



The Housing Authority of the City of Pittsburgh 2018 MTW Annual Report

(Revised October 2019)

### THE HOUSING AUTHORITY OF THE CITY OF PITTSBURGH

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# THE HOUSING AUTHORITY OF THE CITY OF PITTSBURGH

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#### I. INTRODUCTION

It's an exciting time in the City of Pittsburgh. With a renaissance in full swing, the city's economy is growing, and the region is continuing to prosper again. Unfortunately, not everyone is sharing in this prosperity. Though it remains one of the most livable cities in the country, housing prices in Pittsburgh have been rising quickly and substantially. As Pittsburgh continues to attract tech companies such as Uber, Google, Duolingo and more, the standard of living increases at an unsustainable rate for its current, underserved and vulnerable residents.

The Housing Authority of the City of Pittsburgh (HACP) plays an important role in striving to ensure sure Pittsburgh is a city for all. It is our responsibility to develop and expand high-quality affordable housing, improve the lives of our 20,000 residents, and strengthen communities. We continue to innovate and do the "hard work" necessary to maintain and expand quality, affordable housing in the City of Pittsburgh.

Through comprehensive efforts such as the Rental Assistance Demonstration Program (RAD), we preserve and improve existing affordable housing properties, protecting the existing affordable housing stock and ensuring that it remains high-quality. Through the Gap Financing Program and other development initiatives, we are expanding our real estate portfolio, increasing the supply of affordable housing in the city and providing more people with stable and affordable housing. Through the Larimer/East Liberty Choice Neighborhood Implementation Program, we are working with community stakeholders to build a vibrant, inclusive, and affordable neighborhood that will allow residents to take advantage of East Liberty's recent community and economic developments.

The HACP is committed to do more than secure affordable housing. Our commitment to our residents means finding effective and innovative ways to improve their quality of life and their communities. The Family Self-Sufficiency (FSS) Program offers classes and training to help residents develop valuable skills and gain employment. The Home Ownership Program makes it possible for people to progress towards homeownership in an affordable manner while building wealth for their family and supporting economic mobility. Our innovative programs, to include the ConnectHome USA digital, literacy classes and the new ABK Childhood Learning & Development Center, provide residents with the skills and support they need to attain self-sufficiency and increased livability within the City of Pittsburgh.

It is our 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 Pittsburgh's most vulnerable residents—senior citizens, persons with disabilities, low-income families—can share in that prosperity. Our 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 that call our communities home.

# A. Overview of HACP's Moving to Work 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. Long Term Goals and Vision

The HACP's vision for its MTW Program is built around three (3) major themes that together will 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.

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

Since the initial HACP MTW Annual Plan 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 re-link public housing properties to their surrounding neighborhoods and act as a driver of other public and private investments to revitalize entire neighborhoods.

Prior to MTW through the initiatives established in three (3) HOPE VI redevelopment projects, the HACP has achieved great success. These significant accomplishments, as pertains to addressing the needs of affordable housing opportunities has continued throughout each year of MTW implementation.

Two (2) core components of the HACP's MTW strategy is to preserve successful developments and to revitalize distressed developments through strategic investments that connect housing properties to their surrounding neighborhoods. These components strengthen the state of affordable housing in the city while, improving the quality of life for our residents.

These efforts, which have decreased the number of traditional, public housing units but maintained overall number of affordable housing units using low income housing tax credit program, are facing a challenge as Pittsburgh's economy grows. Rapid growth in the technology and healthcare industries has led to an influx of higher-income residents moving to the area, which in turn attracted high end real estate developers. Neighborhoods that once had an abundance of affordable market-rate housing now experiencing rising prices and affordable housing shortages. Low-income families (at and below 30% of AMI), including those with Housing Choice Vouchers HCVs), have increasing difficulty finding units in neighborhoods of opportunity. Priced out of neighborhoods as the market shifts, they are disproportionately affected by this lack of affordable housing. This new housing market, dominated by high-end developments for higher-income professionals, is creating a crisis, increasing the demand for public and affordable housing in the city.

The HACP plays a critical role in this changing landscape. As the main provider of public and affordable housing in the city, it is the duty of the HACP to respond to these changes in Pittsburgh's economy and housing market and expand affordable housing opportunities. While it is a central goal of the HACP to reposition its housing stock, this must be done in a way that addresses the critical affordable housing shortage that Pittsburgh's most vulnerable residents face. This means innovating and collaborating with community stakeholders to both reposition the HACP's housing stock for a successful future and meet rising demands for public and affordable housing. The HACP is rising to this challenge.

The innovative Gap Financing program allows the HACP to invest in both revitalization of existing developments and the construction of new units. This program protects the affordable housing already in the market, while also expanding affordable housing opportunities for those in

the city that need it. Though competitive request for proposals process, developers/owners can utilize Project-Based Voucher (PBV) subsidy for new low-income rental units and request HACP's Gap Financing loans (either soft or hard debts) to support the development of the PBV units in their development projects. The PBV program works similar to the HCV program, creating vibrant mixed-income communities, but de-couples the voucher from the whims of the housing market. The new Allegheny Dwellings development (renamed Sandstone Quarry Apartments), close to completion, will alone add a total number of 65 mixed-income units (47 affordable/18 market rate) with new affordable units using the PBV program, and this is just one example.

The HACP is not focusing only on expanding its real estate portfolio, but on strengthening its current portfolio as well. If existing housing developments or units fall into extreme disrepair, they could both worsen the quality of life and diminish the upward mobility of residents and, if the disrepair is bad enough, worsen the affordable housing shortage. To prevent this, the HACP is revitalizing its Glen Hazel Family, Glen Hazel (Bernice Crawley) High Rise, and Oak Hill properties through the RAD program. This approach guarantees that the properties remain high-quality and affordable and prevents the already stressed affordable housing supply from decreasing further in the future.

To reposition the housing stock in Larimer/East Liberty in a manner that creates a vibrant, inclusive, and affordable neighborhood, the HACP is working closely with community groups to continue implementation of the remaining phases of the Choice Neighborhood Implementation Grant (CNIG) program. To ensure that its efforts to expand affordable housing in the city are not isolated, HACP is collaborating with the Urban Redevelopment Authority (URA) to utilize the newly established Housing Opportunity Fund and expand affordable housing opportunities throughout the city.

Successfully repositioning housing stock to meet the needs of Pittsburgh residents means working with city leaders and community stakeholders. To combat the difficulty that HCV recipients face in finding a home, the HACP is increasing its landlord outreach, as well as collaborating with the Landlord Advisory Council to create a strategy that will increase landlord participation in the HCV Program.

The HACP is taking the affordable housing crisis in Pittsburgh very seriously. Its efforts to reposition its housing stock are responding to the changing economy in the city and the increased demand for public and affordable housing. Through strengthening existing properties, developing new units and properties, and robust community engagement, the HACP will continue to respond to address the issues facing the City of Pittsburgh.

The charts at the end of this chapter shows projected sources of funds that can be used for capital projects, and projected uses of those funds over the next five (5) years. All 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, and other unforeseen developments.

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

Development	FY 2018
Addison Terrace Phase III	Phase III was fully occupied by the first quarter of 2018. The development consists of 37 affordable units (Project Based Voucher) and 13 market rate units.
Larimer/East Liberty Phase II (Cornerstone Village, Phase II)	The construction started in October 2017 and will be completed in May 2019. This second phase of Larimer/East Liberty CNIG development is comprised of 150 mixed-income rental units. Seventy-Five (75) will be assisted via HUD Multi-family HAP contract (Project Based Rental Assistance). The mixed-income housing will also include 32 tax credit-only units and 43 market rate units.
Larimer/East Liberty Phase III	The ARMDC and its co-developer, McCormack Baron Salazar, applied for a 9% low income housing tax credits in November 2018 and expect award in 2019. Forty-two (42) mixed-income rental units will be developed as part of the third phase of the Choice Neighborhoods redevelopment. The development will include 19 project-based voucher units, 14 tax credit only units and 9 market rate units.
Larimer/East Liberty Phase IV	This phase will consist of 42 mixed-income rental units including 18 project-based voucher units, 17 tax credit only units and 7 market rate units. ARMDC and its co-developer applied for 9% low-income housing tax credits in November 2018 along with Phase III and expect award in 2019.
Bedford Dwellings Redevelopment (Choice Neighborhood Planning Grant)	The HACP and the City of Pittsburgh worked with community partners to complete a Choice Neighborhoods Transformation Plan by June 2018 and also submitted a CN Implementation grant application to HUD in September 2018 for Bedford Dwellings and the Hill District. The grant application was unsuccessful. The HACP and the ARMDC will continue to engage residents and strategic partners to plan for redevelopment of Bedford Dwellings public housing in 2019.

Northview Heights Midrise	The HACP plans to construct an 87-unit replacement building on a vacant plot within the community. HACP submitted a four percent LIHTC application in June of 2017 with financial closing and possible construction to begin in 2018. Informal Note: HUD denied the HACP Site & Neighborhood Standards submission. Therefore, the HACP is studying alternative sites to construct the new midrise building. The HACP will need to submit a new LIHTC application once it completes several due diligence activities associated with the new site(s).
Allegheny Dwellings Redevelopment	A total number of 65 units of mixed-income units (47 affordable/ 18 market rate units), consisting of one, two- and three-bedroom units are now close to completion. These units are built on a segment of the Allegheny Dwellings site as well as along Federal Street. Buildings A and B (consisting of an apartment block and townhomes/rowhouses) are built on the Allegheny Dwellings site. These were renamed Sandstone Quarry Apartments. Buildings C, D and E consisting of townhomes/row houses are built off-site along Federal Street. Anticipated project completion date is March 31, 2019 and that the project is on schedule. Leasing activities are currently underway.
Crawford Square	Crawford square is a pre-existing LIHTC supported mixed income development overlooking downtown Pittsburgh and located a few blocks from the HACP owned mixed finance development named Bedford Hill. The HACP collaborated with the City of Pittsburgh and the current property owners to develop a solution to maintain the affordable units as the property entered the final year of its tax credit affordability period in 2016. As a mechanism to preserve 194 affordable units at Crawford Square, the HACP provided financing to re-syndicate the property and further assistance with Project Based Vouchers. Of the 194 units, 60 are designated as PBV units and 134 are LIHTC units. The re-syndication closed in June of 2018, and construction for modernization of the units is currently taking place.

Manchester Revitalization	Manchester is a HOPE VI mixed finance redevelopment with 86 units. When the LIHTC compliance period ended in 2016, the HACP and its partners acquired the property. The HACP proposes to preserve the 86 affordable rental units for the next 20-year period through re-syndication and plans to submit a LIHTC application in 2019. The HACP initiated planning, pre-development, and site selection activities in late 2018 in preparation for the LIHTC submission for capital improvements of individual units and updates/repairs of ancillary land and building structures, as necessary.
Turnkey development of scattered sites	Two Community Development Groups/Faith-based organizations were selected in 2016 to develop up to fifty (50) turnkey units over five(5) successive years. Turnkey Development of Scattered Sites in the East Liberty Neighborhoods for twenty (20) units are nearing completion. (Phase I and Phase II are complete, and Phase III is close to completion). Additional 22 units are currently in the design and pre-development stage.
Addison Terrace Phase IV (Homewood Redevelopment)	The HACP and its private co-development partner have submitted a four percent LIHTC application to the PHFA Pennsylvania Housing Finance Agency in May 2017 with a goal of having a financing construction closing in November 2017. Part of that closing involved the disposition of the Kelly Street high-rise site along with the use of MTW funds to prepare the site and construct the units.
St. Clair and vacant lots	The appraisal for St. Clair is currently being updated following which, the appraisal will be shared with the prospective buyer. Once a firm offer is accepted by the HACP, a disposition application will be submitted to HUD for review and approval.
Disposition and or redevelopment of vacant properties	The HACP continues to plan for potential disposition and/or mixed finance development of vacant properties at St. Clair Village, Kelly Street in Homewood, and at Cove Place in Glen Hazel. Vacant properties located within the Glen Hazel community are not included in RAD and St. Clair Village and Kelly Street are former Low-Income Public Housing communities prime for redevelopment.

Elmer Williams Square	Identified through the PBV Plus Gap Financing competitive selection process in 2016. The project consists of 36 rehabilitated units and 1 new construction/wheelchair accessible unit that will also be fully accessible and meet Uniform Federal Accessibility Standards (UFAS). All 37 units will be PBV units. The HACP entered into a gap financing loan agreement with owner entity and a use agreement with HUD of the project in June 2018. The project is under construction and planned to be completed by November 2019.
Miller Street Apartments	Identified through the PBV Plus Gap competitive selection process in 2016. The HACP has committed to awarding nine (9) PBV units and gap financing for the project located in the Crawford Roberts Neighborhood in the Middle Hill District. Miller Street is currently under construction and completion is anticipated mid-April 2019.
Acquisition and Build-Out of New Administratio n Building	On September 20, 2018 the HACP along with the Urban Redevelopment Development Authority (URA) and the City of Pittsburgh jointly purchased a building located at 412 Boulevard of the Allies (f/k/a 420 Boulevard of the Allies) to be used as an administrative building for the agency. The HACP also made strides to start the design process of the new space in 2018.
PBV/Gap Financing Project	Eight (8) project teams were awarded through a 2018 PBV Plus Gap Financing competitive selection process as follows.  A. Harvard Beatty Housing (2018) – Forty-two (42) unit rehabilitation project in East Liberty to be developed by TREK Development. Eight (8) units are PBV.  B. Herron Avenue Homes (2018) – Twenty-four (24) unit new construction project in the Upper Hill to be developed by Amani Christian Community Development Corporation and Ralph Falbo, Inc. All units are PBV.  C. Kirkpatrick Residences (2018) – One hundred fifty (150) unit new construction project in the Hill District to be developed by Bridging the Gap Development, LLC. Fifty-seven (57) units are PBV.  E. Lexington Technology Park (2018) – One hundred twenty-five (125) unit new construction project in Point Breeze to be developed by KBK Enterprises, LLC. Fifty (50) units are PBV.  G. New Granada Square (2018) – Forty (40) unit new construction

	project in the Middle Hill to be developed by CHN Housing Partners and
	the Hill District CDC. Ten (10) units are PBV.
	<b>H.</b> North Negley Residences (2018) – Forty-five (45) unit adaptive
	reuse project in Garfield to be developed by Beacon Communities. Ten
	(10) units are PBV.
	I. Western Restoration Apartments (2018) – Ninety-six (96) unit
	rehabilitation project in the Upper Hill to be developed by Ralph Falbo, Inc.
	Twenty-four (24) units are PBV.
Glen Hazel Rental	
Assistance	A financial/construction closing occurred on November 20, 2018 and the 225
	units associated with the Glen Hazel (Bernice Crawley) High Rise and Glen
(RAD)	Hazel Family Community converted to the U. S. Department of Housing and
(KAD)	Urban Development's Rental Assistance Demonstration (RAD) program.
	Construction is anticipated to be completed by the second quarter of 2020.
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#### **Pursuit of Rental Assistance Demonstration Conversions**

In order to secure the long-term viability of existing housing stock, the HACP is pursuing conversion of some public housing and mixed finance properties to HUD contracts for multifamily housing rental assistance through the Rental Assistance Demonstration (RAD) Program. The HACP previously received approval for the following properties:

- Glen Hazel Family and Glen Hazel High Rise
- Murray Towers
- Oak Hill (various phases)
- New Pennley Place

The Glen Hazel Family and Glen Hazel High Rise achieved financial/construction closing as HACP/ARMDC's first self-development RAD project. This is the second RAD project in the City of Pittsburgh. The ARMDC and its private investment partners will rehabilitate and upgrade a total of 225 units with public and private funds and long-term project based rental assistance.

Murray Towers' financial/construction closing was expected to occur for the RAD conversion in Fall 2018. However, upon further financial consideration, the HACP determined not to pursue converting the property to RAD. In December of 2018, the HACP submitted a request to HUD to have this property withdrawn from the RAD program. The HACP does however, intend to pursue the needed capital improvements to the property but instead of doing so through RAD, will transition for the improvements to be performed under its modernization program.

Although Oak Hill converted 395 of its public housing units to RAD in 2017, 80 units remain to be converted under HUD's original Commitment to Enter Into Housing Assistance Payments (CHAP). The HACP and its private co-developer partner intend to apply for an allocation of Low-Income Housing Tax Credits (LIHTC) in 2019 to partially fund the new construction that will replace the now vacant public housing units as part of a multiphase strategy.

New Pennley Place was intended to reach financial closing in 2018 and to be a no-debt transaction. However, similar to Murray Towers, upon further financial consideration it was decided to not pursue RAD conversion of this property.

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

Below are two (2) 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 and 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:

- Low-income Housing Tax Credits, Historic Tax Credits, and/or New Market Tax Credits.
- Federal, State, and Local Housing Trust Funds dollars as available.
- Other Federal, State, and Local funds such as CDBG, HOME, PA Department of Community and Economic Development Programs, and others as can be secured.
- HUD's new and evolving financing and transformation initiatives (if authorized), or other similar approaches.
- Project basing up to 500 Housing Choice Vouchers.
- The HACP's Moving to Work (MTW) Step Up To Market Financing Program.
- 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 Low-income Public Housing (LIPH) and Housing Choice Voucher (HCV) programs.

Other sections of the FY 2018 MTW Annual Report include specifics on the funding strategies utilized in specific development phases that closed in 2018. Future Plans and Reports will include additional details for future phases.

Below are two (2) charts showing project funding obligations over the next five (5) years.

		Projected Sources  MtW Funding		2019	2020	2021	2022	5-Year SubTotals							
S				16,638,695	10,000,000	10,000,000	10,000,000	70,017,450							
Sources	CFP Projected Future Funding  MtW Reserves  Total All Projected Sources		12,713,098	15,066,937	10,000,000	10,000,000	10,000,000	57,780,035							
So			3,325,337	13,040,272	0	0	0	16,365,609							
			39,417,190	44,745,904	20,000,000	20,000,000	20,000,000	144,163,094							
		Proposed Uses	2018	2019	2020	2021	2022	5-Year Subtotals							
		Administrative	1,094,724	1,506,694	1,500,000	1,500,000	1,500,000	7,101,418							
		Security	5,167,856	5,394,216	5,556,042	5,722,723	5,894,405	27,735,242							
	HACP-WIDE	HACP-WIDE	HACP-WIDE	DE	LBP Abatement-Other Misc Hazmat	47,051	60,000	60,000	60,000	60,000	287,051				
				GPNA (Every 5 years)	0	0	0	194,000	0	194,000					
				HAC	HACI	HAC	HAG	HAC	Utility Repair	25,000	2,500	0	0	0	27,500
Uses								A/E Technical Services	700,000	736,218	407,334	137,671	167,218	2,148,441	
_						Resident Services	2,070,026	2,256,379	2,324,070	2,393,792	2,465,606	11,509,873			
		Contingencies	0	50,000	50,000	50,000	50,000	200,000							
	Subtotal HACP-Wide Uses		9,104,657	10,006,007	9,897,446	10,058,186	10,137,229	49,203,525							
		Subtotal Development	21,000,000	24,200,000	4,000,000	8,000,000	1,000,000	58,200,000							
	Subtotal Modernization		8,313,533	10,517,397	5,819,061	1,966,729	2,388,833	29,005,553							

44,723,404

19,716,507

20,024,915

13,526,062

136,409,078

38,418,190

**Total All Proposed Uses** 

Proposed Development	2018	2019	2020	2021	2022	5-Year Subtotals
Addison IV - Homewood	0	0	0	0	0	0
Allegheny I	0	0	0	0	0	0
Allegheny II	0	0	0	0	0	0
Allegheny III	U	0	0	0	0	
Arlington Heights	0	0	0	0	0	0
Bedford 1		12,000,000	0	0	0	13,200,000
Bedford 2		1,000,000	0	0	0	1,000,000
Bedford 3	1,200,000	0	0	0	1,000,000	1,000,000
Bedford 4		0	0	0	0	0
Bedford 5		0	0	0	0	0
Larimer 3	1,500,000	1,200,000	0	0	0	2,700,000
Larimer 4	1,500,000	1,000,000	0	0	0	1,000,000
Larimer 5	0	0	0	0	0	0
Manchester	0	0	0	3,000,000	0	3,000,000
Glen Hazel RAD	1,000,000	0	0	0	0	1,000,000
Murray Towers RAD	2,700,000	0	0	0	0	2,700,000
Northview 1	0	2,000,000	0	0	0	2,000,000
Northview 2	1,000,000	6,000,000	0	1,000,000	0	8,000,000
Oak Hill MROPs	1,000,000	1,000,000	0	0	0	2,000,000
Oak Hill Capital Improvements	1,600,000	0	0	0	0	1,600,000
Oak Hill Future	0	0	0	0	0	0
Gap Financing	10,000,000	0	4,000,000	4,000,000	0	18,000,000
Scattered Sites	0	0	0	0	0	0
New Pennley Place RAD	1,000,000	0	0	0	0	1,000,000
Subtotal Development	21,000,000	24,200,000	4,000,000	8,000,000	1,000,000	58,200,000

Prop	osed Modernization	2018	2019	2020	2021	2022	5-Year Subtotals
901	Addison (201 Kirkpatrick St Central Maintenance)	308,398	0	0	0	0	308,398
902	Bedford Dwellings	90,348	0	0	0	0	90,348
904	Arlington Heights	2,822	4,858,250	140,164	485,939	78,060	5,565,235
905	Allegheny Dwellings	0	0	0	0	0	0
909	Northview Heights	4,771,700	1,792,121	1,236,000	0	0	7,799,821
912	Garfield Heights	62,949	0	0	0	0	62,949
915	PA Bidwell / D.O.C.	554,925	433,501	316,359	0	0	1,304,785
917	Pressley	1,339,164	79,703	1,773,969	128,932	13,404	3,335,172
920	Homewood North	607,000	1,961,509	39,057	0	95,938	2,703,504
922 & 939	Scattered Sites / Hamilton Larimer	191,203	170,471	1,150,718	0	500,269	2,012,661
931	Murray Towers	0	0	0	0	0	0
932	Glen Hazel Family (incl. Renova)	0	0	0	0	0	0
933	Glen Hazel Highrise	0	0	0	0	0	0
940	Mazza Pavillion	1,500	0	0	7,471	0	8,971
941	Caliguiri Plaza	19,326	527,051	286,546	172,941	0	1,005,864
944	Finello Pavillion	14,347	146,157	469,913	33,295	158,799	822,511
945	Morse Gardens	27,500	139,855	149,041	48,887	1,441,999	1,807,282
946	Carrick Regency	233,351	406,266	208,369	966,736	78,426	1,893,148
947	Gualtieri Manor	89,000	2,513	48,925	122,528	21,938	284,904
999	Authority Wide	0	0	0	0	0	0
Suk	ototal Modernization	8,313,533	10,517,397	5,819,061	1,966,729	2,388,833	29,005,553

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

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

The HACP's Family Self-Sufficiency (FSS) Program, called Realizing Economic Attainment For Life or REAL, includes the Resident Employment Program (REP). REAL and REP provide a variety of supports, programs, and referrals to residents to assist them in preparing for, seeking, finding, and retaining employment. The program and the HACP also work constantly to link with other programs, leverage additional services, and create positive environments for families, adults, seniors, and children. REAL and REP are complemented by the programs provided by the HACP and its partners that focus on youth of varying ages, including the BJWL after school and summer programs, YouthPlaces, the Clean Slate Drug Free Lifestyles and Youth Leadership Development Program, and the Creative Arts Corner state of the art audio/video studios 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 REAL program's service coordinators are Family Self Sufficiency (FSS) Program Service Coordinators and they are funded by FSS/ ROSS grants from HUD. There are many service providers that provide in kind services to our residents. Some of these providers and programs include: The Community College of Allegheny County, the Health Professionals Opportunity Grant, Catholic Charities, 412 Food Rescue, City Parks, Annanias Mission, Grow Pittsburgh, Duquesne University, the Juvenile Re-Entry Assistance Program, "Y on the Fly", the Beverly Jewel Wall Lovelace Children's Program and YouthPlaces.

The Clean Slate Program, REP, Creative Arts Corner, Computer Training Program, GED prep program, Drivers Education and all resident services are frontlined out of the Central Office Cost Center.

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.

# E. 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 Housing Choice Vouchers (HCVs).

In response, the HACP initiated its initial landlord initiatives to increase the number of landlords participating in the HCV program, and to increase the number and quality of units available. However, the final ruling of the Small Area Fair Market Rents (SAFMR) mandated zip code-based payment standards. With rental costs continuing to escalate in many neighborhoods, the HACP conducted further analysis of market changes and continues to pursue additional initiatives including the development of an alternative payment standard for the HCV program. A waiver request to delay the implementation of the SAFMR was submitted in March 2018 in response to public comments and to allow the HACP to complete the creation of the alternative methodology. These efforts should result in an increase in the quality of housing options for households utilizing tenant-based rental assistance. The local payment standard is a new and innovative approach to address the challenges associated with rehabbing and utilizing the available housing stock. To ensure that the local payment standard addressed the needs of the city, the HACP conducted an extensive public engagement process, meeting with all relevant stakeholders.

#### II. GENERAL HOUSING AUTHORITY OPERATING INFORMATION

(II) GENERAL OPERATING INFORM	

#### **Annual MTW REPORT**

#### A. HOUSING STOCK INFORMATION

#### 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		STATUS AT END OF PLAN YEAR**	RAD?	DESCRIPTION OF PROJECT	
	Planned*	Actual				
Crawford Square			In lease-up	No	Re-syndication of mixed	
Crawioru Square	60	60	stage		finance property	
	60	60	1			
			Planned/Act	ual Total V	ouchers Newly Project-Rased	

<sup>\*</sup> Figures in the "Planned" column should match the corresponding Annual MTW Plan.

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

There were no differences.

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

#### 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.

		F PROJECT- OUCHERS	STATUS AT END OF PLAN YEAR**	RAD?	DESCRIPTION OF PROJECT
	Planned*	Actual			
Allegheny Union Baptist Association 2700 Centre Ave. (Senior)	36	29	Leased/Issued	No	Senior
Skyline Terrace (Addison Phase I)	153	143	Leased/Issued	No	New construction tax credit supported housing in the Hill District Neighborhood
Lofts at Bentley (Addison Phase II)	64	59	Leased/Issued	No	New construction tax credit supported housing in the Hill District Neighborhood
Addison Phase III	37	35	Leased/Issued	No	New construction tax credit supported housing in the Hill District Neighborhood
Legacy Apartments	18	15	Leased/Issued	No	Senior
Mackey Lofts	11	11	Leased/Issued	No	preference for disabled/vision impaired
Wood Street Commons	65	59	Leased/Issued	No	SRO - homeless disability preference
Milliones Manor	36	33	Leased/Issued	No	Senior
East Liberty Place South	6	6	Leased/Issued	No	PBV Only
Larimer Pointe	40	33	Leased/Issued	No	PBV Only
Larimer/East Liberty Phase 1	28	28	Leased/Issued	No	Co-Developed
Hillcrest Senior Apartments	16	16	Leased/Issued	No	Senior
Doughboy	6	6	Leased/Issued	No	Existing construction tax credit supported housing in the Lawrenceville Neighborhood.
Dinwiddie III and IV	13	13	Leased/Issued	No	Existing construction tax credit supported housing in the Uptown Neighborhood.
Miller Street	9	9	Leased/Issued	No	AHAP signed 2017, units not yet leased in 2018
	538	495	Planned/Act	ual Total E	xisting Project-Based Vouchers

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

<sup>\*\*</sup> 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 lease-up stage

#### 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

2 units at Northview Heights changed to Special Use: Anti-Drug/Crime as part of the Public Safety Center. Six 3-story buildings on Sandusky Court (consisting of 97 units) were demolished at Allegheny Dwellings for Allegheny Dwellings Phase I development (aka Sandstone Quarry).

#### 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

Completed: Northview Heights - Construction of New Public Safety Center, Comprehensive Modernization of various units; Authority wide - related activities pertaining to Hazardous Materials, Architectural & Engineering, Environmental, and Site Improvements. In Progress: Carrick Regency - interior upgrades; Caligiuri Plaza - interior upgrades; Fairmont Apartments- emergency work to stabilize landslide; Finello Pavilion - emergency generator replacement; Pennsylvania Bidwell - balcony repairs; Garfield Heights - Fort Pitt Playground tennis court conversion to basketball court (substantially complete).

#### **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/LEASED*		NUMBER OF HOUSEHOLDS SERVED**	
	Planned^^	Actual	Planned^^	Actual
MTW Public Housing Units Leased	39048	38556	3254	3213
MTW Housing Choice Vouchers (HCV) Utilized	68400	62532	5700	5211
Local, Non-Traditional: Tenant-Based	2052	1584	171	132
Local, Non-Traditional: Property-Based	5832	5928	486	494
Local, Non-Traditional: Homeownership	360	264	30	22
Planned/Actual Totals	115692	108864	9641	9072

<sup>&</sup>quot;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).

<sup>\*\* &</sup>quot;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).

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

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

The difference in the planned and actual data (units) is that the market of available landlords is not accepting vouchers at the pace we anticipated.

LOCAL, NON- TRADITIONAL	MTW ACTIVITY NAME/NUMBER	NUMBER OF UNIT MONTHS OCCUPIED/LEASED*		NUMBER OF HOUSEHOLDS TO BE SERVED*	
CATEGORY		Planned^^	Actual	Planned^^	Actual
Tenant-Based	Activity 9: Step Up to Market	2052	1584	171	132
Property-Based	Activity 9: Step Up to Market	5832	5928	486	494
Homeownership	Activity 6: Homeownership	360	264	30	22
Planned/Actual Totals:		8244	7776	687	648

<sup>\*</sup> 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.

<sup>^^</sup> 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	Description	
MTW Housing Choice Voucher	Challenges include increasing rental market particularly in emerging neighborhoods once affordable under current FMRs. Older housing stock abundant in Pittsburgh continues to fail HQS inspections and there is a scarcity of landlords. The HACP submitted and subsequently received approval for a waiver request to delay the implementation of the SAFMR.	
Local, Non-Traditional	Description	

#### 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 OPEN, PARTIALLY OPEN OR CLOSED	WAS THE WAITING LIST OPENED DURING THE PLAN YEAR
Low Income Public Housing	Site Based	4,668	Partially Open	Yes
Housing Choice Voucher Community Wide		10,203	Closed	Yes
Homeownership	Community Wide	N/A	Open	N/A
Mixed Finance	Site Based	N/A	Partially Open	Yes

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

Numerous applicants are on multiple waiting lists.

#### i. 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 HACP's Site Based Site Preference system allows applicants to choose up to three communities of preference, or the first available from all properties option. Public housing units in mixed finance/mixed income privately managed properties are not included, as each location operates a separate waiting list. The HACP allows for pre-applications submission and continued use of centralized application location
Housing Choice Voucher	The HCV waitlist was opened for Monday, December 10, through Sunday, December 23, 2018 with position assigned by lottery to roughly 10,000 applicants.
Homeownership	Currently no waiting list, program participation is open to otherwise eligible families; if demand for soft second mortgages approaches annual budget authority a waiting list of participants with mortgage preapproval letters will be established.
MTW Project Based Vouchers	Skyline Terrace and Larimer Point, Doughboy Square Apartments, Dinwiddie Street Housing and Cornerstone Village (formerly Larimer - East Liberty Phase 1) and Sandstone Quarry (Allegheny Dwellings Phase I) are closed.
Mixed Finance developments	Mixed-income developments that include public housing units, low income housing tax credit and market rate units. Wait lists are operated by private management.

#### D. INFORMATION ON STATUTORY OBJECTIVES AND REQUIREMENTS

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

HUD will verify compliance with the statutory requirement that at least 75% 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	0
49%-30% Area Median Income	0
Below 30% Area Median Income	0

**Total Local, Non-Traditional Households Admitted** 

0 (Zero LNT units admitted in FY 2018)

#### 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		
1 Person	1714	994	#	#	29.61%		
2 Person	1721	1536	#	#	35.62%		
3 Person	1427	1134	#	#	28.00%		
4 Person	300	208	#	#	5.55%		
5 Person	84	27	#	#	1.21%		
6+ Person	Х	Х	#	#	0%		
TOTAL	5246	3899	#	#	#%		

<sup>\* &</sup>quot;Non-MTW Adjustments" are defined as factors that are outside the control of the MTW PHA. 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.

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

At this time, the HACP has not requested any adjustments to the baseline for the mix of families served. It should be noted that HACP's total baseline of families to be served has increased to a total of 9563, but these additional authorized units do not have a family size and therefore are not reflected in these charts. Also, the HACP has collected data only for 5+ and does not have a separate entry for 6+

	MIX OF FAMILY SIZES SERVED (in Plan Year)					
FAMILY SIZE	BASELINE 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%	3366	39.49%	9.88%		
2 Person	35.62%	2653	31.11%	-4.51%		
3 Person	28.00%	2025	23.76%	-4.24%		
4 Person	5.55%	399	4.68%	87%		
5 Person	1.21%	79	0.93%	28%		
6+ Person	0%	0	0%	0%		
TOTAL	100%	8524	100%	02%		

- \*\* 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 adjustments 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 percentage difference in the one (1) person household is primarily related to the demolition/RAD activity in the LIPH portfolio, GAP financing, and aggressive development activities of the HACP.

# i. Number of Households Transitioned to Self-Sufficiency in the Plan Year

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

MTW ACTIVITY NAME/NUMBER	NUMBER OF HOUSEHOLDS TRANSITIONED TO SELF SUFFICIENCY*	MTW PHA LOCAL DEFINITION OF SELF SUFFICIENCY
Modified Rent Policy HCV #3	55	Graduated from FSS program includes zero cash assistance
Modified Rent Policy LIPH #4	36	Graduated from FSS Program zero cash assistance
Homeownership Program #6	22	Completed Home Purchase
	0	(Households Duplicated Across MTW Activities)
	#113	Total Households Transitioned to Self Sufficiency

<sup>\*</sup> Figures should match the outcome reported where metric SS#8 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."

# IV. APPROVED MTW ACTIVITIES: HUD APPROVAL PREVIOUSLY GRANTED

Activity	Plan Year Approved	Plan Year Implemented	Current Status
1. Pre-Approval Inspection Certification for Multi-Unit Housing	2015 Annual Plan	2015	Implemented
2. Preferred Owners Program	2015 Annual Plan	2015	Implemented
3. Modified Rent Policy - Work or FSS Requirement or increased minimum tenant payment for non-exempt HCV households	2011 Annual Plan	2011	Implemented
4. Modified Rent Policy - Work or FSS Requirement or increased minimum rent for non-exempt LIPH households	2008 Annual Plan	2008-2009	Implemented
5. (a) Revised Recertification Policy – at least once every other year – for Section 8/HCV	2008 Annual Plan	2008	Implemented
5. (b) Revised Recertification Policy – at least once every other year – for LIPH	2009 Annual Plan	2009	Implemented

6. (a) Homeownership Program: Operation of	Combined Program	2007	Implemented
Combined LIPH and Section 8/HCV Homeownership	approved in 2007; other elements		
Program; 6. (b) Program assistance to include soft-second mortgage assistance coupled with closing cost assistance, homeownership and credit counseling, and foreclosure prevention only; establish a soft-second mortgage waiting list; expand eligibility to persons on the LIPH and HCV program waiting lists; expand eligibility to persons	approved in 2010; expansion of eligibility to person eligible for LIPH proposed in this 2014 plan.	2010 Revised in 2017	Implemented
eligible for LIPH  7. Modified Housing Choice Voucher Program policy on maximum percent of Adjusted Monthly Income permitted.	2001 Annual Plan	2001	Implemented
8. Modified Payment Standard Approval - establish Exception Payment Standards up to 120% of FMR without prior HUD approval.	2004 Annual Plan; additional features in 2013 Annual Plan	2004 2013	Implemented.  Ongoing for persons with disabilities; On Hold for exception areas.
9. Step Up To Market Financing Program	2012 Annual Plan	2013	Implemented

# A. Implemented Activities Ongoing

# 1. Pre-Approval Certification for Multi-Unit Housing

# Description:

In 2018, this activity was in development and is slated for implementation in 2019.

#### 2. Preferred Owners Program

#### 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 Project-Based Voucher (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 if that inspection.

#### b) Vacancy payment

i. When a voucher holder moves out, if the landlord re-leases the unit to another voucher holder, the HACP will issue vacancy payment of up to 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.

#### 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. This form will include:

- 1. Landlord's name
- 2. Contact information
- 3. Address of units currently leased to voucher holders

- 4. Checklist of the standards for membership which must be passed by the landlord, which are:
  - a. Consistent HQS Inspection Passes
  - b. Units have passed annual inspection on the first inspection for the past three consecutive years
  - c. Trainings

Preferred Owners must complete a minimum of one training per year to maintain membership. All trainings will be provided free of charge to all landlords; however, to maintain membership in the Preferred Owners Program, owners or property managers must complete a minimum of one training per year. Trainings may be chosen from the following options:

- 1. Screening Tenants- Includes information about background checks, references, and Fair Housing law.
- 2. The Magistrate Process- Includes information about legal recourse landlords may take if they feel their tenant has broken his or her lease.
- 3. Mental Health First Aid Training- This training is provided by Mercy Behavioral Health.
- 4. Real Estate continuing education credits may also be counted as Preferred Owners trainings, when proof of completion is provided.

This activity was approved and implemented in 2015.

Changes and Modifications:

No changes to this activity during this fiscal year.

Authorization:

Attachment C (D)(5)

Regulatory Citation:

24 CFR 982.311.

Standard	Unit of	Baseline	Benchmark	2018	Benchmark
HUD Metric	Measurement			Outcome	Achieved
Local Metric-	Number of new	Housing units of	Expected housing	Actual housing	Yes
Housing	housing units	this type prior to	units of this type	units of this type	
Choice:	made available	implementation: 0	after	after	
Additional	for households at	(current number	implementation of	implementation	
Units of	or below 80%	of units of	the activity:	(number).	
Housing Made	AMI as a result	landlords in this			
Available	of the activity	program).			
	(increase). If		120	1,103	
	units reach a			1,100	
	specific type of				
	household, give				
	that type in this				
	box.				
Housing	Number of	Housing units	Expected housing	Actual housing	Yes
Choice #2:	housing units	preserved prior to	units preserved	units preserved	
Units of	preserved for	implementation of	after	after	
Housing	households at or	the activity: 0	implementation of	implementation	
Preserved	below 80% AMI	(number of units	the activity: 120	of the activity	
	that would	currently in the		(number): <b>1,103</b>	
	otherwise not be	program).			
	available				
	(increase). If				
	units reach a				
	specific type of				
	household				

Cost	Total cost of	Cost of inspecting	Expected cost of	Actual cost after	Yes
Effectiveness	task in dollars	90 units in dollars	task after	implementation	
	(decrease).	prior to	implementation:	(in dollars):	
#1: Agency		implementation:	<b>\$7,800</b>	\$5,200	
Cost Savings		\$5,850			

Cost	Total time to	Total staff time to	Expected amount	Actual amount of	Yes
Effectiveness	complete the	complete	of total staff time	staff time after	
#2: Staff	task in staff	inspections for 90	dedicated to	implementation	
Time	hours	Preferred Owner	inspecting 90	(in hours).	
Savings	(decrease).	units prior to	Preferred Owner		
		implementation:	units after		
		135 hours per	implementation	52.5 hours per	
		year.	67.5 hours per	year	
			year		
Cost	Average error	Average error rate	Expected average	Actual average	Yes
Effectiveness	rate in	of task prior to	error rate of	error rate of	
112 D	completing a	implementation:	inspections after	inspections after	
#3: Decrease	task as a	0.1%	implementation:	implementation	
in Error Rate	percentage		0.1% [HACP	(percentage).	
of Task	(decrease).		does not expect a		
Execution			change in error		
			rate as a result of	0.1%	
			this program.]		

HACP	Unit of	Baseline	Benchmark	2018 Outcome	Benchmark
	Measurement				Achieved
Specific					
Metric					
Landlords are	Landlords	Landlords	Expected	Actual	Yes
enrolled in	enrolled in	enrolled in	number of	number of	
Preferred	Preferred	Preferred	landlords	landlords	
Owners	Owners	Owners	enrolled in	enrolled in	
Program.	Program	Program	Preferred	Preferred	
	(number).	before the	Owners	Owners	
		start of the	Program: 15	Program: 20	
		program:			
		zero ( <b>0</b> ).			
Increase in	Landlords who	Number of	Expected number	Actual number	Yes
landlord	rate HACP as	landlords who	of landlords who	of landlords	
satisfaction	"good" or	rate HACP as	rate HACP as	who rate	
with HACP	"excellent"	"good" or	"good" or	HACP as	
	(percentage)	"excellent"	"excellent" after	"good" or	
		before the start	six months of the	"excellent"	
		of the	program: 55%	(56%):	
		program: 55%			

Comparison of Outcomes to Benchmarks:

The total number of landlords participating in the preferred landlord program has increased since last year. Feedback indicates that landlords are agreeable to the incentives offered by the program and efforts have continued to recruit and conduct outreach including the landlord advisory council and planning of landlord workshops.

#### 3. Modified Rent Policy for Section 8 Housing Choice Voucher Program

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 Family Self-Sufficiency program (FSS), 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.

This activity was approved and implemented in 2011.

Changes and Modifications:

No changes to this activity during this fiscal year.

Authorization:

Section D. 2. a. of Attachment C

Section D. 1. of Attachment D

Regulatory Citation:

24 CFR 982.311.

Because of limited capacity in the HACP's REAL Family Self-Sufficiency (FSS) Program, voucher holders whose rent calculation results in a rent of less than \$150 per month are permitted to certify via independent third party to their participation in an eligible local self-sufficiency, welfare to work, or other training or education program. The HACP continues to pursue expanded partnerships to maximize the program options available for voucher holders.

The HACP initially identified programs that would qualify affected families for an exemption from the \$150 minimum tenant payment, including the Pennsylvania Department of Public Welfare's Welfare to Work program that is associated with TANF assistance. The HACP is working with the Allegheny County Department of Human Services and the Pennsylvania Department of Public Welfare and has identified additional programs and conducted outreach to identified programs to notify agencies of the new requirements and what constitutes acceptable verification.

The provisions of the modified policy are expected to increase the percentage of families reporting earned income and increase the number of families pursuing training and preparation for work through local self-sufficiency, welfare to work, or other employment preparation/training/education programs.

Baselines, Benchmarks, and metrics – benchmarks established as of August 2010 remain and are indicated in the bullets below. Subsequent numbers are included in the charts.

- a) The HACP's August 2010 HCV Program population included (1976) non-elderly, non-disabled families whose tenant payment calculation was less than \$150 per month.
- b) Of those families, (1454) did not report any wage income. This is the group that this policy was expected to impact.
- c) Participation among all HCV program participants in the HACP's REAL FSS program was (371).
- d) Program participants (769) showed TANF income, and thus were assumed to be compliant with state welfare to work requirements. 98 of these families were enrolled in HACP's REAL FSS program.
- e) The HACP also calculated average HAP overall, average HAP for non-elderly/non-disabled households, and average HAP for households whose rent calculation is less than \$150 per month prior to application of utility allowances. See charts for results.

Please see the chart below for December baseline information and Benchmark targets for each measure.

# Housing Choice Voucher Program

Measure	Baseline	Benchmark	Outcome	Benchmark
	12/2010	12/2018	12/2018	Achieved
**Non-Elderly, non-disabled families with total tenant payment <\$150	1988	650	939	Yes
Average overall HAP	\$486	\$575	\$552	Yes
Average HAP for non-elderly, non- disabled	\$538	\$570	\$549	Yes
**Average HAP for non- elderly, non- disabled paying	\$657	\$420	\$401	Yes
<\$150				

FSS program Stats subdivided by LIPH/HCV	LIPH or HCV	2018 Outcomes	2018 Totals
FSS	LIPH	200	350
Participants	HCV	150	_
Number of families working (of FSS	LIPH	81	188
Participants)		107	
	HCV		
Percentage of families working (of FSS	LIPH	40%	54%
participants)		71%	
	HCV		

Number of	LIPH	36	92
participants			
graduating from FSS	HCV	56	
Number of participants	LIPH	47	97
with Escrow accounts			
	HCV	50	

#### Information for Rent Reform Activities:

A review of the data above and below indicates the policy is having the anticipated impact, although the HACP FSS enrollments, and declines in average HAP payments for non-elderly, non- disabled families paying less than \$150 per month rent are behind projections. Mechanisms to confirm participation in non-HACP, Local Self-Sufficiency programs (LSS) are continuing to be reviewed to ensure accuracy of collected data and the benchmark for FSS enrollments may be unnaturally inflated as families choose LSS programs. As capacity becomes available, families are encouraged to enroll in the HACP's FSS program.

#### Comparison of Outcome to Benchmark:

The HACP did not meet the benchmark for the number of participants in the FSS program due to stricter guidelines for continued participation in FSS modified rent program. Coupled with a decrease in new-lease ups and no policy permitting re-enrollment into FSS, this prevented the HACP from reaching its benchmark. The number of participants in the FSS program was lower than the benchmark, which impacted the HACP's ability to meet the benchmark for families working. Participants completing the program with income exceeding the guidelines brought down the percentage of active participants working, which prevented the HACP from meeting its benchmark. Though the HACP did not meet its benchmark, higher average escrow accounts indicate that participants were completing the program with higher-paying employment. As the HACP moves forward, it will collaborate with third parties to evaluate the efficacy of this policy to maximize the number of people participating, working, and graduating.

Standard HUD Metrics – Self- Sufficiency – modified based on HACP capability	-			
Unit of Measure	Baseline	Benchmark	2018 Outcome	Benchmark Achieved?
SS#1: Increase on Household Income:	\$11,802	\$12,000	\$12,960	Yes
Average Gross Income of all households				
SS#2: Increase in Household Savings: Average amount of savings/escrow of households affected by this policy in dollars (increase)	\$3,789.66	\$2,900	\$2,933.65	Yes
SS#3: Increase in Positive Outcomes in Employment Status: Other: Employed full or part time – Number (of all families)	1475	1475	2235	Yes
SS#3: Increase in Positive Outcomes in Employment Status: Other: Employed full or part time – percentage (of all families)	28.61%	30%	36%	Yes
SS#3, Increase in Positive Outcomes in Employment Status: Other Enrolled in Education or training program <i>number</i> (of FSS participants)	101	55	63	Yes
SS#3, Increase in Positive Outcomes in Employment Status: Other (3 + 4): Enrolled in Education or training program <i>percentage</i> (of FSS participants)		15%	27%	Yes
SS#4: Households Removed from Temporary Assistance for Needy Families (TANF): Number of households receiving TANF assistance (of all households) (decrease)	774	800	709	Yes

SS#5: Households Assisted by Services that	353	200	230	Yes
Increase Self-Sufficiency: Number of				
households receiving services aimed to				
increase Self-Sufficiency (FSS enrollment)				
·				

SS#6: Reducing Per Unit Subsidy Costs for	\$466.24	\$575	\$552	Yes
Participating Households: Average amount of	:			
Section 8 Subsidy per household affected by				
this policy in dollars (HAP) (all households)				
(decrease)				
SS#8: Households Transitioned to Self-	12	50	55	Yes
Sufficiency: Number of households				
transitioned to Self-Sufficiency				
(graduation)				

#### HACP Metrics – HCV FSS

	2010	Benchmark	2018 Outcome	Benchmark Achieved?
FSS Participants	448	250	150	No
Families working (of FSS participants)	248	160	107	No
% of families working (FSS participants)	55%	75%	71%	No
# graduating	12	51	55	Yes
# with FSS escrow accounts	191	200	50	No

#### 4. Modified Rent Policy for the Low-Income Public Housing Program

#### Description:

Requires that any non-elderly, able-bodied head of household who is not working to either participate in the Family Self-Sufficiency (FSS) Program or pay a minimum rent of \$150 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.

