

BEFORE THE  
PHILADELPHIA WATER, SEWER AND STORMWATER RATE BOARD

Re Application of the Philadelphia Water Department for Increased Rates and Related Charges	Fiscal Years 2017-2018
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**DIRECT TESTIMONY OF JOANNE DAHME AND ERIN WILLIAMS**

**Q. PLEASE STATE YOUR NAMES, TITLES AND BUSINESS ADDRESS FOR THE RECORD.**

A. My name is Joanne Dahme and I serve as General Manager – Public Affairs for the Philadelphia Water Department (“Department” or “PWD”). Also testifying with me is Erin Williams who serves as Manager for the Stormwater Billing Program at PWD. Our business address is 1101 Market Street, Fifth Floor, Philadelphia, Pennsylvania.

**Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

A. We are both employed by the City of Philadelphia and in our respective capacities administer or have responsibilities related to the Water Department’s customer assistance programs generally or in connection with stormwater customers specifically.

**Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND RELEVANT EXPERIENCE.**

Ms. Dahme

A. I hold a Bachelor’s Degree in Civil Engineering from Villanova University. I also have earned Master’s Degrees in Journalism and Creative Writing from Temple University. The attached resume of experience details my educational background and various positions with the Department since 1980 and the increasing responsibilities associated with each position. See, Exhibit JD-1.

Ms. Williams

I hold Bachelor of Science and Master of Science degrees in Environmental Engineering from Drexel University. The attached resume of experience sets forth my educational background and describes various positions of increasing responsibility I have held with the Department. See, Exhibit EW-1.

**Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

A. The purpose of our testimony is to describe (i) the Department’s stormwater conveyance facilities; (ii) regulatory requirements and permits associated with the operation of such facilities; (iii) stormwater management programs necessary to comply with regulations and permits, and (iv) other assistance and discount programs provided to our customers.

**Q. PLEASE DESCRIBE THE DEPARTMENT’S SEPARATE STORMWATER AND COMBINED SANITARY/STORMWATER SEWERAGE FACILITIES.**

A. In approximately 40% of the City stormwater flows into, through and is discharged from separate storm sewers to receiving waters. In the remaining 60% of the City, combined sewers carry both sanitary wastewater and, during and following storm events, stormwater runoff. Stormwater entering the combined sewer system impacts both the conveyance and treatment plant facilities and impacts the health and beauty of our rivers and streams. The Department manages stormwater through a conveyance system comprised of 737 miles of separate storm sewers, 1,855 miles of combined sewers and approximately 71,962 stormwater inlets.

**Q. PLEASE DESCRIBE REGULATORY REQUIREMENTS APPLICABLE TO THE DEPARTMENT’S COMBINED AND SEPARATE SEWER SYSTEMS.**

A. The Clean Water Act requires cities, like Philadelphia, whose separate storm sewer systems serve a population of over 100,000, to obtain a permit from the National Pollutant Discharge Elimination System (“NPDES”) for their discharges. The United States Environmental Protection Agency (“EPA”) has delegated the NPDES program for the Commonwealth to the Pennsylvania Department of Environmental Protection (“PaDEP”). In addition to the Clean Water Act, the City and its Water Pollution Control Plants also are subject to regulation by the PaDEP, which exercises regulatory authority over municipal sewage treatment operations, and by the Delaware River Basin Commission (“DRBC”), which exercises regulatory authority over withdrawals from and discharges into the Delaware and Schuylkill Rivers. The City’s NPDES permit requires reduction of pollutants from (1) commercial and residential areas; (2) illicit connections; (3) industrial facilities; and (4) construction sites.

Current NPDES permits for the Northeast, Southeast and Southwest Water Pollution Control Plants expired on August 31, 2012. The facilities are operating under an extension of the expired permits, as dictated by the policies of the PaDEP. The expired NPDES permits will remain in place until new permits are issued. Applications for renewals were submitted to the PaDEP, as required, in February 2012. Negotiations to renew the permits are ongoing. The NPDES permits grant the City flexibility in the treatment of combined sewer overflows (“CSO”). The PaDEP requires the Department to update its Long Term Control Plan for CSO management (“LTCP”) and Capital Improvement Program to provide for additional projects to reduce CSO frequency and volume.

