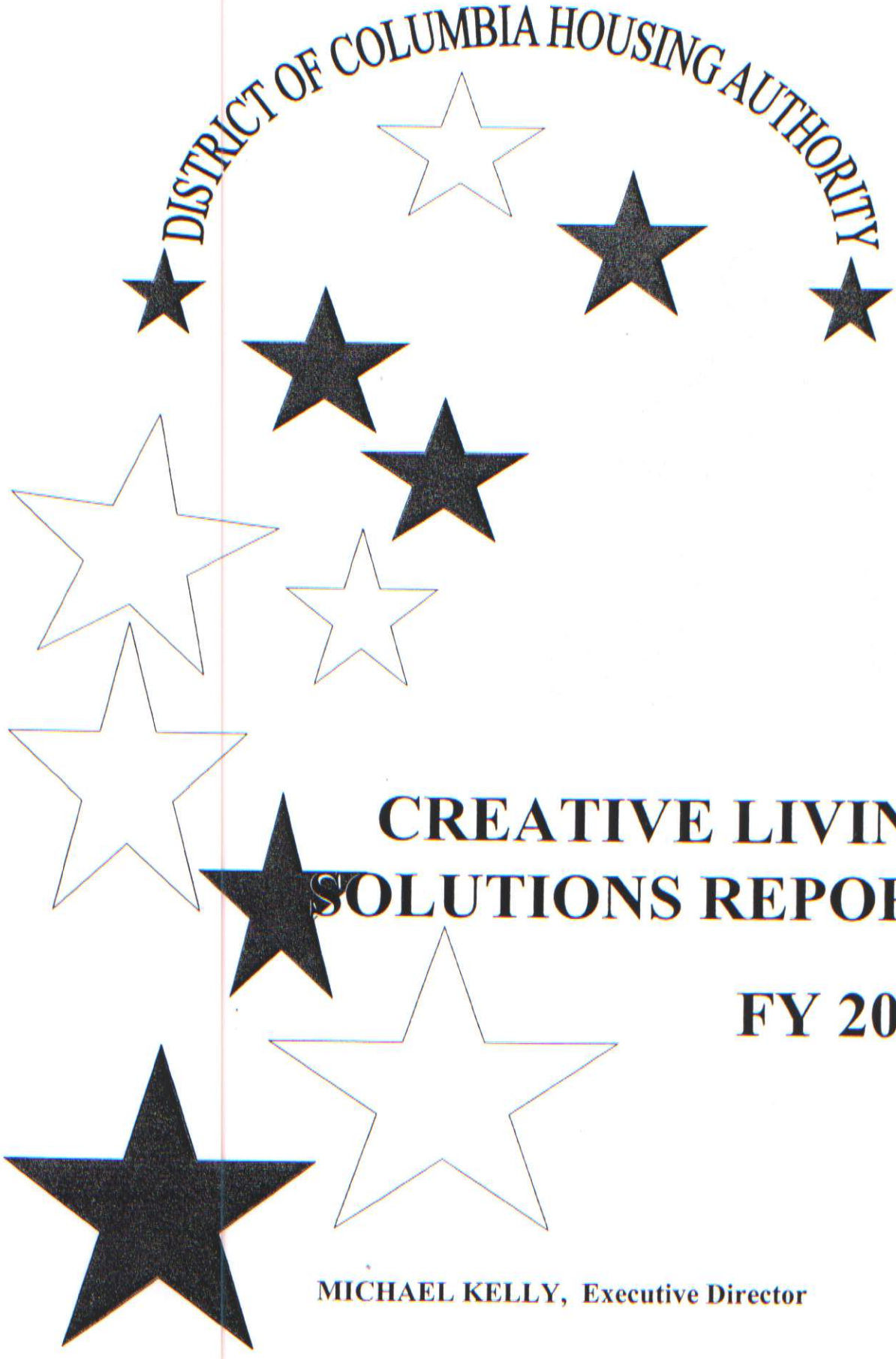



# CREATIVE LIVING SOLUTIONS REPORT

## FY 2006

MICHAEL KELLY, Executive Director

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# District of Columbia Housing Authority
# Creative Living Solutions Annual Report
# FY 2006


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# PART I: OVERVIEW OF ACTIVITIES AND ISSUES

## INTRODUCTION

This report describes both the ongoing activities of the District of Columbia Housing Authority (DCHA) over the past year from October 1, 2005 thru September 30, 2006 (Fiscal Year 2006) and the innovative initiatives that DCHA has undertaken using MTW flexibility. The initiatives reported on in this report were described in DCHA's Moving to Work/Creative Living Solutions (MTW/CLS) Plan for Fiscal Year 2006, presented to HUD in July 2005.

During FY 2006, DCHA sustained its mission of managing public housing units, administering vouchers, expanding affordable housing opportunities and supporting resident empowerment efforts. While the year was filled with multiple challenges, it also contained a variety of opportunities that allowed DCHA to face increasing affordable housing needs within a city with an aggressive housing market. Much like its peers across the nation, DCHA sought creative responses to the changing affordable housing environment and the reality of shrinking resources. The DCHA staff has demonstrated remarkable resiliency as both programmatic and administrative changes were implemented to reduce costs. With solid leadership and the commitment and sacrifices of a talented staff, DCHA stabilized the level of its housing assistance programs without undue harm to its existing clients.

During FY 2006, DCHA realized a number of achievements in each of its program areas. Highlights of these achievements include:

a. Maintenance of quality property management at public housing developments;
b. Continued implementation of the expedited modernization program where $80 in bond proceeds are bringing properties to a 20-year viability; to date, $53 million has been obligated for this 4-year project;
c. Completion of 381 (cumulative)ADA/504 units,
d. Closing on numerous homeownership units at various sites, including 90 units at Henson Ridge and the initial occupancy of family units at Capital Gateway which includes the sale of six homes to low and moderate income families;
e. Completion of two elderly building at the Capper/Carrollsburg and Eastgate HOPE VI sites;
f. Implementation of a new Linguistically Isolated Voucher initiative;
g. Sponsorship of DCHA's second Annual Resident Summit,
h. Facilitation of Resident Commissioner election for the three seats reserved on DCHA's Board for residents;
i. Continued effective community policing efforts of DCHA's Public Safety force;
j. Received, for the fifth year in a row, an Unqualified Opinion in FY 2005 independent audit;

k. Implemented Customer Service training for all employees;
l. Acquired new software system to enhance information management.

DCHA is the largest landlord in the District of Columbia. This fact, coupled with the housing authority's location in the nation's capitol, places a unique value on our efforts. Continuously in the spotlight, DCHA has assumed a leadership role, both locally and federally, by carrying out its mission with a quiet confidence and commitment to excellence.

## Moving to Work as a Valuable Tool

Each of the objectives reported as completed in this report advance at least one of the four objectives of DCHA's MTW Plan found in DCHA' MTW Agreement. The four objectives are as follows:

- Develop enhanced housing opportunities;
- Sustain quality property management;
- Achieve effective customer support services; and
- Organize efficient businesslike operating systems.

These four objectives are a summary of the ten objectives of DCHA's two year strategic plan. The initiatives proposed in the CLS Plan and reported on in the CLS Report are just some of the many avenues and tools that DCHA is employing to achieve the goals and objectives as outlined in the DCHA Strategic Plan. This report covers the policies and accomplishments directly related to MTW/CLS activities. Other planning tools that DCHA uses alongside with the CLS Plan to guide the implementation of its strategic plan include a comprehensive Business Plan and a Communications Plan. The objectives and the tasks of the strategic plan are updated every two years, the Business Plan, the Communications Plan and the CLS Plan are updated annually.

## Content of this Report

The report is presented in three parts. The first part presents much of the data and information required by Attachment B of DCHA's MTW Agreement with HUD, including the number and demographics of the households served. The second section reports on the Initiatives proposed in the FY 2006 Creative Living Solutions Plan that was completed during FY 2006. The second section is organized according to DCHA's MTW/CLS objectives. The third section is the Appendices that complete the requirements of the MTW Agreement, including data required by Attachment B of the Agreement. Appendix B of the third section is a table presenting DCHA's progress on the Benchmarks incorporated in DCHA's MTW Agreement.

The Initiatives presented in this report were accomplished in consultation with the residents of DCHA's communities, the local organizations committed to helping improve the lives of low income families, local elected and appointed officials, DCHA staff and concerned members of the general public. After the exploration and consultation process, the proposed changes that were carried through to implementation were adopted through

the District of Columbia rulemaking process, with final adoption by the DCHA Board of Commissioners.

DCHA appreciates the advice, hard work and commitment of all the participants in the process of examining our mission and services and devising policies and processes that can help us do it better. The completed Initiatives that result from these efforts would not have been possible without the contributions from our clients, advocacy groups and all other stakeholders, not the least of which are DCHA employees responsible for the day-to-day success of the agency in achieving its mission.

# PART I: OVERVIEW OF ACTIVITIES AND ISSUES

This section of the plan is organized according to the reporting requirements of Attachment B of DCHA's MTW Agreement with HUD. It provides the data, narrative and discussion as required by the Agreement.

## I. Households Served

Overall, DCHA has achieved a net increase in total families served, exceeding our combined MTW benchmark of 16,564 by serving a total of 16,937, representing a growth rate of one percent. This growth was primarily in the voucher program as DCHA began to remove a modest amount of households from the waiting list and also issue vouchers to tenants impacted by local opt outs. The program is closer to its 2004 participant level. The public housing program did not reach the anticipated lease-up level due to unforeseen delays in the delivery of newly constructed public housing units at HOPE VI sites and changes in a financing structure at the Henson Ridge site where units originally planned as ACC units are now project-based Section 8 units. Additionally, bond-supported modernization efforts have also temporarily taken some units offline

| **Public Housing Families** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
| Planned | 7,203 | 7,508 | 7,000 | 7,200 | | | | |
| Actual | 7,203 | 7,258 | 7,120 | 7,032 | | | | |

| **HCVP Recipients** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
| Planned | 8,680 | 9,300 | 9,643 | 10,000 | | | | |
| Actual | 9,249 | 9,908 | 9,575 | 9,905 | | | | |

| Total Households Served | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
| Planned | 15,883 | 16,808 | 16,643 | 17,200 | | | | |
| Actual | 16,452 | 17,166 | 16,695 | 16,937 | | | | |

One key fact that is not readily captured in the data above is the extent to which DCHA has been able to expand opportunities for low and moderate income families through other affordable housing methods. This includes units built in partnership with private developers. During FY 2006, DCHA and its partners constructed a total of 64 LIHTC (tax credit) units and 10 HCVP projected based Section 8 units. DCHA also entered into agreements with various other affordable housing providers for the collective creation of more project based Section 8 and ACC units. The housing authority has also been a partner in the construction of affordable homeownership sites. In addition, during FY 2006, DCHA delivered a total of 107 homeownership units and one Lease to Purchase unit targeted to mixed-income populations. These units include 96 units at the Henson Ridge development, five (5) at the East Capitol site, six (6) scattered sites, and 1 lease-to-purchase unit at the Wheeler Creek development.

| Total Households Served: By Bedroom Size | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
| 0 BR | 2,255 | 2,956 | 2,563 | 1,021* | | | | |
| 1 BR | 3,592 | 3,626 | 3,531 | 4,274 | | | | |
| 2 BR | 5,193 | 5,196 | 4,992 | 5,522 | | | | |
| 3 BR | 3,857 | 3,767 | 3,796 | 4,115 | | | | |
| 4 BR | 1,177 | 1,204 | 1,327 | 1,462 | | | | |
| 5 BR | 343 | 370 | 417 | 465 | | | | |
| 6 BR | 35 | 57 | 70 | 78 | | | | |
| TOTAL | 16,452 | 17,166 | 16,696 | 16,937 | | | | |

*This number represents a corrected account of households served by bedroom distribution. Previous figures inadvertently counted privately managed units all as one bedroom units. The 2006 number represents the adjusted distribution.

| Total Households Served: by Household Type | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
|---|---|---|---|---|---|---|---|---|
| Non-elderly/non-disabled | 9,683 | 9,732 | 10,158 | 10,158 | | | | |
| Elderly/non-disabled | 2,140 | 2,249 | 2,476 | 2,399 | | | | |
| Disabled | 4,629 | 5,185 | 5,743 | 6,126 | | | | |
| Other | - | - | | | | | | |
| TOTAL | 16,452 | 17,166 | 18,377 | 18,683 | | | | |

| Total Households Served: By Income Group | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
|---|---|---|---|---|---|---|---|---|
| <30% AMI | 15,465 | 15,869 | 15,432 | 15,428 | | | | |
| 30%-50% AMI | 926 | 1,187 | 1,153 | 1,322 | | | | |
| 50%-80% AMI | 60 | 105 | 104 | 176 | | | | |
| >80% AMI | 1 | 5 | 6 | 11 | | | | |
| TOTAL | 16,452 | 17,166 | 16,695 | 16,937 | | | | |

| Total Households Served: By Race | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
|---|---|---|---|---|---|---|---|---|
| Asian/Pacific Islander | 48 | 53 | 51 | 59 | | | | |
| African American | 15,829 | 16,643 | 16,185 | 16,458 | | | | |
| Native American /Hawaiian | 7 | 27 | 28 | 28 | | | | |
| Caucasian | 326 | 369 | 362 | 364 | | | | |
| Other | 242 | 74 | 69 | 28 | | | | |
| TOTAL | 16,452 | 17,166 | 16,695 | 16,937 | | | | |

| Total Households Served: By Ethnicity | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
|---|---|---|---|---|---|---|---|---|
| Hispanic | 339 | 350 | 340 | 344 | | | | |
| Non-Hispanic | 16,113 | 16,816 | 16,282 | 16,593 | | | | |
| TOTAL | 16,452 | 17,166 | 16,695 | 16,937 | | | | |

*Changes in Tenant Characteristics*

As shown in the tables above, DCHA's tenant characteristics have remained fairly constant over the past year. The percentage of African Americans has remained at approximately 97% of the households served while the families of other races served by DCHA have increased slightly in real terms. The percentage of families with incomes less than thirty percent of the Area Median Income (AMI) decreased slightly from 92% in FY 2005 to 91% during FY 2006. At the same time, the number of households who fell in the income ranges of 50% to 80% of AMI rose slightly from less than one-percent at .06% to 1%, representing an increase of 67 households. The number of households whose incomes fell above eighty percent of AMI doubled from six households in FY 2005 to 12 in FY 2006.

A closer review of the data reveals that the slight increase in higher income families is a result of both ACC lease ups in the HOPE VI program where returning families who have taken advantage of the CSSP (supportive services) program are returning to the sites, and a stringent third party review during recertification at the conventional public housing developments where previously unaccounted income is being accurately reported.

**Number and characteristics of households on Waiting Lists**

The DCHA waiting list continued to grow in FY 2006. The number of applicants on the waiting list for public housing increased by 6%, while the number of households waiting for Section 8 assistance increased by 8% from the previous year. It should be noted that some households are on the waiting list for both public housing and Section 8 assistance. The tables below are summaries of the waiting list by different data elements.

| Households on Waiting List by Housing Type | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
|---|---|---|---|---|---|---|---|---|
| Public Housing | 20,492 | 26,458 | 27,622 | 29,797 | | | | |
| HCVP | 30,876 | 40,884 | 44,500 | 47,229 | | | | |

| Households on Waiting List by Bedroom Size: Public Housing | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
| 0 BR | 7,011 | 6,367 | 6,450 | 6,995 | | | | |
| 1 BR | 3,363 | 6,636 | 7,535 | 8,690 | | | | |
| 2 BR | 5,502 | 7,453 | 7,730 | 7,848 | | | | |
| 3 BR | 3,485 | 4,667 | 4,580 | 4,906 | | | | |
| 4 BR | 846 | 1,088 | 1,118 | 1,186 | | | | |
| 5 BR | 141 | 119 | 95 | 71 | | | | |
| 6 BR | 30 | 25 | 19 | 6 | | | | |
| 6+ BR | 114 | 103 | 95 | 95 | | | | |
| TOTAL | 20,492 | 26,458 | 27,622 | 29,797 | | | | |

| Households on Waiting List by Income Group: Public Housing | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
| <30% AMI | 20,077 | 25,971 | 27,244 | 29,385 | | | | |
| 30%-50% AMI | 357 | 421 | 318 | 353 | | | | |
| 50%-80% AMI | 13 | 23 | 20 | 19 | | | | |
| >80% AMI | 45 | 43 | 40 | 40 | | | | |
| TOTAL | 20,492 | 26,458 | 27,622 | 29,797 | | | | |

| Households on Waiting List by Income Group: HCVP | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
| <30% AMI | 30,164 | 39,951 | 43,659 | 46,349 | | | | |
| 30%-50% AMI | 622 | 821 | 739 | 776 | | | | |
| 50%-80% AMI | 29 | 48 | 39 | 41 | | | | |
| >80% AMI | 61 | 64 | 63 | 63 | | | | |
| TOTAL | 30,876 | 40,884 | 44,500 | 47,229 | | | | |

**Households on Waiting List by Household Type: Public Housing**

| | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
|---|---|---|---|---|---|---|---|---|
| Non-elderly/non-disabled | 18,340 | 23,320 | 24,269 | 25,962 | | | | |
| Elderly/non-disabled | 1,133 | 1,343 | 1,051 | 1,343 | | | | |
| Disabled | 969 | 1,751 | 2,251 | 2,445 | | | | |
| Other | 50 | 64 | 51 | 47 | | | | |
| TOTAL | 20,492 | 26,458 | 27,622 | 29,797 | | | | |

**Households on Waiting List by Household Type: HCVP**

| | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
|---|---|---|---|---|---|---|---|---|
| Non-elderly/non-disabled | 26,304 | 34,103 | 37,142 | 38,924 | | | | |
| Elderly/non-disabled | 2,080 | 2,881 | 2,690 | 3,237 | | | | |
| Disabled | 2,422 | 3,825 | 4,668 | 4,989 | | | | |
| Other | 70 | 75 | - | 79 | | | | |
| TOTAL | 30,876 | 40,884 | 44,500 | 47,229 | | | | |

**Households on Waiting List by Race: Public Housing**

| | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
|---|---|---|---|---|---|---|---|---|
| Asian/Pacific Islander | 111 | 185 | 140 | 150 | | | | |
| African American | 19,780 | 25,505 | 26,653 | 28,733 | | | | |
| Native American /Hawaiian | 59 | 69 | 65 | 74 | | | | |
| Caucasian | 465 | 640 | 672 | 765 | | | | |
| Other | 77 | 59 | 92 | 75 | | | | |
| TOTAL | 20,492 | 6,458 | 27,622 | 29,797 | | | | |

| Households on Waiting List by Ethnicity: Public Housing | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
| Hispanic | 700 | 412 | 542 | 548 | | | | |
| Non-Hispanic | 19,792 | 24,609 | 27,080 | 29,249 | | | | |
| TOTAL | 20,492 | 26,458 | 27,622 | 29,797 | | | | |

| Households on Waiting List by Race: HCVP | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
| Asian/Pacific Islander | 154 | 263 | 231 | 263 | | | | |
| African American | 29,722 | 39,335 | 42,803 | 45,383 | | | | |
| Native American /Hawaiian | 90 | 100 | 164 | 113 | | | | |
| Caucasian | 769 | 1,070 | 1,187 | 1,308 | | | | |
| Other | 141 | 116 | 115 | 162 | | | | |
| TOTAL | 30,876 | 40,884 | 44,500 | 47,229 | | | | |

| Households on Waiting List by Ethnicity: HCVP | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
| Hispanic | 992 | 664 | 895 | 1,005 | | | | |
| Non-Hispanic | 29,884 | 40,220 | 43,605 | 46,224 | | | | |
| TOTAL | 30,876 | 40,884 | 44,500 | 47,229 | | | | |

*Discussion*

While the characteristics of families on the waiting list have remained substantially the same, not only has the number of families on both the HVCP and the public housing waiting lists increased in the past year, the rate at which the numbers have grown has also been consistently increasing over the past fours years. The waiting list has increased by 6% percent between FY 2005 and FY 2006.

DCHA attributes the increasing rate of growth in the waiting lists for both public housing and HCVP to the increasing need for affordable housing in a city identified by the 2006 Fannie Mae Foundation/ Urban Institute Report titled *"Housing in the Nation's Capitol"*. According to this report, the District's rental market declined over the past year, as multifamily properties continued to get converted into condominiums, resulting in a net loss 4,800 during 2005. As of January 2006, almost 5,500 rental units were under development in the region, with 580 of those in the District. With such high conversion rates of rental properties into condominiums and little supply to replace the conversion, the vacancy rates has decreased dramatically, thereby creating a tight rental market.

In addition to the loss of rental units to conversions, the rent market is further tightened with the high rental rates. The average rent in the DC metro was at $1,179 at the end of 2005, representing an increase of 1.4% after inflation from 2004. During the same period, the District's average rent climbed even faster by 3% to $1,321, creating serious financial burden and affordability challenges for many working families.

The growth rate of DCHA's waiting list is reflective of the market pressures of the last five years, creating a huge demand and limited housing resources available to address the needs of the families on the lists. The modest slow down in the housing market in 2006 has yet to impact the populations targeted and served by DCHA as is reflected in the size and growth of the waiting list.

During FY 2006, DCHA also concluded its review of the current procedural operations of its Client Placement Division, which manages DCHA's housing application process and continued to explore options into 2006. DCHA's application process is carefully examined and movement on the list is determined by preferences and the date/time of incoming applications. While DCHA has an open waiting list, only a small percentage of families on the public housing and voucher lists have been assisted during the past year.

## II. Occupancy Policies

*Changes in concentration of lower income families*

It is well documented that the District of Columbia has one of the hottest housing markets in the country. This fact, coupled with revised federal HCVP funding methodologies, and the low turnover rate and low incomes of our family public housing units create a challenge when implementing de-concentration policies. But for the past several years, DCHA has used a variety of tools to encourage de-concentrated neighborhoods.

In the public housing program, DCHA does not have any properties with a large number of families with relatively higher incomes, except in HOPE VI properties where explicit policies have been established to market to and recruit families with a wide-range of incomes. The majority of families in each DCHA property have incomes substantially below 30% of the Area Median Income (AMI). Many DCHA properties have historically been located in low income neighborhoods. However, because of the rapidly increasing demand for homes in the District of Columbia, many of the neighborhoods surrounding DCHA properties have rising income levels. This is leading to a greater mix of incomes in neighborhoods that include public housing properties. Additionally, DCHA encourages its residents to participate in educational and job training programs that will assist those who are unemployed or underemployed. Here the goal is to increase the incomes of existing public housing households.

In the HCVP program, DCHA encourages its voucher participants in their efforts to choose homes in neighborhoods with lower concentrations of poverty. During initial briefing sessions, DCHA staff informs participants about the benefits and the means to get assistance to look for housing in those areas. Information on specific units in low poverty areas is also available. DCHA has also counseling staff who are dedicated to helping participants maintain a successful tenancy. DCHA also has an active Landlord Advisory Committee that assist with the recruitment of landlords in low poverty areas within the city. Additionally, the Board of Commissioners have supported a payment standard set at 110% of FMR which provides participants with the option of accessing units with higher rents.

## III. Changes in the Housing Stock

| Number of Public Housing units in inventory | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
| Projected | 9,219 | 8,807 | 7,000 | 7,876 | | | | |
| Actual | 9,219 | 8,607 | 7,772 | 7,784 | | | | |

| Number of Vouchers in inventory | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
| Projected | 9,355 | 10,800 | 10,800 | 11,261 | | | | |
| Actual | 9,355 | 10,877 | 10,978 | 10,031 | | | | |

*Discussion*

DCHA's projected number of units in inventory for FY 2006 included the anticipated completion of 92 ACC units at the Henson Ridge site and 12 ACC units at the newly redeveloped Kentucky Courts site. The actual number is lower because the Henson Ridge units originally planned to be ACC are now project-based Section 8. And although these units are serving the same returning residents, they are not included in the public housing inventory count.

*Homeownership*

DCHA has a very active and successful homeownership program that utilities a medley of federal and local tools to assist low and moderate families achieve the American Dream. Between FY 2003 and FY 2006, DCHA assisted 315 households in achieving homeownership through the 5(h) and HOPE VI programs, with local homeownership assistance programs, and with the voucher program. Given local market pressures, there is a strong demand for DCHA's homeownership efforts. Overall, DCHA has provided 727 homeownership opportunities to low and moderate income households and plans to increase that number of over a 1,000.

## IV. Sources and Amounts of Funding

The tables in this section, Sources and Uses of Funding, present estimates of the total funds received and expended in FY 2006 at the time the plan was prepared and compared to the actual as of the end of FY '06. The projected sources were based on DCHA's current knowledge of grants approved and/or requested, adjusted by any new information received at the time the plan was being drafted in July 2005. DCHA anticipated a decline in both the Low Rent and HCV program thus the projected uses presented in the FY 2006 plan reflected DCHA's response to the anticipated funding realities.

The tables presented below are estimates only. HUD will be provided with the final audited FY 2006 numbers upon completion of DCHA's independent audit. Attached to this report is the FY 2005 independent audit.

**Planned versus actual funding amounts, FY 2006 un-audited**

| Classification | Projected Amount | Actual Amount |
|---|---|---|
| Low Rent Program | $61,500,000 | $58,834,139 |
| HCVP | $151,257,964 | $122,743,880 |
| Capital Fund | $23,300,000 | $20,501,852 |
| HOPE VI Program & other Dev. Grants | $25,000,000 | $36,506,757 |
| Misc. Grants | $11,000,000 | $11,502,503 |
| Proceeds from Grant Anticipation Loans/Bond | $14,400,000 | $19,660,549 |
| Subsidiary Corporations | $1,600,000 | $1,300,000 |
| **TOTAL** | **$288,057,964** | **$271,049,680** |

*Discussion*

The planned versus the actual funding is based on the amount DCHA anticipated in receiving versus the actual amount it received. The actual amount represents the dollar amount the agency received through reimbursement, which is counted as revenue in the agencies accounting. As shown above, DCHA projected $288,057,964 in revenue, however the actual revenue was 6% less than projected. As anticipated, the primary shortfall was in the Low rent program and HCV program. DCHA anticipated $61,500,000 in the Low Rent program and $151,257,964 in the Voucher program, representing a short fall of 5% and 23%, respectively.

## V. Uses of Funds

**Budgeted vs actual expenditures by line item, FY 2005 unaudited***

| Line Item | Classification | Planned Amount | Actual Amount |
|---|---|---|---|
| 4110,4130,4140,4150,4171,4190,4195 | Administration | $29,200,000 | $34,061,340 |
| 4210 4220,1430 | Tenant Services | $1,300,000 | $1,063,329 |
| 4310,4320,4330,4340,4350,4390 | Utilities | $23,500,000 | $24,070,147 |
| 4410,4420,4430 | Maintenance | $15,750,000 | $16,811,501 |
| 4460,4470,4480 | Security | $8,000,000 | $6,230,618 |
| 4715 | Housing Assistance Pmts | $143,857,964 | $122,743,880 |
| 4510,4530,4540,4590 | General | $18,328,593 | $11,887,746 |
| 1400,1430,1440,1450, 1460,1470,4610 | Dev./Capital/No Routine | $47,921,407 | $57,381,925 |
| | **TOTAL** | **$287,857,964** | **$274,250,486** |

*DCHA will provide HUD with final audited numbers at the conclusion of the FY 2006 independent audit review.

*Discussion*

As a result of the decrease in projected sources, DCHA found it necessary to reduce Voucher payments. As can be gleaned from the table above, the resulting actual expenses reflect success in reaching the revised budget targets. In FY 2006, DCHA continued to work towards planning a management restructuring changes that will continue into 2007.

*Reserve Balance at End of FY '06 and Adequacy of Reserves*

DCHA had an estimated $34,775,000 in retained earnings in its reserves at the end of FY '06. DCHA's reserves are more than twice its monthly expenses.

## VI. Capital Planning

*Planned vs Actual Expenditures*

The table in Appendix B reflects planned and actual capital expenditures at each existing property during FY 2006, using all capital funding sources.

*Discussion*

DCHA has established a grand goal for its capital programs. After a comprehensive assessment of the physical needs of its portfolio and a realistic review of available resources, DCHA has placed each of its developments into one of three capital categories. The first category is for those sites that have already been targeted and funded for major revitalization. This includes the HOPE VI sites and other mixed finance sites throughout the city. The second category is for those sites that will be treated and brought to a 20 year viability during the bond funded, four year accelerated modernization program. The third category was established for those sites that due to their size, physical needs, and harsh social dynamics require substantial investment and potential redevelopment.

Accelerated Modernization Program

By borrowing funds to accelerate the modernization of DCHA properties, DCHA hopes to stop further deterioration of targeted properties and resulting increases in routine maintenance costs. Through bond proceeds received in FY 2005, DCHA has began an aggressive program at 39 properties to update/replace major systems in most of its developments and make other physical investments important to our clients.

As of the end of FY 2006, DCHA initiated or completed many renovation activities at 28 properties resulting in contracting approximately $52.4 million for various modernization projects as DCHA properties. The activities range retrofitting units for UFAS, replacement of boiler systems and removal and replacement of condensing roof tops. A list of activities and the payments made to date can be found in Appendix C.

For improved management of ongoing maintenance for the properties, DCHA has implemented a maintenance system, which includes (i) the incorporation of cameras, facilities devices, and fire alarm systems within one monitoring system that will allow a centralized monitoring of multiple senior buildings at once; (ii) the implementation and utilization of handhelds to conduct preventative maintenance on property boilers and chillers, and (iii) the implementation of 15 laptop computers to operate wirelessly throughout the city to allow project managers to manage and maintain current status of multiple projects simultaneously.

Revitalization Sites

Henson Ridge: As of September 2006, the first phase of the project, the construction of 124 rental units is complete and fully occupied. To date, 90 homeownership units have been constructed and sold. All homeownership units in Phase 1 are under contract and awaiting completion of construction and closing. Phase II has commenced with the construction of 42 rental units. All rental units will be completed by July 2007.

Capitol Gateway: Construction was completed on the 152 unit Capitol Gateway senior building in 2004. Transit Oriented development, or building higher density in proximity to a metro station, has made this a much more significant undertaking than originally envisioned. Over the past two years, a great deal of energy has gone into making the best use of this land given its location. Construction of the family units on the southeast portion of the site was substantially completed during 2006, with former residents beginning there return to the site.

Capper/Carrollsburg: As of September 2006, construction on the first of two senior buildings was near completion and being readied for occupancy. The first phase (Capper Senior I) is scheduled for delivery at the end of calendar year 2006. Construction of the second phase is underway with a scheduled delivery of late spring 2007. Demolition activity on the remainder of the site also continued.

Eastgate: Construction of the senior facility, Triangle View, was substantially completed during 2006.

UFAS Activity

DCHA is working ardently on the creation of UFAS units to meet the requirements of a voluntary compliance agreement with HUD and a court ordered mandate. In addition to the units already converted in DCHA conventional public housing sites, DCHA is aggressively constructing UFAS units at its various HOPE VI sites and other redevelopment sites where such conversions are possible. Additionally, DCHA issued a RFP offering project based Section 8 subsidy to owners in the private market willing to convert their units. The housing authority is also making significant progress in converting the common areas of various developments to a UFAS standard. The developments targeted are those that house the converted 326 units.

DCHA has also hired a new Housing Counselor within its ADA/504 Program who is responsible for specialized outreach to applicants needing the features of a UFAS unit.

## VII. Management Information for Owned/Managed Units

A. Vacancy Rates by Property at end of FY '06

| Property | # of Available Units FY '06 | # of Occupied Units FY '06 | Actual Adjusted Vacancy Rate FY '06 | Target Adjusted Vacancy Rate FY '06 |
|---|---|---|---|---|
| **DCHA – Rock Creek** | | | | |
| Colorado | 21 | 21 | 0% | 2% |
| Columbia Road | 23 | 23 | 0.00% | 2% |
| Fort Lincoln | 118 | 118 | 0.00% | 2% |
| Garfield Terrace | 268 | 264 | 1.49% | 2% |
| Greenleaf Gardens | 274 | 267 | 2.55% | 2% |
| Greenleaf Senior | 212 | 207 | 2.36% | 2% |
| Harvard Towers | 175 | 175 | 0.00% | 2% |
| James Apartments | 140 | 138 | 1.43% | 2% |
| James Creek Apartments | 235 | 231 | 1.70% | 2% |
| Judiciary House | 174 | 173 | 0.57% | 2% |
| Kelly Miller Apartments | 167 | 163 | 2.40% | 2% |
| LeDroit Apartments | 121 | 117 | 3.31% | 2% |
| Montana Terrace | 63 | 62 | 1.59% | 2% |
| Park Morton Apartments | 168 | 162 | 3.57% | 2% |
| Scattered Sites | 34 | 34 | 0.00% | 2% |
| Syphax Gardens | 167 | 164 | 1.80% | 2% |
| Langston Addition | 34 | 34 | 0.00% | 2% |
| Langston Terrace | 271 | 264 | 2.58% | 2% |
| **TOTAL** | **2,665** | **2,617** | **0.08%** | **2%** |

| Property | # of Available Units FY '06 | # of Occupied Units FY '06 | Actual Adjusted Vacancy Rate FY '06 | Target Adjusted Vacancy Rate FY '06 |
|---|---|---|---|---|
| **DCHA – Potomac** | | | | |
| Benning Terrace | 267 | 263 | 1.50% | 2% |
| Fort DuPont Addition | 16 | 16 | 0.00% | 2% |
| Fort DuPont Dwellings | 102 | 101 | 0.98% | 2% |
| Kenilworth Courts | 288 | 283 | 1.74% | 2% |
| Lincoln Heights | 424 | 414 | 2.36% | 2% |
| Parkside Addition | 42 | 41 | 2.38% | 2% |
| Richardson | 187 | 186 | 0.53% | 2% |
| Stoddert Terrace | 152 | 152 | 0.00% | 2% |
| Arthur Capper Senior | 65 | 65 | 0.00% | 2% |
| Barry Farm | 425 | 417 | 1.88% | 2% |
| Carroll Apartments | 60 | 58 | 3.33% | 2% |
| Elvans Road | 19 | 19 | 0.00% | 2% |
| Highland Addition/Highland Dwellings | 319 | 313 | 1.88% | 2% |
| Kentucky Courts | 115 | 113 | 1.74% | 2% |
| Knox Hill Senior | 122 | 117 | 4.10% | 2% |
| The Villager | 20 | 20 | 0.00% | 2% |
| Wade Apartments | 11 | 11 | 0.00% | 2% |
| Woodland | 227 | 218 | 3.96% | 2% |
| Scattered Sites | 12 | 12 | 0.00% | 2% |
| **TOTAL** | **2,873** | **2,819** | **0.08%** | **2%** |

| Privately Managed Properties | | | | |
|---|---|---|---|---|
| **Property** | **# of Available Units FY '06** | **# of Occupied Units FY '06** | **Actual Adjusted Vacancy Rate FY '06** | **Target Adjusted Vacancy Rate FY '06** |
| Clairidge | 281 | 281 | 0.00% | 2% |
| Edgewood | 89 | 85 | 4.49% | 2% |
| Horizon House | 92 | 92 | 0.00% | 2% |
| Regency House | 151 | 151 | 0.00% | 2% |
| Lincoln Road/Ontario | 19 | 19 | 0.00% | 2% |
| Sibley Plaza | 182 | 182 | 0.00% | 2% |
| Sursum Corda | 28 | 28 | 0.00% | 2% |
| Potomac Gardens | 332 | 332 | 0.00% | 2% |
| Henson Ridge | 68 | 67 | 1.47% | 2% |
| Hopkins Apts. | 153 | 139 | 9.15% | 2% |
| Wheeler Creek | 148 | 146 | 1.35% | 2% |
| **TOTAL** | **1,173** | **1,522** | **0.14%** | **2%** |

*Discussion*

DCHA has a low adjusted vacancy rate at all of it properties. None of the regions had an overall adjusted vacancy rate of even 1%. All three regions more than met their target vacancy rate of less than 2% as of September 30, 2006.

B. Rent Collections

**Rent Collections: Cash Collected compared to Rent Billed**

| | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
|---|---|---|---|---|---|---|---|---|
| Projected | 98% | 98% | 98% | 98% | | | | |
| Actual | 99% | 99% | 97% | 98% | | | | |

DCHA maintains a high percentage of cash collected compared to rent billed, with 98% collection rate.

C. Work Orders

**Work Orders: Days to Complete Routine Work Orders**

| | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
|---|---|---|---|---|---|---|---|---|
| Projected | 23 | 23 | 23 | 23 | | | | |
| Actual | 20 | 23 | 23 | 23 | | | | |

DCHA has tracked this measure according to the requirements of its MTW Agreement benchmark.

**Work Orders: %-age Emergency Work Orders completed within 24 hours**

| | | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
|---|---|---|---|---|---|---|---|---|---|
| Projected | | 100% | 100% | 100% | 100% | | | | |
| Actual | | 100% | 100% | 100% | 100% | | | | |

D. Inspections

**Units and Systems Inspected Annually**

| | | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
|---|---|---|---|---|---|---|---|---|---|
| Projected | | 100% | 100% | 100% | 100% | | | | |
| Actual | | 100% | 100% | 100% | 100% | | | | |

## VIII. Management Information for Leased Housing

A. Leasing Information

**Target vs Actual lease-ups at end of period**

| | | End of FY '03 | End of FY '04 | End of FY '05 | End of FY '06 | End of FY '07 | End of FY '08 | End of FY '09 | End of FY '10 |
|---|---|---|---|---|---|---|---|---|---|
| Projected | | 8680 | 9,300 | 9,643 | | | | | |
| Actual | | 9249 | 9,908 | 9,905 | | | | | |

*Rent Reasonableness*
DCHA performs rent reasonableness reviews for each new lease and request for rent increase using a comprehensive automated system and on-staff real estate analysts who maintain the district-wide database of comparable properties. DCHA HQS inspectors have been trained and tasked with gathering data, on site, during the initial, pre-lease-up inspections for the use of the real estate analysts in completing an accurate rent reasonableness determination for units newly entering the program. DCHA's inspection unit now schedules and conducts its HQS inspections electronically, which has improved the timing and scheduling of our inspections.

*Expanding Housing Opportunities*
DCHA has implemented Fair Market Rents based on the 50$^{th}$ percentile and established a high payment standard in order to expand housing opportunities for its voucher recipients. Each of theses past actions has served to expand housing opportunities for DCHA's low income families. New federal voucher allocation methodologies has not kept pace with actual costs; a departure from HUD's traditional method of funding the voucher program. As such, during FY 2006, DCHA continued to explore cost containment initiatives allowed by DCHA's MTW Agreement to sustain families currently in the program, and to allow for modest growth in the program.

*Discussion*
In the past five years DCHA's lease rate has increased consistently. The authority has modified and improved its rent reasonableness practices to be more efficient and has worked hard to increase the opportunities for voucher participants to live in non-poverty impacted areas. Given the success of an active and effective rent reasonableness effort, the success of efforts to increase lease-up and reduce poverty impaction has resulted in increased per voucher costs. .

B. Inspection Strategy

*Planned versus actual inspections*
DCHA schedules 100% of annual HQS inspections of occupied households. DCHA has met its goals of completing 100% of planned HQS Inspections for occupied units, 100%

of planned pre-contract inspections and 100% of the planned sample of HQS quality control inspections.

*HQS Enforcement*
DCHA requires that 100% of all HQS violations are repaired or the HAP contract is terminated.

## IX. Resident Programs

In FY 2006, DCHA continued to work and provide services in the four priority areas, including:

- Workforce Preparation;
- Family Enhancement;
- Children and Youth;
- Elderly and Disabled;

*Workforce Preparation/Self-Help*

During FY 2006, DCHA's Office of Resident Services implemented its Transitional Employment Program (TEP). In 2006, there were 117 TEP participants assigned to DCHA worksites. DCHA also entered into an agreement with DOES (D.C. Office of Employment Services) to offer current TEP participants in their search for permanent gainful employment.

DCHA also worked with the DC Fire and Emergency Medical Services Cadet Program in efforts to refer eligible DCHA public housing and HCV program participants opportunities to participant in the training.

*Family Enhancement*

In 2006, DCHA's ORS successfully submitted grant applications for Neighborhood Network and ROSS grants and was awarded $1.1million. DCHA implemented the ROSS grant and opened a Family Enhancement Center at its Lincoln Heights development. The Center is staffed by a Program Coordinator and its partner agencies, Marshall Heights and DayBreak Ministries. The staff and partners hosted a Parent Supporting Students day in an effort to promote the Center and to encourage families to participate in the programs offered at the Center. The programs include job training in the areas of emergency medical technicians and HVAC classes.

DCHA continued to work towards implementing the Neighborhood Networks Grant. In 2006, plans were underway for renovation and furnishing of the two selected sites where the Neighborhood Networks Centers will be housed, Garfield Terrace and Park Morton. Plans were also underway to establish advisory committees for both centers and hire two resident technicians to assist with the program's full implementation.

*Children and Youth*

ORS continued to provide youth focus services in 2006. For example, DCHA partnered with the District of Columbia Department of Youth Rehabilitation Services to assist youth associated with the juvenile justice system to develop and build life skills through work experience. DCHA also hosted its annual Do Your BEST Summer Youth Employment Program and hosted 100 youth. The youth were required to participate in Workforce Development Workshop where they were provided with job search and marketing skills and communications classes.

## IX. Other Information Required by HUD

| | |
|---|---|
| Form 038-0046 | Disclosure of Lobbying Activities |
| Form HUD 50071 | Certification of Payments to Influence Federal Transactions |

# PART II: CREATIVE LIVING SOLUTIONS INITIATIVES

**Overview**

Under the terms of DCHA's Moving to Work (MTW) agreement, DCHA has the authority to develop local regulations that better meet the needs of the 50,000 District of Columbia residents that the housing authority serves. During the past fiscal year, DCHA has worked with the residents of its properties, the participants in its HCVP voucher program, the landlords who house voucher recipients, the advocate community and other stakeholders to begin work on the initiatives listed in the FY 2006 Creative Living Solutions Plan (CLS). DCHA values this participatory approach in its policymaking, and takes very seriously the input of all of its stakeholders. As a result of this extensive exploratory process, some initiatives proposed last year have been implemented, some have been closed without implementation, and others will be continued in FY 2007. Of the thirteen initiatives proposed in the FY 2006 Creative Living Solutions Plan, implementation began or continued on five. DCHA's FY 2007 plan submitted to HUD earlier this year speaks to the continued implementation and exploration of eleven initiatives previously included in the FY 2006 plan. One FY 2006 initiative has been closed without implementation.

Initiatives Implemented:

| | |
|---|---|
| Initiative 1.7.05 | Security Deposit Guarantee Program |
| Initiative 3.5.05: | Streamlining Resident Community Service |
| Initiative 3.3.05 | Streamlined Subsidy-Only Protocol |
| Initiative 4.1.04 | DCHA Subsidiary to Act as Energy Services Company |
| Initiative 4.3.05 | Flexible Funding |

Initiative closed without implementation:

| | |
|---|---|
| Initiative 1.8.05 | Modifications to HCVP Inspections Scheduling |

Initiatives still that will be further implemented or explored that are included in the FY 2007 Plan are:

| | |
|---|---|
| Initiative 1.7.04 | Security Deposit Guarantee Program |
| Initiative 1.5.05 | Modifications to DCHA's Project-Based Voucher Program |
| Initiative:1.10.06 | Applicant Intake Site Designation |
| Initiative 2.1.04 | Simplified Certification and Multi-year Income Recertification |
| Initiative 3.3.05 | Streamlined Subsidy-Only Protocol |
| Initiative 3.4.05 | Supporting Grand families |
| Initiative 3.5.06 | Rent Simplification and Collections |
| Initiative 4.1.04 | DCHA Subsidiary to Act as Energy Services Company |
| Initiative 4.2.05 | Revolving Loan Fund for HCVP Landlords |
| Initiative 4.3.05 | Flexible Funding |
| Initiative 4.4.06 | Reformulation of HUD Forms |

This section of the report presents DCHA activities on the five initiatives where substantial implementation occurred during FY 2006. During the past reporting years, DCHA has advised HUD on those federal rules that have been modified and codified through the local District of Columbia rulemaking process described below. During the FY 2006 implementation year, no federal rules were modified.

During this program year, DCHA also decided to close without implementation initiative 1.8.05 "Modifications to HCVP Inspections Scheduling". The objective of the proposed initiative was to reduce the time and resources dedicated to annual inspections of the over 11,000 units in DCHA's tenant-based and project-based voucher programs. DCHA considered categorizing properties with HAP contracts according to risk, quality, and upkeep level, and then determine the frequency of inspections based on these categorizations. In 2006, DCHA invested into a more robust and efficient data collecting and information processing system for its public housing and voucher programs. It has been determined that use of this system will substantially streamline staff efforts dedicated to the inspection of units in the voucher program. Therefore, DCHA will not pursue this initiative as the intended goal will be achieved through different means.

## Overview of Local Regulatory Process and Implementation of Initiatives

Prior to starting the public rulemaking process DCHA consults with and obtains comments and input on any proposed rule changes or new rules from key stakeholders such as the DCHA Citywide Resident Advisory Board, and the HCVP Landlord Advisory Committee and Participant Advisory Committee, and the local housing advocate community. Once a draft rule has been prepared taking all views into account, it is presented to the appropriate committee(s) of the Board of Commissioners. The Board of Commissioners has four committees with defined responsibilities. These committees are:

- Development and Modernization;
- Operations;
- Finance; and
- Education

Once the appropriate Board committee has provided authorization to publish the proposed rule, it is published for 14 to 30 days in the DC Register by the government of the District of Columbia. Written comments are received and reviewed. Based on the comments and further discussion with stakeholders the proposed rule may or may not be amended. If it is significantly amended it is taken back before the appropriate Board committee(s) and with the committee(s) authorization republished for an additional notice and comment period. If there are no significant changes, the proposed rule is brought back to the committee(s) with the written comments. If the committee(s) approves the proposed rule it is placed on the Board of Commissioners public agenda for action after public testimony. The agenda is distributed to all of the Resident Council Presidents and reviewed with the Citywide Resident Advisory Board, and the HCVP Landlord Advisory

Committee and the Participant Advisory Committee. Prior to taking action at the Board meeting, the Board of Commissioners calls on staff for a public presentation of an analysis of the proposed rule and its potential impacts. The new rule or rule change is not in effect until the Board of Commissioners has adopted a resolution in a public meeting approving it, and final notice is published in the DC Municipal Register.

## Objective 1: Developing Enhanced Housing Opportunities

### Introduction

This chapter describes the CLS activities that the District of Columbia Housing Authority (DCHA) will be undertaking to develop enhanced housing opportunities for the low-income citizens of the District. DCHA has proposed initiatives that will both facilitate the production or preservation of affordable units and improve the quality of life at the affordable units on which it has some influence.

CLS Initiatives

### Initiative 1.7.05 Security Deposit Guarantee Program

DCHA has a large, successful Housing Choice Voucher program that has endured dramatic growth over the past several years, the impact of reduced federal assistance, and an extremely hot housing market. As the basic program was strengthened, DCHA sought to enhance aspects of the program to streamline administrative functions, reduce costs, and assist clients in achieving a successful tenancy.

The goal of this MTW initiative is to assist voucher participants who have difficulty securing a security deposit for an apartment. DCHA has explored the implementation of a security deposit guarantee program through which voucher recipients may subscribe for a monthly fee in lieu of a lump sum deposit to landlords. The initiative will require flexible use of funds to allow for potential payment on any guarantee where the recipient caused damage.

DCHA has been discussing this initiative with its Landlord Advisory Committee and during FY 2006 has negotiated a partnership with the city's Department of Human Services for a one-time financial contribution to this initiative. This financial contribution will assist DCHA with the startup costs associated with the implementation of this initiative. DHS's funds are from their FY 2007 budget and a memorandum of understanding between the two agencies will be finalized. DCHA intends to complete the design details of this initiative during FY 2007, but the identification and eminent receipt of these implementation funds was a substantial accomplishment.

## Objective 3: Achieve Effective Customer Support Services

In addition to achieving excellence in its property management and expanding housing opportunities for District of Columbia families, DCHA values effective resident services and resident empowerment.

Over the past year, DCHA has sponsored or facilitated a variety of empowerment activities, as outlined earlier in this report. DCHA continuously seeks to partner with other organizations and government agencies for the provision of services that meet the needs of our public housing residents and voucher participants.

Under this Objective, DCHA identifies and explores innovative approaches to resident services and resident empowerment. To the extent that DCHA needs regulatory relief to achieve either of these , it has created alternative local rules. During FY 2006, DCHA continued implementation of one very important initiative that was initiated during FY 2005 and made substantial progress with HUD in the negotiation of a second.

### Initiative 3.5.05: Streamlining Resident Community Service

In August of 2004, DCHA established its Neighbor-to-Neighbor program, which encouraged voluntary community services among its residents and provided a framework for DCHA to document these contributions. DCHA recognizes the value and magnitude of the truly voluntary service contributed by its residents for the welfare of their neighbors and the larger community.

During FY 2005, DCHA reported the creation of an innovative approach to the enactment of the required federal community service requirement. This local approach is designed to meet the statutory community service requirements while providing regulatory simplifications and administrative streamlining. It allows the focus to remain on providing support and assistance to residents looking for avenues to self-sufficiency. The regulations provide for all the exemptions from participation for residents allowed by statute and define an exemption from the community service requirement for participation in "work activities" that was referenced in the statute.

The goal of these regulations is to assist public housing residents in improving their economic and social well-being and to give residents a greater stake in their communities. The Neighbor to Neighbor Program allows residents who are not exempt from the community service requirement to use their required 8 hours of service in a self-sufficiency activity. This policy offers positive incentives to increase self-responsibility. Using data residents already report regarding income amount and sources, DCHA has automatically determined those individuals who are not exempt. During recertification, non-exempt individuals will be responsible for demonstrating their participation in a work activity.

During FY 2006, DCHA put into place the mechanisms necessary to implement this approach to community service. Through partnerships with public and private job training/placement entities, DCHA has secured slots for "non-exempt" residents. Through this approach, residents who choose to participate are receiving on the job training and life skill benefits while meeting the community service requirement. One example of this is a very successful partnership with the local Department of Employment Services on a Transitional Employment Program where interested residents are placed into paid temporary jobs, sometimes within DCHA, and are afforded the opportunity to make these jobs permanent. DOES provides funding to pay the residents. At the end of FY 2006, there were 28 residents participating in this expanding program.

**Initiative 3.3.05 Streamlined Subsidy-Only Protocol**

Over the past two fiscal years, DCHA has been working closely with HUD in the development of a new creative tool to expand affordable housing in the District of Columbia. Referred to as the OPERAting assistance for rental housing ("OPERA"), DCHA seeks to partner with private or public entities that intend on serving very low-income families in a portion of their existing or planned units within a rental property. Through the partnership, DCHA will provide public housing (ACC) subsidy on designated units to support the costs of operating a very low-income unit. DCHA seeks to develop with HUD a streamlined subsidy-only protocol that will reduce transaction time and costs in order to negotiate and finalize these partnerships quickly. A copy of the RFP can be found in Appendix A.

During FY 2006, DCHA held several discussions with HUD on the development of this protocol, and issued an RFP to solicit potential housing partners. Discussions with HUD have progressed favorably, and DCHA is in the process of structuring a deal for review and approval. DCHA is hopeful that the approval of this deal in FY 2007 will open the door to several other partnerships that will yield additional affordable housing for very needy District families.

## Objective 4: Organize Efficient Businesslike Operating Systems

This chapter outlines the initiatives that DCHA undertook in FY 2006 to target its resources where they are most needed and develop revenue sources to augment those provided by HUD and tenant rent.

### Initiative 4.1.04: DCHA Subsidiary to Act as Energy Services Company

Over the past two years, DCHA has proposed the implementation of an initiative where its wholly owned subsidiary, Construction Services Administration, LLC (CSA) will serve as an Energy Services Company (ESCo) and execute a comprehensive energy management strategy. The strategy will combine MTW flexibility and freedom from regulatory restraint with HUD's Operating Subsidy incentives at 24 CFR 990.107(e)(4) and (f)(1). DCHA expects to use HUD provisions allowing -- for the purposes of energy subsidy calculation -- a frozen base of consumption costs plus actual consumption costs savings to amortize private financing of a comprehensive DCHA energy management program. This initiative is coupled with DCHA's accelerated modernization program where $80 million in bond proceeds is being used to substantially modernize several of its developments to make them sustainable for the next 20 years. Work completed via this bond sponsored rehab effort will generate energy consumption savings; these savings, in turn, will be invested into additional modernization activities.

DCHA submitted its ESCo proposal to HUD at the start of FY 2006, and is awaiting HUD's response and approval. A copy of the proposal can be found in Appendix D

### Initiative 4.3.05: Flexible Funding

As proposed in the FY 2006 plan, and with the funding fungibility authority granted in DCHA's MTW Agreement, the housing authority used HCVP funding authority totaling $1,690,000 for operating costs associated with the program. Use of these funds for this purpose was particularly necessary during FY 2006 in order to cover a portion of the unanticipated national reduction in operating subsidy funds made by HUD during the middle of the fiscal year.

# CONCLUSION

In this third Moving to Work Annual Report, DCHA has presented the data and other information required under Attachment B of its MTW Agreement with HUD along with a report on the Initiatives proposed in the FY 2006 CLS Plan that were implemented.

During 2006, DCHA experienced some changes in key leadership positions. A new Board Chairman, Mr. Frank Smith, replaced Mr. Russell Simmons who led DCHA through five successful years. Another new commissioner, Mr. Gordon Cavanaugh, joined the Board, along with two new Resident Commissioners, Ms. Aquarius Vann-Ghasri and Mr. David Watson. The infusion of this new leadership, along with the election of a new Mayor in the District of Columbia, will stimulate new ideas and different approaches to achieving DCHA's mission. Furthermore, the changing dynamics in federal housing policy mandates that DCHA remain nimble in the implementation of its local housing program. Through MTW, DCHA has been able to respond ably to unforeseen circumstances and unanticipated opportunities. This flexibility is invaluable and is an important tool in DCHA's ability to sustain and expand affordable housing in one of the hottest housing markets in the country. During FY 2007, DCHA will continue to use this tool strategically to support the goals of its Strategic Plan and the needs of its clients.

# Part III: APPENDICES

## Appendix A: OPERAting Assistance Program—RFQ

**REQUEST FOR QUALIFICATIONS**
**OPERATING ASSISTANCE for RENTAL HOUSING PROGRAM**

## SECTION A – INTRODUCTION

### A.1 BACKGROUND

The District of Columbia Housing Authority ("DCHA") is dedicated to enhancing the quality of life in the District of Columbia (the "District") by providing and effectively managing affordable housing which is diverse, well maintained, and aesthetically pleasing for those whose circumstances prevent them from competing in the general marketplace. DCHA currently operates over 8,000 publicly owned rental units, and it also contracts for over 10,000 private units through its Housing Choice Voucher Program. Yet there is still a need for affordable housing in the District, which requires the DCHA to create and explore new strategies to more effectively and fully address the affordable housing needs in the District including the OPERAting assistance for rental housing ("OPERA") Program.

This program will provide an operating assistance subsidy for owners of residential rental units in the District that rent to households of low-income. The subsidy may also be used for housing for disabled and elderly persons, as well persons making a transition from homelessness, victims of domestic violence, or other needs for supportive living.

### A.2 SCOPE

DCHA is soliciting responses from owners or developers of rental property in the District The property may be in the predevelopment or infrastructure phase, or the units may be in service. Additionally, a portion of the units (no more than 30% in most cases) must be appropriate for rental to low income families who pay rent no greater than 30% of their annual income. Units identified for assistance ("Assisted Units") will be eligible for an annual operating subsidy equal to ninety-five (95%) percent of the maximum per unit subsidy (currently known as AEL) that DCHA receives from HUD, presently about $350,

less rents collected. This number may be also adjusted to reimburse the Owner for (1) a pro rata percentage of the common area utilities and (2) utilities paid on behalf of residents.