This activity was approved and implemented in 2008.

Changes and Modifications:

No changes to this activity during this fiscal year.

Authorization:

Section C. 11. of Attachment C

Section C. 3 of Attachment D

The HACP may grant a hardship exemption from the rent, including the \$25 per month minimum required of those exempted from the \$150 minimum rent, under the following circumstances:

- When the family is awaiting an eligibility determination for a government assistance program;
- ❖ When the income of the family has decreased because of loss of employment;
- ❖ When a death has occurred in the family; and
- ❖ When other such circumstances occur that would place the family in dire financial straits such that they are in danger of losing housing. Such other circumstances will be considered, and a determination made by the HACP.

The HACP's modified rent policy was expected to have a number of positive impacts on the HACP and its residents, including, but not limited to, increased rent collections by the HACP, a changed environment where work by adults is the norm, an increased level of active participation in the HACP self-sufficiency program and, of course, added incentive for residents to become self- sufficient.

The HACP established baseline measures in mid-2008 and mid-2009 as the full implementation of the policy was completed, and detailed information on the impact of the activity as compared against the benchmarks and outcome metrics are included below.

In addition to the baseline measures established in mid-2008 and mid-2009 as the full implementation of the policy was completed, the HACP has some data dating to 2005 when the

LIPH enhanced FSS program was established. The LIPH data through 2018 from the Tracking at a Glance Software, Emphasys Elite, and internal reports are included in the tables below.

Hardship Requests: The HACP approved one (1) hardship request in 2018 for the LIPH Program.

# HACP Metrics – LIPH FSS

	Baseline	Benchmark	2018	Benchmark
FSS Program Stats	2005		Outcome	Achieved
FSS	658	500	200	No
Participants				
Number of families working (of FSS participants)	181	300	81	No
Percentage of families working (of FSS participants)	28%	65%	40%	No
# graduating from FSS	n/a	40	36	No
# of FSS participants with escrow accounts	29	251	47	No

	Baseline	Benchmark	Dec 2018	Benchmark
	July 2008			Achieved?
HACP Rent Roll Amounts (\$)	\$685,682	\$645,000	\$718,791	Yes
HACP Rent collection amounts (\$)	\$612,027	\$665,200	\$723,529	Yes
Average Rent All Communities	\$198.88	\$225	\$263	Yes
Number of families working (reporting wage income)	713	730	745	Yes
Percentage of families working	22%	30%	29%	Yes

Data is collected via EmPHAsys Elite software, with periodic reports based on the tenant database.

The HACP anticipated that this policy would result in increased rent roll and collections, increased participation in the FSS program, and increased number and percentage of families working. At this point of implementation, expected results have actualized and are generally in line with expected outcomes. In 2018, despite a decrease in FSS enrollment, the HACP continued to see progress as a result of this initiative. The percentage of families working, both overall and among participants in the FSS program, increased and 36 participants graduated from the program. Average rents experienced a significant increase of 14 percent above the benchmark. FSS graduation totals and tightened pre-qualification criteria and reduced availability of training programs. The HACP experienced decreases in overall program participation resulting in metrics below the benchmark for total number of escrow accounts, FSS graduation and participants enrolled in education or training programs.

#### Comparison of Outcome to Benchmarks:

The HACP did not meet the benchmark for the number of HCV and 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 a decrease in new-lease ups and no policy permitting re-enrollment into FSS, this prevented the HACP from reaching its benchmark. Because the number of participants in the FSS program was low, the HACP was unable to meet the benchmark for families working. Many program participants completed the program and exceeded the income guidelines, which 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.

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 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.

LIPH Rent Policy Impact Data		2010	Bench	mark	Outcom	ne 2018	
Item			Numb	er	Numbe	r	
Total non-disabled non-elderly families	1394		1,100		953		
Number of families working (reporting wage income)	595		575		470		
Percentage of non-disabled, non-elderly families working	g 43%		50%		49%		
Number of families impacted (non-elderly non- disabled and rent less than \$150)		828		560		468	
Number exempt due to disability (disabled, rent <\$150)	206	206		75		74	
Number exempt due to elderly (age 62+, rent <\$150)	72	72		25		18	
Number enrolling in FSS (not elderly, not disabled, Tenant Rent <= \$150 and enrolled in FSS)			375		165		
Standard HUD Metrics – LIPH FSS							
Unit of Measure	Baseline	Bench	ımark	Outco 2018	ome	Benchmark Achieved	

SS#1, additional: Increase in Household Income: Average Gross Income of all households	\$11,268	\$12,200	\$13,198	Yes
SS#2: Increase in Household Savings: Average amount of savings/escrow of households affected by this policy in dollars (increase).	\$1,772	\$2,700	\$3,525.34	Yes
SS#3: Increase in Positive Outcomes in Employment Status: Other: Employed Number (all households)	620	575	730	Yes
SS#3: Increase in Positive Outcomes in Employment Status: Other: Employed percentage (all households)	21.72%	22%	28%	Yes
SS#3 Increase in Positive Outcomes in Employment Status: Other: Enrolled in Education or Training program number (of FSS participants)	88	25	52	No
SS#3 Increase in Positive Outcomes in Employment Status: Other: Enrolled in Education or Training program percentage (of FSS participants)	14%	5%	17%	No
SS#4: Households Removed from Temporary Assistance for Needy Families (TANF): Number receiving TANF (all)	637	315	279	No
SS#5: Households Assisted by Services that Increase Self-Sufficiency: Number of households receiving Self-Sufficiency services (FSS enrollment)	634	403	305	No
SS#7: Increase in Agency Rental Revenue: PHA Rental Revenue in dollars (increase)	\$626,041	\$656,166	\$706,742	Yes
SS#8: Households Transitioned to Self- Sufficiency: Number of households transitioned to Self- Sufficiency (graduation)	7	50	36	No

To more fully understand the impacts of this policy, the HACP has also gathered the following

# 5. (a and (b) Revised Recertification Requirements Policy

Description:

The HACP may operate both the Low-Income Public Housing (LIPH) Program and the Housing Choice Voucher (HCV) Program 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.

This activity was approved and implemented in 2008 and 2009 for LIPH and HCV programs respectively.

Changes and Modifications:

No changes to this activity during this fiscal year.

Authorization:

Section C. 4. of Attachment C (for public housing)

Section D.1. c. of Attachment C (for Housing Choice Voucher Program)

Re-certification Policy for	Baseline 2010	Benchmark	Outcome	Benchmark
HCV				
			2018	Achieved?
Number of Annual				
Recerts	2698	2650	3542	No
Number of interim				
Recerts	1889	2300	2611	Yes
Total Recerts				
	4596	4950	6153	No
Average cost per recert				
	\$53.63	53.63	53.63	n/a
Total estimated costs	\$246,483	\$265,468	\$329,985.39	No

Re-certification Policy for	2010	Benchmark	Outcome	Benchmark
LIPH			2018	Achieved?
Number of Annual				
Recerts	2,587	1,200	1934	No
Number of interim				
Recerts	1,052	1,250	1,265	No
Total Recerts	3,639	2,450	3,199	No
Average cost per recert				
	\$53.63	\$53.63	\$53.63	n/a
Total estimated costs	\$195,159.57	\$131,393	\$171,562.37	No

## Comparison of Outcome to Benchmarks:

In 2018, the HACP did not meet the agency and MTW standard benchmarks for is activity due to an increase in recertifications in the LIPH program as a result of Larimer/East Liberty relocation, and the annual recertification processes of the traditional mixed finance properties. The HCV program total certifications and time spent on the process also increased as a result of the biennial cycle. The HCV program has experienced an increase in lease-up in large part due to additional PBV vouchers coming on-line. Our program in general has continued to expand over the years since implementation of this activity resulting in additional certifications being needed. Overall policy results are below expectations; however, the policy still reduces the total number

of certifications that would result under an annual certification schedule.

This initiative also 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.

HCV - HUD STANDARD METRICS - Cost Effectiveness- Estimates

Unit of measure	Baseline	Benchmark	2018	Benchmark
			Outcome	Achieved
CE#1: Agency Cost Savings: Total cost of task in dollars (decrease)	\$294,965	\$246,698	\$329,985	No
CE#2: Staff Time Savings: Total Time To Complete the Task in staff hours (decrease)	11,000 hours	9,200 hours	12,306 hours	No

LIPH - HUD STANDARD METRICS - Cost Effectiveness - Estimates

Unit of measure	Baseline	D 1 1	Outcome	Benchmark Achieved
CE#1: Agency Cost Savings: Total cost of task in dollars (decrease)	\$208,942.48	\$112,623	\$171,562	No
CE#2: Staff Time Savings: Total Time To Complete the Task in staff hours (decrease)		4,200 hours	6,398 hours	No

Note: provided numbers do not account for fluctuations in program size.

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

Description:

The HACP operates a single Homeownership Program open to both Low-Income Public Housing (LIPH) and Housing Choice Voucher (HCV) Program 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 various benefits offered. By combining the programs, increased benefits are available to some families.

This activity was approved and implemented in 2007

Changes and Modifications:

No changes to this activity during this fiscal year.

Authorization:

Section B. 1. and D. 8. of Attachment C

Section B. 4. of Attachment D

Homeownership Statistics	2018	LIPH	HCV	Eligible
	Total	2017	2017	Non- Resident Participant
Closings / Purchase	22	0	7	15
Number of applicants	25	1	89	15
completing homebuyers' course & 1st mortgage pre-approval)				
Homebuyer Education Referrals	155	n/a	n/a	n/a
HACP funds for closing (total)	\$111,475	\$0	\$39,025	\$72,452
Average HACP 2nd mortgage amount*	\$28,446	\$0	\$31,727	\$22,859
Average purchase price	\$98,482	\$0	\$95,914	\$99,680
Amount of non-HACP assistance**	\$57,533	\$0	\$20,110	\$36,423
Foreclosures	0	0	0	0

Assistance from other sources was as follows:

	HCV	LIPH	Eligible	Total
	Program	Program	Non-	Assistance
	Buyers	Buyers	Resident	
			Buyers	
Seller's assist	\$10,999	\$0	\$10,524	\$21,523
Lender's Credits	\$9,111	\$0	\$13,649	\$22,760.41
Dollar Bank 3-2-1	\$ 0	\$0	5,250	\$5,250
URA Soft-Second Mortgage	\$0	\$0	\$0	\$0
URA Closing Cost Assistance	\$0	\$0	\$6,000	\$6,000
First Front Door	\$0	\$0	\$2,000	\$2,000
Total	\$20,110	\$0	\$34,423	\$61,533

#### Foreclosure Prevention:

There were no reported foreclosures in 2018; no foreclosure prevention services were rendered.

Homeownership Soft-Second Mortgage Waiting List: The HACP continued to see success with this program, with 22 families becoming homeowners in 2018 the largest group in program history. In addition, 155 new families were referred into homebuyer education workshops which is the first step to enroll into the Program. In recent years, the City of Pittsburgh has experienced steady growth and demand for housing resulting in increased rental costs. Many applicants were eager to enter homeownership, as mortgage payments became comparable to the rising rental rates. As previously stated, the HACP received approval through its FY 2017 MTW Annual Plan to increase the maximum second soft mortgage amount to \$52,000 and closing cost assistance to \$8,000. With increased capacity to provide competitive assistance, the HACP expects to experience continuous growth in the program.

<b>HUD Standard Metrics - Cost</b>				
Effectiveness - Homeownership				
Unit of Measurement	Baseline	Benchmark	2018 Outcome	Benchmark Achieved?
Number of recerts (reduced)	10/year	10	22	Yes
CE#1: Agency Cost Savings: Total cost of task in dollars (decrease) (recerts)		\$380.00	\$836.00	Yes
CE#2: Staff Time Savings: Total time to complete the task in staff hours (decrease) recerts)	20	20	44	Yes
CE#4: Increase in Resources Leveraged: Amount of funds leveraged in dollars (increase)	\$0	\$0	\$0	Yes

HUD Standard Metrics - Housing				
Choice				
Unit of Measurement	Baseline	Benchmark	2018 Outcome	Benchmark Achieved?
HC#5: Number of households able to move to a better unit and/or neighborhood of opportunity	0	10	22	Yes
HC#6: Increase in Homeownership Opportunities: Number of households that purchased a home	0	10	22	Yes
HC#7: Households Assisted by Services that Increase Housing Choice: Number of households receiving services aimed at increasing housing choice	0	75	78	Yes

6. (b) Homeownership Program Assistance to Include Soft-Second Mortgage Assistance Coupled with Closing Cost Assistance, Homeownership and Credit Counseling, and Foreclosure Prevention; Expand Eligibility to Persons on the LIPH and HCV Program Waiting List or Persons Eligible But Not on a Wait List; Establish a Homeownership Soft-Second Mortgage Waiting List

#### Description:

Initially approved in 2010, the following provisions of the HACP homeownership program are as follows for 2018:

- i. 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.
- ii. Expand Homeownership Program eligibility to include persons on the HACP's LIPH and Section 8 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.
- iii. Establish a Homeownership Waiting List to assist in determining the order of eligibility for second mortgage Homeownership benefits.

This activity was initially approved and implemented in 2010 and revised in 2017.

Changes and Modifications:

No changes to this activity during this fiscal year.

Authorizations:

Section B. 1.and D. 8 of Attachment C

Section B. 4. of Attachment D

This program continues successfully, reducing costs for the HACP, providing incentives for families to become self-sufficient homeowners, and expanding housing choices for eligible families. Program enrollment is steady, and as in prior years, only 3 foreclosures have taken place. Please see the program statistics under Section 4. A., above, for statistics, HUD Standard Metrics, and additional information on the results of this initiative.

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

Description:

The HACP's operation of the Housing Choice Voucher (HCV) Program allows flexibility in the permitted rent burden (affordability) for new tenancies. Specifically, the limit of 40% of Adjusted Monthly Income (AMI) 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.

This activity was initially approved and implemented in 2001.

Changes and Modifications:

No changes to this activity during this fiscal year.

Authorization:

Section D. 2. C. of Attachment C.

Section D. 1. B. of Attachment D.

In 2018, 15 families took advantage of this option furthering their ability to move to a residence of their choice. An increase in usage of this activity by participants indicates the value of offering this type of flexibility to participants to allow them to find housing that would otherwise be considered unaffordable. The HACP expects families to continue to exercise this option in coming years as an alternative payment standard methodology for the jurisdiction remains in development and market costs continue to steadily increase. This activity is a mechanism for residents to have greater geographic choice and fluctuates from year to year as housing cost, and preferences of families on the program change.

The total number of families exercising this option performed below the benchmark in 2018. The increase in rental costs within the jurisdiction require rent burdens much higher than 40% to enable participants to rent in high opportunity areas. The policy does provide a wider range of housing options in terms of rent prices but there remains a price barrier to access within the city. The HACP, as previously stated, is developing an alternative payment standard methodology that in conjunction with this initiative will further increase housing choice for HCV participants.

# **HUD Standard Metrics – Housing Choice**

Unit of Measurement	Baseline	Benchmark	2018	Benchmark
			Outcome	Achieved
HC#1: Additional units made				
available: Number of new units				
made available to households at or				
below 80% AMI*	0	60	15	No
HC#5: Increase in Resident				
Mobility: Number of households				
able to move to a better unit and/or				
neighborhood of opportunity	0	60	15	No

<sup>\*</sup> Note: Assumes the unit rented by a family at more than 40% of adjusted monthly income would not be affordable, and thus not available to low income families.

#### Comparison of Outcome to Benchmarks:

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 did not meet the standard metrics for the above activity due to increases in housing cost particularly in low poverty neighborhoods. Families in the HCV program encountered difficulties finding units that fell within the current payment standard and did not exceed the 40 percent allowable rent burden. The HACP has developed a local payment standard that if approved should broaden the housing options available to families that choose to utilize this activity.

# 8. Modified Payment Standard Approval

#### 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. The HACP has not utilized its authority to establish Exception Payment Standard Areas since 2007. Allowing the HACP to conduct its own analysis and establish Exception Payment Standards reduces administrative burdens on both the HACP and HUD (as n HUD submission and approval is not required), while expanding housing choices for participating families.

In 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.

This activity was initially approved and implemented in 2004 and revised in 2013

Changes and Modifications

No changes to this activity during this fiscal year.

Authorization:

Attachment C. Section D. 2. a.

In 2016, the HACP constructed ten (10) UFAS units in Addison Terrace Redevelopment Phase II under this payment standard and few other families took advantage of this initiative, but those disabled families that did so had more choices in their search for an affordable home. Thirteen (13) additional project-based vouchers UFAS units were also be completed in 2016 as part of Larimer Redevelopment Phase I through the Choice Neighborhoods Implementation grant. In 2017, six (6) UFAS units were completed at Addison Terrace Phase III. In 2018, two (2) UFAS units were completed at Larimer/East Liberty Phase II. Additionally, while many UFAS units are under construction, they are slated for completion in 2019. UFAS units are included in all new developments and those new units as applicable to this initiative will be reflected upon completion in future annual reports.

Modified Payment Standard - HUD Standard Metrics - Housing Choice

Measure	Baseline	Benchmark	2018	Benchmark
			Outcome	Achieved?
HC#1: Additional Units made available: Number of new units made available for households at or below 80% of AMI	0	25	18	No (Larimer Phase II construction
HC#2: Units of Housing Preserved: Number of housing units preserved for households at or below 80% of AMI	0	25	0	No (Elmer Williams Square construction delay)
HC#4: Displacement Prevention: Number of households at or below 80% AMI that would lose assistance or need to move	0	25	0	No
HC#5: Increase in Resident Mobility: Number of households able to move to a better unit and/or neighborhood of opportunity	0	25	0	No (Larimer Phase II construction delay)

# Comparison of Outcome to Benchmarks:

The HACP did not meet the MTW standard metrics listed above for this activity. 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 are too costly for landlords at the current payment standard. The HACP intends to remedy this obstacle through the implementation of a local payment standard that considers these costs.

## HACP Measure:

Measure	Baseline	Benchmarks	2018	Benchmark
			Outcome	
				Achieved?
New				
Housing				
Units			10	
Available	0	7	18	Yes (Larimer
				Phase II)
(New				
Construction)				

#### Comparison of Outcome to Benchmarks:

The HACP did not meet the agency metric for new housing units developed for this activity. Delays in the HACP's build schedule resulted in UFAS units for later phases of various redevelopment completed in 2018 Use of Block Grant Funding Authority for Development, Redevelopment, and Modernization.

# 9. Use of Block Grant Funding Authority via the Step Up to Market Financing Program

## Description:

The HACP will expand its use of the Block Grant Authority authorized in the Moving To Work (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 in 2028 and increase the variety and quality of available affordable housing. Specifically, the HACP will identify properties for participation in the Step Up To Market Program and will utilize one or more strategies, subject to any required HUD approvals, to achieve its development 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:

- i. Project basing the HACP units without competitive process.
- ii. 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 contract (AHAP).
- iii. 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.
- iv. Extending Eligibility for project-based units to families with incomes up to 80% of AMI.
- v. 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.
- vi. Establishing income targeting goals for the project-based voucher program, and/or for specific project-based voucher developments, that have a goal of promoting a broad range of incomes in project based developments.
- vii. 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 Project Based Voucher Assistance permitted under Section 8 of the act, as identified in this section. HACP will follow HUD protocol and submit mixed-finance development proposals to HUD for review and approval.

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.

#### Strategic 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 Redevelopment Phases III and IV and Larimer/ East Liberty Redevelopment Phase II, III and IV, Allegheny Dwellings Redevelopment Phase I, development of a new Northview Midrise, Crawford Square Preservation, and projects identified through the Project-Based Voucher Plus Gap competitive selection process (in 2016, the Elmer Williams Square and Miller Street Apartments projects were selected and have secured most required financing and approvals):

- 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 Section 8 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 contract (AHAP). (As authorized under Attachment C. Section 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 Section 8 assistance) and Attachment D. Section D. 1. c. (authorizing 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 Project Based Voucher Commitments with Low Income Housing Tax Credits 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€(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 submitted 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:

In response to the growing demand for affordable housing, the HACP developed the PBV plus GAP financing tool. Using this product, the HACP can issue PBV awards as well as capital investment to developers committed to the creation of additional affordable units within the city.

In 2018, the HACP periodically issued Request for Proposals for Project-Based Voucher (PBV) Units with an option for additional HACP capital investments to close gaps in project financing. This initiative, which combines authorizations already permitted under Section 8 (PBV) and Section 9 (capital investments) will spur the development, rehabilitation, or preservation of high-quality affordable housing units and will leverage other public and private investments in the construction, rehabilitation, and/or preservation of such units. 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 lower cost to the HACP than is possible through other strategies.

The HACP has made one 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 contract (AHAP)." 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 will streamline processes and expedite completion of replacement developments.

The HACP submitted a full development proposal, including Rental Term Sheet, Pro Formas, Sources and Uses, schedules, Evidentiary documents, and other detailed project information 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. This process was completed and approved for Addison Phase III in 2016.

#### Relationship to Statutory Objectives:

This policy will expand housing choices for low and moderate income families by fostering the redevelopment of obsolete housing and replacing it with quality affordable housing including low income public housing units, and low income housing tax credit units; it will also provide expanded unit style options offering townhouses, as well as apartments where currently only walk-up apartments are available.

This policy has the potential to improve the efficiency of federal expenditures by stabilizing the long-term costs of operating and maintaining low-income housing properties, and leveraging other capital resources (low-income housing tax credits and private market debt, foundation grants, local government matching funds, etc.

# Anticipated Impacts:

This policy is expected to allow the redevelopment of obsolete properties to continue at a reasonable pace, resulting in improved living conditions and quality of life for residents, reduced costs for the HACP, increases in leveraged resources, improvement and investment in surrounding neighborhoods, reduced crime at redeveloped properties, increased housing choices for assisted families.

For the 2018 activities, please refer to development updates chart in Section 1.C. of the report.

# Comparison of Outcome to Benchmarks

The HACP did not meet the agency metric for new housing units developed for this activity. Delays in the HACP's build schedule resulted in moving unit completion dates to later phases of redevelopment.

# HUD Standard Metrics - Housing Choice

Unit of Measurement	Baseline	Benchmark		Benchmark Achieved?
HC#1: Additional Units of Housing Made Available: Number of new units made available to households at or o below 80% AMI	0	100	37	No
HC#5: Increase in Resident Mobility: Number of households able to move to a better unit and/or neighborhood of opportunity	0	100	37	No
HC#6: Increase in Homeownership Opportunities: Number of households that purchased a home	0	10	15	Yes

# B. Not Yet Implemented Activities

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

#### C. On-Hold Activities

The HACP activities that could be considered as 'on hold' are actually subsets of implemented activities. There is only one (1), and it is as follows:

❖ Exception Payment Standard Areas. Originally approved in 2004 as part of a larger approval on Exception Payment Standards, the HACP suspended its Exception Payment Standard Area in 2007 in order to reduce costs and streamline administration. In response to changes in the local market, the HACP plans to develop new payment standard methodologies to increase housing choices for voucher families in 2019.

## 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 2018 no longer required specific Moving To Work (MTW) Authority. Some of those initiatives are:

- i. Establishment of Site-Based Waiting Lists. Closed out in 2006, prior to execution of the Standard Agreement as Moving To Work (MTW) Authority was no longer required for this activity.
- ii. Establishment of Site-Based Waiting Lists. Closed out in 2006, prior to execution of the Standard Agreement as Moving To Work (MTW) Authority was no longer required for this activity.
- iii. Modified Rent Reasonableness Process. Closed out in 2008, prior to execution of the Standard Agreement as Moving To Work (MTW) Authority was no longer required for this activity.
- iv. Transition to Site-Based Management and Asset Management, including Site Based Budgeting and Accounting. Closed out in 2005, prior to execution of the Standard Agreement as Moving To Work (MTW) Authority was no longer required for this activity.

# E. Other Activities

Several activities that utilized Moving To Work (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:

- i. Use of Block Grant Funding Authority to support Development and Redevelopment, Enhanced and Expanded Family Self-Sufficiency (FSS) 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, 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.
- ii. 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 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. See attached.
- iii. 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, HACP embarked on a strategy to transition its centralized management to more decentralized site-based management capable of using an asset management approach. During 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.

# **V. SOURCES AND USES OF FUNDS**

A. MTW Report: Sources and Uses of MTW Funds										
Actual Sources and Uses of MTW Funding for the Fiscal Year										
PHAs shall submit their unaudited and audited information in the prescribed FDS format through										
the Financial Assessment System - PHA (FASPHA), or its successor system										
Describe the Activities that Used Only MTW Single Fund Flexibility										
The HACP had 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 \$16,506,788 towards development, \$10,198,304 for modernization, protective services and resident services. During 2018, the HACP used \$7,915,887 from MTW Section 8 and Public Housing. The MTW funds used to support the Energy Performance Contract was \$718,906. The amount of \$776,531 was used to support the private management sites. Lastly, \$2,151,921 was spent on resident services, \$4,251,005 was spent on protective services, and \$17,524 was spent on MTW Development activities.										
V.4.Report.Local Asset Management Plan										
B. MTW Report: Local Asset Management Plan										
Has the PHA allocated costs within statute during the plan year? Has the PHA implemented a local asset management plan (LAMP)?										
If the PHA is implementing a LAMP, it shall be described in an appendix every year beginning with the year it is proposed and approved. It shall explain the deviations from existing HUD requirements and should be updated if any changes are made to the LAMP.										
Has the PHA provided a LAMP in the appendix?										

# VI. ADMINISTRATIVE

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 2018.
- B. Results of PHA-directed evaluations of the demonstration.
  - i. The HACP secured the University of Pittsburgh to conduct an evaluation of its rent reform policy and an alternative payment standard methodology. Results of this study will be included in the FY MTW 2019 Annual Report.
- C. Certification that the HACP has met the statutory requirements of the MTW Demonstration.

The HACP hereby certifies that it has met the Statutory Requirements of 1) assuring that at least 75% of the families assisted by the Agency are very low-income families; 2) continuing to assist substantially the same total number of eligible low-income families as would have been served absent the demonstration; and 3) maintaining a comparable mix of families by family size, as would have been served or assisted had the amounts not been used under the demonstration.

# A. Local Asset Management Plan

## A. B. C. Planned Sources and Uses of Funds (MTW, Non-MTW, State and Local)

Please see the charts at the end of this Chapter, which show sources and uses of MTW and non-MTW funds.

# <u>D. Deviations in Cost Allocation and Fee For Service Approach - Approach to Asset</u> 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.

#### 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 housing stock.

The HACP's plan is consistent with HUD's ongoing implementation of project based budgeting and financial 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 and 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.

New Initiatives and Deviations from General Part 990 Requirements

During FY 2018 the HACP undertook the following initiatives to improve the effectiveness and efficiency:

- 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 accounting was "broken-out" to the sites. This included all assets, liabilities, debt service costs, and cost savings.
- 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, both in time and expense.

- Central Operations staff, many of whom performed direct frontline services such as Home Ownership, Self-Sufficiency, and/or Relocation, were frontlined appropriately to the LIPH and/or HCV programs, as these costs are 100 percent (100%) low rent and/or Section 8.
- Actual Section 8 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 Section 8 operations, enhancing the budget transparency.
  Section 8 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 charged 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 2018.

#### 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. Fortunately, a major component of the HACP strategic plan is to grow 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 high 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.

#### E. Use of Single Fund Flexibility

The HACP had budgeted its single fund flexibility from the HCV and LIPH programs to support the MTW initiatives and other activities. This included budgeting \$16,506,788 towards Development, \$10,198,304 for Modernization, Protective Services and Resident Services.

During 2018, the HACP used \$7,915,887 from MTW Section 8 and LIPH. The MTW funds used to support the Energy Performance Contract was \$718,906. The amount of \$776,531 was used to support the private management sites. Lastly, \$2,151,921 was spent on resident services, \$4,251,005 was spent on protective services, and \$17,524 was spent on MTW Development activities.

	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
LIPH Family	2141	2164	2186	2208	2195	2207	2154	2173	2182	2130	2152	2169
LIPH Elderly	964	974	986	994	993	999	986	997	1006	982	996	1005
HCV Family	4472	4509	4548	4561	4545	4577	4520	4523	4520	4489	4520	4537
HCV Elderly	797	808	812	823	831	839	826	841	858	862	870	853
Total	8374	8455	8532	8586	8564	8622	8486	8534	8566	8463	8538	8564

	Historical: HACP - LIPH and Section 8 Occupancy 01/01/01 to 01/01/16															
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	1/1/2001	1/1/2002	1/1/2003	1/1/2004	1/1/2005	1/1/2006	1/1/2007	1/1/2008	1/1/2009	1/1/2010	1/1/2011	1/1/2012	1/1/2013	1/1/2014	1/1/2015	1/1/2016
LIPH Family	3813	3489	3612	3573	3437	3280	3135	3017	2919	2879	2934	2766	2823	2859	2623	2653
LIPH Elderly	1433	1355	1313	1248	1219	1218	1269	1211	1195	1132	1100	1205	1182	1197	1167	1090
HCV Family	3440	3891	3973	4496	4786	6076	5649	4954	4651	4463	4538	4739	4431	4345	4267	4569
HCV Elderly	459	472	555	581	560	592	588	609	596	600	672	691	711	715	742	721
Totals	9145	9207	9453	9898	10002	11166	10641	9791	9361	9092	9244	9401	9147	9116	8799	9033

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Family	619	630	638	646	639	642	630	632	635	619	628	631	632
Elderly	687	694	701	710	707	713	702	710	717	698	706	712	705
Total	1306	1324	1339	1356	1346	1355	1332	1342	1352	1317	1334	1343	1337
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Family	654	665	677	685	687	692	669	677	678	656	661	668	672
Elderly	184	184	186	186	188	188	187	189	191	188	192	194	188
Total	838	849	863	871	875	880	856	866	869	844	853	862	861
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Family	660	662	664	669	665	668	652	660	663	653	659	667	662
Elderly	79	81	84	83	84	84	83	84	84	80	82	83	83
Total	739	743	748	752	749	752	735	744	747	733	741	750	744
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	18	18	18	18	18	18	18	18	18	18	18	18	
Famili:	400	400	470	470	475	470	475	470	477	474	470	475	477
Family	180	180	179	179	175	176	175	176	177	174	176	175	177

Elderly	12	12	12	12	11	11	11	11	11	12	12	12	12
Total	192	192	191	191	186	187	186	187	188	186	188	187	188
		•		•		IPH 5+		•	•		•		
	Jan- 18	Feb- 18	Mar- 18	Apr- 18	May- 18	Jun- 18	Jul- 18	Aug- 18	Sep- 18	Oct- 18	Nov- 18	Dec- 18	Average
		10					10			10			
Family	28	27	28	29	29	29	28	28	29	28	28	28	28
Elderly	2	3	3	3	3	3	3	3	3	4	4	4	3
Total	30	30	31	32	32	32	31	31	32	32	32	32	31
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LIPH AII													
	Jan-	Feb-	Mar-	Apr-	May-	Jun-	Jul-	Aug-	Sep-	Oct-	Nov-	Dec-	1
	18	18	18	18	18	18	18	18	18	18	18	18	Average
Family	2141	2164	2186	2208	2195	2207	2154	2173	2182	2130	2152	2169	2172
Elderly	964	974	986	994	993	999	986	997	1006	982	996	1005	990
Total	3105	3138	3172	3202	3188	3206	3140	3170	3188	3112	3148	3174	3162
					HCVI	I Efficier	1 ncy/1[	3R					
	Jan-	Feb-	Mar-	Apr-	May-	Jun-	Jul-	Aug-	Sep-	Oct-	Nov-	Dec-	_
	18	18	18	18	18	18	18	18	18	18	18	18	Average
Family	1358	1375	1383	1385	1386	1393	1369	1364	1359	1347	1359	1360	1370
Elderly	628	636	641	648	656	664	655	669	681	680	685	669	659
Total	1986	2011	2024	2033	2042	2057	2024	2033	2040	2027	2044	2029	2029
	<u> </u>					HCV 2	BR						ļ
	Jan-	Feb-	Mar-	Apr-	May-	Jun-	Jul-	Aug-	Sep-	Oct-	Nov-	Dec-	Augrans
	18	18	18	18	18	18	18	18	18	18	18	18	Average

Family	1638	1641	1655	1654	1647	1658	1652	1651	1645	1643	1658	1669	1651
Elderly	133	136	136	140	141	142	139	140	144	150	152	151	142
Total	1771	1777	1791	1794		1800		1791	1789	1793	1810	1820	1793
		•	•			HCV 3	BR		•		•		•
	Jan- 18	Feb- 18	Mar- 18	Apr- 18	May- 18	Jun- 18	Jul- 18	Aug- 18	Sep- 18	Oct- 18	Nov- 18	Dec- 18	Average
Family	1219	1235	1252	1261	1257	1267	1247	1257	1262	1246	1252	1254	1251
Elderly	32	32	31	31	30	29	29	29	30	29	29	29	30
Total	1251	1267	1283	1292	1287	1296	1276	1286	1292	1275	1281	1283	1281
				L	ı	HCV 4	BR					ı	ı
	Jan- 18	Feb- 18	Mar- 18	Apr- 18	May- 18	Jun- 18	Jul- 18	Aug- 18	Sep- 18	Oct- 18	Nov- 18	Dec- 18	Average
Family	212	212	213	215	209	211	202	201	205	202	201	204	207
Elderly	4	4	4	4	4	4	3	3	3	3	4	4	4
Total	216	216	217	219	213	215	205	204	208	205	205	208	211
	•				ŀ	ICV 5+	BR						•
	Jan- 18	Feb- 18	Mar- 18	Apr- 18	May- 18	Jun- 18	Jul- 18	Aug- 18	Sep- 18	Oct- 18	Nov- 18	Dec- 18	Average
Family	45	46	45	46	46	48	50	50	49	51	50	50	48
Elderly	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	45	46	45	46	46	48	50	50	49	51	50	50	48
						HCV							
Jan-18	Feb- 18	Mar- 18	Apr- 18	May- 18	Jun- 18	Jul- 18	Aug- 18	Sep- 18	Oct- 18	Nov- 18	Dec- 18	Avera ge	Jan-18

Family	4472	4509	4548	4561	4545	4577	4520	4523	4520	4489	4520	4537	4527
Elderly	797	808	812	823	831	839	826	841	858	862	870	853	835
Total	5269	5317	5360	5384	5376	5416	5346	5364	5378	5351	5390	5390	5362
HCV	Port -	Outs A	re Not I	ncluded	d Withir	n These	e Total	's Due t	o Unav	ailable	Bedroo	m Size	es .
		- ·				Efficie							1
	Jan- 18	Feb- 18	Mar- 18	Apr- 18	May- 18	Jun- 18	Jul- 18	Aug- 18	Sep- 18	Oct- 18	Nov- 18	Dec- 18	Average
Family	1977	2005	2021	2031	2025	2035	1999	1996	1994	1966	1987	1991	2002
Elderly	1315	1330	1342	1358	1363	1377	1357	1379	1398	1378	1391	1381	1364
Total	3292	3335	3363	3389				3375	3392	3344	3378	3372	3366
	•					Total 2							
	Jan- 18	Feb- 18	Mar- 18	Apr- 18	May- 18	Jun- 18	Jul- 18	Aug- 18	Sep- 18	Oct- 18	Nov- 18	Dec- 18	Average
Family	2292	2306	2332	2339	2334	2350	2321	2328	2323	2299	2319	2337	2323
Elderly	317	320	322	326	329	330	326	329	335	338	344	345	330
Total	2609	2626	2654	2665	2663	2680	2647	2657	2658	2637	2663	2682	2653
		ı				Total 3	BR					ı	l
	Jan- 18	Feb- 18	Mar- 18	Apr- 18	May- 18	Jun- 18	Jul- 18	Aug- 18	Sep- 18	Oct- 18	Nov- 18	Dec- 18	Average
Family	1879	1897	1916	1930	1922	1935	1899	1917	1925	1899	1911	1921	1913
Elderly	111	113	115	114	114	113	112	113	114	109	111	112	113
Total	1990	2010	2031	2044	2036			2030	2039	2008	2022	2033	2025
						Total 4							,
	Jan- 18	Feb- 18	Mar- 18	Apr- 18	May- 18	Jun- 18	Jul- 18	Aug- 18	Sep- 18	Oct- 18	Nov- 18	Dec- 18	Average

	,												
Family	392	392	392	394	384	387	377	377	382	376	377	379	384
Elderly	16	16	16	16	15	15	14	14	14	15	16	16	15
Total	408	408	408	410	399	402	391	391	396	391	393	395	399
					7	otal 5	- BR						
	Jan-	Feb-	Mar-	Apr-	May-	Jun-	Jul-	Aug-	Sep-	Oct-	Nov-	Dec-	
	18	18	18	18	18	18	18	18	18	18	18	18	Average
Family	73	73	73	75	75	77	78	78	78	79	78	78	76
Elderly	2	3	3	3	3	3	3	3	3	4	4	4	3
Total	75	76	76	78	78	80	81	81	81	83	82	82	79
						Total .	AII						
	Jan-	Feb-	Mar-	Apr-	May-	Jun-	Jul-	Aug-	Sep-	Oct-	Nov-	Dec-	
	18	18	18	18	18	18	18	18	18	18	18	18	Average
Family	6613	6673	6734	6769	6740	6784	6674	6696	6702	6619	6672	6706	6699
Elderly	1761	1782	1798	1817	1824	1838	1812	1838	1864	1844	1866	1858	1825
Total	8374	8455	8532	8586	8564	8622	8486	8534	8566	8463	8538	8564	8524

											nder 30	% AMI												
	Jan-18		Feb-18		Mar-18		Apr-18		May-18		Jun-18		Jul-18		Aug-18		Sep-18		Oct-18		Nov-18		Dec-18	
LIPH	2407	77.5 %	2426	77.3 %	2448	77.2 %	2539	79.3 %	2516	78.9 %	2529	78.9 %	2490	79.3 %	2523	79.6 %	2529	79.3 %	2456	78.9 %	2475	78.6 %	2426	77.3 %
HCV	4776	78.4 %	4856	78.9 %	4886	78.9 %	4997	80.6 %	4977	80.6 %	5013	80.6 %	4960	80.5 %	4975	80.4 %	4981	80.3 %	4971	80.4 %	4957	80.0 %	4856	78.9 %
Total	7183	78.1 %	7282	78.3 %	7334	78.3 %	7536	80.1	7493	80.0 %	7542	80.0 %	7450	80.1 %	7498	80.1 %	7510	80.0 %	7427	79.9 %	7432	79.5 %	7282	78.3 %
		U	1	•	,	1			,		0% to 50		1	•	1	l .	1	U	1	•		•	,	
	Jan-18		Feb-18		Mar-18		Apr-18		May-18		Jun-18		Jul-18		Aug-18		Sep-18		Oct-18		Nov-18		Dec-18	
LIPH	466	15.0 %	468	14.9 %	478	15.1 %	445	13.9 %	449	14.4 %	454	14.2 %	440	14.0 %	435	13.7 %	440	13.8 %	430	13.8 %	437	13.9 %	468	14.9 %
HCV	1102	18.1 %	1087	17.7 %	1077	17.4 %	1017	16.4 %	1018	%	1006	16.2 %	1014	16.5 %	1012	16.4 %	1010	16.3 %	1004	16.2 %	1028	16.6 %	1087	17.7 %
Total	1568	17.1 %	1555	16.7 %	1555	16.6 %	1462	15.5 %	1467	15.7 %	1460	15.5 %	1454	15.6 %	1447	15.5 %	1450	15.4 %	1434	15.4 %	1465	15.7 %	1555	16.7 %
			l								% to 80	% AMI			l		l		l					
	Jan-18		Feb-18		Mar-18		Apr-18		May-18		Jun-18		Jul-18		Aug-18		Sep-18		Oct-18		Nov-18		Dec-18	
LIPH	183	5.9%	193	6.2%	193	6.1%	175	5.5%	178	5.6%	178	5.6%	165	5.3%	165	5.2%	169	5.3%	180	5.8%	189	6.0%	193	6.2%
HCV	201	3.3%	204	3.3%	220	3.6%	176	2.8%	170	2.8%	189	3.0%	183	3.0%	192	3.1%	201	3.2%	200	3.2%	205	3.3%	204	3.3%
Total	384	4.2%	397	4.3%	413	4.4%	351	3.7%	348	3.7%	367	3.9%	348	3.7%	357	3.8%	370	3.9%	380	4.1%	394	4.2%	397	4.3%
			1			ı					Over 80	% AMI	ı						1					
	Jan-18		Feb-18		Mar-18		Apr-18		May-18		Jun-18		Jul-18		Aug-18		Sep-18		Oct-18		Nov-18		Dec-18	
LIPH	49	1.6%	51	1.6%	53	1.7%	43	1.3%	45	1.4%	45	1.4%	45	1.4%	47	1.5%	50	1.6%	43	1.5%	47	1.5%	51	1.6%
HCV	9	0.1%	10	0.2%	10	0.2%	12	0.2%	9	0.1%	8	0.1%	5	0.1%	6	0.1%	8	0.1%	10	0.2%	9	10.0 %	10	0.2%
Total	58	0.6%	61	0.7%	63	0.7%	55	0.6%	54	0.6%	53	0.6%	50	0.5%	53	0.6%	58	0.6%	56	0.6%	56	0.6%	61	0.7%

								Tab	le A-3–	Income	of Disal		usehold	s Serve	d									
	Jan	ı-18	Feb	o-18	Mai	r-18	Арі	-18	Ma	y-18		1-18	Jul	-18	Aug	j-18	Sep	-18	Oct	t-18	Nov	<b>/-18</b>	Dec	c-18
LIPH	1331	84.3	1343	84.3 %	1350	83.9 %	1405	86.5 %	1403	86.2 %	1411	86.3 %	1397	86.8	1415	87.1 %	1424	86.9 %	1387	86.5 %	1391	85.9 %	1396	85.5
HCV	2151	87.1 %	2183	87.5 %	2187	87.4 %	2238	89.2 %	2213	88.9 %	2228	88.9 %	2213	89.1 %	2222	89.2 %	2221	89.1 %	2224	89.0 %	2214	88.8	2208	88.89
Total	3482	86.0 %	3526	86.2 %	3537	86.0 %	3643	88.1 %	3616	87.9 %	3639	87.9 %	3610	88.2 %	3637	88.4 %	3645	88.3 %	3611	88.0 %	3605	87.7 %	3604	87.5
	ı	I						l		30	% to 50	% AMI		l					I				I	
	Jan	ı-18	Feb	-18	Maı	r-18	Арі	·-18	Ma	y-18		n-18	Jul	-18	Aug	j-18	Sep	-18	Oct	t-18	Nov	/-18	Dec	c-18
LIPH	182	11.5 %	180	11.3 %	190	11.8 %	158	9.7%	157	9.6%	157	9.6%	150	9.3%	147	9.0%	153	9.3%	154	9.6%	158	9.8%	164	10.0
HCV	296	12.0 %	289	11.6 %	290	11.6 %	248	9.9%	257	10.3	257	10.3	249	10.0	246	9.9%	246	9.9%	249	10.0	255	10.2	254	10.2
Total	478	11.8 %	469	11.5 %	480	11.7 %	406	9.8%	414	10.1	414	10.0	399	9.7%	393	9.6%	399	9.7%	403	9.8%	413	10.0	418	10.1
	-1	ı						ı		51	% to 80	% AMI		ı					ı				ı	
	Jan	ı-18	Feb	-18	Maı	r-18	Apı	·-18	Ma	y-18	Jur	n-18	Jul	-18	Aug	j-18	Sep	-18	Oct	t-18	Nov	/-18	Dec	c-18
LIPH	52	3.3%	57	3.6%	56	3.5%	49	3.0%	54	3.3%	54	3.3%	53	3.3%	53	3.3%	51	3.1%	53	3.3%	60	3.7%	61	3.79
HCV	20	0.8%	20	0.8%	22	0.9%	20	0.8%	15	0.6%	17	0.7%	18	0.7%	18	0.7%	19	0.8%	20	0.8%	19	0.8%	21	0.89
Total	72	1.8%	77	1.9%	78	1.9%	69	1.7%	69	1.7%	71	1.7%	71	1.7%	71	1.7%	70	1.7%	73	1.8%	79	1.9%	82	2.0
	Jan	ı-18	Feb	)-18	Mai	r-18	Apı	·-18	Ma	y-18	<i>ver 80</i> 9 Jur	% <i>AMI</i> n-18	Jul	-18	Auc	j-18	Sep	-18	Oct	t-18	Nov	/-18	Dec	c-18

LIPH	13	0.8%	14	0.9%	14	0.9%	12	0.7%	13	0.8%	13	0.8%	10	0.6%	10	0.6%	10	0.6%	10	0.6%	10	0.6%	11	0.7%
HCV	3	0.1%	3	0.1%	3	0.1%	3	0.1%	3	0.1%	3	0.1%	3	0.1%	4	0.2%	6	0.2%	5	0.2%	4	0.2%	4	0.2%
Total	16	0.4%	17	0.4%	17	0.4%	15	0.4%	16	0.4%	16	0.4%	13	0.3%	14	0.3%	16	0.4%	15	0.4%	14	0.3%	15	0.4%

			Та	ible A-4– F	Race / Ethr		useholds (	Served				
		_				I Family						_
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
Black	805	816	823	831	832	837	817	821	828	820	827	833
White	145	144	143	145	146	146	146	147	147	143	144	144
Hispanic	13	13	13	13	12	12	11	12	12	12	12	12
Asian	5	5	5	5	5	5	5	5	5	5	5	5
Other	6	6	6	6	6	6	5	5	5	5	4	4
Total	974	984	990	1000	1001	1006	984	990	997	985	992	998
	1				LIPI	l Elderly					l	1
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-1
Black	513	517	527	528	531	534	532	539	544	528	535	540
White	79	81	81	84	82	82	81	83	84	79	80	82
Hispanic	9	9	9	9	10	10	10	10	10	9	9	9
Asian	9	9	9	9	10	10	10	10	10	9	9	9
Other	1	1	1	1	1	1	1	1	1	1	1	1
Total	611	617	627	631	634	637	634	643	649	626	634	641