The Department’s Municipal Separate Storm Sewer (MS4) NPDES Permit (No. PA0054712) was issued in 2005 and amended in 2006. It expired in 2010. As required under PaDEP regulations, the Department submitted an application for renewal to the PaDEP on March 29, 2010. Currently, PWD is in negotiations with the PaDEP to determine the final permit requirements. The Department’s most recent draft permit was submitted to the PADEP on October 31, 2014 and is awaiting PaDEP approval. The most recently approved NPDES permit remains in force until this process is completed.

**Q. PLEASE GENERALLY DESCRIBE THE DEPARTMENT’S APPROACH TO STORMWATER MANAGEMENT.**

**A.** The Department, consistent with its PaDEP permit currently in force, has implemented four management programs to reduce the discharge of pollutants from its municipal separate storm sewer system. Such programs are designed to reduce pollution from (i) commercial and residential areas; (ii) illicit connections; (iii) industrial facilities; and (iv) construction sites. PWD’s stormwater management program addresses both the quantity and quality of stormwater runoff and its effects on the natural environment. The mission of the stormwater program is also associated with flood protection along major waterways and our receiving streams and rivers.

**Q. PLEASE DESCRIBE THE DEPARTMENT’S COMBINED SEWER OVERFLOW PROGRAM.**

**A.** The present NPDES permits require the Department to implement a program to manage combined sewer overflows. In older sections of the City, both sanitary wastewater and stormwater are conveyed in one pipe to the sewage treatment plant. This is known as a combined system. During certain rain events, the additional stormwater exceeds the capacity of the collection system and causes overflows. The excess stormwater/sanitary wastewater mix known as “combined sewer overflow” or “CSO” discharges directly into local waterways. The Department has 164 CSO points in its collection system.

Since 1997, PWD has been committed to restoring the region’s waterways to fishable, swimmable, accessible and beautiful rivers and streams that are life-sustaining and are an amenity to nearby communities. PaDEP and the Department signed a Consent Order and Agreement on June 1, 2011 (“COA”) that allowed the Department to embark on the implementation of its landmark strategy known as the Green City, Clean Waters Program (*Green City Clean Waters*). Pursuant to this program, PWD will spend approximately \$2.4 billion over 25 years (\$1.2 billion in 2009 dollars) to use green technologies to substantially mitigate CSOs and enhance the quality of local waterways. The program also includes wastewater treatment facility enhancements and pipe renewal and replacement.

EPA’s CSO Control Policy identifies two general approaches for managing CSOs and achieving compliance with the Clean Water Act: the demonstration approach and the presumption approach. The COA adopts the presumption approach. The goal under the presumption approach is to eliminate and remove the mass of pollutants that otherwise would be removed by the capture of 85% of the combined sewage volume otherwise collected in the City’s combined sewer system during precipitation events. To ensure this ultimate goal is met, the COA requires interim water quality milestones at years 5, 10, 15 and 20. The interim milestones require the City to achieve specific targets in four categories: (1) Total Greened Acres (“Greened Acres”); (2) Overflow Reduction Volume; (3) Miles of Interceptor Lined; and (4) Water Pollution Control Plant Upgrades: Design and Construction. The COA uses Greened Acres as a metric that accounts for the conversion of highly impervious urban landscape through the implementation of projects that reduce stormwater runoff. A Greened Acre is defined as an acre of impervious cover connected to a combined sewer that subsequently is reconfigured to utilize green stormwater infrastructure to manage all or a portion of the stormwater runoff from that acre. The COA includes financial protections in the event that the costs of complying with the COA exceed the Water Department’s projections. Should the costs of

complying with the COA increase to the extent that the wastewater component of a customer's bill exceeds 2.27% of median household income, the City may petition the PaDEP for an extension of time to satisfy the requirements of the COA so that the financial burden does not become excessive on ratepayers. The COA also includes significant penalties for non-compliance with the various 5-year milestone targets. Penalties start at \$25,000 per month for each violation (for the first 6 months) and increase up to \$100,000 monthly for uncured violations of 13 months or more.