Respondents must meet the ranking criteria and make certain that their admission and operating procedures are or can be adapted to compliance with DCHA and HUD. The properties will also have the following requirements:

1. The property will be subject to a recorded regulatory agreement;

2. The subsidy will be paid monthly;

3. The contract term is 30 years, but Owner can end its participation in the program at any time by providing one year's notice to DCHA;

4. For the Assisted Units, some of the anticipated obligations will be for the Owner to:
   a. Accept income-eligible tenants in accordance with its own rental screening criteria and DCHA and HUD regulations;
   b. Maintain separate waiting list for Assisted Units and coordinate admissions to accessible units with DCHA;
   c. Deny admission to applicants with household members that have been evicted for drug-related criminal activity, convicted of drug-related criminal activity for manufacture or production of methamphetamine; and are sex offenders subject to lifetime registration requirements;
   d. Follow DCHA's standards regarding the maximum and minimum numbers of people who may occupy Assisted Units;
   e. Conduct regular reexamination of residents' income;
   f. Charge 30% of residents' income as rent; and
   g. Participate in DCHA's Neighbor-to-Neighbor Community Service Agreement;
   h. Comply with HUD environmental requirements;

5. On a property level, Owner is also expected to:
   a. Maintain the Property at acceptable maintenance standards for the term of the contract and undergo periodic inspections by DCHA;
   b. Comply with federal laws related to fair housing, Title VI, Age Discrimination, and Section 504 of the Rehabilitation Act;
   c. Provide, economic opportunities to Section 3 residents and businesses (per Section 3 of the Housing and Urban Development Act of 1968),
   d. Pay prevailing wages to all maintenance laborers and mechanics employed in the operation of the Assisted Units;
   e. Keep liability insurance in amounts required by DCHA;
   f. Pay Davis-Bacon wage rates during construction of properties that are constructed or developed in anticipation of the DCHA subsidy;

6. Respondents are strongly encouraged to attend a pre-submission conference or talk to the DCHA contracting officer. The first pre-proposal conference will be held at DCHA on Monday, September 26, 2005 at 10:00 am. Additional conferences will be scheduled as needed throughout the period that this RFQ is open.

## A.3 PROGRAM GOALS

DCHA has developed the OPERA Program to partner with private owners, including governmental and for- and non- profit entities, to increase the supply of affordable housing in the District of Columbia, particularly:

- in neighborhoods where affordable housing is not readily available;
- where subsidies are needed to reduce displacement as a result of gentrification;
- for low-income, disabled and/or elderly families requiring supported living environments and particularly meeting mobility accessibility (UFAS) standards;
- for special needs populations, such as persons with mental health needs or making a transition from homelessness, victims of domestic violence, or other needs for supportive living; and
- apartments serving families with three (3) to five (5) bedrooms.

## A.4 METHOD OF SOLICITATION

DCHA is requesting Responses from interested property owners. Each respondent's qualifications will be evaluated and scored separately by DCHA in accordance with the *Evaluation/Selection Process and Selection Criteria* described in Section E. DCHA will calculate the total score for each Statement of Qualification in accordance with the procedures described in Section E.4. DCHA reserves the right to negotiate with respondents who provide the best value and meet the minimum scoring criteria, as determined in the discretion of DCHA. DCHA may select respondents that are most advantageous and most qualified based on the evaluation criteria stated herein. DCHA reserves the right to negotiate with any and all parties that submit acceptable Responses. DCHA reserves the right to award without discussion and may make award to multiple respondents, either prior to or subsequent to the submission deadline. DCHA reserves the right to reject Responses for any reason, including geographic locations and building type, or to withdraw this solicitation for any reason prior to the selection of any Responses.

Responses will be accepted by DCHA during the period as outlined in Section D.2.2. Responses will be reviewed and evaluated according to the following timeline: (1) all Responses accepted by October 19, 2005, shall be evaluated and the respondent will be contacted by December 16, 2005; (2) Responses accepted between November 18, 2005 through February 17, 2006, shall be evaluated and the respondent will be contacted by March 17, 2006; (3) Responses accepted between March 17, 2006 through May 19, 2006, shall be evaluated and the respondent will be contacted by June 19, 2006; (4) Responses accepted between June 19, 2006 through August 18, 2006, shall be evaluated and the

respondent will be contacted by September 19, 2006; (5) all Responses accepted after August 18, until closing date of September 19, 2006, shall be evaluated and the respondent will be contacted by October 20, 2006. DCHA reserves the right to change this schedule at any time during the application and submission period.

## SECTION B – QUALIFICATIONS

### B.1 ELIGIBLE PROPERTIES

In order for a property to be eligible, it must be a residential rental property located in the District of Columbia and identify a number, by bedroom size, of units to be occupied by income eligible families with incomes no greater than eighty percent (80%) of AMI.

### B.2 AWARD AND USE OF SUBSIDY

DCHA will enter into an agreement with awardees to provide the operating subsidy through the OPERA Program for up to 30 years for the initial agreement, subject to annual congressional appropriation. Income eligible families will be required to pay thirty (30%) percent of their adjusted income, as defined by DCHA, to the owner directly for rent. The operating subsidy is reduced by the amount of rents charged to residents on a per unit basis. DCHA will reimburse a portion of the utilities paid by the Owner.

## SECTION C – POST SELECTION

### C.1 OPERATING ASSISTANCE REGULATORY AGREEMENT

After an award under this solicitation, DCHA will enter into a regulatory agreement ("RA") with the Owner governing the general repair, maintenance, and payment of subsidies. DCHA will make monthly operating assistance payments in accordance with the RA for each unit occupied by an eligible family.

## SECTION D - INSTRUCTIONS, CONDITIONS AND NOTICE TO RESPONDENTS

### D.1 GENERAL

The instructions below provide guidance for the preparation and submission of a response. They establish the requirements, format and content of responses so they are complete, contain all essential information and can easily be evaluated.

### D.2 SUBMISSION AND CONTENT OF RESPONSES

#### D.2.1 REQUESTS/INQUIRIES

The Request for Qualifications ("RFQ") Package will be available, at no cost, beginning on September 19, 2005. The RFQ Package may also be secured by regular mail by

submitting a written request to DCHA at the address below. DCHA reserves the right to review responses and make awards at any time until the closing date.

**District of Columbia Housing Authority**
**Contracts Administration**
**1133 North Capitol Street, NE., Suite 300**
**Washington, DC 20002-7599**
**Attn: Lisa Blacknall, Contracting Officer**

Inquiries concerning the solicitation and corrections, modifications and request for withdrawal of Responses shall be submitted in writing to the issuing office.

Answers to questions will be provided to all Respondents receiving a solicitation package, giving due regard to the proper protection of proprietary information.

**RESPONDENTS ARE INSTRUCTED SPECIFICALLY TO CONTACT ONLY THE CONTRACTS AND PROCUREMENT OFFICE IN CONNECTION WITH ANY ASPECT OF THIS RFQ PRIOR TO CONTRACT AWARD. RESPONSES AND ALL CORRESPONDENCE RELATING TO THIS RFQ MUST BE SUBMITTED TO THE ISSUING OFFICE.**

D.2.2 APPLICATION SUBMISSION DEADLINE

Responses shall be submitted in original and five (5) copies, prepared in the format and detail as outlined in Section D.2.3, below. Each Response shall be submitted in sealed envelopes marked "RFQ No.0033-2006, OPERA Program."

**Responses will be accepted after September 19, 2005 and until September 19, 2006. Submit all Responses to the address identified above.**

A pre-proposal conference will be held at DCHA on September 26, 2005. Those wishing to submit a response to this RFQ are encouraged to attend.

D.2.3 Responses shall be organized as follows:

Cover Page
EXHIBIT I – Table of Contents
EXHIBIT II - Statement of Qualification
  A. Owner's Qualifications
  B. Property's Qualifications
EXHIBIT III – Small, Minority-Owned and Women-Owned Business Participation
EXHIBIT IV – References
EXHIBIT V – Certifications

D.3 TECHNICAL RESPONSE

***The Response must include all of the items listed below and should be organized by the topics and submitted in the same order.***

1. **Cover Page**

   The cover page should identify the solicitation by its name, number and submission deadline date. It should also bear the Respondent's name, address, e-mail address, and telephone and fax numbers.

2. **Table of Contents**

   The table of contents should clearly identify the location of each section of the package submittal by section number or letter and page number. The sections should be identified by consecutive letters or numbers and the contents of each section shall be number separately with the section letter or number as a prefix to the page number (e.g. A-1, A-2, A-3).

3. **Contents**

   A. Owner's Qualifications

   Provide general information on the respondent's business entity including the following:

   - Contact person, title, telephone number, fax number and email address;
   - Résumés of key Team Members;
   - Overview of the Management Firm's experience in the overall management of rental properties including a descriptive property portfolio;
   - Statement of experience with managing, developing low income and/or supportive or subsidized housing and regulatory covenants;
   - Provide information in Schedule 1, as attached hereto.

   B. Property's Qualifications as evidenced by the following items:

   - Site control or ownership;
   - Site and unit floor plans that must include size and number of units, square footage of the units, the number of bedrooms, and the bedroom configuration;
   - The number, size, configuration, and square footage of any UFAS units;
   - Environmental Reports conducted;
   - Copy of Management Contract if any;
   - Copy of lease and leasing requirements;
   - Operating pro-forma (that should include rents, expenses, debt

payments, etc.);

- Requested subsidy commencement date;
- Information required in Schedule 1.

C. Small, Minority-Owned and Women-Owned Business Participation

Briefly describe the proposed participation of any small, minority-owned or women owned businesses in this engagement, if any. The description should indicate whether the firm(s) is small, minority-owned or women owned and whether it is the prime partner, a joint venture partner, an associated firm or a consultant. It should include an estimation of the percentage of the contract that may be attributable to that firm.

D. References

Please provide two business references by company contact name, address, and telephone number.

E. Certifications

All certifications, as outlined in Attachments A-F of this solicitation, shall be completed and submitted with the response to this RFQ.

## SECTION E – EVALUATION FACTORS FOR AWARD

### E.1 EVALUATION AND SELECTION PROCESS

DCHA will commence review of Responses at its discretion upon receipt of the same. Submissions will not be opened publicly. Submissions will be initially screened for completeness and responsiveness as they are received. To be determined responsive, the submission must include the following:

1. A Response packaged prepared and identified in accordance with the instruction in Section D.
2. A Debarment/Suspension Certification indicating that neither the owner nor management agent nor any individual, officer or employee of the owner or management agent is debarred, suspended, or otherwise prohibited from participation in government programs by any federal, state or local agency.

Submissions lacking these items will be deemed non-responsive and will not be considered further. DCHA reserves the right to award without discussion or to make multiple awards. DCHA reserves the right to review Responses and make awards at any time until a closing date.

## E.2 THRESHOLD SELECTION CRITERIA

The District of Columbia Housing Authority has determined that any unit determined to be eligible for a contract must meet the criteria listed below. Any property that does not meet these criteria will be rejected without further consideration in the competitive ranking process.

1. The property must be in a District of Columbia neighborhood.

2. The units must be already occupied or reasonably expected to be occupied by income eligible families or persons within thirty-six (36) months from the date of award under this solicitation.

## E.3 COMPLIANCE WITH RFQ REQUIREMENTS

All responses will be scored based on the evaluation criteria outlined below. The Procurement Officer will determine a competitive range based on the established criteria and point system. The Review Panel may consider unacceptable any response for which critical information is lacking or the submission represents a major deviation from the requirements of this RFQ. Minor omissions, such as incomplete references, may, at the sole option and discretion of the Review Panel, be corrected subsequent to the submission due date.

## E.4 EVALUATION FACTORS

**In addition to satisfactorily fulfilling the threshold criteria outlined in Section E.1 above, all responses must score a minimum of 70 points in order to be considered for award under this RFQ.** Submissions which receive fewer points will be rejected and may be modified for resubmission under this or a future RFQ. Submissions that satisfactorily comply with the criteria herein will be reviewed and award will be based on submissions deemed most responsive in meeting DCHA's stated goals.

**1. Owner's Statement of Qualifications**
**(Maximum Rating: 30 Points)**

Evidence of the firm's ability to perform the services, as indicated by:

* The respondent's overall demonstration of qualifications based on previous experience in the overall management of rental low-income housing;

* The respondent's capacity and/or experience of providing effective management of subsidized or other low income or supportive housing;

* The respondent's ability to manage the ongoing operation of the property through DCHA's review of the operating pro-forma; and/or

* The respondent's knowledge and experience with subsidized rental housing and the operating covenants required while receiving such subsidies.

2. **Property's Qualifications**
**(Maximum Rating: 30 Points)**

Evidence of the property's overall ability to comply the terms and conditions outlined in the public housing building standards identified in 24 CFR part 40 and 24 CFR part 8, subpart C; as indicated by:

* The number of units and bedroom size;

* Whether there are any UFAS units and the number of these units;

* The type of building and the number of wheelchair accessible paths if any;

* The environmental reports for the property, if any; and

* Pro-forma and/or current operating information such as rents, expense reports, and debt payments.

3. **Contribution to the goals of the OPERA Program (Maximum 40 Points)**
The Review Panel will consider the extent to which the proposed property will address the goals as set forth in Section A.3 of this RFQ. Properties that address more than one of the goals will be given greater consideration.

4. **Small, Minority-Owned and Women-Owned Business Participation**
**(Maximum Rating: 15 Points)**
Evidence that the firm is a minority-owned business and/or that the firm has included or plans to include small businesses, minority enterprises and/or women-owned enterprises in development or operation of the project.

F.1 Protest Procedures

PROTEST

Any party involved in a dispute with the District of Columbia Housing Authority (the Authority) related to a procurement decision that has unfavorably affected the aggrieved party is entitled to a resolution of the dispute in a timely manner and in accordance with applicable local or Federal law. The protestor, in all instances, must pursue a remedy through the

established administrative procedures of the Authority prior to pursuing protest with the Federal agency. Guidelines and procedures that must be followed are presented herein.

**DEFINITIONS**

**Contracting Officer.** The person within the Authority duly authorized by the governing body thereof to administer contracts for, and in the name of, the Authority.

**Executive Director.** The Executive Director of the District of Columbia Housing Authority.

**Federal Agency.** Unless otherwise defined, the United States Department of Housing and Urban Development (HUD).

**General Counsel.** The General Counsel of the District of Columbia Housing Authority.

**Protestor.** Any respondent to a solicitation made by the Authority who has submitted a bid, quotation, or proposal meeting all the material requirements of the solicitation, who has received an unfavorable decision concerning the results thereof, and who feels that said decision was reached in an unfair or biased manner.

**PROCEDURES**

1. Any protest against a solicitation must be received before the due date for receipt of bids or proposals, and any protest against the award of a contract must be received within ten calendar days of contract award by the Contracting Officer of the Authority, or the protest will not be considered, unless a different time period has been established in the contract, if applicable. In such cases the time period set forth in the contract prevails. The complaint must be in writing, and must identify the aggrieved party by name and address, state the nature and scope of the complaint, include costs, if any, being sought by the Protestor, and be specific as to the solicitation, bid, proposal or contract that gave rise to the protest or complaint.

2. The Contracting Officer, upon receipt of the formal protest or complaint, shall review the merits of the protest and render a decision, in writing, to the Protestor. The response shall state if the protest or complaint is eligible for consideration based in its timely submission, or state a finding of fact based on information provided by the Protestor and the Authority's knowledge of the circumstances, and include instructions for further action the Protestor may take if said decision is not satisfactory. The Contracting Officer must respond to the protest within fifteen (15)

days of its receipt, except where the response time is otherwise stipulated in a contract with the Protestor directly related to the disputed issues.

3. If the Contracting Officer does not respond to the formal protest within the allotted time, or the Protestor does not agree with the decision rendered, then the Protestor may submit a formal request to have the dispute resolved by the Executive Director. Such request must be in writing and made within ten (10) days of receipt of the decision rendered by the by the Contracting Officer, or within ten (10) days after the expiration of the response time allotted. The Executive Director, or designee, shall respond to protests submitted in a timely manner within ten (10) days of receipt of said protests, except where the response time is otherwise stipulated in a contract with the Protestor directly related to the disputed issues.

4. If the Executive Director, or designee, does not respond to a properly submitted protest within the allotted time, or the Protestor continues to disagree with the decision rendered, then the Protestor may submit a formal request to have the dispute settled by the appropriate field office of the Federal Agency. Such request must be in writing and made within ten (10) days of receipt of the decision rendered by the Executive Director. The field office of the Federal Agency will only review protest that meet one of the following criteria:

   (i)Violation of Federal law or regulations and the standards of section 85.36, Code of Federal Regulations, title 24 (24 CFR, Part 85.36). Violations of or local law will be under the jurisdiction of local authorities.

   (ii)Violation of the Authority's protest procedures delineated herein based on the failure of the Authority to review a complaint or protest.

5. All protests, except those directed to the Federal Agency, or local authorities, shall be addressed to the Contracts and Procurement Administration of the Authority. The address is as follows:

   District of Columbia Housing
   Authority Contracts and
   Procurement Administration 1133
   North Capitol Street, N.E. Room
   300 Washington, D.C. 20002-7599
   Attn: Contracting Officer

6. All protest directed to the field office of the Federal Agency shall be addressed to the following location:

   Public Housing Division

U.S. Department of Housing and Urban Development
Washington, D.C. Field Office, Region III
Union Center Plaza
820 First Street, N.E.
Washington, D.C.
20002-4205

7. The Authority shall, in all instances, promptly disclose information to the Federal agency related to protest or complaints. However, failure to promptly notify the Federal agency of such matters does not relieve the Protestor of the responsibility of complying with the administrative procedures presented herein.

## Appendix B: Benchmark Status Report

| DCHA MTW Benchmarks FY 2006 | | Year 3 (FY 2006) Accomplishments |
|---|---|---|
| Objective: **DEVELOP ENHANCED HOUSING OPPORTUNITIES** | | |
| Benchmark: Housing Choice Voucher | Number of vouchers in use on 9/30/06 | 9,905 vouchers in use |
| Benchmark: Public Housing Units | Public housing units leased on 9/30/06 | 7,032 occupied units |
| Benchmark: Homeownership Units | Cumulative number of public housing or HCVP homeownership units that have gone to closing | 315 homeownership closings |
| Benchmark: UFAS units | Cumulative number of UFAS units | 381 UFAS units created or converted |
| Objective: **SUSTAIN QAULITY PROPERTY MANAGEMENT** | | |
| Benchmark: Cash Collected/Rent Billed | For the Fiscal Year, tentant payments as the percentage of rent billed | 98% |
| Benchmark: Units & Systems Inspected | The percentage of major systesm and occupied units inspected by 9/30/06 | 100% |
| Benchmark: Routine Work Order Completion Time | For the Fiscal Year, the average number of days to complete rountine work orders | 23 |
| Benchmark: Emergency Work Order Completion Rate | For the Fiscal Year, the average number of hours required to close Emergency Work Orders | <24 |
| Benchmark: Adjusted Occupancy Rate | The ratio of Occupied public housing units to available units as of 9/30/06 | 99% |
| Objective: **ASSURE EFFECTIVE SUPPORT SERVICES** | | |
| Benchmark: Families Assisted in Self-Sufficiency Efforts | The cumulative number of families enrolled in or graduated from a DCHA sponsored self-sufficiency program, including HCVP and CSSP | 2,015 |
| Objective: **MAINTAIN BUSINESS-LIKE OPERATIING SYSTEMS** | | |
| Benchmark: Expandable Fund Balance in Operating Reserve | Funds from all sources available to be expended for unanticipated needs expressed in the number of months of average operating expense that could be covered by the reserves | >2 Months |
| Benchmark: File Accuracy | Percentage of an audited sample of public housing and HCVP lease-up and recertification files for fiscal year reviewed for caclculation of adjusted income and tenant payment/rent | 81% |
| Benchmark: Additional Non-PHA Funds Raised | | 3,336,113 |

# Appendix C: Capital Expenditures at Existing Properties

# DISTRICT OF COLUMBIA HOUSING AUTHORITY
## DEVELOPMENT and MODERNIZATION ADMINISTRATION
## CURRENT GRANTS: CAPITAL FUND PROGRAMS REPORT
(as of 09/30/06)

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| **Fort Dupont Dwellings*** | | **Built 1940, Renovation is Underway, Modernized N.A. (200 Units Demolished in 1995)** | | |
| DC1-01 | BONDS | UFAS common space design | 18,300.00 | 18,300.00 |
| **DC1-01** | **Fort Dupont Dwellings Subtotal** | | **18,300.00** | **18,300.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Ellen Wilson Dwellings*** | | **(134 Units Demolished in 1996), Coop.** | | |
| DC1-02 | CFP | | | |
| **DC1-02** | **Ellen Wilson Dwellings Subtotal** | | - | - |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***James Creek*** | | **Modernized 1982** | | |
| DC1-03 | CFP501-02 | UFAS modification of a unit | 36,888.00 | 36,888.00 |
| DC1-03 | CFP501-03 | Order a/c parts for emergency a/c repair. Roof replacement/repair over 6 units. Emergency installation of 5 furnaces, gas leak & heating system cleaning/repair | 60,624.00 | 60,624.00 |
| DC1-03 | CFP501-04 | Roof replacement, Phase III | - | - |
| DC1-03 | ADA-38FUND | New concrete ramp to Resident Council Office, remove existing ramp & provide concrete stairs to alley. Modify existing trash shed & install handrails to existing ramp | 11,841.00 | 11,841.00 |
| DC1-03 | ADA-38FUND | Additional UFAS modifications at common areas | 3,355.00 | 3,355.00 |
| DC1-03 | BONDS | Renovation of a fire damaged unit | 22,983.00 | 22,983.00 |
| DC1-03 | BONDS | UFAS common space, Mgt & RCouncil Office modifications | 142,879.00 | - |
| DC1-03 | BONDS | Renovation of Vacant units & other mod. Replace shingle roof, Phase II & III | 583,245.00 | 583,245.00 |
| DC1-03 | CFP501-05 | Emergency furnace & 2 boilers repair | 1,767.00 | 1,767.00 |
| DC1-03 | CFP501-05 | Roof replacement, Phase III. Satellite dishes installation | 11,520.00 | 11,520.00 |
| **DC1-03** | **James Creek Subtotal** | | **875,102.00** | **732,223.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Frederick Douglass Dwellings* 0 Units, Family, Townhouse, 2001 Stanton Tr, SE, Ward 8, Anacostia Region, Built** | | | | |
| **DC1-04** | **Frederick Douglass Dwellings Subtotal** | | | |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Carrollsburg Dwellings*** | | **1941, Modernized 1991** | | |
| DC1-07 | CFP | | | |
| **DC1-07** | **Carrollsburg Dwellings Subtotal** | | - | - |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Kelly Miller*** | | **Built 1941, Modernized N.A.** | | |
| DC1-08 | CFP501-03 | Emergency repair/clean tank enclosure @10,000 gal. undeground storage tank & order of parts for heating repairs. Primary underground elec svce incl. meters bank new power transformer. | 150,182.00 | 52,320.00 |
| DC1-08 | BONDS | A&E for Main elec svce. Design for boiler rooms. Design drawings for Community Room. Comp renovation design & plan | 139,034.00 | 132,336.00 |
| DC1-08 | BONDS | Renovation of a fire damaged unit | 38,720.00 | 38,720.00 |
| DC1-08 | BONDS | Hazmat abatement in boiler rooms & basement | 57,882.00 | 57,882.00 |
| DC1-08 | BONDS | 3 boiler rooms upgrade. Renovation of ADA units, critical & other mod | 304,067.00 | 37,800.00 |
| **DC1-08** | **Kelly Miller Subtotal** | | **689,885.00** | **319,058.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Barry Farms Dwellings*** | | **1943, Modernized 1990** | | |
| DC1-09 | CFP501-04 | Air combustion, Phase IV. Emergency a/c repair | 2,487.00 | 2,487.00 |
| DC1-09 | ADA-38FUND | Install concrete sidewalks & ADA ramp. UFAS bathrooms renovations @Mgt Office & Community Bldg | 112,098.00 | 52,247.00 |
| DC1-09 | BONDS | UFAS design of common space | 42,311.00 | 42,311.00 |
| DC1-09 | CFP501-05 | Emergency 2 furnaces repair | 1,220.00 | 1,220.00 |
| **DC1-09** | **Barry Farms Dwellings Subtotal** | | **158,116.00** | **98,265.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Lincoln Heights*** | | **Built 1945, Modernized 1987** | | |
| DC1-13 | CFP501-03 | Roof, fascia & soffit replacement, Phase II. Expansion of scope to renovate main office & lavatory room incl. ADA compliance. Exterior upgrade, Phase I | 68,765.00 | 68,765.00 |
| DC1-13 | CFP501-04 | Roof replacement, Phase II, air combustion. 4 Emergency BTU furnaces installations | 8,165.00 | 8,165.00 |
| DC1-13 | CFP501-04 | CCTV system installation | 7,235.00 | 7,235.00 |
| DC1-13 | CFP501-04 | 4 Vacant units renovations | 197,617.00 | 138,555.00 |
| DC1-13 | ADA-38FUND | Community Center UFAS upgrade | 29,036.00 | 11,700.00 |
| DC1-13 | BONDS | UFAS design to repair fire damaged units | 47,260.00 | 47,260.00 |
| DC1-13 | BONDS | Renovation of 6 fire damaged units. Contract reduction | 211,649.00 | 211,649.00 |
| DC1-13 | BONDS | Fire alarm upgrade | 32,604.00 | 32,604.00 |
| DC1-13 | BONDS | Community Center renovations | 95,066.00 | 69,930.00 |
| DC1-13 | CFP501-05 | Emergency install 5Ton a/h unit & boiler repair | 4,569.00 | 4,569.00 |
| **DC1-13** | **Lincoln Heights Subtotal** | | **701,966.00** | **600,432.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Stanton Dwellings*** | | **1952, Modernized 1992, Sewer only (348 Units Demolished in 2003)** | | |
| DC1-14 | CFP | | | |
| **DC1-14** | **Stanton Dwelling Subtotal** | | - | - |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Parkside Addition*** | | **Modernized 1992 & 1999 (Phases 1, 3 & 4; Phase 2 in 1999), Resident Mgt.** | | |
| DC1-15 | BONDS | Renovation of ADA, fire damaged units, critical & other mod | - | - |
| **DC1-15** | **Parkside Addition Subtotal** | | - | - |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Highland Addition*** | | **Built 1954, Modernized N.A. (128 units Demolished in 2000)** | | |
| DC1-16 | RHF501-03 | Construciton & Revitalization of approx. 10 PH units | 1,770,409.00 | 2,630.00 |

| | | | | |
|---|---|---|---|---|
| DC1-16 | CFP501-04 | Emergency removal of existing meters & installation of new meters. Roof replacement | 2,095.00 | 2,095.00 |
| DC1-16 | BONDS | UFAS design to repair fire damaged units. Tech assistance for Green Bldg Project. UFAS design for common space | 54,352.00 | 8,077.00 |
| DC1-16 | BONDS | Renovation of a fire damaged unit. Contract reduction | 82,619.00 | 82,619.00 |
| DC1-16 | BONDS | Roof replacement. Condon Terrace roof replacement. Canopy replacements, entire property. Electrical upgrade. Critical & other mod | 1,349,922.00 | 674,530.00 |
| DC1-16 | CFP501-05 | Emergency boiler repair | 6,956.00 | 6,956.00 |
| **DC1-16** | **Highland Addition Subtotal** | | **3,266,353.00** | **776,907.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Richardson Dwelling*** | | **Built 1953 & 1964, Modernized 1988** | | |
| DC1-17 | CFP501-04 | Emergency hw heater replacement. Roof replacement | 7,226.00 | 7,226.00 |
| DC1-17 | BONDS | UFAS design for common space | 61,036.00 | - |
| DC1-17 | BONDS | UFAS upgrades for common space | 109,537.00 | 11,447.00 |
| **DC1-17** | **Richardson Dwelling Subtotal** | | **177,799.00** | **18,673.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***East Capitol Dwellings*** | | **Modernized N.A. (180 Units Demolished in 2000 & 397 Units Demolished in 2003)** | | |
| DC1-18 | CFP501-04 | Revitalization & construction of Capitol Gateway Estates, HOPE VI, Rental Family | 1,000,000.00 | 596,197.00 |
| **DC1-18** | **East Capitol Dwellings Subtotal** | | **1,000,000.00** | **596,197.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Kenilworth Courts*** | | **Built 1959, Modernized 1992 & 1999 (Phases 1, 2 & 4; Phase 2 in 1999), Resident Mgt.** | | |
| DC1-19 | CFP501-04 | Mechanical & electrical systems upgrade. Emergency 2 hot water heaters installation & a/c repair. Emergency 2 boilers replacement | 25,053.00 | 25,053.00 |
| DC1-19 | BONDS | Roof replacement - contract reduction. Roof replacement at 20 bldgs | 609,061.00 | 543,552.00 |

| | | | | |
|---|---|---|---|---|
| DC1-19 | BONDS | Boilers & water heater replacements, 10 boiler rooms. Emergency replacement of pulse boilers & water makers in 16 mech rooms | 1,129,726.00 | 823,967.00 |
| DC1-19 | BONDS | Common area UFAS upgrade | 626,110.00 | - |
| DC1-19 | CFP501-05 | Emergency install 2 HW heaters & boiler repair | 8,320.00 | 8,320.00 |
| **DC1-19** | **Kenilworth Courts Subtotal** | | **2,398,270.00** | **1,400,892.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Arthur Capper*** | | **SE, Ward 6, Anacostia Region, Built 1958, Modernized 1989 (1011 7th St, Senior Bldg), (206** | | |
| DC1-20s | CFP501-04 | Emergency a fiberglass cell in cooling tower replacement | 11,254.00 | 11,254.00 |
| **DC1-20** | **Arthur Capper Subtotal** | | **11,254.00** | **11,254.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Greenleaf Gardens*** | | **201 N St, SW, Ward 2, Rock Creek Region, Built 1959, Modernized 1989 (Senior Bldg),** | | |
| DC1-21 | ADA-38FUND | Additional modification at UFAS unit. Selective modifications at 8 UFAS & 2 occupied units. UFAS renovations of 12 units. Renovation of 5 UFAS units. Install UFAS stair chair lift at family townhouse, 231 L St | 604,558.00 | 604,558.00 |
| DC1-21s | ADA-38FUND | ADA common areas renovations | - | - |
| DC1-21 | BONDS | Design & software installation for CADGRAPHICS remote monitoring system. Add work for Bldg Log/Prevent Maint Project | 123,939.00 | 112,839.00 |
| DC1-21 | BONDS | Roof replacement at Sr Bldg. 51 storm doors replacement. Balcony renovations. Remote monitoring equipment installation. Renovation of ADA, vacant units, critical & other mod | 2,010,104.00 | 492,009.00 |
| DC1-21 | CFP501-05 | Emergency H&A/C unit & furnace repair | 4,272.00 | 4,272.00 |
| **DC1-21** | **Greenleaf Gardens Subtotal** | | **2,742,873.00** | **1,213,678.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Benning Terrace*** | | **Modernized 1988** | | |

| | | | | |
|---|---|---|---|---|
| DC1-22 | CFP501-03 | Repair a/c unit. Roof repair/replacement over a burnt unit. Roof replacement. Emergency replacement of 4 hot water heaters & 5 furnaces | 68,361.00 | 68,361.00 |
| DC1-22 | CFP501-04 | Renovation of 6 Vacant units | 270,934.00 | 262,606.00 |
| DC1-22 | BONDS | ADA ramp construction. UFAS ramps construction | 79,211.00 | 9,529.00 |
| DC1-22 | BONDS | Renovation of 9 Vacant Units. Renovation of 4 UFAS & 3 Standard Units. Asbestos abatement in 2 UFAS Units. Renovation of 7 fire damaged units | 1,180,604.00 | 1,177,503.00 |
| DC1-22 | BONDS | Roof replacement, critical & other mod. Roof replacement | 172,630.00 | 171,130.00 |
| DC1-22 | CFP501-05 | Emergency 2 furnaces repair | 1,665.00 | 1,665.00 |
| **DC1-22** | **Benning Terrace Subtotal** | | **1,773,405.00** | **1,690,794.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Stoddert Terrace*** | | **Built 1960, 1999 Renovation & 2002 Site Upgrade, (2 Units Demolished in 1997 & 40 Units** | | |
| **DC1-23-** | **Stoddert Terrace Subtotal** | | - | - |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Syphax Gardens*** | | **Modernized N.A.** | | |
| DC1-24 | BONDS | Misc UFAS renovations of common space. Maint Office renovations. Critical & other mod | 379,467.00 | 192,026.00 |
| DC1-24 | CFP501-05 | Emergency replacement of bearing assembly & impeller of boiler | 2,096.00 | 2,096.00 |
| **DC1-24** | **Syphax Gardens Subtotal** | | **381,563.00** | **194,122.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Langston Terrace*** | | **Modernized N.A.** | | |
| DC1-25 | CFP501-04 | Emergency heat boiler & 4 DCHA provided boilers replacement. Roof replacement, Phase II | 26,924.00 | 26,924.00 |
| DC1-25 | ADA-38FUND | ADA common areas renovations | 38,964.00 | 33,268.00 |
| DC1-25 | BONDS | Renovation of 4 fire damaged units | 136,708.00 | 136,708.00 |
| DC1-25 | BONDS | Boiler rooms equipment replacement. 5 boiler rooms equipment replacement | 1,439,618.00 | 493,741.00 |
| DC1-25 | CFP501-05 | Emergency 2 boilers repairs | 6,372.00 | 6,372.00 |

| | | | | |
|---|---|---|---|---|
| **DC1-25** | **Langston Terrace Subtotal** | | **1,648,586.00** | **697,013.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Sibley Plaza*** | | **Ward 2, Rock Creek Region, Built 1968, 1999 Renovation, Modernized N.A., Pvt Mgt.** | | |
| DC1-29 | CFP501-04 | Roof replacement, North side/Penthouse. Common area renovations & UFAS upgrade | 312,128.00 | 249,250.00 |
| DC1-29 | CFP501-04 | Emergency boiler repair | 74,436.00 | 74,436.00 |
| DC1-29 | BONDS | Roof replacement, South side | 293,069.00 | 261,711.00 |
| DC1-29 | BONDS | Emergency 150 ton chiller replacement. Fan coil & risers replacement. Boiler replacement. Oil tank removal | 1,976,797.00 | 292,368.00 |
| DC1-29 | BONDS | Balconies, trash room doors & windows treatment. Common area renovations & UFAS upgrade. Laundry room renovations | 1,580,134.00 | 331,228.00 |
| DC1-29 | CFP501-05 | Emergency chiller repair | 2,219.00 | 2,219.00 |
| **DC1-29** | **Sibley Plaza Subtotal** | | **4,238,783.00** | **1,211,212.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Hopkins Apartments*** | | **1960, 1999 Renovation, Modernized N.A., Pvt Mgt.** | | |
| DC1-30 | ADA-38FUND | Additional work at 5 UFAS units | 35,938.00 | 35,938.00 |
| **DC1-30** | **Hopkins Apartments Subtotal** | | **35,938.00** | **35,938.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Sheridan Terrace*** | | **Built 1960 (183 Units Demolished in 1997)** | | |
| DC1-31 | CFP | | | |
| **DC1-31** | **Sheridan Terrace Subtotal** | | **-** | **-** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Park Morton*** | | **Modernized N.A.** | | |
| DC1-34 | BONDS | Computer lab renovations. UFAS common space renovations. Renovation of ADA, vacant units, critical & other mod | 109,748.00 | 38,242.00 |
| DC1-34 | CFP501-05 | Emergency installation of sheet metal & insulation of boiler jackets | 680.00 | 680.00 |
| DC1-34 | CFP501-06 | Security site lighting | - | - |
| **DC1-34** | **Park Morton Subtotal** | | **110,428.00** | **38,922.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Greenleaf Addition*** | | **Modernized N.A.** | | |
| DC1-35 | CFP501-04 | Emergency dhw svce & recirculating line in the crawl space | 22,888.00 | 22,888.00 |
| **DC1-35** | **Greenleaf Addition Subtotal** | | **22,888.00** | **22,888.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Woodland Terrace*** | | **Built 1964, Renovation is Underway, Modernized N.A.** | | |
| DC1-36a | CFP501-04 | Emergency hw heater replacement. Boiler room upgrade | 9,997.00 | 9,997.00 |
| DC1-36a | BONDS | A&E electrical design for CAD | 39,114.00 | 35,203.00 |
| DC1-36a | CFP501-05 | Emergency installation of OS&Y valves. Boiler room upgrade | 2,465.00 | 2,465.00 |
| DC1-36a | CFP501-06 | Boiler room upgrade | - | - |
| **DC1-36a** | **Woodland Terrace Subtotal** | | **51,576.00** | **47,665.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Kentucky Courts*** | | **Modernized N.A. (45 Units Demolished in 2002)** | | |
| DC1-36b | BONDS | Roof replacement. Critical & other mod | 573,545.00 | 513,000.00 |
| DC1-36b | BONDS | Fan coil units & risers replacement | 951,032.00 | 90,000.00 |
| DC1-36b | BONDS | UFAS common space renovations | 180,627.00 | 78,279.00 |
| **DC1-36b** | **Kentucky Courts Subtotal** | | **1,705,204.00** | **681,279.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Carroll Apartments*** | | **(Phase 1 Completed in 1999)** | | |
| DC1-36c | BONDS | Emergency 45 ton chiller replacement. Fan coil units replacement. Critical & other mod | 418,375.00 | 117,930.00 |
| **DC1-36c** | **Carroll Apartments Subtotal** | | **418,375.00** | **117,930.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Garfield Terrace*** | | **Rock Creek Region, Built 1965, Renovation is Underway, Modernized N.A.** | | |
| DC1-37 | BONDS | Investigation of retaining wall failure & test borings | 23,400.00 | 3,400.00 |

| | | | | |
|---|---|---|---|---|
| DC1-37 | BONDS | Mech room upgrade: replace Wheaters, boilers & piping. Fan coils & risers replacement. Renovation of ADA units, critical & other mod | 1,509,954.00 | 86,840.00 |
| **DC1-37** | **Garfield Terrace Subtotal** | | **1,533,354.00** | **90,240.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Eastgate Gardens*** | | **Demolished in 1998 & 16 Units Demolished in 2002)** | | |
| DC1-38 | RHF501-02 | Development of Sr.Bldg on the Stoddert site, approx. 75 PH units | 3,289,637.00 | 3,289,637.00 |
| DC1-38 | RHF501-03 | Development of Sr.Bldg on the Stoddert site, approx. 75 PH units | 237,040.00 | 237,040.00 |
| DC1-38 | RHF501-04 | Acquisiton of 30 units at Oxford Manor | 3,572,123.00 | 2,040,677.00 |
| **DC1-38** | **Eastgate Gardens Subtotal** | | **7,098,800.00** | **5,567,354.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***LeDroit Apartments*** | | **Creek Region, Built 1965, Modernized N.A.** | | |
| DC1-39a | CFP501-02 | UFAS renovation of 3 units. HRGM LITIGATION. Fire alarm system modifications, UFAS requirement | 13,825.00 | 13,825.00 |
| DC1-39a | BONDS | A&E for UFAS common space & comprehensive renovations | 37,965.00 | 37,743.00 |
| DC1-39a | BONDS | Fan coil units replacement & plumbing upgrade. Mechanical equipment replacement | 908,207.00 | 637,300.00 |
| DC1-39a | BONDS | Hazmat abatement in boiler rooms | 37,176.00 | 37,176.00 |
| **DC1-39a** | **LeDroit Apartments Subtotal** | | **997,173.00** | **726,044.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Greenleaf Extension*** | | **Modernized N.A.** | | |
| DC1-39b | CFP | | | |
| **DC1-39b** | **Greenleaf Extension Subtotal** | | - | - |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Langston Addition*** | | **Modernized N.A.** | | |
| **DC1-40** | **Langston Addition Subtotal** | | - | - |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| *Scattered Sites-Group 1* | | Demo/Dispo,1999 through 2001) | | |
| DC1-41 | CFP | | | |
| **DC1-41** | **Scattered Sites-Group 1 Subtotal** | | - | - |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| *Potomac Gardens* | | Region, Built 1968, Modernized 1992 (Rebound), Renovated in 2003, Private Mgt | | |
| DC1-43 | CFP501-04 | Emergency dhw heating system replacement | 15,120.00 | 15,120.00 |
| DC1-43 | BONDS | UFAS design | 59,697.00 | 59,697.00 |
| DC1-43 | BONDS | 3 dhw boilers, 2 hw heaters & associated piping replacement. Critical & other mod | 117,666.00 | 117,666.00 |
| **DC1-43** | **Potamac Gardens Subtotal** | | **192,483.00** | **192,483.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| *Montana Terrace* | | Region, Built 1968, Renovated in 2003, Modernized N.A. (52 Units Demolished in 1999, 38 | | |
| DC1-44 | CFP501-02 | Additional work to rehab. 11 Vacant Units | 33,855.00 | 33,855.00 |
| DC1-44 | BONDS | UFAS design | 50,094.00 | 50,094.00 |
| DC1-44 | BONDS | Site work at Bldg A-5. Additional site work | 171,853.00 | 171,853.00 |
| DC1-44 | BONDS | Renovation of 12 standard units at Bldg A-5. Competion of Bldg A-5 renovations | 148,905.00 | 148,905.00 |
| DC1-44 | BONDS | Fire alarm system replacement at Bldg A-5 | 100,000.00 | 100,000.00 |
| DC1-44 | CFP501-05 | Emergency boiler repair | 306.00 | 306.00 |
| **DC1-44** | **Montana Terrace Subtotal** | | **505,013.00** | **505,013.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| *Edgewood Terrace* | | Creek Region, Built 1973, Redev 2003, (42 Units Demo in 2002, 292 Units Converted into 200, | | |
| DC1-46 | CFP | | | |
| **DC1-46** | **Edgewood Terrace Subtotal** | | - | - |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| *Sursum Corda* | | Built 1968, Renovation is Underway, Modernized N.A., Private Mgt | | |
| DC1-50 | BONDS | Other mod | - | - |
| **DC1-50** | **Sursum Corda Subtotal** | | - | - |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Highland Dwellings*** | | **1942, Modernized 1990 (4 Units Converted into Mgt Offices)** | | |
| DC1-53 | CFP501-04 | 3 Emergency BTU furnaces installations & heating system clean/repair. Order parts for heating repairs. Emergency boiler controls replacement. Emergency meter stack replacement | 22,841.00 | 22,841.00 |
| DC1-53 | CFP501-04 | Completion of 5 UFAS units renovations | 69,313.00 | 69,313.00 |
| DC1-53 | BONDS | Roof replacement. Canopy replacements, entire property. Renovation of ADA units, critical & other mod | 1,299,692.00 | 900,645.00 |
| DC1-53 | CFP501-05 | Sewer system upgrade, erosion control, security site lighting | - | - |
| DC1-53 | CFP501-05 | Emergency boiler & furnace repair | 780.00 | 780.00 |
| **DC1-53** | **Highland Dwellings Subtotal** | | **1,392,626.00** | **993,579.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Fort Dupont Addition*** | | **Rehabilitated in 1998 (37 Units Demolished in 1997, fire damaged, 31 Units Demolished in** | | |
| DC1-57 | BONDS | Convectors & entry door replacement. Critical & other mod | 107,684.00 | 87,916.00 |
| **DC1-57** | **Fort Dupont Addition Subtotal** | | **107,684.00** | **87,916.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Scattered Sites-Group 2*** | | **Demo/Dispo, 1999 through 2004)** | | |
| DC1-58 | CFP501-03 | Additional renovation work: replacement of windows @1851 Lamont St, NW | 4,471.00 | 4,471.00 |
| **DC1-58** | **Scattered Sites-Group 2 Subtotal** | | **4,471.00** | **4,471.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Wade Apartments*** | | **Modernized 1990** | | |
| DC1-58 | BONDS | Soil erosion control & fencing | 40,000.00 | 40,000.00 |
| DC1-58 | BONDS | Renovation of 12 standard units | 40,000.00 | 40,000.00 |
| DC1-58 | BONDS | Security improvements | 13,935.00 | 13,935.00 |

| | | | | |
|---|---|---|---|---|
| DC1-58 | BONDS | Renovation of mech, plumbing, common areas, roof & windows. Renovation of ADA units, critical & other mod | 144,800.00 | 100,514.00 |
| **DC1-58** | **Wade Apartments Subtotal** | | **238,735.00** | **194,449.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Claridge Towers*** | | **Modernization is Underway, Private Mgt** | | |
| DC1-60 | CFP501-04 | Relocation of residents | 1,891.00 | 1,891.00 |
| DC1-60 | ADA-38FUND | ADA common areas renovations | 205,281.00 | 89,744.00 |
| DC1-60 | BONDS | UFAS design of common space. Tech assistance for Green Bldg Project. Chiller & colling tower replacement design. Hazmat testing | 52,205.00 | 45,067.00 |
| DC1-60 | BONDS | Landscaping | 44,698.00 | 44,698.00 |
| DC1-60 | BONDS | VCT mastic abatement | 35,119.00 | - |
| DC1-60 | BONDS | Renovation of front wall, Phase V&VI. Windows & sliding doors replacement. Common space renovations. Additional structural work | 1,551,190.00 | 650,351.00 |
| **DC1-60** | **Claridge Towers Subtotal** | | **1,890,384.00** | **831,751.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Knox Hill*** | | **Modernized N.A.** | | |
| DC1-61 | BONDS | UFAS A&E for common areas | 56,889.00 | 56,889.00 |
| DC1-61 | BONDS | Site improvements | 154,709.00 | 87,578.00 |
| DC1-61 | BONDS | Replacement of lobby heat pump. Elec & mech upgrades. Renovation of ADA units & other mod | 482,617.00 | 403,970.00 |
| DC1-61 | BONDS | Common space renovations | 401,671.00 | 28,935.00 |
| **DC1-61** | **Knox Hill Subtotal** | | **1,095,886.00** | **577,372.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Horizon House*** | | **Modernized N.A., Private Mgt** | | |
| DC1-62 | ADA-38FUND | UFAS renovations & remodeling of 9 efficiancy units. Fire alarm relocation & programming for 9 UFAS units. Complete renovation & remodeling of 5 UFAS units. Latent conditions for 5 UFAS units | 506,393.00 | 506,393.00 |

| | | | | |
|---|---|---|---|---|
| DC1-62 | ADA-38FUND | ADA common areas renovations | - | - |
| DC1-62 | BONDS | Window replacements. Roof replacements | 1,059,632.00 | 11,174.00 |
| DC1-62 | BONDS | UFAS common space upgrade. Remote monitoring equipment installation | 172,075.00 | 13,210.00 |
| DC1-62 | BONDS | Fan coil units & risers replacement. Cooling tower replacement. Electrical upgrades. Fire alarm system upgrade. Oil tank removal. Renovation of ADA, vacant units, critical & other mod | 1,209,876.00 | 86,812.00 |
| **DC1-62** | **Horizon House Subtotal** | | **2,947,976.00** | **617,589.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Fort Lincoln*** | | **1971, Modernized N.A.** | | |
| DC1-64 | BONDS | UFAS design fees. A&E design for site improvements. Soil survey, tests, comments of oil tank existance | 77,617.00 | 25,950.00 |
| DC1-64 | BONDS | 2 boilers & assoc. piping replacement. 149 fan coil units & assoc. piping replacement. A/c unit replacement to Community rooms. Heater & exhaust system replacement in Laundry room. Renovation of ADA units, critical & other mod | 1,137,680.00 | 547,187.00 |
| **DC1-64** | **Fort Lincoln Subtotal** | | **1,215,297.00** | **573,137.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Judiciary House*** | | **Modernization is Underway** | | |
| DC1-65 | CFP501-04 | Emergency replacement of auto sliding door at rear entrance. Hazmat abatement, plumbing systems replacement, renovation of units. Asbestos abatement of mechanical shafts & plumbing risers replacement | 4,846.00 | 4,846.00 |
| DC1-65 | CFP501-04 | Resident relocation from upper floors to 1st floor units after the units repairs | 26,751.00 | 26,751.00 |
| DC1-65 | BONDS | UFAS design fees | 80,348.00 | 62,923.00 |
| DC1-65 | BONDS | Hazmat abatement, Phase I, II & III. Asbestos & LBP additional abatement, Phase I | 1,491,415.00 | 699,415.00 |

| | | | | |
|---|---|---|---|---|
| DC1-65 | BONDS | Risers replacement | 357,311.00 | 117,311.00 |
| DC1-65 | BONDS | Renovations of 125 std units. Renovations of ADA units, critical & other mod | 2,569,537.00 | 703,124.00 |
| DC1-65 | CFP501-05 | Emergency handicap lift repair. Hazmat abatement, plumbing systems replacement, renovation of units | 14,017.00 | 14,017.00 |
| **DC1-65** | **Judiciary House Subtotal** | | **4,544,225.00** | **1,628,387.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Capitol View Plaza*** | | **Modernized N.A. (92 Units Disposed in 2001)** | | |
| DC1-67 | | | - | - |
| **DC1-67** | **Capitol View Plaza Subtotal** | | **-** | **-** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Harvard Towers*** | | **Modernized N.A., Renovated in 2003** | | |
| DC1-68 | ADA-38FUND | UFAS site improvements | 39,222.00 | - |
| DC1-68 | ADA-38FUND | Fire alarm relocation & programming for 3 UFAS units. Complete renovation & remodeling of 7 UFAS units. Contract reduction. Latent conditions for 7 UFAS units | 268,229.00 | 268,229.00 |
| DC1-68 | BONDS | A&E design. Hazmat testing | 101,247.00 | 82,489.00 |
| DC1-68 | BONDS | Cooling tower replacement. Fan coil units & risers replacement. Renovations of ADA, vacant units, critical & other mod | 1,348,834.00 | 62,721.00 |
| **DC1-68** | **Harvard Towers Subtotal** | | **1,757,532.00** | **413,439.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Regency House*** | | **1964, Modernized N.A., Renovated in 2003, Private Mgt** | | |
| DC1-69 | CFP501-03 | Cooling tower replacement | 36,734.00 | 36,734.00 |
| DC1-69 | BONDS | UFAS design fees | 69,074.00 | 64,292.00 |
| DC1-69 | BONDS | Parking lot upgrade | 73,401.00 | 2,835.00 |
| DC1-69 | BONDS | Common space UFAS upgrade | 587,318.00 | 41,130.00 |
| DC1-69 | CFP501-05 | Emergency backup power generator | 466.00 | 466.00 |
| **DC1-69** | **Regency House Subtotal** | | **766,993.00** | **145,457.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|

| *James Apartments* | | Modernized 1992 (10 Units Demolished in 1990) | | |
|---|---|---|---|---|
| DC1-70 | CFP501-03 | Chiller replacement | 109,329.00 | 109,329.00 |
| DC1-70 | CFP501-04 | Chiller replacement | 25,000.00 | 25,000.00 |
| DC1-70 | BONDS | UFAS design fees | 59,154.00 | 59,154.00 |
| DC1-70 | BONDS | Replace roof & windows | 846,804.00 | 761,900.00 |
| DC1-70 | BONDS | Common areas & UFAS renovations | 510,533.00 | 135,000.00 |
| DC1-70 | BONDS | Boilers, HW heaters & cooling tower replacement | 550,208.00 | 412,200.00 |
| **DC1-70** | **James Apartments Subtotal** | | **2,101,028.00** | **1,502,583.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| *Frontiers Apartments* | | Modernized 1994, (54 Units Diposed 1998 through 2003), Home Ownership | | |
| DC1-73 | CFP | | | |
| **DC1-73** | **Frontiers Apartments Subtotal** | | - | - |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| *Wylie Courts* | | 1980, Modernized N.A. (3 Units Disposed in 1991 & 2 Units Disposed in 2003), Home | | |
| DC1-80 | CFP | | | |
| **DC1-80** | **Wylie Courts Subtotal** | | - | - |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| *Scattered Sites-Group 3* | | Demo/Dispo, 1999 through 2003) | | |
| DC1-81 | CFP501-04 | Emergency installation of BTU furnace | 2,259.00 | 2,259.00 |
| **DC1-81** | **Scattered Sites-Group 3 Subtotal** | | **2,259.00** | **2,259.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| *Scattered Sites-Group 4* | | 1998 & 38 Units Demo/Dispo, 1999 through 2003) | | |
| DC1-82 | CFP | | | |
| **DC1-82** | **Scattered Sites-Group 4 Subtotal** | | - | - |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| *Scattered Sites-Group 5* | | Demo/Dispo, 1999 through 2001) | | |
| DC1-83 | CFP | | | |
| **DC1-83** | **Scattered Sites-Group 5 Subtotal** | | - | - |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| *Elvans Road* | | Modernized N.A. | | |

| | | | | |
|---|---|---|---|---|
| DC1-85 | BONDS | A&E electrical design for CAD. Tech assistance for Green Bldg Project. A&E design for site improvements. Engineering plans for elec svcs | 58,946.00 | 11,818.00 |
| **DC1-85** | **Elvans Road Subtotal** | | **58,946.00** | **11,818.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Scattered Sites-Group 6*** | | **Demo/Dispo, 1999 through 2003)** | | |
| DC1-88 | CFP | | | |
| **DC1-88** | **Scattered Sites-Group 6 Subtotal** | | - | - |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Scattered Sites-Group 7*** | | **Demo/Dispo, 1999 through 2001)** | | |
| DC1-90 | CFP | | | |
| **DC1-90** | **Scattered Sites-Group 7 Subtotal** | | - | - |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***The Villager*** | | **Modernized N.A.** | | |
| DC1-91 | BONDS | Site improvements | 70,000.00 | 70,000.00 |
| DC1-91 | BONDS | Plumbing, roof & common space renovations. Additional misc renovations. Renovation of ADA units & critical mod | 231,699.00 | 225,000.00 |
| **DC1-91** | **The Villager Subtotal** | | **301,699.00** | **295,000.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Columbia Road*** | | **1986, Modernized N.A.** | | |
| DC1-95 | CFP501-05 | Emergency installation of BTU furnace & boiler repair | 3,053.00 | 3,053.00 |
| **DC1-95** | **Columbia Road Subtotal** | | **3,053.00** | **3,053.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Colorado Apartments*** | | **Modernized N.A.** | | |
| **DC1-97** | **Colorado Apartments Subtotal** | | - | - |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Lincoln Road*** | | **1900, Modernized 1982, Private Mgt** | | |

| | | | | |
|---|---|---|---|---|
| DC1-98 | CFP501-05 | Emergency inspection of elec meters | 1,095.00 | 1,095.00 |
| DC1-98 | BONDS | UFAS & comp renovations design | 35,000.00 | 35,000.00 |
| DC1-98 | BONDS | Roof replacement. Common areas renovaton. Other mod | 104,033.00 | 55,700.00 |
| **DC1-98** | **Lincoln Road Subtotal** | | **140,128.00** | **91,795.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Ontario Apartments*** | | **1926, Modernized N.A.** | | |
| DC1-98 | CFP | | | |
| **DC1-98** | **Ontario Apartments Subtotal** | | - | - |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Scattered Sites-Group 8*** | | **Demo/Dispo, 1999 through 2003)** | | |
| DC1-99 | | | - | - |
| **DC1-99** | **Scattered Sites-Group 8 Subtotal** | | - | - |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Western Mews*** | | **1985, Modernized N.A. (25 Units Demolished in 1997)** | | |
| DC1-100 | CFP | | | |
| **DC1-100** | **Western Mews Subtotal** | | - | - |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***Wheeler Creek*** | | **Anacostia Region, Built in 2000** | | |
| DC1-104 | ADA-38FUND | Conversion of 3 Units to UFAS | 50,964.00 | 50,964.00 |
| **DC1-104** | **Wheeler Creek Subtotal** | | **50,964.00** | **50,964.00** |

| DEVLPMT NAME NUMBER | BUDGET | DESCRIPTION OF PROPOSED WORK ITEMS | OBLIGATED FUNDS (D)09/30/06 | EXPENDED FUNDS (E)09/30/06 |
|---|---|---|---|---|
| ***PH-Wide*** | | **Throughout DCHA Properties** | | |
| DC1-zzz | CFP501-03 | HRGM settlement claim | 130,568.00 | 130,568.00 |
| DC1-zzz | CFP502-03 | Fees & Costs for A/E, CM, planning, surveys, studies, testing, consultants, permits, ACM testing | 6,900.00 | 4,518.00 |
| DC1-zzz | CFP501-04 | M.I. Comprehensive Security Plan | 3,580,081.00 | 3,580,081.00 |
| DC1-zzz | CFP501-04 | Supplies for DMA, 4190.33 | 63,683.00 | 62,610.00 |
| DC1-zzz | CFP501-04 | Construction Inspectors Costs | 648,691.00 | 645,497.00 |

| | | | | |
|---|---|---|---|---|
| DC1-zzz | CFP501-04 | Fees & Costs for A/E, CM, planning, surveys, studies, testing, consultants, permits, ACM testing & construction inspectors costs | 1,047,134.00 | 603,070.00 |
| DC1-zzz | CFP501-04 | Mechanical systems upgrade | 20,232.00 | 20,232.00 |
| DC1-zzz | CFP501-04 | HRGM settlement claim | 540,769.00 | 540,769.00 |
| DC1-zzz | CFP501-04 | Upgrade of computer equipment & assoc. apprentices for DMA Office, etc. | 81,526.00 | 74,192.00 |
| DC1-zzz | CFP501-04 | Resident relocation costs (Refer for direct expenditure at Claridge Towers & Judiciary House) | 16,000.00 | 11,591.00 |
| DC1-zzz | RHF501-04 | Graham Staffing Svcs, P.K. Hayes | 70,000.00 | 48,222.00 |
| **DC1-zzz** | **BONDS** | Lease of 10 vehicles for DMA | 46,310.00 | 28,007.00 |
| DC1-zzz | CFP501-05 | M.I. Comprehensive Security Plan | 3,621,537.00 | 478,478.00 |
| DC1-zzz | CFP501-05 | Salaries: Non-Technical | 600,000.00 | 36,155.00 |
| DC1-zzz | CFP501-05 | Supplies, travel, etc.for DMA, 4190.33, 4150.01 | 23,455.00 | 11,739.00 |
| DC1-zzz | CFP501-05 | Fees & Costs for A/E, CM, planning, surveys, studies, testing, consultants, permits, ACM testing & construction inspectors costs | 312,697.00 | 226,917.00 |
| DC1-zzz | CFP501-05 | Mechanical systems upgrade, including boilers, air cond. units, pumps, heating & plumbing risers replacement at 1133 N.Capitol (Refer for direct exp. at Barry Farms, Carroll, Columbia Rd, Highland Dw, Kenilworth, Sibley) | 19,443.00 | 19,443.00 |
| DC1-zzz | CFP501-05 | HRGM settlement claim | 148,663.00 | 148,663.00 |
| DC1-zzz | CFP501-05 | Comp. Security Program equipment | 94,242.00 | 40,606.00 |
| DC1-zzz | CFP501-05 | Upgrade of computer equipment & assoc. apprentices for DMA Office, etc. | 38,920.00 | 26,989.00 |
| DC1-zzz | CFP501-05 | Replacement Reserve: Loan & Bonds repayment | 7,578,593.00 | 7,578,593.00 |
| **DC1-zzz** | **PH-Wide Subtotal** | | **18,689,444.00** | **14,316,940.00** |
| ***DCHA TOTALS*** | | | **65,824,034.00** | **38,735,523.00** |

## Appendix D: DCHA FY05 Energy Capital Improvement Program Proposal

# DCHA ENERGY CAPITAL IMPROVEMENT PROGRAM

## HUD APPLICATION DOCUMENTATION




## OCTOBER 2005

# DCHA FY05 Energy Capital Improvement Program

## HUD APPLICATION DOCUMENTATION

## INTRODUCTION

Over the past four years as part of the DCHA Energy & Environmental Master Plan, DMA has developed a comprehensive Energy Capital Improvement Program (ECIP) valued at $26,024,925 . ECIP is a capital projects program designed to financially leverage the energy and water savings associated with the replacement of aging equipment and infrastructure. Using established HUD subsidy incentives, DCHA will fund the program from energy and water savings.

