

**TESTIMONY OF WILLIAM O. HOWLAND, JR., DIRECTOR  
DC DEPARTMENT OF PUBLIC WORKS  
“PERFORMANCE OVERSIGHT HEARING ON THE DEPARTMENT OF PUBLIC  
WORKS FISCAL YEARS 2012-2013”  
BEFORE THE COMMITTEE ON TRANSPORTATION AND  
THE ENVIRONMENT  
TUESDAY, MARCH 12, 2013**

**INTRODUCTION**

Good morning, Chairperson Cheh, members of the Council and staff. I am William O. Howland, Jr., Director of the Department of Public Works. I am here today to present testimony about the Department’s FY 2012 and FY 2013 performance.

The mission of the Department of Public Works is to provide environmentally healthy municipal services that are both ecologically sound and cost effective. To that end, DPW serves all District residents, businesses, visitors and commuters by providing:

- Trash, recycling, litter, household hazardous waste, and e-cycling collection and disposal.
- Street and alley cleaning.
- Solid waste education and enforcement.
- Snow removal.
- Parking enforcement, including towing, booting, removing and impounding abandoned and dangerous vehicles.
- Fleet management, including acquisition and disposal, fueling, and vehicle maintenance services.

**NEW AND NOTEWORTHY**

While the Department of Public Works provides the most traditional municipal services, every day we seek new ways to improve service delivery.

This past year, DPW started providing MPD with real-time information about stolen or wanted vehicles. This initiative uses all parking enforcement equipment, including handheld devices and license plate recognition systems to wirelessly transmit all captured parking data, including tickets, timings and reads. This data is then compared to a wanted/stolen data base allowing MPD to respond to the vehicle’s location.

Between July 1, 2012 and January 1, 2013 PEMA devices have sighted and transmitted the locations of 2,571 wanted or stolen vehicles to MPD in real time.

Once again, DPW is among the top 10 fleets honored by Green Fleets, now for our extensive use of alternative fuel vehicles and use of alternative fuels. In FY12 DPW went into year-round distribution of biodiesel at five District fuel stations. The use of biodiesel was twofold: to meet US Department of Energy EPCa requirements, and

reduce District vehicle petroleum consumption. The program proved successful as DPW exceeded EPA requirements by 36% and reduced diesel fuel consumption in FY12 by 192,822 gallons.

Finally, I am happy to announce that we are starting a pilot commercial compost program this year; however, the general concept is that a few restaurants will deliver their food waste to DPW for transfer to Maryland to be composted. Details are being worked out now and I will keep you posted.

## **DPW – THE FIRST GREEN DC GOVERNMENT DEPARTMENT**

DPW is a member of Mayor Gray's Sustainable DC Green Cabinet. With the Sustainable DC initiative, Mayor Gray has integrated the efforts of multiple DC government agencies to create a comprehensive and cohesive set of goals and DPW is at the forefront.

As part of Sustainable DC, we will:

- Recover or recycle 75% of all waste generated in the city by 2030.
- Reduce waste generation by 25% by 2030 (from 2012 baseline).
- Eliminate litter by 2030.
- Create a system of teaching environmental literacy.

We also have begun to divert storm debris for composting. Most storm debris from the derecho and Hurricane Sandy was composted. More than 2,000 tons of materials were diverted from the summer storms and more than 1,200 tons of materials were diverted from Hurricane Sandy.

During FY 2012, DPW attempted to reduce its energy usage through multiple projects and initiatives. DPW reduced petroleum usage in the District by providing alternative fuels at District fuel stations. In FY12 through the use of CNG, ethanol (E-85), and biodiesel, DPW displaced 446,797 gallons of petroleum based fuel in District vehicles.

I anticipate an increased use of CNG vehicles, which can have the effect of reducing our fuel costs by about one-third. We are working on a plan to make this happen.

DPW also introduced 4 plug-in hybrid electric vehicles (Chevy Volts) into the Fleet Share program bringing the total number to 11 Chevy Volts in the program. Additionally, four electric charging stations were installed – two at the Reeves Center and two at 441 4<sup>th</sup> Street, NW.

DPW-PEMA Parking Enforcement Officers used 32 bicycles and 35 Segways and reduced fuel consumption. On average, PEOs riding Segways and bicycles save 15+ percent of DPW-PEMA's total projected fuel usage.

We also installed a green roof on the Tire Shop located at 1827 West Virginia Avenue, NE, and we are constructing a Storm Water Management System at the Blue Plains Impoundment Lot located at 5001 Shepherd Parkway, SW.