The Department is in the fifth year of the 25-year *Green City Clean Waters* program. It has made significant progress towards meeting the first 5-year milestone requirements and expects to exceed compliance targets in terms of gallons of sewage kept out of waterways (600 million gallons is the requirement for Fiscal Year 2016), number of Greened Acres (744 Greened Acres is the requirement for Fiscal Year 2016) and improved air and water quality.

**Q. WHY IS THE COMBINED SEWER OVERFLOW PROGRAM AN ISSUE IN THE RATE PROCEEDING?**

A. *Green City Clean Waters* will require a significant increase in capital and operating expenditures over the next 25 years, as well as the focus of staff and management on tracking, measuring and reporting progress toward compliance with Consent Order Agreement requirements. Notably, *Green City Clean Waters* (unlike predecessor programs in other parts of the country) will address combined sewer overflows through large scale implementation of green stormwater infrastructure with only minimal installation of grey infrastructure improvements (storage and plant capacity increases). This approach focuses on controlling pollution at its source and improving water quality by restoring the natural hydrologic cycle in the urban environment and is consistent with current EPA policy for addressing wet weather impacts. As described in the testimony of Stephen Furtek, the *Green City Clean Waters* program is an integral part of the Capital Improvement Program as to which there are related financing costs reflected in the revenue requirements for FY 2017-2018.

**Q. IS THE DEPARTMENT REQUIRED TO FUND THE COMBINED SEWER OVERFLOW PROGRAM EXPENDITURES PURSUANT TO THE CONSENT ORDER AND AGREEMENT?**

A. Yes. Capital improvements associated with the Combined Sewer Overflow Program are undertaken pursuant to the COA described above and are consistent with the shift in regulatory emphasis toward non-point sources of water pollution. The Department has embraced a "green approach" to stormwater management which utilizes green stormwater infrastructure to control stormwater and reduce combined sewer overflows, while also having the following ancillary benefits:

- Utilizing rainwater as a resource by recycling, re-using and recharging long neglected groundwater supplies;
- Transforming rivers and streams into recreation destinations and green open spaces for visitors and residents;
- Preserving and restoring habitat for aquatic species within urban stream corridors;

- Revitalizing the City with an emphasis on sustainability; and
- Energizing citizens, partnerships and public and regulatory partners to adopt and join in this watershed-based strategy.

As described above, this approach is most beneficial to ratepayers and the City generally. It also is a sound approach to lowering non-point sources of water pollution.

**Q. IS THE DEPARTMENT REQUIRED TO FUND AND IMPLEMENT PUBLIC EDUCATION PROGRAMS UNDER ITS NPDES PERMITS?**

- A.** Yes. The current NPDES permits and the most recent drafts of the proposed new NPDES permits require the Department to continue to fund and implement its education and public outreach programs around the issues of non-point source pollution, pollution prevention and stormwater management. This current permit includes a specific requirement that the Department continue to: (1) develop and share, in conjunction with its watershed partnership stakeholders, a variety of public information materials concerning the COA in relation to watershed education, resident stewardship, and watershed planning implementation; (2) maintain its watershed management and source water protection partnership websites to encourage pollution prevention; (3) provide information to city residents about its programs through publications, monthly bill stuffers and reports; (4) develop and publish additional public education materials; and (5) support the Fairmount Water Works Interpretive Center. The most recent draft of the proposed new permit for the Department’s municipal separate storm sewer system requires the Department to continue implementing its existing education and outreach programs, as well as to identify areas where additional education and outreach are needed based on an assessment of the current programs.

**Q. PLEASE HIGHLIGHT PROGRAMATIC EXPENDITURES RELATED TO STORMWATER MANAGEMENT THAT ARE SUPPORTED BY THE PROPOSED REVENUE REQUIREMENTS DURING FY 2017-2018.**

- A.** Some examples of programmatic expenditures related to stormwater management that are supported by the proposed revenue requirements include: (1) continued funding of the Department’s Green Homes programs (“Rain Check” which is a cost share program to install rain barrels, downspout planters, rain gardens and porous pavers on residential properties) which seeks to educate and engage homeowners about stormwater management; (2) continued funding of public education programs on the urban watersheds and stormwater management at the Fairmount Water Works Interpretive Center; and (3) continued funding of partnership programs with non-profit partners to increase awareness and stewardship by watershed community members through education and volunteer activities across Philadelphia.

