the 1,727 HCV households that paid the increased minimum rent of \$150 at any time during the study period and never participated in the FSS program, households that earned a higher maximum household income tended to pay the increased minimum rent for a shorter period of time than those households that earned less (see Table 13).

**Table 13. Income of HCV Households Paying Minimum Rent at Any Period but Did Not Participate in the FSS Program**

Maximum Income	Number of Households	Average Number of Months Paying Minimum Rent
\$0	59	20.8
\$1 - \$2,500	104	24.6
\$2,501 - \$5,000	125	25.5
\$5,001 - \$7,500	108	23.7
\$7,501 - \$10,000	128	20.0
\$10,001 - \$20,000	553	17.0
\$20,001 - \$30,000	467	14.4
\$30,001 and above	183	12.0

<b>Total</b>	<b>1,727</b>	<b>17.5</b>
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There was not a lot of difference in the average number of months paying the increased minimum rent for HCV households not participating in FSS by income group. There were 59 housing choice voucher households that reported zero income during the study period. These households tended to be small and headed by a young head of household. Roughly two-thirds of the households were headed by a woman.

For households never in FSS, unlike the PH households with no income, many fewer HCV households with no income left HACP housing during the study period, 83% and 42% respectively (see Table 14). Of the 183 HCV households that reported a maximum income of \$30,000 or more, one-third left HACP housing during the study period, a higher figure than similar PH households.



**Table 14. HCV Households that Paid Minimum Rent During the Study Period but Did Not Participate in FSS**

Maximum Income	Total Households	Number of Households Left HCV	Percent of Households that Left HCV
\$0	59	25	42.4
\$1 - \$2,500	104	43	41.3
\$2,501 - \$5,000	125	42	33.6
\$5,001 - \$7,500	108	30	27.8
\$7,501 - \$10,000	128	36	28.1
\$10,001 - \$20,000	553	118	21.3
\$20,001 - \$30,000	467	102	21.8
\$30,001 and above	183	60	32.8
<b>Total</b>	<b>1,727</b>	<b>456</b>	<b>26.4</b>

When we examine the number of HCV households, never in FSS, who leave the program, we find that half of the households that left HACP housing reported an annual income of less than \$5,000 when they ended their participation in HACP housing (see Table 15).

**Table 15. Exit from HCV (and HACP) for Households That Paid the Increased Minimum Rent but Did Not Participate in FSS by Income**

Income at Time of Exit	Number	Percent
\$0	96	21.1
\$1 - \$2,500	71	15.6
\$2,501 - \$5,000	65	14.2
\$5,001 - \$7,500	43	9.4
\$7,501 - \$10,000	33	7.2
\$10,001 - \$20,000	53	11.6
\$20,001 - \$30,000	56	12.3
\$30,001 and above	39	8.3
<b>Total</b>	<b>456</b>	<b>99.7</b>

### **Discussion**

Of households that did not participate in the FSS program during the study period, the households in public housing tended to pay the increased minimum rent for a shorter period of time and leave HACP housing at a higher rate than the HCV households. Both the PH and HCV households that paid the increased minimum rent but did not participate in the FSS program during the study period paid the increased minimum rent for longer than the PH and HCV households that participated in the FSS program during the study period.



### Did the Minimum Rent Policy of \$150 Per Month Increase Revenues for the HACP?

In this section, we estimate what the revenue stream was from the \$150 per month minimum rent policy.

#### *Public Housing Households*

For the public housing households who paid the increased minimum monthly rent, increased rent revenue is calculated by multiplying the difference between the prior minimum rent, \$25 and the new minimum rent \$150 by the number of months that households paid the increased minimum rent. For the 974 public housing households (Table 1), the minimum rent payment was for a total of 8,538 months (from the 50058). This would be an increase in rent revenue of \$1,067,250 for the HACP between January 2010 and October 2017.

Figure 2 shows the number of public housing households that paid increased minimum rent during each month of the study period. There was an increase in the number of households that were impacted by the increased minimum rent after the program was initially implemented in 2010. Then, in August and September 2015, the number of public housing households paying the increased minimum rent peaked at 161 households. At the end of the study period, the number fell to 100 households.

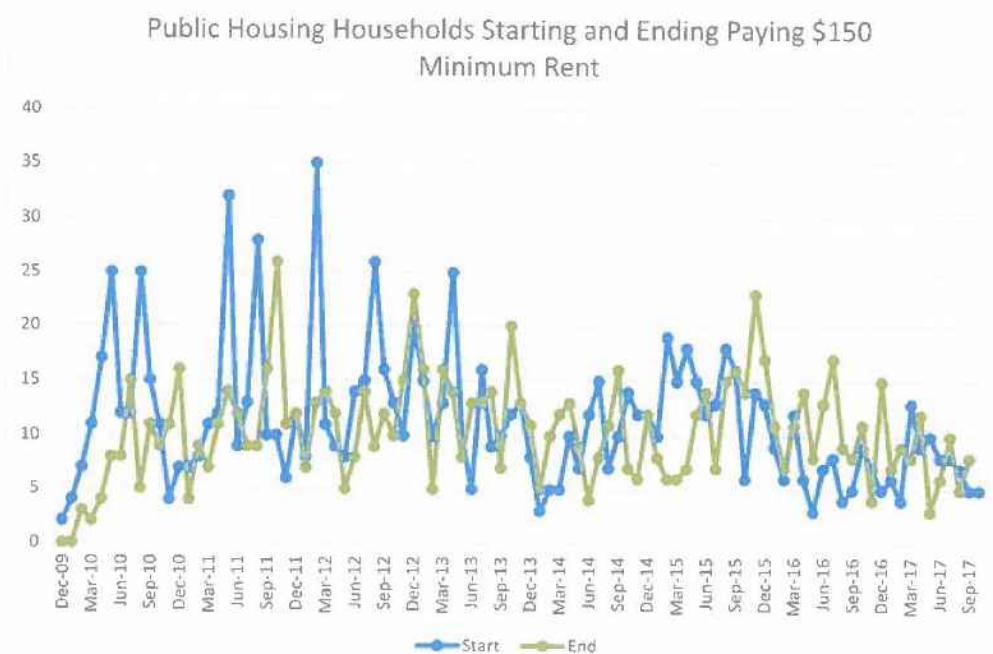
**Figure 2. Number of Public Housing Households Paying \$150 Minimum Rent Between January 2010 and October 2017, by Month\***