This package provides all of the documentation HUD requires to approve the ECIP program. The final list of documentation requirements will come from the HUD field office, however, this initial assembly of documentation results from a conversation held with HUD's Mr. John Miller (202-708-0614 x4237) who supplied DCHA with a presentation entitled *Los Angeles HUD EPC Seminar 6-15-05* in which a list of required documentation was provided.

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## ENERGY CONSERVATION MEASURES

In April through June of 2004, Mr. Alan Stewart, P.E. accompanied by DCHA facility engineer Mr. Vishaw Mohan, conducted a series of building walkthroughs and interviews to determine which energy and water conservation measures (ECMs) would be appropriate for application in candidate buildings.

In each property specific M&V Plan, a list of ECMs is delineated under the title *M&V Plan – Planned ECM's.* (See Appendix A) During the walkthrough, the 30-year experience of Mr. Stewart as an energy systems engineer and facilities auditor, was combined with the anecdotal evidence of energy and water system requirements provided by Mr. Mohan. This institutional knowledge of the facilities was critical in determining the appropriate ECMs to recommend for every property. There are a total of 38 properties in which DCHA will install energy and water conservation measures.

### ECM SELECTION

For the Senior hi-rise properties, with large central boiler and chiller systems, Mr. Stewart modeled the performance of his recommendations and conferred with Mr. Mohan to determine design and operational restrictions on the proposed systems. As a result, a comprehensive list of ECMs was compiled by property.

The ECMs are broken down into the following categories and descriptions. Although not every property will use every ECM, the basic description is used if applicable to that property.

*Table 1: ECM Descriptions*

| Equipment Name | Model | Description |
|---|---|---|
| **Mechanical Systems** | | |
| *Chiller and auxiliaries* | *Rack Chiller* | A central chiller system. Designed per actual unit – replace and upgrade if existing unit faulty or at end of useful life. |
| *Boiler and auxiliaries* | *200M BH High-Eff* | A central boiler for central heating (steam) applications. Designed per actual unit – replace and upgrade if existing unit faulty or at end of useful life. |
| *DHW and auxiliaries* | *DHW Boiler* | Central Domestic hot water boiler system. Designed per actual unit – replace and upgrade if existing unit faulty or at end of useful life. |
| *DHW and auxiliaries* | | A heat pump package designed to capture waste heat from chiller operations for DHW applications. Reduces natural gas consumption during summer months. |
| *Building Automation* | *Central system* | A centralized whole building energy management automation and controls system which improves operational efficiency, reduces maintenance costs and provides a remote capability to monitor consumption and energy and security operations. |
| *Building Automation* | *Unit controls* | Thermostats or other unit level controls to improve operational efficiency and controls on whole energy systems. |
| **Electrical Systems - Lighting** | | |
| *Interior* | | Compact fluorescent lighting for resident application. |
| **Appliances** | | |
| *Refrigerators* | | Replace existing older refrigerators with Energy Star model 20.6 Cubic foot refrigerators. |
| **Water systems** | | |
| *Toilets* | *1.5 gallon* | Replace toilets with 1.5 gallon per flush water saving toilets |
| *Faucets* | | Repair and replace faucets and aerators for 2.5 gpm flow. |
| *Showers/ Baths* | | Replace shower heads with maximum 2.5 gpm flow models |
| *Associated Leaks* | | Repair associated leaks in residential plumbing systems |
| **Other Capital Projects** | | |
| *Fan Coil Units* | | Faulty or outdated fan coil units reduce efficiency of heating and cooling transfer and have higher maintenance costs. |

An interactive ECIP model was created which allowed DCHA to select and deselect individual ECM projects per building to determine how each project effects the entire program. Costing data was provided by DMA for each individual class of systems. Costing data includes direct, indirect, and profit cost per ECM selected. Costing data was derived from existing JOC contract price sheets associated with each ECM. The final list of ECMs by property is provided as Appendix A. Figure 1 and Figure 2 illustrate which category of ECMs is included in each DCHA ECIP candidate property by summarizing ECM cost by property. The total summary list by ECM is provided as Table 2. The total final value of the ECIP project ECM capital cost is estimated as $26,024,925 .

*Table 2: ECIP ECM Summary Data*

| ECM | Quantity | Est. Cost |
|---|---|---|
| **Mechanical Systems** | | |
| *Chiller and auxiliaries* | 12 | $ 1,079,000 |
| *Boiler and auxiliaries* | 24 | $ 8,866,250 |
| *DHW and auxiliaries* | 23 | $ 2,647,000 |
| *Building Automation* | 20 | $ 1,440,000 |
| **Lighting** | 16,329 | $ 163,290 |
| **Appliances** | | $ 2,993,650 |
| *Refrigerators* | 5,443 | |
| **Water systems** | | $ 2,068,340 |
| *Toilets* | 5,443 | |
| *Faucets* | 5,443 | |
| *Showers/ Baths* | 5,443 | |
| **Other Capital Projects** | 10 | $ 1,862,000 |
| **TOTAL ECIP PROJECT** | | **$21,119,530** |

| Property | Units | Mechanical Systems | | | | | Lighting | Appliances | Water Systems | Project Size |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Heating | Cooling | DHW | Controls | Fan Coils | | | | |
| Claridge Towers | 343 | $ - | $ 95,000 | $ 170,000 | $ 100,000 | $ 235,000 | $ 10,290 | $ 188,650 | $ 130,340 | $929,280 |
| Colorado Apts | 21 | $ 60,000 | $ 21,000 | $ 10,000 | $ - | $ - | $ 600 | $ 11,000 | $ 7,600 | $110,200 |
| Columbia Road | 23 | $ 46,000 | $ 23,000 | $ 10,000 | $ - | $ - | $ 690 | $ 12,650 | $ 8,740 | $101,080 |
| Ft. Lincoln | 120 | $ 170,000 | $ 150,000 | $ 70,000 | $ 60,000 | $ 120,000 | $ 3,600 | $ 66,000 | $ 45,600 | $685,200 |
| Garfield Terrace Family | 51 | $ - | $ - | $ - | $ - | $ - | $ 1,530 | $ 28,050 | $ 19,380 | $48,960 |
| Garfield Terrace Senior | 278 | $ 275,250 | $ 30,000 | $ 50,000 | $ 100,000 | $ 278,000 | $ 8,340 | $ 152,900 | $ 105,640 | $1,000,130 |
| Greenleaf Senior | 215 | $ 210,000 | $ - | $ 75,000 | $ 100,000 | $ 215,000 | $ 6,450 | $ 118,250 | $ 81,700 | $806,400 |
| Harvard Towers | 193 | $ 210,000 | $ 60,000 | $ 75,000 | $ 100,000 | $ 193,000 | $ 5,790 | $ 106,150 | $ 73,340 | $823,280 |
| Horizon House | 105 | $ - | $ 60,000 | $ - | $ 100,000 | $ 105,000 | $ 3,150 | $ 57,750 | $ 39,900 | $365,800 |
| James Apartments | 141 | $ 250,000 | $ 260,000 | $ 75,000 | $ 100,000 | $ 141,000 | $ 4,230 | $ 77,550 | $ 53,580 | $961,360 |
| James Creek | 239 | $ - | $ - | $ - | $ - | $ - | $ 7,170 | $ 131,450 | $ 90,820 | $229,440 |
| Judiciary House | 271 | $ 250,000 | $ - | $ 65,000 | $ 100,000 | $ - | $ 8,130 | $ 149,050 | $ 102,980 | $675,160 |
| Kelly Miller | 169 | $ 600,000 | $ - | $ 150,000 | $ 50,000 | $ 169,000 | $ 5,070 | $ 92,950 | $ 64,220 | $1,131,240 |
| Langston Terrace | 308 | $ 900,000 | $ - | $ 400,000 | $ - | $ - | $ 9,240 | $ 169,400 | $ 117,040 | $1,595,680 |
| Ledroit | 124 | $ 250,000 | $ - | $ 35,000 | $ 60,000 | $ - | $ 3,720 | $ 68,200 | $ 47,120 | $464,040 |
| Lincoln Road | 20 | $ 20,000 | $ 20,000 | $ 10,000 | $ - | $ - | $ 600 | $ 11,000 | $ 7,600 | $69,200 |
| Park Morton | 174 | $ 720,000 | $ - | $ 300,000 | $ - | $ - | $ 5,220 | $ 95,700 | $ 66,120 | $1,187,040 |
| Regency House | 160 | $ 250,000 | $ - | $ 70,000 | $ 100,000 | $ 160,000 | $ 4,800 | $ 88,000 | $ 60,800 | $733,600 |
| Sibley Plaza | 246 | $ 250,000 | $ - | $ 35,000 | $ 100,000 | $ 246,000 | $ 7,380 | $ 135,300 | $ 93,480 | $867,160 |
| Syphax Gardens | 174 | $ 150,000 | $ - | $ 100,000 | $ 50,000 | $ - | $ 5,220 | $ 95,700 | $ 66,120 | $467,040 |
| **Region Sub- Ttal** | **3,375** | **$ 4,611,250** | **$ 719,000** | **$ 1,700,000** | **$ 1,120,000** | **$ 1,862,000** | **$ 101,220** | **$ 1,855,700** | **$ 1,282,120** | **$13,251,290** |

*Figure 1: Summary ECIP ECM Cost by Property (Rock Creek)*

| Property | Units | Mechanical Systems | | | | | Lighting | Appliances | Water Systems | Project Size |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Heating | Cooling | DHW | Controls | Fan Coils | | | | |
| Benning Terrace | 274 | $ 275,000 | $ - | $ 137,000 | $ - | $ - | $ 8,220 | $ 150,700 | $ 104,120 | $675,040 |
| Carroll Apts | 60 | $ 60,000 | $ 60,000 | $ - | $ 60,000 | $ - | $ 1,800 | $ 33,000 | $ 22,800 | $237,600 |
| Ft. Dupont | 104 | $ - | $ - | $ - | $ - | $ - | $ 3,120 | $ 57,200 | $ 39,520 | $99,840 |
| Highland Dwellings & Addition | 454 | $ - | $ - | $ - | $ - | $ - | $ 13,620 | $ 249,700 | $ 172,520 | $435,840 |
| Kenilworth | 290 | $ 1,100,000 | $ - | $ 300,000 | $ 100,000 | $ - | $ 8,700 | $ 159,500 | $ 110,200 | $1,778,400 |
| Kentucky Courts | 163 | $ 600,000 | $ 150,000 | $ 150,000 | $ - | $ - | $ 4,890 | $ 89,650 | $ 61,940 | $1,056,480 |
| Knox Hill | 122 | $ 350,000 | $ 150,000 | $ 30,000 | $ 60,000 | $ - | $ 3,660 | $ 67,100 | $ 46,360 | $707,120 |
| Richardson Dwell | 190 | $ 170,000 | $ - | $ 30,000 | $ 50,000 | $ - | $ 5,700 | $ 104,500 | $ 72,200 | $432,400 |
| Stoddert Terrace | 158 | $ - | $ - | $ - | $ 7,500 | $ - | $ 4,740 | $ 86,900 | $ 60,040 | $159,180 |
| Villager | 20 | $ 100,000 | $ - | $ - | $ 7,500 | $ - | $ 600 | $ 11,000 | $ 7,600 | $126,700 |
| Woodland Terrace | 234 | $ 1,600,000 | $ - | $ 300,000 | $ 35,000 | $ - | $ 7,020 | $ 128,700 | $ 88,920 | $2,159,640 |
| **Region Sub- Ttal** | **2,069** | **$ 4,255,000** | **$ 360,000** | **$ 947,000** | **$ 320,000** | **$ -** | **$ 62,070** | **$ 1,137,950** | **$ 786,220** | **$7,868,240** |
| | | | | | | | | | | |
| **DCHA TOTAL** | **5,444** | **$ 8,866,250** | **$ 1,079,000** | **$ 2,647,000** | **$ 1,440,000** | **$ 1,862,000** | **$ 163,290** | **$ 2,993,650** | **$ 2,068,340** | **$21,119,530** |

*Figure 2: Summary ECIP ECM Cost by Property (Potomac)*

## ECM COST REASONABLENESS

### MECHANICAL SYSTEMS

Mechanical systems costs were estimated based upon the estimates drawn from the professional energy engineering expertise of Mr. Alan Stewart. Given the unique aspects of each property and complexity associated with the design, and installation of each individual unit. Given that there are a total of 89 mechanical system improvements in the program, it was not cost effective to design the system prior to HUD application. Rather, during the audit, Mr. Stewart provided a industry practice cost estimate (based on RS Means methodology) for each type of system, providing a contingency "cushion" for each standard system to account for unique design and installation issues associated with each property. The mechanical systems costs also include the Fan Coil Units listed under Other Projects.

These costs were reviewed by DCHA's P.E., Vishaw Mohan, and adjusted for additional design and installation contingencies known by Mr. Mohan. So to save costs on the front-end audit, a generic cost for each type of mechanical system is provided. Direct costs are only provided as indirect and profit are examined elsewhere.

Costing data is consistent with RS Means costing data protocol, and materials, labor, and equipment cost are estimated based on past experience of Mr. Alan Stewart and Mr. Vishaw Mohan.

Results are provided in Table 3 through Table 6.

| Property | | | Cooling System | | DHW System | |
|---|---|---|---|---|---|---|
| | Work Description | Est. Dir Cost | Work Description | Est. Dir Cost | Work Description | Est. Dir Cost |
| Claridge Towers | | $ - | 2-50 ton Modular Stack | $ 95,000 | 2 600k-MBh DHW | $ 170,000 |
| Colorado Apts | HE Condensing Boiler | $ 60,000 | High-Effi Conden. Units | $ 21,000 | HE DHW | $ 10,000 |
| Columbia Road | HE Furnaces | $ 46,000 | High-Effi Conden. Units | $ 23,000 | HE DHW | $ 10,000 |
| Ft. Lincoln | HE Condensing Boiler | $ 170,000 | Stackable chillers | $ 150,000 | 2 600k-MBh DHW Heat-pump pkg | $ 70,000 |
| Garfield Terrace Family | | $ - | | $ - | | $ - |
| Garfield Terrace Senior | 200M BH High-Eff | $ 275,250 | Cooling Tower | $ 30,000 | 3 - 600k-MBh | $ 50,000 |
| Greenleaf Senior | 200M BH High-Eff | $ 210,000 | | $ - | 2 600k-MBh | $ 75,000 |
| Harvard Towers | 200M BH High-Eff | $ 210,000 | 250Tons vs300TCooling Tower | $ 60,000 | High-Efficiency DHW Heaters | $ 75,000 |
| Horizon House | | $ - | Cooling Tower | $ 60,000 | | $ - |
| James Apartments | 200M BH High-Eff | $ 250,000 | Stackable chillers | $ 260,000 | 250k-MBh DHW Heat Pump Pkg | $ 75,000 |
| James Creek | | $ - | | $ - | | $ - |
| Judiciary House | 200M BH High-Eff | $ 250,000 | | $ - | 250k-MBh DHW Heat Pump Pkg | $ 65,000 |
| Kelly Miller | HE Condensing Boiler | $ 600,000 | | $ - | HE DHW | $ 150,000 |
| Langston Terrace | Upgrade boiler rooms | $ 900,000 | | $ - | HE DHW | $ 400,000 |
| Ledroit | 200M BH High-Eff | $ 250,000 | | $ - | 2 600k-MBh | $ 35,000 |
| Lincoln Road | High Efi. Furnances | $ 20,000 | High Efi. Cond. Units | $ 20,000 | HE DHW | $ 10,000 |
| Park Morton | High Effi. BoilersFor 5 Boiler Rm. | $ 720,000 | | $ - | HE DHW | $ 300,000 |
| Regency House | 200M BH High-Eff | $ 250,000 | | $ - | 250k-MBh | $ 70,000 |
| Sibley Plaza | 200M BH High-Eff | $ 250,000 | | $ - | 2 600k-MBh | $ 35,000 |
| Syphax Gardens | Replace Boilers | $ 150,000 | | $ - | 2 600k-MBh | $ 100,000 |

*Table 3: Mechanical Cost Reasonableness HVAC-(Rock Creek)*

| Property | | | Cooling System | | DHW System | |
|---|---|---|---|---|---|---|
| | Work Description | Est. Dir Cost | Work Description | Est. Dir Cost | Work Description | Est. Dir Cost |
| Benning Terrace | 200M BH High-Eff Boiler | $ 275,000 | | $ - | 2 600k-MBh DHW | $ 137,000 |
| Carroll Apts | HE Condensing Boiler | $ 60,000 | Air-cooled Chiller | $ 60,000 | | $ - |
| Ft. Dupont | | $ - | | $ - | | $ - |
| Highland Dwell | | $ - | | $ - | | $ - |
| Kenilworth | High Effi. BoilersFor 10 Boiler Rm. | $ 1,100,000 | | $ - | High Efi. HWHeaters in 10Boiler Rms. | $ 300,000 |
| Kentucky Courts | Boiler Room Upgrade | $ 600,000 | Chiller efficiency upgrade | $ 150,000 | HE DHW system | $ 150,000 |
| Knox Hill | 200M BH High-Eff, renovate 2-pipe system | $ 350,000 | 120T Chiller, renovate 2 pipe system | $ 150,000 | 2 600k-MBh | $ 30,000 |
| Richardson Dwell | Replace Boilers | $ 170,000 | | $ - | HE DHW | $ 30,000 |
| Stoddert Terrace | | $ - | | $ - | | $ - |
| Villager | HE Boiler | $ 100,000 | | $ - | | $ - |
| Woodland Terrace | High Efi. Boilers For 8 Boiler Rooms | $ 1,600,000 | | $ - | High Efi. Water Heaters in 8 Boiler Rooms | $ 300,000 |

*Table 4: Mechanical Cost Reasonableness HVAC (Potomac)*

| Property | Controls | | Fan Coil Units | |
|---|---|---|---|---|
| | Work Description | Est. Dir Cost | Work Description | Est. Dir Cost |
| Claridge Towers | EMS Control package | $ 100,000 | Fan Coil replacement & upgrade | $ 235,000 |
| Colorado Apts | | $ - | | $ - |
| Columbia Road | | $ - | | $ - |
| Ft. Lincoln | EMS Control package- HVAC | $ 60,000 | Fan Coil replacement & upgrade | $ 120,000 |
| Garfield Terrace Family | | $ - | | $ - |
| Garfield Terrace Senior | EMS Control package | $ 100,000 | Fan Coil replacement & upgrade | $ 278,000 |
| Greenleaf Senior | EMS Control package | $ 100,000 | Fan Coil replacement & upgrade | $ 215,000 |
| Harvard Towers | EMS Control package | $ 100,000 | Fan Coil replacement & upgrade | $ 193,000 |
| Horizon House | EMS Control package | $ 100,000 | Fan Coil replacement & upgrade | $ 105,000 |
| James Apartments | EMS Control package | $ 100,000 | Fan Coil replacement & upgrade | $ 141,000 |
| James Creek | | $ - | | $ - |
| Judiciary House | EMS Control package | $ 100,000 | | $ - |
| Kelly Miller | EMS Control package- HVAC | $ 50,000 | Fan Coil replacement & upgrade | $ 169,000 |
| Langston Terrace | | $ - | | $ - |
| Ledroit | EMS Control package- HVAC | $ 60,000 | | $ - |
| Lincoln Road | | $ - | | $ - |
| Park Morton | | $ - | | $ - |
| Regency House | EMS Control package | $ 100,000 | Fan Coil replacement & upgrade | $ 160,000 |
| Sibley Plaza | EMS Control package | $ 100,000 | Fan Coil replacement & upgrade | $ 246,000 |
| Syphax Gardens | EMS Control package- HVAC | $ 50,000 | | $ - |

*Table 5: Other Mechanical Project Cost Reasonableness (Rock Creek)*

| Property | Controls | | Fan Coil Units | |
|---|---|---|---|---|
| | Work Description | Est. Dir Cost | Work Description | Est. Dir Cost |
| Benning Terrace | | $ - | | $ - |
| Carroll Apts | EMS Control package- HVAC | $ 60,000 | | $ - |
| Ft. Dupont | | $ - | | $ - |
| Highland Dwell | | $ - | | $ - |
| Kenilworth | EMS Control package | $ 100,000 | | $ - |
| Kentucky Courts | | $ - | | $ - |
| Knox Hill | EMS Control package- HVAC | $ 60,000 | | $ - |
| Richardson Dwell | EMS Control package | $ 50,000 | | $ - |
| Stoddert Terrace | EMS Control package - Water | $ 7,500 | | $ - |
| Villager | EMS Control package - Water | $ 7,500 | | $ - |
| Woodland Terrace | EMS Control package- HVAC | $ 35,000 | | $ - |

*Table 6: Table 5: Other Mechanical Project Cost Reasonableness (Potomac)*

LIGHTING

Lighting systems consist exclusively of compact fluorescent light bulbs for distribution to the residents. Costing data for compact fluorescent bulbs was found on the GSA Advantage web site. The GSA site lists all Federally approved contractors for the sale of products and services. For the ECIP program, a search was run on the GSA Advantage site to find three or more quotes for compact fluorescent bulbs. Assumed a 60W replacement bulb which fits a standard incandescent fixture with a twist bottom. The following five vendors were found:

*Table 7: GSA Advantage Price Quotes for Lighting*

| GSA Vendor | Contract Number | Brand - Model | Price |
|---|---|---|---|
| MER-WIL INDUSTRIES, INC | GS-06F-0059N | Lights of America | $4.55 |
| NOBLE SALES COMPANY, INC | GS-06F-0032K | GE Lighting | $4.88 |
| NOBLE SALES COMPANY, INC | GS-06F-0032K | Westinghouse Lighting | $4.34 |
| HARDWARE ASSOCIATES, INC | GS-06F-0002 | Westinghouse Lighting | $4.93 |
| BIC SUPPLY | GS-06F-0041M | GE Lighting | $4.63 |
| | | **AVERAGE** | **$ 4.67** |

The average price was rounded up to $5.00 per bulb and then doubled to $10, assuming two bulbs per residence.

APPLIANCES

Costing data for refrigerators was found on the GSA Advantage web site. The GSA site lists all Federally approved contractors for the sale of Energy-Star compliance appliances. For the ECIP program, a search was run on the GSA Advantage site to find three or more quotes for an Energy Star compliant 20.9 cu. Ft. refrigerator. The following five vendors were found:

*Table 8: GSA Advantage Price Quotes for Appliances*

| GSA Vendor | Contract Number | Brand - Model | Price |
|---|---|---|---|
| Absocold Corporation | GS-21F-0087H | Whirlpool - ET1MTEXMQ | $520.70 |
| Capitol Furniture Distributing | GS-21F-0001K | Whirlpool - CF71583 | $514.74 |
| Elmbrook Corporate Services | GS-21F-0007L | Whirlpool - ET1MTEXMQ | $498.00 |
| Blockhouse Dq, Inc | GS-21F-0002N | Whirlpool - ET1MTEXMQ | $522.13 |
| Glenco Distributing Inc | GS-21F-0006J | Whirlpool - ET1MTEXMQ | $525.00 |
| | | **AVERAGE** | **$ 516.11** |

The average price of $516.11 was rounded up to $550 to include disposal of old refrigerators.

PLUMBING FIXTURES

Costing data for all plumbing fixtures was found on the GSA Advantage web site. The GSA site lists all Federally approved contractors for the sale of Energy-Star compliant plumbing fixtures. For the ECIP program, a search was run on the GSA Advantage site to find three or more quotes for the following fixtures. The following five vendors were found:

*Table 9: GSA Advantage Price Quotes for Cadet 1.6 gal Toilet*

| GSA Vendor | Contract Number | Brand – Model | Price |
|---|---|---|---|
| OSC SOLUTIONS, INC | GS-06F-0035M | OSC206939 | $188.28 |
| NOLAND COMPANY | GS-07F-0438M | American Standard - 2264703 | $274.94 |
| THE HOME DEPOT SUPPLY | GS-06F-0080M | 404744 / 4392.001SMT | $152.58 |

| | | | |
|---|---|---|---|
| | | **AVERAGE** | **$ 205.27** |

The average price of $205.27 was rounded up to $220 to include disposal of old toilet and then multiplied by 1.5 to account for units with more than one fixture.

*Table 10: GSA Advantage Price Quotes for 2.0 gpm faucet (kitchen and bath)*

| GSA Vendor | Contract Number | Brand – Model | Price |
|---|---|---|---|
| COMPLETE PACKAGING & SHIPPING SUPPL | GS-06F-0046N | Delta - CL15M | $45.52 |
| SUPPLYCORE INC. | GS-06F-0014N | PEERLESS/DELTA CL25M | $30.53 |
| THE HOME DEPOT SUPPLY | GS-06F-0080M | MOEN - 412601 / 67425 | $54.02 |
| | | **AVERAGE** | **$ 43.36** |

The average price of $43.56 was rounded down to $40 since many faucets may only require a replacement aerator.

*Table 11: GSA Advantage Price Quotes for low-flow shower head*

| GSA Vendor | Contract Number | Brand – Model | Price |
|---|---|---|---|
| SUPPLYCORE INC. | GS-06F-0014N | DS2C | $10.88 |
| COMPLETE PACKAGING & SHIPPING SUPPL | GS-06F-0046N | PLUMB SHOP DIV BRASSCRAFT | $9.89 |
| THE HOME DEPOT SUPPLY | GS-06F-0080M | 531209 | $15.94 |
| | | **AVERAGE** | **$ 12.24** |

The average price of $10.00 was used, discounting the Home Depot price.

## ECIP BASELINE DATA

The DCHA Development and Modernization Administration has collected verifiable, relevant whole facility monthly energy billing data for electricity, natural gas and water on a per meter basis since October 2001 through the present. Managing over 9,600 monthly utility accounts, DCHA has maintained a comprehensive utility billing and administration program for over five years. A Microsoft Access Database was constructed to house the utility billing data. This information is readily available for independent analysis upon request to the Development and Modernization Administration Office.

### MONTHLY ENERGY BILLING DATA MATRIX

Table 12 through Table 15 provide the data points available in the DCHA Utility Database.

*Table 12 Development Data Base Data Points*

| Development | Unit ID | Address | Electric Account | Electric Meter(s) | Natural Gas Account | Gas Supplier Account | Water Account | Water Meter(s) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

*Table 13 Electricity Monthly Energy Billing Data Points*

| Account | Date | Consumption [kWh] | Demand [kW] | Billing Days | Hard Copy Cost [$] | Adjusted Cost [$] |
|---|---|---|---|---|---|---|
| | | | | | | |

*Table 14 Natural Gas Monthly Energy Billing Data Points*

| Account | Bill Date | Consumption Therms | Current Charge [$] | Supplier Charge [$] |
|---|---|---|---|---|
| | | | | |

*Table 15 Water Monthly Energy Billing Data Points*

| Account | Bill Date | Previous Read Date | Current Read Date | Read Type | CCF | Total Current Billed |
|---|---|---|---|---|---|---|
| | | | | | | |

From the utility database, a three year monthly, whole building utility cost and consumption data table is created. The data tables (shown on the following pages) provide consumption and cost data for the ECIP property subset as well as DCHA as a whole which includes utility consumption and cost for properties not included in the ECIP program. All analysis for the ECIP program are based upon the ECIP building subset of the utility data and does not include utility consumption or cost data for the other properties. The data is provided by property, by utility, and by fiscal year. (See Figure 3 through Figure 11)

The database is a fluid system, therefore is a correction is found in the identification of a property, for example reclassifying the property name from Property A to Property B, all historical data for that account will be reclassified as well. This may cause some discrepancies in the grand totals for consumption, particularly if an account was found to be an erroneous account, however, in comparing the data to the total consumption found on HUD Form 52722-A, there may be a slight difference in consumption reported.

In reviewing the DCHA reported consumptions, less then a 1% difference was noted on reported consumptions and this difference was primarily in the positive (meaning more actual consumption then reported.).

| Electricity - FY02 | 10/1/2001 | | 11/1/2001 | | 12/1/2001 | | 1/1/2002 | | 2/1/2002 | | 3/1/2002 | | 4/1/2002 | | 5/1/2002 | | 6/1/2002 | | 7/1/2002 | | 8/1/2002 | | 9/1/2002 | | FY02 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Development | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost |
| Benning Terrace | 137,058 | $1,363 | 163,210 | $5,341 | 144,652 | $7,645 | 154,812 | $9,331 | 126,488 | $7,949 | 165,166 | $9,786 | 143,296 | $9,297 | 152,502 | $10,643 | 208,988 | $18,021 | 258,216 | $24,290 | 283,078 | $26,994 | 217,730 | $18,659 | 2,155,196 | $149,319 |
| Carroll Apartments | 43,650 | $1,839 | 41,850 | $2,819 | 39,150 | $2,582 | 41,850 | $2,615 | 34,650 | $2,146 | 39,600 | $2,398 | 34,650 | $2,168 | 39,150 | $2,580 | 50,850 | $4,507 | 71,550 | $5,799 | 72,450 | $5,520 | 64,800 | $5,152 | 574,200 | $40,125 |
| Claridge Towers | 176,850 | $20,052 | 129,150 | $0 | 151,200 | $4,995 | 152,100 | $12,936 | 137,700 | $11,706 | 141,750 | $12,067 | 125,550 | $10,639 | 126,450 | $10,758 | 196,650 | $22,408 | 204,300 | $23,315 | 220,050 | $24,806 | 185,850 | $20,698 | 1,947,600 | $174,380 |
| Colorado Apartments | 18,790 | $1,514 | 16,710 | $16 | 25,650 | $1,299 | 25,680 | $1,792 | 36,270 | $2,640 | 26,990 | $1,998 | 27,260 | $2,042 | 19,160 | $1,351 | 19,420 | $1,777 | 16,470 | $1,296 | 16,470 | $1,695 | 21,820 | $1,939 | 270,690 | $19,358 |
| Columbia Road | 6,980 | $735 | 4,840 | $174 | 5,720 | $461 | 32,270 | $2,370 | 9,750 | $253 | 9,712 | $664 | 9,484 | $636 | 10,736 | $714 | 16,342 | $1,412 | 22,056 | $2,017 | 28,766 | $2,802 | 26,996 | $2,503 | 183,652 | $14,740 |
| Ft. Dupont Dwelling | 27,800 | $1,881 | 81,860 | $5,820 | 130,000 | $5,542 | 94,730 | $5,142 | 80,660 | $4,921 | 78,680 | $4,738 | 74,090 | $4,714 | 59,810 | $5,343 | 65,990 | $4,963 | 87,270 | $7,293 | 84,350 | $8,444 | 92,760 | $6,709 | 958,000 | $65,510 |
| Ft. Lincoln Apartments | 84,900 | $7,068 | 75,300 | $0 | 25,200 | $0 | 58,200 | $2,881 | 53,700 | $3,199 | 51,000 | $2,963 | 51,900 | $3,042 | 67,200 | $4,392 | 81,300 | $6,645 | 111,900 | $10,272 | 109,200 | $8,644 | 96,600 | $8,208 | 857,400 | $57,314 |
| Garfield Terrace Family | 7,547 | $608 | 5,041 | $1 | 5,335 | $6 | 5,878 | $355 | 5,165 | $315 | 10,203 | $757 | 4,652 | $270 | 5,266 | $320 | 6,148 | $454 | 7,844 | $657 | 8,037 | $678 | 15,227 | $1,486 | 86,342 | $5,906 |
| Garfield Terrace Senior | 188,573 | $15,191 | 125,949 | $16 | 133,305 | $159 | 146,852 | $8,873 | 129,035 | $7,863 | 254,917 | $18,920 | 116,218 | $6,754 | 131,574 | $7,994 | 153,602 | $11,331 | 195,986 | $16,419 | 200,793 | $16,932 | 380,453 | $37,116 | 2,157,258 | $147,569 |
| Greenleaf House | 295,560 | $28,242 | 207,450 | $401 | 243,240 | $4,345 | 237,150 | $15,958 | 196,170 | $13,783 | 253,570 | $19,474 | 205,910 | $13,657 | 210,670 | $14,761 | 309,200 | $26,724 | 316,830 | $28,546 | 418,488 | $39,495 | 233,564 | $25,461 | 3,127,802 | $230,845 |
| Harvard Towers | 246,600 | $9,904 | 78,600 | $0 | 72,600 | $0 | 79,200 | $4,620 | 67,200 | $2,542 | 64,800 | $3,661 | 74,400 | $4,219 | 60,600 | $3,432 | 72,000 | $4,088 | 150,000 | $12,898 | 145,800 | $12,471 | 145,200 | $12,034 | 1,257,000 | $69,869 |
| Highland Dwelling & Addition | 118,334 | $1,451 | 112,679 | $2,798 | 141,967 | $6,780 | 186,660 | $11,725 | 164,797 | $10,524 | 220,924 | $13,598 | 212,643 | $13,618 | 203,744 | $13,314 | 316,295 | $27,316 | 447,633 | $39,203 | 434,441 | $39,312 | 395,272 | $24,653 | 2,955,389 | $204,291 |
| Horizon House | 107,280 | $9,297 | 86,220 | $0 | 97,350 | $2,464 | 74,730 | $4,877 | 68,340 | $4,269 | 74,250 | $4,773 | 66,960 | $4,192 | 91,320 | $6,321 | 122,430 | $10,778 | 120,570 | $10,553 | 130,950 | $11,514 | 110,430 | $9,415 | 1,150,830 | $78,453 |
| James Apartments | 133,150 | $10,892 | 88,400 | $79 | 105,170 | $2,968 | 102,100 | $4,188 | 86,000 | $3,915 | 93,880 | $4,660 | 80,780 | $4,213 | 105,670 | $6,817 | 157,580 | $12,040 | 145,090 | $11,036 | 155,300 | $10,964 | 140,830 | $10,503 | 1,393,950 | $82,275 |
| James Creek | 140,357 | $11,108 | 117,361 | $555 | 132,169 | $3,438 | 148,001 | $7,202 | 119,288 | $6,786 | 128,669 | $8,033 | 114,987 | $7,388 | 130,326 | $8,781 | 176,349 | $14,883 | 223,876 | $20,498 | 244,388 | $22,273 | 206,281 | $17,466 | 1,882,052 | $128,410 |
| Judiciary House | 45,450 | $15,211 | 113,850 | $0 | 111,150 | $0 | 113,850 | $3,848 | 108,900 | $6,174 | 89,550 | $5,038 | 101,700 | $5,727 | 90,000 | $5,062 | 144,900 | $10,743 | 197,550 | $16,607 | 238,950 | $21,621 | 179,550 | $14,069 | 1,535,400 | $104,100 |
| Kelly Miller | 69,766 | $4,344 | 77,596 | $0 | 83,336 | $1,082 | 78,418 | $4,500 | 75,522 | $4,343 | 71,974 | $4,150 | 72,780 | $4,196 | 78,250 | $4,485 | 67,240 | $3,789 | 116,054 | $8,337 | 120,810 | $9,086 | 116,016 | $8,258 | 1,027,762 | $56,572 |
| Kenilworth Courts | 261,360 | $24,476 | 267,570 | $7,358 | 205,650 | $13,772 | 221,040 | $16,831 | 195,900 | $15,401 | 182,600 | $14,791 | 190,960 | $15,217 | 213,310 | $17,352 | 251,660 | $21,688 | 363,140 | $34,681 | 354,760 | $32,566 | 384,600 | $33,404 | 3,092,550 | $247,538 |
| Kentucky Courts | 60,200 | $343 | 41,640 | $645 | 16,800 | $442 | 103,960 | $6,186 | 66,760 | $2,527 | 132,840 | $4,031 | 6,320 | $2,467 | 94,360 | $3,828 | 76,840 | $4,600 | 0 | $4,256 | 109,040 | $9,234 | 85,720 | $4,857 | 794,480 | $43,416 |
| Knox Hill | 91,290 | $2,218 | 91,350 | $3,030 | 79,220 | $3,093 | 98,180 | $4,620 | 76,160 | $4,150 | 84,020 | $4,981 | 74,860 | $4,546 | 81,240 | $4,812 | 97,210 | $7,410 | 118,230 | $9,039 | 122,600 | $9,472 | 93,930 | $6,810 | 1,108,290 | $64,182 |
| Langston Terrace | 15,680 | $1,353 | 15,680 | $157 | 13,410 | $467 | 37,670 | $2,243 | 18,190 | $1,117 | 19,230 | $1,321 | 19,840 | $1,438 | 18,050 | $1,275 | 22,760 | $1,996 | 36,330 | $3,522 | 34,720 | $3,337 | 29,370 | $2,774 | 280,930 | $21,002 |
| Ledroit | 37,620 | $6,528 | 47,400 | $0 | 67,200 | $0 | 69,360 | $3,287 | 61,680 | $3,522 | 59,940 | $3,432 | 60,960 | $3,474 | 68,760 | $4,101 | 78,720 | $5,371 | 101,700 | $7,710 | 112,260 | $8,817 | 108,120 | $8,195 | 873,720 | $54,438 |
| Lincoln Road | 4,810 | $499 | 2,690 | $0 | 2,670 | $178 | 8,190 | $680 | 11,770 | $854 | 10,890 | $801 | 8,590 | $621 | 8,800 | $615 | 13,350 | $1,030 | 18,960 | $1,962 | 26,400 | $2,370 | 27,220 | $2,574 | 144,340 | $12,183 |
| Park Morton | 22,480 | $2,367 | 29,620 | $1,682 | 28,340 | $2,466 | 31,500 | $2,771 | 93,840 | $6,614 | 71,520 | $4,992 | 82,250 | $5,884 | 72,400 | $5,004 | 83,280 | $6,438 | 122,320 | $10,552 | 124,950 | $10,906 | 125,920 | $10,383 | 888,420 | $70,059 |
| Regency House | 94,950 | $7,261 | 69,300 | $0 | 74,250 | $0 | 81,000 | $4,952 | 69,300 | $4,023 | 59,490 | $3,321 | 68,850 | $4,065 | 63,900 | $3,592 | 90,450 | $6,733 | 103,500 | $8,333 | 127,800 | $11,107 | 109,800 | $8,745 | 1,012,500 | $62,134 |
| Richardson Dwelling | 16,870 | $1,846 | 19,970 | $927 | 20,860 | $2,003 | 79,020 | $5,695 | 85,760 | $5,975 | 88,580 | $6,137 | 105,190 | $7,463 | 87,600 | $6,113 | 122,230 | $9,594 | 198,830 | $18,876 | 194,840 | $18,027 | 164,510 | $13,499 | 1,184,260 | $96,066 |
| Sibley Plaza | 60,600 | $18,848 | 147,420 | $140 | 152,340 | $2,424 | 144,660 | $9,582 | 161,940 | $11,019 | 141,600 | $9,346 | 132,600 | $8,601 | 140,280 | $9,225 | 179,160 | $15,002 | 190,140 | $16,300 | 254,460 | $24,067 | 240,960 | $21,411 | 1,946,160 | $145,964 |
| Stoddert Terrace | 28,840 | $2,303 | 24,880 | $792 | 21,360 | $1,311 | 28,110 | $2,038 | 126,935 | $9,565 | 92,135 | $5,919 | 96,091 | $6,418 | 80,896 | $5,657 | 100,880 | $7,901 | 138,619 | $12,120 | 150,903 | $13,814 | 163,696 | $14,445 | 1,053,345 | $82,283 |
| Syphax Gardens | 19,980 | $2,178 | 25,380 | $1,356 | 27,940 | $2,637 | 32,170 | $2,912 | 101,530 | $7,357 | 85,660 | $6,237 | 78,290 | $5,796 | 78,660 | $5,506 | 102,920 | $8,459 | 155,060 | $14,260 | 156,130 | $14,498 | 130,370 | $11,201 | 994,090 | $82,397 |
| Villager | 4,000 | $0 | 4,140 | $339 | 5,180 | $466 | 10,220 | $811 | 9,660 | $648 | 9,120 | $645 | 10,170 | $692 | 7,920 | $552 | 12,620 | $1,046 | 19,320 | $1,782 | 27,890 | $2,318 | 21,720 | $1,229 | 141,960 | $10,527 |
| Woodland Terrace | 157,500 | $5,190 | 171,150 | $10,649 | 176,850 | $10,344 | 185,850 | $10,654 | 323,550 | $8,217 | 162,750 | $9,516 | 167,850 | $10,577 | 135,300 | $8,316 | 196,200 | $16,498 | 303,000 | $6,920 | 301,650 | $37,638 | 251,100 | $18,927 | 2,532,750 | $153,447 |
| **ECIP TOTAL** | 2,724,825 | $216,112 | 2,484,256 | $45,095 | 2,539,264 | $83,371 | 2,863,411 | $176,474 | 2,902,610 | $174,315 | 2,975,920 | $193,147 | 2,620,081 | $174,033 | 2,733,904 | $183,017 | 3,593,564 | $295,646 | 4,562,344 | $389,349 | 5,001,724 | $461,421 | 4,566,415 | $382,693 | 39,568,318 | $2,774,673 |
| Arthur Capper | 304,270 | $4,889 | 321,810 | $13,056 | 330,420 | $15,916 | 401,920 | $22,237 | 286,710 | $17,098 | 329,840 | $19,879 | 266,170 | $16,103 | 256,580 | $15,192 | 319,880 | $24,246 | 398,580 | $32,306 | 396,600 | $30,612 | 380,340 | $27,791 | 3,993,120 | $239,326 |
| Arthur Capper Family | 21,844 | $1,607 | 20,916 | $2,122 | 21,998 | $2,518 | 23,898 | $2,917 | 17,320 | $2,423 | 25,842 | $3,130 | 21,910 | $2,711 | 33,548 | $3,569 | 29,578 | $3,796 | 41,772 | $5,781 | 39,854 | $5,408 | 38,336 | $5,524 | 336,816 | $41,507 |
| Barry Farm | 283,500 | $3,391 | 260,298 | $20,836 | 315,120 | $18,013 | 338,834 | $22,989 | 255,118 | $17,083 | 300,752 | $21,355 | 276,164 | $19,429 | 260,448 | $18,206 | 407,654 | $37,651 | 521,988 | $50,590 | 548,466 | $53,118 | 482,978 | $45,178 | 4,251,320 | $327,839 |
| Capitol View Plaza | 189,900 | $16,759 | 133,200 | $176 | 153,000 | $9,332 | 187,200 | $11,400 | 110,700 | $7,713 | 122,460 | $7,648 | 111,730 | $6,612 | 5,580 | $6,303 | 261,570 | $15,938 | 2,310 | $224 | 199,667 | $15,244 | 379,022 | $27,770 | 1,856,339 | $125,120 |
| Carrollsburg Dwelling | 28,168 | $1,558 | 68,464 | $5,798 | 83,816 | $5,246 | 154,946 | $11,238 | 140,590 | $8,934 | 154,218 | $11,091 | 149,432 | $10,484 | 130,414 | $8,578 | 190,580 | $16,386 | 275,488 | $27,509 | 281,472 | $25,301 | 250,440 | $22,304 | 1,908,028 | $154,427 |
| East Capitol Dwelling | 18,830 | $1,945 | 17,960 | $266 | 20,280 | $1,674 | 133,511 | $9,012 | 127,450 | $8,668 | 146,088 | $10,351 | 137,761 | $9,597 | 122,699 | $8,557 | 154,107 | $11,891 | 228,795 | $19,706 | 211,259 | $18,400 | 170,692 | $13,380 | 1,489,432 | $113,446 |
| Edgewood Terrace | 119,700 | $6,695 | 85,500 | $0 | 88,200 | $0 | 77,400 | $524 | 71,100 | $4,089 | 65,700 | $3,845 | 61,200 | $3,501 | 47,700 | $2,861 | 55,800 | $3,205 | 64,800 | $3,747 | 68,400 | $3,944 | 89,100 | $4,844 | 894,600 | $37,254 |
| Elvans Road | 2,330 | $187 | 1,470 | $153 | 1,980 | $198 | 10,450 | $753 | 10,920 | $746 | 12,590 | $901 | 13,740 | $999 | 13,120 | $950 | 27,570 | $2,803 | 33,820 | $3,517 | 34,480 | $3,379 | 30,750 | $3,055 | 193,220 | $17,642 |
| Error | 0 | $0 | 0 | $0 | 0 | $0 | 100 | $6 | 120 | $7 | 140 | $8 | 110 | $7 | 100 | $6 | 140 | $8 | 200 | $12 | 950 | $85 | 300 | $16 | 2,160 | $156 |
| Frederick Douglas | 6,550 | $131 | 8,300 | $738 | 8,710 | $153 | 1,270 | $131 | 1,000 | $106 | 1,160 | $120 | 140 | $20 | 140 | $20 | 130 | $21 | 140 | $22 | 130 | $20 | 90 | $16 | 27,760 | $1,497 |
| Frontiers | 620 | $28 | 490 | $0 | 710 | $4 | 2,960 | $144 | 10,890 | $775 | 8,720 | $557 | 7,450 | $497 | 8,880 | $610 | 10,020 | $895 | 9,140 | $773 | 8,210 | $627 | 7,780 | $595 | 75,870 | $5,504 |
| Greenleaf Gardens | 148,500 | $7,659 | 73,260 | $1,274 | 62,790 | $1,900 | 98,180 | $6,461 | 61,550 | $3,779 | 87,750 | $6,534 | 71,910 | $5,267 | 66,656 | $4,425 | 95,390 | $8,676 | 115,365 | $11,086 | 131,540 | $12,726 | 191,973 | $16,230 | 1,204,864 | $86,017 |
| Henson Ridge | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 |
| Hopkins Apartments | 75,636 | $3,252 | 73,852 | $23,458 | 81,240 | $5,215 | 149,816 | $4,452 | 58,750 | $3,923 | 74,740 | $4,815 | 70,498 | $4,580 | 48,730 | $3,515 | 95,042 | $6,883 | 123,880 | $8,972 | 412,460 | $34,636 | 101,358 | $10,368 | 1,366,002 | $114,069 |
| Lincoln Heights | 32,810 | $3,247 | 30,220 | $948 | 35,220 | $2,573 | 148,430 | $10,716 | 168,012 | $11,624 | 191,204 | $12,659 | 170,966 | $11,271 | 182,018 | $11,795 | 257,090 | $20,708 | 324,550 | $28,345 | 356,752 | $31,791 | 317,132 | $27,234 | 2,214,404 | $172,911 |
| Montana Terrace | 16,100 | $1,514 | 25,320 | $7,965 | 23,140 | $677 | 29,770 | $1,836 | 20,280 | $1,342 | 23,510 | $1,581 | 21,230 | $1,341 | 22,700 | $1,379 | 39,840 | $2,842 | 42,280 | $3,911 | 55,730 | $5,226 | 46,260 | $4,143 | 366,160 | $33,759 |
| Office | 347,360 | $30,132 | 287,080 | $4,304 | 272,880 | $18,246 | 267,440 | $16,978 | 268,840 | $17,336 | 249,080 | $16,463 | 290,080 | $18,443 | 314,560 | $20,276 | 337,520 | $30,330 | 416,800 | $33,999 | 398,320 | $33,349 | 400,000 | $31,747 | 3,849,960 | $271,605 |
| Ontario | 2,180 | $241 | 2,820 | $165 | 3,220 | $303 | 2,900 | $274 | 2,860 | $270 | 3,280 | $309 | 2,600 | $246 | 2,630 | $249 | 2,940 | $323 | 2,950 | $324 | 2,230 | $247 | 2,510 | $266 | 33,120 | $3,216 |
| Parkside Additions | 23,830 | $1,882 | 21,660 | $244 | 22,910 | $531 | 24,900 | $1,220 | 22,420 | $1,342 | 20,140 | $1,328 | 21,800 | $1,487 | 20,550 | $1,386 | 25,850 | $2,017 | 35,580 | $3,274 | 37,620 | $3,466 | 35,030 | $3,072 | 312,290 | $21,248 |
| Potomac Gardens | 231,418 | $5,903 | 190,038 | $11,941 | 242,210 | $14,734 | 358,600 | $13,615 | 179,698 | $11,318 | 227,380 | $13,642 | 204,514 | $13,597 | 199,404 | $12,853 | 262,056 | $19,897 | 351,532 | $25,160 | 326,124 | $22,572 | 301,208 | $20,968 | 3,074,182 | $186,201 |
| Scattered Sites | 136,040 | $9,202 | 147,480 | $737 | 152,530 | $3,264 | 217,060 | $1,861 | 206,481 | $26,933 | 200,969 | $13,142 | 194,835 | $12,315 | 174,155 | $10,939 | 196,567 | $14,185 | 249,169 | $20,745 | 266,465 | $21,824 | 250,107 | $20,050 | 2,391,858 | $155,196 |
| Stanton Dwelling | 20,882 | $1,146 | 19,740 | $1,743 | 24,100 | $2,088 | 48,743 | $3,728 | 40,369 | $3,008 | 48,003 | $3,723 | 29,393 | $1,698 | 18,694 | $1,071 | 16,527 | $1,034 | 17,730 | $992 | 16,365 | $2,105 | 4,740 | $285 | 307,286 | $22,621 |
| Sursum Corda | 5,520 | $319 | 20,080 | $567 | 320 | $58 | 800 | $63 | 2,480 | $153 | 2,160 | $135 | 20,800 | $1,476 | 2,320 | $144 | 2,880 | $174 | 3,520 | $210 | 3,520 | $0 | 0 | $0 | 64,400 | $3,298 |
| Warehouse | 30,240 | $2,666 | 20,400 | $2,225 | 22,980 | $1,441 | 22,680 | $1,338 | 22,800 | $1,365 | 19,140 | $1,191 | 20,160 | $1,248 | 22,020 | $1,499 | 26,880 | $2,440 | 30,240 | $2,646 | 36,360 | $2,960 | 31,620 | $2,607 | 305,520 | $25,625 |
| Wheeler Creek | 0 | $0 | 0 | $0 | 0 | $0 | 680 | $47 | 620 | $42 | 580 | $36 | 490 | $29 | 420 | $24 | 550 | $40 | 670 | $55 | 530 | $37 | 470 | $30 | 5,010 | $339 |
| **DCHA TOTAL** | 4,771,053 | $320,464 | 4,314,614 | $143,813 | 4,507,038 | $187,457 | 5,565,899 | $320,413 | 4,989,688 | $324,393 | 5,291,366 | $347,590 | 4,785,164 | $316,988 | 4,687,970 | $317,425 | 6,409,725 | $522,036 | 7,853,643 | $673,251 | 8,837,228 | $788,499 | 8,078,651 | $670,166 | 70,092,839 | $4,932,496 |