**Q. ARE ANY OF THE FOREGOING EXPENDITURES NECESSARY TO COMPLY WITH REGULATORY REQUIREMENTS?**

- A.** Yes, the Long Term Control Plan and COA, as well as the Department’s NPDES permits, require the Department to continue funding these types of public outreach and education programs as described above together with programmatic expenditures to incentivize stormwater management best practices addressed below.

**Q. HAS THE DEPARTMENT IMPLEMENTED ITS OWN INCENTIVES TO PROMOTE STORMWATER MANAGEMENT BEST PRACTICES?**

A. Yes. The Department offers several programs providing technical assistance and financial incentives to its stormwater customers. Expenditures for these programs constitute Operating Expenses of the Department or contra revenue in the form of credits or reductions to stormwater charges. For example, the Stormwater Management Incentives Program awards grants to property owners that meet selective criteria, including the ability to construct stormwater systems that assist the Department in complying with the COA Greened Acre requirements at a cheaper price than it would cost the Department. A list of stormwater incentives and assistance programs, together with their attendant costs incurred in FY 2013-2015 and budgeted for FY 2016 is attached as Exhibit JD-2.

**Q. PLEASE DESCRIBE THE HISTORY OF THE DEPARTMENT'S STORMWATER ASSISTANCE AND INCENTIVE PROGRAMS.**

Stormwater Customer Assistance Program

A. PWD officially began its Stormwater Customer Assistance Program (CAP), formerly called Stormwater Assistance Phase-in Program, in July 2011. This program was offered to customers most impacted by the Department's transition to parcel based charges for stormwater beginning July 1, 2010. Accounts eligible for CAP must have met the following criteria: the account must service a non-residential property; the account must not be held by a City, State or Federal agency; the account must be current with all Water charges and any City tax accounts associated with the parcel must be in good standing; and the account must see an increase in stormwater charges between fiscal years that is greater than 10% and \$100.

Accounts that met these criteria were enrolled into the CAP program upon approval of an application. Once approved, the account received an adjustment on the monthly water bill equivalent to an amount that would make the stormwater charge 10% higher than the fiscal year prior.

PWD officially closed new enrollment to CAP on September 30, 2013. After September 30, 2013, applicants who had previously submitted CAP applications but had outstanding compliance issues that prevented enrollment were allowed to re-apply to the program until June 30, 2014. After this date, the 'pool' of CAP accounts became locked-in except for subsequent account drop-out.

While PWD has made significant effort to run an effective CAP program, it has also fully developed a robust incentives program. Many PWD customers appreciate CAP but realize that it only "lessens the blow" and does nothing to abate the fully realized stormwater charges. Many of our most impacted customers have used CAP as a transitional tool while they engaged engineers and contractors to complete a stormwater retrofit and be approved for credits.

Stormwater Incentive Programs

PWD launched its first stormwater grants program called the Stormwater Management Incentives Program (SMIP) in 2012. This program provides grants to non-residential

property owners to design and build stormwater retrofit projects resulting in a Greened Acres that the Department is able to count toward compliance with the performance requirements for implementing combined sewer overflow programs as specified in the COA. In the first year, PWD awarded \$3.35 million to 7 projects. In the second year of SMIP, PWD awarded another 14 projects working under a \$5 million program budget. The SMIP model has been successful to date and is still offered, but the Department also realized its limitations as an effective project development model. Beginning FY2015, PWD launched its second stormwater grants program called the Greened Acre Retrofit Program (GARP) where PWD provides stormwater grants directly to project developers or aggregators. GARP's intent was to streamline the development of stormwater retrofit projects, particularly in the CSO area, and incorporates ideas such as project aggregation and pay-for-performance. The introduction of GARP to PWD's stormwater incentives program necessitated an increase to the program budget, and PWD doubled the grants budget from \$5 million to \$10 million in FY15.

These two programs provide very direct and clear paths for property owners and project developers to work with PWD to reduce stormwater charges and manage more stormwater in Philadelphia. These projects translate to Greened Acres in the CSO area, which is the primary metric by which PWD measures compliance for its Consent Order & Agreement. To date, PWD has awarded \$30.5 million in SMIP and GARP grants for nearly 375 managed acres across the City, 250 of which are in the CSO area. At present, 143 greened acres have been constructed and many more are expected to come on-line in the near future.