\*Over this period, there were a total of 974 public housing households paying \$150 minimum monthly rent at any point, whether in FSS or not.

We then looked at the number of public housing households that entered and exited minimum rent status during the study period to further examine patterns in the changes in the number of households paying the increased minimum rent (see Figure 3).

**Figure 3. Total Number of PH Households Starting and Ending Paying \$150 Minimum Rent**



We expected to find seasonal patterns in the number of households paying the increased minimum rent to reflect changes in employment during the summer months and around the holidays. We see some upticks, as expected in summer and December, but the data show that seasonal employment patterns were not as prominent as we expected.

During the study period, January 2010 – October 2017, oftentimes households moved in and out of minimum rent status as changes in household status occurred. Typically, household changes that affected status in the minimum rent policy included:

- **Moving in and out of employment:** There are many households that moved in and out of employment and, thus, for short periods of time, had monthly income less than \$500. They paid the increased minimum rent during periods of unemployment, or periods where earnings were less. When wages increased, rent was re-calculated and, if over \$500 per monthly, income-based rent began.
- **Leaving full participation in TANF or a decrease in other non-wage income.** There are also a set of households that may have been receiving full TANF benefits and other non-

wage income and experienced a decrease in benefits that led to the household being charged minimum rent.

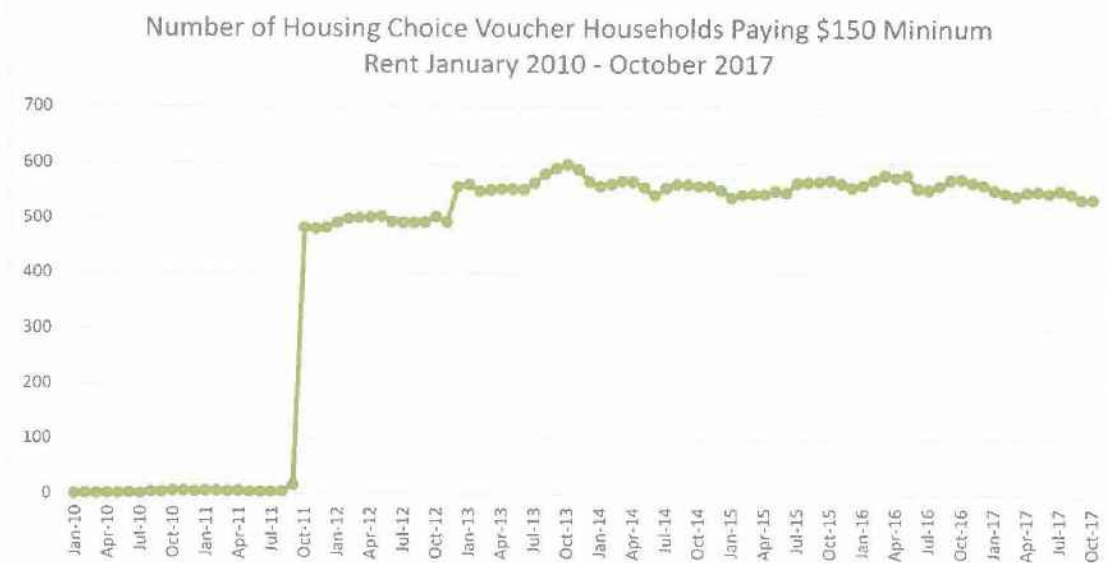
- Entry to the FSS program; and
- Move out of HACP housing.

#### ***Housing Choice Voucher Households***

The increased minimum rent policy also led to an increase in rent revenue to HACP from the HCV households. From the HCV program, HACP receives between \$50,000 and \$60,000 per month in increased rent revenue, as there are roughly between 500 and 600 households paying minimum rent per month. The total increased rent revenue from the HCV program during the study period was \$4.0 million.

The two figures below show the number of HCV households paying \$150 minimum rent during the study period, with scales differentiated by the start date (see Figure 4 and 5). Figure 4 begins with January 2010, because that was the program's start date for PH clients. The HCV components was phased in and Figure 5 shows a later start date. Figure 5 shows that after the policy was fully implemented in October 2011, the number of households paying \$150 in minimum rent remained steady, despite families moving in and out of minimum rent status. The data show that the housing choice voucher households started to be charged the increased minimum rent of \$150 in October 2011. Figure 4 shows the number of HCV households paying the increased minimum rent during the entire study period of January 2010 to October 2017. Figure 5 shows the number of HCV households paying the increased minimum rent between October 2011 and October 2017. Figure 5 offers a clearer view of the changes in the number of HCV households paying the increased minimum rent by month.