*Figure 3: FY02 Electricity*

| Electricity - FY03 | 10/1/2002 | | 11/1/2002 | | 12/1/2002 | | 1/1/2003 | | 2/1/2003 | | 3/1/2003 | | 4/1/2003 | | 5/1/2003 | | 6/1/2003 | | 7/1/2003 | | 8/1/2003 | | 9/1/2003 | | FY03 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Development | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost |
| Benning Terrace | 158,440 | $11,975 | 138,980 | $9,223 | 161,784 | $9,883 | 164,022 | $11,500 | 126,006 | $8,245 | 137,316 | $9,281 | 127,884 | $8,571 | 139,246 | $9,647 | 150,372 | $11,891 | 275,124 | $25,929 | 261,504 | $26,591 | 222,490 | $17,358 | 2,063,168 | $160,095 |
| Carroll Apartments | 45,000 | $4,227 | 36,000 | $2,009 | 41,400 | $2,337 | 44,100 | $2,042 | 30,600 | $1,865 | 38,250 | $1,238 | 31,950 | $2,700 | 39,150 | $2,360 | 43,650 | $4,020 | 67,500 | $5,037 | 71,100 | $5,591 | 57,150 | $4,964 | 545,850 | $38,390 |
| Claridge Towers | 190,800 | $21,220 | 129,600 | $10,697 | 154,350 | $12,881 | 143,098 | $11,877 | 128,250 | $10,672 | 126,000 | $10,475 | 115,650 | $9,466 | 121,050 | $9,932 | 143,100 | $15,779 | 204,300 | $22,890 | 206,550 | $23,645 | 213,300 | $24,522 | 1,876,048 | $184,056 |
| Colorado Apartments | 17,890 | $1,549 | 16,310 | $1,108 | 25,600 | $1,858 | 37,880 | $2,659 | 43,580 | $2,916 | 33,570 | $3,116 | 30,280 | $1,269 | 20,670 | $1,523 | 17,990 | $1,457 | 15,900 | $1,270 | 20,300 | $1,755 | 17,790 | $1,555 | 297,760 | $22,035 |
| Columbia Road | 20,398 | $1,774 | 15,180 | $1,066 | 12,402 | $865 | 13,026 | $922 | 12,600 | $859 | 10,090 | $692 | 10,330 | $560 | 10,682 | $697 | 9,710 | $678 | 18,320 | $1,517 | 25,672 | $2,264 | 24,718 | $2,319 | 183,128 | $14,213 |
| Ft. Dupont Dwelling | 76,650 | $7,665 | 44,480 | $2,554 | 58,030 | $4,208 | 168,735 | $13,379 | 161,612 | $10,830 | 141,164 | $7,238 | 147,874 | $6,398 | 100,225 | $5,339 | 83,769 | $5,158 | 79,628 | $5,125 | 97,328 | $6,455 | 89,852 | $7,459 | 1,249,347 | $81,807 |
| Ft. Lincoln Apartments | 96,900 | $8,242 | 69,600 | $4,422 | 50,400 | $2,797 | 54,000 | $2,629 | 55,200 | $3,228 | 60,000 | $3,641 | 45,300 | $2,464 | 45,300 | $2,464 | 75,000 | $5,723 | 104,400 | $9,139 | 104,700 | $9,424 | 113,100 | $10,420 | 873,900 | $64,594 |
| Garfield Terrace Family | 320 | $25 | 239 | $16 | 169 | $11 | 169 | $12 | 152 | $2,108 | 31,799 | $14 | 13,304 | $899 | 5,948 | $383 | 6,864 | $540 | 7,286 | $595 | 8,595 | $748 | 8,444 | $749 | 83,290 | $6,099 |
| Garfield Terrace Senior | 8,880 | $702 | 6,631 | $446 | 4,691 | $307 | 4,681 | $321 | 4,198 | $58,409 | 881,021 | $376 | 368,596 | $24,904 | 164,792 | $10,621 | 190,176 | $14,954 | 201,864 | $16,481 | 238,135 | $20,713 | 233,936 | $20,755 | 2,307,600 | $168,989 |
| Greenleaf House | 446,458 | $43,871 | 211,372 | $14,287 | 251,790 | $17,777 | 230,680 | $14,051 | 211,708 | $14,282 | 250,584 | $17,566 | 198,190 | $13,130 | 191,410 | $12,521 | 280,544 | $23,722 | 344,302 | $31,130 | 376,110 | $35,679 | 305,656 | $27,320 | 3,298,804 | $265,337 |
| Harvard Towers | 128,400 | $10,075 | 99,000 | $6,005 | 80,400 | $5,039 | 91,800 | $5,270 | 69,300 | $4,601 | 72,900 | $4,948 | 73,200 | $4,878 | 70,200 | $4,687 | 75,300 | $7,119 | 117,300 | $10,622 | 141,300 | $12,521 | 143,900 | $13,650 | 1,161,000 | $89,415 |
| Highland Dwelling & Addition | 208,864 | $16,337 | 248,051 | $12,142 | 208,132 | $11,170 | 309,104 | $16,556 | 167,462 | $9,457 | 391,049 | $12,677 | 207,398 | $11,516 | 184,548 | $10,581 | 249,467 | $18,896 | 357,916 | $31,239 | 381,062 | $35,110 | 279,588 | $24,362 | 3,192,641 | $210,043 |
| Horizon House | 123,330 | $10,729 | 62,550 | $4,088 | 107,490 | $6,901 | 0 | $4,669 | 69,090 | $4,102 | 71,970 | $4,447 | 68,760 | $4,335 | 90,840 | $6,120 | 100,020 | $8,126 | 129,630 | $11,446 | 123,300 | $10,865 | 125,940 | $11,359 | 1,072,920 | $87,187 |
| James Apartments | 149,910 | $11,361 | 89,680 | $4,788 | 101,800 | $4,929 | 0 | $5,495 | 39,170 | $2,340 | 142,150 | $8,055 | 82,030 | $4,629 | 101,150 | $4,483 | 119,600 | $10,491 | 160,830 | $11,065 | 149,700 | $10,829 | 169,720 | $12,133 | 1,305,740 | $90,598 |
| James Creek | 173,209 | $14,397 | 116,946 | $7,258 | 142,752 | $8,227 | 139,706 | $9,253 | 130,873 | $8,428 | 131,134 | $8,341 | 124,927 | $7,766 | 117,469 | $7,558 | 152,207 | $12,130 | 209,245 | $19,642 | 223,576 | $20,223 | 238,111 | $22,055 | 1,900,155 | $145,277 |
| Judiciary House | 153,000 | $10,982 | 123,750 | $7,126 | 130,050 | $7,401 | 83,250 | $4,583 | 110,250 | $6,047 | 100,800 | $5,484 | 99,900 | $4,483 | 91,350 | $4,986 | 106,200 | $5,725 | 131,850 | $8,565 | 351,900 | $18,865 | 215,100 | $18,698 | 1,697,400 | $102,944 |
| Kelly Miller | 101,804 | $6,734 | 59,890 | $3,336 | 81,184 | $4,479 | 81,866 | $4,586 | 68,108 | $3,324 | 71,150 | $3,970 | 71,108 | $3,871 | 60,292 | $3,397 | 64,448 | $3,589 | 93,540 | $5,942 | 108,402 | $7,431 | 121,116 | $9,112 | 982,908 | $59,771 |
| Kenilworth Courts | 343,140 | $29,930 | 219,520 | $14,217 | 205,880 | $13,067 | 246,970 | $16,243 | 214,740 | $14,764 | 262,780 | $17,379 | 170,640 | $10,523 | 297,550 | $15,471 | 219,590 | $18,918 | 299,740 | $27,046 | 372,950 | $32,662 | 348,860 | $32,609 | 3,202,360 | $242,828 |
| Kentucky Courts | 41,120 | $2,434 | 79,680 | $4,674 | 6,480 | $3,045 | 31,440 | $2,919 | 73,080 | $2,973 | 205,200 | $5,276 | 44,320 | $2,723 | 32,960 | $3,965 | 101,080 | $3,876 | 32,360 | $5,226 | 130,760 | $4,137 | 52,920 | $3,296 | 831,400 | $44,546 |
| Knox Hill | 79,420 | $5,699 | 80,990 | $4,712 | 116,160 | $6,176 | 116,810 | $6,530 | 93,700 | $5,689 | 93,730 | $5,439 | 75,880 | $4,449 | 77,920 | $4,472 | 79,790 | $6,081 | 129,110 | $9,446 | 103,940 | $7,931 | 94,970 | $7,270 | 1,142,420 | $73,895 |
| Langston Terrace | 28,370 | $2,628 | 19,880 | $1,472 | 21,540 | $1,440 | 24,020 | $1,768 | 19,050 | $1,363 | 21,150 | $1,547 | 20,980 | $1,495 | 20,280 | $1,455 | 19,930 | $1,596 | 33,110 | $3,101 | 35,740 | $3,520 | 35,770 | $3,502 | 299,820 | $24,886 |
| Ledroit | 89,100 | $6,142 | 68,160 | $3,981 | 73,980 | $4,372 | 76,500 | $4,600 | 66,360 | $3,383 | 63,000 | $3,526 | 57,720 | $3,100 | 60,600 | $3,349 | 72,120 | $4,606 | 90,540 | $6,301 | 95,220 | $6,668 | 107,760 | $8,195 | 921,060 | $58,223 |
| Lincoln Road | 15,400 | $1,344 | 15,600 | $928 | 27,530 | $2,043 | 11,590 | $679 | 10,300 | $666 | 10,230 | $654 | 7,780 | $480 | 9,730 | $628 | 11,510 | $898 | 18,660 | $1,640 | 20,950 | $1,882 | 34,070 | $2,677 | 193,350 | $14,518 |
| Park Morton | 101,040 | $8,020 | 75,580 | $5,094 | 90,510 | $6,174 | 86,570 | $5,914 | 74,460 | $5,116 | 82,520 | $5,905 | 68,470 | $3,567 | 65,590 | $4,050 | 73,030 | $5,007 | 109,800 | $8,617 | 125,490 | $10,118 | 151,530 | $11,747 | 1,104,590 | $79,329 |
| Regency House | 88,650 | $6,237 | 72,900 | $4,232 | 77,850 | $4,701 | 75,150 | $4,438 | 71,100 | $4,050 | 62,550 | $3,422 | 66,150 | $3,092 | 66,600 | $3,699 | 65,700 | $3,489 | 98,550 | $7,515 | 96,300 | $7,201 | 110,700 | $9,139 | 952,200 | $61,213 |
| Richardson Dwelling | 131,140 | $10,942 | 94,590 | $6,243 | 114,900 | $6,785 | 0 | $8,375 | 96,790 | $6,536 | 106,257 | $7,241 | 101,697 | $7,570 | 98,652 | $6,276 | 116,529 | $9,235 | 189,188 | $17,437 | 179,188 | $16,674 | 172,764 | $15,981 | 1,401,695 | $119,295 |
| Sibley Plaza | 177,420 | $14,296 | 183,840 | $12,652 | 147,600 | $9,505 | 165,780 | $11,233 | 190,500 | $12,107 | 138,000 | $8,672 | 172,020 | $9,676 | 141,480 | $9,019 | 168,600 | $13,341 | 203,640 | $16,246 | 236,580 | $20,981 | 270,840 | $25,496 | 2,196,300 | $163,224 |
| Stoddert Terrace | 127,392 | $10,428 | 96,995 | $6,580 | 118,280 | $8,047 | 121,768 | $8,071 | 115,666 | $8,024 | 100,714 | $7,053 | 103,645 | $5,699 | 86,436 | $5,792 | 82,802 | $6,207 | 132,961 | $11,593 | 154,762 | $14,250 | 166,374 | $15,253 | 1,407,795 | $106,997 |
| Syphax Gardens | 115,150 | $10,112 | 85,310 | $5,856 | 100,510 | $6,210 | 88,130 | $5,902 | 88,560 | $6,242 | 86,880 | $6,259 | 84,660 | $5,669 | 80,880 | $5,373 | 97,390 | $7,455 | 140,610 | $12,234 | 152,510 | $14,036 | 159,270 | $14,793 | 1,279,860 | $100,139 |
| Villager | 9,500 | $691 | 15,150 | $1,077 | 16,250 | $1,067 | 15,780 | $1,106 | 17,570 | $1,210 | 10,600 | $763 | 36,280 | $281 | 8,170 | $280 | 10,330 | $749 | 17,530 | $1,453 | 16,720 | $1,454 | 23,040 | $2,211 | 196,920 | $12,342 |
| Woodland Terrace | 170,400 | $14,078 | 42,150 | $2,877 | 296,100 | $15,953 | 176,850 | $7,971 | 151,050 | $9,188 | 213,000 | $8,660 | 164,700 | $9,544 | 138,750 | $8,083 | 178,950 | $13,553 | 284,250 | $19,923 | 263,100 | $20,099 | 233,400 | $18,650 | 2,312,700 | $148,579 |
| | 3,617,495 | $304,845 | 2,618,604 | $165,166 | 3,025,994 | $189,654 | 2,803,475 | $195,552 | 2,711,085 | $233,025 | 4,147,558 | $183,353 | 2,991,623 | $179,705 | 2,739,920 | $169,211 | 3,165,768 | $245,009 | 4,298,984 | $365,413 | 4,873,444 | $410,321 | 4,540,179 | $399,609 | 41,534,129 | $3,040,863 |
| Arthur Capper | 283,910 | $20,630 | 308,460 | $17,506 | 371,370 | $21,262 | 463,640 | $24,707 | 317,200 | $19,141 | 356,610 | $20,498 | 256,700 | $14,764 | 259,670 | $14,277 | 251,580 | $17,372 | 324,750 | $26,353 | 350,830 | $27,122 | 312,780 | $24,429 | 3,857,500 | $248,060 |
| Arthur Capper Family | 22,454 | $3,315 | 79,838 | $6,968 | 25,762 | $3,112 | 44,262 | $2,288 | 30,340 | $4,601 | 30,060 | $3,137 | 27,988 | $2,569 | 29,440 | $2,927 | 32,600 | $3,444 | 49,463 | $10,594 | 50,344 | $9,236 | 44,970 | $5,789 | 467,521 | $57,980 |
| Barry Farm | 327,700 | $25,974 | 283,346 | $19,381 | 349,850 | $22,847 | 344,862 | $24,636 | 289,322 | $20,091 | 290,080 | $19,554 | 258,828 | $17,233 | 276,332 | $19,218 | 315,630 | $26,147 | 523,524 | $50,060 | 547,306 | $54,363 | 427,682 | $39,669 | 4,234,462 | $339,171 |
| Capitol View Plaza | 168,750 | $12,707 | 94,940 | $5,350 | 103,600 | $5,733 | 108,900 | $4,623 | 103,470 | $6,151 | 81,590 | $4,726 | 8,610 | $14 | 91,650 | $5,147 | 83,510 | $4,809 | 85,500 | $6,499 | 94,040 | $13,440 | 85,680 | $154 | 1,110,240 | $69,352 |
| Carrollsburg Dwelling | 150,736 | $12,075 | 146,340 | $10,171 | 216,250 | $13,221 | 191,208 | $14,575 | 160,005 | $11,448 | 174,873 | $11,693 | 143,546 | $10,031 | 124,205 | $8,737 | 126,963 | $10,322 | 225,925 | $20,543 | 215,959 | $20,600 | 217,443 | $18,514 | 2,093,453 | $161,929 |
| East Capitol Dwelling | 115,856 | $9,215 | 90,972 | $9,310 | 99,586 | $6,516 | 1,570 | $6,306 | 78,047 | $6,424 | 71,484 | $4,917 | 63,773 | $4,371 | 94,909 | $3,332 | 38,464 | $5,322 | 68,292 | $5,983 | 46,797 | $3,998 | 31,936 | $1,827 | 802,086 | $67,520 |
| Edgewood Terrace | 79,200 | $4,282 | 52,200 | $3,016 | 65,700 | $3,592 | 0 | $0 | 0 | $0 | 0 | $4,401 | 103,200 | $5,820 | 147,600 | $8,226 | 69,000 | $3,846 | 97,200 | $5,292 | 88,800 | $4,852 | 234,600 | $8,052 | 937,500 | $51,378 |
| Elvans Road | 15,080 | $1,287 | 12,190 | $831 | 14,410 | $927 | 14,430 | $1,020 | 12,650 | $882 | 12,870 | $901 | 10,710 | $730 | 13,420 | $912 | 16,840 | $1,495 | 35,520 | $3,640 | 28,300 | $2,888 | 27,500 | $2,795 | 213,920 | $18,308 |
| Error | 200 | $11 | 140 | $8 | 230 | $8 | 250 | $14 | 180 | $10 | 180 | $10 | 190 | $11 | 190 | $11 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 1,560 | $82 |
| Frederick Douglas | 1,090 | $65 | 75,500 | $6,825 | 7,110 | $659 | 6,730 | $564 | 5,140 | $486 | 19,680 | $492 | 5,290 | $471 | 5,160 | $474 | 5,980 | $559 | 11,650 | $998 | 9,720 | $940 | 8,490 | $832 | 161,540 | $13,366 |
| Frontiers | 4,520 | $324 | 1,930 | $107 | 2,400 | $64 | 1,520 | $93 | 1,200 | $67 | 1,460 | $87 | 940 | $54 | 1,030 | $57 | 1,350 | $90 | 2,510 | $246 | 3,640 | $361 | 450 | $11 | 22,950 | $1,561 |
| Greenleaf Gardens | 97,654 | $8,947 | 95,301 | $6,058 | 91,007 | $5,650 | 92,776 | $6,736 | 59,842 | $3,851 | 65,936 | $4,438 | 69,427 | $4,517 | 85,086 | $8,220 | 97,770 | $6,516 | 152,021 | $13,503 | 126,023 | $12,782 | 124,476 | $11,833 | 1,157,319 | $93,052 |
| Henson Ridge | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 |
| Hopkins Apartments | 94,006 | $7,116 | 66,348 | $3,991 | 83,834 | $11,323 | 72,270 | $4,342 | 32,560 | $4,431 | 79,796 | $7,241 | 62,658 | $6,579 | 59,838 | $4,024 | 72,470 | $11,156 | 113,672 | $11,792 | 115,682 | $9,422 | 109,676 | $13,242 | 962,810 | $94,658 |
| Lincoln Heights | 268,028 | $21,095 | 177,334 | $12,606 | 256,204 | $13,630 | 213,004 | $14,050 | 217,127 | $14,172 | 213,559 | $14,300 | 184,239 | $12,220 | 180,196 | $12,725 | 222,902 | $17,207 | 326,747 | $28,700 | 352,554 | $32,198 | 373,706 | $32,817 | 2,985,600 | $225,720 |
| Montana Terrace | 30,760 | $2,595 | 28,030 | $1,694 | 27,940 | $2,293 | 5,980 | $2,031 | 35,600 | $2,057 | 32,210 | $2,058 | 39,270 | $1,574 | 25,070 | $1,783 | 32,770 | $3,010 | 55,930 | $5,065 | 56,850 | $5,942 | 49,580 | $5,109 | 419,990 | $35,212 |
| Office | 397,680 | $31,003 | 289,400 | $17,405 | 309,360 | $17,953 | 279,280 | $14,107 | 277,080 | $15,918 | 249,280 | $15,511 | 297,280 | $17,940 | 302,240 | $18,354 | 322,040 | $26,014 | 371,560 | $29,949 | 398,360 | $30,782 | 434,840 | $34,198 | 3,928,400 | $269,135 |
| Ontario | 3,030 | $320 | 2,780 | $251 | 3,080 | $278 | 3,450 | $289 | 2,800 | $255 | 2,790 | $254 | 2,490 | $227 | 2,580 | $235 | 2,820 | $294 | 2,990 | $311 | 1,880 | $198 | 2,600 | $282 | 33,290 | $3,193 |
| Parkside Additions | 28,050 | $2,326 | 18,230 | $1,197 | 21,800 | $1,490 | 22,760 | $1,574 | 20,870 | $1,439 | 19,540 | $1,352 | 19,830 | $1,122 | 17,690 | $1,176 | 18,180 | $1,306 | 30,580 | $2,609 | 36,800 | $3,297 | 40,180 | $3,760 | 294,510 | $22,649 |
| Potomac Gardens | 213,006 | $15,694 | 195,334 | $12,483 | 229,952 | $13,536 | 205,694 | $10,195 | 182,624 | $10,948 | 202,074 | $11,684 | 169,288 | $10,534 | 185,210 | $11,281 | 204,244 | $15,204 | 297,958 | $20,331 | 312,646 | $21,840 | 251,832 | $18,321 | 2,649,862 | $172,050 |
| Scattered Sites | 209,126 | $15,701 | 201,215 | $12,443 | 242,530 | $15,872 | 247,826 | $16,800 | 265,914 | $18,390 | 52,141 | $3,585 | 48,941 | $3,037 | 466,126 | $28,673 | 48,325 | $3,752 | 69,449 | $6,710 | 83,957 | $8,595 | 87,810 | $8,133 | 2,023,360 | $141,691 |
| Stanton Dwelling | 52,557 | $3,203 | 46,025 | $3,737 | 65,462 | $4,702 | 14,100 | $1,601 | 29,552 | $2,034 | 11,150 | $349 | 4,467 | $334 | 3,541 | $240 | 3,321 | $312 | 2,480 | $143 | 4,937 | $372 | 2,460 | $351 | 240,052 | $17,376 |
| Sursum Corda | 8,960 | $526 | 2,240 | $134 | 3,360 | $192 | 4,480 | $215 | 15,680 | $995 | 0 | $0 | 6,720 | $389 | 2,560 | $152 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 44,000 | $2,603 |
| Warehouse | 27,720 | $2,295 | 19,080 | $1,201 | 22,620 | $1,266 | 24,000 | $1,140 | 20,880 | $1,294 | 22,440 | $1,299 | 20,460 | $1,189 | 38,880 | $2,587 | 21,360 | $561 | 32,940 | $2,567 | 29,280 | $2,410 | 29,880 | $2,596 | 309,540 | $20,405 |
| Wheeler Creek | 460 | $28 | 600 | $36 | 940 | $56 | 1,210 | $81 | 930 | $61 | 770 | $49 | 630 | $39 | 500 | $29 | 470 | $30 | 490 | $32 | 660 | $53 | 540 | $39 | 8,200 | $533 |
| DCHA TOTAL | 6,218,028 | $505,579 | 4,906,377 | $317,874 | 5,640,751 | $355,835 | 5,167,677 | $347,540 | 4,870,098 | $378,170 | 6,138,131 | $315,888 | 4,797,098 | $295,473 | 5,153,043 | $322,005 | 5,154,357 | $403,777 | 7,180,135 | $617,334 | 7,828,809 | $676,012 | 7,439,290 | $632,362 | 70,493,794 | $5,167,847 |

*Figure 4: FY03 Electricity*

| Electricity - FY04 | 10/1/2003 | | 11/1/2003 | | 12/1/2003 | | 1/1/2004 | | 2/1/2004 | | 3/1/2004 | | 4/1/2004 | | 5/1/2004 | | 6/1/2004 | | 7/1/2004 | | 8/1/2004 | | 9/1/2004 | | FY04 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Development | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost | kWh | Cost |
| Benning Terrace | 140,378 | $11,660 | 127,822 | $8,730 | 178,560 | $12,540 | 152,926 | $11,689 | 151,816 | $9,642 | 133,372 | $9,350 | 149,976 | $10,580 | 171,848 | $12,612 | 211,522 | $19,427 | 304,522 | $26,846 | 264,438 | $21,445 | 246,414 | $19,270 | 2,233,394 | $173,791 |
| Carroll Apartments | 40,500 | $3,846 | 36,450 | $2,100 | 0 | $0 | 75,600 | $4,438 | 32,400 | $2,035 | 33,750 | $1,895 | 31,050 | $1,862 | 52,200 | $3,276 | 58,950 | $5,073 | 67,950 | $5,633 | 69,750 | $5,613 | 63,000 | $5,433 | 561,600 | $41,204 |
| Claridge Towers | 191,700 | $21,968 | 101,700 | $8,580 | 141,750 | $12,035 | 150,750 | $12,869 | 128,700 | $10,883 | 127,800 | $10,846 | 133,200 | $11,323 | 126,900 | $10,806 | 193,050 | $22,076 | 226,800 | $26,200 | 189,450 | $21,647 | 195,750 | $22,397 | 1,907,550 | $191,628 |
| Colorado Apartments | 16,180 | $1,466 | 14,740 | $1,000 | 20,160 | $1,527 | 36,760 | $2,674 | 43,920 | $3,147 | 34,540 | $2,559 | 27,040 | $2,028 | 22,400 | $1,657 | 17,500 | $1,412 | 18,510 | $1,563 | 20,330 | $1,810 | 17,580 | $1,493 | 289,660 | $22,337 |
| Columbia Road | 19,762 | $1,763 | 37,372 | $2,105 | 10,716 | $707 | 14,812 | $898 | 11,618 | $674 | 11,900 | $707 | 11,980 | $784 | 10,800 | $704 | 14,532 | $1,117 | 14,170 | $1,097 | 47,872 | $4,791 | 22,824 | $2,101 | 228,358 | $17,448 |
| Ft. Dupont Dwelling | 66,533 | $4,819 | 48,349 | $2,784 | 56,562 | $3,224 | 65,266 | $5,155 | 66,879 | $4,108 | 54,540 | $3,900 | 58,408 | $3,692 | 48,333 | $2,987 | 75,983 | $5,939 | 90,431 | $7,219 | 92,416 | $7,653 | 90,883 | $7,501 | 814,583 | $58,980 |
| Ft. Lincoln Apartments | 63,600 | $4,550 | 45,900 | $2,586 | 52,800 | $3,124 | 54,000 | $3,230 | 62,400 | $3,971 | 46,200 | $2,603 | 46,500 | $2,619 | 55,500 | $3,364 | 97,800 | $8,649 | 103,500 | $9,327 | 96,300 | $8,470 | 109,800 | $10,077 | 834,300 | $62,572 |
| Garfield Terrace Family | 8,135 | $714 | 6,054 | $406 | 156 | $11 | 13,355 | $927 | 207 | $17 | 184 | $12 | 172 | $12 | 153 | $12 | 311 | $26 | 302 | $26 | 372 | $35 | 46,576 | $3,351 | 75,977 | $5,548 |
| Garfield Terrace Senior | 225,375 | $19,769 | 167,736 | $11,253 | 4,324 | $307 | 370,005 | $25,692 | 5,743 | $464 | 5,096 | $337 | 4,778 | $341 | 4,247 | $321 | 8,619 | $714 | 8,358 | $733 | 10,298 | $956 | 1,290,414 | $92,829 | 2,104,993 | $153,716 |
| Greenleaf House | 267,750 | $23,180 | 207,454 | $13,852 | 233,898 | $16,181 | 259,060 | $18,811 | 181,086 | $12,521 | 233,566 | $16,238 | 204,132 | $13,611 | 209,812 | $14,077 | 346,278 | $32,631 | 348,232 | $32,509 | 348,298 | $32,531 | 361,532 | $33,285 | 3,201,098 | $259,428 |
| Harvard Towers | 127,500 | $12,286 | 80,700 | $5,484 | 72,900 | $4,951 | 83,100 | $5,528 | 69,600 | $4,779 | 69,000 | $4,768 | 73,800 | $4,945 | 66,000 | $4,580 | 91,500 | $8,542 | 265,200 | $17,996 | 155,100 | $15,192 | 138,300 | $14,017 | 1,292,700 | $103,069 |
| Highland Dwelling & Addition | 210,490 | $16,197 | 200,228 | $12,519 | 247,353 | $17,116 | 273,210 | $17,790 | 221,564 | $14,190 | 218,185 | $13,193 | 179,326 | $10,931 | 244,690 | $17,506 | 291,941 | $26,091 | 360,927 | $34,599 | 308,732 | $27,942 | 303,102 | $27,761 | 3,059,748 | $235,835 |
| Horizon House | 115,290 | $10,080 | 58,230 | $3,548 | 77,640 | $5,029 | 88,530 | $5,712 | 66,660 | $4,275 | 75,750 | $4,912 | 78,660 | $5,229 | 79,860 | $5,348 | 120,360 | $10,638 | 141,930 | $12,952 | 122,370 | $10,716 | 126,240 | $11,131 | 1,151,520 | $89,569 |
| James Apartments | 145,680 | $11,487 | 86,760 | $5,017 | 101,540 | $6,075 | 112,940 | $6,757 | 102,200 | $6,234 | 93,350 | $5,546 | 86,760 | $5,224 | 122,940 | $7,769 | 158,430 | $11,966 | 167,860 | $12,394 | 162,940 | $12,101 | 147,110 | $11,081 | 1,488,510 | $101,650 |
| James Creek | 135,755 | $10,524 | 129,027 | $8,599 | 141,075 | $9,487 | 166,901 | $11,883 | 113,096 | $7,373 | 146,071 | $9,700 | 123,675 | $8,372 | 157,632 | $11,237 | 192,570 | $17,492 | 238,302 | $22,703 | 228,748 | $21,104 | 245,547 | $22,915 | 2,018,399 | $161,391 |
| Judiciary House | 170,100 | $13,469 | 112,050 | $6,342 | 108,000 | $6,103 | 121,950 | $7,295 | 104,400 | $5,905 | 91,800 | $5,167 | 104,400 | $5,882 | 103,050 | $5,805 | 164,250 | $12,794 | 160,200 | $12,315 | 193,950 | $16,329 | 172,800 | $13,812 | 1,606,950 | $111,217 |
| Kelly Miller | 70,594 | $4,159 | 68,530 | $3,966 | 78,034 | $4,515 | 74,912 | $4,316 | 68,004 | $3,937 | 82,088 | $4,826 | 73,600 | $4,245 | 63,592 | $3,696 | 92,694 | $5,986 | 96,862 | $6,524 | 112,320 | $8,212 | 17,688 | $1,188 | 898,918 | $55,569 |
| Kenilworth Courts | 267,710 | $25,059 | 212,040 | $16,353 | 202,038 | $15,174 | 221,816 | $17,670 | 189,009 | $16,347 | 179,734 | $14,216 | 267,807 | $20,025 | 190,645 | $14,862 | 370,810 | $33,658 | 343,164 | $30,228 | 363,058 | $36,158 | 398,521 | $38,927 | 3,206,352 | $278,677 |
| Kentucky Courts | 110,120 | $6,527 | 57,080 | $3,533 | 68,360 | $4,164 | 66,920 | $4,085 | 64,320 | $3,929 | 267,960 | $2,638 | 48,280 | $3,011 | 58,920 | $3,593 | 75,760 | $4,563 | 63,200 | $2,895 | 200,040 | $8,175 | 86,400 | $5,159 | 1,167,360 | $52,272 |
| Knox Hill | 92,350 | $6,789 | 79,470 | $4,740 | 115,730 | $6,952 | 102,090 | $6,293 | 97,360 | $5,884 | 96,370 | $5,767 | 82,410 | $4,938 | 97,740 | $5,869 | 107,680 | $8,209 | 119,320 | $9,368 | 65,780 | $10,092 | 123,370 | $8,631 | 1,179,670 | $83,532 |
| Langston Terrace | 25,570 | $2,321 | 25,220 | $1,943 | 25,290 | $1,951 | 23,400 | $1,606 | 18,120 | $1,299 | 22,900 | $1,731 | 22,520 | $1,698 | 20,590 | $1,460 | 33,600 | $3,331 | 35,440 | $3,471 | 33,860 | $3,283 | 38,620 | $3,848 | 325,130 | $27,942 |
| Ledroit | 76,620 | $5,115 | 70,080 | $4,071 | 72,900 | $4,394 | 69,780 | $4,176 | 72,180 | $4,432 | 66,540 | $3,909 | 63,480 | $3,663 | 24,360 | $3,219 | 91,080 | $6,549 | 88,020 | $6,311 | 98,880 | $7,244 | 90,060 | $6,458 | 883,980 | $59,542 |
| Lincoln Road | 13,880 | $1,076 | 10,010 | $611 | 11,200 | $696 | 12,260 | $783 | 12,630 | $810 | 8,690 | $543 | 7,950 | $497 | 35,550 | $1,757 | 21,620 | $2,051 | 26,890 | $2,589 | 22,510 | $2,097 | 23,400 | $2,685 | 206,590 | $16,194 |
| Park Morton | 101,380 | $8,245 | 89,060 | $6,289 | 135,380 | $7,723 | 83,640 | $5,599 | 79,380 | $5,534 | 82,450 | $5,287 | 79,040 | $5,396 | 80,340 | $5,498 | 115,540 | $9,728 | 125,750 | $11,034 | 133,950 | $11,920 | 134,850 | $12,031 | 1,240,760 | $94,284 |
| Regency House | 77,850 | $5,297 | 68,400 | $4,029 | 72,900 | $4,307 | 73,350 | $4,426 | 68,850 | $4,069 | 59,490 | $3,375 | 67,050 | $3,871 | 60,750 | $3,375 | 92,250 | $7,098 | 99,450 | $7,795 | 117,450 | $10,044 | 99,000 | $7,795 | 956,700 | $65,480 |
| Richardson Dwelling | 117,285 | $9,619 | 127,911 | $7,156 | 107,065 | $7,250 | 122,610 | $8,446 | 113,500 | $8,057 | 229,123 | $9,590 | 95,843 | $6,421 | 120,794 | $8,506 | 149,966 | $13,508 | 192,757 | $18,426 | 170,209 | $15,092 | 178,161 | $16,564 | 1,725,224 | $128,638 |
| Sibley Plaza | 192,180 | $16,508 | 172,200 | $12,011 | 150,840 | $10,157 | 189,060 | $13,465 | 166,140 | $11,268 | 149,460 | $10,094 | 153,660 | $10,449 | 143,160 | $8,892 | 222,780 | $20,231 | 194,880 | $16,835 | 253,800 | $24,147 | 244,800 | $22,833 | 2,232,960 | $176,890 |
| Stoddert Terrace | 122,315 | $9,535 | 96,531 | $5,833 | 102,158 | $6,495 | 122,330 | $8,662 | 118,134 | $8,228 | 89,521 | $6,119 | 101,267 | $6,945 | 81,244 | $5,625 | 127,929 | $11,602 | 143,974 | $13,084 | 146,982 | $13,608 | 149,888 | $13,699 | 1,402,273 | $109,434 |
| Syphax Gardens | 87,610 | $6,746 | 93,460 | $5,688 | 116,000 | $8,963 | 103,140 | $7,434 | 107,160 | $7,893 | 90,310 | $6,265 | 95,670 | $6,808 | 94,070 | $6,660 | 136,420 | $12,064 | 161,240 | $14,936 | 154,490 | $13,976 | 156,570 | $14,362 | 1,396,140 | $111,796 |
| Villager | 13,160 | $1,114 | 12,240 | $941 | 15,250 | $886 | 13,070 | $722 | 11,250 | $779 | 9,940 | $629 | 14,790 | $1,039 | 12,580 | $863 | 16,400 | $1,446 | 21,580 | $1,896 | 18,020 | $1,762 | 15,380 | $1,480 | 173,660 | $13,558 |
| Woodland Terrace | 143,700 | $12,158 | 192,750 | $11,380 | 23,400 | $1,647 | 25,800 | $1,766 | 757,950 | $24,804 | 163,350 | $9,412 | 159,300 | $9,500 | 201,750 | $12,103 | 223,950 | $18,257 | 271,200 | $20,788 | 265,800 | $20,740 | 36,000 | $19,635 | 2,464,950 | $162,190 |
| | 3,457,052 | $288,046 | 2,835,554 | $183,446 | 2,743,779 | $183,692 | 3,343,343 | $230,796 | 3,306,276 | $197,488 | 2,972,940 | $176,136 | 2,646,524 | $175,942 | 2,762,450 | $188,039 | 3,922,075 | $342,868 | 4,500,921 | $390,293 | 4,468,513 | $394,886 | 5,370,580 | $473,749 | 42,330,007 | $3,225,381 |
| Arthur Capper | 250,170 | $18,955 | 270,620 | $15,862 | 307,490 | $18,821 | 374,670 | $22,705 | 313,950 | $18,828 | 274,760 | $16,512 | 232,820 | $13,987 | 256,830 | $15,148 | 255,320 | $20,019 | 285,000 | $22,965 | 289,890 | $23,056 | 272,370 | $21,345 | 3,383,890 | $228,203 |
| Arthur Capper Family | 21,600 | $2,565 | 21,285 | $2,392 | 22,066 | $2,823 | 27,909 | $3,473 | 21,532 | $4,511 | 19,734 | $2,141 | 15,880 | $1,909 | 25,722 | $3,100 | 34,147 | $4,924 | 36,408 | $4,837 | 39,049 | $5,192 | 27,414 | $4,166 | 312,686 | $42,033 |
| Barry Farm | 286,714 | $22,798 | 285,572 | $19,949 | 322,450 | $24,398 | 356,190 | $25,414 | 287,676 | $19,921 | 292,858 | $21,067 | 270,142 | $17,950 | 326,468 | $23,132 | 455,846 | $43,189 | 467,878 | $44,493 | 478,510 | $46,105 | 470,932 | $45,610 | 4,301,236 | $354,034 |
| Capitol View Plaza | 89,340 | $7,082 | 216,580 | $14,248 | 216,240 | $3,992 | 148,560 | $3,701 | 740 | $32 | 59,390 | $3,443 | 810 | $49 | 1,200 | $87 | 1,690 | $158 | 2,410 | $244 | 1,970 | $191 | 1,970 | $191 | 740,900 | $33,420 |
| Carrollsburg Dwelling | 136,483 | $11,592 | 142,915 | $10,220 | 158,132 | $11,466 | 103,220 | $7,797 | 166,987 | $10,503 | 94,102 | $4,280 | 58,449 | $4,017 | 72,531 | $5,126 | 113,561 | $9,435 | 88,078 | $7,252 | 79,835 | $6,900 | 77,352 | $7,551 | 1,291,645 | $96,139 |
| East Capitol Dwelling | 67,465 | $3,478 | 24,338 | $2,136 | 29,177 | $2,508 | 46,255 | $3,235 | 23,813 | $2,300 | 24,206 | $1,497 | 19,024 | $2,005 | 15,850 | $3,335 | 18,040 | $1,662 | 18,725 | $1,722 | 25,922 | $2,560 | 10,543 | $841 | 323,358 | $27,278 |
| Edgewood Terrace | 99,000 | $5,622 | 92,400 | $5,294 | 95,400 | $5,425 | 118,800 | $6,706 | 128,400 | $7,199 | 88,200 | $5,099 | 89,400 | $5,099 | 94,200 | $5,329 | 132,600 | $7,520 | 144,000 | $8,742 | 120,600 | $6,891 | 136,200 | $7,885 | 1,339,200 | $76,812 |
| Elvans Road | 23,790 | $1,402 | 16,580 | $833 | 13,350 | $894 | 15,530 | $1,164 | 13,040 | $865 | 12,480 | $887 | 12,320 | $862 | 24,970 | $1,950 | 27,250 | $2,760 | 33,450 | $3,216 | 34,800 | $3,903 | 28,990 | $2,955 | 256,550 | $21,690 |
| Error | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 |
| Frederick Douglas | 10 | $574 | 9,920 | $433 | 5,500 | $500 | 5,850 | $543 | 4,650 | $456 | 4,420 | $424 | 10,770 | $575 | 5,960 | $564 | 7,530 | $770 | 7,750 | $798 | 180 | $797 | 7,850 | $689 | 70,390 | $7,123 |
| Frontiers | 80 | $5 | 140 | $8 | 80 | $5 | 60 | $4 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 360 | $22 |
| Greenleaf Gardens | 81,112 | $7,127 | 69,191 | $5,048 | 84,218 | $6,399 | 109,605 | $5,994 | 134,130 | $5,304 | 90,952 | $6,304 | 76,150 | $5,365 | 92,602 | $6,953 | 97,294 | $9,328 | 131,316 | $12,516 | 117,642 | $11,419 | 121,792 | $11,955 | 1,206,004 | $93,713 |
| Henson Ridge | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $2,300 | 28,923 | $4,445 | 42,989 | $2,645 | 48,689 | $3,535 | 76,494 | $10,462 | 117,072 | $10,249 | 110,050 | $10,455 | 90,701 | $11,326 | 514,918 | $55,417 |
| Hopkins Apartments | 70,444 | $5,229 | 77,896 | $5,160 | 69,240 | $3,725 | 70,866 | $13,899 | 57,448 | $8,248 | 61,854 | $3,885 | 59,368 | $8,289 | 63,972 | $3,988 | 106,178 | $13,039 | 113,276 | $7,668 | 105,640 | $15,042 | 89,980 | $5,691 | 946,162 | $93,861 |
| Lincoln Heights | 215,058 | $18,602 | 199,226 | $14,073 | 237,469 | $15,499 | 240,954 | $16,376 | 252,152 | $16,993 | 197,174 | $13,301 | 206,744 | $13,759 | 262,520 | $18,334 | 302,562 | $25,984 | 362,898 | $32,998 | 400,368 | $36,210 | 356,971 | $32,471 | 3,234,096 | $254,600 |
| Montana Terrace | 39,752 | $3,241 | 27,463 | $2,083 | 53,614 | $4,275 | 49,057 | $3,847 | 46,161 | $3,557 | 34,818 | $2,701 | 31,140 | $2,549 | 406,700 | $3,077 | 53,019 | $5,390 | 63,522 | $7,183 | 73,159 | $7,581 | 94,265 | $9,312 | 972,670 | $54,794 |
| Office | 353,240 | $30,044 | 309,200 | $19,276 | 324,760 | $19,620 | 306,680 | $18,373 | 274,240 | $16,961 | 288,040 | $17,787 | 284,640 | $17,860 | 311,160 | $19,254 | 429,870 | $34,924 | 425,120 | $35,255 | 386,400 | $32,824 | 418,840 | $36,715 | 4,112,190 | $298,894 |
| Ontario | 2,520 | $274 | 2,450 | $228 | 2,860 | $265 | 2,930 | $272 | 2,470 | $230 | 2,420 | $226 | 2,770 | $257 | 2,710 | $252 | 3,050 | $336 | 1,530 | $172 | 2,400 | $266 | 2,180 | $242 | 30,290 | $3,021 |
| Parkside Additions | 29,710 | $2,553 | 20,840 | $1,484 | 23,750 | $1,718 | 22,090 | $1,589 | 21,500 | $1,557 | 17,490 | $1,228 | 24,469 | $1,631 | 19,190 | $1,341 | 29,310 | $2,564 | 33,473 | $3,040 | 39,307 | $3,691 | 48,678 | $3,340 | 329,807 | $25,737 |
| Potomac Gardens | 205,820 | $15,867 | 220,718 | $13,373 | 199,114 | $12,087 | 245,780 | $15,823 | 186,648 | $11,852 | 191,382 | $11,618 | 192,048 | $11,821 | 214,408 | $13,319 | 292,712 | $21,712 | 293,994 | $21,715 | 317,684 | $23,177 | 176,442 | $12,079 | 2,736,750 | $184,444 |
| Scattered Sites | 846,710 | $63,891 | 189,636 | $12,366 | 245,717 | $16,902 | 254,108 | $17,817 | 275,050 | $20,056 | 211,988 | $14,375 | 188,484 | $12,226 | 175,235 | $10,974 | 59,223 | $5,348 | 62,761 | $5,797 | 385,351 | $30,357 | 67,867 | $30,856 | 2,962,130 | $240,964 |
| Stanton Dwelling | 3,428 | $233 | 2,266 | $164 | 2,446 | $193 | 2,978 | $218 | 2,959 | $187 | 3,893 | $188 | 2,130 | $182 | 3,516 | $185 | 6,381 | $736 | 8,078 | $944 | 11,123 | $1,123 | 9,943 | $944 | 99,141 | $5,298 |
| Sursum Corda | 0 | $0 | 18,080 | $1,070 | 0 | $0 | 0 | $0 | 12,320 | $783 | 3,440 | $205 | 3,440 | $151 | 3,520 | $210 | 3,920 | $233 | 3,840 | $229 | 4,560 | $269 | 4,080 | $242 | 57,200 | $3,392 |
| Warehouse | 22,500 | $2,311 | 19,800 | $1,288 | 22,200 | $1,393 | 22,200 | $1,391 | 22,020 | $1,293 | 19,440 | $1,183 | 20,220 | $1,245 | 21,960 | $1,351 | 46,560 | $2,521 | 0 | $0 | 49,360 | $4,612 | 29,840 | $2,655 | 296,100 | $21,244 |
| Wheeler Creek | 500 | $34 | 760 | $50 | 1,230 | $85 | 1,450 | $101 | 980 | $66 | 920 | $62 | 670 | $43 | 830 | $55 | 820 | $73 | 830 | $74 | 740 | $63 | 800 | $70 | 10,530 | $775 |
| DCHA TOTAL | 6,302,498 | $511,524 | 5,073,430 | $330,483 | 5,180,222 | $336,686 | 5,869,085 | $401,241 | 5,555,142 | $351,491 | 4,995,824 | $308,994 | 4,491,401 | $300,429 | 5,213,193 | $328,634 | 6,475,452 | $565,956 | 7,202,330 | $622,401 | 7,543,053 | $667,569 | 7,906,580 | $722,880 | 71,818,250 | $5,448,289 |

*Figure 5: FY04 Electricity*

| Nat Gas | 10/1/2001 | | 11/1/2001 | | 12/1/2001 | | 1/1/2002 | | 2/1/2002 | | 3/1/2002 | | 4/1/2002 | | 5/1/2002 | | 6/1/2002 | | 7/1/2002 | | 8/1/2002 | | 9/1/2002 | | FY02 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Development | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost |
| Benning Terrace | 7,596 | $5,277 | 12,285 | $11,392 | 20,756 | $10,705 | 33,376 | $14,430 | 29,835 | $11,358 | 28,818 | $14,431 | 24,583 | $12,195 | 11,382 | $6,838 | 7,746 | $3,277 | 6,248 | $2,533 | 5,024 | $1,999 | 5,790 | $4,708 | 195,439 | $99,143 |
| Carroll Apartments | 944 | $409 | 15 | $24 | 5,333 | $2,357 | 5,469 | $2,410 | 6,955 | $2,992 | 7,314 | $3,133 | 5,036 | $2,239 | 0 | $0 | 957 | $395 | 472 | $190 | 0 | $0 | 319 | $324 | 32,815 | $14,473 |
| Claridge Towers | 6,708 | $16,706 | 14,294 | $6,522 | 17,691 | $7,853 | 31,755 | $13,362 | 21,873 | $9,491 | 25,498 | $10,911 | 13,084 | $6,046 | 4,443 | $1,785 | 3,615 | $1,446 | 3,201 | $1,281 | 0 | $0 | 3,006 | $1,230 | 145,166 | $76,633 |
| Colorado Apts. | | | | | | | | | | | | | | | | | | | | | | | | | 0 | $0 |
| Columbia Road | 138 | $454 | 189 | $143 | 139 | $90 | 187 | $105 | 1,451 | $1,481 | 1,140 | $1,260 | 55 | $45 | 82 | $62 | 549 | $630 | 531 | $588 | 0 | $0 | 496 | $711 | 4,956 | $5,569 |
| Ft. Dupont Dwelling | 1,951 | $1,146 | 2,538 | $2,344 | 5,238 | $2,597 | 7,474 | $3,496 | 3,242 | $1,627 | 6,388 | $3,054 | 4,741 | $2,339 | 1,089 | $712 | 906 | $387 | 1,019 | $320 | 1,584 | $944 | 1,692 | $1,363 | 37,861 | $20,309 |
| Ft. Lincoln Apartments | 2,746 | $2,642 | 7,749 | $3,493 | 2,172 | $979 | 7,247 | $3,114 | 7,979 | $3,400 | 7,694 | $3,289 | 6,762 | $2,922 | 0 | $0 | 0 | $0 | 1,371 | $548 | 1,225 | $490 | 1,461 | $612 | 46,406 | $21,489 |
| Garfield Terrace Family | 234 | $541 | 37 | $23 | 3,608 | $1,113 | 1,807 | $755 | 2,013 | $837 | 1,656 | $697 | 1,085 | $473 | 206 | $91 | 146 | $60 | 20 | $9 | 18 | $8 | 123 | $58 | 10,953 | $4,664 |
| Garfield Terrace Senior | 4,633 | $10,724 | 728 | $454 | 71,557 | $22,069 | 35,843 | $14,965 | 39,918 | $16,602 | 32,837 | $13,825 | 21,528 | $9,382 | 4,094 | $1,799 | 2,905 | $1,190 | 397 | $183 | 353 | $165 | 2,438 | $1,154 | 217,232 | $92,512 |
| Greenleaf Senior | 5,548 | $2,329 | 12,982 | $11,257 | 25,257 | $11,505 | 32,620 | $14,338 | 32,949 | $14,220 | 36,303 | $15,546 | 27,800 | $11,445 | 15,448 | $6,198 | 9,290 | $3,738 | 6,430 | $2,588 | 5,986 | $2,409 | 6,526 | $2,747 | 217,139 | $98,320 |
| Harvard Towers | 4,572 | $14,891 | 998 | $437 | 10,565 | $4,673 | 15,112 | $6,453 | 15,328 | $6,538 | 11,499 | $5,038 | 881 | $391 | 1,625 | $655 | 15,553 | $6,645 | 2,485 | $994 | 3,440 | $1,412 | 3,005 | $1,242 | 84,862 | $49,367 |
| Highland Dwelling & Addition | 6,401 | $3,231 | 9,596 | $9,371 | 18,771 | $8,575 | 27,329 | $11,806 | 28,667 | $12,352 | 21,528 | $9,686 | 28,290 | $12,274 | 13,485 | $11,443 | 9,493 | $5,459 | 753 | $2,933 | 6,767 | $4,207 | 6,795 | $6,994 | 177,875 | $98,330 |
| Horizon House | 3,308 | $6,585 | 7,025 | $3,203 | 7,583 | $3,422 | 12,731 | $5,438 | 8,929 | $3,949 | 8,960 | $3,961 | 5,391 | $2,562 | 2,380 | $969 | 1,843 | $737 | 1,847 | $739 | 1,510 | $604 | 1,692 | $704 | 63,198 | $32,873 |
| James Apartments | 2,661 | $7,706 | 6,291 | $2,933 | 7,189 | $3,285 | 52 | $33 | 22,763 | $9,838 | 9,741 | $4,285 | 6,141 | $2,873 | 1,591 | $669 | 1,376 | $562 | 1,231 | $504 | 0 | $0 | 1,215 | $525 | 60,251 | $33,214 |
| James Creek | 4,845 | $4,979 | 10,653 | $10,333 | 15,687 | $8,359 | 25,148 | $12,213 | 31,600 | $14,341 | 28,325 | $13,468 | 18,762 | $9,251 | 11,266 | $6,528 | 8,043 | $3,513 | 4,366 | $1,857 | 4,272 | $1,591 | 3,570 | $3,534 | 166,536 | $89,966 |
| Judiciary House | 5,955 | $5,225 | 9,386 | $7,883 | 12,685 | $5,649 | 19,264 | $8,226 | 16,516 | $7,150 | 15,506 | $6,754 | 11,456 | $5,165 | 0 | $0 | 5,433 | $2,173 | 6,774 | $1,370 | 0 | $0 | 3,120 | $1,288 | 106,094 | $50,884 |
| Kelly Miller | 12,057 | $9,783 | 12,033 | $10,093 | 17,012 | $7,523 | 30,456 | $12,789 | 27,539 | $11,647 | 26,167 | $11,110 | 22,808 | $9,788 | 0 | $0 | 0 | $0 | 753 | $395 | 2,989 | $1,302 | 3,344 | $1,523 | 155,159 | $75,953 |
| Kenilworth Courts | 9,559 | $5,193 | 15,517 | $13,934 | 22,257 | $10,691 | 29,971 | $13,756 | 29,356 | $13,522 | 31,785 | $15,469 | 25,120 | $12,490 | 12,293 | $6,241 | 6,116 | $2,865 | 8,327 | $3,624 | 6,665 | $2,943 | 7,887 | $5,525 | 204,853 | $106,253 |
| Kentucky Courts | 1,790 | $840 | 4,491 | $3,900 | 10,332 | $4,500 | 10,771 | $4,672 | 12,453 | $5,331 | 11,136 | $4,815 | 10,215 | $4,452 | 0 | $0 | 2,031 | $812 | 1,742 | $697 | 0 | $0 | 1,382 | $1,306 | 66,341 | $31,325 |
| Knox Hill | 638 | $278 | 838 | $780 | 1,754 | $825 | 2,654 | $1,177 | 3,054 | $1,333 | 3,142 | $1,368 | 2,193 | $996 | 0 | $0 | 0 | $0 | 574 | $229 | 0 | $0 | 565 | $254 | 15,411 | $7,240 |
| Langston Terrace | 5,006 | $2,411 | 14,180 | $12,107 | 34,291 | $15,126 | 38,507 | $20,944 | 33,363 | $14,678 | 37,072 | $19,888 | 32,337 | $18,391 | 5,370 | $2,429 | 1,511 | $2,115 | 5,166 | $3,006 | 4,527 | $2,544 | 4,709 | $3,256 | 216,039 | $116,896 |
| Ledroit | 796 | $1,645 | 9,305 | $7,789 | 16,550 | $7,131 | 19,189 | $8,165 | 17,678 | $7,573 | 16,428 | $7,084 | 14,752 | $6,424 | 0 | $0 | 0 | $0 | 117 | $59 | 94 | $38 | 1,769 | $814 | 96,678 | $46,721 |
| Lincoln Road | 239 | $122 | 333 | $299 | 517 | $246 | 656 | $280 | 644 | $287 | 1,439 | $1,269 | 476 | $221 | 0 | $0 | 11 | $15 | 433 | $305 | 443 | $322 | 436 | $511 | 5,628 | $3,877 |
| Park Morton | 3,723 | $13,315 | 10,805 | $5,113 | 27,029 | $11,675 | 24,561 | $9,779 | 22,744 | $10,077 | 21,517 | $9,597 | 17,360 | $7,869 | 0 | $0 | 3,847 | $1,272 | 3,192 | $1,277 | 0 | $0 | 2,744 | $1,430 | 137,522 | $71,405 |
| Regency House | 5,099 | $11,113 | 0 | $0 | 16,834 | $10,388 | 9,310 | $4,063 | 12,554 | $5,334 | 9,847 | $4,273 | 9,174 | $4,010 | 926 | $403 | 2,867 | $1,173 | 0 | $0 | 788 | $327 | 2,029 | $824 | 69,428 | $41,909 |
| Richardson Dwelling | 5,484 | $3,247 | 13,997 | $12,746 | 21,605 | $10,104 | 37,206 | $16,082 | 34,353 | $15,390 | 38,043 | $22,434 | 31,105 | $15,647 | 8,972 | $4,052 | 5,987 | $3,717 | 5,820 | $3,861 | 4,898 | $3,305 | 5,536 | $4,408 | 213,004 | $114,993 |
| Sibley Plaza | 9,089 | $3,671 | 146 | $164 | 21,298 | $9,352 | 33,061 | $14,419 | 26,160 | $11,260 | 24,308 | $10,531 | 25,121 | $10,845 | 0 | $0 | 0 | $0 | 7,003 | $2,802 | 211 | $85 | 5,005 | $2,085 | 151,401 | $65,214 |
| Stoddert Terrace | 4,324 | $3,582 | 7,176 | $6,739 | 12,161 | $6,277 | 22,943 | $10,166 | 17,458 | $8,190 | 18,621 | $8,790 | 15,911 | $7,526 | 6,576 | $3,654 | 4,838 | $2,046 | 3,285 | $1,530 | 2,453 | $1,030 | 3,096 | $2,415 | 118,843 | $61,943 |
| Syphax Gardens | 3,296 | $1,516 | 7,386 | $6,635 | 15,346 | $6,979 | 22,404 | $9,743 | 20,861 | $9,139 | 22,472 | $9,770 | 18,824 | $8,339 | 9,402 | $3,917 | 4,121 | $1,711 | 2,655 | $1,121 | 8,071 | $1,086 | 2,134 | $1,051 | 136,970 | $61,006 |
| Villager | 360 | $169 | 1,239 | $1,090 | 1,569 | $754 | 2,845 | $1,254 | 3,084 | $1,348 | 2,956 | $1,298 | 2,248 | $1,020 | 0 | $0 | 492 | $197 | 446 | $179 | 0 | $0 | 345 | $166 | 15,584 | $7,474 |
| Woodland Terrace | 8,581 | $3,788 | 18,376 | $15,224 | 62,164 | $20,264 | 65,428 | $28,207 | 63,707 | $27,533 | 57,262 | $25,008 | 48,811 | $21,687 | 17,413 | $7,179 | 11,904 | $4,791 | 8,829 | $3,532 | 7,880 | $3,152 | 8,840 | $3,980 | 379,195 | $164,147 |
| ECIP TOTAL | 128,060 | $143,517 | 210,587 | $166,423 | 504,946 | $215,066 | 605,373 | $266,642 | 595,027 | $258,819 | 565,401 | $262,022 | 452,051 | $209,507 | 128,043 | $65,622 | 111,579 | $50,928 | 85,487 | $39,252 | 69,198 | $29,964 | 91,067 | $56,742 | 3,546,838 | $1,764,304 |
| Arthur Capper | 3,236 | $1,304 | 78 | $69 | 5,089 | $2,141 | 3,701 | $1,597 | 3,829 | $1,648 | 3,952 | $1,696 | 3,461 | $1,503 | 0 | $0 | 2,967 | $1,188 | 2,552 | $1,022 | 22 | $9 | 2,313 | $1,891 | 31,198 | $14,067 |
| Arthur Capper Family | 3,124 | $2,007 | 5,173 | $4,852 | 10,407 | $5,027 | 12,801 | $5,769 | 15,079 | $6,926 | 15,208 | $6,994 | 11,313 | $5,623 | 6,182 | $3,255 | 4,919 | $2,098 | 5,979 | $2,446 | 2,294 | $956 | 2,208 | $1,702 | 94,686 | $47,655 |
| Barry Farm | 385 | $357 | 521 | $540 | 986 | $686 | 1,365 | $689 | 36,410 | $37,460 | 1,592 | $988 | 1,098 | $653 | 17,014 | $20,589 | 14,629 | $16,117 | 7,574 | $7,727 | 7,886 | $8,641 | 9,050 | $14,111 | 98,510 | $108,558 |
| Capitol View Plaza | 2,053 | $1,286 | 7,357 | $6,311 | 11,164 | $5,084 | 16,322 | $7,337 | 350 | $194 | 29,546 | $12,909 | 12,616 | $5,674 | 38 | $49 | 1,713 | $685 | 1,527 | $635 | 1,317 | $546 | 1,504 | $709 | 85,507 | $41,418 |
| Carrollsburg Dwelling | 0 | $0 | 22,590 | $21,394 | 29,430 | $12,776 | 36,982 | $15,806 | 36,100 | $15,388 | 35,271 | $15,074 | 29,755 | $12,896 | 0 | $0 | 6,177 | $2,471 | 6,725 | $2,690 | 0 | $0 | 3,751 | $3,199 | 206,780 | $101,694 |
| East Capitol Dwelling | 12,095 | $8,220 | 22,220 | $20,997 | 34,176 | $17,256 | 61,063 | $30,723 | 60,384 | $27,991 | 50,993 | $20,998 | 38,318 | $19,087 | 9,113 | $5,037 | 55 | $24 | 6,310 | $2,261 | 4,110 | $1,719 | 4,813 | $4,680 | 303,649 | $158,992 |
| Eastgate Gardens | 345 | $201 | 971 | $871 | 1,342 | $652 | 1,705 | $794 | 1,635 | $766 | 1,785 | $825 | 1,723 | $801 | 0 | $0 | 0 | $0 | 0 | $0 | 70 | $28 | 509 | $270 | 10,085 | $5,207 |
| Edgewood Terrace | 2,146 | $880 | 10,838 | $7,287 | 6 | $14 | 12,281 | $5,816 | 5,224 | $2,555 | 4,718 | $2,356 | 3,791 | $1,993 | 0 | $0 | 1,333 | $546 | 1,368 | $559 | 2,002 | $7,635 | 444 | $217 | 44,151 | $29,859 |
| Elvans Road | 10 | $12 | 8 | $12 | 11 | $13 | 11 | $13 | 117 | $56 | 114 | $110 | 9 | $14 | 9 | $14 | 0 | $0 | 39 | $44 | 52 | $46 | 567 | $901 | 948 | $1,235 |
| Frederick Douglas | 139 | $87 | 483 | $476 | 789 | $410 | 1,023 | $508 | 1,197 | $580 | 1,158 | $564 | 1,062 | $523 | 0 | $0 | 0 | $0 | 106 | $45 | 102 | $43 | 108 | $75 | 6,165 | $3,309 |
| Frontiers | 31 | $64 | 66 | $44 | 77 | $48 | 136 | $72 | 1,504 | $1,502 | 1,749 | $4,205 | 68 | $75 | 518 | $783 | 338 | $1,338 | 348 | $579 | 158 | $516 | 194 | $318 | 5,187 | $9,544 |
| Greenleaf Gardens | 3,949 | $2,703 | 8,043 | $7,418 | 12,131 | $6,052 | 17,952 | $8,287 | 18,045 | $8,423 | 20,157 | $9,345 | 13,962 | $6,780 | 9,843 | $5,017 | 3,698 | $1,560 | 3,518 | $1,464 | 3,114 | $1,296 | 2,904 | $2,134 | 117,316 | $60,480 |
| Henson Ridge | | | | | | | | | | | | | | | | | | | | | | | | | 0 | $0 |
| Hopkins Apartments | 3,729 | $3,669 | 9,549 | $8,175 | 19,869 | $8,704 | 23,671 | $10,193 | 21,589 | $9,365 | 24,798 | $10,635 | 20,012 | $8,756 | 0 | $0 | 4,742 | $1,910 | 3,730 | $1,505 | 21 | $9 | 2,697 | $2,438 | 134,406 | $65,357 |
| Lincoln Heights | 13,627 | $12,322 | 16,178 | $16,163 | 18,326 | $10,268 | 40,927 | $20,117 | 43,033 | $21,186 | 38,559 | $27,392 | 28,744 | $15,392 | 15,195 | $9,554 | 2,361 | $292 | 10,584 | $4,097 | 14,272 | $11,257 | 8,272 | $10,492 | 250,076 | $158,531 |
| Montana Terrace | 672 | $643 | 952 | $998 | 2,149 | $1,465 | 4,171 | $1,211 | 5,248 | $2,228 | 4,945 | $2,824 | 3,431 | $1,997 | 0 | $0 | 102 | $236 | 613 | $625 | 464 | $372 | 581 | $1,069 | 23,329 | $13,668 |
| Office | 1 | $28 | 657 | $660 | 1,358 | $687 | 4,155 | $1,783 | 3,512 | $1,531 | 3,160 | $1,393 | 2,471 | $1,123 | 0 | $0 | 0 | $0 | 0 | $0 | 1 | $9 | 0 | $28 | 15,315 | $7,233 |
| Ontario | 176 | $202 | 0 | $0 | 214 | $107 | 259 | $124 | 0 | $0 | 0 | $0 | 201 | $101 | 149 | $71 | 139 | $68 | 127 | $63 | 0 | $0 | 138 | $67 | 1,403 | $802 |
| Parkside Additions | 728 | $396 | 2,096 | $1,880 | 3,319 | $1,572 | 4,494 | $2,032 | 3,957 | $1,821 | 4,235 | $1,930 | 3,208 | $1,527 | 0 | $0 | 0 | $0 | 754 | $302 | 608 | $243 | 556 | $333 | 23,955 | $12,037 |
| Potomac Gardens | 4,885 | $2,218 | 7,071 | $6,329 | 24,217 | $11,014 | 34,581 | $15,032 | 28,465 | $12,415 | 36,480 | $15,818 | 30,164 | $13,337 | 4,191 | $1,686 | 6,638 | $2,656 | 5,637 | $2,489 | 0 | $0 | 4,052 | $3,814 | 186,381 | $86,806 |
| Scattered Sites | 59 | $125 | 109 | $130 | 135 | $105 | 288 | $154 | 1,643 | $1,570 | 5,610 | $9,259 | 514 | $516 | 505 | $593 | 340 | $450 | 962 | $1,297 | 1,698 | $1,189 | 2,000 | $3,172 | 13,864 | $18,560 |
| Stanton Dwelling | 3,134 | $3,192 | 5,192 | $6,078 | 7,715 | $5,135 | 10,620 | $6,209 | 23,055 | $11,023 | 8,042 | $4,336 | 4,386 | $2,943 | 19 | $10 | 209 | $117 | 170 | $70 | 201 | $83 | 177 | $521 | 62,918 | $39,716 |
| Sursum Corda | 270 | $135 | 370 | $322 | 248 | $132 | 356 | $169 | 249 | $125 | 321 | $154 | 241 | $122 | 0 | $0 | 0 | $0 | 28 | $35 | 79 | $38 | 383 | $819 | 2,544 | $2,051 |
| UNCLASSIFIED | 0 | $0 | 0 | $0 | 3,124 | $1,788 | 6,087 | $3,015 | 0 | $0 | 7,756 | $3,706 | 3,699 | $2,025 | 2,002 | $1,286 | 536 | $228 | 112 | $47 | 514 | $544 | 493 | $39 | 24,323 | $12,678 |
| Warehouse | 47 | $46 | 0 | $0 | 2,642 | $1,212 | 4,329 | $1,873 | 0 | $0 | 3,638 | $1,603 | 2,294 | $1,076 | 0 | $0 | 296 | $119 | 141 | $56 | 0 | $0 | 56 | $50 | 13,442 | $6,036 |
| DCHA TOTAL | 182,919 | $183,614 | 331,110 | $277,425 | 693,868 | $307,415 | 964,652 | $405,962 | 905,654 | $423,573 | 869,585 | $417,137 | 668,591 | $313,843 | 192,820 | $113,565 | 162,772 | $83,031 | 144,390 | $69,309 | 108,181 | $65,135 | 138,833 | $109,789 | 5,302,975 | $2,769,798 |