## **USING TECHNOLOGY TO IMPROVE CUSTOMER SERVICE**

While school-age children and even some adults may be chafing because we've had so little snow this year and last, we learned that just the prediction of last week's "significant" snow storm led thousands to [snow.dc.gov](http://snow.dc.gov).

According to OCTO, until this week, Google analytics showed no visitors to the site, which is understandable. But all that changed last week when 3,924 people made 4,532 visits to the site. Annualized, that would be almost 1.2 million visits for a year. I am glad we had the information available when residents needed it.

I am happy to announce that DPW is in the final stages of upgrading our Web site to make it easier to use and more attractive to our customers. I expect the new site to launch by April 1.

The success of Parkmobile is obvious. The District has the highest use of this technology, which translates into great compliance with meter requirements, including turnover. The real winners are the small businesses whose customers have improved access to curbside parking spaces.

Another success story is the use of eSWEEP, which began in FY 2012. Inspectors are using tablets to generate Notices of Infraction in the field, thus eliminating the need to return to the office to look up the property owner's name and contact information.

By generating and transmitting notices electronically, eSWEEP eliminates the most time consuming of manual tasks—data collection, administrative paperwork, sorting, printing and mailing notices to violators making processing exponentially faster.

eSWEEP consolidates data from five inter-departmental databases including the 311 center which, had been obtained manually. The system has the ability to auto-fill the majority of data before the inspector even arrives on site, minimizing collection and administrative work considerably.

The tablet captures evidence with a built-in camera instantly attaching photos to the NOV file that can be sent wirelessly to the Office of Adjudication Hearings (OAH).

Another Mayoral initiative planted our feet firmly in the world of social media. DPW was among the first five agencies in the [Grade.DC.gov](http://Grade.DC.gov) pilot program that gathers customer feedback from various social media sites, e.g., Twitter, Yelp, etc., as well as the program's Web survey instrument. Our overall grade for March 2013 is an A. When a reviewer provides contact information, DPW uses that information to respond to any

questions, service requests or comments included in the review. As a result, we are keeping in closer contact with our customers.

## **EMERGENCY RESPONSE EFFORTS**

During FY 2012, certain neighborhoods experienced unprecedented flooding, even when the rest of the city remained flood-free. These neighborhoods – LeDroit Park and Bloomingdale – became the focus of multiple agencies working together at the Mayor’s direction to create a plan to solve the problem.

DPW led the Emergency Response Subcommittee, creating a series of goals, including advance distribution of sandbags to have them in place before rain storms are predicted.

As stated above, we collected thousands of tons of debris from DC streets, alleys and sidewalks following the derecho, Hurricane Sandy and other smaller storms.

## **DPW EMPLOYEES – OUR GREATEST ASSET**

I would like to conclude my testimony by expressing my deepest appreciation to the people who do the work. Every day they collect trash, recycling, bulk and dead animals to keep our city clean and healthy. Every day they enforce parking regulations to keep our streets safe and clean. Every day they make our vehicles run so the rest of the government can do what needs to be done. These are the truly unsung heroes of DC government.

While their names may not be known to our residents, they are known by the quality of their work. And this year we are conducting a series of recognition ceremonies to thank them. This is but one of the activities we are undertaking to spur employee development.

Working with the Community College of the University of the District of Columbia and the Department of Human Resources, we are starting a pilot program – “Thrive in the Workplace” – to provide training for employees in our Street and Alley Cleaning Division.

We also are starting a coaching program and matching employees with senior managers to provide enrichment, encouragement and enthusiasm for pursuing a career in public works.

Thanks to Mayor Gray’s leadership, we are refocusing our efforts to build on our relationship between labor and management.

FY 2012 was a successful year and I am looking forward to even greater success for DPW in FY 2013.

This concludes my remarks. I am happy to respond to your questions. Thank you.