**Figure 4. Number of Housing Choice Voucher Households Paying \$150 Minimum Rent**



**Figure 5. Number of Housing Choice Voucher Households Paying \$150 Minimum Rent between October 2011 and October 2017**





Like public housing households, there is variation in the number of households the start and end paying the increased minimum rent of \$150. Figure 6 shows the number of HCV households that start and end periods of paying the increased minimum rent between January 2010 and October 2017. Like public housing residents, housing choice voucher household changes that affected status in the minimum rent policy included:

- Moves in and out of employment; There are many households that move in an out of employment and for short periods of time, had annual incomes of less than \$3,000. They paid minimum rent during a period of unemployment, or a period where they were earning less, and then when their wages increased, their rent was re-calculated and those households pay income-based rent again.
- Leaving Full participation in TANF or a decrease in other non-wage income. There are also a set of households that may have been receiving full TANF benefits and other non-wage income and experienced a decrease in benefits that led to the household being charged minimum rent.
- Entry to the FSS program; and
- Move out of HACP housing.



**Figure 6. Housing Choice Voucher Households Starting and Ending Increased Monthly Minimum Rent Payment of the \$150**



Figure 7 below shows the number of households that started and ended periods of paying the minimum rent between November 2011 and October 2017. By shortening the time period on the chart, we allow for a more detailed view of the changes at the monthly level.

**Figure 7. Housing Choice Voucher Households Starting and Ending Increased Monthly Minimum Rent Payment of \$150**



# Analysis of Rental Market Areas for Administering Housing Vouchers in Pittsburgh, PA

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8/14/2018

## Introduction

In April, 2018, the U.S. Department of Housing and Urban Development (HUD) required 24 metropolitan areas to use Small Area Fair Market Rents (SAFMR) as the basis for setting voucher amounts for properties administered as part of the Housing Choice Voucher Program, often referred to as Section 8 housing. The goal of the SAFMR requirement is to increase affordable housing in areas with more opportunity by better aligning vouchers with local market rates.

In preparation for complying with the SAFMR rule, the Housing Authority of the City of Pittsburgh (HACP) asked the University Center for Social and Urban Research (UCSUR) to examine geographic patterns in rental market data in Pittsburgh, PA. This report summarizes UCSUR's analysis.

## Sample

Data used for this analysis were purchased from RentJungle (2017), a commercial aggregator of rental market data. The raw data include NA listings aggregated from different websites advertising properties for rent in the Pittsburgh Metropolitan Statistical Area (MSA) between October 2016 and October 2017. Table 1 summarizes the subset of raw RentJungle listings used for analysis. Listings that include utilities were characterized by finding expressions that include a utility descriptor (the words "electric," "gas," "water", "utilities", or "heat") combined with keywords suggesting tenants responsibilities (e.g., the words "tenant" and "responsible for"). A complete list of the logic used to characterize responsibility for utilities is available upon request.

Table 1: Summary of steps used to prepare sample for analysis from raw listings data.

sample description	listings	addresses
MSA (raw sample)	1,104,157	10,474
Listings that exclude utils	1,035,634	10,272
Listings without an address	1,006,857	10,270
Removing duplicated RentJungle identifiers	188,219	10,068
Listings in Pittsburgh	107,854	5,517
Listings allowing one prototype per address	14,788	5,511
Listings with amenity information	11,147	4,905
Listings after removing outliers	11,135	4,903

RentJungle applies a proprietary algorithm intended to distinguish unique listings from duplicate listings. Assuming a unique listing corresponds to a unique household, we found RentJungle's algorithm indicates approximately 124,000 unique rental units were available in the City of Pittsburgh between Oct 2016 and Oct 2017, which is roughly twice the total rental units in the city (U.S. Census 2018). As a result, we allow only one advertised prototype per address, where a unit prototype is defined by unique counts bedrooms and

bathrooms, floor space, and price. This restriction leads to approximately 18,000 unique listings available for rent, which better matches the 16,500 available units estimated using tenure data published by the U.S. Census (2018).

After removing listings missing amenity information and several outliers, the sample used for analysis consists of 11,135 unique listings across 83 neighborhoods and 26 zip codes in the City of Pittsburgh. Figure 1 summarizes variation in price by counts of bedrooms and bathrooms.

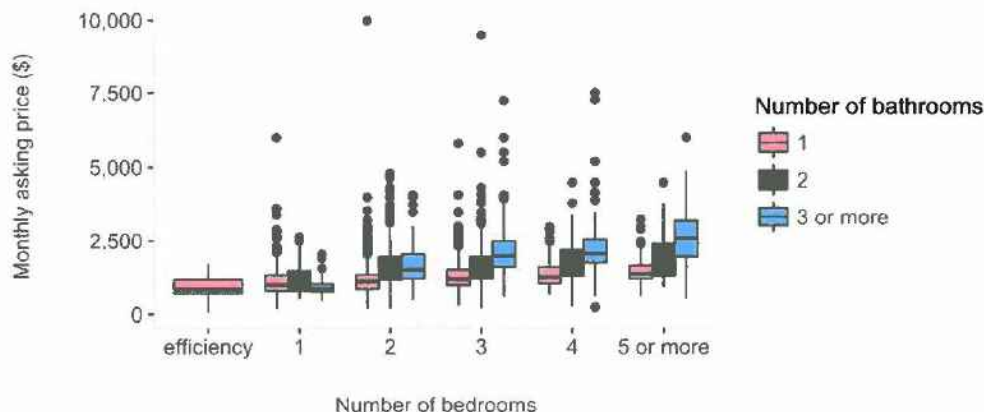


Figure 1: Variation in advertised rent by bedrooms and bathrooms for 11,135 listings in the City of Pittsburgh between October 2016 and October 2018.