					LIP	H Total						
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
Black	1318	1333	1350	1359	1363	1371	1349	1360	1372	1348	1362	1373
White	224	225	224	229	228	228	227	230	231	222	224	226
Hispanic	22	22	22	22	22	22	21	22	22	21	21	21
Asian	14	14	14	14	15	15	15	15	15	14	14	14
Other	7	7	7	7	7	7	6	6	6	6	5	5
Total	1585	1601	1617	1631	1635	1643	1618	1633	1646	1611	1626	1639
					HC\	/ Family						
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
Black	1346	1357	1360	1357	1337	1342	1336	1338	1328	1325	1314	1308
White	433	437	439	438	435	441	433	426	422	425	428	419
Hispanic	16	17	16	17	17	17	17	17	17	18	18	17
Asian	5	5	5	5	5	5	5	5	5	4	4	4
Other	7	7	7	7	7	7	8	8	8	9	9	8
Total	1807	1823	1827	1824	1801	1812	1799	1794	1780	1781	1773	1756
					HCV	/ Elderly				I		ı
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
Black	464	468	471	477	479	482	479	487	499	505	504	510
White	184	189	189	193	192	195	189	193	197	196	199	205
Hispanic	5	5	5	5	5	5	5	5	5	5	5	5

Asian	5	5	5	5	5	5	5	5	5	5	5	5
Other	8	8	8	8	8	8	8	8	8	8	8	8
Total	666	675	678	688	689	695	686	698	714	719	721	733
		ı			НС	V Total		1			1	1
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
Black	1810	1825	1831	1834	1816	1824	1815	1825	1827	1830	1818	1818
White	617	626	628	631	627	636	622	619	619	621	627	624
Hispanic	21	22	21	22	22	22	22	22	22	23	23	22
Asian	10	10	10	10	10	10	10	10	10	9	9	9
Other	15	15	15	15	15	15	16	16	16	17	17	16
Total	2473	2498	2505	2512	2490	2507	2485	2492	2494	2500	2494	2489
		ı			Tota	al Family						ı
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
Black	2151	2173	2183	2188	2169	2179	2153	2159	2156	2145	2141	2141
White	578	581	582	583	581	587	579	573	569	568	572	563
Hispanic	29	30	29	30	29	29	28	29	29	30	30	29
Asian	10	10	10	10	10	10	10	10	10	9	9	9
Other	13	13	13	13	13	13	13	13	13	14	13	12
Total	2781	2807	2817	2824	2802	2818	2783	2784	2777	2766	2765	2754
					Tota	l Elderly						
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18

Black	977	985	998	1005	1010	1016	1011	1026	1043	1033	1039	1050
White	263	270	270	277	274	277	270	276	281	275	279	287
Hispanic	14	14	14	14	15	15	15	15	15	14	14	14
Asian	14	14	14	14	15	15	15	15	15	14	14	14
Other	9	9	9	9	9	9	9	9	9	9	9	9
Total	1277	1292	1305	1319	1323	1332	1320	1341	1363	1345	1355	1374
	•	•				Total		•	•		•	•
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
Black	3128	3158	3181	3193	3179	3195	3164	3185	3199	3178	3180	3191
White	841	851	852	860	855	864	849	849	850	843	851	850
Hispanic	43	44	43	44	44	44	43	44	44	44	44	43
Asian	24	24	24	24	25	25	25	25	25	23	23	23
Other	22	22	22	22	22	22	22	22	22	23	22	21
Total	4058	4099	4122	4143	4125	4150	4103	4125	4140	4111	4120	4128

			Table A-	5 – Unit S	Sizes of Ho				oled Resi	dents			
	1	I <del></del>	I	·		H Efficier			la	- · · -		I	
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Average
Family	518	523	528	534	533	534	526	527	530	517	523	525	527
Elderly	428	432	437	442	441	444	439	447	452	437	441	446	441
Total	946	955	965	976	974	978	965	974	982	954	964	971	967
	Į.	ı		l		LIPH 2	BR		l				
Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Averag e	Jan-18
Family	215	219	221	224	227	228	223	227	228	229	230	232	225
Elderly	123	123	125	125	128	128	129	130	131	129	132	134	128
Total	338	342	346	349	355	356	352	357	359	358	362	366	353
	•	•				LIPH 3							
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Average
Family	191	193	190	192	191	193	187	186	188	188	189	191	190
Elderly	45	46	49	48	49	49	50	50	50	45	46	46	48
Total	236	239	239	240	240	242	237	236	238	233	235	237	238
		1	1	1	1	LIPH 4		<u> </u>	1	<u>.</u>			
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Average
Family	41	41	43	42	42	42	40	42	43	43	42	42	42

Elderly	7	7	7	7	6	6	6	6	6	6	6	6	6
Total	48	48	50	49	48	48	46	48	49	49	48	48	48
	1	l				LIPH 5+	BR	I	l				
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Average
Family	9	8	8	8	8	9	8	8	8	8	8	8	8
Elderly	1	2	2	2	2	2	2	2	2	2	2	2	2
Total	10	10	10	10	10	11	10	10	10	10	10	10	10
	l.	I.			l .	LIPH A	4 <i>//</i>	<u>I</u>	I.				
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Average
Family	974	984	990	1000	1001	1006	984	990	997	985	992	998	992
Elderly	604	610	620	624	626	629	626	635	641	619	627	634	625
Total	1578	1594	1610	1624	1627	1635	1610	1625	1638	1604	1619	1632	1616
The HACP use are public payments	housing	or HCV	(Section	8) hous	eholds ir abilities w	which t ho are r	he leas	eholder l designate	nas a ve	rified SS	I disabilit	ty lowerin	ng rent
		ı				/Efficier			ı			1	
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Average
Family	914	923	928	930	921	925	913	907	894	894	895	890	911
Elderly	482	488	493	498	502	508	501	509	520	518	521	535	506
Total	1396	1411	1421	1428	1423	1433	1414	1416	1414	1412	1416	1425	1417
						HCV 21							
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Average
Family	407	404	403	403	396	401	402	400	396	401	402	401	401

Elderly	109	112	111	114	115	116	113	115	119	125	127	127	117
Total	516	516	514	517	511	517	515	515	515	526	529	528	518
						HCV 3	BR						
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Average
Family	189	193	194	195	197	199	197	196	197	189	186	184	193
Elderly	25	25	24	24	23	22	21	21	23	22	22	22	23
Total	214	218	218	219	220	221	218	217	220	211	208	206	216
						HCV 4	BR						
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Average
Family	51	52	52	51	50	49	45	44	44	44	44	45	48
Elderly	3	3	3	3	3	3	3	3	3	3	3	3	3
Total	54	55	55	54	53	52	48	47	47	47	47	48	51
						HCV 5+	BR						
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Average
Family	10	11	11	11	10	10	10	10	11	11	11	12	11
Elderly	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	10	11	11	11	10	10	10	10	11	11	11	12	11
	· I					HCV A							
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Average
Family	1571	1583	1588	1590	1574	1584	1567	1557	1542	1539	1538	1532	1564
Elderly	619	628	631	639	643	649	638	648	665	668	673	687	649
Total	2190	2211	2219	2229	2217	2233	2205	2205	2207	2207	2211	2219	2213

#### HCV Port - Outs Are Not Included Within These Totals Due to Unavailable Bedroom Sizes The HACP uses the definitions of disabilities used by the Social Security Administration. All households counted in Table A-5 are public housing or HCV (Section 8) households in which the leaseholder has a verified SSI disability lowering rent payments. Members of the family with disabilities who are not the designated head of household are not included. Total Efficiency/1 BR Jan-18 Feb-18 Mar-18 Apr-18 May-18 Jun-18 Jul-18 Aug-18 Sep-18 Oct-18 Nov-18 Dec-18 Average Family Elderly Total Total 2 BR Jan-18 Feb-18 Mar-18 Apr-18 May-18 Jun-18 Jul-18 Aug-18 Sep-18 Oct-18 Nov-18 Dec-18 Average Family Elderly Total Total 3BR Jan-18 Feb-18 Mar-18 Apr-18 May-18 Jun-18 Jul-18 Aug-18 Sep-18 Oct-18 Nov-18 Dec-18 Average Family Elderly Total Total 4BR Jan-18 Feb-18 Mar-18 Apr-18 May-18 Jun-18 Jul-18 Aug-18 Sep-18 Oct-18 Nov-18 Dec-18 Average Family

Elderly

Total

Total 5+ BR

	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Average
Family	19	19	19	19	18	19	18	18	19	19	19	20	19
Elderly	1	2	2	2	2	2	2	2	2	2	2	2	2
Total	20	21	21	21	20	21	20	20	21	21	21	22	21
						Total A	4//						
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Average
Family	2545	2567	2578	2590	2575	2590	2551	2547	2539	2524	2530	2530	2556
Elderly	1223	1238	1251	1263	1269	1278	1264	1283	1306	1287	1300	1321	1274
Total	3768	3805	3829	3853	3844	3868	3815	3830	3845	3811	3830	3851	3829

The HACP uses the definitions of disabilities used by the Social Security Administration. All households counted in Table A-5 are LIPH or HCV (Section 8) households in which the leaseholder has a verified SSI disability lowering rent payments. Members of the family with disabilities who are not the designated head of household are not included.

# Honeywell

## **Americas M&V Services Team**

### Housing Authority of the City of Pittsburgh

**Energy Cost Avoidance Report** 

Year 7 of 12 Energy Guarantee September 2017 through August 2018



Helping customers manage energy resources to improve financial performance

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### Housing Authority of the City of Pittsburgh

































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### 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: Larry Guzy, MVS

Karen Westlick, EA



### Meters Included in Report



Buildings	Electric Acct #	Gas Acct#	Water Acct #
Addison Terrace		2-0000-481-2216	201881
		2-0000-387-0074	201882
			201883
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		0900608-421814	202112
Pennsylvania-Bidwell		0900608-280359	125461
Pressley Street		0900608-210020	137061
,			137062

## **Program Overview**



## Meters Included in Report



		$\sim$	
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 5000-538-7153-001 5000-541-792-001 5000-542-549-001 6000-538-715-001 6001-055-907-001 7000-538-694-001 7000-538-694-001 8000-538-736-001 8000-538-736-001 9000-537-154-001 9000-537-154-001 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

- 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

### 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.

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)

### **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.

	- 1			Savings				Amortization		P+I+Service	Savings %
		Energy	RBY	Total	M&V	Total	Interest	Principal	Balance	= Honeywell	Guaranteed
Escalation	n Over Term	16.3%	0.0%		3.0%					Guarantee	by HW
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 7 Savis	ngs	
Option A Cost Avoidance	\$	359,666
Option C Cost Avoidance	\$	1,542,465
Adjustments	\$	1,483,338
Total Year 7 Savings	\$	3,385,468

Year 7 Savings	
Year 7 Debt Service Year 7 M&V Service Cost	\$ 2,944,524 86,379
Total Year 7 Energy Guarantee	\$ 3,030,903
Net Results	\$ 354,565
Percent of Plan	112%

### **Cumulative Results**

		COST			ANNUAL		MOUNT		NET
TIMI	E PERIOD	AVOIDANCE		GUARANTEE		RECONSILED		RESULTS	
Year l	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
T	TOTAL		21,358,518	\$	19,614,260	\$	15,807	\$	1,775,872

	Project	Project		Elec	trical	Natu	iral Gas	W	ater	Total Energy
Sice	Number	Name	Cost Summary		Yearly Energ	y Savings		Yearly	Savings	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			Build	ling being rehabilit	ated		
1	PA 1-01	Addison Terrace	Building Envelope							
1	PA 1-01	Addison Terrace	Option C Savings							
			Rate Applied		\$0.1138		\$23,726		\$11.069	
			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		80	\$12,103
	PA 1-02	Bedford Dwellings	High Efficiency Refrigerators	28,516	\$3,245		\$0		80	\$3,245
2	PA 1-02	Bedford Dwellings	Building Envelope	3,075	\$350		\$0		80	\$350
2	PA 1-02	Bedford Dwellings	Option C Savings	54010	3330	21,985	\$521,627		\$0	\$521,627
			Rate Applied		\$0.1138		\$23.7264		\$11.0689	
			Totals:	518,174	\$58,968	21,985	\$521,627		\$0	\$580,595
3	PA 1-04	Arlington Heights	Option C Savings	(983,262)	(\$111,942)	7,076	\$167,899	5,067	\$56,081	\$112,038
			Rate Applied Totals:	(983,262)	\$0.1138 (\$111,942)	7,076	\$23.7264 \$167,899	5,067	\$11.0689 \$56,081	\$112,038
4	PA 1-05	Allegheny Dwellings	Retrofit Tenant Area Lighting	295,457	\$33,623		\$0		80	\$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		50	\$1,600
4	PA 1-05	Allegheny Dwellings	Water Conservations	222,931	\$25,370		\$0		80	\$25,370
4	PA 1-05	Allegheny Dwellings	Building Envelope	7,255	\$826		\$0		80	\$826
4	PA 1-05	Allegheny Dwellings	Option C Savings			9,161	\$217,365	5,299	\$58,657	\$276,022
			Rate Applied	571,495	\$0.1138 \$65,036	9,161	\$23.7264 \$217.365	5,299	\$11.0689 \$58,657	\$341.058

	Project	Project		Elec	trical	Natu	ral Gas	W	ater	Total Energy
Sice	Number	Name	Cost Summary		Yearly Energ	y Savings		Yearly	Savings	Savings
			Description of ECM	(KWH)	(\$)	(MCF)	(\$)	(Kgals)	(\$)	(\$)
5	PA 1-09	Northview Heights	Option C Savings	(3,582,571)	(\$407,876)	37,901	\$899,257	(65,516)	(\$725,187)	(\$233,805)
			Rate Applied Totals:	(3,582,571)	\$0.1138 (\$407,876)	37,901	\$23.7264 \$899,257	(65,516)	\$11.0689 (\$725,187)	(\$233,805)
7	PA 1-11	Hamilton-Larimer	Retrofit Tenant Area Lighting	41,936	\$4,772		\$0		\$0	\$4,772
7	PA I-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	2,091	\$49,608	1,075	\$11,901	\$61,509
			Rate Applied Totals:	93,509	\$0.1138 \$10,641	2,091	\$23.7264 \$49,608	1,075	\$11.0689 \$11,901	\$72,151
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 I-15	Pennsylvania-Bidwell	Option C Savings	0	50	356	\$8,441	5,911	\$65,430	\$73,871
			Rate Applied Totals:	104,576	\$0.1138 \$11,901	356	\$23.7264 \$8,441	5,911	\$11.0689 \$65,430	\$85,772
9	PA 1-17	Pressley Street	Retrofit Tenant Area Lighting	68,020	\$7,741		50		50	\$7,741
9	PA 1-17	Pressley Street	Retrofit Common Area Lighting	278,784	\$31,726		50		50	\$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	50	(594,841)	(\$67,693)	23,216	\$550,822	\$483,129
10			Rate Applied Totals:	351,125	\$0.1138 \$39,958	(594,841)	\$23.7264 (\$67,693)	23,216	\$11.0689 \$550,822	\$523,087
10	PA 1-20	Homewood North	Option C Savings	15,724	\$174,047	4,248	\$100,780	1,923	\$21,282	\$296,110
			Rate Applied Totals:	15,724	\$0.1138 \$174,047	4,248	\$23.7264 \$100,780	1,923	\$11.0689 \$21,282	\$296,110

	Project	Project		Elec	trical	Natu	iral Gas	W	ater	Total Energy
Site	Number	Name	Cost Summary		Yearly Energ	gy Savings		Yearly	Savings	Savings
			Description of ECM	(KWH)	(\$)	(MCF)	(\$)	(Kgals)	(\$)	(\$)
11	PA 1-31	Murray Towers	Retrofit Tenant Area Lighting	46,433	\$5,284		\$0		80	\$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		50	\$17
11	PA 1-31	Murray Towers	New Ventilation Unit	13,243	\$1,507		50		\$0	\$1,507
11	PA 1-31	Murray Towers	New Ventilation Unit	3,842	\$437		50		50	\$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	(28)	(\$672)	(6,597)	(\$73,018)	(\$73,691)
			Rate Applied		\$0.1138		\$23.7264		\$11.0689	
			Totals:	131,585	\$14,974	(28)	(\$672)	(6,597)	(\$73,018)	(\$58,716)
12	PA 1-32	Glen Hazel Family	Retrofit Tenant Area Lighting	153,182	\$17,432		\$0		80	\$17,432
12	PA 1-32	Glen Hazel Family	Retrofit Common Area Lighting	0	50)		\$0		\$0	\$0
12	PA 1-32	Cilen Hazel Family	High Efficiency Refrigerators	34,071	\$3,877		50		\$0	\$3,877
12	PA 1-32	Glen Hazel Family	Water Conservations	0	50)	840	\$19,921	1,797	\$19,887	\$39,809
12	PA 1-32	Glen Hazel Family	Limiting Thermostats	0	\$0	2,294	\$54,417			\$54,417
			Rate Applied		\$0.1138		\$23.7264		\$11.0689	
			Totals:	187,253	\$21,309	3,133	\$74,338	1,797	\$19,887	\$115,535
13	PA 1-40	Mazza Pavilion	Retrofit Tenant Area Lighting							
13	PA 1-40	Mazza Pavilion	Retrofit Common Area Lighting			Desil	ding was rehabilita	tud		
13	PA 1-40	Mazza Pavilion	Building Envelope			25011	umg was renaemta	DOM:		
13	PA 1-40	Mazza Pavilion	Option C Savings							
			Rate Applied		\$0.1138		\$23.7264		\$11.0689	
			Totals:	0	\$0	0	\$0	0	\$0	\$0

	Project	Project		Elec	trical	Natu	ral Gas	W	ater	Total Energy
Sice	Number	Name	Cost Summary		Yearly Energ	gy Savings		Yearly	Savings	Savings
			Description of ECM	(KWH)	(\$)	(MCF)	(\$)	(Kgals)	(\$)	(\$)
4	PA 1-41	Caluguiri Plaza	Retrofit Tenant Area Lighting	53,296	\$6,065		\$0		\$0	\$6,065
14	PA.1-41.	Caluguiri Plaza	Retrofit Common Area Lighting	30,311	\$3,449		\$0		80	\$3,449
14	PA 1-41	Caluguiri Plaza	Building Envelope	1,161	\$132		\$0		\$0	\$132
14	PA 1-41	Caluguiri Plaza	Limiting Thermostats	30,433	\$3,463		\$0		50	\$3,463
14	PA 1-41	Caluguiri Plaza	Option C Savings	0	\$0	810	\$19,220	(2,010)	(\$22,247)	(\$3,026)
			Rate Applied		\$0.1138		\$23.7264		\$11.0689	
			Totals:	115,201	\$13,110	810	\$19,220	(2,010)	(\$22,247)	\$10,083
15	PA 1-44	Finello Pavilion	Retrofit Tenant Area Lighting	24,773	\$2,819		50		\$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		80	\$76
15	PA 1-44	Finello Pavilion	Limiting Thermostats	19,733	\$2,246		\$0		80	\$2,246
	PA 1-44	Finello Pavilion	Option C Savings	0	\$0	(72)	(\$1,704)		\$0	(\$1,704)
			Rate Applied Totals:	62,753	\$0.1138 \$7,141	(72)	\$23.7264 (\$1,704)	0	\$11.0689 \$0	\$5,438
16	PA 1-45	Morse Gardens	Retrofit Tenant Area Lighting	7,332	\$834		50		50	5834
16	PA 1-45	Morse Gardens	Retrofit Common Area Lighting	9,164	\$1,043		50		50	\$1,043
16	PA 1-45	Morse Gardens	Limiting Thermostats	19,469	\$2,216		\$0		50	\$2,216
	PA 1-45	Morse Gardens	Option C Savings	0	50	690	\$16,373	290	\$3,206	\$19,579
	174.1-45	bytese Caracus	Option C Savings			0,0	910,070	2,70	901800	9171017
			Rate Applied Totals:	35,965	\$0.1138 \$4,093	690	\$23.7264 \$16,373	290	\$11.0689 \$3,206	\$23,672
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		50		S0:	\$1.33
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	50	310	\$7,354	(439)	(\$4,864)	\$2,490
			Rate Applied	103.941	\$0.1138 \$11.829	310	\$23.7264 \$7,354	(439)	\$11.0689 (\$4,864)	\$14,318

	Project	Project		Elect	Electrical Natural Gas Water					Total Energy	
Sice	Number	Name	Cost Summary	Yearly Energy Savings Yearly Savings					Savings	Savings	
			Description of ECM	(KWH) (\$) (MCF) (\$) (Kgala)		(\$)	(\$)				
18	PA 1-47	Gualtieri Manor	Retrofit Tenant Area Lighting	16,158	\$1,839		90		\$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		80	\$882	
18	PA 1-47	Gualtieri Manor	Option C Savings	0	50	291	\$6,896	128	\$1,420	\$8,316	

Rate Applied \$0.1138 \$23.7264 \$11.0689

Totals: 56,945 \$6,480 291 \$6,896 128 \$1,420 \$14,796

### Total ALL Sites:

						Total Energy
(KWH)	(\$)	(MCF)	(\$)	(Water)	(\$)	Savings
(2,217,588)	(\$80,329)	(506,889)	\$2,019,089	(29,857)	(\$36,629)	\$1,902,131

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	Electricty 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 7 Option C Savings

		Electric	: Savings	Gas	Savings	Water / S	ewer Savings	Total Savings
HA Site #	Site Name	kWh	Annual Savings	MCF	Annual Savings	1000 Gal/yr.	Annual Savings	Savings/yr.
PA 1-01	Addison Terrance			Building r	ehabilitated			\$0
PA 1-02	Bedford Dwellings			21,985	\$521,627			\$521,627
PA 1-04	Arlington Heights	(983,262)	(\$111,942)	7,076	\$167,899	5,067	\$56,081	\$112,038
PA 1-05	Allegheny Dwellings			9,161	\$217,365	5,299	\$58,657	\$276,022
PA 1-09	Northview Heights	(3,582,571)	(\$407,876)	37,901	\$899,257	(65,516)	(\$725,187)	(\$233,805)
PA 1-11	Hamilton-Larimer			2,091	\$49,608	1,075	\$11,901	\$61,509
PA 1-15	Pennsylvania-Bidwell			356	\$8,441	5,911	\$65,430	\$73,871
PA 1-17	Pressley Street			(594,841)	(\$67,693)	23,216	\$550,822	\$483,129
PA 1-20	Homewood North	15,724	\$174,047	4,248	\$100,780	1,923	\$21,282	\$296,110
PA 1-31	Murray Tower			(28)	(\$672)	(6,597)	(\$73,018)	(\$73,691)
PA 1-40	Mazza Pavilion (Brookline)			Building r	ehabilitated			\$0
PA 1-41	Caliguiri Plaza (Allentown)			810	\$19,220	(2,010)	(\$22,247)	(\$3,026)
PA 1-44	Finello Pavilion (South Oakland)			(72)	(\$1,704)			(\$1,704)
PA 1-45	Morse Gardens			690	\$16,373	290	\$3,206	\$19,579
PA 1-46	Carrick Regency			310	\$7,354	(439)	(\$4,864)	\$2,490
PA 1-47	Gualtieri Manor			291	\$6,896	128	\$1,420	\$8,316
		(4,550,109)	(\$345,770)	(510,022)	\$1,944,751	(31,653)	(\$56,516)	\$1,542,465

Reference: Actual usage and costs for past Year. SimActual: Actual usage and calculated costs for current Year. Buseline: Current usage and costs based upon historic patierns of Unit use.

#### Meter: FA 1-01 Water

Reference																								
		Sap 2006		Oct 1006		Nev 2006		Dec 1996		Jan 2006		Fab 2006		Mar 2006		Apr 2006		May 1006		Jun 2006		Jul 1006		Aug 2006
Month Use		3,582		3,225		3,453		3,991		4,311		4,445		4,984		7,448		4,464		6,169		2,985		3,457
YTD Use		3,552		6,807		10,260		14,251		18,562		23,007		27,991		35,439		39,903		46,072		49,057		32,514
Month S	5.	33,205	8	29,896	5.	32,009	8	37,000	\$	39,963	5	41,205	\$	46,202	8	69,043	8	41,381	\$	57,187	8	27,671	5	32,046
YTD 5	5.	33,205	5	63,101	5.	95,110	5	132,110	5	172,073	5	213,278	5	259,480	5	328,523	5	369,904	\$.	427,091	5	454,762	5	486,808
BP Length		30		31		30		31		31		2.5		31		30		31		30		31		31
HDD		134		442		604		812		433		969		832		349		236		41		4		
CDD		12																42		83		263		266
Month Rate	5	9.270	5	9.270	5	9.270	5	9.271	\$	9.270	5	9.270	\$	9.270	5	9.270	5	9.270	\$	9.270	5	9.270	5	9.270
YTD Rate	5.	9.270	5	9.270	5.	9.270	5	9.270	5	9.270	5	9.270	5	9.270	5	9.270	5	9.270	5	9.270	5	9.270	5	9.270

Bareline																					
	Sep 2017	, Q	# 1017	Nev	2017	Dec :	1017	Jan 200	1.6	Feb 2015	Mar 20	(1.6	Apr 2015	Mag	y 1015	Ju	n 2018	1	Jul 2015	Au	€ 2018
Month Use																					
YTD Use																					
Month 5																					
YTD 5																					
BP Length	28		34		26		30	2	9	32		50	31		30		30		31		30
HDD	77		342		658	1.	108	1,12	7	858	9	17	526		18		2.0				2
CDD	110		37							4			25		150		207		246		254
Month Rate	5 -	5		5		5		5 -	5		5 -	5		5		5		5		5	
YTD Rate	š -	8		5.		8		\$ -	- 8		\$ -	- 8		8		5.		8		5	

SimActual																								
	Sag	2017	Oct	1017	N	av 2017	E	ec 2017	r,	Jan 2018	F	6 201E	М	ar 1015	۵	Apr 2016	м	ay 1015		un 2015		Pul 2015		kug 2018
Month Use																								
YTD Use																								
Month 5																								
YTD S																								
BP Length		28		34		26		30		29		32		30		31		30		30		31		30
HDD		77		142		658		1,108		1,127		165.5		917		526		18		2.0				2
CDD		110		37								4				25		150		207		246		254
Month Rate	5		5		5		5	-	5		5		5		5		5	-	5		5		5	
YTD Rate	5.		8		5.		8		8		5		\$		5		8		5.		8		5.	

	Sep 2017	Oct 1017	Nev 2017	Dec 2017	Jan 2018	Fab 2015	Mar 2018	Apr 2015	May 1015	Jun 2018	Jul 2015	Aug 2018
Month Use		-						-	-			
YTD Use												
Month 5						-					-	
YTD \$		-				-		-	-			
BP Length												
HDO		-				-		-				
CDD	-		-	-					-	-		
Ces Avoidance												
Month Use												
YTD Use												

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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 patierns of Unit use.

Reference																								
		Sap 2006	0	at 1006		Nev 2006		Dec 2006		Jan 2006		Fab 2006		Mar 1006	,	Apr 2006	,	May 1006		Jun 2006		Jul 2006	,	Aug 20
fonth Use		815		4,788		4,586		9,736		10,041		8,679		7,959		5,065		2,474		875		577		5)
TD Use		815		5,603		10,189		19,925		29,966		38,641		46,604		51,669		54,143		55,018		55,595		36,1
Acretic S	5.	16,195	Ś	95,140	5	91,127	S	193,461	\$	199,521	s	172,457	ķ	158,150	5	100,645	S	49,160	5.	17,387	s	11,465	5.	10,13
TD 5	5.	16,195	S I	11,335	5.	202,462	s	395,923	s	595,444	5	767,901	s	926,051	5 1	1,026,696	5.1	,075,856	5.1	.093,243	5	1,104,708	5.1	.1.14,86
SP Length		30		31		30		31		3.1		2.5		31		30		31		30		31		
EDD		1.59		473		634		843		864		997		863		379		261		59		6		
DD		12																42		83		263		24
Month Rate	5.	19.871	s	19.871	5	19.871	s	19.871	s	19.871	s	19.871	ş	19.871	S	19.871	s	19.871	5.	19.871	s	19.870	5.	19.8
TD Rate	5.			19.87L	5.	19.871	5	19.871	5	19.871	5		8	19.871	5	19.871	S	19.871	5.		s	19.871	5.	19.8
									Ť												_			
areline			_														_				_			
fonth Use		Sep 2017	•	at 1017	-	New 2017	-	Dec 2017		Jan 2015		Fab 2015		Mar 1015		Apr 2015	ď	day 1015	-	Jun 2015		Jul 2015	-	Aug 26
TD Use																								
Mouth S			s		\$		5		5		5		2		8		5		\$		5		\$	
YTD 5	5		5		î.		Š		ŝ		5				5		5		î		5		5.	
3P Length			-								1										-			
EDD .																								
CDD																								
Aonth Rate	5.		c				5		c		5		c		5		5		٤.		5			
TD Rate	1				1		s		ŝ		s	-	į.		5		s		ī		s		1	
fonth Use		Sep 2017	0	est 1017		Nev 2017		Dec 2017		Jan 2015		Fab 2015		Mar 1015		Agr 2015	ď	day 1015 -		Jun 2015 -		Jul 1015		Aug 26
YTD Use																								
Mouth 5	5		ş		5		5		\$		5		ş		5		5		5		5		5	
TD 8	5		s		5		s		\$		s		ŝ		s		s		5		s		5	
3P Length																								
IDD .																								
CDD						-																		
Month Rate	- 5		5		5	-	5		5		5		8		5		5		5		5		5	
TD Rate	5.	-	\$		5	-	S	-	\$		5	-	\$	-	S	-	S	-	5.	-	S	_	ş.	_
im.Letual v	L Ba																				_			Aug 26
	L B1	Sep 2017	0	at 1017		Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 1015		Apr 2015	,	day 1015		Jun 2015		Jul 2015	_	
Month Une	L Ba	Say 2017	0	-		-		-									,			-		-		
RinnActual v Month Une VTD Use	. 61		0					Dec 2017									,							
Month Use FTD Use Month 5	L Ba	Sep 2017	0	÷		:		:		:		:		:		:	,	:		:		:		
Month Use FTD Use Month 5 FTD \$	L Ba	Sag 2017 - - - -	0	-		:		-									,					-		
Month Use PTD Use Month 5 PTD 8 SP Length	. 5:	Sep 2017	0	÷		:		:		:		:		:		:	,	:		:		:		
Month Use TTD Use Month 5 TTD 8 SP Length IDD	. 61	Sag 2017 - - - -	0	÷		:		:								:	,	:				:		
Month Use TTD Use Month 5 TTD 8 SP Length IDD	LBI	Sag 2017 - - - -	0	÷		:		:								:	)	:				:		
Month Use FTD Use Month 5 FTD 8 SP Length EDD		Sag 2017 - - - -	0	÷		:		:								:	,	:				:		
Month Use FTD Use Month 5 FTD \$		Sag 2017 - - - -	0	÷		:		:								:	3	:				:		

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 patients of Unit use.

#### Meter: FA 1-02 Gas

Mouth Day	_	Sap 2006	_	Oct 1006		Nev 2006	_	Dec 1006	_	Jan 2006	_	Fab 2006	_	Mar 1006	_	Apr 2006	_	May 1006		Jun 2006	_	Jul 1006		Aug 200
Month Use		943		2,955		4,627		5,527		8,609		7,752		8,555		6,034		4,153		1,271		1,008		78
YTD Use		943		3,898		8,525		14,052		22,661		30,413		38,968		45,902		49,155		50,426		51,434		52,21
Month S YTD 5	5.	18,738	5	58,718	5	91,948	3	109,823	5	171,066 450,293	5	154,037	5	774,323	5	119,899	5	82,523	5		3	20,030	-	15,55
BP Length	5.	18,738	3	77,456		30	3	279,227	3	450,293	3	28	3	774,323	3	894,222 30	3	976,745 31	3	1,002,001	3	1,022,03L 31	b	
HDD HDD		134		442		604		812		433		969		832		349		236		47		4		3
CDD		134		442		604		812		633		909		8.52		349		42		83		263		26
Month Rate																	5	19.871						19.57
YTD Rate	5.	19.871	5	19.871	5	19.872	5	19.870	6	19.871	5	19.871	5	19.871	5	19.871	5		5	19.871	5	19.871	1	19.87
LIDEN	Ť	17/8/1	Ť	19.0/1	Ť	12.001	Ť	17,071	Ť	12.011	Ť	17,071	Ť	15.011	Ť	17/07/1	_	15.511	Ť	17/2/1	_	13.071	Ť	12.01
Bateline																								
		Sep 2017		Oct 1017		New 2017		Dec 2017		Jan 2018		Fab 2015		Mar 1015		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 201
Month Use		1,627		2,964		6,686		9,710		9,350		6,801		8,338		5,160		1,410		1,392		1,210		1,22
YTD Use		1,627		4,590		11,276		20,986		30,336		37,137		45,475		50,634		52,044		53,436		54,645		35,86
Month S	5	35,59%	5	TO,318	5	155,628	5	230,390	\$	221,834	5	161,358	5	197,826	5	122,419	- 5		5	33,016	5	28,700	5	29,044
YTD 5	5	38,598	5	108,916	5	267,544	5	497,933	5	719,767	5	881,125	5	1,078,951	5	1,201,370	5	1,234,817	5	1,267,833	5	1,296,533	5	1,325,57
BF Length		29		31.		3.2		32		29		29		32		29		31.		31		30		34
HDD		63		236		743		1,160		1,127		776		971		550		22		2.0				
CDD		1.14		37								4				12		146		208		249		24
Month Rate	5	23.726	5	23,726	5	23,726	5	23,726	5	23,726	5	23,726	5	23,726	5	23,726	5	23,726	5	23.726	5	23.726	5	23,72
YTD Rate	5.	23.726	8	23.726	5	23.726	8	23.726	\$	23.726	5	23.726	\$	23.726	5	23.726	8	23.726	5	23.726	8	23.726	5.	23.72
Sim.Letual																								
Jane Land Control		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 2015		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 201
Month 17se		729		1,775		3,921		5,012		6,6T1		4,251		5,168		3,455		925		730		607		635
YTD Use		729		2,504		6,425		11,437		18,108		22,360		27,528		30,983		31,908		32,638		33,245		33,884
Month 5	5	17,297	5	42,112	5	93,041	5	118,919	\$	1.55,274	5	100,870	5	122,618	5	81,982	5	21,952	5	17,311	5	14,409	5	15,166
YTD \$	5.	17,297	8	59,409	5	152,449	8	271,368	\$	429,642	8	530,513	\$	653,131	8	735,113	8	757,064	5	774,375	8	T88,784	5	803,950
BP Length		29		31.		3.2		32		29		29		32		29		31.		31		30		34
HDD		63		236		743		1,160		1,127		776		971		55D		22		2.0				
CDD		1.14		37								4				12		146		216		249		24
Month Rate	5	23.726	5	23,726	5	23,726	- 5	23,726	5	23,726	5	23,726	5	23,726	5	23,726	- 5	23.726	5	23.726	5	23.726	5	23,726
YTD Rate	5.	23.726	8	23.726	5	23.726	8	23.726	\$	23.726	5	23.726	\$	23.726	5	23.726	8	23.726	5	23.726	8	23.726	5.	23.72
SimActual vs.																								
		Sap 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 1015		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 201
Month Use		-55.2%		-40.1%		-41.3%		-48.4%		-28.7%		-37.5%		-38.0%		-33.0%		-34.4%		47.4%		-49.8%		-47.85
YTD Use		-55.2%		45.5%		-43.0%		-45.5%		-40.3%		-39.8%		-39.5%		-38.8%		-38.7%		-38.9%		-39.2%		-39.45
Month 5		-55,2%		-40.1%		-41.3%		-48,4%		-28.7%		-37,5%		-38.0%		-33.0%		-34.8%		-47,65%		-49.8%		-47.85
YTD\$		-55.2%		-45.5%		-43.0%		-45.5%		-40.3%		-39.8%		-39.5%		-38,8%		-38.7%		-38.9%		-39.2%		-39.45
BP Length																								
HDO																								
CDD																								
Use Avoidanc																								
Month Use YTD Use		895 896		1,189		2,764 4,851		4,698 9,549		2,679		2,549 14,777		3,170 17,947		1,704		484 20,136		20,798		602 21,400		58: 21,98:

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 patients of Unit use.

#### Meter: PA 1-64 Electric

Cost Avaidance

Reference																								
		Sap 2006		Oct 1006		Nev 2006		Dec 2006		Jan 2006		Fab 2006		Mar 1006		Apr 2006		May 1006		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 S	5	6,072	S	6,497	5.	6,831	S	7,380	5	6,375	S	6,110	\$	6,489	S	5,867	S	5,821	5.	5,814	S	7,157	\$	6,436
YTD 5	5.	6,072	S	12,569	5	19,400	S	26,780	8	33,155	5	39,265	\$	45,754	5	51,621	S	57,442	5.	63,256	S	70,413	5	76,849
BP Length		30		31		30		31		3.1		2.6		31		30		31		30		31		3.1
HDD		134		442		604		812		633		969		832		349		236		47		4		
CDD		12																42		83		263		266
Month Rate	5	0.114	5	0.114	5.	0.114	5	0.114	\$	0.114	5	0.114	\$	0.114	5	0.114	5	0.114	5.	0.114	5	0.114	5	0.114
YTD Rate	5.	0.114	s	0.114	5	0.134	S	0.114	s	0.114	5	0.114	s	0.114	5	0.114	S	0.314	5.	0.114	S	0.114	5.	0.114

Bareline																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 2015		Apr 2015		May 1015		Jun 2015		Jul 2015		Aug 2015
Month Use		51,806		53,704		64,364		69,103		52,934		55,116		54,557		52,841		49,747		52,696		61,845		54,526
YTD Use		51,806		105,511		169,875		238,978		291,912		347,027		401,584		454,425		504,172		556,868		618,713		673,239
Mouth \$	5	3,898	5	6,114	5.	7,328	5	7,867	\$	6,026	5	6,275	\$	6,211	5	6,016	5	5,664	5.	3,999	5	7,041	5	6,206
YTD 5	5.	5,898	S	12,012	5	19,340	S	27,207	s	33,233	5	39,508	\$	45,719	5	51,735	S	57,399	5	63,398	S	70,439	5.	76,647
BP Length		29		29		3.2		34		29		29		30		31		30		30		31		30
HDD		6.2		265		755		1,376		1,030		732		889		493		14		19				2
CDD		1.10		37								4				30		152		231		232		271
Month Rate	5	0.114	5	0.114	5	0.134	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114
YTD Rate	5	0.114	s	0.114	5.	0.114	S	0.114	\$	0.114	5	0.114	\$	0.114	5	0.114	S	0.114	5	0.114	S	0.114	5	0.114

Simuloteal																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2015		Apr 2015		May 1015		Jun 2015		Jul 2015		Aug 2015
Month Use		84,078		90,849		133,548		210,465		164,476		130,816		147,640		111,199		290,329		97,669		95,727		99,705
YTD Use		84,078		174,927		308,475		518,940		683,416		814,232		961,872		1,073,071		1,363,400		1,461,069		1,556,796		1,656,501
Mouth \$	5.	9,572	5	10,343	5	13,204	5	23,961	\$	18,725	5	14,893	\$	16,808	5	12,660	5	33,053	5	11,119	5	10,898	5	11,351
YTD S	5.	9,572	S	19,915	5.	35,119	s	59,080	\$	77,805	5	92,698	\$	109,507	5	122,166	S	155,220	5.	166,339	s	177,237	5	148,588
BP Length		29		29		3.2		34		29		29		30		31		30		30		31		30
HDD		52		265		755		1,376		1,030		732		5399		493		14		19				2
CDD		110		37								4				30		152		231		232		271
Month Rate	5.	0.114	5	0.314	5	0.134	5	0.114	8	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114
YTD Rate	5.	0.114	S	0.114	5.	0.114	s	0.114	\$	0.114	S	0.114	5	0.114	5	0.114	S	0.114	5.	0.114	S	0.114	5.	0.114

	Sep 2017	Oct 1017	Nev 2017	Dec 2017	Jan 2015	Feb 2015	Mar 2015	Apr 2015	May 1015	Jun 2015	Jul 2015	Aug 2015
Month Use	62.3%	69.2%	107.5%	204.6%	210.7%	137.3%	170.6%	110.4%	483.6%	85.3%	54.8%	82.9%
YTD Use	62.3%	65.8%	81.6%	117.1%	134.1%	134.6%	139.5%	136.1%	170.4%	162.4%	151.6%	146.0%
Month 5	62.3%	69.2%	107.5%	204.6%	210.7%	137.3%	170.6%	110.4%	483.0%	85.3%	54.8%	82.9%
YTD S	62.3%	65.8%	81.65%	117.1%	134.1%	134.6%	139.5%	136.1%	170.4%	162.4%	151.6%	146.0%
B# Length												
HDD	-		-	-	-	-		-		-	-	
CDD												

CDD	-		-			-		-				
Use Avoidance												
Month Use	(32,270)	(37,145)	(09,154)	(141,363)	(111,542)	(75,700)	(93,084)	(58,358)	(240,581)	(44,973)	(33,882)	(45,179)
YTD Use	(32,270)	(69,416)	(138,599)	(279,962)	(391,505)	(467,205)	(560,288)	(618,646)	(859,228)	(904,201)	(938,083)	(983,262)

Month Use S	5.	(3,674) \$	(4,229) \$	(7,876) S	(16,094) \$	(12,699) \$	(8,618) \$	(10,597) \$	(6,644) \$	(27,390) \$	(5,120) S	(3,857) \$	(5,144)
YTD 8	5.	(3,674) \$	(7,903) \$	(15,779) \$	(31,873) \$	(44,572) \$	(53,190) \$	(63,797) \$	(70,431) \$	(97,821) \$	(102,941) \$	(106,798) \$	(111.942)

Reference: Actual usage and costs for past Year. SimActual: Actual usage and calculated costs for current Year. Buseline: Current usage and costs based upon historic patients of Unit use.