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**Government of the District of Columbia**



**DC Department of Public Works**

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Testimony of

**William O. Howland, Jr.**

Director

**“RECYCLING AND WASTE DISPOSAL IN THE  
DISTRICT OF COLUMBIA”**

COMMITTEE ON THE ENVIRONMENT, PUBLIC WORKS AND  
TRANSPORTATION

Mary Cheh, Chairperson

John A. Wilson Building

Room 120

1350 Pennsylvania Avenue, NW

Washington, DC 20004

September 28, 2012

- We already have captured the economic value of some of the waste through recycling. Now, we are redefining the remaining waste from a burden that needs to disappear to a resource with economic value. We want to develop a self-sufficient or regional solid waste management system to turn our waste into an economic opportunity.
- That means integrating recycling, composting and waste to energy conversion into an integrated system. The benefits include: Green Jobs, natural and built infrastructure improvement, and maximizing the energy and embedded value of waste.
- The US Conference of Mayors adopted the US Mayors Climate Change Protection Agreement which identifies waste to energy as a clean, alternative source that can help reduce greenhouse gas emission.
- Waste-to-energy facilities offer a safe, sustainable and technologically-advanced means of disposal of post-recycled municipal waste that generates clean, renewable energy, reduces greenhouse gas emissions and supports recycling.
- Today's waste to energy plants exceed the strictest federal requirements for effluent for all media (air, soil and water) and are clean additions to any community.
- Major metropolitan cities around the world are embracing new and varied waste to energy technologies.
- Our next steps include crafting a scope of work that requests a comprehensive understanding of the District's current solid waste management program and the program needs of surrounding jurisdictions.
- This will help us determine the potential for partnership, describe the technologies that exist on a commercial scale, and establish selection criteria that maximize utility and minimize risk.
- Additionally, we will identify regulatory, institutional and legal requirements that need to be addressed and create a financial model that includes a full accounting of capital and operating costs.
- Further, that model will summarize costs on a tipping fee basis for the District's use in comparing it with other available disposal options and arrangements.
- This effort will be incorporated into the Sustainable DC process, initiated by Mayor Gray this year. DPW led the Waste Working Group. This group of more than 40 people included interested residents as well as representatives of industry and non-profits who volunteered their time to give structure to the Mayor's vision.

- We will provide households that receive DPW trash and recycling services a brochure describing how the program works, the ward-based collection schedule and what we need residents to do to make this a successful collection season. The brochure also will be available online at [www.dpw.dc.gov](http://www.dpw.dc.gov).
- When you get the brochure, check the dates for your neighborhood's two collection cycles. To make sure your leaves are collected, the weekend before each collection cycle, please rake your leaves into the treebox space, not the street, in front of your house. Or you may bag your leaves and place them in the treebox space.
- Leaves raked into the street can cause flooding because storm drains are blocked. They also can cause fires and reduce available curbside parking.
- Leaf collection season and snow season overlap, which means we may need to suspend collecting leaves to fight a snow storm. Once the storm is over, we will resume collecting leaves.
- This program is a real win-win for everyone. First, we get the leaves off the street, which become slippery when wet and can cause vehicle and pedestrian accidents. Then, we compost the leaves and provide the free compost to residents and neighborhood beautification projects. So, please help us help you by getting your leaves ready for collection.
- I would like to conclude my testimony by quoting representative FY 2012 workload statistics generated through July.
- Since October 1, 2011, DPW has collected 80,000 tons of trash, 29,000 tons of recyclables, 91 tons of e-waste, 111 tons of shredded paper and 8,000 tons of leaves.
- In July 2012, following the derecho and other storms, we collected and composted more than 1,500 tons of storm debris.
- We removed more than 2,100 tons of street litter and debris through our residential and commercial street sweeping program; and we collected almost 5,700 tons of trash from our street litter cans.
- The District of Columbia is a cleaner, more attractive environment because of the work of the hundreds of DPW employees.
- Thank you, again, for this opportunity to appear before the committee. I am prepared to respond to your questions.

*District of Columbia Strategy Roadmap for Residual Asset Management*

A) System Baseline Dimensions and Specifications

B) Preliminary Design for Scenario Development

SECTION A

BACKGROUND

The subject project will develop a strategy and implementation roadmap for planning and execution options in solid material source control, diversion, and disposition capable of meeting goals of the current DC Sustainability Plan. These include: zero solid waste to landfills, total waste generation reduced by 15 percent, 20 percent reuse of construction and demolition waste, and waste diversion rate increased to 80 percent. The plan also calls for a 50 percent reduction in greenhouse gas emissions.

Because these goals require reduction of a certain percentage (and thereby amount) of the current amount of material handled with particular methodologies, the first step for the project is to define the dimensions, specifications, and throughput volumes various components of the system handle, as well as whether and how those elements will be covered by this study. Once the system to be analyzed is delineated, the study can establish baseline numeric levels of natural and financial capital associated with the current generation, handling, and disposition activities. This will not only establish the baseline for the current system but will enable calculation of formulae for Units/Ton of natural, financial, and other capital components of the baseline and alternatives to be studied.