**Q. PLEASE PROVIDE EXAMPLES OF STORMWATER MANAGEMENT INITIATIVES FUNDED WITH SMIP AND GARP GRANTS.**

- A. SMIP and GARP grants are important components of the *Green City Clean Waters* program and are part of the goal to convert 9,500 impervious acres into Greened Acres that capture and manage the first one inch of stormwater runoff to achieve beautiful, fishable, clean and healthy rivers and streams. The grants also allow businesses, institutions and other non-residential customers to be directly involved in green stormwater management practices.

**Q. PLEASE DESCRIBE OTHER CUSTOMER ASSISTANCE PROGRAMS AND RATE DISCOUNTS PROVIDED BY THE DEPARTMENT.**

- A. The Department, in most instances together with the Water Revenue Bureau, provides numerous programs to assist our customers either through rate discounts or more direct assistance. Rate discounts include the following:
- **Senior Citizen Discount.** 25% discount is provided for senior citizens, 65 years and older, with a total household income not exceeding \$31,500.
  - **Charitable Discount.** 25% discount is provided for public and private schools, institutions of purely public charity, and places used for actual religious worship.
  - **Public Housing.** 5% discount is provided for public housing properties of the Philadelphia Housing Authority.

These rate discounts are proposed to remain in place, as described above, in the rate filing. In addition to the foregoing programs, PWD offers the direct assistance programs described below to our customers.

- **Water Revenue Bureau Assistance Program or “WRAP.”** Grants of up to \$500 on water bills to prevent shut-off of low income customers (at or below 250% FPL).
- **Utility Emergency Services Fund or “UESF.”** Grant program to prevent shut-off or restore water service for low-income customers (at or below 175% FPL). Provides up to \$500 every other year (\$250 UESF grant plus \$250 matching PWD credit). The above financial assistance must be applied to arrearage.
- **Homeowners Emergency Loan Program or “HELP.”** No-interest repair loan program for homeowners in imminent danger of shut-off because of a violation notice.
- **Conservation Assistance Program.** Program providing conservation devices and education to low-income customers (at or below 150% FPL) targeting 25% or greater savings for participants.
- **Cross Connection Abatement Program.** State mandated program to replace sanitary drainage lines that are connected to storm sewers.

The nature and scope of WRAP and other current residential assistance programs are also addressed in the testimony of Michelle Bethel and Mark Harvey (PWD Statement 6). The Rate Affordability Program (to be implemented in FY 2018) is addressed in the Testimony of Jon Davis (PWD Statement 8).

**Q. PLEASE PROVIDE AN OVERVIEW OF COSTS EXPENDED BY THE DEPARTMENT FOR RATE DISCOUNTS AND CUSTOMER ASSISTANCE PROGRAMS DISCUSSED IN THIS TESTIMONY.**

**A.** The costs associated with rate discounts, customer assistance and stormwater assistance programs for FY 2013, 2014, 2015 and 2016 (as budgeted) are summarized in Exhibit JD-2. As depicted in the exhibit, the Department’s budget in FY 2015 reflected \$55.1 million in costs related to rate discounts, stormwater management incentives and customer assistance programs.

**Q. DOES THIS CONCLUDE YOUR PREPARED DIRECT TESTIMONY?**

**A.** Yes, it does.



**Joanne Dahme**  
ARAMARK Tower  
1101 Market Street, 5<sup>th</sup> Floor  
Philadelphia, PA 19107

Work History

*January 2009 To present*      *General Manager, Public Affairs, Philadelphia Water Department*

*2000 - 2008*      *Watersheds Programs Manager*

As the Philadelphia Water Department's Watersheds Programs Manager, I am responsible for the development and implementation of regional watershed partnerships, working with a team of Water Department engineers and scientists. The mission of these partnerships is to create watershed management plans in the various sub-watersheds in Philadelphia that will result in the improvement of stream water quality and measurable improvements to the quality of our parks and neighborhoods. Watershed management issues are to be communicated and shared with a diverse group of stakeholders including regional municipal partners, elected officials, the general public and the media, to gain local support for the implementation of regulatory-driven initiatives and community-based projects. I am responsible for ensuring that stormwater management as it is related to land-based practices will also be incorporated into final best management practices.