#### Meter: FA 1-04 Gas

		Sep 2006		Oct 1996		New 2006		Dec 1986		Jan 2006		Fab 2006		Mar 1804		Apr 2006		May 1006		Jun 2006		Jul 2006		Aug 200
Month Use		253	_	1,199		1,067		1,745		1,747		1,650		1,537		1,010		470		214		405		17
YTD Use		253		1,452		2,519		4,284		5,031		7,681		9,218		10,228		10,698		10,912		11,317		11,49
Month S		5,02T		23,825	5.	21,202	5	35,072		34,714	5	32,786	٠	30,541	5	20,069	5	9,339		4,252		8,048		3,45
TD5	5	5,027	5	28,852	5.	50,054	5	85,126	5	119,840	5	152,626	5	183,167	5	203,236	5	212,575	5.	216,827	5	224,875	5	228,33
IP Length		30		31		30		31		31		28	,	31		30		31		30		31		120,00
EDD Tangin		214		535		694		905		926		1,053		925		439		313		92		11		,
CDD		12		233		0.54		943		940		1,033		943		439		42		83		263		26
Worth Rate		19.870		19.871		19,871		19.871		19,571		19,870		19.871		19.870		19.870		19.869		19.872		19.86
YTD Rate	5.	19.870	5	19.871	5.	19.871	5	19,871	5	19.871	5	19.871	5	19.871	5	19.871	5	19.871	5.	19.871	5	19.871	5.	19.87
1.7.D Hans	Ť	133250	Ť	13.011	Ť	12.00-1	Ť	12011	Ť	1.7.211	Ť	15.011	Ť	335,011	_	17.07.1	Ť	17.011	Ť	17.00-1	Ť	12.011	Ť	13.00
Sateline																								
		Sep 2017		Oct 1917		Nev 2017		Dec 1967		Jan 2018		Fab 2015		Mar 1015		Age 2018	- 1	May 1015		Jun 2018		Jul 2015		Aug 201
Month Use		212		732		1,374		1,670		2,602		1,474		1,753		1,226		181		121		73		8
YTDUw		212		944		2,318		3,988		6,590		8,064		9,817		11,043		11,224		11,346		11,419		11,50
Month 5	5	5,040	5	17,367	5	32,59%	5	39,627	5	61,732	5	34,973	\$	41,596	5	29,077	5	4,304	5	2,87%	5	1,742	5	2,05
YTD 5	5.	5,040	5	22,407	5.	55,005	5	94,632	5	156,364	5	191,337	5	232,933	5	262,010	5	266,314	5.	269,192	5	270,934	5.	272,98
3P Length		25		40		30		27		34		28		30		31		32		28		32		3
HDD		93		383		780		961		1,508		843		1,007		690		6.5		35		1		1
CDD		66		91								4				12		146		170		281		23
Month Rate	5.	23.726	5	23.726	5.	23.726	5	23.726	5	23,726	5	23.726	5	23,726	5	23.726	5	23.726	5.	23.726	5	23.726	5.	23.72
YTD Rate	5.	23.726	s	23.726	5.	23.726	s	23.726	\$	23.726	\$	23.726	\$	23.726	5	23.726	s	23.726	5.	23.726	s	23.726	5.	23.72
SimActual		Sep 2017		Oct 1917		New 2017		Dec 1917		Jan 2018		Feb 2015		Mar 1018		Apr 2018		May 1015		Jun 2018		Jul 2015		Aug 201
Month Use		243		309		423		391		650		466		430		446		321		268		252		23
YTD Use		243		551		974		1,365		2.015		2,481		2,911		3,357		3,678		3,946		4,198		4,425
Month S	5.	3,756		7,322	t	10,041	*	9,265		15,410	5	11,086	t	10,212	5	10,577	5	7,609	*	6,388	*	5,979	5.	5,411
YTDS	5	5,756	5	13,078	1	23,119	8	32,387	1	47,797	5	58,863	ě	69,075	5	79,652	5	87,261	1	93,629	5	99,608	5.	105,06
BP Length	-	25	-	40	-	30		27		34	-	28		30		31		32	-	28	-	32	-	3
HDD		93		383		790		961		1,106		1143		1,007		690		65		35		1		1
CDD		66		91		-		-				4				12		146		170		281		23
Month Rate	5.	23.726		23.726		23.726		23.726		23,726		23.726		23.726		23.726		23.726	5.	23.726		23.726		23.72
YTD Rate	5	23.726	s	23,726	5.	23.726	5	23.726	5	23.726	5	23.726	5	23.726	5	23.726	5	23.726	1	23.726	5	23.726	5	23.72
															_		_							
Simulatual v	. Ba				_															Jun 2015		Jul 2015	_	Aug 201
	. Ba	Sap 2017		Oct 1817		New 2017		Dec 1917		Jan 2018		Fab 2015		Mar 1015	_	Age 2015		May 1015	-			the sales dealers		167.05
Month Use	. Ba	Sep 2017 14:2%		-57.8%		-69:2%		-76.6%		-75.0%		-68.4%		-75.4%		-63.6%		76.8%		121.3%		243.2%		
Month Use YTD Use	. 53	\$42% 142%		-57.8% -41.6%		-69:2% -58:0%		-76.6% -65.8%		-75.0% -69.4%		-68.4% -69.2%		-75.4% -70.3%		-63.6% -69.6%		76.8% -67.2%		121.3% -65.2%	Ī	-63.2%		
Month Use YTD Use Month 5	. 21	549 2017 14:2% 14:2% 14:2%		-57.8% -41.6% -57.8%		-69:2% -58:0% -69:2%		-76.6% -65.3% -76.6%		-75.0% -69.4% -75.0%		-68.4% -69.2% -68.4%		-75.4% -79.3% -75.4%		-63.6% -69.6% -63.6%		76.8% 47.2% 76.8%		121.3% -65.2% 121.3%		-63.2% 243.2%		167.05
Month Use YTD Use Month 5 YTD 5	. 51	Sep 2017 14:2% 14:2% 14:2% 14:2%		-57.8% -41.6% -57.8% -41.6%		-69.2% -58.0% -69.2% -58.0%		-76.6% -65.3% -76.6% -65.3%		-75.0% -69.4% -75.0% -69.4%		48.4% 49.2% 48.4% 49.2%		-75.4% -70.3% -75.4% -70.3%		-63.6% -69.6% -63.6% -69.6%		76.8% 47.2% 76.8% 47.2%		121.3% -65.2% 121.3% -65.2%		49.2% 209.2% 49.2%		167.05 -61.55
Month Use YTD Use Month 5 YTD 5 BP Length	. 51	Sep 2017 14:2% 14:2% 14:2% 14:2%		-57.8% -41.6% -57.8% -41.6%		-69.2% -58.0% -69.2% -58.0%		-76.6% -65.3% -76.6% -65.3%		-75.0% -69.4% -75.0% -69.4%		-68.4% -69.2% -68.4% -69.2%		-75.4% -70.3% -75.4% -70.3%		-63.6% -69.6% -63.6% -69.6%		76.8% -67.2% -76.8% -67.2%		121.3% -65.2% 121.3% -65.2%		43.2% 243.2% 43.2%		167.05 -61.55
Month Use YTD Use Month 5 YTD 5 BP Length HDO	. 5:	Sep 2017 14:2% 14:2% 14:2% 14:2%		-57.8% -41.6% -57.8% -41.6%		-69.2% -58.0% -69.2% -58.0%		-76.6% -65.3% -76.6% -65.3%		-75.0% -69.4% -75.0% -69.4%		48.4% 49.2% 48.4% 49.2%		-75.4% -70.3% -75.4% -70.3%		-63.6% -69.6% -63.6% -69.6%		76.8% 47.2% 76.8% 47.2%		121.3% -65.2% 121.3% -65.2%		49.2% 209.2% 49.2%		167.05 -61.55
Month Use YTD Use Month 5 YTD 5 SP Length HDD	. 51	Sep 2017 14:2% 14:2% 14:2% 14:2%		-57.8% -41.6% -57.8% -41.6%		-69.2% -58.0% -69.2% -58.0%		-76.6% -65.3% -76.6% -65.3%		-75.0% -69.4% -75.0% -69.4%		-68.4% -69.2% -68.4% -69.2%		-75.4% -70.3% -75.4% -70.3%		-63.6% -69.6% -63.6% -69.6%		76.8% -67.2% -76.8% -67.2%		121.3% -65.2% 121.3% -65.2%		43.2% 243.2% 43.2%		
Month Use YTD Use Month 5 YTD 5 3P Length HDD		Sep 2017 14:2% 14:2% 14:2% 14:2%		-87.8% -41.6% -57.8% -41.6%		-69.2% -58.0% -69.2% -58.0%		-76.6% -65.3% -76.6% -65.3%		-75.0% -69.4% -75.0% -69.4%		-68.4% -69.2% -68.4% -69.2%		-75.4% -70.3% -75.4% -70.3%		-63.6% -69.6% -63.6% -69.6%		76.8% -67.2% 76.8% -67.2%		121.3% -65.2% 121.3% -65.2%		40.2% 200.2% 40.2%		167.05 -61.55
Simileraal vi Month Use Month S YTD S BP Length HDD CDD Use Avoldan		Sep 2817 14:2% 14:2% 14:2% 14:2%		-57.8% -41.6% -57.8% -41.6%		-60.2% -58.0% -69.2% -58.0%		-76.6% -65.3% -76.6% -65.3%		-75.0% -69.4% -75.0% -69.4%		-68.4% -69.2% -68.4% -69.2%		-75.4% -70.3% -75.4% -70.3%		-63.6% -69.6%		76.8% -67.2% 76.8% -67.2%		121.3% -65.2% 121.3% -65.2%		40.2% 200.2% 40.2%		-61.55
Month Use YTD Use Month 5 YTD 5 BP Length HDD CDD		Sep 2017 14:2% 14:2% 14:2% 14:2%		-87.8% -41.6% -57.8% -41.6%		-69.2% -58.0% -69.2% -58.0%		-76.6% -65.3% -76.6% -65.3%		-75.0% -69.4% -75.0% -69.4%		-68.4% -69.2% -68.4% -69.2%		-75.4% -70.3% -75.4% -70.3%		-63.6% -69.6% -63.6% -69.6%		76.8% -67.2% 76.8% -67.2%		121.3% -65.2% 121.3% -65.2%		40.2% 200.2% 40.2%		167.05 -61.55

Month Use S = (716) S = 10,045 S = 22,357 S = 30,359 S = 46,322 S = 23,907 S = 31,384 S = 18,500 S = (3,305) S = (3,491) S = (4,237) S = (3,427) YTD S = (716) S = 9,329 S = 31,886 S = 62,243 S = 108,367 S = 132,474 S = 163,838 S = 182,338 S = 179,053 S = 173,563 S = 171,326 S = 167,899

Reference: Actual usage and costs for past Year. SimActual: Actual usage and calcubited costs for current Year. Baseline: Current usage and costs based upon historic patients of Unit use.

#### Mater: PA 1-04 Water

		Sap 2006		Oct 1996		Nav 2006		Dec 1986		Jan 2006		Fab 2006		Mar 1006		Apr 2006		May 1006		Jun 2006		Jul 2006		Aug 2006
Month Use		342		373		386		483		511		1,491		685		5,634		1,639		490		686		635
YTD Use		342		71.5		1,101		1,594		2,095		3,586		4,271		9,905		11,544		12,034		12,720		13,355
Month S	5	3,170	s	3,458	5	3,578	s	4,478	5	4,737	5	13,822	5	6,350	5	52,22T	s	15,194	5	4,542	S	6,359	5	5,886
YTD 5	5.	3,170	s	6,628	5	10,206	s	14,684	s	19,421	5	33,243	s	39,593	5	91,820	s	107,014	5.	111,556	s	117,915	5.	123,801
BP Lingth		30		31		30		31		31		25		31		30		31		30		31		31
HDD		134		442		604		812		633		969		832		349		236		41		4		
CDD		12				-		-		-		-		-		-		42		83		263		266
Month Rate	5	9.269	s	9.271	5	9.269	5	9.271	5	9:270	5	9.270	\$	9.270	5	9.270	5	9.270	5	9.269	5	9.270	5	9:269
YTD Rate	5.	9.269	s	9.270	5	9:270	s	9.270	s	9:270	5	9.270	s	9.270	5	9:270	S	9.270	5	9.270	S	9.270	5.	9:270

Saratine																								
		Sep 2017		Oct 1017		New 2017		Dec 2017		Jan 2018		Fab 2015		Mar 1015		Apr 2015		May 1015		Jun 2015		Jul 2015		Aug 2018
Month Use		328		395		347		425		587		1,417		703		5,159		1,991		652		669		619
YIDUw		328		723		1,070		1,495		2,063		3,500		4,203		9,362		11,353		12,005		12,674		13,294
Mouth S	5	3,434	5	4,374	5	3,536	5	4,709	\$	6,499	5	15,690	\$	7,795	5	57,104	5	22,057	5	7,222	5	7,401	5	6,557
YIDS	5.	3,634	s	8,008	5.	11,544	s	16,553	s	23,051	5	38,741	s	46,524	5	103,628	s	125,665	5.	132,888	s	140,288	5.	147,145
BP Length		28		33		27		28		36		28		29		31		30		31		31		30
HDD		54		246		643		780		1,531		793		897		614		90		20				2
CDD		116		37								4				12		87		213		286		193
Month Rate	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069
YTD Rate	5	11.069	s	11.069	5	11.069	s	11.069	\$	11.069	s	11.069	s	11.069	s	11.069	s	11.069	5.	11.069	s	11.069	5	11.069

Simuloteal																								
		Sep 2017		Oct 1917		New 2017		Dec 2017		Jan 2018		Feb 2015		Mar 1015		Apr 2015		May 1015		Jun 2015		Jul 2015		Aug 2015
Month Use		538		611		552		489		617		577		545		534		516		2,077		613		558
YTD Use		538		1,149		1,701		2,190		2,807		3,384		3,929		4,463		4,979		7,056		7,669		8,227
Mouth S	5	5,955	5	6,763	5	6,110	5	5,413	5	6,530	5	6,387	\$	6,053	5	5,911	5	5,712	5	22,990	5	6,755	5	6,176
YTDS	5	5,955	s	12,718	5	18,828	s	24,241	s	31,070	5	37,457	s	43,490	s	49,401	s	55,112	5.	78,102	s	84,887	5	91,064
BP Length		28		33		27		28		36		28		29		31		30		31		31		30
HDD		.54		246		643		790		1,531		793		897		614		90		20				2
CDD		116		37		-				-		4				12		87		213		286		193
Month Rate	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.009	5	11.069
YTD Rate	5	11.069	s	11.069	5	11.069	s	11.069	\$	11.069	5	11.069	s	11.069	s	11.069	s	11.069	5	11.069	s	11.069	5	11.069

	Sep 2017	Oct 1017	Nav 2017	Dec 2017	Jan 2015	Feb 2015	Mar 2015	Age 2015	May 1015	Jun 2015	Jul 2015	Aug 201
Month Use	63:9%	54.6%	59:3%	15.0%	5.1%	-59.3%	-22.5%	-89.6%	-74.1%	218.3%	-8.3%	-0.9%
YTD Use	63.9%	58.8%	59:0%	46.4%	34.8%	-3.3%	-6.5%	-52.3%	-56.1%	41.2%	-39.5%	-38.1%
Month 5	63.9%	54.0%	59.3%	15.0%	5.1%	-59.3%	-22.5%	-89.6%	-74.1%	218.3%	-3.3%	-9.9%
YTD S	63:9%	58.9%	59:0%	46.4%	34.8%	-3.3%	-6.5%	-52.3%	-56.1%	41.2%	-39.5%	-38.1%
BP Length												
HDD	-		-	-	-	-	-	-		-	-	
CDD			-		-	-		-		-		

Month Use YTD Use		(210) (210)		(216) (426)		(206) (631)		(64) (695)		(30) (724)		540 116		158 274		4,625 4,899		1,475 6,374		(1,425) 4,949		56 5,005		61 5,067
Cost Avoidar	108																						_	
Month Use S	5.	(2,321)	S	(2,389)	5.	(2,274)	s	(704)	s	(331)	5	9,303	5	1,750	5	51,194	5	16,326	5.	(15,768)	S	616	5	680
YTDS	5.	(2,321)	s	(4.710)	S.	(6,994)	s	(7,688)	s	(8,019)	s	1,284	s	3,034	s	54,227	s	T0L553	S.	54,785	s	55,401	5.	56,081

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.

Reference																								
		Sap 2006		Oct 1006		Nev 2006		Dec 1006		Jan 2006		Fab 2006		Mar 1006		Apr 2006		May 1006		Jun 2006		Jul 1006		Aug 200
Month Use		173		828		1,700		2,652		3,391		2,598		3,244		1,336		921		134		80		15
YTD Use		173		1,001		2,701		5,353		5,744		11,342		14,586		13/922		16,843		16,977		17,057		17,214
Month S	5.	3,438	8	16,453	5.	33,780	8	52,696	\$	67,381	8	51,624	\$	64,460	8	26,547	8	18,301	5.	2,663	8	1,590	5.	3,120
TD 5	5.	3,438	5	19,891	5.	53,673	5	106,367	5	173,748	5	225,372	5	289,832	5	316,379	5	334,680	5.	337,343	5	338,933	5.	342,05
SP Length		30		31		30		31		3.1		25		31		30		31		30		31		3
IDD O		92		382		544		750		271		913		170		293		188		30				
CDD		12																42		8.3		263		266
Month Rate	5.	19.873	5	19.871	5.	19.871	5	19.870	5	19.871	5	19.871	5	19.871	5	19.871	5	19.871	\$	19.873	5	19.875	5.	19.572
TD Rate	5.	19.873	5	19.871	5.	19.871	5	19.871	\$	19,871	5	19.871	5	19.871	5	19.871	5	19.871	5.	19.871	5	19.871	5.	19.87
lateline		Sap 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Feb 2015		Mar 1015		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 201
Month Use		160		315		2,205		2,658		4,793		2,930		2,750		2,261		432		93		57		50
CTD Use		140		475		2,480		5,339		10,132		13,062		15,812		18,073		18,505		18,596		18,655		18,700
Month S	5.	3,901	5	7,462	1	52,326	5	63,075	5	113,726	5	69,518	5	65,251	Š	53,637	5	10,254	\$.	2,209	5	1,350	\$.	1,22
YTD 5	5	3,801	5	11,263	5.	63,589	5	126,664	5	240,390	5	309,909	5	375,160	5	428,797	5	439,051	5.	441,260	5	442,610	5	
37 Length		22		29		33		29		33		29		30		31		30		29		32		25
IDD .		35		76		621		754		1,369		832		T80		638		110		12				
ODD		53		100						1,000		4				12		70		196		280		213
Month Rate	5.	23.726		23.726	5.	23.726		23.726		23,726	5	23,726	5	23,726	*	23.726	5	23.726		23.726		23.726		23,726
'TD Rate	5.	23.726	5	23.726	1.	23.726	5	23.726	5	23.726	5	23,726	5	23, 726	5	23.726	5	23.726	1	23.726	5	23.726	5	23.72
SimActual								D				T-1						May 1015						
Month Use		Sep 2017 28		Oct 1017 41		New 2017 1,204	-	Dec 2017	-	Jan 2018 1,995	-	Feb 2015 1,515	-	Mar 2015 1,504		Apr 2015 1,254		422	-	Jun 2018 33	-	Jul 2015 29	-	Aug 201
TD Use		28		69		1,273		2,737		4,732		6,247		7,750		9,035		9,456		9,489		9,518		9,545
Month S	t	652		975		28,56T	5	34,738		47,329	5	35,945	5	35,600		30,469		10,005	\$.	771		035	\$.	841
TDS	1.	652	5	1,628	1	30,194	5	64,932		112,261	5	148,207	5	183,887	5	214,356	5	224,362	1.	225,133	5	225,821	5	226,468
37 Length		22		29		33		29		33		29	,	30		31		30	*	29	,	32	,	25
EDD		35		76		621		754		1,369		832		T90		638		110		12				
CDD		53		100		-		1.54		1,7100		4				12		70		196		280		213
Month Rate		23.726		23.726		23.726		23.726		23.726		23.726		23,726		23.726		23.726		23.726		23.726		23.720
YTD Rate	5.	23.726	5	23.726	5	23.726	5	23.726	5	23.726	5	23,726	5	23, 726	5	23.726	5	23,726	5.	23.726	5	23.726	5	23.726
SimActual vs.																	_							
Month Use		-82.8%		Oct 1017 -86.9%		New 2017 -45.4%		-44.9%		Jan 2018 -58.4%		Feb 2015 -48.3%		Mar 2018 -45.3%		Apr 2015 -43.2%		May 1015 -2.4%		Jun 2018 -65.1%		Jul 2015 -49.0%		Aug 201 -47, 15
YTD Use		-82,8%		-85.5%		-52.5%		-48,7%		-53.3%		-52.2%		-S1.0%		-50.0%		43.9%		49.0%		49.0%		-49.0%
				-86.9%		-45,454		-44,9%		-58.4%		-48.3%		-65.3%								-49.0%		
douth 5		-82,8%				-52.5%		-48,7%		-53.3%		-52.2%				-43.2%		-2,4%		-65.1% -40.6%		-49.0%		-47,1%
YTD \$		-82.8%		-85.5%		-92.979						-92.279		-51.0%		-50.0%		-48.9%				-47.17%		-49.0%
3P Length																								
3DD 3DD																								
.00				-		_			_	-				_		-		_	_			-		_
Use Avoidano			_		_		_		_		_		_		_		_		_		_		_	
Month Use		133		273		1,001		1,194		2,798		1,415		1,246		976		10		61		28		24

Month Use \$ \$ 3,149 \$ 6,487 \$ 23,760 \$ 28,337 \$ 66,396 \$ 33,573 \$ 29,571 \$ 23,168 \$ 249 \$ 1,438 \$ 662 \$ 576 YTD\$ \$ 3,149 \$ 9,636 \$ 33,395 \$ 61,732 \$ 128,129 \$ 161,702 \$ 191,273 \$ 214,441 \$ 214,690 \$ 216,127 \$ 216,789 \$ 217,365

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 patients of Unit use.

#### Meter: PA 1-05 Water

		Sap 2006		Oct 1006		Nev 2006		Dec 1986		Jan 2006		Fab 2006		Mar 2006		Apr 2006		May 1006		Jun 2006		Jul 2006		Aug 2006
Month Use		821		680		613		831		1,120		678		415		1,364		558		1,490		845		906
TD Use		821		1,501		2,114		2,945		4,065		4,743		5,158		6,522		7,000		5,570		9,413		10,321
Month S	5.	7,611	S	6,304	5.	5,683	S	7,706	5	10,382	5	6,285	\$	3,847	5	12,644	S	5,173	5.	13,812	S	7,833	5.	8,399
TD 5	5.	7,611	s	13,915	5	19,598	s	27,304	s	37,686	5	43,971	s	47,818	5	60,462	s	65,635	5.	79,447	S	87,280	5.	95,679
3P Length		30		31		30		31		31		25		31		30		31		30		31		31
IDD .		134		442		604		812		633		969		832		349		236		47		4		
DD.		12																42		83		263		266
Aonth Rate	5.	9.270	5	9.271	5.	9.271	5	9.273	5	9.270	5	9.270	\$	9.270	5	9.270	5	9.271	5.	9.270	5	9.270	5.	9.270
TD Rate	5.	9.270	s	9.270	5.	9.271	S	9.271	8	9.271	5	9.271	s	9.271	5	9.270	5	9.270	5.	9.270	S	9.270	5.	9.270

Bareline																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 2015		Apr 2015		May 1015		Jun 2015		Jul 2015		Aug 2015
Month Use		849		783		634		769		1,035		918		461		1,011		824		1,128		1,087		851
YTD Use		849		1,632		2,266		3,035		4,070		4,988		5,449		6,460		7,284		8,412		9,499		10,350
Month S	5.	9,396	5	8,671	5	7,018	5	8,507	\$	11,456	5	10,159	\$	5,106	5	11,192	5	9,122	5.	12,486	5	12,028	5.	9,432
YTD 5	5.	9,396	S	18,068	5.	25,086	S	33,593	s	45,049	5	55,208	s	60,316	5	71,508	S	80,630	5.	93,116	S	105,144	5.	1.14,566
BP Length		30		32		30		32		3.2		32		28		30		29		31		30		30
HDD		59		7.5		561		889		1,418		974		737		716		219		2.0				
CDD		87		141										4		12		50		177		289		216
Month Rate	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5.	11.069
YTD Rate	5.	11.069	S	11.069	5.	11.069	S	11.069	\$	11.069	- 5	11.069	\$	11.069	5	11.069	8	11.069	5.	11.069	8	11.069	5.	11.069

Sim.Lotual																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2015		Apr 2015		May 1015		Jun 2015		Jul 2015		Aug 2018
Month Use		393		447		418		491		615		429		319		343		360		405		439		392
YTD Use		393		840		1,258		1,749		2,364		2,793		3,112		3,455		3,815		4,220		4,659		5,051
Mouth S	5.	4,310	5	4,945	5.	4,627	5	5,431	\$	6,507	5	4,749	\$	3,531	5	3,797	5	3,965	5.	4,453	5	4,859	5	4,339
YTDS	5.	4,350	s	9,298	5.	13,925	s	19,360	5	26,167	s	30,915	\$	34,446	s	38,243	s	42,228	5.	46,711	S	51,570	5	55,900
BP Length		3.0		32		30		32		3.2		32		28		30		29		31		30		30
HDD		.19		7.5		361		1699		1,418		978		737		716		219		20				
CDD		8.7		141										4		12		50		177		289		216
Month Rate	5.	11.069	5	11.069	5.	11.069	5	11.069	8	11.069	5	11.069	8	11.069	5	11.069	5	11.069	5.	11.069	5	11.069	5	11.069
YTD Rate	5.	11.069	s	11.069	5.	11.069	S	11.069	5	11.069	5	11.069	5	11.069	S	11.069	S	11.069	5.	11.069	S	11.069	5.	11.069

	Say 2017	Oct 1017	New 2017	Dec 2017	Jan 2015	Feb 2015	May 2015	Apr 2015	May 2015	Jun 2015	Jul 2015	Aug 2015
Month Use	-53.7%	-42.9%	-34.1%	-36.1%	-40.6%	-53.3%	-30.9%	-66.1%	-56.3%	-64.1%	-59.6%	-53.9%
YTD Use	-53.7%	-48.5%	-44.5%	-42.4%	-41.9%	-44.0%	-42.9%	-46.5%	47.6%	-49.8%	-51.0%	-51.2%
Month 5	-53.7%	-42.9%	-34.1%	-36.1%	-40.6%	-53.3%	-30.9%	-66.1%	-56.3%	-64.1%	-59.0%	-53.9%
YTD S	-53.7%	-48.5%	-44.5%	-42.4%	-41.9%	-44.0%	-42.9%	-46.5%	-47.6%	-49.8%	-51.0%	-51.2%
BP Length												
HDO	-	-	-	-	-	-		-	-	-	-	
CDD												
Use Avoidance												
Month Use	456	336	216	278	420	499	142	668	464	723	645	459

YTD Use		456		192		1,008		1,286		1,706		2,195		2,337		3,005		3,469		4,192		4,840		5,299
Cost Avoidan	68																							
Month Use S	5	5,046	S	3,724	5.	2,391	S	3,073	S	4,648	5	5,411	S	1,577	5	7,395	5	5,137	5.	8,003	S	7,169	5.	5,083
YTD S	5.	5,046	5	8.770	5.	11,161	5	14,234	5	18,882	5	24,293	5	25,869	5	33,265	5	38.402	5.	45,405	5	53,574	5.	38,457

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

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

#### Mater: FA 1-09 Electric

Reference																								
		Sap 2006		Oct 1006		Nev 2006		Dec 1006		Jan 2006		Fab 2006		Mar 1006		Apr 2006		May 1006		Jun 2006		Jul 1006		Aug 2006
Month Use		341,938		352,979		383,458		443,435		381,698		375,752		371,218		327,657		363,217		368,472		380,818		374,790
YTD Use		341,938		894,917		1,078,375		1,521,810		1,903,508		2,279,260		2,650,419		2,978,135		3,341,352		3,709,824	-	4,090,642		4,465,432
Month S	5.	38,929	8	40,186	5	43,656	8	50,484	\$	43,456	8	42,779	\$	42,262	8	37,303	8	41,352	5.	41,950	8	43,355	5.	42,669
YID5	5.	38,929	5	79,115	5	122,771	5	173,255	5	216,711	5	259,490	\$	301,752	5	339,055	5	380,407	5.	422,357	5	465,712	5.	508,381
BP Length		30		31		30		31		3.1		25		31		30		31		30		31		3.1
HDD		134		442		604		812		433		969		832		349		236		41		4		
CDD		12																42		83		263		266
Month Rate	5.	0.114	5	0.114	5	0.114	\$	0.114	\$	0.114	\$	0.114	\$	D.114	5	0.114	5	0.114	\$	0.114	5	0.114	\$	0.114
YTD Rate	5.	0.114	5	0.114	5	0.134	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5.	0.114	5	0.114	5.	0.114

Bareline																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 2018		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 2018
Month Use		341,938		352,979		383,458		443,435		381,698		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		2,450,478		2,978,135		3,341,352		3,709,824		4,090,642		4,465,432
Month 5	5	38,930	5	40,187	5	43,657	5	50,485	\$	43,456	5	42,779	\$	42,263	5	37,304	5	41,352	\$	41,931	5	43,356	5	42,670
YTD 5	5	38,930	5	79,116	5	122,773	5	173,258	5	216,714	5	259,494	5	301,757	5	339,061	5	380,413	5	422,363	5	465,720	5	508,389
BP Length		30		31.		30		31		31		28		31.		30		31.		30		31		3.1
HDD		74		253		690		1,067		1,246		762		938		582		37		20				2
CDD		1.14		37								4				12		135		192		271		247
Month Rate	5	0.114	5	0.314	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114
YTD Rate	5.	0.114	8	0.114	5.	0.114	8	0.114	\$	0.114	8	0.114	\$	0.114	8	0.114	8	0.114	5.	0.114	8	0.114	5.	0.114

SimActual																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 2015		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 2018
Month Use		478,914		503,668		672,619		929,723		1,037,304		734,770		856,240		625,763		476,076		499,634		627,250		606,042
YTD Use		478,914		982,582		1,655,201		2,584,924		3,622,228		4,356,998		5,213,238		5,839,001		6,315,077		5,814,711		7,441,961		8,048,003
Month 5	5	54,524	5	57,343	5	76,578	\$	105,849	\$	118,097	3	83,654	\$	97,483	5	71,243	5	54,201	5.	56,883	\$	71,412	5	68,998
YTD S	5.	54,524	\$	111,867	5.	188,445	8	294,294	\$	412,391	\$	496,044	\$	593,527	5	664,770	8	718,972	5.	775,855	8	847,267	5.	916,265
BF Length		30		31.		30		31		3.1		28		31		30		31.		30		31		3.1
HDD		74		253		890		1,057		1,246		762		938		552		37		20				2
CDD		1.14		37								4				12		13.5		192		271		247
Month Rate	5	0.114	5	0.114	5	0.134	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114
YTD Rate	5.	0.114	8	0.114	5.	0.114	8	0.114	\$	0.114	5	0.114	\$	0.114	8	0.114	8	0.114	5.	0.114	8	0.114	5.	0.114

SimActual vs.	Baseline											
	Sep 2017	Oct 1017	Nev 2017	Dec 1917	Jan 2018	Fab 2015	Mar 2018	Apr 2015	May 1015	Jun 2015	Jul 2015	Aug 2018
Month Use	40.1%	42.7%	75.4%	109.7%	171.8%	95.5%	130.7%	91.05%	31.1%	35.6%	64.7%	61.7%
YTD Use	40.1%	41.4%	53.5%	69.9%	90.3%	91.2%	96.7%	96.1%	89.0%	83,7%	81.9%	80.2%
Month 5	40.1%	42,7%	T5.45%	109.7%	171.8%	95.5%	130.7%	91.0%	31.1%	35.6%	04.7%	61,774
YTD\$	40.1%	41.4%	53.5%	69.9%	90.3%	91.2%	96.7%	96.1%	89.0%	83.7%	81.9%	80.2%
BP Length												
HDD						-					-	
CDD												

Use Avoidance												
Month Use	(136,976)	(150,689)	(289,161)	(486,288)	(655,606)	(359,018)	(485,022)	(295,106)	(112,859)	(131,162)	(246,432)	(231,252)
VTD Use	(136.976)	(287.665)	(526, 526)	CLD63.1140	(1.718.720)	(2.077.738)	(2.562.760)	(2.860.866)	(2.973.725)	(3.104.887)	(3.351.319)	(3.582.571)

Cost Aveidan	108		_			_		-				_				_						-	
Month Use \$	5.	(15,595)	5	(17,156) \$	(32,921) 5	S	(55,364)	5	(74,641)	5	(40,874)	5	(55,220)	5	(33,939)	5	(12,849)	5.	(14,933)	5	(28,056)	5	(26,328)
YTD \$	5.	(15,595)	5	(32,751) \$	(65,672) 5	5	(121,036)	5	(195,676)	5	(236,550)	5	(291,770)	5	(325,710)	5	(338,559)	5.	(353,491)	5	(381,548)	5	(407,876)

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 1-09 Gas

Reference																								
		Sap 2006		Oct 1006		Nev 2006		Dec 1986		Jan 2006		Fab 2006		Mar 1806		Apr 2006	May 1	006	Jı	m 2006		Jul 2006		Aug 2006
Month Use		1,194		3,730		5,635		9,143		10,940		9,587		9,357		5,211	3,5	527		1,684		1,130		3,100
YTD Use		1,194		4,924		10,559		19,702		30,642		40,229		49,586		54,797	58,3	124		60,006		61,138		62,238
Month S	5.	23,725	S	74,117	5.	111,971	S	181,671	5	217,384	S	190,499	5	185,929	5	103,546	\$ 70,0	084	5 :	33,462	S	22,454	5.	21,858
YID5	5.	23,725	5	97,842	5.	209,813	5	391,484	s	608,868	5	799,367	s	985,296	5 1	1,088,842	\$ 1,158,5	926	51,1	92,388	5.7	,214,842	5	1,236,700
BP Length		30		31		30		31		3.1		2.6		31		30		31.		30		31		3.1
HDD		1.11		412		574		781		802		941		BOL		321		111		3.6		2		
CDD		12																42		83		263		266
Month Rate	5	19.870	5	19.871	5	19.871	5	19.870	\$	19.571	5	19.871	\$	19.871	5	19.871	\$ 19.5	671	5	19.871	5	19.871	\$	19.871
YTD Rate	5.	19.870	5	19.870	5.	19.871	5	19.870	8	19.870	5	19.870	8	19.870	5	19.870	\$ 19.5	870	5	19.870	5	19.870	5.	19.870

Bareline																								
		Sep 2017		Oct 1017		New 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2015		Apr 2015		May 1015		Jun 2015		Jul 2015		Aug 2018
Month Use		1,407		1,509		6,310		9,701		14,612		10,023		6,924		7,917		3,132		1,085		873		844
YTD Use		1,407		2,917		9,227		18,927		33,539		43,562		52,486		60,403		63,536		64,621		65,494		66,338
Mouth \$	5.	33,392	5	35,815	5.	149,709	5	230,163	\$	346,654	5	237,805	\$	211,738	5	187,848	5	74,319	5.	25,740	5	20,715	5	20,025
YIDS	5.	33,392	S	69,207	5.	218,916	S	449,078	s	795,762	5	1,033,571	s	1,245,309	5	1,433,157	5	,507,476	5.	,533,216	5	1,553,931	5	1,573,956
BP Length		32		29		30		32		3.1		29		31.		30		29		32		30		29
HDD		47		6.5		531		8.57		1,339		897		784		688		224		15				
CDD		91		125										4		12		43		184		289		209
Month Rate	5.	23.726	5	23.726	5	23,726	5	23.726	5	23,726	5	23,726	8	23,726	5	23.726	5	23.726	5	23.726	5	23.726	5	23,726
YTD Rate	5.	23.726	S	23.726	5.	23.726	s	23.726	\$	23.726	5	23.726	\$	23,726	5	23.726	s	23.726	5.	23.726	S	23.726	5	23.726

Simuloteal																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2015		Feb 2015		Mar 2015		Apr 2015		May 1015		Jun 2015		Jul 2015		Aug 2015
Month Use		2,134		1,255		2,346		3,329		3,971		3,321		3,135		3,016		1,976		1,479		1,291		1,195
YTD Use		2,134		3,389		5,735		9,063		13,035		16,355		19,490		22,496		24,472		25,951		27,242		28,437
Mouth 5	5.	50,639	5	29,767	5.	55,657	5	78,976	\$	94,225	5	78,786	\$	74,370	5	71,322	5	46,886	5	35,094	5	30,625	5.	28,348
YTDS	5.	50,639	s	80,406	5.	136,064	S	215,039	5	319,264	s	388,050	5	462,420	5	533,742	S	580,628	5.	615,721	S	646,350	5.	674,698
BP Length		32		29		30		32		31		29		31.		30		29		32		39		29
HDD		47		6.5		531		8.57		1,339		997		794		655		224		15				
CDD		91		125										4		12		43		184		289		209
Month Rate	5	23.726	5	23,726	5	23.726	5	23,726	5	23,726	5	23,726	5	23,726	5	23.726	5	23,726	5	23.726	5	23.726	5.	23,726
YTD Rate	5.	23.726	s	23.726	5.	23.726	s	23.726	\$	23.726	5	23.726	\$	23, 726	5	23.726	S	23.726	5	23.726	S	23.726	5.	23.726

	Sep 2017	Oct 1017	Nev 2017	Dec 2017	Jan 2015	Feb 2015	Mar 2015	Apr 2015	May 1015	Jun 2015	Jul 2015	Aug 2015
Month Use	51.7%	-16.9%	-62.8%	-65.7%	-72.8%	-66.9%	-64.9%	-62.0%	-36.9%	36.3%	47.9%	41.6%
YTD Use	51.7%	16.2%	-37.8%	-52.1%	-61.1%	-62.5%	-62.9%	-62,8%	-61.5%	-59.8%	-58.4%	-57.1%
Month 5	51.7%	-16.9%	-62.8%	-65.7%	-72.8%	-66.9%	-64.9%	-62.0%	-36.9%	36.3%	47.9%	41.6%
TD S	51.7%	16.2%	-37.8%	-52.1%	-61.1%	-62.5%	-62.9%	-62.85%	-61.5%	-59.8%	-58.4%	-57.1%
3P Length												
HDO			-			-		-			-	-
CDD												

Use Avoidance	Use Avoidance														
Month Use	(727)	255	3,964	6,372	10,640	6,702	5,790	4,911	1,156	(394)	(418)	(351)			
YTD Use	(727)	(472)	3,492	9,864	20,505	27,207	32,997	37,916	39,064	38,670	38,252	37,901			

Cost Avaidance																								
Month Use S	5.	(17,247)	S	6,048	5.	94,052	S	151,187	8	252,459	5	159,022	S	137,368	5	116,527	S	27,433	5.	(9,354)	S	(9,913)	5	(8,324)
YTD \$	\$	(17,247)	5	(11.199)	5.	82,852	5	234,039	\$	456,498	5	645,521	\$	782,889	5	1999,415	5	926,848	5	917,495	5	907,581	\$	899,257

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 patierns of Unit use.

#### Meter: FA 1-09 Water

Reference																								
		Sap 2006		Oct 1006		Nev 2006		Dec 1006		Jan 2006		Fab 2006		Mar 2006		Apr 2006		May 1006		Jun 2006		Jul 1006		Aug 2006
Month Use		2,204		1,345		1,282		1,042		3,317		4,498		1,743		3,344		3,386		1,507		1,890		1,744
YTD Use		2,204		3,549		4,531		5,873		9,190		13,688		15,431		18,775		22,161		23,568		25,558		27,302
Month S	5.	20,431	8	12,468	5.	11,884	8	9,661	\$	30,349	5	41,696	\$	16,158	8	30,999	8	31,388	5.	13,970	8	17,520	5	16,167
YID5	5.	20,431	5	32,899	5.	44,783	5	54,444	5	85,193	5	126,889	5	143,047	5	174,046	5	205,434	5.	219,404	5	236,924	5.	253,091
BP Length		30		31		30		31		3.1		25		31		30		31		30		31		3.1
HDD		134		442		604		812		433		969		832		349		236		41		4		
CDD		12																42		83		263		266
Month Rate	5.	9.270	5	9.270	5.	9.270	5	9.272	5	9.270	5	9.270	\$	9.270	3	9.270	5	9.270	5.	9.270	5	9.270	3.	9.270
YTD Rate	5.	9.270	5	9.270	5.	9.270	5	9.270	5	9.270	5	9.270	5	9.270	5	9.270	5	9.270	5.	9.270	5	9.270	5.	9.270

Bareline																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2015		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 2018
Month Use		2,174		1,387		1,230		975		3,137		4,551		1,791		3,566		3,277		1,568		1,768		1,749
YTD Use		2,174		3,561		4,791		5,766		8,903		13,454		15,245		18,811		22,088		23,656		25,424		27,172
Month 5	5	24,083	5	15,353	5.	13,616	5	10,790	\$	34,719	5	50,379	\$	19,827	5	39,465	5	36,270	5.	17,336	5	19,571	5.	19,356
YTD 5	5	24,063	5	39,416	5.	53,033	5	63,822	5	98,541	5	148,920	5	168,746	5	208,214	5	244,485	5.	261,840	5	281,411	5.	300,767
BP Length		30		32		29		29		30		29		30		33		30		31		29		3.1
HDD		78		274		683		983		1,227		81.5		918		639		22		20				2
CDD		1.14		37								4				12		135		204		254		235
Month Rate	5	11.069	5	11.069	5.	11,069	5	11.069	5	11.069	5	11.069	5	11.069	5	11,069	5	11.069	5.	11.049	5	11.069	5	11/069
YTD Rate	5.	11.069	8	11.069	5.	11.069	8	11.069	\$	11.069	8	11.069	\$	11.069	8	11.069	8	11.069	5.	11.069	8	11.069	5.	11.069

SimActual																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 2018		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 2018
Month Use		12,861		11,726		11,971		12,268		12,268		10,231		3,605		3,857		3,631		3,441		3,276		3,547
YTD Use		12,861		24,587		36,558		48,826		61,094		71,325		74,930		78,787		82,418		85,865		89,141		92,688
Month 5	5	142,357	5	129,794	5	132,906	5	135,793	\$	135,793	5	113,246	\$	39,903	5	42,693	5	40,191	5.	35,134	5	36,262	\$	39,261
YTDS	5.	142,357	8	272,151	5.	404,65T	8	540,450	\$	676,243	8	T89,489	\$	829,393	8	872,085	8	912,277	5.	950,431	8	986,693	\$	1,025,954
BP Length		30		32		29		29		30		29		30		33		30		31		29		31
HDD		78		274		683		983		1,227		81.5		918		639		22		20				2
CDD		1.14		37								4				12		135		204		254		235
Month Rate	5	11.069	5	11.069	5	11.069	5	11.069	5	11/069	5	11.069	5	11.069	5	11,069	5	11.069	5	11.069	5	11.069	5	11/069
YTD Rate	5.	11.069	8	11.069	5.	11.069	8	11.069	\$	11.069	8	11.069	\$	11.069	8	11.069	8	11.069	5.	11.069	8	11.069	5.	11.069

	Sep 2017	Oct 1017	New 2017	Dec 2017	Jan 2018	Feb 2015	Mar 2015	Apr 2015	May 1015	Jun 2018	Jul 2015	Aug 2018
Month Use	491.659	745,4%	873.1%	1158.5%	291.1%	124.8%	101.3%	8.2%	10.8%	119.8%	85.3%	102.8%
YTD Use	491.6%	590.5%	663.0%	746.8%	586.3%	430.1%	391.5%	318,854	273.1%	263.0%	250.6%	241.1%
Month 5	491.6%	745,4%	873.1%	1158.5%	291.1%	124,8%	101.3%	8.2%	10.8%	119.8%	85.3%	102,9%
YTD S	491.6%	590.5%	663.0%	746.8%	586.3%	430.1%	391.5%	318.8%	273.1%	263.0%	259.6%	241.1%
BP Length												
HDO						-						
CDD												

Use Avoidance												
Month Use	(10,687)	(10,339)	(10,741)	(11,293)	(9,131)	(5,690)	(1,814)	(291)	(354)	(1,879)	(1,508)	(1,798)
YTD Use	(10,687)	(21.026)	(31,767)	(43,060)	(52,191)	(57,871)	(59,685)	(59,976)	(60,330)	(62,209)	(63,717)	(65,516)

Cost Avoidan	108											
Month Use S	5 (118,294)	5 (114,440)	5 (118,88	7) \$ (125,004)	\$ (101,074)	\$ (62,867)	\$ (20,077	5 (3,225	\$ (3,921)	5 (20,799)	\$ (16,691)	\$ (19,905)
YTD \$	3 (118,294)	\$ (232,735)	\$ (351,62	(476,628)	\$ (577,702)	\$ (640,570)	\$ (660,646	5 (663,871	\$ (667,792)	\$ (688,591)	\$ (705,282)	3 (725,187)

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.