*Figure 6: FY02 Natural Gas*

| Nat Gas - FY03 | 10/1/2002 | | 11/1/2002 | | 12/1/2002 | | 1/1/2003 | | 2/1/2003 | | 3/1/2003 | | 4/1/2003 | | 5/1/2003 | | 6/1/2003 | | 7/1/2003 | | 8/1/2003 | | 9/1/2003 | | FY03 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Development | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost |
| Benning Terrace | 6,121 | $4,708 | 16,949 | $9,403 | 30,348 | $14,933 | 39,421 | $18,769 | 43,478 | $21,715 | 41,791 | $19,941 | 33,179 | $16,750 | 16,860 | $8,867 | 12,171 | $6,913 | 9,291 | $10,389 | 5,417 | $8,918 | 5,832 | $8,936 | 260,857 | $150,242 |
| Carroll Apartments | 444 | $210 | 1,527 | $828 | 5,011 | $2,222 | 5,804 | $2,560 | 7,629 | $3,350 | 7,124 | $3,089 | 4,301 | $2,003 | 2,454 | $947 | 610 | $265 | 1,146 | $682 | 448 | $576 | 458 | $555 | 36,956 | $17,288 |
| Claridge Towers | 5,796 | $2,346 | 19,287 | $8,579 | 27,396 | $11,744 | 28,389 | $12,367 | 0 | $0 | 27,873 | $12,166 | 33,566 | $15,318 | 0 | $0 | 6,108 | $2,612 | 7,607 | $5,495 | 2,939 | $3,546 | 3,574 | $4,048 | 162,535 | $78,221 |
| | | | | | | | | | | | | | | | | | | | | | | | | | 0 | $0 |
| Columbia Road | 558 | $791 | 1,664 | $2,199 | 1,651 | $1,807 | 2,156 | $2,420 | 2,226 | $2,484 | 43 | $328 | 2,482 | $1,499 | 0 | $0 | 1,305 | $780 | 504 | $821 | 471 | $766 | 588 | $884 | 13,649 | $14,779 |
| Ft. Dupont Dwelling | 1,730 | $1,382 | 3,920 | $2,433 | 6,788 | $3,645 | 8,568 | $4,454 | 9,737 | $5,294 | 9,104 | $4,251 | 5,649 | $2,910 | 3,764 | $1,803 | 2,895 | $1,450 | 3,213 | $2,886 | 1,347 | $1,996 | 2,249 | $2,974 | 58,963 | $35,478 |
| Ft. Lincoln Apartments | 1,255 | $530 | 5,042 | $2,247 | 8,187 | $3,482 | 8,261 | $3,578 | 9,563 | $4,065 | 8,561 | $3,704 | 7,035 | $3,123 | 4,455 | $1,667 | 1,747 | $663 | 3,509 | $2,144 | 1,593 | $1,935 | 1,529 | $1,749 | 60,735 | $28,886 |
| Garfield Terrace Family | 157 | $72 | 1,937 | $836 | 2,532 | $1,067 | 2,857 | $1,230 | 1,939 | $991 | 124 | $60 | 2,885 | $1,290 | 0 | $0 | 929 | $362 | 245 | $291 | 183 | $229 | 214 | $250 | 14,002 | $6,677 |
| Garfield Terrace Senior | 3,104 | $1,421 | 38,424 | $16,583 | 50,213 | $21,164 | 56,661 | $24,401 | 38,455 | $19,655 | 2,457 | $1,189 | 57,225 | $25,579 | 0 | $0 | 18,431 | $7,171 | 4,863 | $5,777 | 3,636 | $4,533 | 4,242 | $4,953 | 277,711 | $132,425 |
| Greenleaf Senior | 5,642 | $2,396 | 15,590 | $7,303 | 38,449 | $16,349 | 41,516 | $17,730 | 48,255 | $20,680 | 41,345 | $17,662 | 30,185 | $13,455 | 23,002 | $8,741 | 10,505 | $3,878 | 11,105 | $9,285 | 7,016 | $8,535 | 5,349 | $6,155 | 277,959 | $132,169 |
| Harvard Towers | 4,101 | $1,680 | 13,133 | $5,696 | 15,802 | $6,718 | 19,466 | $8,315 | 1,080 | $487 | 23,334 | $9,999 | 15,088 | $6,846 | 0 | $0 | 11,103 | $4,279 | 4,842 | $5,835 | 3,912 | $4,722 | 1,022 | $1,162 | 112,884 | $55,739 |
| Highland Dwelling & Addition | 7,348 | $8,435 | 17,247 | $11,705 | 32,661 | $19,446 | 36,680 | $22,871 | 60,306 | $40,616 | 74,153 | $53,752 | 38,589 | $25,214 | 25,136 | $15,124 | 15,079 | $9,779 | 13,505 | $10,907 | 7,221 | $9,988 | 9,191 | $11,727 | 337,116 | $239,564 |
| Horizon House | 2,796 | $1,146 | 7,970 | $3,551 | 11,550 | $4,950 | 12,651 | $5,486 | 0 | $0 | 13,066 | $5,658 | 15,622 | $7,053 | 0 | $0 | 2,544 | $1,122 | 3,434 | $2,484 | 1,331 | $1,621 | 1,787 | $2,038 | 72,749 | $35,109 |
| James Apartments | 2,745 | $1,138 | 7,333 | $3,254 | 10,208 | $4,375 | 11,142 | $4,833 | 0 | $0 | 11,929 | $5,153 | 14,674 | $6,578 | 0 | $0 | 2,273 | $1,022 | 3,307 | $2,525 | 1,347 | $1,652 | 1,437 | $1,656 | 66,394 | $32,186 |
| James Creek | 5,903 | $4,536 | 11,015 | $1,586 | 24,893 | $12,428 | 30,603 | $14,975 | 39,426 | $18,968 | 33,421 | $15,921 | 18,586 | $10,313 | 14,340 | $7,600 | 8,572 | $5,238 | 13,801 | $8,508 | 4,710 | $7,702 | 4,246 | $6,843 | 209,517 | $114,617 |
| Judiciary House | 3,577 | $1,470 | 12,551 | $5,567 | 19,219 | $8,180 | 17,923 | $7,817 | 24,381 | $10,492 | 15,221 | $6,693 | 11,726 | $5,331 | 13,407 | $4,914 | 4,340 | $1,638 | 6,597 | $3,608 | 3,464 | $4,185 | 4,130 | $4,686 | 136,535 | $64,581 |
| Kelly Miller | 4,009 | $1,789 | 21,017 | $9,450 | 26,202 | $11,449 | 25,581 | $11,421 | 25,145 | $3,124 | 26,651 | $19,925 | 21,378 | $9,846 | 4,854 | $2,288 | 4,787 | $1,903 | 3,758 | $4,250 | 2,674 | $3,388 | 2,987 | $3,547 | 169,043 | $82,379 |
| Kenilworth Courts | 7,276 | $4,354 | 15,126 | $5,618 | 27,963 | $14,121 | 30,966 | $15,616 | 38,005 | $21,001 | 33,819 | $15,851 | 21,676 | $11,203 | 15,859 | $7,160 | 12,728 | $5,986 | 20,259 | $11,568 | 7,199 | $9,941 | 7,008 | $9,210 | 237,883 | $131,628 |
| Kentucky Courts | 1,831 | $871 | 5,064 | $2,487 | 10,881 | $4,783 | 11,356 | $5,017 | 12,872 | $5,747 | 12,709 | $5,559 | 11,011 | $4,970 | 6,089 | $2,391 | 2,966 | $1,213 | 5,302 | $2,936 | 1,878 | $2,388 | 1,855 | $2,226 | 83,813 | $40,589 |
| Knox Hill | 663 | $293 | 1,288 | $626 | 0 | $0 | 4,287 | $1,829 | 4,523 | $1,963 | 4,307 | $1,857 | 2,664 | $1,236 | 2,083 | $795 | 1,140 | $439 | 1,915 | $959 | 613 | $761 | 596 | $698 | 24,078 | $11,457 |
| Langston Terrace | 4,640 | $3,076 | 24,222 | $4,489 | 40,764 | $22,460 | 43,452 | $24,199 | 43,075 | $19,717 | 41,568 | $18,337 | 34,983 | $15,810 | 12,115 | $4,931 | 6,413 | $2,729 | 10,307 | $6,623 | 4,492 | $5,795 | 4,611 | $5,606 | 270,640 | $133,772 |
| Ledroit | 1,890 | $863 | 9,762 | $4,494 | 18,477 | $7,927 | 17,417 | $7,654 | 18,473 | $8,074 | 17,588 | $7,724 | 7,961 | $3,925 | 2,419 | $1,020 | 2,150 | $879 | 3,814 | $2,109 | 1,464 | $1,860 | 1,685 | $2,003 | 103,099 | $48,531 |
| Lincoln Road | 425 | $511 | 993 | $1,036 | 1,849 | $1,764 | 2,006 | $1,952 | 2,357 | $2,852 | 2,120 | $1,180 | 1,148 | $714 | 675 | $433 | 665 | $496 | 851 | $788 | 428 | $684 | 495 | $730 | 14,013 | $13,140 |
| Park Morton | 3,320 | $1,661 | 17,735 | $8,077 | 24,735 | $10,812 | 24,071 | $10,737 | 28,211 | $12,417 | 19,177 | $8,674 | 22,529 | $10,265 | 0 | $0 | 4,888 | $2,189 | 8,590 | $6,482 | 2,700 | $3,567 | 4,305 | $5,222 | 160,262 | $80,104 |
| Regency House | 1,934 | $813 | 4,400 | $1,800 | 10,693 | $4,645 | 12,026 | $5,144 | 15,473 | $6,693 | 13,113 | $5,693 | 8,971 | $4,023 | 6,628 | $2,831 | 6,069 | $2,230 | 3,306 | $1,847 | 1,350 | $1,643 | 2,148 | $2,611 | 86,111 | $39,973 |
| Richardson Dwelling | 6,222 | $4,398 | 22,609 | $12,574 | 39,916 | $19,762 | 42,030 | $20,669 | 46,260 | $27,785 | 41,697 | $19,665 | 32,589 | $16,250 | 17,011 | $7,880 | 8,572 | $4,773 | 12,834 | $9,286 | 5,276 | $7,867 | 5,891 | $8,154 | 280,907 | $159,061 |
| Sibley Plaza | 4,843 | $2,021 | 11,972 | $5,566 | 22,675 | $9,783 | 25,591 | $11,138 | 29,563 | $12,740 | 26,779 | $11,644 | 15,646 | $7,301 | 9,908 | $3,665 | 10,631 | $4,052 | 16,381 | $7,132 | 2,981 | $3,658 | 3,053 | $3,525 | 180,021 | $82,225 |
| Stoddert Terrace | 3,272 | $2,505 | 11,151 | $5,980 | 20,700 | $10,605 | 25,012 | $13,155 | 27,581 | $15,665 | 27,060 | $13,569 | 16,469 | $9,030 | 10,838 | $5,531 | 8,386 | $3,975 | 5,858 | $6,223 | 3,231 | $5,071 | 3,472 | $5,187 | 180,028 | $96,494 |
| Syphax Gardens | 2,706 | $1,280 | 10,012 | $4,835 | 21,321 | $9,298 | 24,310 | $10,581 | 26,496 | $11,702 | 24,257 | $10,560 | 18,253 | $8,317 | 13,201 | $5,138 | 5,576 | $2,224 | 8,116 | $3,239 | 3,088 | $3,896 | 2,603 | $3,128 | 159,939 | $74,197 |
| Villager | 336 | $162 | 1,248 | $608 | 2,837 | $1,235 | 3,333 | $1,446 | 3,084 | $1,379 | 3,256 | $1,428 | 2,344 | $1,092 | 1,562 | $605 | 629 | $257 | 1,240 | $762 | 547 | $683 | 419 | $499 | 20,835 | $10,156 |
| Woodland Terrace | 8,367 | $3,563 | 29,352 | $14,046 | 24,517 | $10,666 | 70,974 | $30,744 | 71,544 | $31,657 | 61,439 | $27,014 | 40,998 | $19,636 | 39,208 | $14,851 | 16,755 | $6,551 | 29,265 | $15,486 | 9,203 | $11,463 | 7,667 | $9,072 | 409,288 | $194,747 |
| **ECIP TOTAL** | 103,008 | $60,419 | 359,538 | $163,455 | 578,437 | $271,822 | 684,510 | $323,108 | 679,137 | $331,314 | 665,084 | $328,246 | 549,413 | $266,878 | 245,869 | $109,180 | 190,964 | $87,066 | 218,764 | $151,327 | 92,156 | $123,566 | 94,642 | $120,033 | 4,461,521 | $2,336,413 |
| Arthur Capper | 2,697 | $1,115 | 2,860 | $1,312 | 3,684 | $1,632 | 3,742 | $1,630 | 3,734 | $1,709 | 3,408 | $1,536 | 3,250 | $1,498 | 2,977 | $1,138 | 2,881 | $1,068 | 5,199 | $2,811 | 2,136 | $2,593 | 2,317 | $2,644 | 38,886 | $20,726 |
| Arthur Capper Family | 3,121 | $2,053 | 5,564 | $3,065 | 14,320 | $6,702 | 16,459 | $7,656 | 19,419 | $9,067 | 17,474 | $8,079 | 11,366 | $5,649 | 8,450 | $4,054 | 5,686 | $2,936 | 9,009 | $4,822 | 2,556 | $3,945 | 2,572 | $3,725 | 115,996 | $61,754 |
| Barry Farm | 14,314 | $17,207 | 18,951 | $25,805 | 43,053 | $47,743 | 52,848 | $59,366 | 66,604 | $139,283 | 57,459 | $31,508 | 34,966 | $20,640 | 29,057 | $17,346 | 18,500 | $11,652 | 13,801 | $19,846 | 11,817 | $18,034 | 10,414 | $15,583 | 371,786 | $424,014 |
| Capitol View Plaza | 1,744 | $806 | 9,567 | $4,290 | 14,229 | $6,134 | 16,215 | $7,000 | 18,455 | $8,193 | 19,212 | $8,237 | 12,208 | $5,549 | 8,168 | $3,051 | 2,914 | $1,110 | 5,679 | $3,397 | 2,814 | $3,408 | 2,808 | $3,217 | 114,012 | $54,393 |
| Carrollsburg Dwelling | 10,502 | $4,732 | 15,439 | $7,349 | 33,082 | $14,313 | 36,534 | $15,827 | 40,440 | $17,682 | 46,464 | $19,807 | 29,211 | $13,184 | 22,260 | $8,428 | 9,439 | $3,592 | 14,870 | $7,905 | 6,588 | $8,053 | 6,234 | $7,181 | 271,065 | $128,054 |
| East Capitol Dwelling | 5,132 | $4,162 | 17,572 | $10,353 | 31,696 | $15,875 | 36,853 | $18,215 | 37,611 | $18,581 | 34,316 | $16,512 | 16,116 | $9,007 | 7,903 | $4,624 | 6,253 | $3,704 | 5,527 | $6,994 | 1,200 | $2,912 | 1,185 | $2,998 | 201,363 | $113,937 |
| Eastgate Gardens | 82 | $95 | 62 | $180 | 0 | $43 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 143 | $322 |
| Edgewood Terrace | 514 | $251 | 538 | $424 | 787 | $521 | 815 | $542 | 794 | $529 | 729 | $496 | 686 | $493 | 515 | $218 | 433 | $183 | 813 | $485 | 338 | $433 | 0 | $0 | 6,962 | $4,575 |
| Elvans Road | 551 | $898 | 967 | $1,391 | 2,282 | $2,497 | 2,903 | $3,197 | 3,291 | $7,356 | 3,189 | $1,505 | 1,625 | $881 | 1,121 | $583 | 869 | $480 | 792 | $1,006 | 581 | $863 | 569 | $808 | 18,741 | $21,463 |
| Frederick Douglas | 107 | $75 | 429 | $243 | 1,045 | $500 | 1,258 | $595 | 1,256 | $608 | 1,288 | $608 | 1,117 | $546 | 824 | $352 | 269 | $134 | 223 | $312 | 173 | $249 | 185 | $250 | 8,174 | $4,471 |
| Frontiers | 174 | $116 | 1,164 | $1,377 | 754 | $655 | 897 | $855 | 75 | -$20 | 741 | $882 | 671 | $373 | 15 | $0 | 136 | $102 | 216 | $244 | 78 | $128 | 25 | $46 | 4,946 | $4,758 |
| Greenleaf Gardens | 3,932 | $2,735 | 7,901 | $4,333 | 19,060 | $8,977 | 22,073 | $10,316 | 26,373 | $12,345 | 23,137 | $10,761 | 14,173 | $7,074 | 11,442 | $5,606 | 8,259 | $5,092 | 11,513 | $6,412 | 3,809 | $7,023 | 3,216 | $4,771 | 154,888 | $85,446 |
| Henson Ridge | | | | | | | | | | | | | | | | | | | | | | | | | 0 | $0 |
| Hopkins Apartments | 4,009 | $1,848 | 13,009 | $6,115 | 29,109 | $12,484 | 28,293 | $12,272 | 32,367 | $14,124 | 32,224 | $13,903 | 27,328 | $12,168 | 13,737 | $5,271 | 7,095 | $2,743 | 9,825 | $6,335 | 4,450 | $5,506 | 4,852 | $5,638 | 206,297 | $98,406 |
| Lincoln Heights | 9,934 | $11,321 | 22,300 | $13,244 | 42,430 | $21,609 | 45,103 | $19,541 | 56,212 | $28,357 | 47,549 | $23,882 | 27,886 | $16,020 | 20,687 | $12,385 | 16,434 | $9,904 | 27,314 | $17,585 | 8,515 | $14,012 | 9,393 | $14,378 | 333,757 | $202,237 |
| Montana Terrace | 625 | $900 | 2,738 | $3,166 | 5,108 | $4,592 | 6,092 | $3,568 | 5,840 | $5,768 | 6,146 | $3,739 | 3,921 | $2,645 | 1,864 | $1,287 | 1,607 | $1,193 | 2,459 | $1,783 | 1,261 | $1,645 | 1,407 | $1,516 | 39,067 | $31,801 |
| Office | 54 | $49 | 1,954 | $919 | 4,284 | $1,838 | 4,960 | $2,145 | 5,726 | $2,433 | 4,618 | $2,014 | 2,799 | $1,306 | 1,215 | $480 | 475 | $201 | 0 | $28 | 1 | $29 | 0 | $28 | 26,087 | $11,470 |
| Ontario | 140 | $68 | 224 | $107 | 262 | $122 | 292 | $136 | 273 | $129 | 0 | $0 | 420 | $205 | 0 | $0 | 356 | $152 | 146 | $187 | 134 | $172 | 146 | $176 | 2,394 | $1,455 |
| Parkside Additions | 680 | $383 | 2,487 | $1,221 | 4,438 | $1,989 | 5,121 | $2,281 | 6,143 | $2,743 | 5,196 | $2,338 | 3,577 | $1,733 | 1,971 | $840 | 1,103 | $511 | 1,915 | $1,089 | 771 | $1,034 | 913 | $1,138 | 34,314 | $17,301 |
| Potomac Gardens | 4,905 | $12,757 | 15,856 | $7,502 | 38,136 | $16,576 | 40,910 | $17,842 | 47,127 | $20,730 | 42,594 | $18,507 | 32,655 | $14,794 | 19,409 | $7,541 | 8,029 | $3,279 | 14,750 | $8,456 | 5,652 | $7,129 | 5,938 | $7,043 | 275,962 | $142,155 |
| Scattered Sites | 1,478 | $2,620 | 6,777 | $8,041 | 8,213 | $8,644 | 12,244 | $13,767 | 11,707 | $16,213 | 8,870 | $5,171 | 7,397 | $3,683 | 1,967 | $1,316 | 2,299 | $1,318 | 1,338 | $1,800 | 823 | $1,342 | 1,126 | $1,711 | 64,238 | $65,624 |
| Stanton Dwelling | 159 | $511 | 578 | $721 | 1,725 | $1,173 | 3,046 | $1,740 | 3,968 | $2,166 | 3,522 | $1,972 | 2,239 | $1,470 | 1,211 | $964 | 386 | $603 | 216 | $985 | 100 | $279 | 17 | $122 | 17,167 | $12,705 |
| Sursum Corda | 1,057 | $1,618 | 1,744 | $1,926 | 905 | $659 | 3,043 | $3,129 | 3,547 | $8,343 | 2,991 | $2,445 | 1,721 | $1,274 | 900 | $709 | 841 | $1,488 | 743 | $891 | 460 | $727 | 506 | $749 | 18,459 | $23,958 |
| UNCLASSIFIED | 81 | $64 | 1,880 | $1,040 | 5,856 | $2,705 | 9,163 | $4,131 | 11,602 | $5,268 | 10,873 | $4,856 | 4,830 | $2,359 | 3,176 | $1,275 | 353 | $174 | 109 | $168 | 110 | $169 | 102 | $151 | 48,136 | $22,361 |
| Warehouse | 54 | $49 | 1,991 | $938 | 4,793 | $2,045 | 5,213 | $2,253 | 6,014 | $2,576 | 0 | $0 | 7,111 | $3,195 | 0 | $0 | 1,154 | $502 | 0 | $0 | 111 | $160 | 454 | $591 | 26,895 | $12,310 |
| **DCHA TOTAL** | 169,055 | $126,857 | 512,088 | $268,517 | 887,688 | $451,851 | 1,038,586 | $531,152 | 1,067,714 | $655,494 | 1,037,086 | $507,005 | 796,686 | $392,624 | 404,738 | $186,648 | 286,736 | $139,187 | 345,224 | $244,866 | 146,635 | $203,414 | 149,021 | $194,496 | 6,861,257 | $3,902,110 |

*Figure 7: FY03 Natural Gas*

| Nat Gas - FY04 | 10/1/2003 | | 11/1/2003 | | 12/1/2003 | | 1/1/2004 | | 2/1/2004 | | 3/1/2004 | | 4/1/2004 | | 5/1/2004 | | 6/1/2004 | | 7/1/2004 | | 8/1/2004 | | 9/1/2004 | | FY04 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Development | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost | Therms | Cost |
| Benning Terrace | 11,120 | $14,939 | 12,962 | $17,110 | 29,942 | $38,055 | 35,115 | $47,279 | 49,152 | $67,738 | 31,316 | $38,966 | 25,144 | $33,756 | 14,146 | $21,475 | 7,189 | $12,659 | 11,368 | $18,223 | 5,543 | $9,998 | 6,115 | $10,297 | 239,111 | $330,495 |
| Carroll Apartments | 400 | $489 | 1,638 | $2,085 | 3,300 | $4,108 | 5,313 | $6,949 | 6,905 | $9,300 | 4,983 | $5,966 | 3,949 | $5,101 | 2,493 | $3,353 | 753 | $1,100 | 695 | $994 | 1,459 | $2,005 | 842 | $1,103 | 32,728 | $42,554 |
| Claridge Towers | 5,929 | $6,698 | 0 | $0 | 14,145 | $16,694 | 27,468 | $33,527 | 21,177 | $27,506 | 21,688 | $29,234 | 14,399 | $17,325 | 13,027 | $16,809 | 6,246 | $8,327 | 13,518 | $18,897 | 3,635 | $5,015 | 3,913 | $4,962 | 145,145 | $184,994 |
| | | | | | | | | | | | | | | | | | | | | | | | | | 0 | $0 |
| Columbia Road | 667 | $995 | 993 | $1,336 | 1,865 | $2,453 | 0 | $0 | 2,389 | $3,268 | 2,055 | $2,944 | 4,747 | $6,522 | 20 | $33 | 733 | $1,238 | 2,095 | $3,773 | 466 | $860 | 567 | $938 | 16,596 | $24,361 |
| Ft. Dupont Dwelling | 2,157 | $2,829 | 3,380 | $4,311 | 6,169 | $7,798 | 7,666 | $10,244 | 9,945 | $13,648 | 7,212 | $8,844 | 6,281 | $8,274 | 3,604 | $5,227 | 2,289 | $3,641 | 1,968 | $3,121 | 1,677 | $2,719 | 1,828 | $2,725 | 54,176 | $73,382 |
| Ft. Lincoln Apartments | 1,520 | $1,738 | 4,819 | $5,703 | 6,423 | $7,848 | 8,529 | $11,044 | 8,973 | $12,051 | 7,091 | $8,423 | 8,035 | $10,156 | 3,816 | $5,099 | 1,489 | $2,120 | 1,945 | $2,697 | 1,371 | $1,909 | 1,351 | $1,733 | 55,363 | $70,521 |
| Garfield Terrace Family | 240 | $279 | 801 | $975 | 1,065 | $1,349 | 0 | $0 | 1,408 | $1,863 | 2,238 | $2,952 | 877 | $1,160 | 43 | $63 | 813 | $1,119 | 244 | $370 | 151 | $217 | 171 | $226 | 8,053 | $10,573 |
| Garfield Terrace Senior | 4,753 | $5,528 | 15,896 | $19,346 | 21,120 | $26,760 | 0 | $0 | 27,930 | $36,944 | 44,388 | $58,556 | 17,396 | $22,999 | 860 | $1,246 | 16,121 | $22,188 | 4,844 | $7,347 | 3,002 | $4,507 | 3,400 | $4,476 | 159,709 | $209,695 |
| Greenleaf Senior | 5,723 | $6,577 | 16,143 | $19,543 | 31,265 | $38,030 | 38,856 | $50,432 | 45,676 | $61,310 | 39,479 | $46,714 | 32,344 | $41,155 | 19,104 | $25,532 | 5,996 | $8,568 | 6,114 | $8,531 | 4,491 | $5,807 | 5,188 | $6,686 | 250,379 | $318,886 |
| Harvard Towers | 8,860 | $10,036 | 9,245 | $10,903 | 16,649 | $20,216 | 0 | $0 | 16,956 | $21,894 | 16,716 | $22,426 | 13,080 | $15,794 | 0 | $0 | 14,406 | $19,633 | 6,154 | $8,591 | 3,912 | $5,407 | 5,292 | $6,713 | 111,268 | $141,612 |
| Highland Dwelling & Addition | 8,985 | $11,360 | 13,082 | $16,326 | 22,335 | $27,780 | 68,583 | $87,043 | 52,821 | $72,112 | 50,328 | $62,747 | 38,418 | $49,826 | 20,309 | $28,493 | 10,333 | $15,887 | 10,121 | $15,254 | 8,340 | $12,803 | 17,267 | $24,456 | 320,922 | $424,086 |
| Horizon House | 2,806 | $3,184 | 0 | $0 | 6,878 | $8,112 | 12,089 | $14,713 | 14,159 | $18,234 | 12,575 | $16,867 | 8,257 | $9,858 | 6,544 | $8,425 | 1,874 | $2,519 | 6,215 | $8,754 | 1,546 | $2,150 | 1,457 | $1,866 | 74,401 | $94,683 |
| James Apartments | 2,533 | $2,890 | 0 | $0 | 19,873 | $23,853 | 0 | $0 | 14,650 | $18,834 | 13,565 | $18,144 | 8,939 | $10,620 | 6,563 | $8,429 | 1,904 | $2,571 | 6,865 | $9,703 | 1,697 | $2,369 | 1,670 | $2,147 | 78,259 | $99,559 |
| James Creek | 5,251 | $7,989 | 10,704 | $14,214 | 19,861 | $25,620 | 28,571 | $38,623 | 39,030 | $53,951 | 26,254 | $32,690 | 19,787 | $26,742 | 11,354 | $17,383 | 5,672 | $10,158 | 4,682 | $8,593 | 4,116 | $7,363 | 4,549 | $7,912 | 179,830 | $251,238 |
| Judiciary House | 1,307 | $1,483 | 16,124 | $18,753 | 7,029 | $8,896 | 21,253 | $27,466 | 22,961 | $30,695 | 23,507 | $27,557 | 14,186 | $18,025 | 5,870 | $7,840 | 5,413 | $7,645 | 4,485 | $6,193 | 5,038 | $6,951 | 5,063 | $6,425 | 132,237 | $167,928 |
| Kelly Miller | 3,711 | $4,361 | 15,959 | $18,822 | 28,422 | $34,408 | 28,327 | $36,604 | 21,085 | $27,623 | 29,146 | $36,091 | 24,562 | $31,051 | 5,373 | $7,333 | 3,286 | $4,811 | 2,764 | $3,986 | 2,539 | $3,677 | 3,035 | $4,021 | 168,209 | $212,789 |
| Kenilworth Courts | 9,322 | $11,818 | 12,538 | $16,192 | 25,577 | $32,252 | 32,042 | $42,675 | 36,494 | $50,143 | 27,888 | $34,231 | 21,660 | $28,824 | 15,541 | $22,068 | 9,420 | $14,768 | 8,529 | $13,093 | 7,861 | $12,173 | 7,760 | $11,175 | 214,630 | $289,412 |
| Kentucky Courts | 1,855 | $2,227 | 4,983 | $6,094 | 9,429 | $11,532 | 12,211 | $15,900 | 12,236 | $16,542 | 11,597 | $13,804 | 10,186 | $13,013 | 7,109 | $9,590 | 2,273 | $3,339 | 1,778 | $2,585 | 3,328 | $4,669 | 1,862 | $2,523 | 78,846 | $101,816 |
| Knox Hill | 680 | $793 | 1,242 | $1,546 | 2,775 | $3,408 | 3,759 | $4,892 | 4,901 | $6,575 | 3,197 | $3,819 | 2,584 | $3,311 | 1,604 | $2,160 | 755 | $1,090 | 673 | $953 | 621 | $881 | 642 | $838 | 23,434 | $30,267 |
| Langston Terrace | 5,873 | $7,027 | 20,445 | $24,594 | 34,753 | $42,536 | 41,734 | $54,261 | 42,199 | $56,954 | 38,777 | $46,115 | 34,148 | $43,577 | 11,391 | $15,572 | 5,943 | $8,787 | 5,488 | $7,966 | 4,935 | $7,208 | 5,734 | $7,668 | 251,422 | $322,266 |
| Ledroit | 2,179 | $2,559 | 9,274 | $11,053 | 16,835 | $20,487 | 16,532 | $21,482 | 17,583 | $23,685 | 12,260 | $14,703 | 10,629 | $13,695 | 2,896 | $3,960 | 2,092 | $3,051 | 1,471 | $2,131 | 1,491 | $2,157 | 1,699 | $2,255 | 94,941 | $121,217 |
| Lincoln Road | 606 | $856 | 830 | $1,123 | 1,620 | $2,117 | 2,052 | $2,805 | 2,816 | $3,921 | 1,678 | $2,137 | 1,611 | $2,189 | 777 | $1,230 | 562 | $973 | 474 | $832 | 466 | $821 | 540 | $863 | 14,033 | $19,868 |
| Park Morton | 7,385 | $8,672 | 17,797 | $21,092 | 22,715 | $27,901 | 18,164 | $23,653 | 28,727 | $38,616 | 22,379 | $27,291 | 18,376 | $23,675 | 10,893 | $14,823 | 4,107 | $6,115 | 4,274 | $6,213 | 3,789 | $5,577 | 3,794 | $5,265 | 162,400 | $208,892 |
| Regency House | 2,460 | $2,807 | 5,233 | $5,927 | 8,663 | $10,253 | 11,486 | $14,098 | 15,916 | $20,533 | 10,553 | $14,303 | 7,892 | $9,523 | 6,402 | $8,335 | 3,181 | $4,267 | 2,709 | $3,847 | 4,575 | $6,358 | 2,252 | $2,881 | 81,323 | $103,133 |
| Richardson Dwelling | 7,589 | $10,096 | 18,425 | $23,424 | 36,769 | $46,107 | 39,630 | $52,944 | 43,663 | $60,280 | 35,565 | $43,714 | 33,771 | $42,791 | 14,750 | $21,265 | 6,626 | $10,926 | 5,989 | $9,845 | 5,873 | $9,673 | 6,258 | $9,516 | 254,908 | $360,582 |
| Sibley Plaza | 3,836 | $4,407 | 11,767 | $14,115 | 23,750 | $28,917 | 26,478 | $34,289 | 29,184 | $39,162 | 21,332 | $25,371 | 18,919 | $24,139 | 6,518 | $8,755 | 4,893 | $6,967 | 4,468 | $6,222 | 4,564 | $6,353 | 5,005 | $6,405 | 160,714 | $205,102 |
| Stoddert Terrace | 4,743 | $6,578 | 8,034 | $10,422 | 18,372 | $23,153 | 21,191 | $28,374 | 30,017 | $41,139 | 19,167 | $23,603 | 16,057 | $21,293 | 9,154 | $13,532 | 4,330 | $7,374 | 3,589 | $6,196 | 3,149 | $5,645 | 3,540 | $5,695 | 141,342 | $193,005 |
| Syphax Gardens | 2,975 | $3,546 | 8,265 | $10,210 | 16,834 | $20,406 | 22,903 | $29,818 | 26,594 | $35,797 | 21,368 | $25,448 | 18,440 | $23,588 | 11,973 | $16,115 | 3,483 | $5,101 | 3,287 | $4,717 | 2,868 | $3,834 | 3,071 | $4,144 | 141,862 | $182,723 |
| Villager | 580 | $680 | 1,526 | $1,827 | 2,600 | $3,163 | 2,894 | $3,761 | 3,855 | $5,165 | 3,108 | $3,677 | 2,781 | $3,528 | 1,518 | $2,046 | 596 | $866 | 518 | $739 | 831 | $1,169 | 206 | $290 | 21,012 | $26,911 |
| Woodland Terrace | 10,798 | $12,655 | 30,081 | $36,280 | 54,331 | $66,257 | 64,153 | $83,400 | 82,249 | $110,307 | 57,153 | $68,066 | 53,429 | $68,090 | 28,386 | $38,178 | 14,486 | $20,816 | 10,561 | $14,952 | 8,539 | $12,208 | 9,123 | $11,951 | 423,288 | $543,159 |
| ECIP TOTAL | 126,843 | $156,096 | 272,187 | $333,326 | 511,161 | $630,471 | 596,998 | $776,276 | 731,650 | $985,790 | 618,564 | $765,404 | 490,884 | $649,601 | 242,057 | $334,370 | 147,262 | $218,622 | 137,886 | $205,317 | 101,871 | $152,282 | 113,194 | $158,154 | 4,090,537 | $5,365,710 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Arthur Capper | 2,187 | $2,497 | 2,381 | $2,812 | 3,288 | $3,984 | 3,170 | $4,135 | 2,871 | $3,902 | 2,821 | $3,375 | 2,445 | $3,141 | 2,400 | $3,228 | 1,919 | $2,734 | 1,798 | $2,504 | 3,409 | $4,573 | 1,733 | $2,224 | 30,422 | $39,107 |
| Arthur Capper Family | 2,800 | $3,987 | 5,886 | $7,508 | 9,781 | $12,415 | 14,381 | $19,220 | 16,440 | $22,625 | 12,527 | $15,703 | 9,240 | $12,254 | 6,487 | $9,482 | 2,419 | $4,184 | 1,862 | $3,358 | 3,036 | $5,517 | 1,441 | $2,515 | 86,319 | $118,766 |
| Barry Farm | 11,768 | $17,136 | 20,354 | $26,960 | 37,763 | $47,801 | 53,310 | $72,063 | 70,450 | $97,486 | 49,979 | $62,111 | 38,230 | $51,527 | 24,124 | $36,351 | 12,928 | $22,295 | 11,186 | $19,444 | 11,074 | $18,445 | 11,255 | $18,294 | 352,420 | $489,911 |
| Capitol View Plaza | 2,233 | $2,561 | 7,065 | $8,523 | 13,986 | $17,013 | 13,064 | $17,068 | 16,196 | $21,823 | 65 | $117 | 14,872 | $18,917 | 34 | $67 | 334 | $490 | 301 | $435 | 11 | $37 | 11 | $35 | 68,173 | $87,085 |
| Carrollsburg Dwelling | 6,424 | $7,395 | 11,257 | $14,167 | 22,670 | $28,075 | 22,304 | $29,417 | 24,896 | $33,926 | 21,900 | $27,329 | 13,856 | $18,870 | 9,501 | $12,991 | 3,785 | $5,404 | 3,352 | $4,750 | 5,573 | $7,527 | 3,026 | $3,912 | 148,543 | $193,761 |
| East Capitol Dwelling | 571 | $1,085 | 804 | $1,283 | 3,209 | $4,099 | 4,140 | $5,536 | 5,736 | $7,886 | 4,031 | $5,023 | 2,061 | $2,792 | 715 | $1,124 | 454 | $777 | 313 | $565 | 280 | $535 | 165 | $360 | 22,477 | $31,066 |
| Eastgate Gardens | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 |
| Edgewood Terrace | 0 | $0 | 410 | $511 | 689 | $862 | 965 | $1,268 | 1,333 | $1,797 | 1,117 | $1,332 | 1,154 | $1,467 | 923 | $1,255 | 831 | $1,197 | 770 | $1,085 | 726 | $1,024 | 766 | $995 | 9,682 | $12,791 |
| Elvans Road | 706 | $964 | 954 | $1,246 | 2,047 | $2,599 | 2,507 | $3,378 | 3,965 | $5,443 | 2,340 | $2,900 | 1,984 | $2,646 | 1,168 | $1,748 | 745 | $1,234 | 685 | $1,127 | 615 | $1,029 | 645 | $1,000 | 18,359 | $25,314 |
| Frederick Douglas | 188 | $253 | 639 | $825 | 975 | $1,275 | 1,398 | $1,932 | 1,399 | $2,007 | 1,238 | $1,569 | 1,005 | $1,374 | 597 | $869 | 195 | $321 | 168 | $275 | 131 | $221 | 294 | $454 | 8,228 | $11,377 |
| Frontiers | 9 | $19 | 0 | $0 | 46 | $72 | 39 | $53 | 0 | $0 | 0 | $35 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 94 | $179 |
| Greenleaf Gardens | 4,091 | $5,769 | 8,647 | $10,977 | 14,910 | $18,846 | 21,043 | $28,080 | 25,959 | $35,654 | 19,042 | $23,359 | 15,111 | $19,997 | 9,097 | $13,419 | 4,372 | $7,386 | 3,943 | $6,644 | 4,046 | $6,561 | 3,769 | $5,984 | 134,031 | $182,676 |
| Henson Ridge | | | | | | | | | | | 5,909 | $7,312 | 5,158 | $6,876 | 2,698 | $4,351 | 1,388 | $2,394 | 1,474 | $2,493 | 1,261 | $2,216 | 2,930 | $4,747 | 20,818 | $30,389 |
| Hopkins Apartments | 5,022 | $5,857 | 12,542 | $15,171 | 29,847 | $36,014 | 36,241 | $46,780 | 36,888 | $49,439 | 32,525 | $38,391 | 27,834 | $35,271 | 17,160 | $22,985 | 6,394 | $9,169 | 6,293 | $8,818 | 11,085 | $15,036 | 4,814 | $6,257 | 226,643 | $289,187 |
| Lincoln Heights | 11,956 | $17,311 | 16,549 | $22,539 | 38,202 | $49,289 | 46,783 | $63,707 | 55,804 | $77,985 | 36,114 | $45,922 | 31,266 | $42,784 | 19,110 | $29,739 | 10,310 | $18,502 | 9,748 | $17,389 | 9,451 | $17,028 | 9,209 | $15,609 | 294,501 | $417,805 |
| Montana Terrace | 1,005 | $1,564 | 2,075 | $2,919 | 4,313 | $5,694 | 5,454 | $7,524 | 7,743 | $10,880 | 5,106 | $6,563 | 4,523 | $6,262 | 2,077 | $3,322 | 1,288 | $2,374 | 1,181 | $2,175 | 1,164 | $2,150 | 1,265 | $2,152 | 37,292 | $53,580 |
| Office | 221 | $277 | 1,069 | $1,383 | 4,317 | $5,265 | 5,568 | $7,204 | 6,531 | $8,745 | 2,983 | $3,608 | 3,181 | $4,092 | 393 | $552 | 7 | $39 | 6 | $38 | 6 | $38 | 6 | $37 | 24,288 | $31,277 |
| Ontario | 167 | $200 | 172 | $213 | 235 | $298 | 0 | $0 | 269 | $359 | 248 | $346 | 902 | $1,154 | 0 | $0 | 184 | $257 | 695 | $1,015 | 136 | $199 | 157 | $210 | 3,166 | $4,253 |
| Parkside Additions | 1,050 | $1,293 | 2,550 | $3,144 | 4,527 | $5,600 | 4,984 | $6,569 | 5,306 | $7,239 | 3,921 | $4,782 | 3,343 | $4,391 | 1,607 | $2,252 | 801 | $1,243 | 744 | $1,137 | 712 | $1,094 | 685 | $981 | 30,230 | $39,724 |
| Potomac Gardens | 6,393 | $7,528 | 16,255 | $19,890 | 30,125 | $36,888 | 35,196 | $46,036 | 53,037 | $71,161 | 42,318 | $50,185 | 33,534 | $42,837 | 22,452 | $30,207 | 7,748 | $11,264 | 6,351 | $9,090 | 11,573 | $15,959 | 5,800 | $7,692 | 270,785 | $348,737 |
| Scattered Sites | 1,662 | $2,279 | 3,991 | $4,963 | 8,239 | $10,259 | 6,590 | $8,674 | 14,221 | $19,017 | 11,130 | $14,336 | 10,332 | $13,173 | 2,385 | $3,518 | 1,915 | $3,300 | 2,010 | $3,495 | 1,083 | $1,941 | 1,221 | $1,999 | 64,777 | $86,952 |
| Stanton Dwelling | 17 | $131 | 21 | $160 | 21 | $136 | 41 | $170 | 194 | $321 | 44 | $116 | 20 | $89 | 19 | $71 | 18 | $71 | 135 | $258 | 42 | $113 | 97 | $217 | 666 | $1,855 |
| Sursum Coeda | 655 | $936 | 1,502 | $2,009 | 2,979 | $3,801 | 3,268 | $4,421 | 4,069 | $5,614 | 2,744 | $3,556 | 2,054 | $2,784 | 914 | $1,452 | 717 | $1,238 | 621 | $1,080 | 621 | $1,088 | 643 | $1,040 | 20,786 | $29,018 |
| UNCLASSIFIED | 150 | $208 | 2,268 | $3,053 | 5,553 | $5,688 | | | | | | | | | | | | | | | | | | | 7,971 | $8,949 |
| Warehouse | 743 | $863 | 1,744 | $2,149 | 0 | $0 | 10,051 | $12,712 | 0 | $0 | 5,350 | $7,205 | 3,084 | $3,982 | 194 | $286 | 0 | $0 | 228 | $433 | 53 | $102 | 56 | $100 | 21,501 | $27,833 |
| DCHA TOTAL | 186,861 | $236,207 | 391,320 | $485,730 | 748,882 | $926,446 | 887,493 | $1,162,222 | 1,084,954 | $1,469,100 | 882,015 | $1,090,579 | 716,070 | $946,280 | 366,087 | $513,637 | 206,013 | $314,495 | 191,768 | $292,924 | 167,960 | $254,715 | 163,185 | $234,970 | 5,992,606 | $7,927,304 |