*1993- 1999*      *General Manager, Public Affairs, Philadelphia Water Department*

As a member of the PWD's Executive Staff, I reported directly to the Water Commissioner. All tasks which involved interaction with our customers, including emergency phone service, public meetings, public participation mandates, school programs, media, correspondence with City Council and elected officials, assistance to low-income customers, and the development and production of the department's brochures and publications, were my responsibility. As GM, I ensured that the five responsibility centers in Public Affairs, including Public Relations, Public Education, Assistance Programs, Government Affairs and Customer Service - each met the PWD's customer service and public participation goals. I developed and worked with my staff to create a variety of public information campaigns, some required to meet state and federal environmental education mandates, and others to improve the department's customer service functions. The most recent campaigns, including those I developed, were focused on drinking water quality issues, e.g., EPA Public Right-To-Know rules (Consumer Confidence Report), Cryptosporidium in drinking water, lead and copper sampling, and the new Risk Management Program (RMP), as required under the Clean Air Act. These campaigns were developed and produced, for the most part, with the talents and expertise of the Public Affairs staff. I created and facilitated two citizens advisory committees -- one whose mission is to improve drinking water quality communications and the other designed to improve community relations in the neighborhood of one of the

PWD's operating facilities. My staff managed two others. Our public education curriculum development focused on the urban water cycle, watersheds, and stormwater pollution prevention. I worked with the media one to one to keep them up-to-date on PWD issues, and hosted a number of workshops, for both print and broadcast media, to familiarize local reporters on local and national water resource issues.

*1986-1993 Public Relations Manager, Philadelphia Water Department*

As Public Relations Manager, I was responsible for the development, copywriting, editing and production of the PWD's publications, which include: billstuffers, brochures, newsletters, press releases and annual reports. I also represented the PWD at community meetings and represented the Public Affairs Division on PWD operations committees. I also responded to media inquiries

*1980-1986 Civil Engineer, Philadelphia Water Department*

With a team of civil, mechanical and electrical engineers, I supervised the work of PWD contractors during the renovation and reconstruction of one of the department's wastewater treatment plants

#### **EDUCATION**

*1999-2001* Master's degree in Creative Writing, Temple University

*1983-1986* Master's degree in Journalism, Temple University

*1976-1980* Bachelor's degree in Civil Engineering, Villanova University

#### **PROFESSIONAL AND COMMUNITY MEMBERSHIP**

Society of Women Environmental Professionals

Fairmount Water Works Interpretive Center Advisory Board

Board Member, North Light Community Center

Board Member, Awbury Arboretum

Friends of Laurel Hill Cemetery

Board Member, Tookany/Tacony-Frankford Watershed Partnership

**ERIN WILLIAMS**

**EDUCATION**

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**Drexel University**, Philadelphia, PA

- B.S./M.S. Environmental Engineering, June 2008
- *Cum laude*

**EXPERIENCE**

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**Philadelphia Water Department**, Philadelphia, PA

**Manager**, Stormwater Billing and Incentives Program, January 2010 - present

- Lead team responsible for the generation, maintenance and improvement of a parcel-based stormwater billing database, includes engineers and GIS specialists
- Manage the Stormwater Management Incentives Program (SMIP) and Greened Acre Retrofit Program, which provide grants to property owners and project developers for completing stormwater retrofits, currently budgeted at \$15 million
- Engage with property owners and consultants to implement projects that help the City meet regulatory requirements and help customers make their bills more affordable
- Develop and enhance an interactive website providing customers with detailed information about the stormwater billing program
- Manage contracts that provide conceptual design assistance to PWD customers
- Develop policy and regulations that promote stormwater management on private property
- Manage a suite of customer assistance programs, including the Stormwater Appeal, Stormwater Credits, and Stormwater CAP programs

**Project Engineer**, Planning and Research Unit, Stormwater Plan Review and Incentives Program, July 2008 – January 2010

- Reviewed Stormwater Management Plans and Erosion and Sediment Control Plans
- Coordinated inter-City agency efforts to address private and public development
- Performed on-site stormwater management practice inspections