The factors, dimensions, and specifications outlined below are designed to be a starting point for the evaluation parameters and data elements to be used for the study. Following the outline, a list of study design protocol options is presented for review and consideration by the Arcadis Team in consultation with the clients. Ultimate study design will also take into account the results of public interaction and scoping meetings to be scheduled as part of this process.

## OUTLINE OF PROJECT ACTIVITIES

### I. ESTABLISH CURRENT PARAMETERS

The 2011 Solid Waste Characterization Study by Arcadis for DCDPW estimated the material management level in DC to be 894 thousand tons (TT) by 2015 in a high-growth scenario. System throughput data taken from the DCDPW website and other sources break down some of this estimated load into the following categories:

#### **A. DC Handled**

- Residential Solid: 135 TT
  - 25 TT recyclables
  - 8 TT leaves
- Other DC Agencies: 42 TT
- Street and alley cleaning/citizen drop-off 50 TT
- Commercial Haulers (DC Transfer Stations): 240 TT

#### **B. Privately Handled**

- Commercial Recyclers: 100 TT
- Commercial Haulers (Private Transfer Stations): 300 TT

### II. CHART SYSTEM DIMENSIONS AND SPECIFICATIONS

#### **A. Source/Generation Of Residual Materials**

- Residential (Homes, Apartments, Condominiums, Complexes)
- Commercial (Retail, Restaurants, Services)
- Industrial (Manufacturing, Production)
- Hospital/Clinic/Doctor
- School
- Office/Government

#### **B. Residual Material Categories/Components**

- Paper/Cardboard
- Paper/Secure
- Plastic
- Glass
- Metals
- Organic/Food
- Textile/Carpet
- Electronic (sub-components include metal, plastic, other)
- Hazardous (Household/Business)
- Medical
- Construction and Demolition

#### **C. Volume/Flow Throughput Process: Depiction and Interdiction Points**

##### **1. Primary Operational Activity Categories**

- Generation/Accumulation/Preparation (Washing??)

- Collection/Diversion
  - Sorting/Separation/Diversion
  - Transfer/Diversion
  - Disposal
- 2. Asset Management Performance Alternatives**
- **Material Avoidance/Reduction/Elimination**
    - Packaging
    - Cartage (Bags)
    - Other
  - **Diversion**
    - Reuse (restore, fix, exchange, trade, sell)
    - Bio-reuse (compost)
    - Recycle (reconstitute, down-cycle)
    - Refine (fuel)
    - Other
  - **Indefinite Disposition**
    - Burial
    - Incineration
    - Other

**D. Enterprise Natural Capital Use Categories (Used and Available; including but not limited to)**

**1. Operational Activities**

- **Air**
  - Air Rights
- **Water**
  - Process/Supply
  - Transport
- **Land**
  - Buildings (Industrial)
  - Buildings (Administrative)
  - Buildings (Other)
  - Storage
  - Transport (Rail)
  - Transport (Road)
  - Utility/ROW
  - Setback/Safety/Buffer

**2. Residual Loadings**

- **Air (mobile, stationary, equipment, decomposition sources)**
  - Criteria Pollutants
  - Hazardous Pollutants
  - Greenhouse Gases
  - ODS
- **Water (point/outfall, non-point/runoff sources)**
  - Thermal
  - Nutrient
  - Suspended Matter

- Microbial
  - Chemical
  - Radiological
  - **Land (Controlled, Random, Invasive)**
    - Litter
    - Dumped material
    - Leakage
3. Calculate Use Rates for Current and Alternative Operational Levels and Activities
  4. Develop Cost Accounting actuals and estimates

### III. DEVELOP DATA MODEL AND SCENARIO ALTERNATIVES

- A. Craft Excel-based data compilation for natural capital units using current baseline
- B. Build scenarios using public, SME, legal, practice, and capital optimization inputs
- C. Develop financial/costing data that correlates to Residual Asset Management activities included in scenarios
- D. Generate *Residual Asset Management Strategy Roadmap* with optimized activity recommendations based on natural and financial capital requirements

### IV. SYSTEM DEFINITION/BASELINE AND SCENARIO ISSUES—PARALLEL CONSIDERATIONS

1. DCDPW or system-wide asset material volume under review?
  - Private haulers
  - Private transfer stations
  - Government storage
2. Treatment of solid organic asset material volume handled in water streams
  - “Insinkeration”
  - Municipal/Storm sewers
3. Data Sources: Physical Infrastructure Inventory; Permit Inventory; Route/Trip parameters
4. Natural Capital security/supply/interdependence considerations (regional governments and assets)
5. Options requiring legislative/legal changes
6. Data development and management roles and responsibilities

These and other considerations can be addressed as we move to the project planning process and develop the evaluation further.