#### Mater: PA 1-15 Ga

		Sap 2006		Oct 1006		Nev 2006		Dec 2006		Jan 2006		Fab 2006		Mar 2006		Apr 2006		May 2006		Jun 2006		Jul 2006		Aug 200
Worth Use		130		592		842		1,616		1,863		1,852		1,666		948		855		232		337		304
TD Use		130		722		1,564		3,180		5,043		6,895		5,561		9,500		10,364		10,596		10,933		11,237
Month S	3.	2,583	5	11,763	3	16,731	S	32,106	5	37,019	5	36,800	5	33,104	5	18,837	S	16,989	5	4,610	S	6,696	3.	6,041
YTD 5	5	2,583	s	14,346	5	31,077	S	63,183	s	100,202	5	137,002	s	170,106	5	188,943	S	205,932	5	210,542	S	217,238	5	223,279
3P Length		30		31		30		31		3.1		25		31		30		31		30		31		3.1
HDD		92		382		544		750		271		913		770		293		188		30				
CDD		13						-										42		83		263		266
Month Rate	5.	19.869	9	19.870	5	19.871	5	19.869	5	19.871	5	19.870	5	19.870	5	19.870	9	19.870	5	19.871	5	19.859	5	19.872
YTD Rate	-	19.869	S	19.870	-	19.870	,	19.809	,	19.870	3	19.870	,	19.870	3	19.870	S	19.870	5.	19.870	,	19.870	<u>,</u>	19.810
Sareline																								
		Sap 2017		Oct 1017	,	New 2017		Dec 2017		Jan 2018		Feb 2015		Mar 1815		Apr 2015		May 1015		Jun 2015		Jul 2015		Aug 2018
Month Use		192		325		1,271		1,638		2,375		1,734		1,569		1,444		360		180		168		152
TD Use		192		517		1,788		3,426		6,201		7,935		9,504		10,949		11,309		11,489		11,657		11,809
Mouth \$	5.	4,565	5	7,703	5	30,154	5	38,871	\$	65,535	5	41,137	\$	37,236	5	34,271	5	5,545	5	4,275	5	3,982	5	3,609
YTD 5	5	4,565	S	12,269	5	42,423	S	81,294	s	147,128	5	188,266	s	225,501	5	259,772	S	268,320	5	272,595	S	276,577	5.	280,186
BP Lengh		24		32		29		39		33		29		29		32		29		30		32		29
HDD		35		83		589		779		1,369		832		746		672		110		12				
CDD		58		100								4				12		64		201		280		212
Month Rate	5	23.726	5	23.726	5	23.726	5	23.726	5	23.726	5	23,726	8	23,726	5	23.726	5	23.726	5	23.726	5	23.726	5	23,726
YTD Rate	5.	23.726	S	23.726	5.	23.726	S	23.726	\$	23.726	5	23.726	\$	23.726	5	23.726	S	23.726	\$	23.726	S	23.726	\$	23.726
Sim.Lotual																								
and a contract		Sep 2017		Oct 1017	,	New 2017		Dec 2017		Jan 2018		Feb 2015		Mar 1015		Apr 2015		May 2015		Jun 2015		Jul 2015		Aug 2018
Month Use		174		243		880		1,773		1,880		1,357		1,352		1,204	_	382		165		166		142
YTD Use		174		417		1,296		3,070		4,950		6,307		7,659		8,863		9,244		9,410		9,576		9,718
Mouth \$	5.	4,128	5	5,754	5	20,877	5	42,009	\$	44,615	5	32,206	\$	32,07%	5	25,557	5	9,052	5	3,922	5	3,946	5	3,374
YTD 8	5.	4,128	s	9,882	5	30,759	S	72,828	5	117,443	s	149,650	\$	181,728	5	210,285	s	219,336	5.	223,258	s	227,204	5.	230,578
BP Length		24		32		29		39		3.3		29		29		32		29		30		32		29
HDD		35		16.3		.550		77.76																
CDD								779		1,369		832		746		672		110		12		-		
		58		100		-		779		1,369		832 4		740		672 12		110 64		201		280		212
Month Rate	5	23.726	5	23.726	5	23.726	5	23.726	5	23.726	5	23.726	5	23.726	5	23,726	5	23.726	5	201 23.726	5	280 23.726	5	23.726
	5.		5		5.5		5		5		5	4	5		5	12	5 5	64	5.	201	5	280	5.	
YTD Rate	5.	23.726 23.726	5	23.726	5.	23.726	5	23.726	5	23.726	5	23.726	5	23.726	5	23,726	5	23.726	5.	201 23.726		280 23.726		23.726
YTD Rate	5.	23.726 23.726	5	23.726		23.726	5	23.726	5	23.726	5	23.726		23.726	5	23.726 23.726		54 23.726 23.726	5.	201 23.726		280 23.726		23.726 23.726
YTD Rate SimActual vi	5.	23.726 23.726 selline	5	23.726 23.726		23.726 23.726	5	23.726 23.726	5	23.726 23.726	5 5	23.726 23.726		23.726 23.726	5	23,726		23.726	5.	201 23.726 23.726		280 23.726 23.726		23,726 23,726 Aug 201
YTD Rate SimActual vi	5.	23,726 23,726 seline Sep 2017	S	23.726 23.726 Oct 1017		23.726 23.726 New 2017	5	23.726 23.726 Dec 2017	5	23.726 23.726 23.726	5	4 23,726 23,726 Feb 2015		23, 726 23, 726 23, 726	5	12 23.726 23.726 23.726		64 23.726 23.726 May 1015	5.	201 23.726 23.726 23.726		280 23.726 23.726 23.726		23,726 23,726 Aug 201
YTD Rate SimActual vi Month Use YTD Use	5.	23.726 23.726 selfine Say 2017 -0.6%	\$ \$	23.726 23.726 Oct 1017 -25.3%		23,726 23,726 23,726 Nov 2017 -30,8%	S	23,726 23,726 23,726 Dec 2017 8,2%	s	23,726 23,726 23,726 32,256	5 5	4 23,726 23,726 23,726 Feb 2018 -21,7%		23, 726 23, 726 23, 726 Mar 2016	5 5	12 23,726 23,726 23,726 Age 2018 -86,7%		64 23.726 23.726 23.726 May 2018 5.9%	5.	201 23.726 23.726 23.726 Jun 2016 -8.2%		23.726 23.726 23.726 3ul 2018 -0.9%		23,726 23,726 23,726 Aug 201 -6.5% -17,7%
FTD Rate  Similatual vi  Month Due  FTD Due  Month S	5.	23.726 23.726 selfine Sep 2017 -0.6% -0.6%	S	23.726 23.726 0st 1017 -25.3% -19.5%		23,726 23,726 Nov 2017 -30,5% -27,5%	S	23.726 23.726 Dec 2017 8.2% -10.4%	5	23.726 23.726 3an 2018 -32.2% -20.2%	5 5	4 23,726 23,726 23,726 Feb 2018 -21,7% -20,5%		23, T26 23, T26 23, T26 Mar 2018 -13,9% -19,4%	5	12 23,726 23,726 23,726 -46,7% -19,1%		64 23.726 23.726 23.726 May 2015 5.9% -18.3%	5. 5.	201 23,726 23,726 23,726 Jun 2018 -8,2% -18,1%		280 23.726 23.726 23.726 -0.9% -17.9%		23,726 23,726 23,726 Aug 201 -6.5% -17,7%
YTD Rate Sim.Letual vi Month Use YTD Use Month 5 YTD 8	5.	23.726 23.726 20.726 20.8117 -0.6% -9.6%	S	23.726 23.726 0xt 1017 -25.3% -19.5% -25.3%		23.726 23.726 Nov 2017 -30.8% -27.5% -30.8%	\$	23.726 23.726 Dec 2017 8.2% -10.4% 8.2%	\$ \$	23.726 23.726 23.726 32.2% -32.2% -32.2%	5 5	4 23,726 23,726 23,726 -21,7% -20,5% -21,7%		23, T26 23, T26 23, T26 Mater 2016 -13,9% -19,4% -13,9%	5 5	12 23,726 23,726 23,726 -16,7% -19,1% -16,7%		64 23.726 23.726 23.726 May 2018 5.9% -13.3% 5.9%	5 5	201 23,726 23,726 23,726 Jun 2018 -8,2% -18,1% -8,2%		280 23.726 23.726 23.726 -0.9% -17.9% -0.9%		23,726 23,726 23,726 -6,5% -17,7% -6,5%
YTD Rate Simileteal vi Month Use YTD Use Month S YTD \$ BP Length	5.	23.726 23.726 selline Sep 2017 -0.6% -9.6% -9.6%	5 5	23.726 23.726 23.726 -25.3% -19.5% -19.5%		23.726 23.726 23.726 Nav 2817 -30.8% -27.5% -30.8%	5 5	23,726 23,726 23,726 Dec 2017 8,2% -10,4%, 8,2% -10,4%,	5 5	23,726 23,726 23,726 32,2% -20,2% -32,2% -20,2%	5 5	4 23,726 23,726 23,726 -21,736 -20,536 -21,736 -20,536		23, T26 23, T26 23, T26 Mater 2016 -13,9% -19,4% -13,9%	5 5	12 23.726 23.726 23.726 -16.7% -19.1% -16.7% -19.1%		64 23.726 23.726 May 2018 5.9% -18.3% 5.9%	5. 5	201 23.726 23.726 23.726 -8.2% -18.1% -8.2% -18.1%		280 23.726 23.726 23.726 -0.9% -17.9% -0.9%		23.726 23.726 23.726 -6.5% -17.7% -0.5%
Month Rate YTD Rate Sine.Letteal vi Month Use YTD Use Month S YTD 8 BP Length HDD CDD	5.	23,726 23,726 23,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26	5 5	23.726 23.726 23.726 -25.3% -19.5% -25.3% -19.5%		23.726 23.726 23.726 84 2817 -30.8% -27.5% -27.5%	\$	23,726 23,726 23,726 8,2% -10,4% 8,2% -10,4%	\$	23,726 23,726 23,726 32,2% -32,2% -32,2% -20,2%	5 5	4 23,726 23,726 23,726 -21,736 -20,536 -21,736 -20,536		23, 726 23, 726 23, 726 -13,9% -19,4% -13,9% -19,4%	5 5	12 23.726 23.726 23.726 -16.7% -19.1% -16.7% -19.1%		64 23.726 23.726 May 2018 5.9% -18.3% 5.9%	5.5	201 23.726 23.726 23.726 -8.2% -18.1% -8.2% -18.1%		280 23.726 23.726 23.726 -0.9% -17.9% -0.9%		23,726 23,726 23,726 -6,5% -17,7% -0,5% -17,7%
YTD Rate Simileteal vi Month Use YTD Use Month 5 YTD 8 BP Length HDD CDD	5	23,726 23,726 23,726 28 2037 -0.6% -9.6% -9.6%	\$	23.726 23.726 23.726 -25.3% -19.5% -25.3% -19.5%		23.726 23.726 23.726 New 2837 -30.8% -27.5% -30.8% -27.5%	S	23,726 23,726 23,726 8,2% -10,4% 8,2% -10,4%	\$	23.726 23.726 23.726 32.2% -32.2% -20.2% -32.2% -20.2%	5 5	4 23,726 23,726 23,726 -21,736 -20,536 -21,736 -20,536		23, 726 23, 726 23, 726 -13,9% -19,4% -13,9% -19,4%	5 5	12 23.726 23.726 23.726 -16.7% -19.1% -16.7% -19.1%		64 23.726 23.726 May 2018 5.9% -18.3% 5.9%	5. 5.	201 23.726 23.726 23.726 -8.2% -18.1% -8.2% -18.1%		280 23,726 23,726 23,726 -0.9% -17,9% -0.9%		23,726 23,726 23,726 -6.5% -17,7% -6.5%
PTD Rate  Pm.Lettal vi  Month Use  Month 5  YTD 8  SP Length  HDD  CDD	5	23,726 23,726 23,726 28 2037 -0.6% -9.6% -9.6%	S	23.726 23.726 23.726 -25.3% -19.5% -25.3% -19.5%		23.726 23.726 23.726 New 2837 -30.8% -27.5% -30.8% -27.5%	5 5	23,726 23,726 23,726 8,2% -10,4% 8,2% -10,4%	\$	23.726 23.726 23.726 32.2% -32.2% -20.2% -32.2% -20.2%	5 5	4 23,726 23,726 23,726 -21,736 -20,536 -21,736 -20,536		23, 726 23, 726 23, 726 -13,9% -19,4% -13,9% -19,4%	5 5	12 23.726 23.726 23.726 -16.7% -19.1% -16.7% -19.1%		64 23.726 23.726 May 2018 5.9% -18.3% 5.9%	5.5	201 23.726 23.726 23.726 -8.2% -18.1% -8.2% -18.1%		280 23,726 23,726 23,726 -0.9% -17,9% -0.9%		23,726 23,726 23,726 -6.5% -17,7% -6.5%
YTD Rate  Similetual vi Month Use YTD Use Month 5 YTD 8 BP Length HDD	5	23,726 23,726 23,726 28 2037 -0.6% -9.6% -9.6%	\$	23.726 23.726 23.726 -25.3% -19.5% -25.3% -19.5%		23.726 23.726 23.726 New 2837 -30.8% -27.5% -30.8% -27.5%	\$ \$	23,726 23,726 23,726 8,2% -10,4% 8,2% -10,4%		23.726 23.726 23.726 32.2% -32.2% -20.2% -32.2% -20.2%	5 5	4 23,726 23,726 23,726 -21,7% -20,5% -21,7% -20,5%		23, 726 23, 726 23, 726 -13,9% -19,4% -13,9% -19,4%	5 5	12 23.726 23.726 23.726 -16.7% -19.1% -16.7% -19.1%		64 23.726 23.726 May 2018 5.9% -18.3% 5.9%	5 5	201 23.726 23.726 23.726 -8.2% -18.1% -8.2% -18.1%		280 23,726 23,726 23,726 -0.9% -17,9% -0.9%		23,726 23,726 23,726 -6.5% -17,7% -6.5%
YTD Rate  Sim.Leteal vi Month Use  YTD Use Month 5  YTD 8  BP Length  HDD  CDD	5	23.726 23.726 selfine Sup 2017 -0.6% -0.6% -0.6%	5 5	23.726 23.726 23.726 0sc 1017 -25.3% -19.5% -19.5%		23,726 23,726 23,726 New 2837 -30,856 -27,556 -30,856 -27,556	\$	23.726 23.726 23.726 Dec 2017 8.2% -10.4% 5.2% -10.4%		23,726 23,726 23,726 32,256 -20,256 -32,256 -20,256 -20,256	5 5	4 23.726 23.726 23.726 -21.735 -20.5% -21.736 -20.5%		23, 726 23, 726 23, 726 May 2018 -13,9% -19,4% -13,9% -19,4%	5 5	12 23.726 23.726 23.726 46.7% -19.1% -16.7% -19.1%		64 23.726 23.726 23.726 May 2015 5.9% -13.3% 5.9% -18.3%	5. 5.	201 23.726 23.726 23.726 -8.255 -18.156 -8.256 -8.156		280 23.726 23.726 23.726 301.2015 -0.9% -17.9% -17.9%		23,726 23,726 23,726 40,5% -0,5% -0,5% -17,7%
WTD Rate  Stendertaal vir  Month Une  WTD Une  Month 5  VTD S  SP Length  HDO  CDD  CDD  CDD  CDD  CDD  CDD  CDD	5 L B1	23,726 23,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 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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.

Reference																								
		Sap 2006		Oct 1006	:	Nev 2006		Dec 1006		Jan 2006		Fab 2006		Mar 1806		Apr 2006	- 1	May 1006		Jun 2006		Jul 1996		Aug 200
Month Use		379		407		375		390		335		340		361		454		331		400		299		50
YTD Use		379		T96		1,161		1,551		1,556		2,226		2,587		3,941		3,372		3,772		4,071		4,5T
Month \$	3.	3,513	8	3,773	3	3,476	S	3,620	5	3,105	3	3,152	5	3,346	5	4,209	8	3,068	5	3,708	S	2,772	3.	4,65
YTD 5	5.	3,513	5	7,286	5	10,762	5	14,382	5	17,487	5	20,639	5	23,985	5	28,194	5	31,262	5	34,970	5	37,742	5	42,39
BP Length HDD		134		31 442		30 604		31 812		31 433		28 969		31. 832		30 349		31 236		30 41		31		3
CDD		134		442		604		812		933		901		832		349		42		83		263		26
Month Rate	5.	9.269	5	9.270	1.	9.269	5	9.282		9.260	5	9.271	5	9.269	5	9.271	5	9.209	5.	9.270		9.271		9.27
YTD Rate	5	9.269	5	9.270	5.	9.270	5	9.273	5	9.272	5	9.272	5	9.271	5	9.271	5	9.271	5	9,271	5	9.271	5	9.27
171771810	_	7.847	Ť	5.210	Ť	7.810	Ť	74.5	Ť	71878	Ť	7.4.4	Ť	7.4.1	Ť	7.873	Ť		Ť	7.673	Ť		Ť	7.81
Bareline					_																			
March 13co		Sep 2017	_	Oct 1017		New 2017	_	Dec 2017	_	Jan 2018	_	Fab 2015	_	Mar 2015	_	Apr 2015		May 1015	_	Jun 2015	_	Jul 2015	_	Aug 201
Month Use		432		413		384		401		336		40.5		318		427		3.99		365		347		40
YTD Use		432		845		1,229		1,630		1,967		2,372		2,690		3,117		3,476		3,842		4,189		4,58
Month 5 YTD 5	5.	4,786	5	9,354	5.	13,603	5	18,046	5	21,770	5	26,253	5	19,777	5	4,729 34,507	5	38,477	5	42,522	5	3,840	5	4,43 50,79
BP Length		4,786	3	9,334		30	3	32	3	21,510	3	35	3	29,177	3	34,507	3	28,477	,	30	3	31		30,39
HDD		59		75		361		889		1,263		1,133		713		740		219		20				
CDD		47		141		201				1,200		1,133		4		12		50		163		303		230
Month Rate		11.069		11.069		11.069		11.069		11.069		11.069		11.069		11.069		11.069	5.	11.069		11.069		11.06
YTD Rate	1	11.069	8	11.069	1	11,069	8	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	1	11.069	8	11.069	1.	11.06
	_		_		_		_	1111111	Ť		_	11	_	71.000	_		_		Ť		_		_	
SimActual																								
		Sep 2017		Oct 1017	1	Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 2018		Apr 2015	- 1	May 1015		Jun 2018		Jul 2015		Aug 201
Month 1/se		255		296		303		319		275		277		250		28T		293		341		303		31
YTD Use		255		551		854		1,173	ı	1,448		1,725		1,975		2,262		2,555		2,896		3,199		3,51
Month 5	5	2,823	5	3,276	5	3,354	5	3,531	5	3,044	5	3,066	5	2,767	5	3,177	5	3,243	5	3,774	5	3,354	5	3,48
YTD 5	5.	2,823	5	6,099	5	9,453	5	12,984	\$	16,028	5	19,094	\$	21,861	5	25,038	s	28,281	5	32,056	s	35,409	5	38,89
BP Length		30		32		30		32		29		35		27		31		29		30		31		34
HDD		39		75		361		NET		1,263		1,133		713		740		219		20				
CDD		8T		141		11.000		11 000		11.000		11 000		11.000		12		50		163		303		210
Month Rate YTD Rate	5.	11.069	5	11.069	1	11,069	5	11.069		11.069	5	11.069	5	11.069	5	11,069	5	11.069	1	11,069	5	11.069	1	11.06
1 / I/ Kinc	,	11,009		11.009	-	117000	-	11.009	•	11/1009		11.009	•	11.009		11,000	,	11.009	-	11,009		11.009	-	11/465
SimActual v	LBs	selline																						
		Sep 2017		Oct 1017	1	Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 2015		Apr 2015	- 1	May 1015		Jun 2018		Jul 2015		Aug 201
Month Use		41.0%		-28.3%		-21.1%		-20.5%		-18.3%		-31.6%		-21.5%		-32.8%		-18.3%		-6.7%		-12.7%		-21.45
YTD Use		41.0%		-34.8%		-30.5%		-28.1%		-26.4%		-27.3%		-26.6%		-27.4%		-26.5%		-24.6%		-23.6%		-23.45
Month 5		-41.0%		-28,3%		-21.1%		-20.5%		-18.3%		-31.6%		-21.5%		-32.8%		-13.3%		-6.7%		-12.7%		-21,45
YTD S		-41.05%		-34.8%		-30.5%		-28.1%		-26.4%		-27.3%		-26.6%		-27.4%		-26.5%		-24.6%		-23.6%		-23.45
												-												
HDD										-								-		-		-		-
HDD		-																						
CDD	ice.																							
BP Length HDD CDD  Use Avoldar  Month Use	ice	177		117		81		82		61		128		68		140		66		24		- 44		5)

Month Use 5 1,964 5 1,292 5 894 5 913 5 680 5 1,416 5 757 5 1,553 5 727 5 271 5 486 5 948

YTD 5 5 1,984 5 3,255 5 4,150 5 5,062 5 5,743 5 7,159 5 7,016 5 9,489 5 10,198 5 10,486 5 10,953 5 11,901

Reference: Actual usage and costs for past Year. SimActual: Actual usage and calcubited costs for current Year. Baseline: Current usage and costs based upon historic patterns of Unit use.

#### Meter: PA 1-17 Gas

Month Use YTD Use (69) (70)

(1)

248 179 83 262

		Sep 2006		Oct 1006		Nev 2006		Dec 2006		Jan 2006		Fab 2006		Mar 2006		Apr 2006		May 1006		Jun 2006		Jul 2006		Aug 2006
Month Use		1.54		553		1,282		2,169		2,447		2,198		2,177		1,062		572		216		143		129
YTD Use		1.54		707		1,969		4,155		6,605		8,903		10,990		12,042		12,614		12,830		12,973		13,102
Month S	5.	3,060	S	10,988	5.	25,476	S	43,099	5	48,623	5	43,676	5	43,258	S	21,103	S	11,366	5.	4,292	S	2,841	5	2,563
YTD 5	5.	3,060	s	14,048	5.	39,524	s	82,623	s	131,246	5	174,922	s	218,180	5	239,283	S	250,649	5.	254,941	S	257,782	5.	260,345
BP Length		30		31		30		31		3.1		25		31		30		31		30		31		3.1
HDD		63		326		484		688		709		857		709		243		144		2.0				
CDD		12																42		83		263		266
Month Rate	5	19.870	5	19.870	5.	19.572	5	19.870	5	19.870	5	19.871	5	19.870	5	19.871	5	19.871	5.	19.870	5	19.867	5.	19.568
YTD Rate	5.	19.870	5	19.870	5.	19.871	5	19.871	8	19.871	5	19.871	8	19.871	5	19.871	S	19.871	5.	19.871	S	19.871	5.	19.871

Bareline																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Feb 2015		May 2015		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 2015
Month Use		127		253		1,655		2,067		3,690		2,253		2,099		1,717		33.5		121		108		98
YTD Use		127		380		2,036		4,103		7,794		10,047		12,146		13,863		14,198		14,319		14,427		14,525
Mouth \$	5.	3,014	5	6,013	5.	39,278	5	49,053	\$	\$7,560	5	53,453	\$	49,810	5	40,732	5	7,957	5.	2,864	5	2,563	5	2,323
YTDS	5.	3,014	S	9,027	5.	48,305	s	97,357	\$	184,918	5	238,371	s	288,181	5	328,913	S	336,870	5.	339,734	S	342,297	5	344,620
BP Length		22		29		3.3		30		32		29		30		31		29		30		32		29
HDD		19		56		556		708		1,290		776		720		581		86		T				
CDD		53		100								4				12		64		201		280		212
Month Rate	5	23.726	5	23.726	5.	23.726	5	23.726	5	23.726	5	23,726	5	23,726	5	23.726	5	23,726	5	23.726	5	23.726	5	23.726
YTD Rate	5.	23.726	S	23.726	5.	23.726	s	23.726	\$	23.726	5	23.726	\$	23.726	s	23.726	S	23.726	5.	23.726	S	23.726	\$	23.726

Sim.Lotual																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Fab 2015		May 2015		Apr 2015		May 1015		Jun 2015		Jul 2015		Aug 2018
Month Use		128		322		1,407		1,984		3,258		2,319		2,070		1,756		483		158		150		134
YTD Use		128		450		1,857		3,841		7,099		9,418		11,488		13,244		13,727		13,885		14,035		14,169
Mouth S	5	3,037	5	7,640	5	33,383	5	47,073	5	77,301	5	55,022	\$	49,114	5	41,014	5	11,460	5	3,749	5	3,559	5	3,179
YTDS	5	3,037	s	10,677	5.	44,060	s	91,133	5	168,434	s	223,455	\$	272,569	s	314,232	s	325,692	5.	329,441	s	333,000	5.	336,179
BP Length		22		29		3.3		39		3.2		29		30		31		29		30		32		29
HDD		19		56		356		705		1,290		776		720		551		39.5		T				
CDD		53		100								4				12		64		201		280		212
Month Rate	5	23.726	5	23.726	5.	23.726	5	23.726	5	23.726	5	23.726	8	23,726	5	23.726	5	23.726	5	23.726	5	23.726	5.	23.726
YTD Rate	5	23.726	s	23.726	5.	23.726	s	23.726	5	23.726	5	23.726	\$	23.726	s	23.726	s	23.726	5.	23.726	s	23.726	5.	23.726

	Sep 2017	Oct 2017	Nev 2017	Dec 2017	Jan 2018	Feb 2015	Mar 2015	Apr 2015	May 1015	Jun 2016	Jul 2015	Aug 2018
Month Use	0.85%	27.1%	-15.0%	4.0%	-11.7%	2.9%	-1.4%	2.3%	44.0%	30.9%	38.8%	36.9%
YTD Use	0.8%	18.3%	-8.8%	-6.4%	-8.9%	-6.3%	-5.4%	-4.5%	-3.3%	-3.0%	-2.7%	-2.4%
Month 5	0.876	27.1%	-15.0%	~4.0%	-11.7%	2.9%	-1.476	2.3%	44.0%	30.9%	38.8%	36.9%
YTDS	0.8%	18.3%	-8.854	-6.4%	-8.9%	-6.3%	-5.4%	-4.5%	-3.3%	-3.0%	-2.7%	-2.4%
BP Length												
HDD						-		-				
CDD												

Cost Avoidan													
Month Use S		4935 E	(1.497). 4	6 10d - 6	1.020 6	10.200 #	/E 6400 E	CD7 6	00150 6	(3.603). 6	/8840 E	(904) 4	18647
Month the a		(23) 8	(1,027) 6	3,892 3	1,979 5	10,260 8	(1,309) 5	697 S	(952) B	(3,303) 8	(884) 5	(990) 5	(856)
YTD S	5.	(23) \$	(1,650) \$	4,245 \$	6,224 \$	16,464 \$	14,916 \$	15,612 \$	14,651 \$	11,177 \$	10,293 \$	9,297 \$	8,441

432 695 (42) 392

(36)

356

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.

#### Mater: FA 1-17 Water

Reference																								
		Sep 2006		Oct 1006		Nev 2006		Dec 1996		Jan 2006		Fab 2006		Mar 1006		Apr 2006		May 1006		Jun 2006		Jul 1006		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 S	5.	2,262	8	3,207	5.	3,708	8	4,194	\$	2,948	5	5,163	\$	4,533	8	7,073	8	5,423	5.	6,443	8	5,302	5.	8,028
YID5	5.	2,262	5	5,469	5.	9,177	5	13,371	5	16,319	5	21,482	5	26,015	5	33,088	5	38,511	5.	44,934	5	50,256	5.	58,284
BP Length		30		31		30		31		3.1		25		31		30		31		30		31		3.1
HDD		134		442		604		812		433		969		832		349		236		41		4		
CDD		12																42		8.3		263		266
Month Rate	5	9.270	5	9.299	5.	9.270	5	9.279	\$	9.270	5	9.269	\$	9.270	5	9.270	5	9.270	5	9.271	5	9.269	5	9.270
YTD Rate	5.	9.270	5	9.269	5.	9.270	5	9.273	5	9.272	5	9.271	5	9.271	5	9.271	5	9.271	5.	9.271	5	9.271	5.	9.271

Bareline																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2015		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 2018
Month Use		541		312		370		420		313		502		503		663		588		626		666		668
YTD Use		541		853		1,222		1,642		2,015		2,517		3,020		3,683		4,271		4,897		5,563		6,231
Month 5	5	3,989	5	3,451	5.	4,091	5	4,648	5	4,124	5	5,560	\$	5,565	5	7,337	5	6,511	5	6,932	5	7,371	5.	T,393
YTD 5	5.	5,989	5	9,439	5.	13,530	5	18,179	5	22,303	5	27,843	5	33,428	5	40,765	5	47,276	5.	54,208	5	61,579	5.	68,972
BF Length		30		32		30		30		30		33		29		31		27		30		32		29
HDD		59		7.5		561		837		1,265		1,103		766		744		243		20				
CDD		87		141										4		12		33		169		291		220
Month Rate	5	11,069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11,069	5	11.069	5	11.069	5	11.069	5.	11.069
YTD Rate	5.	11,069	8	11.069	5.	11.069	8	11.069	\$	11.069	8	11.069	\$	11.069	8	11,069	8	11.069	5.	11.069	8	11.069	5.	11.069

SimActual																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 1015		Apr 2015	1	May 1015		Jun 2015		Jul 2015		Aug 2018
Month Use		318												2										
YTD Use		318		318		318		31.8		318		31.8		320		320		320		320		320		320
Month S	3.	3,520	5		3.		5		5		3		\$	22	5		5		3.		5		5	
YTD S	5.	3,520	8	3,520	5.	3,520	8	3,520	\$	3,520	5	3,520	\$	3,542	5	3,542	8	3,542	5.	3,542	8	3,542	5.	3,542
BF Length		30		32		30		30		30		33		29		31		27		30		32		29
HDD		39		7.5		361		837		1,265		1,103		T96		744		243		2.0				
CDD		81		141										4		12		3.3		169		291		220
Month Rate	5	11.069	5		5		5		5		5		5	11.069	5		5		5		5		5	
YTD Rate	5.	11.069	8	11.069	5.	11.069	8	11.069	5	11.069	5	11.069	5	11.069	5	11.069	8	11.069	5.	11.069	8	11.069	5.	11,069

	Sep 2017	Oct 1017	New 2017	Dec 2017	Jan 2018	Fab 2015	Mar 1015	Apr 2015	May 1015	Jun 2018	Jul 2015	Aug 2018
Month Use	-41.2%	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%	-09.6%	-100.05%	-100.0%	-100.0%	-100.0%	-100.0%
YTD Use	-41.2%	-62.7%	-74.0%	-30.6%	-84.2%	-37.4%	-89.4%	-91.3%	-92.5%	-93.5%	-94.2%	-94.9%
Month 5	-41.2%	-100.0%	-000.05%	-100.0%	-100.0%	-100.0%	-99.6%	-100.05%	-100.0%	-800.0%	-100.0%	-100.0%
YTD \$	-41.2%	-62.7%	-74.6%	-90.6%	-84.2%	-87.4%	-89.4%	-91.3%	-92.5%	-93.5%	-94.2%	-04.0%
BP Length												
HDD						-						
CDD												
Uss Avoidance												
Month Use	223	312	370	420	373	502	501	663	588	626	666	468
YTD Use	223	53.5	904	1,324	1,697	2,199	2,700	3,363	3,951	4,57T	5.243	5,911

Cost Avaidar	108																							
Month Use S	5.	2,469	5	3,451	5.	4,091	5	4,648	5	4,124	5	5,560	5	5,543	5	7,337	5	6,511	5.	6,932	5	7,371	5.	7,393
YTD \$	5	2,469	5	5,919	5	10,010	5	14,659	5	18,783	5	24,343	5	29,886	5	37,223	5	43,734	5	50,666	5	58,037	5	65,430

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 Electric

ACRES CONTRACTOR																								
		Sap 2006		Oct 1006		Nev 2006		Dec 1006		Jan 2006		Fab 2006		Mar 1006		Apr 2006		May 1006		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		225,551		304,590		394,737		470,330		344,727		614,897		481,100		751,997		835,631		926,803
Month S	5.	9,612	S	8,333	5.	4,078	8	8,654	5	10,263	S	8,606	5	8,470	S	7,989	S	7,537	5.	8,071	5	9.522	5.	10,380
YTDS	5.	9,612	5	17,945	5.	26,023	5	34,677	5	44,940	5	53,546	5	62,016	5	70,005	5	77,542	5.	85,613	5	95,135	5.	105,515
BP Length		30		31		30		31		31		25		31		30		31		30		31		31
HDD		134		442		604		812		433		969		832		349		236		47		4		
CDD		12																42		83		263		266
Month Rate	5.	0.114	5	0.114	5.	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5.	0.114	5	0.114	5.	0.114
YTD Rate	5.	0.114	S	0.114	5.	0.134	S	0.114	8	0.114	5	0.114	5	0.114	5	0.114	S	0.114	5.	0.114	5	0.114	5.	0.114
																					_		_	
Bareline																								
		Sep 2017		Oct 1017	1	Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 2015		Apr 2016		May 2015		Jun 2018		Jul 2015		Aug 2010
Month Use		77,085		68,505		71,647		91,289		84,949		74,695		71,327		70,068		66,572		77,276		89,493		83,897
YTD Use		77,085		145,590		217,238		308,527		393,476		468,170		539,498		609,566		676,137		753,413		842,906		926,803
Mouth \$	5	5,772	5		5	5,153	5	10,389	\$	9,667	5	8,500	\$	8,117	5	7,974	- 5	7,576	5	-111	5	10,184	5	9,547
YID5	5	8,772	S	16,568	5	24,722	S	35,110	s	44,378	5	53,278	\$	61,395	5	69,369	S	76,944	5	85,738	5		5	105,470
BP Length		29		29		30		3.5		30		29		30		31		30		31		32		29
HDD		43		366		774		1,421		1,096		704		865		327		19		1				10
CDD		141		6								4				38		164		262		255		263
Month Rate	5	0.114	5	0.114	5	0.134	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5	0.314	5	0.114	5	0.114	5	0.114
YTD Rate	\$	0.114	S	0.114	5.	0.114	5	0.114	\$	0.114	5	0.114	\$	0.114	5	0.114	S	0.114	\$	0.114	5	0.114	\$	0.114
Simuloteal																								
annucrea:		Sep 2017		Oct 1017	,	New 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2015		Apr 2015		May 1015		Jun 2015		Jul 2015		Aug 2018
Month Use		86,556		93,135		152,006		223,616	-	181,935		139,280		154,578		97,828		84.023	-	103,495		104,195		100,997
YTD Use		86,556		179,691		331,697		555,312		737,248		876,528		1,031,106		1.128,934		1,212,956		1.316,451		1.420.647		1,521,644
Mouth S	5.	9,810	s	10.599	5.	17,298	5	25,647	5	20,704	\$	15,850	5	17,591	5	11,133	5	9.562	5.	11,778	5	11,857	5.	11,493
YTDS	5.	9,850	S	20,449	5.	37,747	5	63,195	5	83,899	5	99,749	5	117,340	5	128,473	S	138,034	5.	149,812	5	161,670	5.	173,163
BP Length		29		29		30		35		30		29		30		31		30		31		32		29
HDD		43		366		774		1,421		1,096		704		865		327		19		1				10
CDD		141		6								4				38		164		262		255		263
Month Rate	5.	0.114	5	0.314	5.	0.134	5	0.114	5	0.114	5	0.114	5	0.114	5	0.114	5	0.314	5.	0.114	5	0.114	5.	0.114
YTD Rate	5.	0.114	S	0.114	5.	0.114	S	0.114	5	0.114	5	0.114	5	0.114	5	0.114	S	0.114	5	0.114	S	0.114	5	0.114
																							_	
Similotual vi	LBI																							
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2015		Feb 2015		Mar 2015		Apr 2015		May 1015		Jun 2015		Jul 2015		Aug 2010
Month Use		12.3%		36.0%		112.2%		145.0%		114.2%		86.5%		116.7%		39.6%		26.2%		33.9%		16.4%		20.4%
YTD Use		12.3%		23.4%		52.7%		80.0%		87.4%		87.2%		91.1%		85.2%		79,4%		74.7%		68.5%		64.2%
Month 5		12.3%		36.0%		112,2%		145,0%		114.2%		36.5%		110.7%		39.6%		26.2%		33.9%		16.8%		20.4%
YTD S		12.3%		23.4%		52.7%		80.0%		87.4%		87.2%		91.1%		85.2%		79.4%		74.7%		68.5%		64.2%
Diff. Loncocks																								

Use	4.10	wi	м	8	DOM:
	-	•	-	•	

BP Length HDD CDD

Month Use	(9,471)	(24,629)	(90,358)	(132,326)	(96.987)	(64,586)	(83,251)	(27,760)	(17,451)	(26,219)	(14,702)	(17,100)
			(114,459)									

#### Cost Avoidance

Month Use S	5.	(1,078) S	(2,803) \$	(9,145) \$	(15,059) \$	(11,037) \$	(7,350) \$	(9,474) \$	(3,159) S	(1,986) \$	(2,984) \$	(1,673) \$	(1,946)
YTDS	5.	(1.07%) S	(3.881) \$	(13,425) S	(28,084) \$	(39.121) \$	(46.471) S	(55,945) \$	(59,104) S	(61,090) \$	(64,074) S	(65,747) \$	(67,693)

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 patierns of Unit use.

#### Meter: FA 1-10 Gas

Reference																								
		Sap 2006		Oct 1006		Nev 2006		Dec 1006		Jan 2006		Fab 2006		Mar 1806		Apr 2006		May 1006		Jun 2006		Jul 1006		Aug 2006
Month Use		212		867		1,734		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 S	5.	4,213	8	17,228	5.	34,059	8	73,522	\$	85,247	8	94,665	\$	88,148	8	40,457	8	21,024	5.	9,161	8	2,901	5.	3,159
YTD 5	5.	4,213	5	21,441	5.	55,500	5	129,022	5	214,269	5	308,934	5	397,082	5	437,539	5	458,563	5.	467,724	5	470,625	5.	473,784
BP Length		30		31		30		31		3.1		25		31		30		31		30		31		3.1
HDD		53		300		454		657		618		829		679		221		125		16				
CDD		12																42		83		263		266
Month Rate	5	19.873	5	19.871	5.	19,871	5	19.871	5	19.871	5	19.871	5	19.871	5	19.871	5	19.871	5	19.872	5	19.870	5	19.868
YTD Rate	5.	19.873	5	19.87L	5.	19,871	5	19.871	5	19,871	5	19.871	5	19,871	5	19.871	5	19.871	5.	19.871	5	19.871	5.	19,871

Bateline																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2015		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 2018
Month Use		227		1,071		3,284		5,884		5,675		3,425		4,716		2,316		94		125		88		82
YTD Use		227		1,297		4,581		10,656		16,141		19,556		24,292		26,597		26,691		26,816		26,904		26,987
Month 5	5	3,378	5	25,403	5	77,921	5	139,613	5	134,653	5	81,262	\$	111,884	5	54,940	5	2,230	5	2,967	5	2,093	\$	1,954
YID5	5	5,378	5	30,781	5.	108,702	5	248,317	5	382,970	5	464,232	5	576,116	5	631,056	5	633,286	5.	636,253	5	638,346	5.	640,299
BF Length		31		30		3.1		32		30		28		32		29		31.		31		30		28
HDD		24		174		366		1,026		990		592		B19		395		1		6				
CDD		1.14		37								4				12		154		216		240		218
Month Rate	5	23,726	5	23,726	5	23.726	5	23,726	5	23,726	5	23,726	5	23,726	5	23.726	5	23.726	5	23.726	5	23.726	5	23,726
YTD Rate	5.	23,726	8	23,726	5.	23,726	8	23,726	\$	23.726	8	23,726	\$	23, 726	8	23.726	8	23.726	5.	23.726	8	23.726	5.	23.726

SimActual																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 1015		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 2018
Month Use		260		270		356		454		420		362		412		323		289		238		200		188
YTD Use		260		530		887		1,341		1,760		2,122		2,534		2,857		3,145		3,383		3,583		3,771
Month 5	5	6,178	5	5,404	5	5,454	5	10,772	\$	9,953	5	8,579	\$	9,775	5	7,064	5	6,850	\$	3,647	5	4,736	5	4,465
YTD S	5.	6,178	8	12,582	5.	21,036	8	31,808	\$	41,761	5	50,340	\$	60,116	8	67,779	8	74,629	5.	80,276	8	85,012	5.	89,417
BF Length		31		30		31		32		30		28		32		29		31.		31		30		28
HDD		24		174		366		1,026		990		592		819		395		1		6				
CDD		1.14		37								4				12		154		216		240		218
Month Rate	5	23.726	5	23.726	5	23,726	5	23,726	5	23,726	5	23.726	5	23,726	5	23,726	5	23.726	5	23.726	5	23.726	5	23,726
YTD Rate	5.	23.726	8	23,726	5.	23,726	8	23,726	\$	23,726	8	23,726	\$	23. T26	8	23,726	8	23,726	5.	23.726	8	23.726	5.	23,726

Simulated vs.	Baseline											
	Sep 2017	Oct 1017	New 2017	Dec 2017	Jan 2018	Feb 2015	Mar 2018	Apr 2015	May 1015	Jun 2018	Jul 2015	Aug 2018
Month Use	14.9%	-74.8%	-89.2%	-92.3%	-92.6%	-89.4%	-91.3%	-86.1%	207.2%	90.3%	126.3%	128.6%
YTD Use	14,9%	-59.1%	-80.6%	-87.2%	-89.1%	-89.2%	-89.6%	-89.3%	-83.2%	-87,4%	-86.7%	-86.0%
Month 5	14,9%	-74.8%	-89.2%	-92.3%	-92.6%	-89,4%	-91.3%	-56.1%	207.2%	90.3%	126.3%	128.6%
YTD\$	14.9%	-59.1%	-80.65%	-87.2%	-89.1%	-89.2%	-89.6%	-89.3%	-88.2%	-87.4%	-96.7%	-86.0%
BP Length												
HDO												
CDD												

Use Avoidance												
Month Use	(34)	801.	2,928	5,430	5,256	3,063	4,304	1,993	(195)	(113)	(HII)	(106)
YTD Use	(34)	767	3,695	9,125	14,381	17,444	21,748	23,741	23,546	23,433	23,321	23,216

Cost Avaids	nce																						
Month Use 5	5	(900)	5 18,9	99 5	5 69,4	67 5	128,843	5	124,700	5	72,682	5	102,109	5	47,276	5	(4,620)	5	(2,680)	5	(2,643)	5	(2,512)
NUTTO 4		09.000					214 214		241 210		417 007		ALC: DOL		844 777		222.022				*** ***		440 440

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 patients of Unit use.

#### Meter: FA 1-20 Water

Reference																								
		Sap 2006		Oct 1006		Nev 2006		Dec 1006		Jan 2006		Fab 2006		Mar 1006		Apr 2006		May 1006		Jun 2006		Jul 1006		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		T,8363		9,099		12,632		14,120		15,299		16,317
Month S	5.	12,635	S	7,611	5.	10,559	5	9,482	5	11,930	5	8,405	5	12,422	5	11,300	5	32,751	5	13,794	S	10,929	5	9,437
YTD 5	5	12,635	S	20,246	5.	30,805	5	40,287	s	52,217	5	60,625	s	73,047	5	84,347	S	117,098	5.	130,892	S	141,821	5	151,258
BP Length		30		31		30		31		3.1		2.5		31		30		31		30		31		31
HDD		134		442		604		812		633		969		832		349		236		47		4		
CDD		12																42		83		263		266
Month Rate	5.	9.270	5	9.270	5.	9.270	5	9.269	5	9.270	5	9.270	\$	9.270	5	9.270	5	9.270	5.	9.270	5	9.270	5	9.270
YTD Rate	5.	9.270	S	9.270	5.	9.270	5	9.270	8	9.270	5	9.270	8	9.270	5	9.270	S	9.270	5.	9.270	S	9.270	5	9:270

Bareline																								
		Sep 2017		Oct 1017		New 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2015		Apr 2015		May 1015		Jun 2015		Jul 2015		Aug 2015
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
Mouth \$	5	15,057	5	9,066	5.	12,607	5	11,323	\$	14,246	5	10,039	\$	14,832	5	13,493	5	39,106	5.	14,471	5	13,050	5	11,268
YTD 5	5	15,087	5	24,174	5.	36,782	S	48,105	s	62,351	5	72,391	s	87,223	5	100,716	S	139,822	5.	156,293	S	169,343	5	180,611
BP Length		30		31		30		31		31		28		31.		30		31.		30		31		3.1
HDD		74		253		690		1,067		1,246		762		938		582		37		20				2
CDD		1.14		37								4				12		135		192		271		247
Month Rate	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069
YTD Rate	5.	11.069	S	11.069	5.	11.069	S	11.069	\$	11.069	S	11.069	\$	11.069	S	11.069	S	11.069	5	11.069	S	11.069	\$	11.069

Similoteal																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2015		Apr 2015		May 1015		Jun 2015		Jul 2015		Aug 2015
Month Use		53		6.5		41		44		48		53		48		41		46		50		45		53
YTD Use		53		118		159		203		251		304		3.52		399		445		495		540		593
Month S	5	557	5	719	5.	454	5	487	\$	.531	5	587	\$	531	5	520	5	509	5	553	5	495	5	397
YTDS	5	587	S	1,306	5.	1,760	S	2,247	\$	2,778	5	3,365	\$	3,896	5	4,416	s	4,926	5	5,479	s	5,977	5.	6,564
BP Length		30		31.		30		31		31		28		31		30		31.		30		31		31
HDD		74		253		690		1,067		1,246		762		938		552		37		2.0				2
CDD		1.14		37								4				12		135		192		271		247
Month Rate	5	11.069	5	11.069	5.	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069
YTD Rate	5.	11.069	S	11.069	5.	11.069	S	11.069	5	11.069	S	11.069	5	11.069	5	11.069	S	11.069	5	11.069	S	11.069	5	11.069

	Sep 2017	Oct 1017	Nev 2017	Dec 2017	Jan 2018	Feb 2015	Mar 2015	Apr 2015	May 2015	Jun 2015	Jul 2015	Aug 2015
Month Use	-96.1%	-92.1%	-96.4%	-95.7%	-96.3%	-94.2%	-96.4%	-96.1%	-98.7%	-96.65%	-96.2%	-04.8%
YTD Use	-96.1%	-94.6%	-95.2%	-95.3%	-95.5%	-95.4%	-95.5%	-95.6%	-96.5%	-96.5%	-96.5%	-96.4%
Month 5	-96.1%	-92.1%	-96.4%	-95,7%	-96.3%	-94.2%	-96.4%	-96.1%	-98.7%	-96.6%	-96.2%	-94.8%
YTD S	-96.1%	-94.6%	-95.2%	-95.3%	-95.5%	-95.4%	-05.5%	-95.65%	-96.5%	-96.5%	-96.5%	-96.4%
BP Length												
HDD								-				
CDD								-		-		

YTD Use		1,310		2,066		3,164		4,143		5,382		6,236		7,528		8,700		12,187		13,625		14,759		15,724
Cost Avoidan	108																						_	
Month Use S	5.	14,500	S	8,368	5.	12,154	S	10,836	S	13,714	5	9,453	S	14,301	5	12,973	5	38,597	5	15,917	S	12,552	5.	10,681
YTD S	5.	14,500	5	22,868	5.	35,022	5	45,858	\$	19,173	5	69,026	\$	83,327	5	96,299	5	134,897	5	150,814	5	163,366	5.	124,047

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

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

#### Meter: FA 1-31 Gas

Reference																								
		Sep 2006		Oct 1006		Nev 2006		Dec 1996		Jan 2006		Fab 2006		Mar 1806		Apr 2006		May 1006		Jun 2006		Jul 1006		Aug 2006
Month Use		64		467		738		1,111		1,151		1,444		1,160		333		168		15				
YTD Use		64		531		1,269		2,590		3,531		4,973		6,135		5,455		6,636		6,651		6,651		6,651
Month S	5.	1,262	8	9,288	5.	14,664	8	22,088	\$	22,868	5	28,696	\$	23,054	5	6,608	8	3,341	5.	29T	8		5.	
YTD 5	5.	1,262	5	10,550	5.	25,214	5	47,302	5	70,170	5	98,866	5	121,920	5	128,528	5	131,869	5.	132,146	5	132,166	5.	132,166
BP Length		30		31		30		31		31		2.5		31		30		31		30		31		3.1
HDD		34		250		395		59.5		616		773		621		1.78		90		8				
CDD		12																42		83		263		266
Month Rate	5	19.719	5	19.839	5	19.870	5	19.881	5	19,868	5	19.873	5	19.874	5	19.844	5	19.887	5	19.900	5		\$	
YTD Rate	5.	19,719	5	19.868	5.	19,869	5	19.875	5	19.873	5	19.873	5	19.873	5	19.871	5	19.872	5.	19,872	5	19.872	5.	19.872

Bareline																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2015		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 2018
Month 1/se		6		59		873		1,367		2,043		1,270		1,175		934		115		B		- 1		- 1
YTD Use		6		66		939		2,306		4,349		5,618		6,794		7,727		7,842		7,850		7,851		7,851
Month 5	5	148	5	1,408	5	20,711	5	32,434	\$	48,414	5	30,127	\$	27,880	5	22,132	5	2,718	5.	193	5	16	5.	15
YTD 5	5.	148	5	1,557	5	22,268	5	54,702	8	103,176	5	133,304	5	161,193	5	183,345	5	186,064	5.	186,256	5	186,273	5.	186,288
BP Length		30		24		30		34		29		29		29		32		29		30		32		29
HDD		3.		32		467		732		1,094		680		629		500		61		4				
CDD		116		37								4				12		70		203		280		213
Month Rate	5	23.726	5	23.726	5	23.726	5	23.726	5	23,726	5	23,726	5	23,726	5	23,726	5	23,726	5.	23.726	5	23.726	5.	23,726
YTD Rate	5.	23.726	8	23.726	5.	23.726	8	23.726	\$	23.726	8	23.726	\$	23, 726	8	23,726	8	23,726	5.	23.726	8	23.726	5.	23.726

SimActual																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2018		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 2018
Month Use		4.0		91.		349		575		647		446		502		511		189		73		76		63
YTD Use		8.9		180		529		1,103		1,751		2,197		2,699		3,209		3,398		3,472		3,541		3,604
Month S	5	2,116	5	2,164	5.	5,278	5	13,647	5	15,341	5	10,570	\$	11,915	5	12,112	5	4,487	\$	1,734	5	1,656	5.	1,485
YTDS	5.	2,116	8	4,280	5.	12,558	8	26,206	\$	41,547	8	52,117	\$	64,033	5	76,145	8	80,632	5.	82,366	8	84,022	5.	45,508
BP Length		30		24		30		34		29		29		29		32		29		30		32		29
HDD		3.		32		467		732		1,054		690		629		500		61		4				
CDD		116		37								4				12		70		203		280		213
Month Rate	5	23.726	5	23.726	5	23.726	5	23,726	5	23,726	5	23,726	5	23,726	5	23.726	5	23.726	5	23.726	5	23.726	5	23,726
YTD Rate	5.	23.726	8	23,726	5.	23.726	8	23,726	\$	23,726	8	23,726	\$	23, 726	5	23,726	8	23,726	5.	23.726	8	23.726	5.	23,726

	Sep 2017	Oct 1017	New 2017	Dec 2017	Jan 2018	Feb 2015	Mar 2018	Apr 2015	May 2015	Jun 2015	Jul 2015	Aug 2018
Month Use	1326.2%	53.6%	-60.0%	-57.9%	-68.4%	-64.9%	-57.3%	-45.3%	65.1%	800.0%	9948.1%	9843,8%
YTD Use	1326.2%	175.0%	43.6%	-52.1%	-59.7%	-60.9%	-60.3%	-58.5%	-56.7%	-55.8%	-54.9%	-54.1%
Month 5	1326.2%	53.0%	-60.0%	-57.9%	-68.474	-64.9%	-57.3%	-45.35%	65.1%	300.0%	9948,1%	9843.8%
YTD \$	1326.2%	175.0%	-43.65%	-52.1%	-59.7%	-60.9%	-60.3%	-58.5%	-56.7%	-55.85%	-54.9%	-54.1%
BP Length												
HDO												
CDD												

Month Use	(83)	(32)	524	792	1,396	824	673	423	(75)	(85)	(69)	(62)
YTD Use												

Cost Avaidar	908																		_	
54		43 (34E) E	(784) 8	12 422 #	10 707 6	21.111		10.557		16 004		10.040	÷	CI TANK		12 5 4 5 5		/ F & ARA		C1 4700
Month Use S	5	(1/968) 8	(130) 9	12,433 8	18,787 \$	33,133	3	19,337	3	15,574	3	10/040	3	(1,768)	ъ.	(1,342)	3	(1,040)	2	(1,410)
YTDS	5.	(1,968) \$	(2.724) 3:	9,709 \$	28,496 \$	61,629	- 5	81,186	5	9T, 160	5	107,200	5	105.432	5.	103,890	5	102.250	5.	100,780

Reference: Actual usage and costs for past Year. SimActual: Actual usage and calcubited costs for current Year. Baseline: Current usage and costs based upon historic patterns of Unit use.