## Methods

Market rents vary primarily based upon property amenities - such as the number of bedrooms, number of bathrooms, and quality - and proximity to spatial amenities, such as schools, parks, transit, and access to jobs. Spatial clustering and spatial regression (e.g., hedonic pricing) are both objective methods for modeling rental markets. Clustering is typically used to identify market boundaries; however, clustering is not predictive. Regression is predictive but is not an ideal method for identifying market boundaries. Clustering and regression were both used here to explore market boundaries and predict rents, respectively.

HACP's programmatic needs also informed the methods. Voucher recipients choose housing from landlords participating in the Section 8 program, which is time consuming for tenants. As such, HACP indicated a strong preference to simplify property searches for tenants by publishing voucher amounts using commonly understood geographic boundaries. As a result, we restricted our geographic delineations to neighborhoods and zip codes, only dividing neighborhoods where the sample indicated a significant difference in neighborhood price across zip codes (a p-value of less than 10% for a t-test comparing prices). In an attempt to improve model performance, the resulting contiguous geographies (combinations of neighborhood and zip codes) were aggregated to ensure each geography had at least 50 observations. Applying the above criteria produced 66 unique combinations of neighborhoods and zip codes for modeling.

HACP also wanted flexibility to aggregate modeled geographies into much fewer zones. As a result of these programmatic objectives, we used Equation 1 to model advertised prices.

$$\log(\text{price}) = B_0 + B_1 * \text{bedrooms} + B_2 * \text{bathrooms} + B_3 * \text{geography} + B_4 * \text{bedrooms} * \text{bathrooms} \quad \text{Equation 1}$$

Administrative boundaries, such as zip codes and neighborhoods, may or may not capture spatial amenities affecting price, such as schools, parks, transit, and access to jobs. As such, we map residual prices (the



difference between observed and modeled price) to gauge the degree to which the modeled administrative boundaries capture spatial amenities.

We also present 2 k-means cluster analyses. Clustering identifies groups of listings similar per the modeled attributes. We first cluster by location, price, bedrooms, and bathrooms to identify contiguous rental markets and primary spatial amenities. We then cluster by price, bedrooms, and bathrooms only. Including location in the cluster models presumes that proximate properties are more likely to represent similar spatial amenities. Finally, we present examples of how the cluster analysis could inform the binning of modeled (fitted) rents for the purposes of administering a SAFMR program at HACP.

## Results

Table 1 shows regression results by geography and bedroom type.

*Table 1: Regression results from fitting Equation 1 to the sample of advertised rents. The geography variables are sorted from lowest to highest effect on advertised price.*

variable	estimate	std error	p.value
(Intercept)	6.04	0.046	<0.001
bedrooms - 1	0.35	0.029	<0.001
bedrooms - 2	0.41	0.027	<0.001
bedrooms - 3	0.57	0.027	<0.001
bedrooms - 4	0.69	0.034	<0.001
bedrooms - 5 or more	0.75	0.035	<0.001
baths	0.16	0.018	<0.001
bedrooms - 1:baths	-0.13	0.023	<0.001
bedrooms - 2:baths	0.00	0.020	0.82
bedrooms - 3:baths	-0.01	0.019	0.691
bedrooms - 4:baths	-0.02	0.021	0.399
Elliott.Windgap.Chartiers City.Esplen	-0.06	0.052	0.269
Crafton Heights	-0.05	0.055	0.366
Knoxville.Beltzhoover.Bon Air	-0.04	0.048	0.431
Carrick.Mt. Oliver.St. Clair	-0.01	0.045	0.849
Sheraden.15204	0.00	0.051	0.986
Homewood North.East Hills	0.01	0.053	0.886
Hazelwood	0.01	0.049	0.782
Perry North.Summer Hill	0.04	0.051	0.488
Perry South.Spring Hill-City View.Fineview	0.05	0.049	0.348
Arlington.Lincoln Place.Hays	0.07	0.050	0.16
Oakwood	0.07	0.079	0.366
Homewood South	0.07	0.057	0.193
Bedford Dwellings.Middle Hill	0.07	0.058	0.204
Beechview	0.10	0.045	0.021
Brookline.Overbrook	0.11	0.045	0.018
Westwood.Banksville.West End.Ridgemont	0.13	0.052	0.009
Lincoln-Lemington-Belmar.Larimer.Homewood West	0.14	0.054	0.011
Allentown	0.16	0.046	<0.001
Brighton Heights	0.17	0.045	<0.001
Garfield	0.21	0.057	<0.001
Shadyside	0.22	0.151	0.152
South Side Slopes.15210	0.24	0.047	<0.001
Sheraden.15220	0.24	0.057	<0.001
Stanton Heights	0.25	0.057	<0.001
Greenfield	0.26	0.045	<0.001
Mount Washington	0.29	0.041	<0.001