**Kling Stubbins**, Philadelphia, PA

**Engineering Intern**, Site/Civil Department, April – September 2007

- Drafted Stormwater Management and Erosion and Sediment Control Plans

**CHPlanning Associates, Inc.**, Philadelphia, PA

**Water Resources Intern**, On-Site Consultant to Philadelphia Water Department, Office of Watersheds, April – September 2006

- Reviewed conceptual and technical stormwater plans submitted for permit review

**PROFESSIONAL REGISTRATIONS & CERTIFICATIONS**

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Delaware Association of Professional Engineers, E.I.T. issued 2007

Exhibit JD-2

<b>PWD WRB Assistance Programs</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016 Budget</b>
Charitable Organizational Discount - Hospital and Universities	\$ 4,102,376	\$ 4,303,519	\$ 4,705,443	\$ -
Charitable Organizational Discount - Other charitable and educational institutions	\$ 3,615,198	\$ 3,405,089	\$ 3,364,874	\$ -
Senior Citizen Discount	\$ 3,105,680	\$ 3,185,043	\$ 3,387,753	\$ -
Homeowners Emergency Loan Program (HELP)	\$ 3,056,530	\$ 3,882,739	\$ 4,639,457	\$ 5,000,000
Charitable Organizational Discount-Board of Education	\$ 2,020,707	\$ 2,029,845	\$ 2,125,440	\$ -
Water Revenue Assistance Program (WRAP)	\$ 3,026,377	\$ 3,521,019	\$ 3,815,133	\$ 4,000,000
Cross Connection Abatement Program	\$ 482,275	\$ 472,067	\$ 399,623	\$ 400,000
Philadelphia Housing Authority	\$ 591,436	\$ 631,945	\$ 697,733	\$ -
Conservation Assistance Program (CAP)	\$ 576,977	\$ 464,767	\$ 488,853	\$ 450,000
Utility Emergency Services Fund (UESF) - Administrative Costs	\$ 233,749	\$ 233,149	\$ 273,749	\$ 273,749
Utility Emergency Services Fund (UESF) - Matching Credits	\$ 165,673	\$ 133,443	\$ 114,704	\$ 126,251
Basement Protection Program (BBP)	\$ 18,320	\$ 173,170	\$ 99,597	\$ 200,000
<b>TOTAL</b>	<b>\$ 20,995,298</b>	<b>\$ 22,435,795</b>	<b>\$ 24,112,359</b>	<b>\$ 10,450,000</b>

<b>Stormwater Assistance Program</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>16 Budget</b>
Residential Green Practices Rebate Program	\$ 298,103	\$ 416,472	\$ 318,795	\$ 550,000
Stormwater Management Incentives Program Grant (SMIP)*	\$ 4,591,670	\$ 4,208,211	\$ 13,577,328	\$ 11,450,000
Stormwater Design Assistance	\$ 461,426	\$ 499,991	\$ 364,876	\$ -
Stormwater Assistance Phase in Program (CAP)	\$ 2,387,524	\$ 4,615,646	\$ 4,164,072	\$ 3,600,000
Stream and Backyard Buffer Program	\$ 14,883	\$ 43,052	\$ 94,180	\$ 130,000
Rebuilding Together Philadelphia Green Practices on Low Income Homes	\$ 37,867	\$ 37,745	\$ 41,221	\$ 50,000
Residential Rain Barrels	\$ 108,022	\$ 126,433	\$ 161,913	\$ 400,000
Residential Stormwater Practive Innovative Design	\$ 47,599	\$ 65,000	\$ 20,410	\$ 50,000
Stormwater Credits	\$ 6,429,142	\$ 10,372,319	\$ 12,262,191	\$ 13,066,000
<b>TOTAL</b>	<b>\$ 14,376,236</b>	<b>\$ 20,384,869</b>	<b>\$ 31,004,986</b>	<b>\$ 29,296,000</b>

\* 2015 SMIP cost include a \$2,032,000 Grant from ACT 13 MARCELLUS SHALE

\* Represented in FY16 budget as one Vendor, PHS for \$950,000 for Raincheck and Rainbarrel Workshop/Installation