*Figure 8: FY04 Natural Gas*

| Water FY02 | 10/1/2001 | | 11/1/2001 | | 12/1/2001 | | 1/1/2002 | | 2/1/2002 | | 3/1/2002 | | 4/1/2002 | | 5/1/2002 | | 6/1/2002 | | 7/1/2002 | | 8/1/2002 | | 9/1/2002 | | FY02 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Development | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost |
| Benning Terrace | 6,513 | $3,004 | 6,826 | $31,304 | 5,240 | $25,421 | 3,528 | $16,179 | 6,054 | $2,776 | 2,785 | $12,772 | 3,290 | $15,088 | 3,786 | $174 | 3,706 | $170 | 4,342 | $19,912 | 5,502 | $25,232 | 5,750 | $26,370 | 57,322 | $178,403 |
| Carroll Apartments | 205 | $94 | 248 | $1,137 | 271 | $2,337 | 215 | $986 | 490 | $225 | 72 | $330 | 193 | $885 | 246 | $11 | 285 | $13 | 218 | $1,000 | 346 | $1,587 | 244 | $1,119 | 3,033 | $9,724 |
| Claridge Towers | 3,230 | $1,490 | 2,656 | $11,923 | 3,141 | $14,120 | 2,213 | $9,953 | 3,466 | $1,560 | 3,298 | $14,858 | 2,904 | $13,042 | 3,379 | $148 | 2,669 | $116 | 3,174 | $14,004 | 4,521 | $20,017 | 3,799 | $16,809 | 38,450 | $118,041 |
| Colorado | 119 | $55 | 125 | $573 | 145 | $665 | 173 | $793 | 165 | $76 | 136 | $624 | 132 | $605 | 138 | $6 | 165 | $8 | 131 | $601 | 175 | $803 | 171 | $784 | 1,775 | $5,593 |
| Columbia Road | 180 | $83 | 221 | $1,014 | 124 | $569 | 160 | $1,069 | 174 | $80 | 201 | $922 | 218 | $1,000 | 136 | $6 | 106 | $5 | 36 | $165 | 0 | $0 | 200 | $917 | 1,756 | $5,828 |
| Fort Dupont | 1,093 | $504 | 760 | $3,485 | 791 | $3,628 | 532 | $2,440 | 881 | $404 | 523 | $2,398 | 639 | $2,930 | 834 | $38 | 1,070 | $49 | 850 | $3,898 | 1,082 | $4,962 | 846 | $3,880 | 9,901 | $28,617 |
| Fort Lincoln | 1,024 | $472 | 335 | $1,888 | 716 | $3,206 | 562 | $2,513 | 679 | $302 | 722 | $3,214 | 468 | $2,068 | 530 | $24 | 844 | $37 | 933 | $4,074 | 976 | $4,271 | 922 | $4,024 | 8,711 | $26,093 |
| Garfield Terrace Family | 268 | $124 | 113 | $513 | 65 | $0 | 238 | $0 | 275 | $0 | 97 | $0 | 46 | $0 | 43 | $0 | 42 | $0 | 70 | $306 | 96 | $420 | 80 | $352 | 1,432 | $1,715 |
| Garfield Terrace Senior | 4,361 | $2,012 | 1,842 | $8,351 | 1,051 | $0 | 3,875 | $0 | 4,468 | $0 | 1,577 | $0 | 743 | $0 | 700 | $0 | 677 | $0 | 1,134 | $4,974 | 1,563 | $6,830 | 1,303 | $5,722 | 23,295 | $27,889 |
| Greenleaf Senior | 1,550 | $715 | 1,404 | $6,439 | 1,453 | $5,060 | 1,496 | $4,770 | 1,474 | $488 | 1,474 | $5,326 | 1,474 | $4,473 | 1,591 | $51 | 1,650 | $55 | 1,447 | $6,636 | 1,841 | $8,443 | 1,700 | $7,796 | 18,554 | $50,251 |
| Harvard Towers | 1,771 | $817 | 1,950 | $8,770 | 1,860 | $8,369 | 1,835 | $8,431 | 1,665 | $747 | 1,735 | $7,790 | 2,120 | $9,533 | 1,435 | $64 | 1,673 | $73 | 1,662 | $7,277 | 2,635 | $11,637 | 1,700 | $7,413 | 22,041 | $70,922 |
| Highland Dwelling & Addition | 5,402 | $2,492 | 5,444 | $24,966 | 5,480 | $25,131 | 4,878 | $22,371 | 4,392 | $2,014 | 4,819 | $22,100 | 5,015 | $22,999 | 5,639 | $259 | 5,904 | $271 | 7,075 | $32,446 | 5,802 | $26,608 | 6,703 | $30,740 | 66,553 | $212,396 |
| Horizon House | 1,222 | $564 | 1,101 | $4,791 | 1,070 | $4,623 | 653 | $2,799 | 995 | $427 | 889 | $3,810 | 966 | $4,155 | 1,451 | $59 | 905 | $36 | 1,066 | $4,336 | 1,506 | $6,191 | 1,282 | $5,266 | 13,106 | $37,056 |
| James Apartments | 1,260 | $581 | 1,282 | $6,317 | 677 | $3,105 | 1,136 | $5,210 | 1,128 | $517 | 1,271 | $5,829 | 1,096 | $5,026 | 859 | $39 | 1,057 | $48 | 947 | $4,343 | 1,365 | $6,260 | 1,333 | $6,113 | 13,411 | $43,388 |
| James Creek | 4,738 | $2,186 | 4,650 | $21,325 | 2,460 | $11,282 | 2,695 | $12,359 | 3,572 | $1,593 | 2,927 | $13,423 | 2,995 | $13,735 | 11,845 | $543 | 6,019 | $276 | 5,151 | $23,623 | 5,760 | $26,415 | 6,337 | $29,061 | 59,149 | $155,822 |
| Judiciary House | 1,796 | $828 | 2,035 | $9,767 | 1,930 | $8,664 | 1,455 | $6,526 | 1,885 | $842 | 1,660 | $7,413 | 1,595 | $7,108 | 1,340 | $56 | 1,380 | $59 | 1,440 | $6,190 | 2,075 | $8,979 | 1,825 | $7,909 | 20,416 | $64,342 |
| Kenilworth Courts | 5,404 | $2,493 | 6,226 | $28,552 | 4,538 | $20,811 | 4,971 | $22,797 | 5,333 | $2,446 | 5,449 | $24,989 | 3,718 | $17,051 | 3,453 | $158 | 4,123 | $189 | 4,986 | $22,866 | 5,409 | $24,806 | 6,274 | $28,773 | 59,884 | $195,931 |
| Kentucky Courts | 648 | $299 | 775 | $3,554 | 552 | $2,531 | 582 | $2,669 | 859 | $83 | 742 | $3,403 | 317 | $1,454 | 749 | $34 | 800 | $37 | 674 | $3,091 | 792 | $3,632 | 554 | $2,541 | 8,044 | $23,328 |
| Knox Hill | 1,138 | $525 | 583 | $2,567 | 710 | $3,139 | 587 | $2,592 | 362 | $156 | 800 | $3,562 | 450 | $1,957 | 629 | $28 | 64 | $3 | 988 | $4,245 | 0 | $0 | 0 | $0 | 6,311 | $18,774 |
| Langston Terrace | 4,252 | $1,961 | 4,371 | $22,786 | 4,194 | $19,234 | 4,478 | $20,536 | 5,594 | $2,565 | 4,987 | $22,870 | 4,496 | $20,619 | 5,537 | $254 | 6,048 | $277 | 6,486 | $29,745 | 7,012 | $32,157 | 7,098 | $33,077 | 64,553 | $206,082 |
| Le Droit Apartments | 1,185 | $547 | 1,073 | $4,921 | 1,278 | $5,861 | 857 | $4,989 | 1,256 | $576 | 964 | $4,421 | 1,068 | $4,898 | 1,120 | $51 | 1,060 | $49 | 1,032 | $4,733 | 1,399 | $6,416 | 1,198 | $5,494 | 13,490 | $42,955 |
| Lincoln Road | 0 | | 0 | $0 | 10 | $46 | 26 | $119 | 14 | $6 | 8 | $37 | 8 | $37 | 25 | $1 | 27 | $1 | 26 | $119 | 50 | $229 | 44 | $202 | 238 | $798 |
| Park Morton | 2,663 | $12,286 | 2,167 | $9,938 | 2,400 | $11,006 | 1,733 | $7,948 | 2,765 | $1,268 | 1,865 | $8,553 | 2,062 | $9,456 | 2,234 | $102 | 2,296 | $105 | 1,979 | $9,076 | 3,535 | $16,212 | 3,069 | $14,074 | 28,768 | $100,024 |
| Regency House | 1,190 | $549 | 1,274 | $5,665 | 0 | $0 | 0 | $0 | 1,393 | $620 | 5,395 | $24,575 | 871 | $3,822 | 1,117 | $46 | 921 | $39 | 851 | $3,558 | 1,266 | $5,358 | 1,030 | $4,289 | 15,308 | $48,522 |
| Richardson Dwellings | 2,821 | $1,302 | 3,303 | $15,148 | 2,612 | $11,979 | 2,261 | $10,369 | 2,946 | $1,351 | 2,874 | $13,180 | 2,437 | $11,176 | 2,397 | $110 | 2,713 | $124 | 2,997 | $13,744 | 3,792 | $17,390 | 4,493 | $20,605 | 35,646 | $116,478 |
| Sibley Plaza | -768 | -$354 | 2,158 | $9,794 | 2,497 | $11,337 | 1,756 | $8,461 | 2,684 | $1,219 | 2,596 | $11,799 | 2,808 | $12,767 | 2,554 | $114 | 3,666 | $166 | 2,943 | $13,276 | 3,468 | $15,618 | 3,248 | $14,650 | 29,610 | $98,847 |
| Stoddert Terrace | 2,103 | $970 | 2,214 | $10,153 | 2,046 | $9,383 | 1,342 | $6,154 | 2,900 | $1,330 | 1,156 | $5,301 | 2,070 | $9,034 | 2,259 | $104 | 3,096 | $142 | 3,098 | $14,207 | 4,262 | $19,546 | 3,097 | $14,203 | 29,643 | $90,528 |
| Syphax Gardens | 1,928 | $889 | 1,675 | $7,682 | 1,486 | $6,815 | 1,586 | $7,273 | 2,726 | $1,250 | 598 | $2,742 | 1,267 | $5,810 | 1,962 | $90 | 2,033 | $93 | 2,017 | $9,250 | 3,052 | $13,996 | 3,036 | $13,923 | 23,366 | $69,815 |
| Villager | 123 | $57 | 159 | $729 | 261 | $1,197 | 120 | $550 | 224 | $103 | 151 | $692 | 129 | $592 | 389 | $18 | 376 | $17 | 352 | $1,614 | 389 | $1,784 | 287 | $1,316 | 2,960 | $8,670 |
| Woodland Terrace | 3,174 | $1,464 | 3,550 | $16,280 | 3,905 | $17,908 | 3,192 | $14,639 | 4,473 | $2,051 | 2,306 | $10,575 | 2,638 | $12,098 | 3,074 | $141 | 3,209 | $147 | 3,520 | $16,143 | 3,285 | $15,065 | 3,510 | $16,097 | 39,836 | $122,609 |
| **ECIP TOTAL** | 63,526 | $40,362 | 62,537 | $289,582 | 55,004 | $246,498 | 50,621 | $212,442 | 67,168 | $27,902 | 56,521 | $248,344 | 49,921 | $220,721 | 63,118 | $2,802 | 60,124 | $2,699 | 63,334 | $287,287 | 75,848 | $344,126 | 72,874 | $331,502 | 740,596 | $2,254,269 |
| Arthur Capper Senior | 5,005 | $2,309 | 5,294 | $23,917 | 5,601 | $25,300 | 5,466 | $24,680 | 7,081 | $3,197 | 4,726 | $21,338 | 3,273 | $14,649 | 7,419 | $330 | 6,473 | $288 | 5,620 | $24,913 | 5,252 | $23,137 | 5,836 | $25,904 | 67,046 | $189,962 |
| Barry Farms | 9,234 | $4,259 | 8,686 | $39,834 | 8,662 | $39,724 | 6,389 | $29,300 | 9,165 | $4,032 | 7,546 | $34,606 | 6,651 | $30,501 | 8,275 | $384 | 8,937 | $410 | 8,051 | $36,922 | 11,103 | $46,169 | 8,699 | $39,894 | 101,398 | $306,036 |
| Capitol View | 5,407 | $2,494 | 4,040 | $18,527 | 4,661 | $0 | 4,195 | $0 | 5,282 | $0 | 3,154 | $0 | 3,154 | $0 | 5,200 | $0 | 4,741 | $0 | 3,806 | $17,454 | 4,201 | $19,266 | 3,938 | $18,060 | 51,779 | $75,802 |
| Carrollsburg | 6,317 | $2,914 | 6,385 | $29,282 | 6,149 | $8,386 | 4,501 | $7,420 | 5,962 | $735 | 3,028 | $6,714 | 5,514 | $5,911 | 4,476 | $71 | 5,723 | $72 | 6,594 | $29,622 | 6,014 | $27,580 | 6,798 | $31,176 | 67,461 | $149,883 |
| East Capitol | 6,317 | $2,914 | 6,326 | $29,011 | 5,330 | $24,443 | 8,404 | $27,094 | 6,507 | $2,956 | 9,709 | $43,526 | 5,849 | $26,741 | 6,049 | $241 | 7,261 | $331 | 7,398 | $33,927 | 6,940 | $32,101 | 6,795 | $31,212 | 82,885 | $254,497 |
| Eastgate Gardens | 121 | $56 | 125 | $573 | 6 | $28 | 140 | $642 | 137 | $63 | 139 | $637 | 137 | $628 | 147 | $7 | 170 | $8 | 309 | $1,417 | 225 | $1,032 | 270 | $1,238 | 1,926 | $6,329 |
| Edgewood Terrace | 1,747 | $806 | 2,573 | $11,605 | 1,017 | $4,497 | 2,107 | $9,513 | 3,341 | $1,513 | 2,605 | $11,813 | 947 | $4,171 | 0 | $0 | 0 | $0 | 2,791 | $12,390 | 2,793 | $12,400 | 0 | $0 | 19,921 | $68,709 |
| Elvans Road | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 516 | $237 | 565 | $2,591 | 482 | $2,210 | 276 | $13 | 267 | $12 | 250 | $1,147 | 422 | $1,935 | 396 | $1,816 | 3,174 | $9,961 |
| Greenleaf Addition | 283 | $131 | 287 | $1,316 | 306 | $1,403 | 259 | $1,188 | 573 | $263 | 63 | $289 | 129 | $592 | 349 | $16 | 408 | $19 | 290 | $1,330 | 509 | $2,334 | 588 | $2,697 | 4,044 | $11,577 |
| Greenleaf Extension | 85 | $39 | 89 | $408 | 81 | $371 | 74 | $339 | 140 | $64 | 15 | $69 | 0 | $0 | 29 | $1 | 79 | $4 | 79 | $362 | 70 | $321 | 51 | $234 | 792 | $2,213 |
| Greenleaf Gardens | 4,006 | $1,848 | 3,674 | $16,849 | 4,584 | $15,963 | 3,414 | $10,886 | 9,151 | $3,030 | 973 | $3,516 | 2,170 | $6,584 | 3,706 | $119 | 4,273 | $141 | 3,927 | $18,009 | 5,899 | $27,053 | 6,342 | $29,084 | 52,119 | $133,083 |
| Henson Ridge | 46 | $21 | 38 | $174 | 19 | $87 | 24 | $110 | 31 | $14 | 21 | $96 | 24 | $110 | 18 | $1 | 26 | $1 | 25 | $115 | 28 | $128 | 26 | $119 | 326 | $977 |
| Homeownership | 464 | $214 | 318 | $1,408 | 303 | $1,440 | 165 | $757 | 576 | $128 | 235 | $1,078 | 230 | $1,055 | 239 | $11 | 174 | $8 | 139 | $619 | 71 | $326 | 148 | $729 | 3,062 | $7,772 |
| Hopkins Apartment | 1,444 | $666 | 1,418 | $6,503 | 1,578 | $7,237 | 1,282 | $5,879 | 2,019 | $926 | 1,116 | $5,118 | 1,139 | $5,223 | 1,279 | $59 | 1,246 | $57 | 1,191 | $5,462 | 1,548 | $7,099 | 1,793 | $8,223 | 17,053 | $52,452 |
| Leasing Units | 6 | $3 | 6 | $28 | 6 | $28 | 5 | $23 | 9 | $4 | 8 | $37 | 7 | $32 | 8 | $0 | 7 | $0 | 6 | $28 | 13 | $60 | 10 | $46 | 91 | $287 |
| Lincoln Heights | 4,872 | $2,248 | 4,959 | $22,738 | 5,313 | $24,360 | 4,299 | $19,710 | 4,806 | $2,204 | 4,842 | $22,200 | 4,999 | $21,952 | 6,007 | $275 | 5,593 | $256 | 4,319 | $19,801 | 6,877 | $31,533 | 6,605 | $30,783 | 63,491 | $198,060 |
| Montana Terrace | 249 | $115 | 318 | $1,438 | 216 | $987 | 205 | $940 | 193 | $89 | 185 | $848 | 275 | $899 | 238 | $11 | 254 | $11 | 229 | $1,050 | 359 | $1,696 | 363 | $1,665 | 3,084 | $9,749 |
| Office | 0 | $0 | 140 | $642 | 214 | $981 | 174 | $798 | 34 | $16 | 91 | $417 | 123 | $564 | 179 | $8 | 232 | $11 | 358 | $1,642 | 317 | $1,454 | 196 | $899 | 2,058 | $7,432 |
| Ontario | 98 | $45 | 104 | $477 | 79 | $362 | 94 | $431 | 82 | $38 | 78 | $358 | 100 | $459 | 86 | $4 | 145 | $7 | 64 | $294 | 75 | $344 | 79 | $362 | 1,084 | $3,180 |
| Parkside Addition | 411 | $1,894 | 553 | $2,536 | 470 | $2,155 | 389 | $1,784 | 445 | $204 | 476 | $2,183 | 359 | $1,646 | 354 | $16 | 394 | $18 | 379 | $1,738 | 383 | $1,756 | 408 | $1,871 | 5,021 | $17,803 |
| Potomac Gardens | 3,715 | $1,714 | 4,050 | $18,573 | 4,837 | $22,977 | 4,255 | $19,513 | 15,701 | $1,819 | 4,713 | $21,614 | 4,438 | $20,353 | 4,990 | $229 | 4,896 | $225 | 4,676 | $21,444 | 3,860 | $17,702 | 5,701 | $26,145 | 65,832 | $172,307 |
| Project 60 | 799 | $369 | 729 | $3,343 | 557 | $2,554 | 593 | $2,720 | 657 | $301 | 624 | $2,862 | 868 | $3,981 | 489 | $22 | 531 | $24 | 419 | $1,922 | 703 | $3,224 | 645 | $3,007 | 7,614 | $24,328 |
| Rehabilitation | 33 | $15 | 31 | $142 | 27 | $124 | 59 | $271 | 15 | $7 | 60 | $275 | 20 | $92 | 32 | $1 | 101 | $5 | 35 | $161 | 50 | $229 | 34 | $156 | 497 | $1,477 |
| Scattered Sites | 605 | $279 | 2,253 | $10,295 | 549 | $2,518 | 443 | $2,032 | 418 | $187 | 545 | $2,499 | 337 | $1,545 | 295 | $13 | 285 | $13 | 210 | $963 | 404 | $1,853 | 343 | $1,573 | 6,687 | $23,771 |
| Stanton Dwellings | 2,810 | $1,296 | 1,876 | $8,603 | 275 | $1,261 | 301 | $1,380 | 5,747 | $1,597 | 8,012 | $29,919 | 1,456 | $5,544 | 476 | $20 | 985 | $41 | 650 | $2,981 | 264 | $1,211 | 195 | $944 | 23,047 | $54,799 |
| Suesum Corda | 0 | $0 | 292 | $2,380 | 274 | $1,257 | 247 | $1,133 | 310 | $142 | 265 | $1,215 | 265 | $1,215 | 293 | $13 | 283 | $13 | 351 | $1,610 | 293 | $1,344 | 274 | $1,257 | 3,147 | $11,578 |
| Wade Apartments | 707 | $326 | 671 | $3,077 | 1,060 | $4,861 | 684 | $3,137 | 690 | $316 | 1,143 | $5,261 | 835 | $3,412 | 743 | $34 | 1,179 | $54 | 987 | $4,526 | 938 | $4,302 | 943 | $4,325 | 10,580 | $33,632 |
| T206 1936 Montana | 5 | $2 | 53 | $243 | 50 | $229 | 45 | $206 | 56 | $26 | 48 | $220 | 48 | $220 | 53 | $2 | 52 | $2 | 59 | $271 | 66 | $303 | 342 | $1,568 | 877 | $3,293 |
| **DCHA TOTAL** | 118,313 | $67,340 | 117,825 | $543,507 | 107,228 | $440,031 | 98,834 | $384,328 | 146,812 | $52,009 | 111,506 | $469,644 | 93,750 | $381,012 | 114,823 | $4,705 | 114,839 | $4,731 | 116,546 | $529,406 | 135,525 | $612,017 | 130,692 | $596,487 | 1,406,693 | $4,085,217 |

*Figure 9: FY02 Water*

| Water FY03 | 10/1/2002 | | 11/1/2002 | | 12/1/2002 | | 1/1/2003 | | 2/1/2003 | | 3/1/2003 | | 4/1/2003 | | 5/1/2003 | | 6/1/2003 | | 7/1/2003 | | 8/1/2003 | | 9/1/2003 | | FY03 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Development | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost |
| Benning Terrace | 5,214 | $24,663 | 4,929 | $23,579 | 4,801 | $22,976 | 4,745 | $22,713 | 5,825 | $27,799 | 4,192 | $20,108 | 4,416 | $21,163 | 5,141 | $24,578 | 3,754 | $18,045 | 4,290 | $20,570 | 5,159 | $24,663 | 5,200 | $24,856 | $7,666 | $275,712 |
| Carroll Apartments | 229 | $1,139 | 165 | $849 | 213 | $1,075 | 304 | $1,503 | 269 | $1,338 | 277 | $1,376 | 307 | $1,517 | 176 | $900 | 216 | $1,089 | 270 | $1,343 | 257 | $1,282 | 178 | $910 | 2,861 | $14,321 |
| Claridge Towers | 4,079 | $18,821 | 3,685 | $17,218 | 2,521 | $11,794 | 2,634 | $12,301 | 2,380 | $11,105 | 2,478 | $11,575 | 1,861 | $8,677 | 2,869 | $13,366 | 2,972 | $13,536 | 2,754 | $12,490 | 3,221 | $14,690 | 3,440 | $15,721 | 34,894 | $161,294 |
| Colorado | 138 | $646 | 101 | $479 | 137 | $649 | 117 | $555 | 123 | $583 | 125 | $592 | 121 | $573 | 142 | $672 | 130 | $616 | 147 | $696 | 114 | $541 | 200 | $946 | 1,595 | $7,548 |
| Columbia Road | 200 | $971 | 200 | $982 | 200 | $982 | 200 | $982 | 192 | $944 | 194 | $954 | 186 | $916 | 200 | $982 | 200 | $982 | 200 | $982 | 200 | $982 | 200 | $982 | 2,372 | $11,641 |
| Fort Dupont | 1,317 | $6,346 | 824 | $4,084 | 712 | $3,556 | 1,565 | $7,574 | 706 | $3,528 | 610 | $3,076 | 654 | $3,283 | 773 | $3,843 | 667 | $3,344 | 831 | $4,117 | 785 | $3,900 | 890 | $4,394 | 10,334 | $51,044 |
| Fort Lincoln | 665 | $3,092 | 679 | $3,188 | 485 | $2,290 | 667 | $3,134 | 731 | $3,422 | 701 | $3,284 | 433 | $2,040 | 481 | $2,266 | 588 | $2,671 | 1,068 | $4,890 | 1,067 | $4,885 | 893 | $4,090 | 8,458 | $39,250 |
| Garfield Terrace Family | 53 | $256 | 66 | $320 | 72 | $348 | 50 | $245 | 50 | $244 | 50 | $245 | 54 | $265 | 55 | $263 | 53 | $255 | 46 | $223 | 55 | $261 | 58 | $277 | 662 | $3,202 |
| Garfield Terrace Senior | 1,375 | $6,661 | 1,715 | $8,330 | 1,866 | $9,046 | 1,298 | $6,370 | 1,298 | $6,359 | 1,299 | $6,375 | 1,411 | $6,901 | 1,434 | $6,851 | 1,389 | $6,646 | 1,197 | $5,792 | 1,421 | $6,792 | 1,510 | $7,201 | 17,213 | $83,325 |
| Greenleaf Senior | 1,918 | $8,993 | 1,408 | $6,698 | 1,893 | $8,984 | 1,845 | $8,758 | 1,661 | $7,896 | 1,703 | $8,095 | 1,917 | $9,104 | 1,454 | $6,914 | 1,655 | $7,869 | 1,822 | $8,646 | 2,112 | $10,010 | 1,901 | $9,020 | 21,289 | $100,986 |
| Harvard Towers | 2,105 | $9,745 | 1,425 | $6,714 | 1,925 | $9,038 | 1,595 | $9,383 | 2,009 | $9,417 | 1,246 | $5,892 | 1,730 | $8,146 | 1,810 | $8,485 | 1,595 | $7,276 | 1,755 | $8,018 | 1,725 | $7,888 | 1,983 | $9,055 | 21,303 | $99,058 |
| Highland Dwelling & Addition | 7,585 | $32,077 | 5,918 | $28,096 | 5,252 | $24,960 | 6,619 | $31,398 | 5,651 | $26,839 | 6,566 | $31,149 | 5,191 | $24,672 | 7,013 | $33,254 | 5,895 | $27,988 | 6,613 | $31,370 | 7,215 | $34,205 | 7,598 | $36,009 | 77,116 | $362,018 |
| Horizon House | 1,587 | $7,143 | 872 | $3,926 | 854 | $3,875 | 866 | $3,906 | 876 | $3,953 | 920 | $4,169 | 868 | $3,932 | 1,061 | $4,782 | 2,013 | $8,951 | 1,925 | $8,517 | 1,859 | $8,207 | 1,677 | $7,349 | 15,378 | $68,710 |
| James Apartments | 1,513 | $7,109 | 1,068 | $5,102 | 1,387 | $6,604 | 1,211 | $5,775 | 1,082 | $5,168 | 927 | $4,438 | 945 | $4,522 | 1,317 | $6,275 | 1,196 | $5,705 | 1,171 | $5,587 | 1,237 | $5,898 | 1,403 | $6,680 | 14,457 | $68,862 |
| James Creek | 6,334 | $29,956 | 4,880 | $23,457 | 6,153 | $29,471 | 4,752 | $22,872 | 3,503 | $16,977 | 4,300 | $20,728 | 4,967 | $23,882 | 3,774 | $18,263 | 3,800 | $18,384 | 4,383 | $21,130 | 3,855 | $18,641 | 5,952 | $28,513 | 56,653 | $272,275 |
| Judiciary House | 1,995 | $9,201 | 1,540 | $7,216 | 1,800 | $8,421 | 1,585 | $7,421 | 1,205 | $5,632 | 1,270 | $5,944 | 1,170 | $5,479 | 1,660 | $7,745 | 1,620 | $7,319 | 1,790 | $8,105 | 2,220 | $10,145 | 2,395 | $10,940 | 20,250 | $93,566 |
| Kelly Miller | 1,851 | $8,695 | 1,714 | $8,148 | 1,857 | $8,822 | 1,824 | $8,666 | 1,596 | $7,592 | 1,537 | $7,314 | 1,716 | $8,157 | 1,997 | $9,481 | 1,563 | $7,437 | 2,311 | $10,960 | 1,880 | $8,930 | 1,704 | $8,101 | 21,550 | $102,303 |
| Kenilworth Courts | 4,990 | $23,388 | 5,520 | $26,171 | 4,115 | $19,553 | 4,579 | $21,739 | 5,129 | $24,329 | 4,686 | $22,243 | 4,893 | $23,218 | 4,637 | $22,012 | 4,650 | $22,073 | 6,169 | $29,228 | 6,272 | $29,713 | 5,539 | $26,260 | 61,179 | $289,926 |
| Kentucky Courts | 749 | $3,569 | 716 | $3,448 | 651 | $3,142 | 649 | $3,132 | 636 | $3,071 | 632 | $3,052 | 424 | $2,072 | 696 | $3,354 | 724 | $3,485 | 593 | $2,868 | 645 | $3,113 | 449 | $2,190 | 7,564 | $36,497 |
| Knox Hill | 633 | $2,866 | 1,574 | $7,359 | 1,663 | $7,758 | 619 | $2,881 | 523 | $2,372 | 1,506 | $7,052 | 878 | $4,088 | 998 | $4,623 | 74 | $389 | 0 | $40 | 1,111 | $4,978 | 0 | $40 | 9,579 | $44,446 |
| Langston Terrace | 6,583 | $30,916 | 6,091 | $28,946 | 5,079 | $24,180 | 5,584 | $26,558 | 5,404 | $25,710 | 4,514 | $21,519 | 5,297 | $25,207 | 4,737 | $22,569 | 4,642 | $22,121 | 5,348 | $25,447 | 5,566 | $26,474 | 6,643 | $31,546 | 65,488 | $311,193 |
| Le Droit Apartments | 1,181 | $5,573 | 1,113 | $5,321 | 946 | $4,535 | 959 | $4,596 | 884 | $4,243 | 800 | $3,847 | 677 | $3,268 | 874 | $4,196 | 883 | $4,238 | 896 | $4,299 | 929 | $4,455 | 830 | $3,988 | 10,972 | $52,557 |
| Lincoln Road | 56 | $263 | 36 | $172 | 49 | $233 | 48 | $228 | 13 | $64 | 75 | $356 | 35 | $167 | 47 | $224 | 10 | $49 | 99 | $469 | 14 | $68 | 47 | $224 | 529 | $2,517 |
| Park Morton | 3,250 | $15,182 | 2,675 | $12,646 | 2,866 | $13,546 | 3,223 | $15,227 | 2,829 | $13,372 | 2,772 | $13,103 | 2,402 | $11,360 | 3,136 | $14,818 | 3,140 | $14,836 | 3,318 | $15,675 | 3,327 | $15,717 | 2,705 | $12,788 | 35,643 | $168,271 |
| Regency House | 954 | $4,423 | 844 | $3,941 | 696 | $3,281 | 776 | $3,642 | 872 | $4,094 | 834 | $3,920 | 698 | $3,285 | 1,207 | $5,645 | 907 | $4,036 | 977 | $4,353 | 956 | $4,266 | 992 | $4,412 | 10,713 | $49,297 |
| Richardson Dwellings | 3,724 | $17,404 | 3,653 | $17,283 | 2,945 | $13,949 | 3,361 | $15,908 | 3,453 | $16,341 | 2,723 | $12,903 | 3,000 | $14,208 | 2,491 | $11,810 | 2,623 | $12,432 | 3,088 | $14,622 | 3,241 | $15,343 | 3,367 | $15,936 | 37,669 | $178,140 |
| Sibley Plaza | 4,037 | $18,800 | 3,599 | $16,980 | 2,745 | $12,981 | 2,435 | $11,511 | 2,432 | $11,496 | 2,327 | $11,005 | 2,093 | $9,906 | 2,772 | $13,081 | 2,839 | $13,271 | 2,995 | $13,998 | 3,218 | $15,056 | 3,632 | $16,990 | 35,124 | $165,074 |
| Stoddert Terrace | 2,311 | $10,893 | 2,272 | $10,824 | 2,173 | $10,358 | 2,427 | $11,554 | 3,024 | $14,366 | 4,559 | $21,596 | 3,272 | $15,534 | 3,936 | $18,662 | 3,527 | $16,735 | 3,979 | $18,864 | 2,984 | $14,178 | 3,156 | $14,988 | 37,620 | $178,555 |
| Syphax Gardens | 3,050 | $14,319 | 2,168 | $10,315 | 2,280 | $10,843 | 2,296 | $10,918 | 1,559 | $7,447 | 1,583 | $7,560 | 2,209 | $10,509 | 1,570 | $7,499 | 1,745 | $8,323 | 2,108 | $10,033 | 2,953 | $14,013 | 1,797 | $8,568 | 25,318 | $120,347 |
| Villager | 137 | $642 | 149 | $704 | 252 | $1,189 | 129 | $610 | 247 | $1,166 | 129 | $610 | 129 | $610 | 389 | $1,835 | 376 | $1,773 | 352 | $1,660 | 377 | $1,778 | 297 | $1,401 | 2,963 | $13,978 |
| Woodland Terrace | 4,019 | $18,797 | 2,985 | $14,150 | 3,174 | $15,041 | 3,776 | $17,876 | 4,095 | $19,378 | 2,981 | $14,132 | 3,439 | $16,355 | 3,733 | $17,627 | 2,752 | $13,057 | 2,635 | $12,505 | 3,225 | $15,284 | 3,210 | $15,214 | 40,024 | $189,415 |
| **ECIP TOTAL** | 73,832 | $342,547 | 64,584 | $306,648 | 61,762 | $293,478 | 63,138 | $299,938 | 60,257 | $286,247 | 58,516 | $278,211 | 57,393 | $273,017 | 62,580 | $296,872 | 58,198 | $274,932 | 65,130 | $307,496 | 69,290 | $326,353 | 69,846 | $329,590 | 764,436 | $3,615,329 |
| Arthur Capper Senior | 7,017 | $32,514 | 5,099 | $23,864 | 5,238 | $24,519 | 5,222 | $24,443 | 4,981 | $23,272 | 5,803 | $27,180 | 3,778 | $17,642 | 4,253 | $19,334 | 4,759 | $22,026 | 5,691 | $26,107 | 7,490 | $34,411 | 4,493 | $20,549 | 63,824 | $295,861 |
| Barry Farms | 10,481 | $48,948 | 7,773 | $36,740 | 9,157 | $43,259 | 8,051 | $38,050 | 7,522 | $35,558 | 7,203 | $34,056 | 5,465 | $25,870 | 7,644 | $36,133 | 6,673 | $31,559 | 9,018 | $42,657 | 9,389 | $44,354 | 9,028 | $42,653 | 97,404 | $459,835 |
| Capitol View | 3,481 | $16,433 | 3,263 | $15,555 | 3,738 | $17,792 | 3,574 | $17,020 | 3,481 | $16,582 | 3,154 | $15,042 | 3,388 | $16,144 | 4,894 | $23,237 | 5,659 | $26,840 | 3,806 | $18,113 | 4,070 | $19,356 | 4,069 | $19,351 | 46,577 | $221,466 |
| Carrollsburg | 6,909 | $32,735 | 4,104 | $19,847 | 5,858 | $28,109 | 4,482 | $21,628 | 5,180 | $24,915 | 4,582 | $22,099 | 4,718 | $22,739 | 3,606 | $17,502 | 3,921 | $18,945 | 5,869 | $28,160 | 5,062 | $24,359 | 5,237 | $25,184 | 59,528 | $286,223 |
| East Capitol | 7,288 | $34,281 | 6,253 | $30,191 | 5,287 | $25,593 | 5,636 | $27,258 | 6,249 | $29,861 | 3,479 | $16,637 | 3,022 | $14,532 | 1,526 | $7,473 | 1,474 | $7,173 | 1,177 | $5,775 | 1,098 | $5,364 | 2,526 | $12,049 | 45,015 | $216,187 |
| Eastgate Gardens | 189 | $927 | 5 | $68 | 29 | $177 | 5 | $64 | 6 | $68 | 7 | $75 | 7 | $73 | 14 | $108 | 8 | $78 | 8 | $78 | 18 | $125 | 5 | $64 | 301 | $1,904 |
| Edgewood Terrace | 0 | $71 | 0 | $71 | 0 | $71 | 0 | $71 | 0 | $71 | 0 | $71 | 0 | $71 | 0 | -$500 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 |
| Elvans Road | 422 | $2,010 | 396 | $1,905 | 383 | $1,844 | 383 | $1,844 | 285 | $1,382 | 482 | $2,310 | 482 | $2,310 | 276 | $1,340 | 267 | $1,298 | 250 | $1,218 | 409 | $1,966 | 409 | $1,966 | 4,444 | $21,394 |
| Greenleaf Addition | 365 | $1,709 | 193 | $917 | 309 | $1,463 | 223 | $1,058 | 218 | $1,034 | 253 | $1,199 | 404 | $1,910 | 385 | $1,821 | 436 | $2,061 | 226 | $1,072 | 411 | $1,943 | 446 | $2,108 | 3,869 | $18,295 |
| Greenleaf Extension | 110 | $516 | 38 | $183 | 113 | $536 | 279 | $1,318 | 76 | $362 | 37 | $178 | 56 | $267 | 35 | $168 | 38 | $183 | 100 | $475 | 102 | $484 | 116 | $550 | 1,100 | $5,219 |
| Greenleaf Gardens | 6,639 | $31,129 | 3,686 | $17,534 | 4,790 | $22,732 | 4,593 | $21,804 | 3,819 | $18,154 | 3,802 | $18,072 | 4,229 | $20,083 | 3,835 | $18,236 | 3,727 | $17,720 | 4,923 | $23,362 | 6,000 | $28,437 | 4,919 | $23,341 | 54,962 | $260,604 |
| Henson Ridge | 23 | $114 | 33 | $162 | 42 | $205 | 24 | $120 | 25 | $125 | 77 | $369 | 29 | $143 | 29 | $143 | 29 | $143 | 36 | $176 | 64 | $308 | 111 | $530 | 522 | $2,538 |
| Homeownership | 48 | $245 | 84 | $417 | 35 | $187 | 15 | $87 | 50 | $250 | 14 | $80 | 28 | $144 | 196 | $933 | 18 | -$1,760 | 20 | $101 | 14 | $73 | 17 | $87 | 539 | $844 |
| Hopkins Apartment | 2,033 | $9,534 | 818 | $3,906 | 1,642 | $7,787 | 1,818 | $8,616 | 1,714 | $8,126 | 1,619 | $7,679 | 1,638 | $7,768 | 1,825 | $8,649 | 1,298 | $6,167 | 1,383 | $6,567 | 1,682 | $7,975 | 1,835 | $8,696 | 19,305 | $91,470 |
| Leasing Units | 6 | $30 | 2 | $12 | 0 | $2 | 0 | $2 | 0 | $2 | 0 | $2 | 1 | $7 | 1 | $7 | 12 | $59 | 0 | $2 | 10 | $49 | 7 | $35 | 39 | $212 |
| Lincoln Heights | 7,173 | $34,272 | 5,800 | $28,187 | 6,732 | $32,557 | 5,341 | $26,023 | 5,466 | $26,611 | 4,608 | $22,567 | 4,737 | $23,178 | 5,106 | $24,969 | 4,367 | $21,499 | 5,873 | $28,536 | 6,327 | $30,675 | 6,685 | $32,318 | 68,215 | $331,393 |
| Montana Terrace | 428 | $2,052 | 355 | $1,728 | 454 | $2,192 | 447 | $2,159 | 307 | $1,500 | 265 | $1,302 | 855 | $4,081 | 614 | $2,946 | 260 | $1,279 | 1,038 | $4,943 | 735 | $3,512 | 806 | $3,844 | 6,564 | $31,538 |
| Office | 179 | $873 | 135 | $676 | 112 | $568 | 157 | $780 | 145 | $723 | 166 | $822 | 115 | $582 | 243 | $1,185 | 163 | $808 | 236 | $1,152 | 246 | $1,199 | 225 | $1,100 | 2,122 | $10,465 |
| Ontario | 87 | $408 | 72 | $343 | 113 | $536 | 87 | $413 | 99 | $470 | 36 | $173 | 63 | $300 | 78 | $371 | 73 | $347 | 88 | $418 | 92 | $437 | 92 | $437 | 980 | $4,654 |
| Parkside Addition | 483 | $2,262 | 538 | $2,549 | 354 | $1,683 | 463 | $2,196 | 489 | $2,319 | 512 | $2,427 | 597 | $2,827 | 389 | $1,848 | 523 | $2,479 | 502 | $2,380 | 433 | $2,055 | 331 | $1,574 | 5,614 | $26,598 |
| Potomac Gardens | 5,336 | $25,080 | 3,774 | $17,971 | 3,886 | $18,499 | 5,140 | $24,405 | 4,019 | $19,125 | 4,446 | $21,136 | 5,592 | $26,534 | 3,349 | $15,969 | 4,014 | $19,101 | 5,017 | $23,826 | 4,156 | $19,770 | 6,634 | $31,442 | 55,363 | $262,858 |
| Project 60 | 766 | $3,632 | 582 | $2,810 | 1,156 | $5,461 | 901 | $4,313 | 709 | $3,404 | 787 | $3,770 | 324 | $1,590 | 814 | $3,892 | 529 | $2,553 | 523 | $2,628 | 519 | $2,510 | 513 | $2,482 | 8,123 | $39,047 |
| Rehabilitation | 62 | $293 | 27 | $132 | 50 | $238 | 18 | $87 | 14 | $68 | 42 | $200 | 48 | $228 | 42 | $200 | 7 | $35 | 48 | $228 | 23 | $110 | 29 | $139 | 410 | $1,957 |
| Scattered Sites | 314 | $1,511 | 232 | $1,142 | 254 | $1,238 | 372 | $1,802 | 256 | $1,251 | 224 | $1,095 | 587 | $2,802 | -81 | -$292 | 204 | $998 | 369 | $1,775 | 348 | $1,676 | 573 | $2,736 | 3,652 | $17,733 |
| Stanton Dwellings | 169 | $927 | 44 | $347 | 351 | $894 | 0 | $132 | 123 | $705 | 16 | $200 | 10 | $163 | -56 | -$190 | 77 | $408 | 0 | $35 | 0 | $36 | 139 | $671 | 873 | $4,328 |
| Sursum Corda | 292 | $1,403 | 274 | $1,331 | 265 | $1,288 | 265 | $1,288 | 292 | $1,415 | 265 | $1,288 | 265 | $1,288 | 293 | $1,420 | 0 | $40 | 436 | $2,094 | 284 | $1,378 | 283 | $1,373 | 3,214 | $13,606 |
| Wade Apartments | 1,023 | $4,844 | 913 | $4,385 | 749 | $3,601 | 900 | $4,322 | 676 | $3,265 | 573 | $2,777 | 765 | $3,682 | 603 | $2,919 | 536 | $2,603 | 874 | $4,247 | 796 | $3,830 | 757 | $3,624 | 9,165 | $44,098 |
| T206 1936 Montana | 53 | $250 | 50 | $238 | 48 | $228 | 48 | $228 | 53 | $252 | 48 | $228 | 48 | $228 | 53 | $252 | 52 | $247 | 59 | $280 | 64 | $304 | 353 | $1,665 | 929 | $4,402 |
| **DCHA TOTAL** | 135,208 | $631,552 | 109,127 | $519,859 | 112,907 | $536,754 | 111,582 | $531,467 | 106,511 | $507,118 | 101,016 | $481,246 | 96,644 | $470,205 | 102,546 | $486,944 | 97,322 | $459,822 | 112,700 | $533,900 | 119,042 | $563,050 | 120,484 | $570,157 | 1,327,089 | $6,292,054 |

*Figure 10: FY03 Water*

| Water FY04 | 10/1/2003 | | 11/1/2003 | | 12/1/2003 | | 1/1/2004 | | 2/1/2004 | | 3/1/2004 | | 4/1/2004 | | 5/1/2004 | | 6/1/2004 | | 7/1/2004 | | 8/1/2004 | | 9/1/2004 | | FY04 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Development | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost | CCF | Cost |
| Benning Terrace | 5,666 | $27,351 | 4,897 | $23,967 | 5,702 | $27,847 | 3,947 | $19,388 | 5,242 | $25,630 | 8,405 | $40,876 | 5,576 | $27,240 | 1,669 | $8,410 | 3,188 | $15,732 | 3,875 | $19,040 | 5,764 | $28,149 | 4,726 | $23,145 | 58,657 | $286,774 |
| Carroll Apartments | 145 | $761 | 219 | $1,127 | 276 | $1,402 | 196 | $1,016 | 173 | $905 | 250 | $1,276 | 217 | $1,118 | 125 | $674 | 148 | $785 | 178 | $930 | 233 | $1,195 | 219 | $1,127 | 2,379 | $12,317 |
| Claridge Towers | 2,807 | $13,034 | 4,104 | $19,626 | 3,451 | $16,512 | 5,061 | $24,197 | 2,784 | $13,360 | 3,990 | $19,087 | 2,675 | $12,731 | 3,447 | $16,564 | 3,021 | $14,125 | 4,226 | $19,834 | 3,771 | $17,740 | 0 | $139 | 39,337 | $186,949 |
| Colorado | 0 | $4 | 219 | $1,054 | 148 | $717 | 183 | $886 | 149 | $722 | 155 | $751 | 183 | $886 | 151 | $731 | 158 | $765 | 183 | $886 | 216 | $1,045 | 216 | $1,045 | 1,961 | $9,490 |
| Columbia Road | 200 | $992 | 200 | $1,004 | 200 | $1,004 | 200 | $1,004 | 200 | $1,004 | 200 | $1,004 | 200 | $1,004 | 200 | $1,004 | 200 | $1,004 | 200 | $1,004 | 200 | $1,004 | 200 | $1,004 | 2,400 | $12,036 |
| Fort Dupont | 830 | $4,163 | 919 | $4,632 | 872 | $4,406 | 868 | $4,386 | 740 | $3,769 | 788 | $4,001 | 1,442 | $7,153 | 433 | $2,290 | 931 | $4,691 | 642 | $3,298 | 1,370 | $6,807 | 1,217 | $6,069 | 11,052 | $55,665 |
| Fort Lincoln | 760 | $3,619 | 613 | $2,952 | 601 | $2,882 | 2,868 | $13,806 | 813 | $3,925 | 1,022 | $4,914 | 1,138 | $5,460 | 925 | $4,362 | 671 | $3,194 | 1,689 | $7,965 | 1,374 | $6,496 | 1,438 | $6,811 | 13,912 | $66,386 |
| Garfield Terrace Family | 46 | $229 | 75 | $373 | 30 | $152 | 86 | $421 | 38 | $193 | 59 | $291 | 62 | $307 | 0 | $7 | 113 | $548 | 66 | $322 | 88 | $424 | 72 | $352 | 734 | $3,620 |
| Garfield Terrace Senior | 1,196 | $5,946 | 1,961 | $9,710 | 769 | $3,955 | 2,225 | $10,958 | 984 | $5,023 | 1,522 | $7,574 | 1,611 | $7,993 | 0 | $179 | 2,949 | $14,279 | 1,704 | $8,390 | 2,288 | $11,027 | 1,884 | $9,169 | 19,094 | $94,194 |
| Greenleaf Senior | 1,579 | $7,588 | 1,974 | $9,584 | 2,070 | $10,049 | 2,298 | $11,155 | 1,462 | $7,121 | 451 | $2,198 | 4,543 | $22,026 | 1,594 | $7,753 | 1,637 | $7,956 | 1,696 | $8,240 | 2,296 | $11,134 | 1,942 | $9,429 | 23,543 | $114,253 |
| Harvard Towers | 1,197 | $5,579 | 1,995 | $9,571 | 1,940 | $9,322 | 2,683 | $12,861 | 1,997 | $9,646 | 1,670 | $8,043 | 1,715 | $8,185 | 1,655 | $7,998 | 1,775 | $8,335 | 2,590 | $12,291 | 2,350 | $11,107 | 2,870 | $13,551 | 24,437 | $116,400 |
| Highland Dwelling & Addition | 5,872 | $28,170 | 7,251 | $35,173 | 5,787 | $28,112 | 7,194 | $34,898 | 4,752 | $23,127 | 7,005 | $33,987 | 6,850 | $33,240 | 4,935 | $24,009 | 5,860 | $28,468 | 9,984 | $48,342 | 6,879 | $33,379 | 6,059 | $29,427 | 78,428 | $380,332 |
| Horizon House | 948 | $4,130 | 1,235 | $5,729 | 917 | $4,230 | 1,407 | $6,517 | 892 | $4,172 | 1,330 | $6,197 | 976 | $4,474 | 0 | $0 | 3,634 | $16,575 | 4,119 | $19,251 | 2,437 | $11,183 | 1,503 | $6,701 | 19,398 | $89,160 |
| James Apartments | 1,101 | $5,305 | 1,306 | $6,366 | 981 | $4,800 | 1,406 | $6,848 | 1,082 | $5,287 | 623 | $3,074 | 960 | $4,699 | 1,156 | $5,643 | 1,255 | $6,121 | 988 | $4,834 | 1,585 | $7,711 | 1,359 | $6,622 | 13,802 | $67,309 |
| James Creek | 5,506 | $26,783 | 4,690 | $23,084 | 4,573 | $22,521 | 5,003 | $24,608 | 3,897 | $19,265 | 3,919 | $19,371 | 4,142 | $20,446 | 3,269 | $16,238 | 3,727 | $18,446 | 4,045 | $19,978 | 4,806 | $23,716 | 3,908 | $19,318 | 51,485 | $253,775 |
| Judiciary House | 1,690 | $7,838 | 2,605 | $12,474 | 2,260 | $10,837 | 3,090 | $14,781 | 1,940 | $9,341 | 1,755 | $8,385 | 1,495 | $7,119 | 2,180 | $10,505 | 1,875 | $8,745 | 2,590 | $12,117 | 2,490 | $11,710 | 2,995 | $14,069 | 26,965 | $127,921 |
| Kelly Miller | 1,962 | $9,420 | 2,308 | $11,200 | 2,291 | $11,114 | 2,888 | $13,995 | 2,484 | $12,048 | 2,651 | $12,853 | 2,685 | $13,017 | 2,027 | $9,845 | 2,044 | $9,927 | 1,887 | $9,170 | 2,630 | $12,752 | 3,016 | $14,612 | 28,873 | $139,953 |
| Kenilworth Courts | 6,376 | $30,565 | 5,867 | $28,451 | 5,083 | $24,668 | 6,440 | $31,212 | 4,532 | $22,016 | 4,845 | $23,521 | 5,406 | $26,225 | 4,434 | $21,544 | 4,341 | $21,095 | 4,330 | $21,042 | 5,767 | $27,969 | 5,175 | $25,115 | 62,596 | $303,422 |
| Kennedy Courts | 669 | $3,272 | 655 | $3,232 | 650 | $3,208 | 712 | $3,507 | 73 | $427 | 77 | $447 | 93 | $524 | 79 | $456 | 111 | $610 | 4,699 | $22,725 | 951 | $4,660 | 881 | $4,322 | 9,650 | $47,391 |
| Knox Hill | 633 | $2,949 | 1,574 | $7,532 | 1,516 | $7,236 | 957 | $4,535 | 375 | $1,751 | 1,757 | $8,412 | 1,216 | $5,777 | 0 | $40 | 3,350 | $15,759 | 2,054 | $9,711 | 2,131 | $10,058 | 2,071 | $9,777 | 17,634 | $83,537 |
| Langston Terrace | 5,291 | $25,499 | 6,447 | $31,287 | 4,858 | $23,624 | 5,477 | $26,657 | 6,918 | $33,602 | 4,401 | $21,470 | 5,136 | $25,013 | 4,645 | $22,647 | 4,920 | $23,973 | 5,149 | $25,077 | 7,534 | $36,573 | 6,630 | $32,216 | 67,406 | $327,638 |
| Le Droit Apartments | 715 | $3,482 | 1,131 | $5,530 | 1,212 | $5,921 | 1,189 | $5,810 | 731 | $3,602 | 1,026 | $5,024 | 874 | $4,292 | 1,167 | $5,704 | 1,121 | $5,482 | 1,056 | $5,169 | 2,104 | $10,221 | 1,609 | $7,835 | 13,935 | $68,072 |
| Lincoln Road | 114 | $546 | 0 | $2 | 19 | $94 | 9 | $46 | 14 | $70 | 22 | $108 | 67 | $325 | 23 | $113 | 7 | $36 | 8 | $41 | 6 | $31 | 10 | $51 | 299 | $1,464 |
| Park Morton | 3,052 | $14,601 | 2,859 | $13,813 | 2,570 | $12,434 | 2,487 | $12,034 | 1,787 | $8,660 | 1,852 | $8,970 | 2,285 | $11,061 | 2,115 | $10,241 | 1,976 | $9,785 | 2,297 | $11,119 | 2,894 | $13,996 | 3,298 | $15,943 | 29,472 | $142,659 |
| Regency House | 629 | $2,852 | 858 | $4,091 | 753 | $3,606 | 1,251 | $5,959 | 712 | $3,447 | 934 | $4,463 | 641 | $3,040 | 960 | $4,648 | 1,075 | $4,961 | 824 | $3,776 | 1,264 | $5,723 | 932 | $4,247 | 10,833 | $50,814 |
| Richardson Dwellings | 3,110 | $14,919 | 2,901 | $14,061 | 2,806 | $13,600 | 3,193 | $15,468 | 2,423 | $11,757 | 2,329 | $11,304 | 4,187 | $20,259 | 2,726 | $13,217 | 2,656 | $12,880 | 3,188 | $15,444 | 3,377 | $16,355 | 3,563 | $17,251 | 36,459 | $176,514 |
| Sibley Plaza | 2,325 | $11,013 | 3,402 | $16,419 | 2,681 | $12,957 | 3,563 | $17,179 | 1,936 | $9,392 | 2,830 | $13,666 | 2,137 | $10,319 | 1,424 | $6,955 | 4,074 | $19,445 | 3,190 | $15,287 | 3,561 | $17,052 | 3,276 | $15,686 | 34,399 | $165,370 |
| Stoddert Terrace | 2,611 | $12,585 | 2,907 | $14,132 | 3,097 | $15,046 | 3,953 | $19,177 | 2,911 | $14,154 | 3,019 | $14,675 | 3,202 | $15,557 | 2,653 | $12,911 | 2,829 | $13,760 | 2,552 | $12,424 | 3,238 | $15,731 | 3,259 | $15,832 | 36,231 | $175,984 |
| Syphax Gardens | 2,385 | $11,487 | 2,774 | $13,464 | 2,443 | $11,879 | 2,194 | $10,679 | 1,575 | $7,696 | 1,775 | $8,660 | 1,945 | $9,479 | 1,689 | $8,245 | 1,962 | $9,561 | 1,663 | $8,120 | 2,322 | $11,296 | 4,984 | $24,093 | 27,711 | $134,657 |
| Villager | 137 | $657 | 139 | $672 | 269 | $1,299 | 151 | $730 | 216 | $1,043 | 125 | $605 | 160 | $774 | 316 | $1,525 | 364 | $1,757 | 243 | $1,174 | 499 | $2,408 | 297 | $1,434 | 2,916 | $14,078 |
| Woodland Terrace | 3,449 | $16,560 | 3,282 | $15,914 | 4,208 | $20,374 | 5,080 | $24,580 | 3,886 | $18,825 | 3,886 | $18,825 | 3,472 | $16,790 | 3,035 | $14,723 | 2,798 | $13,581 | 3,286 | $15,933 | 4,909 | $23,756 | 3,896 | $18,873 | 45,187 | $218,734 |
| **ECIP TOTAL** | 63,001 | $301,897 | 71,367 | $346,229 | 65,033 | $315,808 | 78,259 | $379,301 | 57,718 | $280,983 | 64,673 | $314,031 | 67,291 | $326,531 | 49,032 | $239,184 | 64,770 | $312,372 | 75,201 | $362,842 | 81,334 | $392,406 | 73,505 | $355,266 | 811,185 | $3,926,849 |
| Arthur Capper Senior | 7,321 | $34,722 | 2,435 | $11,646 | 6,564 | $31,386 | 6,616 | $31,666 | 2,516 | $11,972 | 5,963 | $28,586 | 4,702 | $22,408 | 2,182 | $10,461 | 4,296 | $19,894 | 4,797 | $22,539 | 5,745 | $27,079 | 6,088 | $28,531 | 59,225 | $280,889 |
| Barry Farms | 8,486 | $40,638 | 7,564 | $36,588 | 8,854 | $42,791 | 9,330 | $45,098 | 6,658 | $32,217 | 6,714 | $32,491 | 6,977 | $33,751 | 5,612 | $27,179 | 5,478 | $26,533 | 7,468 | $36,121 | 10,035 | $48,498 | 8,087 | $39,109 | 91,263 | $441,015 |
| Capitol View | 3,481 | $16,821 | 3,046 | $14,868 | 3,372 | $16,439 | 3,699 | $18,016 | 3,046 | $14,868 | 3,045 | $14,863 | 3,973 | $19,336 | 5,271 | $25,593 | 4,588 | $22,301 | 2,625 | $12,839 | 5,383 | $26,132 | 4,069 | $19,799 | 45,598 | $221,875 |
| Carrollsburg | 5,265 | $25,612 | 4,629 | $22,829 | 5,260 | $25,821 | 1,925 | $9,725 | 1,988 | $10,028 | 2,460 | $12,303 | 1,678 | $8,534 | 964 | $5,021 | 3,130 | $15,462 | 1,677 | $8,419 | 2,104 | $10,365 | 1,190 | $5,960 | 32,270 | $160,078 |
| East Capitol | 1,018 | $4,981 | 941 | $4,592 | 116 | $656 | 58 | $354 | 15 | $243 | 272 | $1,364 | 779 | $3,844 | 9 | $45 | 25 | $125 | 4 | $21 | 4 | $21 | 1,163 | $5,608 | 4,404 | $21,854 |
| Eastgate Gardens | 5 | $64 | 6 | $69 | 6 | $69 | 5 | $64 | 5 | $64 | 4 | $59 | 6 | $69 | 0 | $40 | 0 | $40 | 96 | $503 | 22 | $147 | 7 | $74 | 162 | $1,262 |
| Edgewood Terrace | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 |
| Elvans Road | 422 | $2,057 | 370 | $1,823 | 409 | $2,011 | 449 | $2,204 | 249 | $1,240 | 465 | $2,281 | 598 | $2,922 | 224 | $1,120 | 0 | $40 | 449 | $2,205 | 387 | $1,906 | 280 | $1,390 | 4,302 | $21,200 |
| Greenleaf Addition | 505 | $2,420 | 748 | $3,613 | 425 | $2,056 | 242 | $1,174 | 205 | $996 | 246 | $1,193 | 396 | $1,916 | 347 | $1,680 | 361 | $1,748 | 356 | $1,723 | 447 | $2,162 | 369 | $1,786 | 4,647 | $22,467 |
| Greenleaf Extension | 113 | $541 | 88 | $428 | 86 | $418 | 97 | $471 | 59 | $288 | 76 | $370 | 99 | $481 | 93 | $452 | 108 | $524 | 86 | $418 | 92 | $447 | 103 | $500 | 1,100 | $5,338 |
| Greenleaf Gardens | 3,754 | $18,040 | 4,852 | $23,557 | 4,423 | $21,472 | 4,631 | $22,480 | 3,257 | $15,767 | 4,031 | $19,642 | 3,946 | $19,132 | 4,121 | $20,035 | 4,230 | $20,561 | 4,382 | $21,294 | 5,934 | $28,774 | 5,020 | $24,366 | 52,560 | $255,118 |
| Henson Ridge | 12 | $62 | 107 | $520 | 97 | $474 | 49 | $243 | 63 | $310 | 121 | $590 | 330 | $2,849 | 531 | $3,402 | 255 | $1,572 | 483 | $2,500 | 464 | $2,343 | 449 | $2,270 | 2,961 | $17,136 |
| Homeownership | 0 | $2 | 1 | $7 | 0 | $2 | 0 | $3 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 1 | $15 |
| Hopkins Apartment | 1,584 | $7,621 | 1,669 | $8,098 | 2,009 | $9,737 | 2,313 | $11,202 | 1,451 | $7,047 | 1,496 | $7,264 | 1,574 | $7,640 | 495 | $2,439 | 1,401 | $6,806 | 1,593 | $7,732 | 1,790 | $8,681 | 1,487 | $7,221 | 18,862 | $91,487 |
| Leasing Units | 5 | $26 | 3 | $17 | 3 | $17 | 4 | $22 | 4 | $22 | 6 | $31 | 6 | $31 | 4 | $22 | 4 | $22 | 6 | $31 | 4 | $22 | 3 | $17 | 52 | $279 |
| Lincoln Heights | 5,675 | $27,977 | 5,671 | $28,164 | 5,690 | $28,295 | 6,444 | $31,935 | 5,331 | $26,569 | 6,805 | $33,383 | 6,567 | $32,602 | 5,828 | $28,956 | 6,157 | $30,557 | 6,520 | $32,315 | 8,904 | $43,796 | 7,285 | $35,990 | 76,877 | $380,538 |
| Montana Terrace | 1,478 | $7,105 | 784 | $3,827 | 977 | $4,757 | 971 | $4,728 | 1,416 | $6,873 | 1,045 | $5,085 | 1,201 | $5,837 | 625 | $3,060 | 2,819 | $13,635 | 1,082 | $5,263 | 984 | $4,791 | 1,252 | $6,083 | 14,634 | $71,043 |
| Office | 179 | $895 | 227 | $1,134 | 155 | $787 | 150 | $763 | 131 | $671 | 92 | $483 | 229 | $1,144 | 151 | $768 | 184 | $831 | 296 | $1,467 | 246 | $1,226 | 341 | $1,684 | 2,361 | $11,856 |
| Ontario | 55 | $265 | 76 | $370 | 90 | $437 | 44 | $216 | 85 | $413 | 81 | $394 | 102 | $495 | 81 | $394 | 81 | $394 | 90 | $437 | 107 | $519 | 103 | $500 | 995 | $4,835 |
| Parkside Addition | 379 | $1,824 | 943 | $4,530 | 469 | $2,276 | 515 | $2,498 | 485 | $2,353 | 479 | $2,324 | 691 | $3,346 | 567 | $2,748 | 644 | $3,119 | 583 | $2,825 | 753 | $3,645 | 775 | $3,751 | 7,283 | $35,240 |
| Potomac Gardens | 4,952 | $23,816 | 5,017 | $24,377 | 4,973 | $24,165 | 4,652 | $22,618 | 3,503 | $17,080 | 5,398 | $26,214 | 5,775 | $28,031 | 2,824 | $13,808 | 2,670 | $13,066 | 5,039 | $24,485 | 4,258 | $20,721 | 8,018 | $38,844 | 57,079 | $277,227 |
| Project 60 | 531 | $2,602 | 511 | $2,529 | 505 | $2,496 | 603 | $2,970 | 545 | $2,691 | 527 | $2,654 | 671 | $3,361 | 430 | $2,142 | 554 | $2,739 | 503 | $2,493 | 637 | $3,191 | 640 | $3,155 | 6,657 | $33,023 |
| Rehabilitation | 15 | $74 | 9 | $45 | 20 | $98 | 10 | $50 | 10 | $50 | 51 | $248 | 75 | $364 | 30 | $147 | 0 | $2 | 0 | $2 | 0 | $2 | 0 | $2 | 220 | $1,084 |
| Scattered Sites | 471 | $2,286 | 395 | $1,947 | 401 | $1,970 | 575 | $2,808 | 351 | $1,729 | 445 | $2,182 | 579 | $2,828 | 322 | $1,587 | 172 | $866 | 376 | $1,898 | 406 | $1,994 | 415 | $2,037 | 4,908 | $24,130 |
| Stanton Dwellings | 0 | $4 | -57 | -$236 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | -57 | -$232 |
| Sursum Corda | 291 | $1,431 | 256 | $1,274 | 0 | $0 | 0 | $40 | 0 | $0 | 1,087 | $5,279 | 338 | $1,669 | 238 | $1,187 | 275 | $1,366 | 242 | $1,206 | 376 | $1,852 | 283 | $1,404 | 3,386 | $16,709 |
| Wade Apartments | 538 | $2,646 | 591 | $2,906 | 497 | $2,472 | 646 | $3,189 | 762 | $3,745 | 999 | $4,888 | 613 | $3,027 | 670 | $3,300 | 777 | $3,815 | 577 | $2,851 | 640 | $3,151 | 596 | $2,937 | 7,906 | $38,928 |
| T206 1936 Montana | 53 | $256 | 47 | $229 | 51 | $248 | 56 | $272 | 46 | $224 | 46 | $224 | 60 | $292 | 43 | $210 | 50 | $243 | 41 | $200 | 85 | $412 | 353 | $1,704 | 931 | $4,514 |
| **DCHA TOTAL** | 109,589 | $526,682 | 112,296 | $545,979 | 110,485 | $537,160 | 122,343 | $594,110 | 89,879 | $438,444 | 106,627 | $518,427 | 109,256 | $532,439 | 80,694 | $394,979 | 103,009 | $498,634 | 114,572 | $554,631 | 131,141 | $634,284 | 121,881 | $589,987 | 1,311,772 | $6,363,756 |

*Figure 11: FY04 Water*

### 3-YEAR ROLLING BASE CONSUMPTION

In preparation for the ECIP program, a thorough reconciliation of the DCHA utility consumption data was required beyond what was reported on the HUD Form 52722-A (01/24/01). Using the criteria for establishing an energy baseline as detailed in the *International Performance Measurement & Verification Protocol: Concept and Options for Determining Energy and Water Savings*, DCHA reconciled every individual utility account utilizing the M&V protocol procedures as detailed later in this documentation for FY02-FY03. This reconciliation accounted for missing utility bills, erroneous meter readings and other adjustments associated with a utility account audit. The results of this reconciliation are provided in Figure 12, and DCHA has verified this data set as accurate based on the receipt and reconciliation of all historical utility bills received.