(continued)

variable	estimate	std error	p.value
Morningside	0.32	0.051	<0.001
Manchester	0.32	0.054	<0.001
Upper Hill.Polish Hill	0.33	0.057	<0.001
Highland Park	0.34	0.044	<0.001
Friendship.15206	0.34	0.062	<0.001
East Allegheny.Spring Garden	0.35	0.046	<0.001
Fairywood	0.36	0.061	<0.001
Duquesne Heights	0.37	0.046	<0.001
Upper Lawrenceville	0.38	0.050	<0.001
Central Northside	0.40	0.048	<0.001
East Liberty	0.40	0.042	<0.001
California-Kirkbride	0.41	0.051	<0.001
Crawford-Roberts	0.41	0.050	<0.001
Point Breeze North	0.43	0.044	<0.001
Point Breeze.Swisshelm Park.Regent Square	0.44	0.046	<0.001
Bloomfield	0.44	0.042	<0.001
South Side Slopes.15203	0.44	0.042	<0.001
North Oakland	0.47	0.043	<0.001
Shadyside.15213	0.47	0.052	<0.001
Squirrel Hill South	0.48	0.041	<0.001
Bloomfield.15213	0.50	0.057	<0.001
Bluff	0.51	0.048	<0.001
Squirrel Hill North.15232	0.52	0.052	<0.001
Terrace Village	0.54	0.053	<0.001
South Oakland	0.55	0.044	<0.001
Friendship.15232	0.56	0.050	<0.001
Troy Hill	0.56	0.044	<0.001
Central Oakland	0.57	0.044	<0.001
West Oakland	0.59	0.046	<0.001
South Side Flats	0.59	0.041	<0.001
Shadyside.15232	0.62	0.041	<0.001
Central Lawrenceville	0.63	0.044	<0.001
Central Business District.15219	0.64	0.045	<0.001
Lower Lawrenceville	0.65	0.044	<0.001
Allegheny West.North Shore.Allegheny Center	0.66	0.054	<0.001
Squirrel Hill North.15217	0.67	0.042	<0.001
Shadyside.15206	0.77	0.043	<0.001
Central Business District.15222	0.86	0.043	<0.001
Strip District	0.93	0.046	<0.001

Residual standard error: 0.291 on 11059 degrees of freedom. Adjusted R-squared: 0.522. F-statistic: 163.4 on 75 and 1.1059  $\times 10^4$  DF with a p-value < 2.2e-16

Regression results indicate that the property amenities (bedrooms and bathrooms) and modeled geographic regions generally correlate well with advertised rental price. Only 10 of the 66 modeled geographies are not significant at the 20% level.

Figure 2 shows price residuals (the difference between the observed and fitted value) are not heavily positive or negative for the 66 modeled geographies. While some neighborhoods, like Shadyside and the Southside Flats, show relatively more differences between the fitted and observed estimates, the residuals are both positive and negative within these neighborhoods. As such, none of the modeled geographies suggest an obvious missing spatial amenity. In fact, the clustering analysis below suggests that the 66 modeled geographies are likely smaller than necessary to capture influences of spatial amenities. Nevertheless, future modeling could be improved by including currently unavailable spatial data, e.g., school assignments.



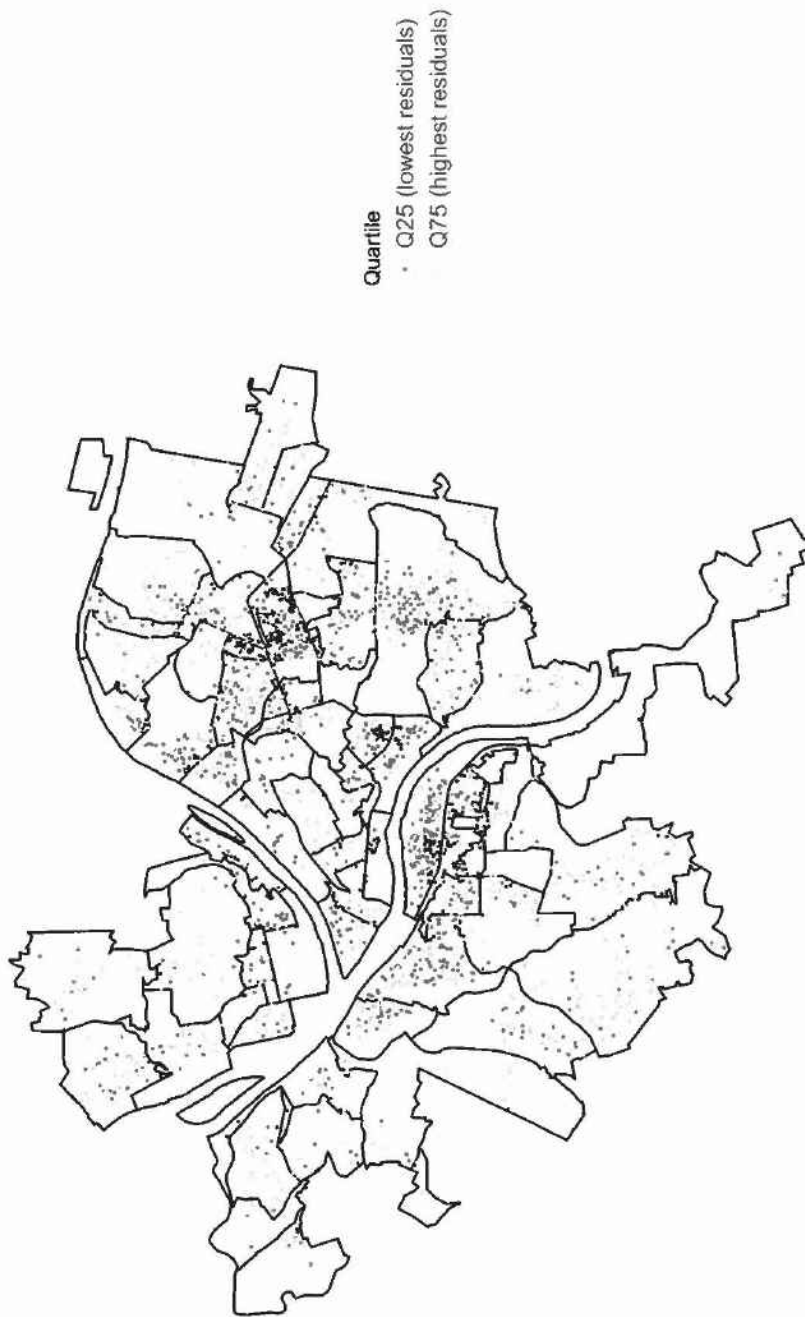


Figure 2: Map of modeled residuals from fitting the sample to Equation 1. Only the first quartile (the lowest 25% of residuals or Q25) and the fourth quartile (highest 25% of residuals or Q75) residuals are mapped for clarity. While areas demonstrate differences between the observed and modeled rent, the extreme residuals are relatively spatially uniform, suggesting no obvious spatial amenities not captured by the modeled geographies.