### Meter: FA 1-31 Water

Reference																								
		Sap 2006		Oct 1006		Nev 2006		Dec 1006		Jan 2006		Fab 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		6635		500		1,133		1,388		1,569		1,951		2,362		2,459		2,950		3,275		3,656
Month S	5.	3,161	S	2,475	5.	2,392	S	2,471	5	2,364	S	1,678	5	3,541	5	3,810	S	899	5.	4,552	S	3,013	5.	3,532
YIDS	5	3,161	S	5,636	5	8,028	S	10,499	s	12,863	5	14,541	s	18,082	5	21,892	S	22,791	5.	27,343	S	30,356	5.	33,888
BP Length		30		31		30		31		3.1		2.6		31		30		31		30		31		3.1
HDD		134		442		604		812		433		969		832		349		236		47		4		
CDD		12																42		83		263		266
Month Rate	5.	9.270	5	9.270	5	9.271	5	9.255	5	9.271	5	9.271	\$	9.270	5	9.270	5	9.268	5.	9.271	5	9.271	5.	9.270
YTD Rate	5.	9.270	S	9.270	5.	9:270	5	9.267	5	9.267	5	9.268	8	9.268	5	9.268	5	9.268	5.	9.269	5	9.269	5.	9.269

Bareline																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2015		Apr 2015		May 1015		Jun 2015		Jul 2015		Aug 2015
Month Use		394		305		241		513				246		252		383		305		229		432		343
YTD Use		394		699		940		1,453		1,453		1,698		1,950		2,334		2,639		2,868		3,301		3,644
Mouth 5	5.	4,316	5	3,378	5.	2,468	5	5,679	\$		5	2,719	\$	2,788	5	4,244	5	3,379	5.	2,539	5	4,754	5.	3,797
YID 5	5.	4,356	S	7,735	5.	10,403	S	16,081	s	16,081	5	18,800	\$	21,588	5	25,833	S	29,212	5.	31,751	S	36,535	5.	40,332
BP Length		33		30		28		60				32		29		30		30		31		30		31
HDD		56		43		425		2,057				1,150		692		870		3.52		25		1		
CDD		121		142										4				3.3		163		249		252
Month Rate	5	11.069	5	11.069	5.	11.069	5	11.069	8		5	11.069	5	11.069	5	11.069	5	11.069	5.	11.069	5	11.069	5.	11.069
YTD Rate	5	11.069	S	11.069	5.	11.069	s	11.069	\$	11.069	5	11.069	\$	11.069	5	11.069	S	11.069	5.	11.069	S	11.069	5.	11.069

Simuloteal																								
		Sap 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 2015		Apr 2015		May 1015		Jun 2015		Jul 2015		Aug 2015
Month Use		149		124		139		249				171		146		1.58		160		154		140		131
YTD Use		149		273		412		661		661		832		978		1,136		1,296		1,450		1,590		1,721
Month S	5.	1,649	5	1,373	5.	1,539	5	2,756	5		5	1,893	5	1,616	5	1,749	5	1,771	5.	1,705	5	1,550	5.	1,450
YTDS	5.	1,649	s	3,022	5.	4,560	S	7,317	5	7,317	5	9,209	5	10,825	S	12,574	S	14,345	5.	16,050	S	17,600	5.	19,050
BP Length		33		30		28		60				32		29		30		30		31		30		31
HDD		.58		43		425		2,057				1,150		692		870		3.52		2.5		1		
CDD		121		142										4				3.3		163		249		252
Month Rate	5	11.069	5	11.069	5	11,069	5	11.069	5		5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5.	11.069
YTD Rate	5.	11.069	8	11.069	5.	11.069	8	11.069	5	11.069	5	11.069	\$	11.069	5	11.069	8	11.069	5.	11.069	8	11.069	1.	11.069

	Sep 2017	Oct 1017	Nev 2017	Dec 2017	Jan 2015	Fab 2015	Mar 2015	Apr 2015	May 2015	Jun 2015	Jul 2015	Aug 2011
Month Use	-62.1%	-59.4%	-42.3%	-51.5%		-30.4%	-42.0%	-58.854	-47.6%	-32.9%	-67.6%	-61.8%
YTD Use	-62.1%	-60.9%	-56.2%	-54.5%	-54.5%	-51.0%	-49.9%	-51.3%	-50.9%	-49.5%	-51.8%	-52.8%
Month 5	-62.1%	-59.4%	-42.3%	-51.5%		-30.4%	-42.0%	-58,874	-47.0%	-32.9%	-67.0%	-61.8%
YTD S	-62.1%	-60.9%	-56.2%	-54.5%	-54.5%	-51.0%	-49.9%	-51.3%	-50.9%	-49.5%	-51.8%	-52.8%
BP Length												
HDD	-		-					-				
CDD												
Use Avoidance												
Month Use	245	181	102	264		75	106	225	145	75	292	212
YTD Use	245	426	528	792	792	866	972	1,198	1,343	1,418	1,711	1,923

Month Use \$ \$ 2,707 \$ 2,006 \$ 1,129 \$ 2,923 \$ - \$ 826 \$ 1,172 \$ 2,496 \$ 1,608 \$ 834 \$ 3,234 \$ 2,347 VTD \$ \$ 2,707 \$ 4,713 \$ 3,842 \$ 8,763 \$ 8,765 \$ 9,591 \$ 10,763 \$ 13,238 \$ 14,867 \$ 15,701 \$ 18,935 \$ 21,282

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

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

### Meter: FA 1-39 Gas

Reference																								
		Sep 2006		Oct 1006		Nev 2006		Dec 1006		Jan 2006		Fab 2006		Mar 1006		Apr 2006		May 1006		Jun 2006		Jul 1006		Aug 2006
Month Use		34		158		229		321		330		395		330		119		74		- 11				
YTD Use		34		192		421		742		1,072		1,467		1,797		1,916		1,990		2,001		2,001		2,001
Month S	5.	676	8	3,140	5	4,550	8	6,376	\$	6,557	8	7,849	\$	6,557	8	2,365	8	1,470	5.	174	8		5.	
YTD 5	5	676	5	3,816	5.	8,366	5	14,742	5	21,299	5	29,148	5	35,705	5	38,070	5	39,540	5	39,714	5	39,714	5.	39,714
BP Length		30		31		30		31		3.1		28		31		30		31		30		31		3.1
HDD		76		354		514		719		740		885		T39		266		165		25				
CDD		12																42		83		263		266
Month Rate	3	19.882	5	19.873	5	19.860	5	19.863	5	19,870	5	19.871	\$	19.870	3	19.874	5	19.865	3.	13.818	5		3.	
YTD Rate	5	19.882	5	19.875	5	19,872	5	19.868	5	19.868	5	19.869	\$	19,869	5	19,870	5	19.869	5	19,847	5	19.847	5.	19.847

Bareline																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2018		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 2018
Month Use		12		31.		285		30.5		598		3.53		374		231		43		4		0		0
YTD Use		12		43		328		633		1,231		1,584		1,958		2,189		2,232		2,236		2,236		2,236
Month S	5	287	5	732	5.	6,757	5	7,245	\$	14,181	5	8,383	\$	8,881	5	3,471	5	1,018	5.	96	5	1	5	1
YTD 5	5	287	5	1,018	5.	7,776	5	15,020	5	29,201	5	37,584	5	46,465	5	51,936	5	52,953	5	53,050	5	53,050	5.	53,051
BF Length		22		32		3.2		28		3.3		29		32		29		30		30		30		30
HDD		27		69		638		684		1,339		792		839		517		96		9				
CDD		53		100								4				12		70		206		269		221
Month Rate	5	23,726	5	23,726	5	23,726	5	23,726	5	23,726	5	23.726	5	23,726	5	23,726	5	23,726	5	23.726	5	23.728	5	23,728
YTD Rate	5.	23.726	8	23,726	5.	23,726	8	23,726	\$	23.726	8	23.726	5	23, 726	5	23.726	8	23,726	5.	23.726	8	23.726	5.	23.726

SimActual																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2018		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 2018
Month Use		50		74		235		275		487		325		360		238		87		52		41		41
YTD Use		50		124		359		634		1,121		1,446		1,806		2,043		2,130		2,182		2,223		2,264
Month 5	5	1,186	5	1,756	5.	3,376	5	6,525	\$	11,555	5	7,714	\$	8,532	5	3,635	5	2,064	5	1,234	5	973	5	973
YTDS	5	1,186	8	2,942	5.	8,518	8	15,043	\$	26,597	8	34,313	\$	42,845	5	45,450	8	50,544	5	51,778	8	52,751	5	53,724
BP Length		22		32		3.2		28		3.3		29		32		29		30		30		30		30
HDD		27		6/9		638		684		1,339		792		939		517		96		9				
CDD		53		100								4				12		70		206		269		221
Month Rate	5	23,726	5	23,726	5	23,726	5	23,726	5	23,726	5	23,726	5	23,726	5	23.726	5	23.726	5	23.726	5	23.726	5	23,726
YTD Rate	5	23.726	8	23,726	5	23,726	8	23.726	\$	23.726	8	23,726	\$	23, 726	8	23.726	8	23,726	5	23.726	8	23.726	5.	23.726

	Sep 2017	Oct 1017	Nev 2017	Dec 2017	Jan 2018	Feb 2015	Mar 2015	Apr 2015	May 1015	Jun 2018	Jul 2015	Aug 2018
Month Use	314.0%	140.0%	-17.5%	-9.9%	-18.5%	-8.0%	-3.9%	3.4%	102.9%	1183.059	114189.7%	114189.7%
YTD Use	314.0%	189.0%	9.5%	0.1%	-8.9%	-8.7%	-7.854	-6.7%	4.5%	-2.4%	-0.6%	1.354
Month 5	314.0%	140.0%	-17,559	-9.9%	-18.5%	-8.0%	-3.9%	3.0%	102.9%	11.83.0%	114183.6%	114183.6%
YTD \$	314.0%	189.0%	9.5%	0.1%	-8.0%	-8.7%	-7.8%	-6.7%	4.5%	-2.4%	-0.6%	1.3%
BP Length												
HDD												
CDD												

Use Avoidance												
Month Use	(38)	(43)	50	30	111	28	15	(7)	(44)	(48)	(41)	(41)
YTD Use	(38)		(31)					146				(28)

Cost Avoidan	-08													
Month Use S	5.	(900) \$	(1.024) 5	1,182 5	720 \$	2,626 \$	667	\$	349 \$	(164) \$	(L047) \$	(1,138) \$	(972) \$	(972)
YTD\$	5	(900) \$	(1,924) \$	(742) \$	(22) \$	2,604 \$	3,271	5	3,620 \$	3,416 \$	2,409 \$	1,271 \$	299 \$	(672)

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.

Mater: FA 1	-191	Water	_		_		_		_		_		_		_		_		_		_		_	
Reference																								
14		Sap 2006		Oct 1006		Nev 2006	_	Dec 2006	_	Jan 2006	_	Fab 2006		Mar 2006		Apr 2006	,	May 1006	_	Jun 2006	_	Jul 1006	_	Aug 2604
Month Use		272		253		324		255		271		273		169		323		516		279		272		269
YTD Use		272		525		540		1,104		1,375		1,648		1,817		2,140		2,656		2,935		3,207		3,476
Month S	5	2,521	3	2,345	5	3,003	5	2,365	5	2,512	5	2,531	5	1,567	5	2,994	3	4,783	2	2,586	3	2,521	2	2,494
YTD 5 BP Length		2,521	S	4,866		7,869	5	10,234	3	12,746	5	15,277	3	16,844 31	3	19,838	S	24,621 31	b	27,207	s	29,728	5	32,222
HDD		134		442		604		812		833		969		832		349		236		47		4		
CDD		12		442		004		812		93.3		507		8.52		349		42		53		263		266
Month Rate	5.	9.268	5	9.209	4.	9.269		9.275	5	9.269	5	9.271	s	9.272	5	9.269	s	9.209	4	9.269	4	9.205	Ł	9.271
YTD Rate	5.	9.268	5	9.269	5	9.269	5	9.270	5	9.270	5	9.270	5	9.270	5	9.270	5	9.270	5	9.270	5	9.270	5	9.270
1717 Name	÷	7.240	_	5.405	÷	7.107	÷	7419	ŕ	9.210	÷	9419	÷	5.210	_	7.270	_	2.210	÷	7.270	ŕ	3.419	÷	9.210
Bareline																								
		Sep 2017	1	Oct 1017		Nev 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2015		Apr 2015	1	May 1015		Jun 2015		Jul 2015		Aug 2018
Month Use		267		256		290		264		271		277		225		254		786				289		262
YTD Use		267		523		813		1,077		1,348		1,625		1,850		2,104		2,890		2,890		3,180		3,441
Month S	5.	2,959	5	2,830	5.	3,207	5	2,920	\$	3,005	5	3,070	\$	2,489	5	2,810	5	8,702	5	-	5	3,201	5	2,896
YTD 5	5	2,959	S	5,789	5.	8,996	S	11,916	s	14,921	5	17,991	s	20,480	5	23,291	S	31,993	5.	31,993	S	35,194	5	38,091
BP Length		30		30		30		28		3.2		39		31.		30		58				32		30
HDD		59		86		579		780		1,344		1,023		195		713		294						
CDD		71		125										- 4		12		202				291		224
Month Rate	5	11.069	5	11.069	5	11.069	5	11.069	8	11.069	5	11.069	8	11.069	5	11.069	5	11.069	5		5	11.069	5	11.069
YTD Rate	5.	11.069	S	11.069	5.	11.069	S	11.069	\$	11.069	5	11.069	\$	11.069	5	11.069	S	11.069	\$	11.069	S	11.069	\$	11.069
Similotual																								
		Sep 2017	'	Oct 1017		Nev 2017	_	Dec 2017	_	Jan 2018	_	Fab 2015		Mar 2015	_	Apr 2015	_ ;	May 2015	_	Jun 2015	_	Jul 2015	_	Aug 2018
Month Use						-		-		3,540				2,018		1,105	ď	1,640		-		910		825
YTD Use		Sep 2017		- ;		New 2017		Dec 2017		3,540 3,540		3,540	Ī	2,018 5,558		1,105 6,663		1,640 8,303		8,303		910 9,213		\$25 10,038
YTD Use Mouth \$	5	:	5	- 1	5.	:	5	- :	5	3,540 3,540 39,184	5	3,540	\$	2,018 5,558 22,337	5	1,105 6,663 12,231	\$	1,640 8,303 18,153	5	8,303	5	910 9,213 10,073	5	\$25 10,038 9,132
YTD Use Mouth S YTD S	5.		S	- :	5.	:	S		5	3,540 3,540 39,184 39,184	5	3,540 - 39,184	Ī	2,018 5,558 22,337 61,521	5	1,105 6,663 12,231 73,752	5	1,640 8,303 18,153 91,905	5.	8,303 91,905	5 5	910 9,213 10,073 101,978	5.	\$25 10,038 9,132 111,110
YTD Use Mouth \$ YTD \$ BP Length	5.	- - - 30	5	- 30	5.	30	5 5	28	s	3,540 3,540 39,184 39,184 32	-	3,540 - 39,184 - 30	\$	2,018 5,558 22,337 61,521 31	5 5	1,105 6,663 12,231 73,752 30	\$	1,640 8,303 18,153 91,905 58	5.	8,303 91,905	5 5	910 9,213 10,073 101,978 32	5.	\$25 10,038 9,132 111,110 30
YTD Use Month \$ YTD \$ BP Length HDD	5.	30	5	30	5.	30	s	- - - 28 780	s	3,540 3,540 39,184 39,184 32 1,344	-	3,540 39,184 30 1,023	\$	2,018 5,558 22,337 61,521 31 795	S S	1,105 6,663 12,231 73,752 30 713	\$	1,640 8,303 18,153 91,905 58 294	5.	8,303 91,905	S	910 9,213 10,073 101,978 32	5.	\$25 10,038 9,132 111,110 30
YTD Use Mouth S YTD S BP Length HDO CDD		- - - 30	s	30 86 125		30		28		3,540 3,540 39,184 39,184 32 1,344	5	3,540 - 39,184 - 30	s	2,018 5,558 22,337 61,521 31 795 4	5 5	1,105 6,663 12,231 73,752 30 713 12	\$	1,640 8,303 18,153 91,905 58 294 202	5.	8,303 91,905	5 5	910 9,213 10,073 101,978 32 - 291	5.	\$25 10,038 9,132 111,110 30 -
YTD Use Mouth 5 YTD 5 BP Length HDD CDD Month Rate	5	30 39 71	5 5	30 86 125	5	30	5	28 780	5	3,540 3,540 39,184 39,184 32 1,344	5	3,540 39,184 30 1,023	\$ \$	2,018 5,558 22,337 61,521 31, 795 4 11,069	5	1,108 6,663 12,231 73,752 30 713 12 11,069	\$ \$	1,640 8,303 18,153 91,905 58 294 202 11,069	5	8,303 91,905	5	910 9,213 10,073 101,978 32 - 291 11,069	5	825 10,038 9,132 111,110 30 - 224 11,069
YTD Use Mouth S YTD S BP Length HDO CDD		30	s	30 86 125		30		- - - 28 780		3,540 3,540 39,184 39,184 32 1,344	5	3,540 39,184 30 1,023	s	2,018 5,558 22,337 61,521 31 795 4	5 5 5	1,105 6,663 12,231 73,752 30 713 12	\$	1,640 8,303 18,153 91,905 58 294 202	5. 5. 5.	8,303 91,905	\$ \$	910 9,213 10,073 101,978 32 - 291	5 5 5	\$25 10,038 9,132 111,110 30 -
YTD Use Mouth 5 YTD 5 BP Length HDD CDD Month Rate	5.	30 39 71	5 5	30 86 125	5	30	5	28 780	5	3,540 3,540 39,184 39,184 32 1,344	5	3,540 39,184 30 1,023	\$ \$	2,018 5,558 22,337 61,521 31, 795 4 11,069	5	1,108 6,663 12,231 73,752 30 713 12 11,069	\$ \$	1,640 8,303 18,153 91,905 58 294 202 11,069	5	8,303 91,905	5	910 9,213 10,073 101,978 32 - 291 11,069	5	825 10,038 9,132 111,110 30 - 224 11,069
YTD Use Mouth 5 YTD 5 BP Longth HDD CDD Mouth Rate YTD Rate Sim.Lotual vi	5.	30 39 71	s s s	30 86 125	5	30	5	28 780	5	3,540 3,540 39,184 39,184 32 1,344	5	3,540 39,184 30 1,023	\$ \$	2,018 5,558 22,337 61,521 31, 795 4 11,069	5	1,108 6,663 12,231 73,752 30 713 12 11,069	\$ \$ \$	1,640 8,303 18,153 91,905 58 294 202 11,069	5	8,303 91,905	5	910 9,213 10,073 101,978 32 - 291 11,069	5	\$25 10,038 9,132 111,110 30 - 224 11,069 11,069
YTD Use Month \$ YTD \$ BP Length HDO CDD Month Rate YTD Rate Similateal vi	5.	30 39 71	s s s	30 36 125	5	30 579	5	28 780	5	3,540 3,540 39,184 39,184 32 1,344 11,069 11,069	5	39,184 39,184 30 1,023 - - 11,069	\$ \$	2,018 5,558 22,337 61,521 31, 705 4 11,069 11,069	5	1,108 6,663 12,231 73,752 30 713 12 11,069 11,069	\$ \$ \$	1,640 8,303 18,153 91,905 58 294 202 11,069 11,069	5	8,303 91,905 - - - 11.069	5	910 9,213 10,073 101,978 32 - 291 11,069 11,069	5	\$25 10,038 9,132 111,110 30 - 224 11,069 11,069
YTD Use Mouth \$ YTD \$ BP Length HDO CDD Month Rute YTD Rute	5.	30 39 71 -	s s s	30 30 36 125 -	5	30 579 - - - - - Nev 2017	5	28 780 - - - -	5	3,540 3,540 39,184 39,184 32 1,344  11,069 11,069	5	39,184 39,184 30 1,023 - 11,069	\$ \$	2,018 5,558 22,337 61,521 31, 795 4 11,069 11,069	5	1,105 6,663 12,231 73,752 30 713 12 11,069 11,069	\$ \$ \$	1,640 8,303 18,153 91,905 58 294 202 11,069 11,069	5	8,303 91,905 - - - 11.069	5	910 9,213 10,073 101,978 32 - 291 11,069 11,069	5	\$25 10,038 9,132 111,110 30 - 224 11.069 11.069
YTD Use Mouth S YTD S BP Length HDD CDD Mouth Rule YTD Rule Smiletual vi Mouth Use	5.	30 39 71 	s s s	30 86 125	5	30 379 - - - New 2017 -100.0%	5	28. 780 - - - - - - - - - - - - - - - - - - -	5	3,540 3,540 39,184 39,184 32 1,344 - 11,069 11,069	5	3,540 - 39,184 30 1,023 - 11,069 F45 2018 -100,0%	\$ \$	2,018 5,558 22,337 61,521 31 705 4 11,069 11,069	5	1,105 6,663 12,231 73,752 30 713 12 11,069 11,069	\$ \$ \$	1,640 8,303 18,153 91,905 58 294 202 11,069 11,069	5	8,303 91,905 	5	910 9,213 10,073 101,978 32 - 291 11,069 11,069	5	\$25 10,038 9,132 111,110 30 - 224 11,069 11,069
YTD Use Mouth S YTD S BP Length HDO CDD Mouth Rate YTD Rate Struketeal vi Mouth Use YTD Use Mouth S YTD S	5.	30 39 71 	s s s		5	30 370 	5	28 780 - - - - - - - - - - - - - - - - - - -	5	3,540 3,540 39,184 39,184 1,344 11,069 11,069 Jan 2018 1203,9% 162,6%	5	3,540 39,184 39 1,023 - 11,069 F45 2018 -100.0%	\$ \$	2,018 5,558 22,337 61,521 31 705 4 11,069 11,069 11,069 May 1018 707,4% 200,4%	5	1,105 6,663 12,231 73,752 30 713 12 11,069 11,069 Apr 2018 335.2% 216.7%	\$ \$ \$	1,640 8,303 18,153 91,905 58 294 202 11,069 11,069 May 2018 108,6% 187,3%	5	91,905 - - - - - - 11.069	5	910 9,213 10,073 101,978 32 - 291 11,099 11,099 241,2018 214,7% 189,8%	5	\$25 10,038 9,132 111,110 30 - 224 11,069 11,069 Avg 201 215,2% 191,7%
YTD Use Mouth S YTD S BP Longth HDD CDD Mouth Rate YTD Rate Similoteal vi Mouth Use YTD Use Mouth S	5.	30 39 71 	s s s	000 1017 -100.0% -100.0%	5	30 310 	5	28 780 - - - - - - - - - - - - - - - - - - -	5	3,540 3,540 39,184 39,184 32 1,344 - 11,069 11,069 Jan 2018 1203,9% 162,6% 1203,9%	5	3,540 -39,184 -30 1,023  -11,069 F45 2315 -100,0% -17,8% -100,0%	\$ \$	2,018 5,558 22,337 61,521 31 705 4 11,069 11,069 11,069 107,4% 200,4% 797,4%	5	1,105 6,663 12,231 73,752 30 713 12 11,069 11,069 Agr 2318 335,255 246,7% 335,256	\$ \$ \$	1,640 8,303 18,153 91,905 58 294 202 11,069 11,069 11,069 103,6% 187,3% 105,6%	5	8,303 91,905 	5	910 9,213 10,073 101,978 32 - 291 11,099 11,099 214,7% 189,8% 214,7%	5	\$25 10,038 9,132 111,110 30 - 224 11,069 11,069 215,254 191,756 215,254
YTD Use Mouth 5 YTD 8 BP Length HDO CDD Month Rate YTD Rate Simulctual vi Month Use YTD Use Month 5 YTD S	5.	30 39 71 	s s s	30 86 125 - - - - - - - - - - - - - - - - - - -	5	30 310 310 	5	28 790 - - - - - - - - - - - - - - - - - - -	5	3,540 3,540 39,184 39,184 32 1,344 - 11,069 11,069 528,2618 1203,9% 162,6%	5	3,540 -39,184 -39 1,023  -11,069 F45 2315 -100,0% 117,8% -100,0%	\$ \$	2,018 5,558 22,337 61,521 31 705 4 11,069 11,069 11,069 107,4% 200,4% 797,4% 200,4%	5	1,105 6,663 12,231 73,752 30 713 12 11,069 11,069 Agr 2018 335,255 216,756 335,256 216,756	\$ \$ \$	1,640 8,303 18,153 91,905 58 294 202 11,069 11,069 11,069 103,6% 103,6% 103,6% 103,6%	5	8,303 91,905 - - - - - - - - - - - - - - - - - - -	5	910 9,213 10,073 101,978 32 291 11,099 11,099 214,7% 199,8% 214,7% 199,8%	5	\$25 10,038 9,132 111,110 30 - 224 11,069 11,069 215,2% 191,7% 215,2% 191,7%
YTD Use Month S YTD S BP Longth HDD CDD Month Rate YTD Rate Similateal vi Month Use YTD Use Month S YTD S BP Longth HDD	5.	30 39 71 -100.05 -100.05 -100.05	s s s	30 86 125 - - - - - - - - - - - - - - - - - - -	5	30 379 	5	28 790 - - - - - - - - - - - - - - - - - - -	5	3,540 3,540 39,184 39,184 1,344 - 11,069 11,069 1200,9% 162,6% 162,6%	5	3,540 39,184 39 1,023 - 11,069 11,069 100,0% 117,3%	\$ \$	2,018 5,558 22,337 61,521 31 705 4 11,069 11,069 11,069 100,4% 200,4% 200,4%	5	1,105 6,663 12,231 73,752 30 713 12 11,069 11,069 Agr 2018 335,255 216,7% 335,255	\$ \$ \$	1,640 8,303 18,153 91,905 58 294 202 11,069 111,069 May 1018 103,6% 187,3% 103,5%	5	5,303 91,905 - - - 11,069 Jun 2018 187,3%	5	910 9,213 10,073 101,978 32 - 291 11,099 11,069 214,7% 214,7% 214,7%	5	\$25 10,038 9,132 111,110 30 - 224 11,069 11,069 215,254 191,754 215,254 191,754
YTD Use Mouth 5 YTD 8 BP Length HDD CDD Month Rate YTD Rate Sinchetual vi Month Use YTD Use Month 5 YTD 8 BP Length	5 5	30 39 71 50 2037 -00.0% -100.0%	s s s	30 86 125 - - - - - - - - - - - - - - - - - - -	5	30 370 	5	28 780 	5	3,540 3,540 39,184 39,184 32 1,344 11,069 11,069 53n,2018 1203,9% 162,6%	5	3,540 39,184 30 1,023 	\$ \$	2,018 5,558 22,337 61,521 31 705 4 11,069 11,069 107,4% 200,4% 	5	1,105 6,663 12,231 73,752 30 713 12 11,069 11,069 216,7% 335,2% 216,7%	\$ \$ \$	1,640 8,303 18,133 91,905 58 294 202 11,009 111,009 103,6% 187,3% 103,6%	5	91,905 	5	910 9,213 10,073 101,978 32 291 11,099 11,099 214,7% 192,8% 	5	\$25 10,038 9,832 111,110 30 - 224 11,069 11,069 215,255 191,7% 215,278 191,7%
YTD Use Month 5 YTD 5 BIP Length HDD CDD Month Rate YTD Rate Similatual vi Month Use YTD Use Month 5 YTD 8 BP Length HDD CDD CDD CDD CDD CDD CDD CDD CDD CDD	5 5	30 39 71 	s s s		5	30 379  - - - - - - - - - - - - - - - - -	5	28 790 	5	3,540 3,540 39,184 39,184 32 1,344 11,069 11,069 1203.9% 162.6%	5	3,540 39,184 30 1,023 - 11,069 11,069 117,8% -100,0%	\$ \$	2,018 5,558 22,337 61,521 31,795 4 11,069 11,069 110,069 107,4% 200,4%	5	1,105 6,663 12,231 73,752 30 713 12 11,069 11,069 11,069 216,7% 335,2% 216,7%	\$ \$ \$	1,640 8,303 18,153 91,905 58 294 294 11,009 11,009 11,009 103,6% 187,3% 105,6%	5	91,905 	5	910 9,213 10,073 101,978 32 - 291 11,069 11,069 214,7% 189,8% 214,7%	5	825 10,038 9,132 111,110 30 
YTD Use Mouth 5 YTD S BY Longth HDD CDD Month Rate YTD Rate SimActual vi Month Use YTD Use Mouth 5 YTD S BY Longth HDD CDD  Con Aveidan Month Use	5 5	30 39 71 	s s s	30 86 125 - - - - - - - - - - - - - - - - - - -	5	30 370 	5	28 790 	5	3,540 3,540 39,184 39,184 1344 11,060 11,060 11,060 1203,9% 162,6%	5	3,540 39,184 30 1,023 - 11,069 F45 201E -100,0% 117,3% -100,0%  	\$ \$	2,018 5,558 22,337 61,521 31 795 4 11,069 11,069 11,069 11,069 107,4% 200,4%	5	1,105 6,663 12,231 73,752 30 713 12 11,069 11,069 11,069 335,255 216,776 335,256 (851)	\$ \$ \$	1,640 8,303 18,153 91,905 58 294 202 11,069 111,069 103,6% 187,3% 103,6% 187,3%	5	5,303 91,905 	5	910 9,213 10,173 101,978 32 29 11,069 11,069 214,7% 189,8% 214,7% 	5	\$25 10,038 9,132 111,110 30 - 224 11,069 11,069 215,256 191,756 215,256 191,756
YTD Use Month 5 YTD 5 BP Length HDD CDD Month Rate YTD Rate Sincletual vi Month Use YTD Use Month 5 YTD 8 BP Length HDD CDD CDD Use Aveidan	5 5	30 39 71 	s s s		5	30 379  - - - - - - - - - - - - - - - - -	5	28 790 	5	3,540 3,540 39,184 39,184 32 1,344 11,069 11,069 1203.9% 162.6%	5	3,540 39,184 30 1,023 - 11,069 11,069 117,8% -100,0%	\$ \$	2,018 5,558 22,337 61,521 31,795 4 11,069 11,069 110,069 107,4% 200,4%	5	1,105 6,663 12,231 73,752 30 713 12 11,069 11,069 11,069 216,7% 335,2% 216,7%	\$ \$ \$	1,640 8,303 18,153 91,905 58 294 294 11,009 11,009 11,009 103,6% 187,3% 105,6%	5	91,905 	5	910 9,213 10,073 101,978 32 - 291 11,069 11,069 214,7% 189,8% 214,7%	5	\$25 10,038 9,132 111,110 30  224 11,069 11,069 215,2% 191,7% 

Month Use \$ \$ 2,959 \$ 2,830 \$ 3,207 \$ 2,920 \$ (36,179) \$ 3,070 \$ (19,848) \$ (9,421) \$ (9,451) \$ - \$ (6,372) \$ (6,234) \$ \text{YTD}\$ \$ \$ 2,939 \$ 5,789 \$ 5,789 \$ 11,916 \$ (24,263) \$ (21,193) \$ (41,041) \$ (50,461) \$ (50,012) \$ (59,912) \$ (59,912) \$ (66,784) \$ (73,018)

Reference: Actual usage and costs for past Year. Baseline: Carrent usage and costs based upon historic patients of Unit use.

SimActual: Actual usage and calculated costs for current Year.

#### Mater: FA 1-40 Gas

Reference																								
		Sep 2006		Oct 1006		Nev 2006		Dec 1006		Jan 2006		Fab 2006		Mar 1006		Apr 2006		May 1006		Jun 2006		Jul 1006		Aug 2006
Month Use		64		213		291		390		401		466		400		168		314		23		2		
YTD Use		64		277		368		958		1,359		1,825		2,225		2,393		2,507		2,530		2,532		2,532
Month S	5.	1,281	8	4,226	5.	5,775	8	7,766	\$	7,965	8	9,265	\$	7,955	8	3,337	8	2,257	5	449	8	38	5.	
YID5	5.	1,283	5	5,507	5.	11,282	5	19,048	5	27,013	5	36,278	5	44,233	5	47,570	5	49,827	5.	50,276	5	50,314	5.	50,314
BP Length		30		31		30		31		3.1		2.5		31		30		31		30		31		3.1
HDD		134		442		604		812		433		969		832		349		236		41		4		
CDD		12																42		8.3		263		266
Month Rate	5	20.016	5	19.840	5.	19.845	5	19.913	5	19.863	5	19.882	\$	19.888	5	19.863	5	19.798	5	19.522	5	19.000	5	
YTD Rate	5.	20.016	5	19.881	5.	19.863	5	19.883	5	19.877	5	19.878	5	19,880	5	19,879	5	19.875	5.	19,872	5	19.871	5.	19.871

Bateline																								
	Sap 2	017	Out :	1017	Ne	v 2017	De	e 2017	1	lan 2018		ab 2016	Mi	er 2018	- 4	Apr 2016	3.	day 1015	. ;	Tun 2015	ı	Jul 2015	Aug	2018
Month Use																								
YTD Use																								
Month 5																								
YID5																								
BP Length		50		30		30		30		3.3		29		29		32		29		30		32		30
HDD		59		59		555		830		1,392		97.5		723		785		274		2.0				
CDD	2	101		137										4		12		39		167		301		219
Month Rate	5 .		5		5		5		5		5		5		5		5		5.	-	5	-	5	-
YTD Rate	5 .		s		5.		S		5		5		\$		5		8		5.		8		5.	

SimActual																						
	Sep 20	17	Oct 10	17	New 2017	١ ١	Dec 2017		Jan 2018	Feb	2015	Ma	r 2015	- 4	Apr 2015	м	ay 1015		un 2015		Jul 2015	Aug 2018
Month Use																						
YTD Use																						
Month 5																						
YTDS																						
BP Length		0	3	0	30		30		3.3		29		29		32		29		30		32	30
HDD		9	5	3	355		830		1,392		97.5		T23		785		274		20			
CDD	21	ri .	13	7									4		12		39		167		301	219
Month Rate	5 -	5		5		5		5		5		5		5		5	-	5		5		5 .
YTD Rate	š -	5		5		8		5		5		\$		5		8		5.		8		š .

	Sep 2017	Oct 1017	New 2017	Dec 2017	Jan 2018	Feb 2015	Mar 1015	Apr 2015	May 1015	Jun 2018	Jul 2015	Aug 2018
Month Use								-				
YTD Use									-			
Month 5								-			-	
YTD S												
BP Length												
HDD				-		-		-		-	-	
CDD												
Use Avoldance												
Month Use												
YTD Use												

Cost Avoidan	08												
Month Use S	5	5	5.	5	5	5	5	5	5	5.	5	5.	
YTDS	5.	5	5.	5	5	5	5	5	5	5.	5	5.	

Reference: Actual usage and costs for past Year. SimActual: Actual usage and calcubited costs for current Year. Baseline: Current usage and costs based upon historic patierns of Unit use.

#### Meter: PA 1-40 Water

Reference																								
		Sap 2006		Oct 1006		Nev 2006		Dec 1006		Jan 2006		Fab 2006		Mar 1806		Apr 2006		May 1006		Jun 2006		Jul 2006		Aug 2006
Month Use		179		112		78		110		7.5		100		130		95		107		192		39		59
YTD Use		179		291		369		479		354		0.54		794		879		9965		1,178		1,267		1,326
Month S	5.	1,659	S	1,038	5.	723	S	1,022	5	695	5	927	5	1,205	S	881	S	992	5.	1,780	S	825	5.	547
YID 5	5.	1,659	S	2,697	5.	3,420	S	4,442	s	5,137	5	6,064	s	7,269	5	8,150	S	9,142	5.	10,922	S	11,747	5.	12,294
BP Length		30		31		30		31		3.1		2.5		31		30		31		30		31		3.1
HDD		134		442		604		812		633		969		83/2		349		236		47		4		
CDD		12																42		83		263		266
Month Rate	5.	9.268	5	9.268	5.	9.269	5	9.291	\$	9.267	5	9.270	\$	9.209	5	9.274	5	9.271	5.	9.271	5	9.270	5.	9.271
YTD Rate	5.	9.268	S	9.268	5	9.268	S	9.273	S	9.273	5	9.272	S	9.272	5	9.272	S	9.272	5.	9.272	S	9.272	5.	9.271

Bareline																								
	Sag	2017	0	at 101	,	Nev 2017		Dec 2017		Jan 2018	-	Feb 2015	Man	1015	4	ige 2016	N	fay 1016		Jun 2018		Jul 2015	Aug	2015
Month Use																								
YTD Use																								
Mouth S																								
YID5																								
BP Length		29		31				63		31		28		30		29		29		34		28		33
HDD		43		426				2,135		1,117		683		865		321		2.5		1				10
CDD		141		6								4				33		149		282		224		294
Month Rate	5.		5		5		5		8		5	-	5		5	-	5		5.		5		5	
YTD Rate	5.		S		5.		S	-	5		S		s		5	-	S		5.	-	S		5.	

Simuloteal																							
	Sep 2017		Oct 1017		Nev 2017	Dec 2	1017	ı	an 2015	Fab:	2015	Mai	2015	4	ige 2016	м	ay 2015		Jun 2016		Jul 2015	Aug	2015
Month Use																							
YTD Use																							
Mouth S																							
YTD S																							
BP Length	29		31.				63		31		28		30		29		29		34		28		33
HDD	43		426			2,	135		1,117		683		865		321		2.5		1				10
CDD	1.41		6								4				33		149		282		224		294
Month Rate	ş -	5		5		5		5	-	5		8		5	-	5	-	5		5	-	5	
YTD Rate	š -	S		5.		S		s		S	-	s		5		S		5.		S		5.	

	Sep 2017	Oct 1017	Nev 2017	Dec 2017	Jan 2018	Feb 2015	Mar 2015	Apr 2015	May 2015	Jun 2015	Jul 2015	Aug 2018
Month Use						-		-			-	
YTD Use	-					-		-			-	
Month 5	-		-	-		-		-			-	
YTD S						-		-				
BP Length												
HDD	-					-		-			-	
CDD												
Usa Avoldanca												
Month Use												
YTD Die												
Cost Aveidanc												

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: FA 1-41 Gas

BP Length
HDD
CDD

Cras Avoldance

Month Use

YTD Use

Month Use 5 5

(21)

(21)

(499) \$

(25)

(588) \$

1,411 \$

160

488

3,807 \$ 11,389 \$

Reference																								
		Sep 2006		Oct 1006		Nev 2006		Dec 2006		Jan 2006		Fab 2006		Mar 2006		Apr 2006		May 1006		Jun 2006		Jul 1006		Aug 2006
Month Use		68		224		445		748		745		727		635		272		142		90		39		63
YTD Use		6.6		292		737		1,483		2,230		2,957		3,592		3,864		4,005		4,096		4,133		4,198
Month \$	5.	1,351	8	4,451	5.	8,842	8	14,869	\$	14,804	8	14,446	\$	12,618	8	5,405	S	2,822	5	1,748	8	77.5	5.	1,252
YTD 5	5.	1,351	5	5,802	5.	14,644	5	29,513	5	44,317	5	58,763	5	71,381	5	76,786	5	79,608	5.	81,396	5	82,171	5.	83,423
BP Length		30		31		30		31		3.1		2.5		31		30		31		30		31		3.1
HDD		53		300		454		657		618		829		679		221		125		16				
CDD		12																42		8.3		263		266
Month Rate	5.	19.868	5	19.871	5	19,870	5	19.878	5	19.871	5	19.871	5	19.871	5	19.871	5	19.873	5	19.867	5	19.872	5.	19.873
YTD Rate	5.	19.868	5	19.870	5	19,870	5	19.874	5	19.873	5	19.873	5	19.872	5	19.872	5	19.872	5.	19,872	5	19.872	5.	19,872
Bareline																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2018		Apr 2015		May 1015		Jun 2015		Jul 1015		Aug 2018
Month Use		39		82		505		673		1,210		730		700		520		108		46		43		3.9
YTD Use		39		121		626		1,299		2,509		3,239		3,939		4,459		6,567		4,613		4,655		4,694
Month 5	5.	917	5	1,945	5.	11,990	5	15,970	\$	28,718	5	17,310	\$	16,602	5	12,341	5	2,566	5	1,083	5	1,014	5.	921
YTD 5	5	917	5	2,862	5	14,852	5	30,822	5	59,540	5	74,850	5	93,452	5	105,793	5	108,359	5	109,442	5	110,458	5	111,378
BP Length		2.1		29		3.2		30		3.3		30		30		30		29		30		32		29
HDD		12		47		504		689		1,270		751		T18		523		76		6				
CDD		51		100								4				12		64		201		280		212
Month Rate	5.	23,726	5	23,726	5	23.726	5	23.726	5	23,726	5	23,726	5	23,726	5	23,726	5	23,726	5	23.726	5	23.726	5.	23,726
YTD Rate	5.	23.726	8	23.726	ş.	23.726	8	23.726	\$	23.726	5	23.726	\$	23.T26	5	23.726	S	23.726	5.	23.726	8	23.726	ş.	23.726
SimActual																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 2018		Apr 2015		May 1015		Jun 2015		Jul 1015		Aug 2018
Month Use		60		86		421	Т	572	Т	882		616		486		426		144	Т	69		67		56
YTD Use		60		145		567		1,139		2,021		2,637		3,123		3,549		3,693		3,762		3,828		3,884
Month S	3.	1,416	5	2,033	3.	9,991	5	13,574	5	20,936	3	14,623	5	11,522	5	10,110	5	3,407	5	1,642	5	1,590	3.	1,324
YTD 5	5.	1,416	8	3,450	5.	13,441	8	27,015	\$	47,951	8	62,574	\$	74,095	8	84,205	8	87,612	5.	89,254	8	90,834	5.	92,158
BP Length		2.1		29		3.2		30		3.3		30		30		30		29		30		32		29
HDD		12		47		304		689		1,270		751		718		523		76		6				
CDD		51		100								4				12		64		201		280		212
Month Rate	5.	23.726	5	23,726	5	23.726	5	23.726	5	23,726	5	23,726	5	23,726	5	23.726	5	23,726	5	23.726	5	23.726	5	23,726
YTD Rate	5.	23.726	S	23.726	ş.	23.726	\$	23.726	\$	23.726	5	23.726	\$	23.726	5	23.726	\$	23.726	5.	23.726	8	23.726	ş.	23.726
SimActual v		estins.																						
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 2015		Apr 2015		May 1015		Jun 2018		Jul 1015		Aug 2018
Month Use		54.4%		4.5%		-16.7%		-15,0%		-27.1%		-15.5%		-30.6%		-18.1%		32.8%		51.6%		55.6%		43.8%
YTD Use		54.4%		20.5%		-9.5%		-12,4%		-19.5%		-18.6%		-20.7%		-20.4%		-19.1%		-18.4%		-17.8%		-17.3%
Month 5		34.4%		4.5%		-10.7%		-15,0%		-27.1%		-15.5%		-30.6%		-18.1%		32.8%		51.6%		55.6%		43,8%
YTDS		54.4%		20.5%		-0.5%		-12,4%		-19.5%		-18.6%		-20.7%		-20.4%		-19.1%		-18.4%		-17.8%		-17.3%
TMT Length		2.478				-21279						-2.20				-227474				220-476				

113

602

14,277 \$

B16

(88) \$ 1,999 \$ 2,396 \$ 7,782 \$ 2,688 \$ 5,080 \$ 2,231 \$ (841) \$ (359) \$ (564) \$ (403)

(17)

810

(24)

827

(24)

851

874

910

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 patients of Unit use.