From the reconciled consumption data, all potential ECM savings are estimated according to the protocols established as part of this program.

| Property | Units | Electricity | | | | Gas | | | | Water | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FY02 | FY03 | FY04 | Average | FY02 | FY03 | FY04 | Average | FY02 | FY03 | FY04 | Average |
| Benning Terrace | 274 | 2,143,206 | 2,035,858 | 2,233,394 | **2,137,486** | 201,594 | 259,515 | 239,111 | **233,406** | 57,322 | 57,666 | 58,657 | **57,882** |
| Carroll Apts | 60 | 574,200 | 545,850 | 561,600 | **560,550** | 37,018 | 36,290 | 32,728 | **35,345** | 3,033 | 2,861 | 2,379 | **2,758** |
| Claridge Towers | 343 | 1,947,600 | 1,876,048 | 1,907,550 | **1,910,399** | 147,846 | 162,533 | 145,145 | **151,841** | 38,450 | 34,894 | 39,337 | **37,560** |
| Colorado Apts | 21 | 270,030 | 295,810 | 289,660 | **285,167** | 0 | 0 | 0 | **0** | 1,775 | 1,595 | 1,961 | **1,777** |
| Columbia Road | 23 | 201,394 | 182,492 | 228,358 | **204,081** | 11,955 | 13,150 | 16,596 | **13,900** | 1,870 | 2,372 | 2,400 | **2,214** |
| Ft. Dupont | 104 | 958,000 | 1,249,347 | 814,583 | **1,007,310** | 37,861 | 58,963 | 54,176 | **50,333** | 9,901 | 10,334 | 11,052 | **10,429** |
| Ft. Lincoln | 120 | 857,400 | 873,900 | 834,300 | **855,200** | 51,654 | 58,988 | 55,363 | **55,335** | 8,711 | 8,458 | 13,912 | **10,360** |
| Garfield Terrace Family | 51 | 73,700 | 83,290 | 75,977 | **77,656** | 11,261 | 13,943 | 8,020 | **11,075** | 1,487 | 687 | 734 | **969** |
| Garfield Terrace Senior | 278 | 1,841,400 | 2,307,600 | 2,104,993 | **2,084,664** | 221,354 | 277,735 | 159,742 | **219,610** | 24,184 | 17,875 | 19,094 | **20,384** |
| Greenleaf Senior | 215 | 2,915,075 | 2,879,275 | 3,201,098 | **2,998,483** | 195,164 | 239,852 | 250,379 | **228,465** | 18,554 | 21,289 | 23,543 | **21,129** |
| Harvard Towers | 193 | 1,138,800 | 1,160,100 | 1,292,700 | **1,197,200** | 95,521 | 116,413 | 111,268 | **107,734** | 22,041 | 21,303 | 24,437 | **22,594** |
| Highland Dwellings & Addition | 454 | 3,052,589 | 2,932,220 | 3,059,748 | **3,014,852** | 184,560 | 325,014 | 320,922 | **276,832** | 66,553 | 77,116 | 78,428 | **74,032** |
| Horizon House | 105 | 1,150,830 | 1,151,776 | 1,151,520 | **1,151,375** | 63,198 | 72,747 | 74,401 | **70,115** | 13,106 | 15,378 | 19,398 | **15,961** |
| James Apartments | 141 | 1,393,220 | 1,372,050 | 1,488,510 | **1,417,927** | 61,358 | 66,390 | 78,259 | **68,669** | 13,411 | 14,457 | 13,802 | **13,890** |
| James Creek | 239 | 1,875,676 | 1,896,155 | 2,018,399 | **1,930,077** | 168,515 | 201,165 | 179,830 | **183,170** | 59,149 | 56,653 | 51,485 | **55,762** |
| Judiciary House | 271 | 1,642,950 | 1,582,650 | 1,606,950 | **1,610,850** | 106,094 | 137,061 | 132,237 | **125,131** | 20,416 | 20,250 | 26,965 | **22,544** |
| Kelly Miller | 169 | 1,063,800 | 951,698 | 898,918 | **971,472** | 185,225 | 168,659 | 168,209 | **174,031** | 23,353 | 21,550 | 28,873 | **24,592** |
| Kenilworth Courts | 290 | 3,032,145 | 2,954,040 | 3,206,352 | **3,064,179** | 225,142 | 243,339 | 214,630 | **227,704** | 60,295 | 61,179 | 62,596 | **61,357** |
| Kentucky Courts | 163 | 795,472 | 795,480 | 1,167,360 | **919,437** | 74,059 | 80,847 | 78,846 | **77,917** | 8,044 | 7,564 | 9,650 | **8,419** |
| Knox Hill | 122 | 1,108,290 | 1,142,420 | 1,179,670 | **1,143,460** | 18,502 | 26,137 | 23,434 | **22,691** | 8,323 | 11,508 | 17,634 | **12,488** |
| Langston Terrace | 308 | 280,420 | 299,820 | 325,130 | **301,790** | 238,542 | 265,492 | 251,422 | **251,818** | 64,553 | 65,488 | 67,406 | **65,816** |
| Ledroit | 124 | 925,200 | 908,580 | 883,980 | **905,920** | 106,283 | 100,949 | 94,941 | **100,724** | 13,490 | 10,972 | 13,935 | **12,799** |
| Lincoln Road | 20 | 179,672 | 173,983 | 206,590 | **186,748** | 12,534 | 14,125 | 14,033 | **13,564** | 238 | 529 | 299 | **355** |
| Park Morton | 174 | 1,135,408 | 1,077,777 | 1,240,760 | **1,151,315** | 144,994 | 158,548 | 162,400 | **155,314** | 28,768 | 35,643 | 29,472 | **31,294** |
| Regency House | 160 | 1,012,500 | 952,200 | 956,700 | **973,800** | 76,668 | 86,636 | 81,323 | **81,542** | 13,915 | 10,713 | 10,833 | **11,820** |
| Richardson Dwell | 190 | 1,462,023 | 1,511,804 | 1,725,224 | **1,566,350** | 215,475 | 274,259 | 254,908 | **248,214** | 36,410 | 38,502 | 36,459 | **37,123** |
| Sibley Plaza | 246 | 2,089,260 | 2,160,873 | 2,232,960 | **2,161,031** | 179,766 | 169,489 | 160,714 | **169,989** | 29,610 | 35,124 | 34,399 | **33,044** |
| Stoddert Terrace | 158 | 1,053,345 | 1,407,795 | 1,402,273 | **1,287,804** | 118,843 | 163,028 | 141,342 | **141,071** | 29,643 | 37,620 | 36,231 | **34,498** |
| Syphax Gardens | 174 | 1,279,325 | 1,279,860 | 1,396,140 | **1,318,442** | 131,466 | 154,357 | 141,862 | **142,562** | 23,366 | 25,318 | 27,711 | **25,465** |
| Villager | 20 | 141,960 | 196,920 | 173,660 | **170,847** | 15,584 | 20,835 | 21,012 | **19,144** | 2,970 | 2,963 | 2,916 | **2,950** |
| Woodland Terrace | 234 | 2,346,900 | 2,269,350 | 2,464,950 | **2,360,400** | 361,433 | 392,273 | 423,288 | **392,331** | 39,546 | 40,909 | 45,187 | **41,881** |
| **TOTALS** | **5,444** | **39,941,790** | **40,507,021** | **42,330,007** | **40,926,273** | **3,699,468** | **4,358,733** | **4,090,537** | **4,049,579** | **742,484** | **768,769** | **811,185** | **774,146** |

*Figure 12: ECIP Property reconciled annual consumption data*

## ESCALATED RATE DOCUMENTATION

Utility rates for FY05 and projections for FY 06 are described below. Escalation factors beyond FY06 are provided as generic estimates in energy pricing rates for electricity and natural gas through the Department of Energy's Energy Information Administration's (EIA) *2005 Energy Outlook*.

ELECTRICITY - PEPCO

FY05 pricing is based on the Customer base ($2.81) = Distribution service charge minimum ($0.90) + Transmission service charge minimum ($0.11) + Generation service charge minimum ($1.80).

Usage ($0.09251 KWH) = Average of distribution kilowatt-hour charge (1.36 cents) + transmission kilowatt-hour charge (0.35 cents) + average of generation kilowatt-hour charge (6.651 cents), Taxes and other charges (0.890 cents per kilowatt-hour).

For year-to-date FY05, the average rate for electricity usage for DCHA is projected to be $0.082 per KWH. In FY06 the rate is projected to be $0.0925, an increase of 13%, a direct result of deregulation. This is reflected in the approved tariff structure effective FEB 2005 and the Energy Information Administration projection that prices will remain steady in 2006 for electricity. The FY05 price is already increased by 8% over FY04 for a combined increase of 21% since FY04 which was expected as a result of the change in rate structure announced in 2004 to take effect in FEB 2005.

The EIA outlook suggests average U.S. electricity prices, in real 2003 dollars, are expected to decline by 11 percent, from 7.4 cents per kilowatt hour in 2003 to 6.6 cents in 2011, then rise to 7.3 cents per kilowatt-hour in 2025. This suggests a 1.4% annual decrease through 2011 and a 0.7% annual rate increase from 2011 to 2025. Given the fact that the generation assets serving DCHA are primarily coal and natural gas driven, rate decreases are not expected between 2003 and 2011. Rather for the ECIP program period (FY06-FY18) the escalation rate above FY06 rates is expected to average 1%.

NATURAL GAS - WASHINGTON GAS:

FY05 pricing is based on a Customer base ($7.85) = amount as set by WGL (DCHA has 2,680 accounts so averages approximately $21,000 per month in base charges or roughly 4.4¢ per Therm.

FY 05 YTD average Therm cost ($1.43) = Distribution ($0.3809) + PGC AVG YTD ($0.90) + Balancing cost ($0.0189) + other charges ($0.126) which include late fees, and other miscellaneous charges (taxes, hook up fees, fuel funds, etc.).

The DOE predicts a rise in FY06 heating season costs to 89¢ a therm. Adding the average spread of 23¢ between wholesale gas price predictions and the PGC or purchased gas cost, the projected average PGC gas costs will be $1.12 per therm a 22¢ per therm or 24% increase over FY05. This will bring the FY06 average therm cost to **$1.65** a 15% rise over FY05.

In 2005 Annual Energy Outlook, the DOE predicts the wellhead price of natural gas to decline 3.5% annually from 2003 to 2011 and increase at an annual rate of 2.5% from 2011 to 2018. Given the recent price hikes associated with natural gas, there is little confidence in these projections. At best the outlook is stability in pricing, and to be conservative, the escalation rate for natural gas is projected to be 1%.

WATER - WASA:

Finally, FY 05 water charges are calculated as follows:

- CCF (Hundred Cubic Feet) = 748 gallons
- Allowance formula is based on 1000 gallons = 1.3369 hundred cubic feet
- Water cost $1.83 CCF X 1.3369 = $2.4465 per 1000 gallons
- Sewer cost $2.76 CCF X 1.3369 = $3.6898 per 1000 gallons
- Right of Way cost $0.36 CCF X 1.3369 = $0.4813 per 1000 gallons
- DC Stormwater Fee 2%($1.83+$2.76) X 1.3369 = $0.1227 per 1000 gallons

Total per 1000 gallons = $6.74 ; the total per CCF is calculated as $5.05

The monthly meter fee is $6.05 (average over 1100 meters most are $2.71)

WASA is requesting a 6% increase in rates in FY06 therefore the new rate is expected to be:

- Water cost $1943 CCF X 1.3369 = $2.593 per 1000 gallons
- Sewer cost $2.76 CCF X 1.3369 = $3.911 per 1000 gallons
- Right of Way cost $0.36 CCF X 1.3369 = $0.4813 per 1000 gallons
- DC Stormwater Fee 2%($1.83+$2.76) X 1.3369 = $0.1227 per 1000 gallons

The FY06 total per 1000 gallons = $7.11 (a 5% increase) Note – there is an expected right of way cost increase projected as well however, the amount is not yet determined.

Water pricing is not projected to decrease during the ECIP project period, on the contrary, rates are expected to increase by a modest 1% annually.

In summary FY06 projected rates are as follows:

*Table 16: FY06 Projected utility rates*

| | Base [$/account] | Usage | Increase over FY05 | Annual Escalation |
|---|---|---|---|---|
| **Electricity** | $2.81 | $0.093 / kWh | 13% | 1% |
| **Gas** | $7.85 | $1.65/therm | 15% | 1% |
| **Water** | $6.05 | $7.11 / CCF | 5% | 1% |
| | | | | |

## ECIP SAVINGS ESTIMATION METHODOLOGY

The initial selection of ECMs is based upon professional engineer's recommendations, with the input from DCHA facility engineers and management. In order to predict a conservative level of consumption savings, a series of M&V Methods and Protocols developed under the auspices of the *M&V Guidelines: Measurement and Verification for Federal Energy Projects Version 2.2* and the *International Performance Measurement & Verification Protocol* were created to calculate the savings associated with each ECM For each protocol, any estimation of baseload and peak load consumption was taken from the property profile curves (Appendix A) and from the rolling base audited consumption data.

### ECM SAVINGS ESTIMATE METHODS AND PROTOCOL

Each savings estimate method is unique to the ECM it represents. (The ECM savings method identifier can be located in ECM Factors column.) Only the savings associated with each ECM applicable to a property is calculated. If an ECM is not represented in the property, the savings associated with the M&V method returns a 0 consumption savings. The savings calculations for each property are represented in the interactive spreadsheet model under the *M&V Protocol* tab. Examples from the *Judiciary House* property spreadsheet model are used here to illustrate the savings estimate methods.

All of the methods list data requirements, stipulated data variables, data collection methods, metering methods *(if applicable)*, simulation methods *(if applicable)*, regression models, savings calculation equations, and estimated savings from the rolling base data set. *Note: Although Regression Analysis was attempted on the data set, it was found that multivariate regression analysis was not effective in providing good correlation of data against various variables. As a result, other methods were primarily used as described below.*

CHILLER SYSTEM – CH-D-01

The chiller systems savings estimates were all modeled using a calibrated computer simulation analysis. (Figure 13). The simulation software used was the Carrier Hourly Analysis Program (HAP). Since the HAP uses many variables, modeling efforts were extensive for eight of the DCHA properties. Model runs revealed a 20% gain in the chiller efficiency. Since the HAP model also calculated the expected kWh used for the old chiller, and that estimation correlated well with the total cooling load demonstrated by the individual property's electric profile (i.e. load above the baseload during the summer months), the reduction in kWh consumed as estimated in the HAP model were used as the consumption savings estimates.

BOILER SYSTEM – B-A-01

Similar to the chiller system, boiler systems were also modeled using an *annual fuel utilization efficiency* (AFUE) rating as the means of calculating efficiency improvements. (See Figure 14) The AFUE rating of the old system was estimated from the estimated space heating load of the old boiler with respect to the actual therms consumed.

Space heating loads were estimated by taking the total therms consumed and subtracting out a cooking load and domestic hot water (DHW) load. If the natural gas profile demonstrates a consistent summertime baseload, those therms (between JUN-AUG) were averaged and used as the monthly baseload for cooking and DHW. Multiplying by 12 provides a baseload for cooking and DHW for the year. Any remaining load was assumed to be the space heating load. If a summertime baseload is not consistent (as would be the case with a laundry facility or some other discrepancy in natural usage patterns, it was assumed that DHW consumed 15% of the load and cooking consumed 10% of the load. Once the estimated AFUE rating of the old boiler was established, a new boiler AFUE was estimated from manufacturer data. Generally the new AFUE was found to be 0.8. The consumption savings in therms were then calculated by taking the estimated space heating load and multiplying by the ratio of $AFUE_{Base}$ / $AFUE_{Post}$.

# DCHA FY04 Energy Capital Improvement Program

## M&V Plan - M&V Methods and Protocol

### Judiciary House

**Analysis Method** **CH-D-01** **Calibrated Computer Simulation Analysis for a Chiller**

| Data Requirements | Variable | Definition | Units |
|---|---|---|---|
| | $kW_{Base}$ | Baseline chiller efficiency rating | kW/ton |
| | $kW_{post}$ | Post retrofit chiller efficiency rating | kW/ton |
| | $kWh_{Base}$ | Baseline kWh cooling usage | kWh |
| | $kWh_{post}$ | Post retrofit kWh cooling usage | kWh |
| | $CL_i$ | Cooling Load | tons |
| | $t_i$ | Operating Hours/year at load CL | hrs |
| | CDD | Cooling-Degree Days | DD |
| | $Q_{dmeand}$ | Demand charge rate - electric | $/kW |
| | $Q_{electric}$ | Energy Charge rate - electric | $/kWh |

| Stipulated Values | Variable | Definition | Units | Source |
|---|---|---|---|---|
| | $kW_{Base}$ | Baseline chiller efficiency rating | kW/ton | MFD |
| | $kW_{post}$ | Post retrofit chiller efficiency rating | kW/ton | MFD |
| | $CL_i$ | Cooling Load | tons | HAP |
| | $t_i$ | Operating Hours/year at load CL | hrs | HAP |
| | $Q_{dmeand}$ | Demand charge - electric | $/kW | Utility |
| | $Q_{electric}$ | Energy Charge - electric | $/kWh | Utility |

| Data Collection Methods | Collection Protocol | Collection Schedule | Source | | | |
|---|---|---|---|---|---|---|
| $kW_{Building}$ | Utility data | Monthly | Utility | | | |
| $kWh_{Building}$ | Utility data | Monthly | Utility | | | |
| $CL_i$ | Model run | Monthly | HAP | | | |
| $t_i$ | Model run | Monthly | HAP | | | |
| CDD | Ind. Variable | Monthly | NWS | | | |
| $Q_{dmeand}$ | Utility data | Monthly | Utility | | | |
| $Q_{electric}$ | Utility data | Monthly | Utility | | | |
| | | | | | | |
| **Metering and Monitoring** | **Metering Protocols** | **Metering Equipment** | **Metering Points** | **Sampling** | **Metering Duration** | **Metering Interval** |
| $Energy_{in}$ | | | | | | |
| $CL_{out}$ | | | | | | |

| Simulation Model | $kW_{Base}$ | $kW_{Base}$ | $kW_{Savings}$ | | | |
|---|---|---|---|---|---|---|
| Cooling | 1 | 0.8 | 20% | | | |
| Non-HVAC Electric | | | | | | |

| Savings Calculations equations | Following calculations and results are provided in two separate runs of the HAP model - with |
|---|---|
| *Energy Savings* | $kWh_{Savings} = (kW_{Base} - kW_{Post}) *? (CL_i * t_i)$ |
| *Maximum Demand savings* | $kW_{Savings-max} = (kW_{Base} - kW_{Post})/CL_{max}$ |

| Savings Calculations Estimates from Baseyear | | | | | | |
|---|---|---|---|---|---|---|
| *Energy Savings- Electric* | $kW_{Base}$ | $kW_{post}$ | $kWh_{Base}$ | $kWh_{post}$ | $kWh_{Savings}$ | % kWh |
| | 1 | 0.8 | 455,625 | 364,500 | 91,125 | 6% |

*Figure 13: M&V Method CH-D-01*

**Analysis Method** **B-A-01** **Calibrated Computer Simulation Analysis for a Boiler**

| Data Requirements | Variable | Definition | Units |
|---|---|---|---|
| | $AFUE_{Base}$ | Baseline boiler AFUE rating | |
| | $AFUE_{post}$ | Post retrofit boiler AFUE rating | |
| | $Therms_{Base}$ | Baseline boiler fuel usage | Therms |
| | $Therms_{post}$ | Post retrofit boiler fuel usage | Therms |
| | HDD | Heating-Degree Days | DD |
| | $t_i$ | Billing Days | days |
| | $Q_{gas}$ | Average periodic energy charge rate - gas | $/therm |
| | $Therms_{Cook\text{-}Base}$ | Gas usage for Cooking application in baseyear | Therms |
| | $Therms_{DHW\text{-}Base}$ | Gas usage for DHW application in baseyear | Therms |

| Stipulated Values | Variable | Definition | Units | Source |
|---|---|---|---|---|
| | $AFUE_{Base}$ | Baseline boiler AFUE rating | | Meter |
| | $AFUE_{post}$ | Post retrofit boiler AFUE rating | | MFD |
| | $Therms_{DHW\text{-}Base}$ | Gas usage for DHW application in baseyear | Therms | Estimate |
| | $Therms_{Cook\text{-}Base}$ | Gas usage for Cooking application in baseyear | Therms | Estimate |

| Data Collection Methods | Collection Protocol | Collection Schedule | Source | | | |
|---|---|---|---|---|---|---|
| $Therms_{Base}$ | Utility data | Monthly | Utility | | | |
| $Therms_{post}$ | Utility data | Monthly | Utility | | | |
| HDD | Ind. Variable | Monthly | NWS | | | |
| $t_i$ | Utility data | Monthly | Utility | | | |
| $Q_{gas}$ | Utility data | Monthly | Utility | | | |
| $Therms_{DHW\ Base}$ | Estimation | Point | Energy Star | | | |
| $Therms_{Cook\text{-}Base}$ | Estimation | Point | Energy Star | | | |
| **Metering and Monitoring** | **Metering** | **Metering** | **Metering** | **Sampling** | **Metering** | **Metering** |
| $AFUE_{Base}$ | | | | | | |
| | | | | | | |
| **Simulation Model Output** | $Therms_{Base}$ | $Therms_{Post}$ | $Therms_{Savings}$ | | | |
| Heating | | | - | | | |
| Other | | | - | | | |
| | | | | | | |
| **Regression Model(s)** | **Ind. Variable(s)** | **Coefficient** | **$R^2$** | **t** | **P** | **Season** |
| $Therms_{DHW + Cook\ Post}$ | $t_i$ | | | | | |
| $Therms_{post}$ | HDD | | | | | |
| ? $Therms_{Post}$ | HDD | | | | | |

**Savings Calculations equations** Since the gas usage will be normalized to baseyear condition, the only factor influencing the total

*Baseyear usage for heating*

$Therms_{Heat\ Base} = Therms_{Base} - Therms_{DHW\text{-}Base} - Therms_{Cook\ Base}$

$Therms_{DHW\text{-}Base} = Therms_{Base} * 15\%$

$Therms_{Cook\text{-}Base} = Therms_{Base} * 10\%$

$Therms_{Heat\ Post} = Therms_{Heat\ Base} * (AFUE_{Base} / AFUE_{Post}) + C$

C = adjustment term in main Equation 1

*Energy Savings*

$Therms_{Savings} = Therms_{Heat\ Base} - Therms_{Heat\ Post} + C$

**Savings Calculations Estimates from Baseyear**

| *Energy Savings- Gas* | $AFUE_{Base}$ | $AFUE_{Post}$ | $Therms_{Heat\ Base}$ | $Therms_{Heat\ Post}$ | $Therms_{Savings}$ | % Therms |
|---|---|---|---|---|---|---|
| | 0.56 | 0.80 | 92,127 | 65,036 | 27,091 | 20% |

*Figure 14: M&V Method B-A-01*

DOMESTIC HOT WATER – HW-A-01

Similar to the boiler system method, the DHW systems savings were estimated based upon an improvement on the improvement in the AFUE rating of the DHW boiler. Annual DHW baseload consumption was estimated by taking the average summertime baseload, those therms between JUN-AUG as the monthly baseload for cooking and DHW. If gas ranges and stovetops are in the property (very rare) then c a 10% total therm cooking load was subtracted. The remainder was multiplied by 12 to provide a baseload for DHW for the year.

The old base boiler system was estimated to have a AFUE rating of 0.65 while a new system has a rating of 0.80. The savings calculation was estimated by multiplying the DHW therms consumed by the ratio $AFUE_{Base}$ / $AFUE_{Post}$. (See Figure 15.)

DOMESTIC HOT WATER – HW-A-02

If the DCHA candidate property selected a DHW Heat Pump Package as a potential ECM, then a second savings estimate was used to determine the savings associated with the heat pump unit. The summertime consumption of gas for DHW applications was reduced by 87%. This assumes that there would be sufficient cooling-degree-days during the summer to activate the chiller which in turn activates the DHW heat pump package. 87% was used as a conservative figure to allow for some natural gas consumption during the summer as a back up to the heat pump system. (See Figure 16)

**Analysis Method** **HW-A-01** **Hot Water Continuous-Post Installation Metering**

| Data Requirements | Variable | Definition | Units |
|---|---|---|---|
| | $AFUE_{Base}$ | Baseline DHW boiler AFUE rating | |
| | $AFUE_{post}$ | Post retrofit DHW boiler AFUE rating | |
| | $Therms_{Base}$ | Baseline gas usage | Therms |
| | $Therms_{post}$ | Post retrofit gas usage | Therms |
| | $Therms_{DHW\text{-}Base}$ | Baseline DHW boiler fuel usage | Therms |
| | $Therms_{DHW\text{-}Post}$ | Post retrofit boiler fuel usage | Therms |
| | $t_i$ | Billing Days | days |
| | $Q_{gas}$ | Average periodic energy charge rate - gas | $/therm |

| Stipulated Values | Variable | Definition | Units | Source |
|---|---|---|---|---|
| | $AFUE_{Base}$ | Baseline boiler AFUE rating | | Meter |
| | $AFUE_{post}$ | Post retrofit boiler AFUE rating | | MFD |
| | $Therms_{DHW\text{-}Base}$ | Baseline DHW boiler fuel usage | Therms | Estimation |

| Data Collection Methods | Collection Protocol | Collection Schedule | Source | | | |
|---|---|---|---|---|---|---|
| $Therms_{Base}$ | Utility data | Monthly | Utility | | | |
| $Therms_{post}$ | Utility data | Monthly | Utility | | | |
| $t_i$ | Utility data | Monthly | Utility | | | |
| $Q_{gas}$ | Utility data | Monthly | Utility | | | |
| | | | | | | |
| **Metering and Monitoring** | **Metering Protocols** | **Metering Equipment** | **Metering Points** | **Sampling** | **Metering Duration** | **Metering Interval** |
| $AFUE_{Base}$ | | | | | | |

| Regression Model(s) | Ind. Variable(s) | Coefficient | $R^2$ | t | P | Season |
|---|---|---|---|---|---|---|
| $Therms_{DHW + Cook\ Post}$ | $t_i$ | | | | | |

**Savings Calculations equations**

*Estimated usage of gas for DHW to be average of summer usage.*

$Therms_{DHW\text{-}Base}$

$Therms_{DHW\ Post} = Therms_{DHW\ Base} * (AFUE_{Base} / AFUE_{Post}) + C$

C = adjustment term in main Equation 1

*Energy Savings*

$Therms_{Savings} = Therms_{DHW\ Base} - Therms_{DHW\ Post} + C$

| *Energy Savings- Gas* | $AFUE_{Base}$ | $AFUE_{Post}$ | $Therms_{DHW\ Base}$ | $Therms_{DHW\ Post}$ | $Therms_{Savings}$ | % Therms |
|---|---|---|---|---|---|---|
| | 0.65 | 0.80 | 30,836 | 25,055 | 5,782 | 4% |

*Figure 15: M&V Method HW-A-01*

**Analysis Method** **HW-A-02** **DHW Heat Pump Package Continuous-Post Installation Metering**

| Data Requirements | Variable | Definition | Units |
|---|---|---|---|
| | $Therms_{DHW\ Base}$ | Baseline DHW boiler fuel usage | Therms |
| | $Therms_{DHW\ Post}$ | Post retrofit boiler fuel usage | Therms |
| | $t_i$ | Billing Days | days |
| | $Q_{gas}$ | Average periodic energy charge rate - gas | $/therm |

| Stipulated Values | Variable | Definition | Units | Source |
|---|---|---|---|---|
| | $Therms_{DHW\ Base\ Summer}$ | Baseline DHW boiler fuel usage JUN-AUG | Therms | Meter |
| | $Therms_{DHW\ Post\ Summer}$ | Post retrofit boiler fuel usage JUN -AUG | Therms | Meter |
| | $Therms^{j}_{Savings\ DHW}$ | Therms savings calculated as part of HW-A-01 | Therms | Calculation |
| | $AFUE_{Base}$ | Baseline boiler AFUE rating | | Meter |
| | $AFUE_{post}$ | Post retrofit boiler AFUE rating | | MFD |

| Data Collection Methods | Collection Protocol | Collection Schedule | Source | | | |
|---|---|---|---|---|---|---|
| $Therms_{Base}$ | Utility data | Monthly | Utility | | | |
| $Therms_{post}$ | Utility data | Monthly | Utility | | | |
| $t_i$ | Utility data | Monthly | Utility | | | |
| $Q_{gas}$ | Utility data | Monthly | Utility | | | |
| | | | | | | |
| **Metering and Monitoring** | **Metering Protocols** | **Metering Equipment** | **Metering Points** | **Sampling** | **Metering Duration** | **Metering Interval** |
| | | | | | | |

| Regression Model(s) | Ind. Variable(s) | Coefficient | $R^2$ | t | P | Season |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |

**Savings Calculations equations**

*Estimated usage of gas for DHW to be average of summer usage.*

$Therms_{DHW\ Base\ Summer} = Therms_{DHW\ Therms\ Base} / 4$

$Therms_{DHW\ Post\ Summer} = Therms_{DHW\ Base\ Summer} * (AFUE_{Base} / AFUE_{Post}) + C$

C = adjustment term in main Equation 1

*Energy Savings*

$Therms_{Savings} = Therms_{DHW\ Base\ Summer} - Therms_{DHW\ Post\ Summer} - (Therms^{j}_{Savings\ DHW} / 4) + C$

| *Energy Savings- Gas* | $AFUE_{Base}$ | $AFUE_{Post}$ | $Therms_{DHW\ Base}$ | $Therms_{DHW\ Post}$ | $Therms_{Savings}$ | % Therms |
|---|---|---|---|---|---|---|
| | 0.65 | 5.20 | 7,709 | 964 | 5,300 | 4% |

*Figure 16: M&V Method HW-A-02*

**Analysis Method** **E-C-02** **Whole Building Utility Bill Analysis for Electrical Systems**

| Data Requirements | Variable | Definition | Units |
|---|---|---|---|
| | $kWh_{Base}$ | Baseyear electrical usage | kWh |
| | $kW_{post}$ | Post retrofit electrical usage | kWh |
| | $t_i$ | Billing Days | |
| | $N_i$ | Number of fixtures | |
| | $kWh_{Base\ Load}$ | Baseyear electrical usage not for HVAC | kWh |

| Stipulated Values | Variable | Definition | Units | Source |
|---|---|---|---|---|
| | $kWh_{Base\ Load}$ | Baseyear electrical usage not for HVAC | kWh | Estimated |
| | $kWh_{Base\ Lighting}$ | Percent $kWh_{Base\ Load}$ used for lighting | % | EPA |
| | $kWh_{Appliances}$ | Percent $kWh_{Base\ Load}$ used for refrigerators | % | EPA |
| | $kWh_{Others}$ | Percent $kWh_{Base\ Load}$ used for other | % | EPA |
| | $N_{Incandescent}$ | Rate of lighting available as incandescent | % | |
| | $kWh_{Reductions}$ | kWh reduction rate for replacement light fixtures | % | MFD |

| Data Collection Methods | Collection Protocol | Collection Schedule | Source | | | |
|---|---|---|---|---|---|---|
| $kWh_{Base}$ | Utility Data | Monthly | Utility | | | |
| $kW_{post}$ | Utility Data | Monthly | Utility | | | |
| $t_i$ | Utility Data | Monthly | Utility | | | |
| $N_i$ | Ind. Variable | Monthly | DCHA | | | |

| Savings Calculations equations | *Utility bill comparison on base kWh consumption using a 3-year monthly average graph to determine the average* |
|---|---|
| *Usage breakdown* | $kWh_{Base\ lighting}$ = 24% $kWh_{Reductions}$ = 50%<br>$kWh_{Appliances}$ = 20% $N_{Incandescent}$ = 30%<br>$kWh_{Other}$ = 56% |
| *Baseload estimation* | Estimation made on 3-year historical average of FEB-APR kWh monthly consumption.<br>$kWh_{Base\ Load}$ = 1,081,650 |
| *Energy Savings* | $kWh_{Savings} = kWh_{Baseload} - kWh_{Post\ Load}$ |
| *Maximum Energy Savings - Lighting* | $kWh_{Post\ Load} = kWh_{Baseload} * (1 - (kWh_{Base\ Lighting} * kWh_{reduction} * N_{Incandescent}))$ |

| Savings Calculations Estimates from Baseyear | | | | |
|---|---|---|---|---|
| *Energy Savings- Electricity* | $kWh_{Base}$ | $kWh_{post}$ | $kWh_{savings}$ | % kWh |
| | 1,081,650 | 1,042,711 | 38,939 | 2% |

*Figure 18: M&V Method E-C-02*

ENERGY MANAGEMENT SYSTEM E-C-03

According to the EPA's December 2004 EnergyStar™ Building Upgrade Manual, the main savings associated with building controls result from reductions in charges for heating and cooling energy (and possibly demand). Because savings are heavily dependent on the existing condition of the controls, it is difficult to estimate the actual savings that will result from a tune-up. Savings will depend on many factors related to the building including heating and cooling system types; construction; geographical location; and internal heating, cooling, and electrical loads. Typical savings can range up to 30 percent of annual heating and cooling costs.

For DCHA, the savings associated with whole building automation controls will only affect the HVAC systems. So in order to calculate the savings, it is assumed that 15% of the energy use associated with heating and cooling for the target buildings in which automation controls will be installed will be affected.

The calculation of the savings is provided in Figure 19.

**Analysis Method** **E-C-03** **Whole Building Utility Bill Analysis for Energy Management Systems**

| Data Requirements | Variable | Definition | Units | |
|---|---|---|---|---|
| | $kWh_{Base\ HVAC}$ | Baseline kWh cooling usage | kWh | Estimated |
| | $kWh_{post\ HVAC}$ | Post retrofit kWh cooling usage | kWh | Estimated |
| | $Therms_{Base\ HVAC}$ | Baseline boiler fuel usage | Therms | Estimated |
| | $Therms_{post\ HVAC}$ | Post retrofit boiler fuel usage | Therms | Estimated |

| Stipulated Values | Variable | Definition | Units | Source |
|---|---|---|---|---|
| | $kWh_{Base\ Load}$ | Baseyear electrical usage | kWh | Data |
| | $\%kWh_{EMS}$ | % $kWh_{Base\ HVAC}$ reduction for EMS | % | DOE |
| | $\%Therms_{EMS}$ | % $Therms_{Base\ HVAC}$ reduction for EMS | % | DOE |

| Data Collection Methods | Collection Protocol | Collection Schedule | Source | | | |
|---|---|---|---|---|---|---|
| $kWh_{Base}$ | Utility Data | Monthly | Utility | | | |
| $kW_{post}$ | Utility Data | Monthly | Utility | | | |
| $Therms_{Base}$ | Utility Data | Monthly | Utility | | | |
| $Therms_{post}$ | Utility Data | Monthly | Utility | | | |
| $t_i$ | Utility Data | Monthly | Utility | | | |
| $N_i$ | Ind. Variable | Monthly | DCHA | | | |

**Savings Calculations equations** *Utility bill comparison on base kWh consumption using a 3-year monthly average graph to determine the average*

*Usage breakdown*

$\%kWh_{EMS}$ = **15%**

$\%Therms_{EMS}$ = 15%

*Baseload estimation*

Estimation made on 3-year historical average of FEB-APR kWh monthly consumption.

$kWh_{Base\ HVAC}$ = 279,298

$Therms_{Base\ HVAC}$ = 120,177

*Energy Savings*

$kWh_{Savings} = kWh_{Base\ HVAC} - kWh_{Post\ HVAC}$

$Therms_{Savings} = Therms_{Base\ HVAC} - Therms_{Post\ HVAC}$

**Savings Calculations Estimates from Baseyear**

| *Energy Savings- Electricity* | $kWh_{Base}$ | $kWh_{post}$ | $kWh_{savings}$ | % kWh |
|---|---|---|---|---|
| | 279,298 | 237,403 | 41,895 | 2% |
| *Energy Savings- Gas* | $Therms_{Base}$ | $Therms_{Post}$ | $Therms_{Savings}$ | % Therms |
| | 120,177 | 102,151 | 18,027 | 11% |

*Figure 19:M&V Method E-C-03*

FAN COIL UNITS – E-C-04

Fan coil units are a critical part of the heat exchange system for most HVAC systems. Although these units are simple in design and some efficiency can be gained from motor fan improvements, the repair or tune-up of malfunctioning units provides more efficiency gains since it is the fan coil unit which makes the heat exchange system operate properly. Repairing and replacing these units not only save energy, they also dramatically improve the comfort level of the building or space occupants.

According to the EPA's December 2004 EnergyStar™ Building Upgrade Manual, The savings you will see from a tune-up of your heat exchange equipment are highly dependent upon the existing conditions of the equipment. In general, the more you can improve the heat transfer of surfaces, the more you will save. Additionally, cleaning coils and filters may reduce the pressure drop across the coil and reduce fan or pump energy consumption.

Savings will differ depending on many factors related to the building, including heating and cooling system types; construction; geographical location; and internal heating, cooling, and electrical loads. Typical heating and cooling system cost savings can range up to 10 percent.

For DCHA, the savings associated with whole building automation controls will only affect the HVAC systems. So in order to calculate the savings, it is assumed that 5% of the energy use associated with heating and cooling for the target buildings in which automation controls will be installed will be affected.

The calculation of the savings is provided in Figure 20.

**Analysis Method** **E-C-04** **Whole Building Utility Bill Analysis for Fan Coil Units**

| Data Requirements | Variable | Definition | Units | |
|---|---|---|---|---|
| | $kWh_{Base\ HVAC}$ | Baseline kWh cooling usage | kWh | Estimated |
| | $kWh_{post\ HVAC}$ | Post retrofit kWh cooling usage | kWh | Estimated |
| | $Therms_{Base\ HVAC}$ | Baseline boiler fuel usage | Therms | Estimated |
| | $Therms_{post\ HVAC}$ | Post retrofit boiler fuel usage | Therms | Estimated |

| Stipulated Values | Variable | Definition | Units | Source |
|---|---|---|---|---|
| | $kWh_{Base\ Load}$ | Baseyear electrical usage | kWh | Data |
| | $\%kWh_{EMS}$ | % $kWh_{Base\ HVAC}$ reduction for EMS | % | DOE |
| | $\%Therms_{EMS}$ | % $Therms_{Base\ HVAC}$ reduction for EMS | % | DOE |

| Data Collection Methods | Collection Protocol | Collection Schedule | Source | | | |
|---|---|---|---|---|---|---|
| $kWh_{Base}$ | Utility Data | Monthly | Utility | | | |
| $kW_{post}$ | Utility Data | Monthly | Utility | | | |
| $Therms_{Base}$ | Utility Data | Monthly | Utility | | | |
| $Therms_{post}$ | Utility Data | Monthly | Utility | | | |
| $t_i$ | Utility Data | Monthly | Utility | | | |
| $N_i$ | Ind. Variable | Monthly | DCHA | | | |

**Savings Calculations equations** *Utility bill comparison on base kW/h consumption using a 3-year monthly average graph to determine the average*

*Usage breakdown*

$\%kWh_{EMS}$ = 5%

$\%Therms_{EMS}$ = 5%

*Baseload estimation*

Estimation made on 3-year historical average of FEB-APR kWh monthly consumption.

$kWh_{Base\ HVAC}$ = 279,298

$Therms_{Base\ HVAC}$ = 120,177

*Energy Savings*

$kWh_{Savings} = kWh_{Base\ HVAC} - kWh_{Post\ HVAC}$

$Therms_{Savings} = Therms_{Base\ HVAC} - Therms_{Post\ HVAC}$

**Savings Calculations Estimates from Baseyear**

| *Energy Savings- Electricity* | $kWh_{Base}$ | $kWh_{post}$ | $kWh_{savings}$ | % kWh |
|---|---|---|---|---|
| | 279,298 | 265,333 | 13,965 | 1% |
| *Energy Savings- Gas* | $Therms_{Base}$ | $Therms_{Post}$ | $Therms_{Savings}$ | % Therms |
| | 120,177 | 114,169 | 6,009 | 4% |

*Figure 20: M&V Analysis Method E-C-04*

APPLIANCES AP-A-01

In order to calculate the savings from appliances, actual rated annual consumption figures for old and new appliances are used to base the savings on. If an appliance is replaced and it's original consumption rating is higher than an Energy Star® compliant replacement, then the savings is the differential between the two. Since it is not directly known what the consumption rating of each DCHA appliance, it is assumed that the average appliance was purchased and installed prior to FY90.

The Department of Energy Office of Energy Efficiency and Renewable Energy (EERE) reports on the energy efficiency standards of residential appliances prior to 1/1/93 and post 7/1/01. For a 20.6 cubic foot automatic defrost refrigerator freezer, DOE estimates annual consumption per refrigerator is (16.0 * 20.6 + 355) = 685kWh. For similar size refrigerators, the maximum annual consumption allowed to be manufactured is (9.8*20.6+276) = 478 kWh per refrigerator. An Energy Star® compliant refrigerator has a rating of 432 kWh. The DOE Buildings Energy Databook lists similar refrigerators put in service prior to 1990 as having an annual electricity consumption of 955 kWh. Unit savings are calculated by taking the difference between the pre-1990 unit and the Energy Star® compliant unit for a total of 523 kWh per unit.

Similarly consumption savings estimates were found for washers and dryers. Since DCHA does NOT own the laundry equipment, however does pay the utilities associated with the laundry facilities, it is important for DCHA to consider replacing the commercial units currently in operation with more efficient systems. According to Energy Star® , a pre-1994 washer commercial clothes washer (2.86 cu. Ft. volume) has an energy factor of 1.18.

To convert the energy factor to kWh per year you divide 392*2.86/ 1.18 = 950 kWh a year. This assumes 8 washes per week or 392 a year. This is assumed to be the normal washing load for every 4 residents in the building. So to calculate the annual consumption, the number of units * number of residents per unit /4 is the total number of washers that would service the property. Then the annual kWh per washer is multiplied by the number of washers to determine the annual base load.

An Energy Star® compliant unit[3] has an annual kWh per year rating of 564 kWh for a savings of 386 kWh per washer. Total annual savings are calculated by multiplying the number of washers X the annual unit savings. In addition to kWh savings, a washer also provides water savings. The American Water Works Association Residential End Use of Water Report states that on average clothes washers consume 15 gallons per capita day (gpcd) of water. Assuming a 30% reduction in water consumption as detailed in the Energy Star® criteria, the reduction in water use per capita day per machine is 4.5gpcd. Total water savings is calculated by taking 4.5 gpcd * number of residents * number of machines.

Similarly, gas and electric clothes dryers have associated savings. Pre-1994, dryers are detailed in the DOE Buildings Energy Data Book to consume 1,000 kWh per year (electric) and 44 therms per year (gas). New standards reduce those loads to 835 kWh and 32 therms annually per machine. It is assumed that the number of machines is the same as the number of washers.

Total savings per utility are reported for all appliances if appliance replacement is selected by DCHA for that property. If a laundry facility does not exists, no laundry savings are assumed. (See Figure 21)

[3] Used Maytag Model MAH20PD

**Analysis Method** **AP-A-01** **Stipulated consumption levels for appliances**

| Data Requirements | Variable | Definition | Units |
|---|---|---|---|
| | $kWh_{Base}$ | Baseline appliance annual electricity use | kWh / year |
| | $kWh_{post}$ | Post retrofit appliance annual electricity use | kWh / year |
| | $Therms_{Base}$ | Baseline appliance annual electricity use | Therms/yr |
| | $Therms_{post}$ | Post retrofit appliance annual electricity use | Therms/yr |
| | $N_i$ | Number of appliances | |
| | $Q_{electric}$ | Energy Charge rate - electric | $/kWh |
| | $Q_{gas}$ | Average periodic energy charge rate - gas | $/therm |

| Stipulated Values | Variable | Definition | Units | Source |
|---|---|---|---|---|
| | $kWh_{Base}$ | Baseline appliance annual electricity use | kWh / year | DOE |
| | $kWh_{post}$ | Post retrofit appliance annual electricity use | kWh / year | DOE |
| | $Therms_{Base}$ | Baseline appliance annual electricity use | Therms/yr | DOE |
| | $Therms_{post}$ | Post retrofit appliance annual electricity use | Therms/yr | DOE |
| | $N_i$ | Number of new appliances on-line during a month | | DCHA |

| Data Collection Methods | Collection Protocol | Collection Schedule | Source | | | |
|---|---|---|---|---|---|---|
| $N_i$ | Ind. Variable | Monthly | DCHA | | | |
| $Q_{electric}$ | Utility data | Monthly | Utility | | | |
| $Q_{gas}$ | Utility data | Monthly | Utility | | | |

**Savings Calculations equations**

*Energy Savings*

$kWh_{Savings} = \{(kWh_{Base} - kWh_{Post})/12\} * N_i$

$Therms_{Savings} = \{(Therms_{Base} - Therms_{Post})/12\} * N_i$

| Appliance | $N_i$ | $kWh_{Base}$ | $kWh_{post}$ | $kWh_{savings}$ per | Savings kWh/month | Savings kWh/yr |
|---|---|---|---|---|---|---|
| Refrigerator 20.5 cu. Ft. | 271 | 955 | 432 | 523 | 11,811 | 141,733 |
| Range Electric | 0 | | | | | |
| Clothes Dryer Electric | 0 | 1057 | 835 | 222 | - | - |
| Water Heater - Electric | 0 | 3456 | 3380 | 76 | - | - |
| Clothes Washer | 0 | 950 | 564 | 386 | - | - |
| | Ni | PC | GPCDBase | GPCDpost | CCF Savings | |
| | 0 | 2 | 15.1 | 10.6 | - | |
| Appliance | $N_i$ | $Therms_{Base}$ | $Therms_{post}$ | $Therms_{savings}$ pe | Therms/mo. | Therms/yr |
| Range-Gas | 0 | | | | | |
| Clothes Dryer - Gas | 0 | 44.8 | 32 | 12.8 | - | - |
| Water Heater - Gas | 0 | | | | | |

**Savings Calculations Estimates from Baseyear**

| *Energy Savings- Electricity* | $kWh_{Base}$ | $kWh_{post}$ | $kWh_{savings}$ | % kWh |
|---|---|---|---|---|
| | 258,805 | 117,072 | 141,733 | 9% |
| *Energy Savings- Gas* | $Therms_{Base}$ | $Therms_{Post}$ | $Therms_{Savings}$ | % Therms |
| | - | - | - | 0% |
| *Energy Savings- Water* | $GPCD_{Base}$ | $GPCD_{post}$ | $CCF_{Savings}$ | % CCF |
| | - | - | - | 0% |

*Figure 21: M&V Method AP-A-01*

PLUMBING FIXTURES – WCM-A-01

In the American Water Works Association (AWWA) Residential End Uses of Water Report, consumption for plumbing devices for households not utilizing water efficient fixtures and households using water efficient fixtures are reported. This is based on a national survey and provides an expected consumption level on a per capita basis.

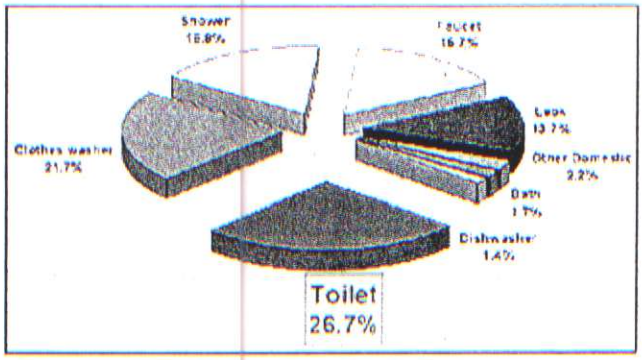



*Figure 22: AWWA Indoor Water Use by Fixture*

Given that the water consumption profile of the "average" DCHA resident is unknown, a different usage pattern was sought which would more closely tie to the actual water consumption patterns evident in the DCHA water utility baseline data. The AWWA conducted a residential water use survey and determined the percentage of indoor water use associated with each class of fixture. (See Figure 22) In order to calculate the consumption of each water saving device, the 3-year average water consumption for each property was multiplied by the percentages associated with each fixture type and recorded as a baseline consumption for that fixture.

In the AWWA report, water consumption savings were also reported by fixture for households using water saving devices versus households using inefficient devices. The difference in the gallons per capita day (gpcd) consumed is the estimated savings per fixture. Since the DCHA resident profile is not an "average" a rate of savings (expressed as a percentage) was calculated and applied to each fixture class and this rate of savings was multiplied by the annual consumption to determine the proposed savings.

*Table 17: AWWA Fixture Savings Rate*

| | AWWA gpcd base | AWWA gpcd post | Rate of savings |
|---|---|---|---|
| **Toilet** | 20.1 | 9.6 | 52% |
| **Faucet** | 11.1 | 6.7 | 40% |
| **Shower Head** | 12.6 | 10 | 20% |
| **Leaks** | 10 | 6.5 | 35% |

According to the Harvard GSD report, which references the AWWA report, leaks account for 13.8% of all water used and a leak averages 10 gpcd. After conservation efforts are installed the consumption associated with leaks drops to 6.5 gpcd. It is assumed that every unit has a leak associated with the fixtures and that if replaced the associated leak will be reduced. (See Figure 23)

**Analysis Method** **WCM-A-01** **Stipulated consumption levels for plumbing devices**

| Data Requirements | Variable | Definition | Units |
|---|---|---|---|
| | $GPCD_{Base}$ | Baseline consumption per device | gpcd |
| | $GPCD_{post}$ | Post retrofit consumption per device | gpcd |
| | $Q_{water}$ | Water Charge rate | $/CCF |
| | $N_i$ | Number of appliances | |
| | PC | per capita unit | |

| Stipulated Values | Variable | Definition | Units | Source |
|---|---|---|---|---|
| | $GPCD_{Base}$ | Baseline consumption per device | gpcd | AWWA |
| | $GPCD_{post}$ | Post retrofit consumption per device | gpcd | AWWA |
| | $N_i$ | Number of appliances | | DCHA |
| | PC | per capita unit | | |

| Data Collection Methods | Collection | Collection | Source | | | |
|---|---|---|---|---|---|---|
| $N_i$ | Ind. Variable | Monthly | DCHA | | | |
| $Q_{water}$ | Utility Data | Monthly | Utility | | | |
| | | | | | | |

**Savings Calculations equations**

*Energy Savings* $CCF_{Savings} = (GPCD_{Base} - GPCD_{Post}) * N_i * PC / 748$ [gal per CCF] * 365 days

| Plumbing Device | $N_i$ | PC | $GPCD_{Base}$ | $GPCD_{post}$ | $CCF_{Savings}$ | |
|---|---|---|---|---|---|---|
| Toilet | 271 | 2 | 25 | 11.9 | 3,399 | |
| Faucet | 271 | 2 | 13 | 7.9 | 1,401 | |
| Shower Head | 271 | 2 | 16 | 12.7 | 840 | |
| Leaks | 271 | 2 | 16 | 10.3 | 1,471 | |

**Savings Calculations Estimates from Baseyear**

| | $GPCD_{Base}$ | $GPCD_{post}$ | $CCF_{Savings}$ | % CCF |
|---|---|---|---|---|
| *Energy Savings* | 37,790 | 23,219 | 7,110 | 30% |

*Figure 23: M&V Method WCM-A-01*

## SUMMARY SAVINGS ESTIMATE

All of the above methods were used to calculate the savings associated with each class of ECM employed in a given property. The Property's ECIP model spreadsheet summarizes the savings associated with each ECM in the Planned ECM's worksheet. Within each property's worksheet, a summary page provides the total consumption savings by ECM class. (See sample Figure 24) DCHA has the ability to select and deselect an individual ECM from this summary page which automatically calculates the consumption savings associated with the selection. All of candidate properties summary data are then collected into a program summary page which provides a combined total estimated savings for the program.

| Baseyear Period | OCT 2002 to SEP 2003 | | | |
|---|---|---|---|---|
| Baseyear conditions | | | Energy Consumption | Unit Rate |
| *Number of units occupied* | 271 | Electric [kWh] | 1,582,650 | $0.060 |
| *Estimated area per unit* | 1,000 | Gas [Therm] | 137,061 | $1.160 |
| *Per capita occupancy* | 2 | Water [CCF] | 20,250 | $4.740 |

| | | |
|---|---|---|
| **Energy Use Intensity** | *70* | **kBtu/sq. ft.** |
| **Water Use Intensity** | *77* | **gpcd** |

Project Savings and Costs

| | | Savings Consumption | | | Savings Energy Cost | | |
|---|---|---|---|---|---|---|---|
| **ECM** | | **Electric** | **Gas** | **Water** | **Electric** | **Gas** | **Water** |
| *Chiller* | 1 | 91,125 | | | $ 5,468 | $ - | $ - |
| *Boiler* | 1 | | 27,091 | | $ - | $ 31,426 | $ - |
| *DHW* | 1 | | 11,082 | 0 | $ - | $ 12,855 | $ - |
| *Automation* | | 0 | 0 | 0 | $ - | $ - | $ - |
| *Lighting* | 1 | 38,939 | | | $ 2,336 | $ - | $ - |
| *Appliances* | 1 | 141,733 | 0 | 0 | $ 8,504 | $ - | $ - |
| *Plumbing Devices* | 1 | | | 4,866 | $ - | $ - | $ 23,067 |
| *Other Capital Projects* | 0 | | | 0 | $ - | $ - | $ - |
| ***TOTAL*** | | 271,797 | 38,173 | 4,866 | **$ 16,308** | **$ 44,280** | **$ 23,067** |
| **Reduction rate** | | 17% | 28% | 24% | **$ 83,655** | | |

| **ECM** | **COST** | **Annual M&V Cost** | **LC Cost** | **LC Savings** | **Benefit : Cost** | **Payback** |
|---|---|---|---|---|---|---|
| *Chiller* | $76,000 | $547 | $82,561 | $65,610 | 0.8 | 13.9 |
| *Boiler* | $210,000 | $3,143 | $247,711 | $377,107 | 1.5 | 6.7 |
| *DHW* | $65,000 | $1,285 | $80,426 | $154,259 | 1.9 | 5.1 |
| *Automation* | $0 | $0 | $0 | $0 | 0.0 | 0.0 |
| *Lighting* | $8,130 | $234 | $10,934 | $28,036 | 2.6 | 3.5 |
| *Appliances* | $149,050 | $850 | $159,255 | $102,048 | 0.6 | 17.5 |
| *Plumbing Devices* | $92,682 | $2,307 | $120,362 | $276,801 | 2.3 | 4.0 |
| *Other Capital Projects* | $0 | $0 | $0 | $0 | 0.0 | 0.0 |
| ***TOTAL*** | **$600,862** | **$8,366** | **$701,248** | **$1,003,861** | 1.4 | 7.2 |

*Figure 24: Sample Property Summary Sheet for Judiciary*

Selection of an ECM for inclusion in the program was made by quickly assessing the payback. If the overall summary payback was less than 10 years then the program was acceptable for financing. It is imperative to bring as many longer payback items into the program as possible to take advantage of the Energy Incentive Financing Mechanism. The program summary savings is provided as Figure 25: ECIP Property Savings Summary.

| Property | Average Consumption | | | Savings Consumption | | | Percentage Reduction | | |
|---|---|---|---|---|---|---|---|---|---|
| | kWh | Therms | CCF | kWh | Therms | CCF | kWh | Therms | CCF |
| Claridge Towers | 1,910,399 | 151,841 | 37,560 | 348,591 | 31,977 | 11,441 | 18% | 21% | 30% |
| Colorado Apts | 285,167 | 0 | 1,777 | 45,769 | 0 | 541 | 16% | 0% | 30% |
| Columbia Road | 204,081 | 13,900 | 2,214 | 27,826 | 3,174 | 674 | 14% | 23% | 30% |
| Ft. Lincoln | 855,200 | 55,335 | 10,360 | 179,970 | 26,794 | 3,156 | 21% | 48% | 30% |
| Garfield Terrace Family | 77,656 | 11,075 | 969 | 28,915 | 0 | 295 | 37% | 0% | 30% |
| Garfield Terrace Senior | 2,084,664 | 219,610 | 20,384 | 412,841 | 124,721 | 6,209 | 20% | 57% | 30% |
| Grrenleaf Senior | 2,998,483 | 228,465 | 21,129 | 297,882 | 92,786 | 6,436 | 10% | 41% | 30% |
| Harvard Towers | 1,197,200 | 107,734 | 22,594 | 265,607 | 38,147 | 6,882 | 22% | 35% | 30% |
| Horizon House | 1,151,375 | 70,115 | 15,961 | 204,951 | 10,619 | 4,862 | 18% | 15% | 30% |
| James Apartments | 1,417,927 | 68,669 | 13,890 | 229,198 | 30,140 | 4,231 | 16% | 44% | 30% |
| James Creek | 1,930,077 | 183,170 | 55,762 | 178,737 | 0 | 16,985 | 9% | 0% | 30% |
| Judiciary House | 1,610,850 | 125,131 | 22,544 | 249,016 | 51,992 | 6,867 | 15% | 42% | 30% |
| Kelly Miller | 971,472 | 174,031 | 24,592 | 154,742 | 54,493 | 7,491 | 16% | 31% | 30% |
| Langston Terrace | 301,790 | 251,818 | 65,816 | 81,660 | 71,532 | 20,047 | 27% | 28% | 30% |
| Ledroit | 905,920 | 100,724 | 12,799 | 115,690 | 34,635 | 3,899 | 13% | 34% | 30% |
| Lincoln Road | 186,748 | 13,564 | 355 | 21,987 | 879 | 108 | 12% | 6% | 30% |
| Park Morton | 1,151,315 | 155,314 | 31,294 | 122,836 | 44,735 | 9,532 | 11% | 29% | 30% |
| Regency House | 973,800 | 81,542 | 11,820 | 149,177 | 31,987 | 3,600 | 15% | 39% | 30% |
| Sibley Plaza | 2,161,031 | 169,989 | 33,044 | 276,699 | 63,509 | 10,065 | 13% | 37% | 30% |
| Syphax Gardens | 1,318,442 | 142,562 | 25,465 | 166,606 | 55,717 | 7,757 | 13% | 39% | 30% |
| **SUBTOTALS** | **23,693,597** | **2,324,590** | **430,330** | **3,558,701** | **767,836** | **131,078** | **15%** | **33%** | **30%** |
| | | | | | | | | | |
| **Property** | **Average Consumption** | | | **Savings Consumption** | | | **Percentage Reduction** | | |
| | kWh | Therms | CCF | kWh | Therms | CCF | kWh | Therms | CCF |
| Benning Terrace | 2,137,486 | 233,406 | 57,882 | 204,364 | 64,828 | 17,631 | 10% | 28% | 30% |
| Carroll Apts | 560,550 | 35,345 | 2,758 | 76,076 | 4,397 | 840 | 14% | 12% | 30% |
| Ft. Dupont | 1,007,310 | 50,333 | 10,429 | 87,999 | 0 | 3,177 | 9% | 0% | 30% |
| Highland Dwellings & Addition | 3,014,852 | 276,832 | 74,032 | 322,426 | 0 | 22,550 | 11% | 0% | 30% |
| Kenilworth | 3,064,179 | 227,704 | 61,357 | 310,278 | 59,360 | 18,601 | 10% | 26% | 30% |
| Kentucky Courts | 919,437 | 77,917 | 8,419 | 131,900 | 21,131 | 2,565 | 14% | 27% | 30% |
| Knox Hill | 1,143,460 | 22,691 | 12,488 | 142,256 | 9,372 | 3,804 | 12% | 41% | 30% |
| Richardson Dwell | 1,566,350 | 248,214 | 37,123 | 191,929 | 94,987 | 11,308 | 12% | 38% | 30% |
| Stoddert Terrace | 1,287,804 | 141,071 | 34,498 | 196,211 | 15,368 | 10,508 | 15% | 11% | 30% |
| Villager | 170,847 | 19,144 | 2,950 | 28,895 | 6,286 | 898 | 17% | 33% | 30% |
| Woodland Terrace | 2,360,400 | 392,331 | 41,881 | 254,199 | 149,679 | 12,757 | 11% | 38% | 30% |
| **SUBTOTALS** | **17,232,676** | **1,724,989** | **343,816** | **1,946,534** | **425,407** | **104,638** | **11%** | **25%** | **30%** |
| | | | | | | | | | |
| **ECIP TOTAL** | **40,926,273** | **4,049,579** | **774,146** | **5,505,235** | **1,193,243** | **235,716** | **13%** | **29%** | **30%** |
| | | | | | | | | | |
| **FY05 Rates & Savings** | **$ 0.07** | **$ 1.33** | **$ 4.85** | **$ 401,882** | **$ 1,587,013** | **$ 1,143,223** | | | |

*Figure 25: ECIP Property Savings Summary*

## ECIP FINANCIAL ANALYSIS

Over the past three years, DMA has developed the ECIP program, estimating the level of savings expected, and proposing a scope of work that encompasses a variety of energy and water conservation measures, while keeping in step with the DCHA long-term outlook and vision for the future. Table 18 provides a summary overview of the ECIP program as it relates to financing the program.