Figure 3 shows how k-means clustering diagnostics vary by the number of assumed clusters. Figure 3 indicates there are at a minimum of 5-6 rental markets in the City of Pittsburgh independent of whether or not location defines clusters. However, the clustering diagnostics change minimally with more zones. Thus the “optimal” numbers of clusters reflects trade-offs between simplifying the cluster model (e.g., the smallest numbers of clusters) and capturing local spatial trends at the expense of increased model complexity (e.g., increasing the numbers of clusters), which is typical of cluster models.

Figures 4a and 4b map the cluster assignments. Figure 4a - which includes proximity in the clustering algorithm - indicates that the primary rental markets are clustered into the northwest (cluster 1), south (cluster 2), and the east (cluster 4). Smaller markets (clusters 5 and 6) appear around the universities, hospitals, and downtown, where prices are highest. This makes sense given a majority of jobs are located in these areas. Cluster 3 is a transition area between the higher and lower rents.

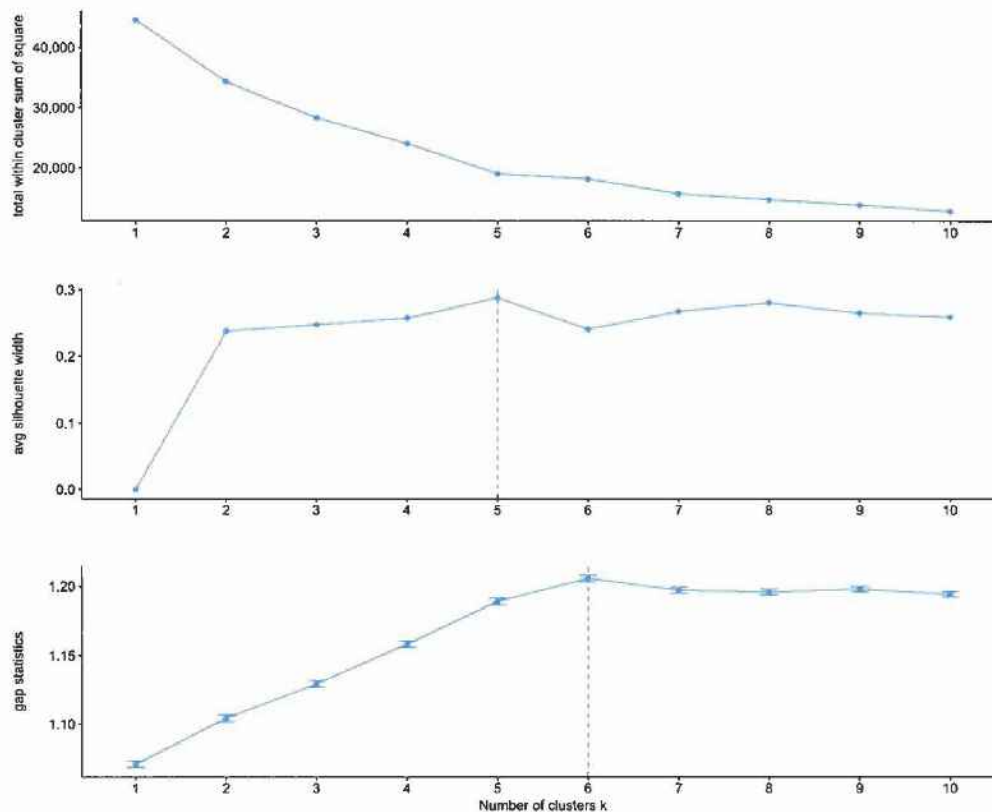


Figure 3a: k-means clustering diagnostics indicating there at least 5-6 market clusters defined by location, price, bedrooms, and bathrooms.