Reference																								
		Sap 2006		Oct 1006		Nev 2006		Dec 1986		Jan 2006		Fab 2006		Mar 1806		Agr 2006	- 1	May 1006		Jun 2006		Jul 2006		Aug 266
Month Use		271		251		323		253		269		271		167		321		514		277		270		267
YTD Use		271		522		545		1,098		1,367		1,638		1,805		2,126		2,640		2,917		3,187		3,454
Month S	5	2,512	5	2,327	5	2,994	S	2,341	5	2,494	5	2,512	5	1,548	5	2,976	S	4,765	5	2,568	S	2,503	5	2,415
YTD 5	5	2,512	S	4,839	5.	7,833	S	10,174	s	12,668	5	15,180	s	16,728	5	19,704	s	24,469	5	27,037	s	29,540	5	32,015
BP Length		30		31		30		31		31		25		31		30		31		30		31		3.1
HDD		134		442		604		812		833		969		832		349		236		47		4		
CDD		13								0.751								42		83		263		266
Month Rate YTD Rate	5.	9.269	5	9.271	5.	9.269	5	9.253	5	9.271	5	9.269	5	9.269	5	9.271	5	9.270	5	9.271	5	9.270	5.	9.270
1 J D Kare	_	7.269	-	9.270	_	9.210	-	9.200	-	9.267	-	9.207	-	9.200	-	7.200	-	9.209	÷	7.269	-	9.209	-	9.269
Bareline																								
		Sep 2017		Oct 1017	•	Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 2015		Apr 2016	- 1	May 2015		Jun 2015		Jul 2015		Aug 2011
Month Use		253		270		288		239		283		285		174		310		480		316		272		259
YTD Use		253		523		811		1,049		1,332		1,618		1,792		2,103		2,582		2,898		3,169		3,428
Mouth 5	5	2,795	5	2,999	5	3,188	5	2,645	5	3,130	- 5	3,159	5	1,931	5	3,436	5	5,311	5	3,494	5	3,006	5	2,863
YTD 5	5	2,795	s	5,784	5	8,972	s	11,617	s	14,746	5	17,905	s	19,836	5	23,273	S	28,583	5	32,077	S	35,083	5	37,946
BP Length		28		33		27		28		33		30		30		31		30		31		31		30
HDD		54		246		643		780		1,458		853		911		614		90		20		286		2
CDD	5.	116		37		11,069		11.069		11.069		11.069		11.069		11.069		31.069		11.069				11.069
Month Rate YTD Rate	1	11.069	5	11.069	1	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069		11.069		11.069	5	11.069	1	11.069
Sim.Letual																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 2015		Apr 2015	- 1	May 1015		Jun 2015		Jul 2015		Aug 2010
		414		479		395		406		500		Fab 2015 445		456		457	-	443		466		476		498
YTD Use		414 414		479 893		395 1,288		406 1,694		500 2,194		448 2,642		456 3,098		457 3,555		443 3,998		466 4,464		476 4,940		498 5,438
YTD Use Month \$	5	414 414 4,583	5	479 893 5,302	5	395 1,288 4,372	5	406 1,694 4,494	s	500 2,194 5,534	5	448 2,642 4,959	5	456 3,098 5,047	s	457 3,555 3,038	5	443 3,998 4,904	5	466 4,464 3,138	5	476 4,940 5,269	5	498 5,438 5,512
Month Use YTD Use Month \$ YTD \$	5.5	414 414 4,583 4,583	S	479 893 5,302 9,885	5 5	395 1,288 4,372 14,257	S	406 1,694 4,494 18,751	5	500 2,194 5,534 24,285		448 2,642 4,959 29,244	5	456 3,098 5,047 34,291		457 3,555 5,058 39,350	5	443 3,998 4,904 44,253	5 5	466 4,464 5,158 49,412	S	476 4,940 5,209 54,680		5,438 5,512 60,193
YTD Use Manth \$ YTD \$ BP Length	-	414 414 4,553 4,563 28	s s	479 893 5,362 9,885 33	5.5	395 1,288 4,372 14,257 27	s	406 1,694 4,494 18,751 28	-	500 2,194 5,534 24,285 33	5	2,642 4,959 29,244 30	5	456 3,098 5,047 34,291 30	s	457 3,555 5,058 39,350 31	S	443 3,598 4,904 44,253 30		466 4,464 3,138 49,412 31	s s	476 4,940 5,209 54,680 31	5	5,438 5,512 60,193 30
YTD Use Mouth \$ YTD \$ BP Length HDD	-	414 414 4,583 4,583 28 34	5 5	479 893 5,362 9,885 33 246	5.	395 1,288 4,372 14,257 27 643	s	406 1,694 4,494 18,751 28 780	-	500 2,194 5,534 24,285 33 1,458	5	448 2,642 4,959 29,244 30 853	5	456 3,098 5,047 34,291 30 911	s	457 3,555 5,058 39,350 31 614	S	443 3,598 4,904 44,253 30 90		466 4,464 5,158 49,412 31 20	S S	476 4,940 5,209 54,680 31	5	498 5,438 5,512 60,193 30 2
YTD Use Mouth \$ YTD \$ BP Length HDD CDD	5.	414 414 4,583 4,583 28 54 116	5 5	479 893 5,302 9,885 33 246 37	5 5	395 1,288 4,372 14,257 27 643	5 5	406 1,694 4,494 18,751 28 780	-	500 2,194 5,534 24,285 33 1,458	5	448 2,642 4,959 29,244 30 853 4	5	456 3,098 5,047 34,291 30 911	s	457 3,555 3,038 39,350 31 414	5 5	443 3,998 4,904 44,253 30 90 87		466 4,464 5,158 49,412 31 20 213	5 5	476 4,940 5,209 54,680 31 - 286	5	498 5,438 5,512 60,193 30 2 193
YTD Use Mouth S YTD S	-	414 414 4,583 4,583 28 34	\$ \$	479 893 5,362 9,885 33 246	5 5	395 1,288 4,372 14,257 27 643	\$ \$ \$	406 1,694 4,494 18,751 28 780	-	500 2,194 5,534 24,285 33 1,458	5	448 2,642 4,959 29,244 30 853	5	456 3,098 5,047 34,291 30 911	s	457 3,555 5,058 39,350 31 614	5 5	443 3,598 4,904 44,253 30 90		466 4,464 5,158 49,412 31 20	5 5	476 4,940 5,209 54,680 31	5	5,438 5,512 60,193 30 2
YTD Use Manth 5 YTD 8 BP Length HDD CDD Month Rate YTD Rate	5. 5.	414 4,583 4,583 28 34 116 11,069	5	479 893 5,302 9,885 33 246 37 11.069	5	395 1,288 4,372 14,257 27 443 -	5	406 1,694 4,894 18,751 25 780	5	500 2,194 5,534 24,285 33 1,458	5 5	2,642 4,059 29,244 30 853 4 11,069	5 5	456 3,098 5,047 34,291 30 911 -	\$ \$	45T 3,555 3,03E 39,350 31 414 12 11,069	5 5	443 3,998 4,904 44,253 30 90 87 11,069	5	466 4,464 3,138 49,412 31 20 213 11,069	5	476 4,940 5,209 54,680 31 - 286 11,009	5.5	498 5,438 5,512 60,193 30 2 193 11,069
YTD Use Manth 5 YTD 8 BP Length HDD CDD Month Rate YTD Rate	5. 5.	414 4,583 4,583 28 34 116 11,069 11,069	5	479 893 5,302 9,885 33 246 37 11,069 11,069	5	395 1,288 4,372 14,257 27 643 - 11,069 11,069	5	406 1,694 4,494 18,751 28 780 - 11,069 11,069	5	500 2,194 5,534 24,285 33 1,458 - 11,069 11,069	5 5 5	2,642 4,059 29,244 30 853 4 11,069	\$ \$ \$	456 3,098 5,047 34,291 30 911 - 11,069 11,069	\$ \$ \$ \$	45T 3,555 5,058 39,350 31 414 12 11,069 11,069	\$ \$ \$	443 3,998 4,904 44,253 30 90 87 11,069	5	466 4,464 5,138 49,412 31 20 213 11,069 11,069	5	476 4,940 5,209 54,680 31 - 286 11,069 11,069	\$ \$ \$ \$	498 5,438 5,312 60,193 30 2 193 11,069
YTD Use Mouth S YTD S BP Length HDD CDD Month Rate YTD Rate	5. 5.	414 414 4,583 4,583 28 34 116 11,069 11,069	5	479 893 5,362 9,885 33 246 37 11,069	5	395 1,288 4,372 14,257 27 643 - 11,069 11,069	5	406 1,694 4,494 18,751 28 780 - 11,069 11,069	5	500 2,194 5,534 24,285 33 1,458 - 11,069 11,069	5 5 5	448 2,642 4,959 29,244 30 853 4 11,069 11,069	\$ \$ \$	456 3,098 5,047 34,291 30 911 - 11,069 11,069	\$ \$ \$ \$	45T 3,555 3,038 39,350 31 414 12 11,069 11,069	\$ \$ \$	443 3,998 4,904 44,253 30 90 87 11,069 11,069	5	466 4,464 3,138 49,412 31 20 213 11,069 11,069	5	476 4,940 5,269 54,680 31 - 286 11,069 11,069	\$ \$ \$ \$	408 5,438 5,512 60,193 30 2 193 11,669 11,669
YTD Use Mouth S YTD S BP Length FDD CDD Mouth Rate YTD Rate SineActual v Mouth Use	5. 5.	414 414 4,583 28 34 116 11,069 11,069 2017a 64,0%	5	479 893 5,302 9,885 33 246 37 11,069 11,069	5	395 1,288 4,372 14,257 27 643 - 11,069 11,069 New 2037 37,1%	5	406 1,694 4,494 18,751 28 780 - 11,069 11,069	5	500 2,194 5,534 24,285 33 1,458 - 11,069 11,069	5 5 5	448 2,642 4,059 29,244 30 853 4 11,069 11,069	\$ \$ \$	456 3,008 5,047 34,291 30 911 - 11,069 11,069	\$ \$ \$ \$	497 3,595 5,058 39,350 31 614 12 11,069 11,069	\$ \$ \$	443 3,993 4,904 44,253 30 90 87 11,069 11,069 May 2015 -7,7%	5	466 4,464 3,138 49,412 31 20 213 11,069 11,069	5	476 4,940 5,209 54,680 31 - 286 11,069 11,069	\$ \$ \$ \$	498 5,438 5,312 60,193 30 2 193 11,069 11,069
YTD Use Month 5 YTD 5 BP Length HDD CDD Month Rate YTD Rate Sine Letual v Month Use YTD Use	5. 5.	414 414 4,583 4,583 34 116 11,069 11,069 2017 64,0% 64,0%	5	479 893 5,302 9,885 33 246 37 11,069 11,069 0cc 1017 77,4% 70,9%	5	395 1,288 4,372 14,257 27 643 11,069 11,069 New 2017 37,1%	5	406 1,694 4,494 18,751 28 790 - 11,099 11,099 09.95 61,495	5	500 2,194 5,534 24,285 33 1,458 	5 5 5	448 2,642 4,059 29,244 30 853 4 11,069 11,069	\$ \$ \$	456 3,008 5,047 34,291 30 911 - 11,069 11,069 May 1018 161,3% 72,9%	\$ \$ \$ \$	497 3,555 5,058 39,350 31 414 12 11,069 11,069 47,2% 68,1%	\$ \$ \$	443 3,998 4,904 44,253 30 90 87 11,069 11,069 May 1018 -3,7% 54,8%	5	466 4,464 5,158 49,412 31 20 213 11,069 11,069 47,6% 54,0%	5	476 4,940 5,209 54,690 31 - 286 11,099 11,099 75,3% 55,9%	\$ \$ \$ \$	498 5,438 5,512 60,193 30 2 193 11,069 11,069 02,5% 58,6%
YTD Use Mouth 5 YTD 5 BP Length FIDO CDD Month Rate YTD Rate YTD Rate Similateal v Month Use YTD Use Mouth 5	5. 5.	414 414 4,583 28 34 116 11,069 11,069 2017a 64,0%	5	479 893 5,302 9,885 33 246 37 11,069 11,069	5	395 1,288 4,372 14,257 27 643 - 11,069 11,069 New 2037 37,1%	5	406 1,694 4,494 18,751 28 780 - 11,069 11,069	5	500 2,194 5,534 24,285 33 1,458 - 11,069 11,069	5 5 5	448 2,642 4,059 29,244 30 853 4 11,069 11,069	\$ \$ \$	456 3,008 5,047 34,291 30 911 - 11,069 11,069 161,3% 72,9% 161,3%	\$ \$ \$ \$	497 3,595 5,058 39,350 31 614 12 11,069 11,069	\$ \$ \$	443 3,993 4,904 44,253 30 90 87 11,069 11,069 May 2015 -7,7%	5	466 4,464 3,138 49,412 31 20 213 11,069 11,069	5	476 4,940 5,209 54,680 31 - 286 11,069 11,069	\$ \$ \$ \$	498 5,438 5,512 60,193 30 2 193 11,069 11,069 02,5% 58,6%
YTD Use Mouth S YTD S BP Length FED CDD Month Rate YTD Rate Sine Lettal v Month Use YTD Use Month S YTD S	5. 5.	414 414 4,583 28 34 116 11,069 11,069 50 2310 64,0% 64,0%	5	479 893 5,302 9,885 33 246 37 11,069 11,069 77,4% 70,9%	5	395 1,288 4,372 14,257 27 643 - 11,069 11,069 11,069 37,1% 58,9% 37,1%	5	406 1,694 4,494 18,751 28 780 - 11,099 11,099 09,95 61,495 69,995	5	500 2,194 5,514 24,285 33 1,458 - 11,069 11,069 76,8% 64,7% 76,8%	5 5 5	448 2,642 4,959 29,244 30 853 4 11,069 11,069 57,0% 63,3% 57,0%	\$ \$ \$	456 3,008 5,047 34,291 30 911 - 11,069 11,069 May 1018 161,3% 72,9%	\$ \$ \$ \$	497 3,555 5,058 39,350 311 414 12 11,069 11,069 47,2% 60,1% 47,2%	\$ \$ \$	443 3,998 4,904 44,253 30 90 87 11,069 11,069 11,069 54,8% -7,7%	5	466 4,464 5,138 49,412 213 11,069 11,069 54,065 47,655 47,656 47,656	5	476 4,940 5,209 54,680 31 - 286 11,099 11,069 75,3% 55,9% 75,3%	\$ \$ \$ \$	498 5,438 5,512 60,193 30 2 193 11,069 11,069 02,5% 58,6% 92,5%
YTD Use Masth 5 YTD 5 BBP Length HDD CDD Mosth Rate YTD Rate Similated vi Mosth Use YTD Use Mosth 5 YTD 8 BP Length	5. 5.	414 414 4,583 4,583 28 34 116 11,069 11,069 54,076 64,076 64,076 64,076	5	479 893 5,302 9,885 33 246 37 11,069 11,069 77,4% 70,9% 77,4% 70,9%	5	395 1,288 4,372 14,257 27 643 	5	406 1,694 4,494 18,751 28 79 11,099 11,099 61,4% 69,9% 61,4%	5	500 2,194 5,334 24,285 33 1,458 - 11,069 11,069 Jan 2010 70,874 64,794 64,794 64,794	5 5 5	448 2,642 4,959 29,244 30 853 4 11,069 11,069 57,095 63,3% 63,3%	\$ \$ \$	456 3,098 5,047 34,291 30 911 - 11,069 11,069 161,3% 72,9%	\$ \$ \$ \$	497 3,555 5,038 39,350 311 614 12 11,069 11,069 47,256 60,176 47,256 60,176	\$ \$ \$	443 3,998 4,904 44,253 30 87 11,069 11,069 47,7% 54,8% 54,8%	5	466 4,464 5,138 49,412 213 11,069 11,069 54,0% 47,6% 54,0% 54,0%	5	476 4,940 5,269 54,690 31 - 286 11,099 11,099 75,3% 55,9% 55,9%	\$ \$ \$ \$	498 5,438 5,512 60,193 30 2 193 11,669 11,669 411,9131 92,5% 58,6% 58,6%
YTD Use Mouth S YTD S BP Length FDD CDD Mouth Rate YTD Rate SineActual v Mouth Use	5. 5.	414 414 4,583 4,583 34 116 11,069 11,069 64,0% 64,0% 64,0%	5	479 893 5,362 9,885 33 246 37 11,069 11,069 77,4% 70,9% 77,4%	5	395 1,288 4,372 14,257 27 643 	5	406 1,094 4,494 18,795 780 - 11,069 11,069 09,9% 61,4%	5	500 2,194 5,334 24,285 33 1,458 - 11,069 11,069 54,794 64,794 64,794	5 5 5	448 2,642 4,959 29,244 30 851 4 11,069 11,069 57,096 63,3%	\$ \$ \$	456 3,098 5,047 34,291 30 911 - 11,069 11,069 161,3% 72,9% 161,3%	\$ \$ \$ \$	497 3,555 5,038 39,350 31 614 12 11,069 11,069 47,256 69,176 47,276 69,176	\$ \$ \$	443 3,998 4,904 44,253 30 90 87 11,069 11,069 11,069 May 1015 -7,7% 54,8% -7,7%	5	466 4,464 3,138 49,412 31 20 213 11,069 11,069 47,675 54,076 47,676	5	476 4,940 5,269 54,690 31 - 286 11,069 11,069 2012015 75,3% 55,9%	\$ \$ \$ \$	498 5,438 5,512 60,193 30 2 193 11,669 11,669 92,5% 58,6% 92,5%
YTD Use Moath 5 YTD S BP Length EDD CDD Moath Rate YTD Rate  Moath Use YTD Use Moath Use YTD Use BP Length EDD CDD	5 5 5	414 414 4,583 4,583 34 116 11,069 11,069 11,069 64,0% 64,0%	5	479 893 5,302 9,883 33 246 37 11,099 11,099 77,4% 70,9% 77,4%	5	395 1,288 4,372 14,257 643 - 11,069 11,069 11,069 37,156 58,9% 37,156	5	406 1,694 4,494 18,751 28 790 - 11,099 11,099 69,9% 61,4% 69,9%	5	500 2,194 5,334 24,283 1,458 11,069 11,069 70,8% 64,7%	5 5 5	448 2,642 4,059 29,244 30 833 4 11,069 11,069 57,0% 63,3%	\$ \$ \$	456 3,098 5,047 34,291 30 911 - 11,069 11,069 161,3% 72,9% - -	\$ \$ \$ \$	497 3,555 3,038 39,350 311 614 12 11,069 11,069 47,256 60,176 47,256 60,176	\$ \$ \$	443 3,998 4,904 44,253 30 87 11,069 11,069 11,069 54,8% -7,7% 54,8%	5	466 4,464 5,158 49,412 20 213 11,069 11,069 47,655 54,056 47,656	5	476 4,940 5,209 54,680 31 - 286 11,099 11,099 75,3% 55,9% - -	\$ \$ \$ \$	498 5,438 5,512 60,193 30 21 11,069 11,069 11,069 58,656 58,656
YTD Use Marik \$ YTD \$ BP Lingth HDD CDD Marith Rate YTD Rate YTD Rate Whath Use YTD Use Morith \$ YTD Use BP Lingth HDD	5 5 5	414 414 4,583 4,583 34 116 11,069 11,069 11,069 64,0% 64,0%	5	479 893 5,302 9,883 33 246 37 11,099 11,099 77,4% 70,9% 77,4%	5	395 1,288 4,372 14,257 643 - 11,069 11,069 11,069 37,156 58,9% 37,156	5	406 1,694 4,494 18,751 28 790 - 11,099 11,099 69,9% 61,4% 69,9%	5 5 5	500 2,194 5,334 24,283 1,458 11,069 11,069 70,8% 64,7%	5 5 5	448 2,642 4,059 29,244 30 833 4 11,069 11,069 57,0% 63,3%	\$ \$ \$	456 3,098 5,047 34,291 30 911 - 11,069 11,069 161,3% 72,9% - -	\$ \$ \$ \$	497 3,555 3,038 39,350 311 614 12 11,069 11,069 47,256 60,176 47,256 60,176	\$ \$ \$	443 3,998 4,904 44,253 30 87 11,069 11,069 11,069 54,8% -7,7% 54,8%	5	466 4,464 5,158 49,412 20 213 11,069 11,069 47,655 54,056 47,656	5	476 4,940 5,209 54,680 31 - 286 11,099 11,099 75,3% 55,9% - -	\$ \$ \$ \$	498 5,438 5,512 60,193 30 2 193 11,069 11,069 447(2/31) 92,5% 58,6%

Month Use \$ \$ (1,787) \$ (2,313) \$ (1,184) \$ (1,349) \$ (2,405) \$ (1,200) \$ (3,116) \$ (1,622) \$ 407 \$ (1,665) \$ (2,263) \$ (2,649) \$ YTD \$ \$ (4,787) \$ (4,101) \$ (5,288) \$ (7,134) \$ (9,539) \$ (11,339) \$ (14,485) \$ (16,077) \$ (15,670) \$ (17,335) \$ (19,998) \$ (22,247)

Reference: Actual usage and costs for past Year. SimActual: Actual usage and calcubited costs for current Year. Baseline: Current usage and costs based upon historic patterns of Unit use.

#### Meter: FA 1-44 Gas

Reference		Sap 2006		Oct 1006		Nev 2006		Dec 1006		Jan 2006		Fab 2006		Mar 2006		Apr 2006		May 1006		Jun 2006		Jul 1006		Aug 2006
		red tase	_	CHES 1000	_	Mar 2466	_	Dec 1996	_	33 H 2 0 0 0	_	N WO TOLK	_	MARY 2006	_	Apr 2006		2413 100e	_	10E 2466	_	301 1000	_	waf zees
Month Use		60		114		213		197		300		233		129		149		67		61		29		42
YTD Use		60		174		387		584		554		1,117		1,246		1,395		1,462		1,523		1,552		1,194
Month S	5.	1,192	8	2,265	5.	4,232	8	3,919	\$	5,961	5	4,630	\$	2,563	8	2,961	8	1,331	5.	1,212	8	576	5	835
YTD 5	5.	1,192	5	3,457	5.	7,689	5	11,608	5	17,569	5	22,199	5	24,762	5	27,723	5	29,054	5.	30,266	5	30,842	5.	31,677
BP Length		30		31		30		31		3.1		25		31		30		31		30		31		3.1
HDD		243		566		724		936		957		1,081		956		469		339		112		1.7		7
CDD		12																62		83		263		266
Month Rate	5.	19.867	5	19.868	5	19,869	5	19.893	5	19,570	5	19.871	\$	19,868	5	19.872	5	19.866	5	19.860	5	19.862	5.	19.881
YTD Rate	5.	19,867	5	19.868	5.	19,868	5	19.877	5	19,874	5	19.874	5	19,873	5	19.873	5	19.873	5.	19,873	5	19.872	5.	19.873

Bareline																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 2015		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 2018
Month Use		39		100		186		290		271		207		247		1.51		3.5		33		24		28
YTD Use		39		139		325		614		886		1,092		1,339		1,490		1,525		1,558		1,586		1,613
Month S	5.	923	5	2,368	3.	4,420	5	6,869	5	6,435	- 5	4,900	\$	5,856	5	3,573	5	538	5	784	5	659	3.	655
YTD5	5.	923	5	3,291	5.	7,711	5	14,580	5	21,015	5	25,915	5	31,770	5	35,343	5	36,182	5.	36,966	5	37,625	5.	38,280
BF Length		24		32		30		33		29		30		32		29		29		29		32		29
HDD		93		366		810		1,314		1,243		912		1,107		635		54		42		3		15
CDD		1.10		37								4				12		135		182		281		213
Month Rate	5	23.726	5	23,726	5.	23.726	5	23.726	5	23,726	5	23,726	5	23,726	5	23,726	5	23.726	5	23.726	5	23.726	5.	23,726
YTD Rate	5.	23.726	8	23,726	5.	23.726	8	23.726	\$	23.726	8	23,726	\$	23, 726	8	23,726	8	23,726	5.	23.726	8	23.726	5.	23.726

SimActual																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 1015		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 2018
Month Use		32		63		190		276		278		230		263		182		48		41		42		40
YTD Use		32		96		285		561		839		1,069		1,333		1,515		1,562		1,604		1,645		1,685
Month S	5.	762	5	1,504	5	4,499	5	6,551	5	6,333	- 5	5,467	\$	6,245	5	4,318	5	1,136	5	978	5	987	5.	940
YTD S	5.	762	8	2,266	5.	6,764	8	13,315	\$	19,904	8	25,371	\$	31,615	8	35,934	8	37,070	5	38,048	8	39,035	5.	39,984
BF Length		24		32		30		33		29		30		32		29		29		29		32		29
HDD		93		366		510		1,318		1,243		912		1,107		635		54		42		3		15
CDD		1.10		37								4				12		135		182		281		213
Month Rate	5	23,726	5	23,726	5	23,726	5	23,726	5	23,726	5	23,726	5	23,726	5	23,726	5	23.726	5	23,726	5	23.726	5	23,726
YTD Rate	5.	23.726	8	23,726	5.	23.726	8	23,726	\$	23.726	8	23,726	\$	23, 726	8	23.726	8	23,726	5.	23.726	8	23.726	5.	23.726

Y TD Kine		23.726	- 5	23.120	- 5-	23.726	-5	23,726	-5	23.720	3	23.726	-	23, 120	3	23.726	5	23.120	3	23.726	3	23.726	3	23.720
SimActual vs																								
		Sep 2017		Oct 1017	_	Nev 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2015		Apr 2015	24	tay 1015		Jun 2015		Jul 2015	- 4	Aug 2018
Month Use		-17.5%		-36.5%		1.85%		4.6%		2.4%		11.6%		6.6%		20.8%		35.6%		24.6%		49.8%		44.9%
YTD Use		-17.554		-31.1%		-12.3%		-8.7%		-5.3%		-2.1%		-0.5%		1.7%		2.5%		2.9%		3.7%		4.5%
Month 5		-17,55%		-36.5%		1.82%		4.6%		2.4%		11.6%		0.0%		20.5%		35.6%		24.6%		49.8%		44,9%
YTD\$		-17.55%		-31.1%		-12.3%		-8.7%		-5.3%		-2.1%		-0.5%		1.7%		2.5%		2.9%		3.7%		4.5%
BP Length																								
HDO																								
CDD																								
Use Avoldan																								
Month Use		7		36		(3)		13		[6]		(24)		[16]		(31)		(13)		(8)		(14)		(12)
YTD Use		Ť		43		40		53		47		23		7		(25)		(37)		(46)		(59)		(72)
Cost Avaidan	908																							
Month Use S	5.	162	5	863	5.	(79)	5	31.8	5	(154)	5	(567)	5	(389)	5	(745)	S	(298)	5.	(193)	5	(328)	5.	(294)
YTD\$	3	162	5	1,025	5	946	5	1,264	5	1,111	5	544	5	155	5	(590)		(888)		(1,081)		(1,409)		(1,794)

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

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

Cost Avaidance Month Use 5 5 YTD 5 5

115 S

Reference		Sap 2006		Oct 1096		Nev 2006		Dec 2006		Jan 2006		Fab 2006	_	Mar 1804		Apr 2006	_	May 1006		Jun 2466		Jul 1006		280
Aonth Use	-	80		162		288	-	491	-	486	-	428		461		152	_	137		187	-	67		Aug 26
TD Use		5D		242		110		1.028		1,514		1.942		2,403		2,555		2.692		2,879		2.946		2,95
krath S	1.	1,590		3,219	1.	5,723	4	9,892		9,657	5	8,505	6	9,160	5	3,020	4	2,722	1	3,716		1,331	1	1,05
TDS	5	1,590	5	4.809	5	10,532	5	20,424	5	30,081	5	38,586	5	47,746	5	50,766	5	53,488	5	57,204	5	58,535	5	59.5
P Length		30		31		30		31		31		25		31		30		23,400		30		31		27,21
DD		92		382		544		750		271		913		770		293		188		30				
DD		12		-				-				-						42		83		263		2
fonth Rate	5.	19.875	5	19.870	8.	19.872	5	19.863	5	19.570	5	19.871	5	19.870	\$	19.565	5	19.869	\$.	19.872	5	19.866	4.	19.50
TD Rate	5	19.875	5	19.872	5.	19.872	5	19.868	5	19.869	5	19.869	5	19.869	5	19.869	5	19.869	5	19.869	5	19.869	5.	19.84
	_				_				_										_				Ė	
areline		Sep 2017		Oct 1017	,	Nev 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2015		Apr 2015	٠,	May 1015		Jun 2015		Jul 2015		Aug 26
fonth Use		66		108		352		423		709		444		423		375	-	109		76		70		All pictures
TD Use		66		174		526		949		1,658		2,102		2,525		2,900		3,009		3,085		3,155		3.2
fouth S	5.	1,567		2,572	5.	5,345	5	10,033	s	16,816	5	10,544		10,045	5	5,995		2,575	5.	1,799	s	1,667	5.	1,51
TD5	5	1,567	5	4,138	5	12,483	5	22,516	5	39,331	5	49,875	5	59,920	5	68,815	5	71,389	5	73,188	5	74,855	5	76.4
@ Length		22		31		30		30		33		29		29		33		28		31		31		7.00,4
IDD to Truthu		35		83		614		768		1,372		820		774		650		98		12		- 31		
DD		59		91		0.14		100		1,112		4		1114		12		70		207		276		2
South Rate	5.	23.726		23,726		23.726	•	23.726		23.726	•	23.726		23.726	•	23.726		23.726		23.726		23.726		23.73
TD Rate	5	23.726	S	23.726	1	23.726	S	23.726	ŝ	23.726	5	23.726	5	23, 726	S	23.726	S	23.726	1	23.726	S	23.726	1	23.73
	_	231120	Ť		Ť	2320	_		_		_		Ť		_		_		Ť	23.720	_		Ť	
lim.Lotual		Sep 2017		Oct 1017	_	Nev 2017		Dec 2017		Jan 2018		Feb 2015	_	Mar 1015		Apr 2015	_	May 1015		Jun 2018		Jul 2015		Aug 20
fonth Use		61		81		263		337		517		358		315		278	_	105		80		70		
TD Use		61		10.1												2,211		2,316		2,397				2.53
Acuth S				1.62				23.43		3.260		1.611												6,2
				142		405	4	743		1,260		1,618	e	1,933	*		4		*			2,467	*	1.91
	5	1,452	5	1,917	5.	6,250	5	8,003	5	12,267	5	8,494	5	T,481	5	6,001	5	2,494	5	1,905	5	1,000	5	
TDS	5.	1,452	5	1,917 3,369	5.	6,250 9,619	5	8,003 17,622	\$	12,267 29,588	5	38,382	5	T,481 45,863	S S	52,464	\$ \$	2,494 54,957	5	1,905 56,863	\$ \$	1,666 58,528	5	60,04
TDS F Length	-	1,452 1,452 22	5	1,917 3,369 31	-	6,250 9,619 30	S	8,003 17,622 30	5	12,267 29,888 33	-	8,494 38,382 29	\$	7,481 45,863 29	-	52,464 33	\$	2,494 54,957 28	5.	1,905 56,863 31	-	1,666 58,528 31		60,04
TD\$ Plengh DD	-	1,452 1,452 22 35	S	1,917 3,369 31 83	-	8,250 9,619 30 614	5	8,003 17,622 30 768	5	12,267 29,588 33 1,372	-	8,494 38,382 29 820	\$	7,481 45,863 29 774	-	52,464 33 650	5	2,494 54,957 28 98	5	1,905 56,863 31 12	-	58,528 31		60,04
TD\$ PLength DD DD	5.	1,452 1,452 22 35 59	5	1,917 3,369 31 83 91	-	6,250 9,619 30 614	5	8,003 17,622 30 768		12,267 29,888 33 1,372	-	8,494 38,382 29 820 4		7,481 45,863 29 774	-	52,464 33 630 12	5	2,494 54,957 28 98 70	5.	1,905 56,863 31 12 207	-	58,528 31 - 276		60,04
TD \$ F Length EDD EDD Abouth Rate	-	1,452 1,452 22 35	\$ \$	1,917 3,369 31 83	-	8,250 9,619 30 614	\$ \$ \$	8,003 17,622 30 768	5 5 5	12,267 29,588 33 1,372	-	8,494 38,382 29 820	\$ \$ \$	7,481 45,863 29 774	-	52,464 33 650	5 5 5	2,494 54,957 28 98	5 5 5	1,905 56,863 31 12	-	58,528 31		1,51 60,04 21 23,73 23,73
TD \$  # Length DD DD fonth Rate TD Rate	5 5	1,452 1,452 22 35 59 23,726 23,726	5	1,917 3,369 31 83 91 23,726	5	6,250 9,619 30 614 	5	8,003 17,622 30 768 	5	12,267 29,868 33 1,372 23,726	5	8,494 38,382 29 820 4 23,726	5	7,481 45,863 29 774 -	5	52,464 33 450 12 23,726	5	2,494 54,957 28 98 70 23.726	5.	1,905 56,863 31 12 207 23,726	5	1,666 58,526 31 - 276 23,726	5.	23.73
TD \$ P Length DD DD kenth Rate TD Rate	5 5	1,452 1,452 22 35 59 23,726 23,726	5	1,917 3,369 31 83 91 23,726	5	5,250 9,619 30 614 23,726 23,726	5	8,003 17,622 39 768 - 23,726 23,726	5	12,267 29,888 33 1,372 23,726	5	8,494 38,382 29 820 4 23,726 23,726	5	7,481 45,863 29 774 - 23,726 23,726	\$ \$ \$	52,464 33 450 12 23,726 23,726	5	2,494 54,957 28 98 70 23,726 23,726	5.	1,905 56,863 31 12 207 23,726 23,726	5	1,666 58,528 31 - 276 23,726 23,726	5. 5.	23.72 23.72
TD \$  P Length DO DD tonth Rate TD Rate	5 5	1,452 1,452 22 35 59 23,726 23,726	5	1,917 3,369 31 83 91 23,726	5	6,250 9,619 30 614 	5	8,003 17,622 30 768 	5	12,267 29,868 33 1,372 23,726	5	8,494 38,382 29 820 4 23,726	5	7,481 45,863 29 774 -	\$ \$ \$	6,901 52,464 33 450 12 23,726 23,726	5	2,494 54,957 28 98 70 23.726	5.	1,905 56,863 31 12 207 23,726	5	1,666 58,526 31 - 276 23,726	5. 5.	21 23.72 23.72
TD \$  P Length DO DD tonth Rate TD Rate  Indicted v fonth Use	5 5	1,432 1,452 22 35 59 23,726 23,726	5	1,917 3,369 31, 83 91 23,726 23,726	5	6,250 9,619 30 614 23,726 23,726	5	8,003 17,622 39 768 - 23,726 23,726	5	12,267 29,868 33 1,372 23,726 23,726	5	8,494 38,382 29 820 4 23,726 23,726	5	7,481 45,863 29 774 - 23,726 23,726	\$ \$ \$	52,464 33 450 12 23,726 23,726	5	2,494 54,957 28 98 70 23,726 23,726	5.	1,905 56,863 31 12 207 23,726 23,726	5	1,006 58,528 31 276 23,726 23,726	5. 5.	23.7; 23.7; 23.7; 23.7;
TD \$  P Length DO DD fonth Rate TD Rate  Instantal v fonth Use TD Use	5 5	1,432 1,452 22 35 59 23,726 23,726 23,726	5	1,917 3,369 31, 83 91 23,726 23,726 Oct 1017 -25,4%	5	6,250 9,619 30 614 23,726 23,726 Nov 2017 -25,1%	5	8,003 17,622 30 765 	5	12,267 29,868 33 1,372 23,726 23,726 23,726	5	8,494 38,382 29 820 4 23,726 23,726	5	T,481 45,863 29 T74 - 23,726 23,726 -25,5%	\$ \$ \$	52,464 33 450 12 23,726 23,726 23,726	5	2,494 54,957 28 98 70 23,726 23,726 23,726	5.	1,905 56,863 31 12 207 23,726 23,726 3,726	5	1,006 58,528 31 276 23,726 23,726 24,726	5. 5.	23.73 23.73 23.73 23.73 -2.9 -21.4
TD \$  F Length DD DD South Rate TD Rate  Ins. Letual v South Use TD Use South 5	5 5	1,452 1,452 22 35 59 23,726 23,726 23,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26	5	1,917 3,369 31 83 91 23,726 23,726 0cc 1917 -25,4% -13,6% -25,4%	5	6,230 9,619 30 614  23,726 23,726 New 2017 -25,1% -22,9% -25,1%	5	8,003 17,622 30 708 - 23,726 23,726 23,726 000 2017 -20,2% -21,7% -20,2%	5	12,267 29,868 33 1,372 - 23,726 23,726 23,726 -27,1% -24,0% -27,1%	5	8,494 38,382 29 820 4 23,726 23,726 23,726 F45 2018 -19,4% -23,0% -19,4%	5	7,481 45,863 29 774 - 23,726 23,726 42,5% -23,5% -23,5%	\$ \$ \$	5,601 52,464 33 650 12 23,726 23,726 23,726 -25,8% -23,8% -25,8%	5	2,494 54,957 28 95 70 23,726 23,726 23,726 419,1018 -3,1% -23,0% -3,1%	5.	1,905 56,863 31 12 207 23,726 23,726 23,726 5,9% -22,3% 5,9%	5	1,006 58,528 31 276 23,726 23,726 23,726 40,1% -0,1% -0,1% -0,1%	5. 5.	23.73 23.73 23.73 -2.0 -21.4 -2.9
TD S P Length DD DD South Rate TD Rate Imactual v South Use TD Use South S TD S	5 5	1,432 1,452 22 35 59 23,726 23,726 23,726 <b>Sep 2017</b> -7,3% -7,3% -7,3%	5	1,917 3,369 31,83 91 23,726 23,726 0cc 1017 -25,4% -13,6%	5	5,250 9,619 30 614 - 23,726 23,726 Nav 2017 -25,1% -22,9%	5	8,003 17,622 30 768 - 23,726 23,726 Dec 2017 -20,2% -21,7%	5	12,267 29,888 33 1,372 -23,726 23,726 23,726 -27,1% -24,0%	5	8,494 38,382 29 820 4 23,726 23,726 -19,495 -23,095	5	7,481 45,863 29 774 23,726 23,726 More 2015 -25,5% -23,5%	\$ \$ \$	52,464 33 430 12 23,726 23,726 23,726 -25,8% -23,8%	5	2,494 54,957 28 98 70 23,726 23,726 23,726 43,1% -3,1% -23,0%	5.	1,905 56,863 31 12 207 23,726 23,726 5,9% -22,3%	5	1,006 58,528 31 276 23,726 23,726 23,726 -0,1% -21,8%	5. 5.	23,73 23,73 23,73 23,73 -2,9 -21,4 -2,9
TD S  P Length DD  South Rate TD Rate  for Lettral v  South Use TD Use  South S TD S  P Length	5 5	1,452 1,452 22 35 59 23,726 23,726 23,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 24,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26,726 26	5	1,917 3,369 31,83 91 23,726 23,726 05:1013 -25,4% -13,6% -13,6%	5	6,230 9,619 30 614 23,726 23,726 New 2017 -25,1% -22,9% -25,1% -22,9%	5	8,003 17,622 30 705 - 23,726 23,726 23,726 000 2017 -20,2% -21,7%	5	12,267 29,888 33 1,372 23,726 23,726 23,726 320,2315 -27,156 -24,056 -24,056	5	8,494 38,382 29 820 4 23,726 23,726 -19,4% -23,0% -19,4% -23,0%	5	7,481 45,863 29 774 - 23,726 23,726 23,726 425,5% -23,5% -23,5%	\$ \$ \$	5,001 52,464 33 650 12 23,726 23,726 23,726 -25,8% -23,8% -23,8%	5	2,494 54,957 28 95 70 23,726 13,726 23,726 3,1% -2,10% -3,1% -2,10%	5.	1,905 56,863 31 12 207 23,726 23,726 5,9% -22,3% 5,9% -22,3%	5	1,005 58,528 31 276 23,726 23,726 21,726 40,1% -21,8%	5. 5.	23,77 23,77 23,77 23,77 23,77 23,77 21,4 -2,9 -21,4
TD S  P Length DD  DD  South Rate TD Rate  forth Use forth Use South S TD S  P Length DD	5 5	1,432 1,452 22 35 59 23,726 23,726 23,726 100ffine 500 2337 -7,3% -7,3%	5	1,917 3,369 31,83 91 23,726 23,726 0er 1017 -25,4% -13,6% -13,6%	5	6,230 9,619 30 614 23,726 23,726 Nov.2337 -25,176 -22,9% -22,9%	5	8,003 17,622 30 708 - 23,726 23,726 23,726 - 20,2% -20,2% -20,2% -21,7%	5	12,267 29,888 33 1,372 23,726 23,726 23,726 348,2618 -27,154 -24,054 -24,054	5	8,494 38,382 29 820 4 23,726 23,726 -19,4% -23,0% -19,4%	5	7,481 48,863 29 774 - 23,726 23,726 -23,5% -23,5% -23,5% -23,5%	\$ \$ \$	5,601 52,464 33 650 12 23,726 23,726 23,726 -25,8% -23,8% -23,8%	5	2,494 \$4,957 28 95 70 23,726 23,726 23,726 -3,1% -21,0% -3,1% -21,0% -21,0%	5.	1,905 56,863 31 12 207 23,726 23,726 5,9% -22,3% 5,9% -22,3%	5	1,006 58,528 31 	5. 5.	23.7; 23.7; 23.7; -2.0 -21.4 -2.9
TDS P Length DD DD South Rate TD Rate Inc. Actual v South Use TD Use South S TD S P Length DD DD	5 5 5	1,452 1,452 33 35 59 23,726 23,726 23,726 24,726 -7,3% -7,3% -7,3%	5	1,917 3,369 31 83 91 23,726 23,726 48,1913 -25,4% -25,4% -25,4%	5	6,230 9,619 30 614 23,726 23,726 New 2817 -25,1% -22,9% -23,9%	5	8,003 17,622 30 705 23,726 23,726 23,726 20,2% -21,2% -20,2% -21,2%	5	12,267 29,888 33 1,372 23,726 23,726 23,726 24,756 -24,076 -24,076	5	8,694 38,382 29 820 4 23,726 23,726 23,726 F45,5218 -19,4% -23,0% -19,4%	5	7,481 45,863 29 774 23,726 23,726 23,726 Mars 1015 -25,5% -23,5% -23,5%	\$ \$ \$	5,601 52,464 33 650 12 23,726 23,726 23,726 -23,8% -23,8% -23,8%	5	2,494 54,957 28 98 70 23,726 23,726 419,1018 -21,0% -21,0% -21,0%	5.	1,905 56,863 31 12 20,726 23,726 23,726 5,90 -22,3% -22,3%	5	1,606 58,528 31 276 23,726 23,726 21,726 40,1% -21,8% -0,1% -21,8%	5. 5.	23.7; 23.7; 23.7; -2.0 -21.4 -2.9
TDS  Length DD  Length DD  South Rate TD Rate  Inc.Lettail v  South Use TD Use South S TDS  Length DD  DD	5 5 5	1,452 1,452 33 35 59 23,726 23,726 23,726 24,726 -7,3% -7,3% -7,3%	5	1,917 3,369 31 83 91 23,726 23,726 23,726 -13,6% -25,4% -13,6%	5	8,250 9,619 30 614 	5	8,003 17,622 39 705 23,726 23,726 23,726 20,2% -21,7% -20,2% -21,7% -21,7%	5	22,267 29,888 33 1,372 23,726 23,726 23,726 -24,0% -27,1% -24,0%	5	8,494 38,382 29 820 4 23,726 23,726 23,726 -19,4% -23,0% -19,4%	5	7,481 45,863 29 774 23,726 23,726 23,726 23,5% -23,5% -23,5% -23,5%	\$ \$ \$	5,601 52,464 33 630 12 23,726 23,726 23,726 -25,8% -23,8% -23,8% -23,8%	5	2,494 54,957 28 98 70 23,726 23,726 419,1018 -21,0% -21,0% -21,0%	5.	1,905 56,863 31 12 207 23,726 23,726 23,726 5,9% -22,3% -22,3%	5	1,606 58,528 31 276 23,726 23,726 21,726 40,1% -21,8% -0,1% -21,8%	5. 5.	23.7; 23.7; 23.7; -2.0 -21.4 -2.9
FTD S P Length DD DD donth Rate FTD Rate Real-ctual v donth Use FTD Use South S FTD S P Length DD DD Cos Avoidar donth Use	5 5 5	1,452 1,452 33 35 59 23,726 23,726 23,726 24,726 -7,3% -7,3% -7,3%	5	1,917 3,369 31 83 91 23,726 23,726 48,1913 -25,4% -25,4% -25,4%	5	6,230 9,619 30 614 23,726 23,726 New 2817 -25,1% -22,9% -23,9%	5	8,003 17,622 30 705 23,726 23,726 23,726 20,2% -21,2% -20,2% -21,2%	5	12,267 29,888 33 1,372 23,726 23,726 23,726 24,756 -24,076 -24,076	5	8,694 38,382 29 820 4 23,726 23,726 23,726 F45,5218 -19,4% -23,0% -19,4%	5	7,481 45,863 29 774 23,726 23,726 23,726 Mars 1015 -25,5% -23,5% -23,5%	\$ \$ \$	5,601 52,464 33 650 12 23,726 23,726 23,726 -23,8% -23,8% -23,8%	5	2,494 54,957 28 98 70 23,726 23,726 419,1018 -21,0% -21,0% -21,0%	5.	1,905 56,863 31 12 20,726 23,726 23,726 5,90 -22,3% -22,3%	5	1,606 58,528 31 276 23,726 23,726 21,726 40,1% -21,8% -0,1% -21,8%	5. 5.	21, 23, 72 23, 72 23, 72 23, 72 -2, 9 -21, 4 -2, 9 -21, 4

654 \$ 2,085 \$ 2,030 \$ 4,549 \$ 2,050 \$ 2,564 \$ 2,294 \$ 81 \$ (107) \$ 709 \$ 2,564 \$ 2,64 \$ 10,431 \$ 10,432 \$ 16,325 \$

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: FA 1-45 Water

Reference																								
		Sep 2006		Oct 1006		Nev 2006		Dec 1006		Jan 2006		Fab 2006		Mar 1006		Apr 2006	- 1	May 1006		Jun 2006		Jul 1006		Aug 2006
Month Use		203		229		215		186		240		245		184		645		259		174		249		207
YTD Use		203		432		547		833		1,073		1,318		1,502		2,147		2,405		2,550		2,829		3,036
Month S	5.	1,882	8	2,123	1	1,993	8	1,724	\$	2,225	5	2,271	\$	1,706	8	5,979	8	2,401	5.	1,613	8	2,308	\$	1,919
YTD 5	5.	1,882	5	4,005	5	5,998	5	7,722	5	9,947	5	12,218	5	13,924	5	19,903	5	22,304	5.	23,917	5	26,225	5.	28,144
BP Length		30		31		30		31		3.1		2.5		31		30		31		30		31		31
HDD		134		442		604		812		433		969		832		349		236		41		4		
CDD		12																42		8.3		263		266
Month Rate	5	9.271	5	9.271	5	9.270	5	9.269	5	9.271	5	9.269	5	9.272	5	9.270	5	9.270	5	9.270	5	9.269	\$	9.271
YTD Rate	5.	9.271	5	9.271	5	9.270	5	9.270	5	9.270	5	9.270	5	9.270	5	9.270	5	9.270	5	9.270	5	9.270	5.	9.270

Bareline																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2018		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 2018
Month Use		196		242		194		173		259		242		187		604		290		190		242		204
YTD Use		196		438		632		504		1,063		1,305		1,492		2,096		2,386		2,576		2,81.8		3,023
Month 5	5	2,170	5	2,678	5.	2,144	5	1,911	5	2,864	5	2,678	5	2,064	5	6,655	5	3,211	5.	2,103	5	2,682	5	2,262
YTD 5	5	2,170	5	4,848	5.	6,992	5	8,903	5	11,768	5	14,446	5	16,511	5	23,199	5	26,410	5	28,513	5	31,195	5.	33,457
BP Length		29		33		27		28		3.5		28		30		31		30		31		31		30
HDD		54		246		643		780		1,504		807		911		614		90		2.0				2
CDD		1.18		37								4				12		87		213		286		193
Month Rate	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11/069
YTD Rate	5	11.069	8	11.069	5.	11.069	8	11.069	\$	11.069	8	11.069	\$	11.069	8	11.069	8	11.069	5.	11.069	8	11.069	5.	11.069

SimActual																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2018		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 2018
Month Use		201		195		188		227		231		217		195		216		218		266		280		299
YTD Use		201		396		584		81.1		1,042		1,259		1,454		1,670		1,888		2,154		2,434		2,733
Month 5	5	2,225	5	2,158	5.	2,061	5	2,513	5	2,557	5	2,402	5	2,158	5	2,391	5	2,413	5	2,944	5	3,099	5	3,310
YTDS	5.	2,225	8	4,383	5.	6,464	8	8,977	\$	11,534	8	13,936	\$	16,094	8	18,485	8	20,898	5	23,842	8	26,942	5.	30,251
BP Length		29		33		27		28		3.5		28		30		31		30		31		31		30
HDD		34		246		643		790		1,504		1937		911		614		90		2.0				2
CDD		1.18		37								4				12		87		213		286		193
Month Rate	5	11.069	5	11.069	5	11.069	5	11.069	5	11/069	5	11.069	5	11.069	5	11,069	5	11.069	5	11.069	5	11.069	5	11.069
YTD Rate	5.	11.069	8	11.069	5.	11.069	8	11.069	\$	11.069	- 5	11.069	5	11.069	5	11.069	8	11.069	5.	11.069	8	11.069	5.	11.069

	Sep 2017	Oct 1017	New 2017	Dec 2017	Jan 2018	Feb 2015	Mar 2018	Apr 2015	May 2015	Jun 2018	Jul 2015	Aug 2018
Month Use	2.5%	-19:4%	-3.4%	31.5%	-10.7%	-10.3%	4.6%	-64.35%	-24.8%	40.0%	15.6%	46.3%
YTD Use	2.5%	-9.6%	-7.5%	0.8%	-2.0%	-3.5%	-2.5%	-20.3%	-20.9%	-16.4%	-13.6%	-9.6%
Month 5	2,5%	-19786	-3.0%	31.5%	-10.7%	-10.3%	4.0%	-64.3%	-24.8%	40.0%	15.0%	40,3%
YTD \$	2.5%	-9.6%	-7.5%	0.8%	-2.0%	-3.5%	-2.5%	-20.3%	-20.9%	-16.4%	-13.6%	-9.6%
BP Length												
HDD						-		-				
CDD												

Month Use YTD Use	(5) (5)	47 42	46		-	25 46	(8)	388 426	72 498	(76) 422	(38)	(95) 290
Cost Aveldance												
Month Use 5 5	(55)	\$ 519	\$ 63	5 (601)	\$ 307	5 276	s (94) s	4,297 5	798 \$	(841) 5	(417) \$	(1,047)

Reference: Actual usage and costs for past Year.