*Table 18: ECIP Financial Summary*

| | |
|---|---|
| **Capital Cost** | **$26,024,925** |
| **DCHA Required Funding** | $0 |
| **Construction Financing** | **$26,024,925** |
| | |
| **Annual Savings – 12 Yr. Avg** | **$3,278,495** |
| **Debt Service (12yrs; 6% rate)** | **($3,104,176)** |
| **Net Annual Savings to DCHA** | **$174,319** |

CAPITAL COST is the total program cost as illustrated in Figure 26. The capital cost includes cost estimates for all of the energy conservation measures which will be included in the ECIP construction scope of work. (Totals $24,182,202). The scope of work was developed as a result of a comprehensive energy audit performed in FY04 by an experienced energy engineer, and internal DMA engineers and facility managers which understand the individual properties' capital improvement requirements. DMA project engineers and energy consultants provided cost estimates for the six energy conservation measure subcategories.

In addition the capital cost includes the project "soft costs" associated with developing, financing and implementing the ECIP program. The soft costs were estimated based upon HUD/Industry documentation and DMA/CSA internal costing estimates. In a presentation entitled "Negotiating an Energy and Water Audit Agreement", David Birr of Synchronous Energy Solutions and Catherine Muller of the National Center for Appropriate Technology provide "reasonable project cost estimates for an energy performance contract project" for HUD. Within the report, seven program phases are identified and the "reasonable" percentage of project construction costs given. These HUD/Industry percentages are provided in Figure 26.

The unique aspect of this program is the fact that DMA and CSA can provide many of the same services identified in the Birr/Muller report. DMA/CSA provided reasonable cost estimates for each phase of the program as well. These DMA/CSA percentages are also provided in Figure 26. **The end result is a $11 million reduction in project soft costs!** This development, implementation and administration cost savings allows DCHA to maximize the number of capital projects in the scope of work. By reducing the overall project soft costs, DCHA is allowed to add an additional $11 million in capital construction costs. As a result, the scope of work includes projects that have a longer payback, that otherwise would need to come from other capital sources such as the recently completed DCHA bond financing.

DCHA REQUIRED FINANCING is a capital contribution required by DCHA in order to "buy down" the cost of the program lowering the debt payment below the estimated annual savings. By including this capital contribution, the energy savings associated with longer payback items (such as appliances which are generally over 10 years) can be included in the project so that the energy savings associated with those projects can be leveraged. If DCHA decides not to contribute the capital and the construction cost is reduced, the associated savings will also be reduced further pressuring the program to cut out additional capital projects. It is recommended that a capital contribution be made so that energy savings financial leverage is maximized.

CONSTRUCTION FINANCING is the difference from the Capital Cost and DCHA Required Financing.

ANNUAL SAVINGS is the estimated savings associated with each energy conservation measure as calculated by the DCHA ECIP Measurement & Verification (M&V) Protocol. The M&V protocol was created from international standards for measuring energy savings and is widely used by the Federal Government. This protocol calculates the utility consumption savings for each ECM and then dollar savings are calculated by multiplying the consumption savings times the current FY05 reported utility rate. A utility rate escalation factor was estimated (1% for electricity, gas, and water) so that increases in rates will result in further savings to DCHA. The 12-year average was calculated and reported here. Utility consumption by property resulted from a 3 year comprehensive consumption baseline study which was created from the DMA Utility Billing Administration database. The database maintains accurate consumption and cost data for every DCHA utility account starting in FY01.

DEBT SERVICE is the estimated annual payments due for principal in the amount of the construction financing at a rate of 6% and a given 12-year term. 12-years is the maximum allowed term associated with HUD utility conservation incentives.

NET ANNUAL SAVINGS TO DCHA is the net result of subtracting the debt service from the average annual savings. Depending upon the incentive chosen, this savings could be retained by DCHA and used for additional services and projects associated with the energy program.

| ECIP Capital Expenditures | Estimated Cost (Equipment & Installation) |
|---|---|
| HVAC Mechanical Systems | $12,592,250 |
| Controls and other Mechanical | $1,440,000 |
| Fan Coils and Other Projects | $1,862,000 |
| Lighting | $163,290 |
| Appliances | $2,993,650 |
| Water Fixtures and Systems | $2,068,340 |
| **Sub- total program asset costs** | **$21,119,530** |

| PHASE | ECIP Development Costs<br>Program Elements | (% asset cost)<br>Industry/ HUD | (% asset cost)<br>DMA Estimate | DMA<br>Est. Cost | Est. Savings |
|---|---|---|---|---|---|
| I<br>*FY05* | Energy and Water Use Audit | 3.0% | 0.6% | $126,270 | $507,316 |
| II<br>*Incentive*<br>*FY05* | Program Development / Management | 5.0% | 2.8% | $600,000 | $455,977 |
| III<br>*Incentive*<br>*FY05* | Finance Fees and Interest | 6.4% | 5.0% | $1,055,977 | $295,673 |
| **Reserve** | **Guarantee (HUD est. 7%)** | **0.0%** | **0.0%** | **$0** | **$0** |
| IV<br>*FY05* | Design and Specification | 5.0% | 3.8% | $800,000 | $255,977 |
| V<br>*FY05-06* | Construction / Project Admin | 10.0% | 5.0% | $1,055,977 | $1,055,977 |
| VI<br>*FY06-07* | Commissioning and Training | 9.0% | 5.0% | $1,055,977 | $844,781 |
| VII<br>*FY07* | M&V First Year | 3.0% | 1.0% | $211,195 | $422,391 |
| Avoided | Overhead and Profit | 35.0% | 0.0% | $0 | $7,391,836 |
| | Subtotal Program Elements | 76% | 23% | $4,905,395 | $11,229,926 |
| | **Total Program Cost Estimate** | **$26,024,925** | | | |
| | **Estimated Initial Capital Requirement** | **$0** | | | |
| | **Estimated Annual Debt Service** | ($3,104,176) | | | |
| | **Estimated 12-yr averaget Annual Savings** | $3,278,495 | | | |
| | **12-yr average net aditional proceeds to DCHA** | $174,320 | | | |

*Figure 26: ECIP Project Summary*

## AMORTIZATION SCHEDULE AND CASH FLOW ANALYSIS

Generally infrastructure projects are funded by HUD through *modernization* funds. There are other initiatives, such as low-income weatherization assistance program, that also provide HUD funds. Unfortunately, DCHA requires modernization funds for larger capital projects such as roofs, windows, risers and other longer payback items that cannot provide high returns in energy savings. Although it is possible to seek private funds- bank loans or public bonds to finance conservation measures, these financing tools do not provide any additional incentive to conserve energy and are used for longer payback modernization projects as well.

In order to encourage conservation projects, Congress passed within the Housing and Community Development Act of 1987 additional financial incentives for housing authorities to decrease their utility costs and allowed them to borrow non-HUD sources to fund the resource conservation retrofits. Two main incentives are the **frozen base** incentive and the **additional subsidy** (or add-on) incentive. These incentives allow the Authority to *supplement* the standard performance funding system (PFS) method for funding conservation projects and allocating savings.

### FROZEN BASE INCENTIVE

The Frozen Base Incentive is an option that primarily uses performance contracts to leverage non-HUD funding for conservation projects. In a performance contract, a third-party develops, designs, constructs and finances the conservation projects and gets repaid through the savings generated. Although an acceptable method for leveraging savings, in practice the high costs of engaging an Energy Services Company (ESCO) in an Energy Savings Performance Contract (ESPC) does not result in the best value to the Authority. The risk premium for a "guarantee" of the savings generally results in fewer capital projects undertaken at a much higher soft cost.

**Performance contracting is a separate concept from the frozen base incentive.** It is simply *one* method of procuring energy management services and for obtaining a guarantee of the savings. The end result is the Authority pays a premium for the guarantee and does not get the full leverage on the energy savings. The Authority can enter into a Frozen Base Incentive *without* a ESCO. The guarantee risk remains with the Authority and given the level of detail and conservatism in generating the savings estimates, the Authority has minimized the savings guarantee risk. Elements of the Frozen Base Initiative are:

- Project must use non-HUD funding
- At least 50% of the savings must be used to pay the project's debt service. Any remaining savings may be used by the Authority to manage the program or pay other eligible costs
- The payment of the debt service *must* be dependent upon the realized savings – thus the requirement for the capital contribution mentioned earlier. The "guarantee" could be in the form of an escrow reserve which will be returned to the Authority upon completion of the program.
- The maximum term is 12 years.

In practice, the Frozen Base Initiative *freezes* the consumption level (not cost so there is a rate risk) of the Authority based upon an average of the three previous fiscal year consumption. The three year average is used to account for fluctuations in weather patterns so that the Authority nor HUD is penalized based on one unusual weather year. The three year average (or rolling base) is taken from the three fiscal years prior to the year of implementation – in this case FY02, FY03, FY04. Note the current year is NOT used in calculating the rolling base.

The Frozen Base consumption and estimated consumption savings are multiplied by the current year utility rates. A sample of the cash flow analysis is provided below:

| | | | |
|---|---|---|---|
| **Project Size** | $26,024,925 | **Current Rates** | |
| **Est Savings** | $3,143,583 | Electricity | $0.073 |
| **Est Debt Service** | ($3,104,176) | Gas | $1.33 |
| | | Water | $4.85 |

| **Frozen Base** | **Savings** | **Debt Service** | **Net DCHA** |
|---|---|---|---|
| FY06 | $3,163,587 | ($3,104,176) | $59,411 |
| FY07 | $3,183,790 | ($3,104,176) | $79,614 |
| FY08 | $3,204,196 | ($3,104,176) | $100,020 |
| FY09 | $3,224,806 | ($3,104,176) | $120,630 |
| FY10 | $3,245,621 | ($3,104,176) | $141,446 |
| FY11 | $3,266,645 | ($3,104,176) | $162,470 |
| FY12 | $3,287,880 | ($3,104,176) | $183,704 |
| FY13 | $3,309,326 | ($3,104,176) | $205,150 |
| FY14 | $3,330,987 | ($3,104,176) | $226,811 |
| FY15 | $3,352,865 | ($3,104,176) | $248,689 |
| FY16 | $3,374,961 | ($3,104,176) | $270,786 |
| FY17 | $3,397,279 | ($3,104,176) | $293,103 |
| FY18 | $1,139,940 | $0 | $1,139,940 |
| FY19 | $573,764 | $0 | $573,764 |
| FY20 | $0 | $0 | $0 |
| FY21 | $0 | $0 | $0 |
| | | | $3,805,538 |
| | | **Total to DCHA** | **$41,055,647** |
| | | less capital | $0 |
| | | **Net to DCHA** | **$41,055,647** |

This model assumes instantaneous savings in FY06 for simplicity. During the frozen base term (12 years) the full savings are accounted for. For the two years following the frozen base period, the additional consumption savings are provided to the Authority based on standard PFS savings allocations. (50% of savings kept by the Authority.) The net proceeds to DCHA is calculated by summing all of the savings DCHA is allowed to retain and adding in the debt service payments made since DCHA received the private funding to implement the project less the capital contributed by DCHA.

**For the Frozen Base incentive, the net proceeds to DCHA are estimated to be $40,902,246.**

To illustrate HUD's method of evaluating the ECIP Program, Figure 28 provides samples of the forms used by HUD to summarize the impact to HUD and the Authority of the proposed project. (The Frozen Base incentive is the top chart.)

## Summary of Impact of Freezing Rolling Base

Name of PHA: DC Housing Authority

Project Name: DCHA FY05 ECIP

| Year After Contract | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Total Utility Savings | $ 3,163,587 | $ 3,183,790 | $ 3,204,196 | $ 3,224,806 | $ 3,245,621 | $ 3,266,645 | $ 3,287,880 | $ 3,309,326 | $ 3,330,987 | $ 3,352,865 | $ 3,374,961 | $ 3,397,279 | $ 39,341,943 |
| 2. Payments to Contractor | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 3. Payments to Financier | $3,104,176 | $ 3,104,176 | $ 3,104,176 | $ 3,104,176 | $ 3,104,176 | $ 3,104,176 | $ 3,104,176 | $ 3,104,176 | $ 3,104,176 | $ 3,104,176 | $ 3,104,176 | $ 3,104,176 | $ 37,250,109 |
| 4. Net Savings to PHA | $59,411 | $79,614 | $100,020 | $120,630 | $141,446 | $162,470 | $183,704 | $205,150 | $226,811 | $248,689 | $270,786 | $293,103 | $ 2,091,834 |

Length of Contract: 12 Years

## Summary Impact of Additional Operating Subsidy

Name of PHA: DC Housing Authority

Project Name: DCHA FY05 ECIP

| Year After Contract | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PFS Utility Adjustment | $ 3,508,455 | $ 2,349,020 | $ 1,181,846 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 7,039,321 |
| Savings to PHA (1/2 adj.) | $ 1,754,228 | $ 1,174,510 | $ 590,923 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 3,519,661 |
| Savings to HUD (1/2 adj.) | $ 1,754,228 | $ 1,174,510 | $ 590,923 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 3,519,661 |
| Savings to HUD in PFS Rolling | $ 1,047,861 | $ 2,095,722 | $ 3,143,583 | $ 3,143,583 | $ 3,143,583 | $ 3,143,583 | $ 3,143,583 | $ 3,143,583 | $ 3,143,583 | $ 3,143,583 | $ 3,143,583 | $ 3,143,583 | $ 34,579,412 |
| Total Savings to HUD | $ 2,802,089 | $ 3,270,232 | $ 3,734,506 | $ 3,143,583 | $ 3,143,583 | $ 3,143,583 | $ 3,143,583 | $ 3,143,583 | $ 3,143,583 | $ 3,143,583 | $ 3,143,583 | $ 3,143,583 | $ 38,099,073 |
| Less Add-On | $ 3,104,176 | $ 3,104,176 | $ 3,104,176 | $ 3,104,176 | $ 3,104,176 | $ 3,104,176 | $ 3,104,176 | $ 3,104,176 | $ 3,104,176 | $ 3,104,176 | $ 3,104,176 | $ 3,104,176 | $ 37,250,109 |
| Net Savings to HUD | ($302,087) | $166,056 | $630,330 | $39,407 | $39,407 | $39,407 | $39,407 | $39,407 | $39,407 | $39,407 | $39,407 | $39,407 | $ 848,964 |

Length of Contract: 12 Years

Total Loan Amount $ 26,024,925

Estimated annual savings from improvements $ 3,143,583

*Figure 28: HUD Incentive Evaluation Forms*

## THE ADD-ON INCENTIVE

The Additional Subsidy Incentive or Add-On Incentive is basically an alteration of the cash flow between HUD and DCHA. This reimbursement methodology allows DCHA to seek non-HUD funding for conservation projects and HUD increases the Authority's operating subsidy by the amount needed to amortize the loan for the length of the financing contract. Although a savings guarantee is *not* required, it must be shown to HUD that the savings generated will cover the debt service requested. The additional subsidy is subject to maximum equal to the amount of savings for that year. If the savings do not materialize, the Authority's following year operating subsidy is reduced by the shortfall. So the Authority bears all of the risk in this incentive. It is important to note that the Authority also bears all of the risk in the Frozen Base Incentive – either by paying a risk premium to the ESCO *or*, as is the case with DCHA, in implementing the program themselves. Elements of the Add-on Initiative are:

- Project must use non-HUD funding
- The savings are in practice used to pay the project's debt service. Any additional savings which result from the standard PFS savings allocation may be used by the Authority in any manner.
- The payment of the debt service *must* be dependent upon the realized savings – thus the requirement for the capital contribution mentioned earlier.
- The maximum term is 12 years.

| Add On | Savings | Subsidy |
|---|---|---|
| FY06 | $1,754,228 | $3,104,176 |
| FY07 | $1,174,510 | $3,104,176 |
| FY08 | $590,923 | $3,104,176 |
| FY09 | $0 | $3,104,176 |
| FY10 | $0 | $3,104,176 |
| FY11 | $0 | $3,104,176 |
| FY12 | $0 | $3,104,176 |
| FY13 | $0 | $3,104,176 |
| FY14 | $0 | $3,104,176 |
| FY15 | $0 | $3,104,176 |
| FY16 | $0 | $3,104,176 |
| FY17 | $0 | $3,104,176 |
| FY18 | $0 | |
| FY19 | $0 | |
| FY20 | $0 | |
| FY21 | $0 | |
| | $3,519,661 | |
| **Total to DCHA** | | **$40,769,769** |
| less capital | | ($302,087) |
| **Net to DCHA** | | **$40,467,682** |

*Figure 29: Add-on Proceeds Calculation*

A sample proceeds calculation to DCHA is provided below.

Since the consumption is not frozen, the general PFS savings are provided to the Authority, phased out over the first three years of the program after the savings materialize. (Again for simplicity, assume all savings in FY06).

The net proceeds to DCHA include the savings generated as well as the sum total of the add-on subsidy to the Authority less the capital contribution.

In Figure 28, bottom chart, the add-on subsidy HUD summary impact calculation is provided. As you can see the net savings to HUD should be positive. However, since the PFS savings from the rolling base does not take full effect until year three and as a result the first year is negative.

In order to make this positive the Housing Authority will need to absorb the $302K in its first year operating subsidy else increase its capital contribution by $750,000. (Not recommended.)

## CASH FLOW ANALYSIS

The previous charts were used to determine the best course of action for the Housing Authority. In order to assist HUD engineers in evaluating this program, a detailed cash flow analysis is provided which shows the cumulative net cash flow from the project itself.

In the cash flow analysis, the following assumptions are made:

- The total cost of the project includes the capital cost for equipment and all other indirect or soft costs associated with the project. *Please note – the savings associated with DCHA acting as its own ESCO are NOT reflected in the savings column for the project.*
- The finance period is the standard 12 years, the all in interest rate is estimated to be 6%. Payments are assumed to be made monthly with interest only payments during the construction period.
- The construction interest has not been capitalized. Construction interest are calculated as interest only payments on the cumulative annual principal drawn for construction. This assumes all principal is drawn at the beginning of the year and payments are made monthly on that total principal amount.
- The installation period is expected to last 3 years from FY06-FY09. Savings are expected to lag by 1 year so construction period savings are 1/3 the savings rate of year 1 during the 2nd year of construction and 2/3 of the year 1 savings is assumed to occur in the third-year of construction.
- Labor and maintenance savings are estimated to be $600K per year based on an energy operations savings audit conducted in FY04 as part of the ECIP development process.
- Capital renewal savings assumes a 15 year equal division of capital renewal requests for the entire project value which assumes the work would have been split evenly over the 15 year (3 year construction, 12 year finance) period.
- On-going technical costs are assumed to equal 1% of the over-all project cost and escalates at an annual inflation rate of 1%.

A detailed cash flow analysis is provided as Figure 30.

**DISTRICT OF COLUMBIA HOUSING AUTHORITY (energy)**
**ENERGY CAPITAL IMPROVEMENT PROGRAM (Self-ESPC)**
**PROFORMA 12 - YEAR CASHFLOW**

| | ASSETS | | | | | LIABILITIES | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Year | Annual Energy Savings | Labor & Maintenance Savings | Capital Renewal | DCHA Capital Contribution | Total Savings | Annualized Lease Payments | On-going Technical Costs | Total Annual Costs | Annual Net Cashflow | Cummulative Cashflow |
| Construction | $0 | $0 | $1,734,995 | $0 | $1,734,995 | $520,498 | $0 | $520,498 | $1,214,496 | $1,214,496 |
| -1 | $949,076 | $180,000 | $1,734,995 | $0 | $2,864,071 | $1,040,997 | $0 | $1,040,997 | $1,823,074 | $3,037,570 |
| 0 | $2,109,058 | $400,000 | $1,734,995 | $0 | $4,244,053 | $1,561,495 | $0 | $1,561,495 | $2,682,557 | $5,720,128 |
| 1 | $3,163,587 | $600,000 | $1,734,995 | $0 | $5,498,582 | $3,104,176 | $260,249 | $3,364,425 | $2,134,157 | $7,854,284 |
| 2 | $3,183,790 | $600,000 | $1,734,995 | $0 | $5,518,785 | $3,104,176 | $260,249 | $3,364,425 | $2,154,360 | $10,008,644 |
| 3 | $3,204,196 | $600,000 | $1,734,995 | $0 | $5,539,191 | $3,104,176 | $260,249 | $3,364,425 | $2,174,766 | $12,183,410 |
| 4 | $3,224,806 | $600,000 | $1,734,995 | $0 | $5,559,801 | $3,104,176 | $260,249 | $3,364,425 | $2,195,376 | $14,378,786 |
| 5 | $3,245,621 | $600,000 | $1,734,995 | $0 | $5,580,616 | $3,104,176 | $260,249 | $3,364,425 | $2,216,191 | $16,594,977 |
| 6 | $3,266,645 | $600,000 | $1,734,995 | $0 | $5,601,640 | $3,104,176 | $260,249 | $3,364,425 | $2,237,215 | $18,832,193 |
| 7 | $3,287,880 | $600,000 | $1,734,995 | $0 | $5,622,875 | $3,104,176 | $260,249 | $3,364,425 | $2,258,450 | $21,090,642 |
| 8 | $3,309,326 | $600,000 | $1,734,995 | $0 | $5,644,321 | $3,104,176 | $260,249 | $3,364,425 | $2,279,896 | $23,370,539 |
| 9 | $3,330,987 | $600,000 | $1,734,995 | $0 | $5,665,982 | $3,104,176 | $260,249 | $3,364,425 | $2,301,557 | $25,672,096 |
| 10 | $3,352,865 | $600,000 | $1,734,995 | $0 | $5,687,860 | $3,104,176 | $260,249 | $3,364,425 | $2,323,435 | $27,995,531 |
| 11 | $3,374,961 | $600,000 | $1,734,995 | $0 | $5,709,956 | $3,104,176 | $260,249 | $3,364,425 | $2,345,531 | $30,341,062 |
| 12 | $3,397,279 | $600,000 | $1,734,995 | $0 | $5,732,274 | $3,104,176 | $260,249 | $3,364,425 | $2,367,849 | $32,708,911 |
| Total | **$42,400,076** | **$7,780,000** | **$26,024,925** | **$0** | **$76,205,001** | **$40,373,100** | **$3,122,991** | **$43,496,091** | **$32,708,911** | |

**ASSUMPTIONS**

| | | |
|---|---|---|
| **Total Cost:** | $26,024,925 | |
| **Finance Period:** | 12 Years | |
| **Payment Frequency:** | Monthly | |
| **Estimated Base Rate:** | 6.00% | |
| **Monthly Payment** | ($258,681) | |
| **Installation Period:** | 10/05 - 9/08 | |
| **Est. First Payment Date:** | 1/1/2006 | |
| **Service Inflation Rate** | 1.00% | |
| **Energy Inflation Rate:** | 1.00% | |
| **Cummulative Net Cashflow:** | | **$32,708,911** |

**Loan Amortization Schedule**

| Year | Principal (Start of year) | Monthly PMT | Monthly PPMT | Annualized PMT |
|---|---|---|---|---|
| -2 | $8,674,975 | ($43,375) | | ($520,498) |
| -1 | $17,349,950 | ($86,750) | | ($1,040,997) |
| 0 | $26,024,925 | ($130,125) | | ($1,561,495) |
| 1 | $26,024,925 | ($258,681) | ($123,840) | ($3,104,176) |
| 2 | $24,538,849 | ($258,681) | ($131,478) | ($3,104,176) |
| 3 | $22,961,115 | ($258,681) | ($139,587) | ($3,104,176) |
| 4 | $21,286,070 | ($258,681) | ($148,197) | ($3,104,176) |
| 5 | $19,507,712 | ($258,681) | ($157,337) | ($3,104,176) |
| 6 | $17,619,669 | ($258,681) | ($167,041) | ($3,104,176) |
| 7 | $15,615,175 | ($258,681) | ($177,344) | ($3,104,176) |
| 8 | $13,487,048 | ($258,681) | ($188,282) | ($3,104,176) |
| 9 | $11,227,664 | ($258,681) | ($199,895) | ($3,104,176) |
| 10 | $8,828,925 | ($258,681) | ($212,224) | ($3,104,176) |
| 11 | $6,282,237 | ($258,681) | ($225,313) | ($3,104,176) |
| 12 | $3,578,476 | ($258,681) | ($239,210) | ($3,104,176) |

*Figure 30: Detailed ECIP Cash Flow Analysis*

## ESCALATED RATE DOCUMENTATION

Escalated rate documentation is provided starting on page 26. The summary table is repeated here.

| | Base [$/account] | Usage | Increase over FY05 | Annual Escalation |
|---|---|---|---|---|
| Electricity | $2.81 | $0.093 / kWh | 13% | 1% |
| Gas | $7.85 | $1.65/therm | 15% | 1% |
| Water | $6.05 | $7.11 / CCF | 5% | 1% |
| | | | | |

## PHA CONTRIBUTING COSTS

PHA contributing costs if the add-on incentive is selected will be to cover the $301,598 shortfall in year one of the program. This shortfall will be covered by a program reserve established from the recently received bond funding. This operational shortfall has been reviewed and is in compliance with 24CFR990 requirements.

## ECIP - RESIDENT PAID UTILITIES - N/A

DCHA is responsible for all utility bills and does not maintain any resident paid utilities.

## ECIP VERIFICATION METHODOLOGY-

The most significant element of the M&V Plan is the methodology used to collect and validate all post-retrofit utility data as part of the DCHA Utility Billing Administration and Analysis Program. The collection and validation of utility consumption data, as well as ensuring alignment of data start and end dates are important elements of this billing analysis. DCHA specific data types and data analysis protocols are discussed below.

### BASIC APPROACH

Energy savings are determined by comparing measured energy use or demand prior to and post-implementation of this ECIP energy savings program. The initial formula for measuring the savings is given as:

***Energy Savings = Baseyear Energy Use – Post-Retrofit Energy Use ± Adjustments***

*Equation 1*

DCHA developed regression models to assist in measuring and verifying Equation 1 and to describe the pre-installation and post-installation energy use for each affected DCHA property. DCHA will employ a multivariate regression model utilizing whole-building billing data as the primary data input to calibrate the model for the baseyear period and post-installation energy use.

Baseyear energy usage is determined from existing, whole-building, *monthly energy billing data.* DCHA receives monthly energy billing data from three utility resources on 8,827 accounts. (See Figure 31.) There are typically two types of monthly energy billing data; **total energy usage** for the month, or energy usage aggregated by time-of-use periods (also known as interval demand data).

*Figure 31 DCHA Monthly Utility Billing Data*

| Utility | # of Accounts |
|---|---|
| Electric | 4,921 |
| Gas | 2,733 |
| Water | 1,173 |
| **TOTAL** | **8,827** |

While either type of data can be used with the DCHA regression model, total energy usage for the month is used since it does not require the added expense of additional metering equipment to measure time-of-use periods (usually in 15 minute increments). Although time-of-use is more preferable as it provides more insight into usage patterns, it remains cost prohibitive at this stage for the ECIP program. For this M&V Plan, DCHA will utilize monthly energy billing data, total energy usage for the month, for baseyear period and post-retrofit energy use measurements.

The "adjustments" term in Equation 1 is used to bring energy usage in the two separate time periods to the same, normalized set of conditions. Conditions commonly affecting energy use include weather, occupancy, and equipment operating conditions required for the prescribed period. Adjustments may be negative or positive depending upon the specific condition.

All adjustments are derived from identifiable facts. Adjustment data that will be incorporated in the DCHA multivariate regression model including weather parameters recorded as heating-degree-days and cooling-degree-days, building occupancy recorded as the number of units occupied, and facility square footage if necessary. Adjustments will be made as per the prescribed protocol below on a routine basis, such as for weather data, or as necessary, as for changes in occupancy or equipment operating conditions. These data are used to help define the independent variables necessary to calibrate the model for the baseyear period and that explain energy consumption or change associated with equipment other than the equipment installed as part of the ECIP program.

## DATA COLLECTION PROTOCOLS

DCHA has selected the *Whole Facility*[4] M&V protocol as the International Performance Measurement & Verification Protocol for the ECIP M&V Plan. The DCHA Development and Modernization Administration has collected verifiable, relevant whole facility monthly energy billing data for electricity, natural gas and water on a per meter basis since October 2001 through the present. A Microsoft Access Database was constructed to house the utility billing data. This information is readily available for independent analysis upon request to the Development and Modernization Administration Office.

### MONTHLY ENERGY BILLING DATA MATRIX

Table 12 through Table 15 (page 14) provide the data points available in the DCHA Utility Database.

### DATA COLLECTION

Data collection of metered data, will be done through the existing DCHA Utility Billing and Administration Program. The program consists of the collection, data input, reconciliation, database management and reporting of metered and invoiced monthly utility data. Electricity and water bills are provided to DCHA in electronic format. Natural gas data is currently entered manually, however, a batch scanning program is being investigated which will reduce the time, and increase the detail level of data input into the DCHA database. A series of ECIP Reconciliation Data Tables will be maintained so as not to disturb the original utility data set.

The types of data collected for the ECIP program and particularly this M&V Plan and associated collection protocols include:

**Utility Data** - Energy quantities in Equation 1 will be measured by utility invoices and meter readings. It is assumed that all historical and future meter readings are accurate and calibrated. Energy and water flow into each individual DCHA property is measured separately by the individual utility through a individual meters. DCHA properties have both centralized meters, primarily for the high-rise buildings, and in some cases individually metered units. Several meters may be used to measure the energy flow into an individual property. All meters will be included in this *whole building* savings determination protocol. All meters will be analyzed separately as each meter has a unique billing period associated with it. The results of individual meter analysis will be aggregated into the whole on for a defined measurement period, here defined as a year.

Smaller meters which do not contain load data will be individually analyzed and then aggregated into the whole for reporting on each individual property. Larger meters, which often contain demand data, will be analyzed separately and aggregated into the whole building, however, demand data and associated load factor information will remain as a separate reporting element for each associated property.

The source of the energy and water data will be the utility invoices provided to DCHA through the DCHA Utility Billing and Administration Program. All individual metered data will be assigned a specific *billing date* which is a time identifier (Month and Year) which will associate that specific consumption and cost to a specific month in the DCHA fiscal year. Most often the month and year identifier of the invoice billing date will correspond to the billing date for the consumption record. If consumption overlaps two calendar months, the consumption will be assigned to the calendar month with the predominant number of billing days. If the number is evenly split than the default will be the billing date which would not produce a missing data element.

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[4] International Performance Measurement & Verification Protocol Committee, "International Performance Measurement & Verification Protocol: Concept and Options for Determining Energy and Water Savings", Volume 1, DOE/GO-102002-1554, March 2002 p. 22. (www.ipmvp.org) Listed as Option C in Table1.

It is understood that the respective utility's need for accuracy in its metered data may not correspond to the higher level of accuracy required for this M&V Protocol. Many utility bills, primarily the smaller bills, contain estimated readings which may go unreported. Also, the consumption data for a specific meter may not be reported, especially if there is a situation in which no charge is levied on the account. As a result, there may be errors associated with missing or estimated data from utility invoices. The following protocol will be used to reconcile such data discrepancies.

**Missing, Estimated, or Erroneous Meter Data** - Any estimated readings will be identified and adjustments made based upon the number of billing days between the previous and current *actual* reading dates. Missing data will be treated as an estimated reading if sufficient evidence exists that the missed consumption can be calculated from the next available actual read date or invoice. If metered data is **missing** for a given period during the post-retrofit period (or an **estimated reading** is provided), an *estimation* of the consumption will be made according to the following procedure:

1. The account and billing period affected will be identified as an estimate reading in the DCHA Utility Billing and Administration database.

2. Upon receipt of the next actual meter reading calculate the total actual consumption

3. Calculate the number of billing days between the previous actual reading *end date* and the current actual reading *end date.*

4. Divide the total consumption by the number of billing days to get *consumption per day.*

5. Identify the normal billing period associated with the subject account and missing billing period(s). This can usually be done by finding an account with a similar start or end date. If this cannot be done assume a 28 day billing period per month.

6. Assign the missing billing period(s) bill date(s) which identify the month(s) and year(s) of the missing billing period(s), assumed to be months. Again this should be done by finding an account with similar billing characteristics as the estimated account.

7. Calculate the month's consumption by multiplying the consumption per day by the number of billing days in the month and record. Repeat for all associated estimated or missing periods until the total consumption is accounted for and all missing billing periods are populated with consumption estimations. This will be classified as *levelized data estimations.* The administrator will reduce the current billing period's consumption as well as to avoid double accounting of consumption data.

8. If actual reading data is **missing**, and the utility cannot provide an actual invoice, then a similar approach will be taken except the total consumption will be calculated by taking actual meter end reading (if available) from the most recent invoice and subtracting the actual meter end reading from the last available actual invoice. Any adjustment factors will need to be made to the consumption as per normal utility procedures. *More than likely the utility will forward any missing data to DCHA.*

9. The levelized data estimations will be adjusted according to the prescribed regression analysis for *routine adjustments* as described below and recorded in the consumption record. At no time with the summation of the missing or estimated period consumption records vary from the actual total consumption calculated earlier. The routine adjustments will properly distribute the consumption over the missing billing periods as per a prescribed protocol. If no significant correlation between any

independent variables and the levelized data estimations exists, the levelized data estimations themselves will remain as the consumption record.

**Outliers-** Outliers are data beyond the expected range of values (e.g., a data point more than two standard deviations away from the average of the data). Any elimination of outliers will be fully explained, noting that it is not sufficient to eliminate a data point because it is beyond the expected range of values. Any outliers identified will be noted in the DCHA Utility Billing Administration ECIP Database under a table entitled Journal. Here any additional information with respect to billing, consumption, or performance abnormalities will be maintained. If there is reason to believe that the data point is abnormal because of specific mitigating factors, then it can and may be eliminated from the analysis. *All outliers in the baseyear analysis are defined in the facility specific savings boundaries report.* If a reason for the unexpected data point cannot be found, the data point will be included in the analysis. Outliers are defined based on "common sense" as well as common statistical practice and are defined in terms of consumption changes and actual consumption levels.

**Operation and Independent variables-** Characteristics of the operations of a DCHA property, mainly the number of units occupied, and the environment which govern energy consumption are the two primary operation and independent variables which concern this M&V Plan. Both units occupied and weather data will be recorded in the DCHA Utility Billing and Administration Database on a monthly basis. Independent variables play a role in the creation and ensuing utilization of all mathematical, or regression analysis models created as part of this M&V Plan.

Weather data will be recorded on a monthly basis and will be correlated to all utility metered data's associated billing date (month and year). Government published degree-day data will be treated as the solitary source of weather information. The National Weather Service – Climate Prediction Center's Degree Day statistical database – Monthly Degree Days Cities Listing - Washington, DC station data will serve as the degree-day information resource. [5] All monthly summaries will be recorded in the DCHA Utility Billing and Administration Database (see Table 19 for a description of available data elements). Weekly data is also available, however, the processing of weekly data is cost prohibitive.

"DEGREE DAY is a quantitative index demonstrated to reflect demand for energy to heat or cool houses and businesses. This index is derived from daily temperature observations at nearly 200 major weather stations in the contiguous United States. The "heating year" during which heating degree days are accumulated extends from July 1st to June 30th and the "cooling year" during which cooling degree data are accumulated extends from January 1st to December 31st. A mean daily temperature (average of the daily maximum and minimum temperatures) of 65°F is the base for both heating and cooling degree day computations. Heating degree days are summations of negative differences between the mean daily temperature and the 65°F base; cooling degree days are summations of positive differences from the same base. For example, cooling degree days for a station with daily mean temperatures during a seven-day period of 67,65,70,74,78,65 and 68, are 2,0,5,9,13,0,and 3, for a total for the week of 32 cooling degree days."[6]

*Table 19 Degree Day data descriptions.*

| | |
|---|---|
| MONTH TOTAL | Summation of the daily values for the given period. |
| MONTH DEV FROM NORM | The difference of the period total from the normal (1971-2000) period total. Negative values indicate less degree days than normal. |
| MONTH DEV FROM L YR | The difference of the period total from the same period previous year. |
| CUMULATIVE TOTAL | The accumulated degree days from the beginning of the season. |
| CUMULATIVE DEV FROM NORM | The difference of the accumulated total from the normal accumulated total. |
| CUMULATIVE DEV FROM L YR | The difference of the accumulated total from the accumulated total of the same period the previous year. |

[5] http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/cdus/degree_days/
[6] Ibid.

SUMMARY OF DATA COLLECTION

Table 20 provides a summary of the data elements to be collected and analyzed *monthly* to provide the performance, operations, and independent variable inputs into the DCHA energy use regression analysis to determine all energy savings.

*Table 20: Monthly Data Collection Elements Summary*

**Performance Elements**

- Account / meter data
- Consumption Total
- Billing period
- Bill Date
- Journal of outliers

**Operation and Independent Elements**

- Units occupied per building
- Heating-Degree-Day Statistics
- Cooling-Degree-Day statistics

## POST-RETROFIT CONDITIONS ADJUSTMENTS PROTOCOLS

The adjustments term in Equation 1 can be of two different types – **routine** adjustments which are changes in parameters that can be expected to happen throughout the post-retrofit period such as degree-day changes and changes in occupancy rates. Routine adjustments are needed to bring the rolling base AUCL to the same conditions of the post-retrofit period.

**Non-routine** adjustments are adjustments for changes in parameters which cannot be predicted and for which a significant impact on energy demand is expected. These are commonly known as baseline adjustments and will be discussed later.

### HEATING-DEGREE-DAY ADJUSTMENTS

Adjustments to the utility consumption level for heating-degree-days will be completed upon approval from HUD as per §990.110. The adjustment, to be determined by HUD, may consist of a percentage change in HDD from the average HDD recorded for the rolling base period. The rolling baseyear period averages 3,990 HDD. Adjustments to space heating consumption will be made on a percentage basis monthly for both electricity and natural gas during the *heating season* defined as OCT-MAY. The heating season averages 3,975 HDD during the rolling base period. (See Figure 32)

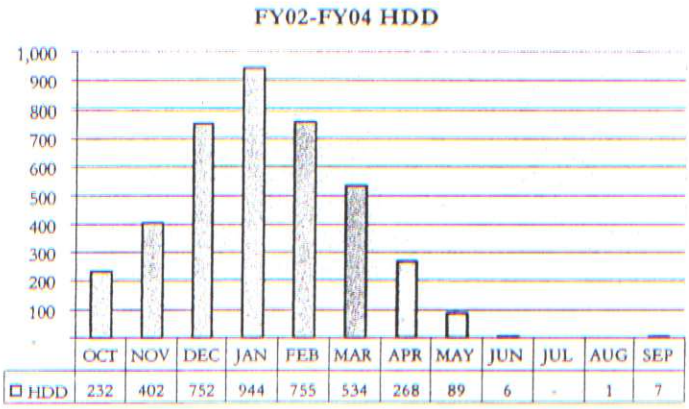



*Figure 32: Rolling Base Average HDD*

Occupancy data will be provided by the DCHA Development and Modernization Administration and changes from the baseline will be noted in an occupancy data table. Total energy consumption will be divided by the number of units occupied to determine the Monthly Utility Consumption Level by unit. This in effect will adjust consumption changes on a percentage basis due to the occupancy rate change.

As an example. assume for Year 1 of the freezing of the rolling base incentive period there were an additional 100 units in an ECIP property brought on-line and the number of HDD for that period totaled 4,589 (as it did during FY03). The adjustments to all of the utilities would be calculated as follows:

*Table 21: Example Adjustments to Utilities for HDD*

| Utility | AUCL | Current Year HDD | Rolling Base HDD | Ratio Current /Rolling | HDD Adjusted AUCL [AUCL X Ratio] |
|---|---|---|---|---|---|
| Electricity (kWh) | 7,142 | 4,589 | 3,975 | 1.154 | 8,245 |
| Natural Gas (Therms) | 727 | 4,589 | 3,975 | 1.154 | 839 |
| Water (CCF) | 142 | NOT ADJUSTED | | | 142 |

*Table 22: Example Adjustments to Utilities for Occupancy*

| Utility | Current Year Units | Rolling Base Units | Ratio Current /Rolling | HDD Adjusted AUCL | Fully Adjusted AUCL |
|---|---|---|---|---|---|
| Electricity (kWh) | 7,073 | 6,973 | 1.014 | 8,245 | 8,360 |
| Natural Gas (Therms) | 7,052 | 6,952 | 1.014 | 839 | 851 |
| Water (CCF) | 7,470 | 7,370 | 1.014 | 142 | 144 |

Any savings calculations would now be made against these adjusted AUCL consumption figures.

## POST-RETROFIT ENERGY USE DATA COLLECTION PROTOCOLS

Post-retrofit energy use for Equation 1 is taken directly from the utility bills as detailed in the data collection protocols and monthly data summarized per development and presented, without adjustment.

## REPORTING ENERGY SAVINGS

The following whole building multiple ECM project savings calculation platform will serve to demonstrate the methodology used to calculate energy savings from the ECIP program. The platform consists of a series of worksheets which demonstrate the data and calculations used to generate savings figures. These worksheets will be completed on a periodic basis to monitor the savings generated and will make up the bulk of the documentation for all summary savings reports.

*Table 23: Routine Adjustment Worksheet*

| | Development ID | | | Utility | | Account(s) | | | FY__ | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Rolling Base Data | | | Post-Retrofit Conditions | | Rolling Base Projected to Post-Retrofit Conditions | | | Post-Retrofit Data | |
| | AUCL[a] | HDD[b] | Units[c] | HDD[d] | Units[e] | HDD Ratio[f] | Units Ratio[g] | Adjusted AUCL[h] | Current Consumption[i] | AUCL Savings[j] |
| OCT | | | | | | | | | | |
| NOV | | | | | | | | | | |
| DEC | | | | | | | | | | |
| JAN | | | | | | | | | | |
| FEB | | | | | | | | | | |
| MAR | | | | | | | | | | |
| APR | | | | | | | | | | |
| MAY | | | | | | | | | | |
| JUN | | | | | | | | | | |
| JUL | | | | | | | | | | |
| AUG | | | | | | | | | | |
| SEP | | | | | | | | | | |
| TOTAL | | | | | | | | | | |

Notes to Table 23:

a. Facts from the rolling base energy data
b. Facts from the rolling base energy data
c. Facts from the rolling base operations profile
d. Facts from the post-retrofit utility metering data
e. Facts from the post-retrofit operations profile
f. Calculation (d)/(b)
g. Calculation (e) /(c)
h. Calculation (a) * (f) * (g)
i. Facts from the post-retrofit utility metering data
j. Calculation (h) - (i)

## NON-ROUTINE ADJUSTMENT PROTOCOLS

The scope of this M&V plan requires extensive documentation or savings boundaries for optimum savings determination. The analysis of the baseyear utility data required considerable additional audits and assessments of baseyear operating conditions to explain discrepancies in expected model baseyear calibration

and performance. Site specific data in Appendix A provides documentation for the facility's *baseyear operating conditions*, along with the *baseyear energy data*. A comprehensive audit was conducted to determine the following data elements for every candidate DCHA property.

- Energy consumption and electricity demand profiles
- Building type and number of units available
- Conditioned space square footage
- Occupancy in number of units
- Occupied space environmental conditions (set points for temperature and humidity) optimum and estimated actual conditions
- Equipment inventory including: nameplate data, location and condition
- Facility operating practices including set points, temperatures, pressures
- Significant equipment problems and outages, including periods of non-performance
- Identification of any significant *planned* changes to conditions of the facility
- Identification of the planned post-retrofit period for scheduled ECMs

Site specific data provides documentation for the facility's *baseyear operating conditions*, along with the *baseyear energy data*. The comprehensive audit details all subject DCHA facility baseyear conditions (see sample Figure 33) and information relevant to this M&V protocol. Special emphasis was required to assess several buildings specific set of conditions that the prescribed building operated under during the baseyear assessment period. Site data provide the information necessary to account for either changes in or usage of energy consumption that is **not** associated with the retrofit equipment.

Savings boundaries (see sample, Figure 34) define all meters and utility accounts associated with each candidate DCHA property. The savings boundaries in conjunction with the baseyear analysis define the savings calculations per ECM as defined earlier.

If there is a significant change in the post-retrofit period that results in a dramatic rise or decrease in energy and water consumption, the impact of this change will be recorded as a rolling base AUCL adjustment. Examples of a significant change include but are not limited to:

- Repair or installation of a significant piece of equipment such as an air handling unit, fan, boiler, or chiller system which was not operational, or minimally operational during the rolling base period.
- The addition or removal of a unit or number of units that would increase or decrease occupancy rate.
- A significant water, steam, gas, or power outage or leak which would reduce or increase consumption abnormal to the rolling base conditions.
- The addition of sources of energy consumption – such as personal PC's or other electronics, space heaters, etc. that are not accounted for in the savings calculations.

ADJUSTMENT PROTOCOL

Generally, non-routine adjustments are *not* necessary of the savings calculations account for the adjustments in the mathematical calculation.

# DCHA FY04 Energy Capital Improvement Program

## M&V Plan - Baseyear Conditions

### Judiciary House

| Facility Variables | | | | Other factors | |
|---|---|---|---|---|---|
| *Units Available* | 271 | *Type* | Senior High-rise | *Weather* | |
| *Units Occupied* | 271 | *Age (years)* | 38 | | Record HDD and CDD from |
| *Occupation Rate* | 100% | *Floors* | 10 | | National Weather Service Monthly |
| *Occupancy Schedule* | 24-7 | *Buildings* | 1 | | Degree Day Cities Listing Statistics |
| *Per capita occupancy* | 2 | *Area per unit* | 1000 | | |

| Equipment Variables | Set Points | | | | | Average Monthly Operating Hours | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Fall | Winter | Spring | Summer | | Fall | Winter | Spring | Summer |
| *Chiller* | | | | | | | | | |
| *Boiler* | | | | | | | | | |
| *DHW* | | | | | | | | | |
| *LAQ* | | | | | | | | | |
| *RH* | | | | | | | | | |

Equipment Inventory

| Equipment Name | Description & Identification | Condition | Age | Load | Performance | Service Quality | Annual On hours or use |
|---|---|---|---|---|---|---|---|
| Mechanical Systems | | | | | | | |
| *Chiller and auxiliaries* | | | | | | | |
| *Boiler and auxiliaries* | | | | | | | |
| *DHW and auxiliaries* | | | | | | | |
| | | | | | | | |
| Electrical Systems | | | | | | | |
| *Lighting* | | | | | | | |
| *Interior* | | | | | | | |
| *Exterior* | | | | | | | |
| *Appliances* | | | | | | | |
| *Refrigerators* | | | | | | | |
| *Ranges- electric* | | | | | | | |
| *Ranges- gas* | | | | | | | |
| Water systems | | | | | | | |
| *Toilets* | | | | 3.5 | | | 14,673 |
| *Faucets* | | | | | | | 8,103 |
| *Showers/ Baths* | | | | | | | 9,928 |
| *Plumbing risers* | | | | | | | 7,300 |
| *Washing machines* | | | | | | | 11,023 |
| | | | | | | | |
| | | | | | | | |

**Planned Adjustments**

*Changes in conditioned space*
- Working ADA 2 floors unoccupied.
-

*Changes in equipmentand auxiliary systems*
-

*Changes in occupancy*
-
-

*Changes in schedule*
-
-

**Notes**

*Changes in conditioned space*
-
-

*Changes in equipmentand auxiliary systems*
-

*Changes in occupancy*
-
-

*Changes in schedule*
-
-

*Figure 33: Sample Baseyear Condition Form*

# DCHA FY04 Energy Capital Improvement Program

## M&V Plan - Utility Savings Boundaries

## Judiciary House

| Utility Accounts | Account Number | Meter | Serving | |
|---|---|---|---|---|
| Electric | | | | |
| *includes demand* | 252422001 | | 461 H ST NW | |
| Gas | 0054.824909 | J76935 | 461 H ST NW | *Boiler* |
| | 0407.034024 | N94224 | 461 H ST NW | |
| Water | 31496 | SE01200710 | 461 H ST NW | |

**Baseyear Period** **OCT 2002 to SEP 2003**

Baseyear conditions

| | |
|---|---|
| *Number of units occupied* | **271** |
| *Estimated area per unit* | **1,000** |
| *Per capita occupancy* | **2** |

| Baseyear Energy Consumption | Annual |
|---|---|
| Summary Electric [kWh] | 1,582,650 |
| Summary Gas [Therm] | 137,061 |
| Summary Water [CCF] | 20,250 |

**Meter Data**

| | | kWh | kW Max | kW Min |
|---|---|---|---|---|
| Electric | | | | |
| *includes demand* | 252422001 | 1,582,650 | 378 | 167 |
| Gas | | Therms | | |
| *Boiler* | 0054.824909 | 122,963 | | |
| *Other* | 0407.034024 | 14,098 | | |
| Water | 31496 | 20,250 | | |

| Per unit Data | Annual | Monthly |
|---|---|---|
| Electric [kWh] | 5,840 | 487 |
| Gas [Therms] | 506 | 42 |
| Water [CCF] | 75 | 6.23 |

| Consumption Categories | | Annual Consumption Summary | per unit | |
|---|---|---|---|---|
| Electric [kWh] | Plug Load | 1,081,650 | 3,991 | |
| | Heating | 45,375 | 167 | |
| | Cooling | 455,625 | 1,681 | |
| Gas [Therms] | Laundry | 14,098 | 52 | |
| | DHW/Cooking | 30,836 | 114 | |
| | Heating | 92,127 | 340 | |
| Water [CCF] | Household | 20,250 | 75 | gpcd |
| | *Toilets* | *5,670* | *21* | *21* |
| | *Clothes Washers* | *4,253* | *16* | *16* |
| | *Showers* | *3,645* | *13* | *14* |
| | *Faucets* | *3,038* | *11* | *11* |
| | *Leaks and Other* | *3,645* | *13* | *14* |

| | | |
|---|---|---|
| **Energy Use Intensity** | *70* | **kBtu/sq. ft.** |
| **Gas Use Intensity** | *51* | **kBtu/sq. ft.** |
| **Water Use Intensity** | *77* | **gpcd** |

*Figure 34: Savings Boundaries*

The AUCL adjustment takes into consideration heating degree-days and occupancy but do not take into account increased cooling-degree-day data or changes to equipment or operational conditions. Since sub-metering is cost prohibitive, non-routine changes will be identified first by backing out the expected change in consumption from the savings as calculated in ECIP Savings Estimation Methodology starting on page 28. If whole facility consumption, as adjusted by degree-day and occupancy data, is different then expected for a given property, an investigation will need to be run through the facility manager to determine the potential cause of the consumption difference. Commissioning will determine that installed equipment is operating within the parameters and savings estimates as established thus documenting the ECM consumption and allowing the ECM source of the consumption change to be backed out. If a non-routine adjustment is required, the non-routine change in consumption will be made within the rolling base period as well so that it is accounted for on a "level playing field" basis.

All adjustments must be documented in a baseline adjustment log and maintained by DCHA throughout the ECIP program. Annual reports will be generated for HUD documenting any adjustments made, with supporting measurements, calculations, and commissioning reports to validate the adjustment.

## DATA QUALITY ASSURANCE, TRANSPARENCY AND RECORDKEEPING

The prescribed method for data collection is of average degree of difficulty compared to other data collection methods. The amount of erroneous or missing data is expected to be low, however, errors in measurement are bound to happen.

### EXPECTED ACCURACY OF MEASUREMENTS

DCHA expects a 99% accuracy rate in data collection and reporting. Given on average, over 115,000 utility bills with over one million annual data points, a 1% error or missing rate equates to just over 1,150 missing bills, and just over 10,000 incorrect data points either through the utility, the data collection system, or the analytical evaluation. This error rate should never account for more than 1% fluctuation in consumption. The missing data protocols will be used as described earlier to account for the missing data. All adjustments will be kept in the ECIP data log and reported annually.

### TRANSPARENCY OF DATA

All utility bills, ECIP logs and data sets, utility billing and administration data and worksheets will be archived and kept throughout the ECIP 12 year program term. All data will be made available to HUD or any other prescribed inspector to determine the accuracy and integrity of the consumption and cost data. Physical utility bills will be kept for a period of three years due to physical storage constraints unless HUD directs DCHA otherwise.

Access to the data set will be controlled by the DCHA Development and Modernization Administration and will be limited to a predetermined number of individuals. Archival copies will be kept independent of the original data set with restricted access to eliminate the potential for data tampering. Once a year the data set will be reconciled for the past fiscal year and the books closed so that no adjustments to those files may be made once the books are sealed. If an adjustment is necessary, it will be done in a subsequent year with documentation justifying the adjustment in the current fiscal year's records.

### REPORTING AND DOCUMENTATION PROTOCOL

Monthly analysis of the consumption data will occur, however, only annual reports will be generated detailing savings to HUD, adjustments made, and any other issues with respect to the implementation of the ECIP program.

Of course if there are issues which flag concern on the potential consumption savings, those will be immediately reported and investigated to prevent the loss of potential savings to DCHA and HUD.

## M&V PROJECT BUDGET

The cost of determining savings depends on many factors including:

- The M&V method selected – for DCHA whole building analysis is selected.
- The number of ECMs implemented and the interaction between the ECMs.
- Energy flow across the savings boundaries as defined in the M&V protocol. In a whole building analysis this is significant.
- The level of detail in the baseline creation and subsequent accuracy of measurements
- The amount and complexity of measurement equipment – could escalate since Energy Management Systems will be involved.
- The amount of engineering required to stipulate the savings estimates provided
- The number and complexity of independent variables which need to be monitored, measured and reported on a periodic basis
- The duration and frequency of measuring and detail of reporting activities – here monthly/annually

It is difficult to generalize costs for a specific M&V program until the program is implemented. However, given the experience of the DCHA Utility Billing and Administration program, it can be anticipated that the annual ECIP M&V costs will be approximately 1-3% of the $26 million project capital cost, well below HUD industry estimates.

# APPENDIX A – ECIP PROPERTY DATA AND CALCULATIONS