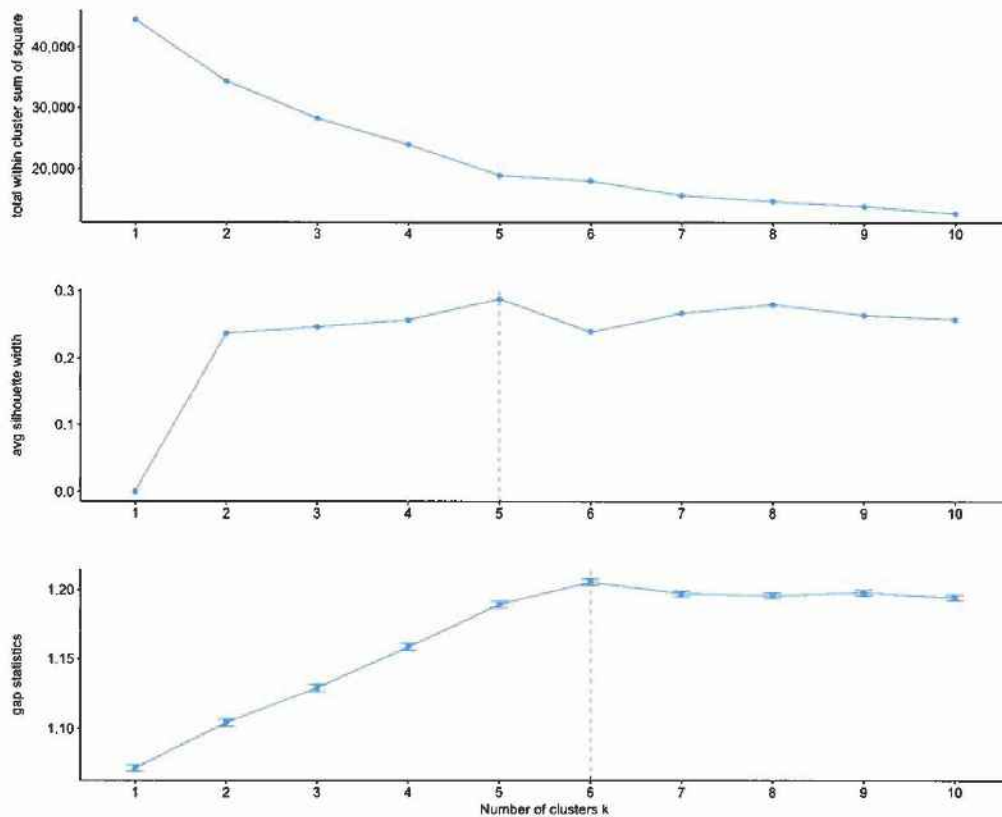


Figure 3b: k-means clustering diagnostics indicating there are at 5-6 clusters defined by price, bedrooms, and bathrooms.

Figure 4b clusters only by price, bedroom, and bathrooms and, in contrast to Figure 4a, does not cluster by spatial proximity. Conceptually, clustering by spatial proximity treats nearby properties as similar, weighting proximity equally with price, bedrooms, and bathrooms. In doing so, clustering by spatial proximity assumes nearby properties capture potential spatial amenities, with similarities gradually declining with distance between properties. Some spatial amenities, such as access to transit, are expected to follow a gradual decline in similarity with distance. Amenities defined by strict boundaries, such as school assignments, clustering by proximity is still helpful, but association would not decline gradually with distance.

These conceptual differences appear when comparing Figures 4a and 4b. Areas of relatively low rent are dispersed around the outside of the City, as the clustering algorithm ignores spatial proximity in defining similarity. Similarly, high end rents are tightly clustered around a few neighborhoods, particularly the Central Business District, the Strip District, Shadyside, Squirrel Hill, Central Lawrenceville, and the South Side Flats. Of course, these are the areas associated with the higher-end sub-markets identified in Figure 4a. The difference between Figure 4a allows these higher-end areas to influence those around them, thus shows more consistency in cluster assignments around the high-rent areas.