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

SimActual: Actual usage and calculated costs for current Year.

#### Meter: FA 1-46 Gas

Month Use \$ \$ (125) \$

(72) 8 (196) \$

		Sap 2006		Oct 1006		Nev 2006		Dec 1006		Jan 2006		Fab 2006		Mar 2006		Apr 2006	,	day 1006		Jun 2006		Jul 2006		Aug 200
Month Use		29		99		278		41.5		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		2,450
Month S	5.	576	S	1,967	5	5,524	S	8,256	5	9,717	S	9,697	5	7,213	5	2,583	S	1,749	5.	338	S	71.5	5	41
YTD 5	5.	576	s	2,543	5.	8,067	S	16,323	8	26,040	5	35,737	s	42,950	5	45,533	5	47,282	5.	47,620	s	48,335	5.	48,51
BP Length		30		31		30		31		3.1		2.6		31		30		31		30		31		3
HDD		16		184		312		502		523		689		534		120		50		2				
CDD		12																42		83		263		26
Month Rate	5.	19.862	5	19.869	5.	19.571	5	19.894	\$	19.871	5	19.871	5	19.871	5	19.860	5	19.875	5.	19.852	5	19.861	5.	19.57
YTD Rate	5	19.862	S	19.867	5.	19.869	S	19.882	S	19.878	5	19.876	s	19.875	5	19.875	S	19.875	5.	19.875	S	19.875	5.	19.87
Sareline																								
		Sep 2017		Oct 1017		New 2017		Dec 2017		Jan 2015		Feb 2015		Mar 1015		Agr 2015	,	May 1015		Jun 2015		Jul 2015	- 1	Aug 201
Month Use		32		121		373		785		556		334		481		165		32		34		31		3.
YTD Use		32		153		526		1,31.1		1,867		2,201		2,683		2,848		2,880		2,914		2,945		2,97
Mouth S	5	763	5	2,868	5	5,547	5	18,623	\$	13,194	5	7,934	\$	11,418	5	3,926	5	771	\$	504	5	729	5	75
YTD 5	5	763	s	3,631	5	12,478	s	31,100	s	44,294	5	52,229	s	63,646	5	67,572	s	68,343	5.	69,147	s	69,876	5	70,63
B₱ Length		29		31.		31		33		29		29		32		29		30		32		29		3
HDD		2		124		477		1,052		737		426		628		189								
CDD		1.14		32								4				30		152		257		229		28
Month Rate	5	23.726	5	23.726	5	23.726	5	23.726	5	23,726	5	23.726	5	23,726	5	23.726	5	23.726	5	23.726	5	23.726	5	23,72
YTD Rate	5.	23.726	S	23.726	5.	23.726	S	23.726	\$	23.726	5	23.726	5	23.726	5	23.726	S	23.726	5.	23.726	S	23.726	5.	23.72
SimActual																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Fab 2015	- 1	Mar 2015		Apr 2015	,	May 1015		Jun 2018		Jul 2015	- 4	Aug 201
Month Use		37		124		347		573		448		361		417		192		46		46		37		34
YTD Use		37		161		508		1,081		1,529		1,890		2,307		2,499		2,545		2,591		2,629		2,66
Mouth 5	5	SST	5	2,940	5	5,233	5	13,590	\$	10,634	5	8,556	\$	9,896	5	4,553	5	1,099	5	1,091	5	165.5	5	91
YTD S	5	887	s	3,827	5	12,060	s	25,651	s	36,285	s	44,841	\$	54,737	5	59,290	s	60,388	5	61,480	s	62,365	5	63,27
BP Length		29		31.		31		33		29		29		32		29		30		32		29		3
HDD		2		124		417		1,052		737		426		628		1.69		I.						-
CDD		1.14		32								4				30		152		257		229		28
Month Rate YTD Rate	5.	23.726	5	23.726	5	23.726	5	23.726	5	23.726	5	23.726	5	23,726	5	23.726	5	23.726	5.	23.726	5	23.726	5	23.72
1 117 8480	_	23.720	_	835.1856	Ť	23.720	_	23.120	Ť	80.780	Ť	23.720	_	831.180	_	23.720	_	8.0.180	Ť	23.720	Ť	2.7.720	_	80.78
																								Aug 200
Sim.Letual v	L Ba			Oct 1017		New 2017		Dec 2017	-	Jan 2015		Fab 2015		Mar 1015		Apr 2015	,	May 1015		Jun 2015				
	L B1	Sap 2017		Oct 1017 2.5%		New 2017 -6.9%		Dec 2017 -27.0%		Jan 2018 -19.4%		Feb 2015 7.8%		Mar 2015		Apr 2015	,	42.5%		Jun 2015 35.7%	-	Jul 2015 21,4%		20.85
Month Use	L Ba	Sep 2017 16.4%		2.5%		-6.9%		-27.0%		-19.4%		7.8%		-13.3%		16.0%	,	42.5%		35.7%		21.4%		
Month Use YTD Use	. 61	5ap 2017 16.4% 16.4%		2.5% 5.4%		-6.9% -3.3%		-27.0% -17.5%		-19.4% -18.1%		7.8% -14.1%		-13.3% -14.0%		16.0% -12.3%	,	42.5%		35.7% -11.1%		21.4% -10.7%		-10.45
Month Une YTD Use Month S	. 61	\$49.2017 16.4% 16.4% 16.4%		2.5% 5.4% 2.5%		-6.9% -3.3% -6.9%		-27.0% -17.5% -27.0%		-19.4% -18.1% -19.4%		7.8% -14.1% 7.8%		-13.3% -14.0% -13.3%		16.0% -12.3% 16.0%	,	42.5% -11.6% 42.5%		35.7% -11.1% 35.7%		21.4% -10.7% 21.4%		-10.45 20.85
Month Use YTD Use Month S YTD \$	. 51	5ap 2017 16.4% 16.4% 16.4% 16.4%		2.5% 5.4% 2.5% 5.4%		4.9% 3.3% 4.9% 3.3%		-27.0% -17.5% -27.0% -17.5%		-19.4% -18.1% -19.4% -18.1%		7.8% -14.1% 7.8% -14.1%		-13.3% -14.0% -13.3% -14.0%		16.0% -12.3% 16.0% -12.3%	,	42.5% -11.6% 42.5% -11.6%		35.7% -11.1% 35.7% -11.1%		21.4% -10.7% 21.4% -10.7%		-10.45 20.85 -10.45
Month Use YTD Use Month 5 YTD 8 BP Length	. 61	16.4% 16.4% 16.4% 16.4%		2.5% 5.4% 2.5% 5.4%		-6.9% -3.3% -6.9% -3.3%		-27.0% -17.5% -27.0% -17.5%		-19.4% -18.1% -19.4% -18.1%		7.8% -14.1% 7.8% -14.1%		-13.3% -14.0% -13.3% -14.0%		16.0% -12.3% 16.0% -12.3%	,	42.5% -11.6% 42.5% -11.6%		35.7% -11.1% 35.7% -11.1%		21.4% -10.7% 21.4% -10.7%		-10.45 20.85 -10.45
Month Use YTD Use Month 5 YTD \$ BP Length HDD CDD	LBI	5ap 2017 16.4% 16.4% 16.4% 16.4%		2.5% 5.4% 2.5% 5.4%		4.9% 3.3% 4.9% 3.3%		-27.0% -17.5% -27.0% -17.5%		-19.4% -18.1% -19.4% -18.1%		7.8% -14.1% 7.8% -14.1%		-13.3% -14.0% -13.3% -14.0%		16.0% -12.3% 16.0% -12.3%	,	42.5% -11.6% 42.5% -11.6%		35.7% -11.1% 35.7% -11.1%		21.4% -10.7% 21.4% -10.7%		20.85 -10.45 20.85 -10.45
Month Use YTD Use Month 5 YTD 8 BP Length HDD		\$49 2017 16.4% 16.4% 16.4% 16.4%		2.5% 5.4% 2.5% 5.4%		-6.9% -3.3% -6.9% -3.3%		-27.0% -17.5% -27.0% -17.5%		-19.4% -18.1% -19.4% -18.1%		7.8% -14.1% 7.8% -14.1%		-13.3% -14.0% -13.3% -14.0%		16.0% -12.3% 16.0% -12.3%	,	42.5% -11.6% 42.5% -11.6%		35.7% -11.1% 35.7% -11.1%		21.4% -10.7% 21.4% -10.7%		-10.47 20.87 -10.47
Month Use YTD Use Month 5 YTD 8 BP Length HDD CDD		\$49 2017 16.4% 16.4% 16.4% 16.4%		2.5% 5.4% 2.5% 5.4%		-6.9% -3.3% -6.9% -3.3%		-27.0% -17.5% -27.0% -17.5%		-19.4% -18.1% -19.4% -18.1%		7.8% -14.1% 7.8% -14.1%		-13.3% -14.0% -13.3% -14.0%		16.0% -12.3% 16.0% -12.3%	,	42.5% -11.6% 42.5% -11.6%		35.7% -11.1% 35.7% -11.1%		21.4% -10.7% 21.4% -10.7%		-10.45 20.85 -10.45

614 S 5,032 S 2,560 S (622) S 1,521 S (628) S (328) S (287) S (156) S 417 S 5,450 S 8,010 S 7,388 S 8,909 S 8,282 S 7,954 S 7,667 S 7,511 S

Reference: Actual usage and costs for past Year. SimActual: Actual usage and calcubited costs for current Year. Baseline: Current usage and costs based upon historic patients of Unit use.

### Meter: FA 1-46 Water

Reference																								
		Sep 2006		Oct 1006		Nev 2006		Dec 1006		Jan 2006		Fab 2006		Mar 2006		Apr 2006		May 1006		Jun 2006		Jul 1006		Aug 2006
Month Use		173		111		184		174		153		370		165		262		179		714		208		168
YTD Use		173		294		468		642		795		1,165		1,330		1,592		1,771		2,485		2,693		2,861
Month S	5.	1,604	8	1,029	5.	1,706	8	1,616	\$	1,418	8	3,430	\$	1,530	8	2,429	8	1,659	5.	6,619	8	1,928	5.	1,557
YTD 5	5.	1,604	5	2,633	5.	4,339	5	5,955	5	7,373	5	10,803	\$	12,333	5	14,762	5	16,421	5.	23,040	5	24,968	5.	26,525
BP Length		30		31		30		31		3.1		2.5		31		30		31		30		31		3.1
HDD		134		442		604		812		433		969		832		349		236		41		4		
CDD		12																4.2		83		263		266
Month Rate	5.	9.272	\$	9.270	5.	9.272	5	9.287	\$	9.268	5	9.270	\$	9.273	5	9.271	5	9.268	5	9.270	5	9.269	5	9.268
YTD Rate	5.	9.272	5	9.271	5.	9.271	5	9.276	5	9.274	5	9.273	5	9.273	5	9.273	5	9.272	5.	9.272	5	9.271	5.	9.271

Bateline																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 2018		Apr 2015	1	May 1015		Jun 2015		Jul 2015		Aug 2018
Month Use		167		119		181		169		149		385		154		273		179		666		229		184
YTD Use		167		286		467		636		786		1,170		1,325		1,597		1,776		2,443		2,672		2,856
Month 5	5	1,847	5	1,317	5.	2,006	5	1,870	\$	1,654	5	4,259	\$	1,709	- 5	3,018	5	1,991	5	7,376	5	2,532	5.	2,017
YTD 5	5	1,847	5	3,164	5.	5,172	5	7,042	5	8,696	5	12,955	5	14,664	5	17,682	5	19,663	5	27,039	5	29,571	5.	31,608
BP Length		29		32		30		30		30		31		29		32		31.		28		29		3.3
HDD		51		243		699		974		1,253		865		895		625		37		2.0				2
CDD		1.16		37								4				12		135		172		272		231
Month Rate	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069
YTD Rate	5.	11.069	8	11.069	5.	11.069	8	11.069	\$	11.069	5	11.069	\$	11.069	5	11.069	8	11.069	5.	11.069	8	11.069	5.	11.069

SimActual																								
		Sep 2017		Oct 1017		New 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2018		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 2018
Month Use		201		241		252		239		293		262		241		314		301		316		302		333
YTD Use		201		442		694		933		1,226		1,488		1,729		2,043		2,344		2,660		2,962		3,295
Month 5	\$	2,225	5	2,668	5	2,789	5	2,645	\$	3,243	- 5	2,900	\$	2,668	5	3,476	5	3,332	5	3,495	5	3,343	\$	3,686
YTDS	5.	2,225	8	4,892	5.	7,682	8	10,327	\$	13,570	8	16,471	\$	19,138	8	22,614	8	25,946	5.	29,443	8	32,786	5.	36,472
BP Length		29		32		30		30		30		31		29		32		31.		28		29		33
HDD		57		243		859		974		1,253		165.5		\$39.5		625		37		20				2
CDD		116		37								4				12		13.5		172		272		231
Month Rate	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11,069	5	11.069	5	11.049	5	11.069	5	11.069
YTD Rate	5.	11.069	8	11.069	5.	11.069	8	11.069	\$	11.069	8	11.069	\$	11.069	8	11.069	8	11.069	5.	11.069	8	11.069	5.	11.069

	Sep 2017	Oct 1017	New 2017	Dec 2017	Jan 2018	Feb 2015	Mar 2018	Apr 2015	May 1015	Jun 2018	Jul 2015	Aug 2018
Month Use	20.4%	102.6%	38.9%	41.5%	96.1%	-31.9%	56.1%	15.2%	68.2%	-52.6%	32.0%	81.0%
YTD Use	20.4%	54.6%	48.5%	46.7%	56.1%	27.1%	30.5%	27.9%	32.0%	8.9%	10.9%	15.4%
Month 5	20.4%	102.6%	38.9%	41.5%	96.1%	-31.9%	50.1%	15.259	68.2%	-52,6%	32.0%	81.0%
YTD\$	20.4%	54.6%	48.5%	46.7%	56.1%	27,126	30.5%	27,95%	32.0%	8.9%	10.9%	15.4%
BP Length												
HDD						-						
CDD												

Use Avoldance												
Month Use	(34)	(122)	(71)	(70)	(144)	123	(87)	(41)	(122)	350	(73)	(149)
YTD Use	(34)	(156)	(227)	(297)	(440)	(318)	(404)	(446)	(568)	(217)	(290)	(439)

Cost Avoidan	108												
Month Use \$	5	(378) 5	(1,351) \$	(781) \$	(776) \$	(1,589) \$	1,359 \$	(959) \$	(458) 5	(1,350) \$	3,879 \$	(811) \$	(1,649)
YTD S	5.	(378) \$	(1.729) 3:	(2,509) \$	(3,285) \$	(4,875) \$	(3,515) \$	(4,474) 3	(4,932) \$	(6,282) \$	(2,404) \$	(3,215) \$	(4,864)

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

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

Reference		Sap 2006		Oct 1006		Nev 2006		Dec 1006		Jan 2006		Fab 2006		Mar 1006		Apr 2006	-	May 1006		Jun 2006		Jul 2006	Aug
Month Use		31		91		174		164		267		251		192		106		54		27	-	28	
TD Use		31		122		296		600		727		978		1,170		1,276		1,330		1,357		1,381	1.
Month S	5.	616	s	1,808	5.	3,457	s	3,260	ŝ	5,305	s	4,988	ŝ	3,815	s	2,106	S	1.073	1	537	S	556	5.
YTD 5	5.	616	5	2.424	5.	5,881	5	9,141	5	14,446	5	19,434	S	23,249	5	25,355	5	26,428	5.	26,965	5	27,521	5 27.
3P Length		30		31		30		31		31		25		31		30		31		30		31	
HDD		34		250		395		59.5		616		773		621		178		90		8			
CDD		12										-						42		83		263	
Month Rate	5	19.871	5	19.868	5	19.868	5	19.878	5	19.869	5	19.873	\$	19.870	5	19.566	5	19.870	5	19.889	5	19.857	\$ 19.
YTD Rate	5.	19.871	s	19.869	5.	19.868	5	19.872	8	19.871	5	19.871	s	19.871	5	19.871	s	19.871	5.	19.871	5	19.871	<ol> <li>19.</li> </ol>
Sareline																							
		Sep 2017		Oct 1017	•	Nev 2017		Dec 2017		Jan 2018		Fab 2015		Mar 2015		Apr 2015	- 1	May 1015		Jun 2015		Jul 2015	Aug
Month Use		36		76		191		334		297		196		230		126		3.5		34		32	
YTD Use		36		112		304		638		935		1,132		1,362		1,488		1,523		1,557		1,588	1,
Month S	5	346	5	1,813	5	4,541	5	7,931	\$	7,057	5	4,657	\$	5,465	5	2,994	5	927	5	503	5		5.
YTD 5	5	848	s	2,661	5	7,202	s	15,133	s	22,190	5	26,847	s	32,312	5	35,307	s	36,134	5	36,937	s	37,686	\$ 38,
3P Length		30		31.		33		32		30		39		30		29		32		30		29	
HDD		. 11		147		534		1,029		910		562		679		325				4			
CDD		114	_	37								4				25	_	157		231	_	21.5	
Month Rate	- 5	23.726	5	23.726	5	23.726	5	23.726	5	23.726	5	23.726	5	23,726	5	23.726	5	23.726	5	23.726	5	23.726	\$ 23.
YTD Rate	5.	23.726	S	23.726	\$	23.726	s	23.726	\$	23.726	s	23.726	s	23.726	5	23.726	S	23.726	\$	23.726	S	23.726	\$ 23.
The Lates I																							
SimActual		Sep 2017		Oct 1017	,	Nev 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2015		Apr 2015	,	May 1015		Jun 2018		Jul 2015	Aug
Month Use		30		30		191	-	251	-	226	-	176	_	187		134	_	31	-	27		24	
YTD Use		30		60		251		502		728		904		1.091		1,225		1.256		1,282		1,306	1.
Mouth 8	5.	712	5	712	5.	4,532	5	5,955	\$	5,362	\$	4,171	s	4,430	5	3,156	5	728	\$	636	5		5.
YTDS	5.	712	s	1,424	5.	5,955	s	11,911	5	17,273	s	21,444	s	25,874	s	29,060	s	29,788	5	30,424	s	30,994	\$ 31,
BP Length		30		31.		3.3		32		30		30		30		29		32		30		29	
HDD		11		147		534		1,029		910		562		679		325				4			
CDD		1.14		37								4				25		157		231		21.5	
Month Rate	5	23.726	5	23.726	5	23.726	5	23.726	5	23.726	5	23,726	8	23,726	5	23.726	5	23,726	5	23.726	5	23.726	5 23.
YTD Rate	5	23.726	s	23.726	5	23.726	S	23.726	\$	23.726	s	23.726	ŝ	23.726	S	23.726	s	23.726	\$	23.726	S	23.726	<ol> <li>23.</li> </ol>
Sim.Letual v	L Ba																						
		Sap 2017		Oct 1017		New 2017	_	Dec 2017		Jan 2015	_	Fab 2015		Mar 2015		Apr 2015	_ :	May 1015		Jun 2015		Jul 2015	Aug
Month Use		-16.1%		-60.7%		-0.2%		-24.9%		-24.0%		-10.4%		-18.9%		6.4%		-11.9%		-20.8%		-24.0%	-24
		-16.1%		46.5%		-17.3%		-21.3%		-22.2%		-20.1%		-19.9%		-87.7%		-17.6%		-17.6%		-17.8%	-17
YTD Use		-16.1%		-69.7%		-0.2%		-24.9%		-24.0%		-10.4%		-18.9%		6.4%		-11.9%		-20.8%		-24.0%	-24
YTD Use Month 5				-46.5%		-17.35%		-21.3%		-22.2%		-20.1%		-19.9%		-17.7%		-17.6%		-17.65%		-17.8%	-17
YTD Use Mouth 5 YTD 8		-16.1%																					
YTD Use Month \$ YTD \$ BP Length																							
YTD Use Mouth 5 YTD 5 BP Length HDD								-															
YTD Use Mouth 5 YTD 5 3P Length HDD										- :		- :				-				-			
TD Use Month 5 TD 5 SP Length IDO TDD	ica		_		_		_		_		_											-:	
YTD Use Mouth 5 YTD 8	nca																						

Month Use \$ \$ 1.36 \$ 1,101 \$ 9 \$ 1,975 \$ 1,695 \$ 486 \$ 1,035 \$ (192) \$ 99 \$ 167 \$ 180 \$ 203 VTD\$ \$ 136 \$ 1,237 \$ 1,247 \$ 3,222 \$ 4,917 \$ 5,603 \$ 6,439 \$ 6,247 \$ 6,345 \$ 6,513 \$ 6,693 \$ 6,896

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

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

#### Mater: PA 1-47 Water

		Sep 2006		Oct 1006		Nev 2006		Dec 1006		Jan 2006		Fab 2006		Mar 1806		Apr 2006		May 1006		Jun 2006		Jul 1006		Aug 200
Month Use		147		105		139		9.5		66		84		202		111		174		128		146		132
YTD Uw		147		252		391		455		552		636		538		949		1,123		1,291		1,397		1,529
Month \$	5.	1,363	S	973	5.	1,283	S	881	\$	612	8	779	\$	1,873	8	1,029	8	1,613	5.	1,187	S	1,353	5.	1,224
YTD 5	5	1,363	5	2,336	5	3,619	5	4,500	5	5,112	5	5,891	5	7,764	5	8,793	5	10,405	5	11,593	5	12,946	5	14,170
3P Length		30		31		30		31		3.1		28		31		30		31		30		31		3.1
HDD		134		442		604		812		433		949		832		349		236		41		4		
CDD		12																42		83		263		266
Month Rate	5	9.272	5	9.267	5	9.230	5	9.274	\$	9.273	5	9.274	5	9.272	5	9.270	5	9.270	5.	9.273	5	9.267	5	9.277
	-	0.055		0.000		9.256		9.259		9.261	5	9.263	6	9.265	5	9.266	5	9.266	5.	9.267	5	9.267	5.	9.267
	\$	9.272	,	9.270	Ì		5		İ		İ		Ĺ		İ				İ		Ė			
YTD Rate	•		,		Ì		,		_		İ		Ĺ		İ				İ		_			
Bateline	•	Sap 2017		Oct 1017		Nev 2017	3	Dec 2017		Jan 2018	İ	Fab 2015		Mar 2018		Apr 2018		May 1015		Jun 2018		Jul 2015		Aug 201
Bateline Month Use	5	Sep 2017 127	3	Oct 1017	,	Nev 2017 133	3	Dec 1017		Jan 2018 79	İ	Feb 2016 126		Mar 1018 165		Apr 2015		May 1015 179		Jun 2018 124		Jul 2018 128		Aug 201
Month Use YTD Use	5	Sep 2017 127 127	5	Oct 1017 117 244	3	Nev 2017 133 377	5	Dec 2017 79 456	5	Jan 2018	İ	Fab 2015	5	Mar 2018 165 825	5	Apr 2018 121 946		May 2015 179 1,125		Jun 2018 124 1,249	5	Jul 2015		Aug 201 137 1,514
Month Use YTD Use Month 3	5.	Sep 2017 127 127 1,405	5 5	Oct 1017 117 244 1,300		Nev 2017 133 377 1,467		Dec 2017 79 456 870	5 5	Jan 2018 79 534 870		Fab 2018 126 690 1,397	5 5	Mar 2018 165 825 1,821	5 5	Apr 2015 121 946 1,337		May 2018 179 1,125 1,581	5 5	Jun 2018 124 1,249 1,376	5	Jul 2018 128 1,377 1,420		Aug 201 13' 1,516 1,511
Month Use YTD Use Month S YTD S	-	Sep 2017 127 127	5 5	Oct 1017 117 244	5	Nev 2017 133 377	5	Dec 2017 79 456	-	Jan 2018 79 534	5	Fab 2018 126 000	5 5	Mar 2018 165 825	5 5	Apr 2018 121 946	5	May 1018 179 1,125 1,581 12,448	-	Jun 2018 124 1,249 1,376		Jul 2015 128 1,377 1,420 15,244		Aug 203 137 1,514 1,511 16,760
Month Use YTD Use Month S YTD S	-	Sep 2017 127 127 1,405 1,405	5 5	Oct 1017 117 244 1,300 2,706	5	New 2017 133 377 1,467 4,172	5	Dec 2017 79 456 870 5,042	-	Jan 2018 79 534 870 5,912	5	Fab 2018 126 690 1,397 7,309	\$ \$	Mar 2018 165 825 1,821 9,130	5 5	Apr 2015 121 946 1,337 10,467	5	May 2018 179 1,125 1,581	-	Jun 2015 124 1,249 1,376 13,824	5	Jul 2018 128 1,377 1,420		Aug 203 137 1,514 1,511 16,760
Month Use YTD Use Month S YTD 5 30° Length	-	2017 127 127 127 1,405 1,405	5 5	Oct 1017 117 244 1,300 2,705 31	5	Nev 2017 133 377 1,467 4,172 33	5	79 456 870 5,042 29	-	Jan 2018 T9 534 870 5,912 32	5	Fab 2015 126 660 1,397 7,309 28	\$ 5	Mar 1018 165 825 1,821 9,130 30	\$ 5	Apr 2015 121 946 1,337 10,467 28	5	May 2018 179 1,125 1,981 12,448 35	-	Jun 2015 124 1,249 1,376 13,824 28	5	Jul 2015 128 1,377 1,420 15,244		Aug 201 13 <sup>1</sup> 1,516
Month Use YTD Use Month S	-	54p 2017 127 127 1,405 1,405 29 43	5 5	Oct 1017 117 244 1,300 2,706 31 426	5	Nev 2017 133 377 1,467 4,172 33 893	5	79 456 870 5,042 29 1,229	-	Jan 2018 T9 534 870 5,912 32	5	Fab 2015 126 660 1,397 7,309 28	\$ 5	Mar 1018 165 825 1,821 9,130 30	5 5	Apr 2015 121 946 1,337 10,467 28 321	5	May 2018 179 1,125 1,081 12,448 35 25	-	Jun 2015 124 1,249 1,376 13,824 28	5	Jul 2018 128 1,377 1,420 15,244 28		Aug 202 13' 1,516 1,511 16,76'

SimActual																								
		Sep 2017		Oct 1017		Nev 2017		Dec 2017		Jan 2018		Feb 2015		Mar 2018		Apr 2015		May 1015		Jun 2018		Jul 2015		Aug 2018
Month Use		96		97		114		98		110		90		120		96		296		120		90		59
YTD Use		96		193		307		40.5		515		60.5		725		821		1,117		1,237		1,327		1,386
Month 5	5	1,063	5	1,074	5.	1,262	5	1,033	\$	1,218	5	995	5	1,328	5	1,063	5	3,276	5	1,328	5	998	5	653
YIDS	5	1,063	8	2,136	5.	3,398	8	4,483	\$	5,700	8	6,697	\$	8,025	8	9,088	8	12,364	5.	13,692	8	14,688	5.	15,341
BP Length		29		31.		3.3		29		3.2		28		30		28		3.5		28		28		3.1
HDD		43		426		893		1,229		1,130		683		56.5		321		2.5						2
CDD		141		6								4				30		175		252		222		300
Month Rate	5	11.069	5	11.069	5.	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069	5	11.069
YTD Rate	5	11.069	8	11.069	5.	11.069	8	11.069	\$	11.069	8	11.069	\$	11.069	8	11.069	8	11.069	5.	11.069	8	11.069	5.	11.069

	Sep 2017	Oct 1017	Nev 2017	Dec 2017	Jan 2018	Fab 2015	Mar 2018	Apr 2015	May 1015	Jun 2018	Jul 2015	Aug 2018
Month Use	-24.4%	-17.4%	-14.0%	24.7%	40.0%	-28.7%	-27.1%	-20.5%	65.4%	-3.5%	-29.8%	-57.0%
YTD Use	-24.4%	-21.0%	-88.6%	-11.1%	-3.6%	-8.4%	-12.1%	-83.2%	-0.7%	-1.0%	-3.6%	-8.5%
Month 5	-24.4%	-17,4%	-84,0%	24.7%	40.0%	-28,7%	-27.1%	-20.5%	05.4%	-3.5%	-29.8%	-57.0%
YTD \$	-24.4%	-21.0%	-18.6%	-11.1%	-3.6%	-8.4%	-12.1%	-13.2%	-0.7%	-1.46%	-3.6%	-8.5%
BP Length												
HDO											-	
CDD												
Month Use	31	20	19	(19)	(31)	36	45	25	(117)		38	78
YTD Use	31	51	70	51	19	55	100	125	8	12	50	128
Cost Aveldan	18											
Month Use S	5 343	5 226	\$ 205	s (215) 5	(348)	\$ 401	\$ 493	\$ 275	S (1,296) :	5 48 5	5 423	\$ 865
									\$ 114			

# **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	k	Wh \$	MCF	MCF \$	Water	Water \$	T	otal \$
1	Retrofit Tenent Area Lighting	1,729,869	\$	137,180					\$ 1	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	\$ 19,921	1,797	\$ 19,887	\$	65,178
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	\$ 54,417			\$	64,948
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
	Total	3,065,343	\$ :	265,441	3,133	\$ 74,338	1,797	\$ 19,887	\$3	359,666

ECM: Interior Tenant Area Lighting Retrofit

		Propose	d Savings	As Instal	led Savings	Diffe	rence
HA Site #	Site Name	Electric		Electric		Electric	
		kWh	Electric \$	kWh	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

		Propose	d Savings	As Instal	led Savings	Diffe	erence
HA Site #	Site Name	Electric		Electric		Electric	
		kWh	Electric \$	kWh	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	5	0	\$ -	0	S -
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

<sup>\*</sup> Buildings are Opt C, therfore 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.

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

		% of	Existing		Existing Re	efrigerators	Net	v Refrigera	itors	Annual
		Units	Refrig.		Annual	Annual	Refrig.	Annual	Annual	Electric
HA Site #	Site Name	Occupied	Code#	Quan.	kWh	Cost	Code#	kWh	Cost	Savings
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%	Ó	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

<sup>\*</sup> Building is Opt C, therfore savings not included in refrigerator savings total

# Water Conservation Savings

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

			Annual	Savings			Savings %	of Total	
HA Site #	Site Name	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%
		1,194	222,931	2,556	2,556	0.42%	0.98%	1.59%	0.00%

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	\$19,887	840	\$19,921
Total	222,931	\$25,370	1,797	\$19,887	840	\$19,921

### **Building Envelope Savings**

			Annual S	avings			Savings %	of Total	
HA Site#	Site Name	Electric - kWh	Natural Gas - MCF	Water - Mgali	Sewer - Mgals	Natural Gas - MCF	Electric - kWh	Water - Mgala	Sewer - Mgals
PA 1-01	Addison Terrace	17,919	1,676			2.99%	0.42%		
PA. 1-02	Bedford Dwellings	3,075	288			0.55%	0.10%		
PA. 1-04	Arlington Heights	3,829	358			3.12%	0.57%		
PA 1-05	Allegheny Dwellings	7,255	636			3.70%	0.31%		
PA. 1-09H	Northview High Rise	585	63			1.02%	0.13%		
PA.1-15	Pennsylvania-Bidwell	3,688	345			3.07%	0.55%		
PA.1-17	Pressley Street	4,321	539			4.11%	0.30%		
PA 1-20	Homewood North*	7,904	739			3.10%	0.85%		
PA. 1-31	Murray Towers	674	56			0.84%	0.16%		
PA. 1-40	Mazza Pavilion (Brookline)		0			0.00%	0.00%		
PA.1-41	Caliguiri Plaza (Allentown)	1,161	131			3.12%	0.14%		
PA 1-44	Finello Pavilion (South Oukland)	668	65			4.08%	0.14%		
PA. 1-46	Carrick Regency	1,170	132			5.37%	0.18%		
		44,345				0.00%	0.19%		

		Present Ann Usa		CFM Saved	Calculated Annual Savings				
HA Site#	Site Name	MCFs	KWhs		Htg. Eff.	Gas MCFs	Htg.kWh	EER	Clg.kWh
PA.1-02	Bedford Dwellings	41,774	-	1,471	75%	288	-	9	3,075
PA 1-04	Arlington Heights	9,308	-	1,831	7.5%	358		9	
PA 1-05	Allegheny Dwellings	16,009		3,470	80%	636		9	7,255
PA.1-09H	Northview High Rise*	4,979		280	65%	63		9	
PA.1-15	Pennsylvania-Bidwell	9,326	-	1,764	75%	345		9	3,688
PA 1-17	Pressley Street	11,137	-	2,755	7.5%	539		12	4,321
PA 1-20	Homewood North*	20,267		3,780	75%	739		9	
PA.1-31	Murray Towers	5,388	-	323	85%	56		9	674
PA 1-40	Mazza Pavilion (Brookline)		-	82	83%			10	
PA 1-41	Caliguiri Plaza (Allentown)	3,527		740	83%	131		12	1,161
PA 1-44	Finello Pavilion (South Oakland)	1,291		355	80%	65		10	668
PA 1-46	Carrick Regency	2,235	-	746	83%	132		12	1,170
	Total	234,896	-			5,028			22,012

\*MCF/yr. = cfm x Ca x DDh x 24 / 1030000 / Eh

\*kWh Saved Calcs Heating kWh/yr. = defin x Ca x DDh x 24 / 3413 / Eh Cooling kWh/yr. = defin x Ca x DDc x 24 / 3413 / Ec

Where: dcfm= Change in Infiltration Rate, Cu. Ft./ Min.

Eh= Heating Efficiency

EER= Energy Efficiency Ratio, Btu/kWh DDh= Heating Degree Days per Year DDc= Cooling Degree Days per Year Ca= Heat capacity factor for air

Area	Savings	Electrical Savings \$	0.00	Total \$
Building Envelope	22,012	\$2,505	Option C Savings	\$2,505

<sup>\*</sup> Buildings are Opt C, therfore savings not included in building envelope savings totals

## Roof Replacement and Added Insulation Savings

		Annual	Savings	Savings % of Total			
HA Site #	Site Name	Natural Gas - Electric - Natural Gas - MCF kWh 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%		
		779	146				

\*Heating MBH Saved Calcs Roof MBH/yr.= DDh x 24 / 1000 x A x dU

Facade MBH/yr.= DDh x 24 / 1000 x A x dU

\*Cooling MBH Saved Calcs Roof MBH/yr.= DDc x 24 / 1000 x A x dU

Facade MBH/yr.= DDc x 24 / 1000 x A x dU

Where: DDh= Heating Degree Days per Year

DDc= Cooling Degree Days per Year

dU= Change in Heat Transmission (U) Value

A= Total Area, 3f

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

<sup>\*</sup> Buildings are Opt C, therfore savings not included in roof replacement savings totals

## **Limiting Thermostats Proposed Savings**

		Annual Saving	Ş		of Total
HA Site #	Site Name	ame Natural Gas - MCF		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 Oakla	452	19,733	28.34%	4.02%
PA 1-45	Morse Gardens	835	19,469	27.84%	3.39%
PA 1-46	Carrick Regency	755	15,161	30.74%	2.33%
PA 1-47	Gualtieri Manor	453	7,751	32.14%	2.68%
		2,294	92,546	0.81%	0.47%

<sup>\*</sup> All sites are Opt C, Gas except Glen Hazel Family, therfore the savings above are only for Glen Hazel Family, Option A

HA Site #	Site Name	Present Modified* Gas Heating MCF/yr	* Electric Cooling kWh/yr	% of Cooling Controlle d by Tenant Tstats	Indoor Temp. Heating	Indoor Temp. Cooling	Gas Savings MCF/yr	Electric Clg Savings kWh/yr
	Arlington Heights	9,486	62,618	100%	75	74	1,194	14,973
	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 Oakla	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	Carrick 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	\$54,417	\$64,948

### Replace Ventilation Units, New Chiller & Insulate Duct Savings

ECM: Replace Existing Gas Fired Rooftop Corridor Ventilation Units

		Annus	l Savings	Savings % of Total		
HA Site #	Site Name	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%	

			Current Ventile	etion Units	New Ventile	etion Units		
HA Site #	Site Name	CFM	Heating Efficiency	MCF per Year*	Heating Efficiency	MCF per Year*	Cooling kW per Ton	kWh per Year*
PA1-31	Murray Towers	8,445	0.75	1,652	0.80	1,548	1	13,243
PA 1-40	Mazza Pavilion (Brookline)	4,110	0.75	804	0.81	744	1	
	Totals	12,555		2,456		2,293		13,243

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

\*kWh per Year Calcs kWh/yr. = cfm x Ca x Ec x H x 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 Vo

H= Hours of Operation at Design Capacity per Year Eb= Heating Efficiency Ec= Cooling Efficiency, kW/Ton

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

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

MAU Heating Temp: 35
MAU Cooling Temp: 70
Heating Efficiency: 70.0%
EER: 10

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

\*MCF Saved Calcs MCF/yr. - A x dU x H x dT / Bmcf / Eh

\*kWh Saved Calcs kWh/yr. - A x dU x H x dT / K / EER

dU= Change in Heat Transmission (U) Value

Where: 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= Bcus per MCF of natural gas= 1,040,000

K= Watts per Kilowatt= 1000

ECM Number	Electrical Savings kWh		Natural Gas Savings MCF		Total \$
30 New Unit	13,243	\$1,507			\$1,507
32 Heat Recovery / New Chiller*	3,842	\$437	Option C Savings \$4		\$437
37 Insulate Duct	212	524	1		\$24

<sup>\*</sup>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.

# **Adjustment Summary**

Adjustment 1 - Elimination of Mazza Pavilion	\$28,047
Adjustment 2 - Elimination of Heat Pump Units	\$132,077
Adjustment 3 - Temporary Elimination of Addison Terrace	\$371,785
Adjustment 4 - Limiting Thermostats	\$180,702
Adjustment 5 - Northview Heights Excess Water Use	\$770,727
	\$1,483,338

### **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
 \$28,047

#### 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:

		Common	Bldg	Year	# of	# of	# af					
HA Site#	Site Name	Sq. Feet	Sq. Feet	Built	Flrs	Units	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 j	per BR (MCF):	2,714	26,613	6,559	1,885	
						Electric Savings	per BR (kWh):	(137,490)	(1,348,162)	(332,267)	(95,479)	
						Un	its Eliminated:		66	27	3	
						% un	its Eliminated:		0.19	0.31	0.12	
	Gas Savings Eliminated (MCF): 4,976 2,036								226			
					Elec	tric Savings Elin	ninated (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
							per BR (MCF):		7,558	3,909	0	1,173
	Electric Savings per BR (kWh): (238,706)								(364,340)	(188,452)	0	(56,536)
	Units Eliminate								13	2		1
	% units Eliminated: 22% 7% 11								1199			
	Gas Savings Eliminated (MCF): 1,694 261 130											
					Elec	tric Savings Elin	ninated (kWh):		(81,662)	(12,563)		(6,282)

	Natural Gas				Electric		Water		
	MCF	S		kWh	S		kCial	S.	
Delete 96 units, Northview Heights	7,238	\$ 143,810	\$ 19.87	-366,639	\$ (41,724)	\$ 0.1138			
Delete 16 units, Homewood North	2.085	5 41.428	5. 19.87	-100.508	5 (11.438)	5 0.1138			

\$ 185,238 \$ (53,161)

### **Adjustment Detail**

### 3. Temporary Closure of Addison Terrace

Discussion:

During 2013 Addison Terrace was removed from use due to a rehabilitation project.

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	\$371,785

#### 4. Limiting Thermostats Adjustment

		Cias Savings	Savings Adjustment
		(MCF)	(8)
Northview Heights		5,678	\$126,986
Arlington Heights		1,194	\$26,706
Gualtieri Manor		453	\$10,121
Carrick Regency		755	\$16,889
	Total	7,325	\$180,702

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

	Water	
	Savings	Savings Adjustment
	(kGal)	(8)
Northview Heights (Water)	8,355	\$770,727

## **Building Utilities Baselines**

		Natural Gas - MCF		Electric - kWh			Water - Mgals			Total	<u> </u>	
HA Site#	Site Name	MCF/yr.	Cost/yr.	\$ per MCF	kWh/yr.	Cost/yr.	\$ per kWh	Mgal/yr.	Cost/yr.	\$ per Mgals	Cost/yr.	AMP #
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.

## ECM: Water Conservation & Lighting

			Lighting (Bath & Kitchen)	Kitchen	Bathroom	Shower	wc
Qty	Site	Unit		1.5 GPM	0.5 GPM	2.0 GPM	1.6 GPF
1	Northview High Rise	503	×	x	1.5	2.5	x
2	Northview High Rise	612	×	x	1.5	2.5	x
3	Northview High Rise	805	×	x	x	2.5	x
4	Northview High Rise	909	×	x	1.5	2.5	1.28
5	Northview High Rise	1001	x	x	1.5	2.2	x
6	Northview High Rise	1009	×	x	1.5	2.5	x
7	Northview Heights	112	×	x	1.2	R	x
8	Northview Heights	646	×	x	1.2	2.5	x
9	Northview Heights	1421	×	x	1.2	N/A	x
10	Northview Heights	1481	x	x	1.5	N/A	1.28
11	Northview Heights	1476	x	x	R	N/A	x
12	Northview Heights	1439	x	x	1.5	N/A	1.28
13	Carrick	2A	x	R.	1.5	x	x
14	Carrick	4C	x	R	1.5	х	1.28
15	Carrick	4A	x	x	x	R	1.28
16	Carrick	8J	x	x	1.5	1.75	1.28
17	Murray Towers	711	x	x	x	х	1.28
18	Murray Towers	703	x	x	x	2.5	1.28
19	Murray Towers	707	x	x	x	2.5	1.28
20							
21	Pressley	1112	x	x	1.5	R	1.28
22	Pressley	817	x	x	x	1.5	1.28
23	Pressley	418	x	x	x	2.5	R
24	Caliguiri Plaza	203	x	x	x	R	1.28
25	Caliguiri Plaza	411	x	x	x	1.5	x
26	Caliguiri Plaza	811	x	x	1.5	R	1.28
27	Caliguiri Plaza	715	x	x	x	2.18	1.28
28	Arlington	587	x	x	1.5	R	1.28
29	Arlington	581	x	R	R	2.5	1.28
30	Arlington	646	×	x	1.5	N/A	x

Notes

1-x-Proper fixture still in place and operating. 2-R-Fixture removed. 3-N/A-No shower installed.

MVS: Carlos Taylor Date of Inspection: 11/16/2018

## **ECM: Limiting Thermostats**

	Site	Unit#	Occ Heat	Limit Heat	Occ Cool	Limit Cool	Current Temp
1	Northview Heights	112	N/A	N/A	N/A	N/A	63
2	Northview Heights	646	67	85	67	65	58
3	Northview Heights	1421	68	90	66	66	63
4	Northview Heights	1476	N/A	N/A	85	50	57
5	Northview Heights	1481	66	85	66	69	66
6	Northview Heights	1439	73	80	68	68	57
7							
8	Carrick	2A	72	85	72	62	75
9	Carrick	4C	68	82	76	65	76
10	Carrick	8J	77	80	77	75	82
11	Arlington	639	74	80	78	68	74
12	Arlington	581	74	75	68	50	74
13	Arlington	646	80	85	81	68	71
14	Caliguiri Plaza	715	77	86	74	68	76
15	Caliguiri Plaza	411	78	85	73	70	78
16	Caliguiri Plaza	811	40	85	65	60	76
17	Caliguiri Plaza	203	63	80	68	68	73

### Notes:

<sup>1-</sup> In some units, the tenants were reported, in past years, to be calling Honeywell tech support to get directions on bypassing the lock on the digital thermostats.

<sup>2-</sup> Some tenants acquire a doctor's note to gain full control of thermostat. N/A- T-Stat buttons do not operate.

## ECM: Miscellaneous

ECM Description	Notes
Windows & Air Sealing	Installation is in place and there are no issues with this ECM.
Refrigerators	No issues reported
Geothermal Heat Pumps	Allentown/Arlington - Clogged GEO thermal lines and Compressor failures.
Radiator Valves	No issues reported

MVS: Carlos Taylor Date of Inspection:

11/16/2018 5.4

### Glossary of Terms

actual cost Actual energy cost taken directly from utility bill.

actual savings Savings derived through the Metrix TM 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 TM 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

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.

Time period (start month and stop month, typically one year's pre-installation

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 R2 = "1.0"

indicates a perfect correlation.

Actual amount the utility company charges per unit of energy or demand; used by  $Metrix^{TM}$  to calculate utility costs for the rate tariff

SimActual & Baseline scenarios.

The actual usage for designated baseline period. reference year

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.

The total cost for the billing period as calculated by Metrix TM. simactual

Adjustment made by Metrix IM for weather variations using weather adjustment

degree days.



### Report Delivery Receipt

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 7 and indicates cost avoidance of \$3,385,468 for the year, as compared to the energy guarantee per the contract of \$3,030,903.

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