## SECTION B: SCENARIO DEVELOPMENT

### I. Background

As mentioned above, DC Sustainability Goals require reduction of a certain percentage (and thereby amount) of residual material handled using optimized methodologies, technologies, and practices. Therefore, in order to best apply NCAM quantitative principles to the analysis, K&D recommends the design concepts for devising alternative scenarios should be linked by “Phase” to the various methodologies, technologies, and practices associated with executing the overall process of addressing municipal residual assets. Breaking the residual material handling process down into component phases allows for “modularized” evaluations of options in each phase.

A module approach will enable the public and decision-makers to see the process options in each phase and adopt some, all, or none of the alternatives to develop final investment and programmatic choices. The phases and activities outlined below are a proposed starting point for the alternative scenarios evaluation parameters and data elements to be used for the study. Ultimate study design and execution will also take into account the results of public interaction and scoping meetings to be scheduled as part of this process.

### II. Preliminary Phase Modules

#### ⇒Phase 1: Load Creation

- Elimination
  - Packaging/Container
  - Recovery (Repair, Restoration)
- Reuse
  - Home Compost

#### ⇒Phase 2: Load Collection

- Routing
- Trips
- Fuel

#### ⇒Phase 3: Load Diversion

- Post-Collection Restoration
- Post-Collection Reuse
- Recycle/Downcycle
- Fuel/Energy Recovery

#### ⇒Phase 4: Load Final Disposition

- Landfill
- Ashpiling

### III. Scenario Modules

#### Phase 1: Load Avoidance

The goal of options analysis for Phase 1 would be reduction or elimination of material actually identified or discarded as trash. This represents the primary “prevention” opportunity, vice collection

and post collection processes whereby the material is already residual (albeit potentially recoverable). The natural capital asset calculations would be based on tonnage estimates of “avoided material processed” due to each option multiplied by the average air, land, and water use rate for tons handled in the baseline scenario.

Options evaluated would include:

- A. Baseline (Current Levels)
- B. Packaging/Container reductions (e.g. water container collection, packaging laws)
- C. Restore/Repair (e.g., laws, regulations, high school vocational training, small business loans, repair “truck”)
- D. Reuse (e.g. DC Jumble or DC Flea, Salvation Army, home composting)

### **Phase 2: Load Collection**

The goal of options analysis for Phase 2 would be reduced use of air, land, water, and funds per ton collected and transported to separation or diversion points. The natural capital asset calculations would be based on reduced use rates from optimized process elements, equipment investments, or economies of scale from realigned flows.

Options evaluated would include:

- A. Route optimization
- B. Truck design
- C. Merged flow (by type of material and/or source; interactive with diversion scenarios)

### **Phase 3: Load Diversion**

The goal of options analysis for Phase 3 would be reduced use of air, land, water, and funds per collected ton managed. The natural capital asset calculations would be based on reduced use rates in handling, transport, and other processes used to recover, reuse or recycle collected material, including natural capital assets consumed outside the District of Columbia.

Options evaluated would include:

- A. Post-Collection Restoration/Reuse (e.g., on-site vocational repair, DC Jumble/Flea)
- B. Increased Recycle/Downcycle (e.g., electronics, organics and composting)
- C. Fuel/Energy development (pellets for existing technology; advanced conversion technologies for liquid fuel/electricity usable in DC systems)

### **Phase 4: Load Final Disposition**

The goal of options analysis for Phase 4 would be reduced use of air, land, water, and funds per collected ton managed. The natural capital asset calculations would be based on reduced use rates in handling, transport, and other processes used to generate conventional energy or bury residual material, including natural capital assets consumed outside the District of Columbia.

Options evaluated would include:

- A. Reduced or eliminated land filling
- B. Optimized process selection for currently availed energy processes

#### IV. General Guidelines

- Interactivity of modules will be identified and treated as sensitivity analysis. For example, if diversion to fuel use is evaluated, economies of scale available in the event of flow increases from public/private merger will also be identified.
- All reductions in natural capital asset use will be evaluated for treatment as bankable or tradable credits of various kinds.
- Unused but available natural capital assets in the purview of the DC Government, in the District itself, or in jurisdictions affected by the current process baseline will be evaluated for optimized use.

#### **SUMMARY**

The recommended Phase/Module approach is an organizing principle that enables multiple scenario options in a more efficient process using NCAM analysis.