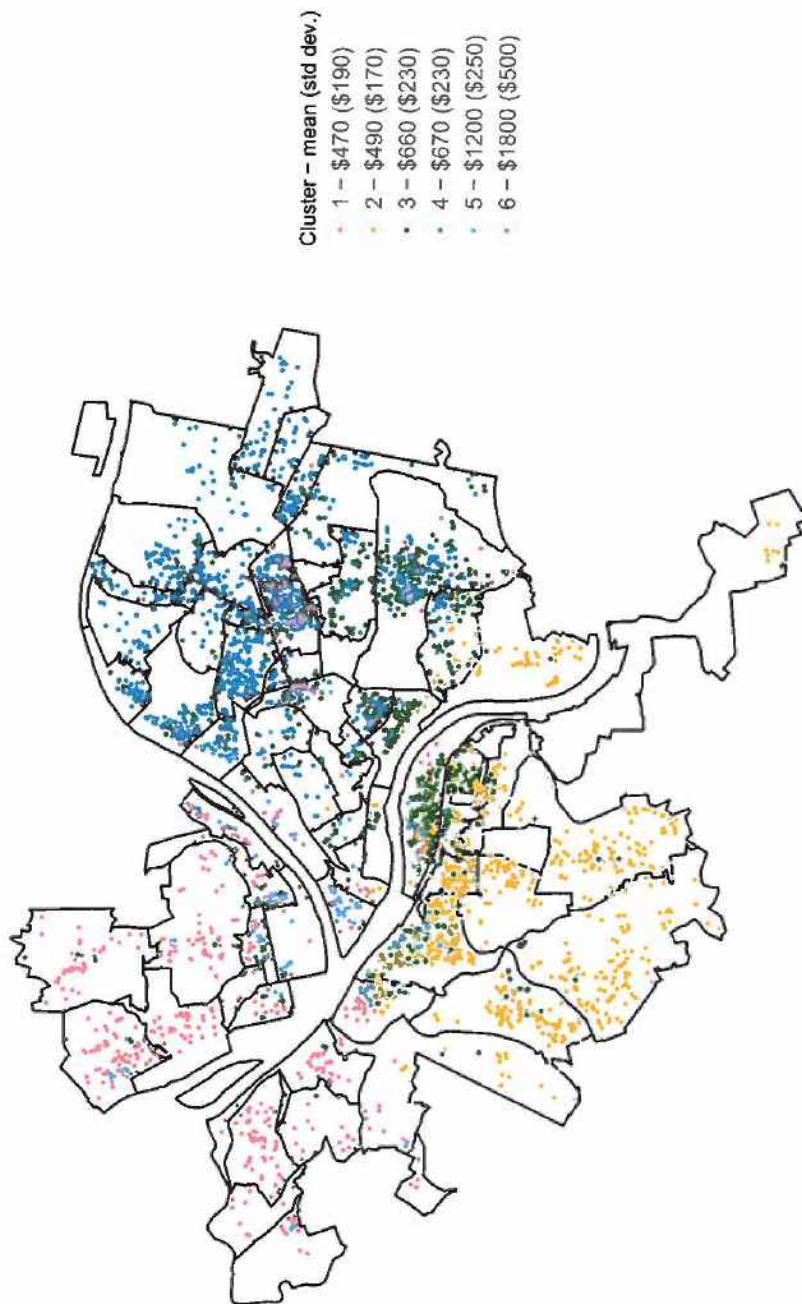


Figure 4a: Map of 6 k-means clusters defined by location, price, bedrooms, and bathrooms.



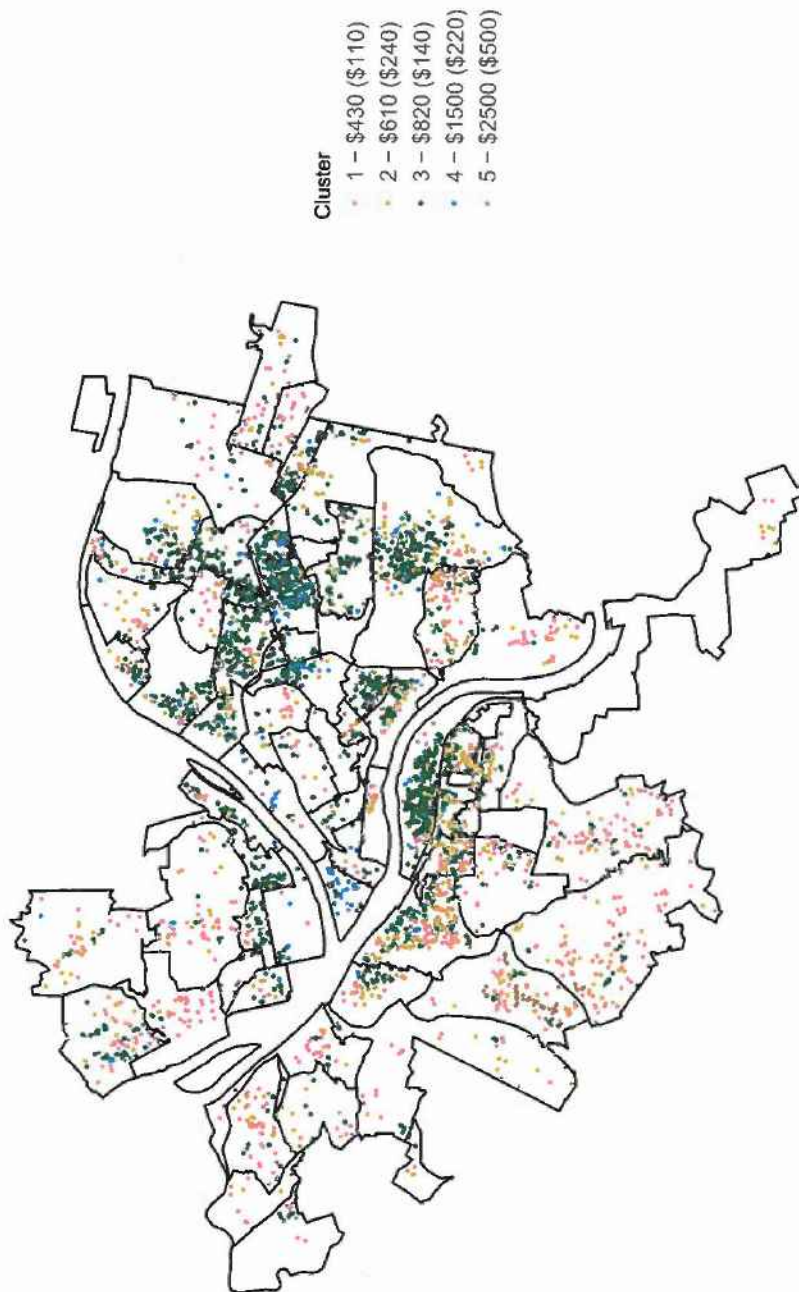


Figure 4b: Map of 5 k-means clusters defined by price, bedrooms, and bathrooms.



### **Implications for defining potential voucher zones**

The broad trends identified in this analysis are that 1) there are at least 5-6 rental markets in the City of Pittsburgh; 2) downtown, the universities, hospitals, and entertainment districts define higher-end, smaller markets within their immediate proximity; 3) lower-end markets are in the south and northwest extremes of the City; and 4) combinations of neighborhoods and zip codes are generally small enough to capture local spatial amenities presented in the sample. These findings can be flexibly combined with HACP's programmatic objectives to revise voucher programming consistent with the objectives of SAFMR, which are to increase vouchers in areas of opportunity.

This analysis was not intended to be prescriptive but informative. While the sample identifies broad geographic trends in rent, specific causes of variation in advertised rents - such as housing quality, school assignments, crime, access to transportation, and access to entertainment - are jointly reflected in the data and analysis. Future work could value each of these amenities separately and may further the the objectives of SAFMR.

### **References**

Rent Jungle (2017). Data purchased by the University of Pittsburgh.

US Census Bureau. (2018). 2016 American Community Survey 5-Year Estimates. Retrieved from <http://factfinder.census.gov>