

New York City's Water Challenge to Restaurants

In Partnership with







The City of New York Mayor Bill de Blasio









Program Welcome

Vlada Kenniff

Managing Director of Planning,
Projections & Demand Management at
NYC DEP

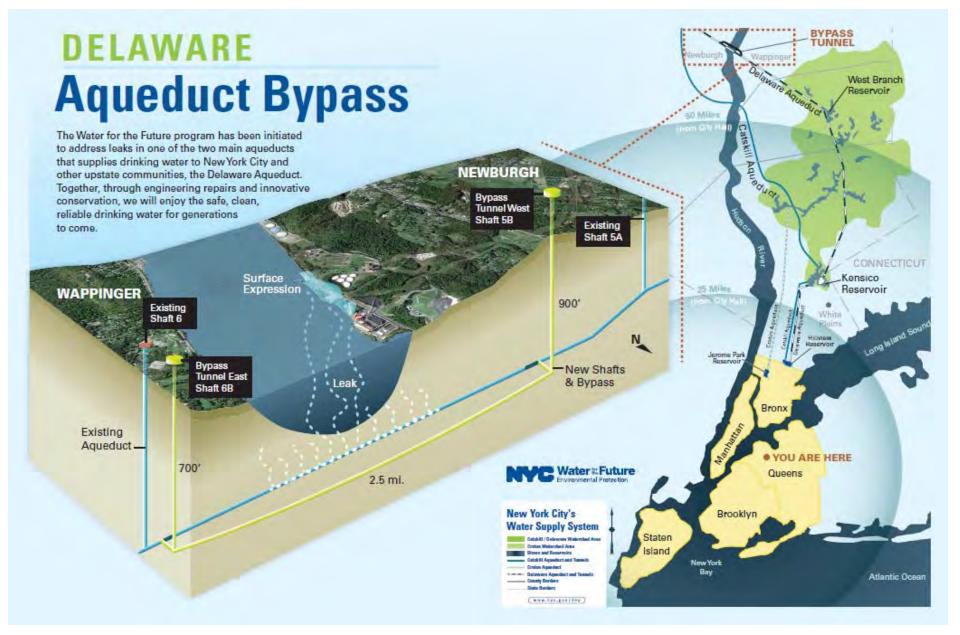


Overview of Water for the Future Program

- The Water for the Future (WFF) Program has been initiated to address leaks in the Delaware Aqueduct, one of the two main aqueducts that supplies drinking water to NYC and other upstate communities
- Critical system component that typically conveys more than half of total daily supply
- Tunnel Dimensions
 - 45 miles long
 - 13.5 feet diameter
 - 300 to 2,400 feet below ground

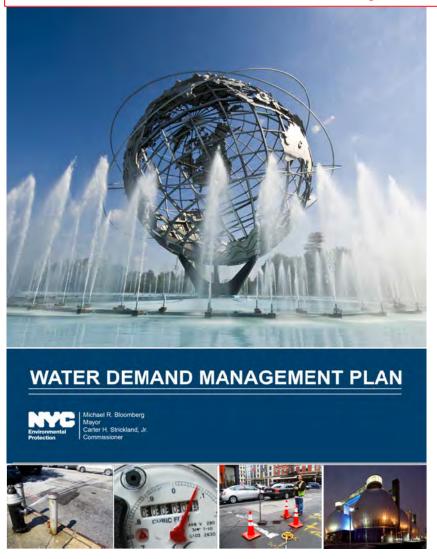


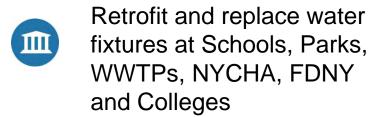




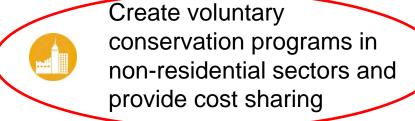


The Water Demand Management Program is Targeting a 5% overall reduction in water consumption citywide by the year 2020.





Replace 800,000 fixtures in residential buildings



- Continue leak detection, pressure management, and metering
- Adopt Water Shortage Rules, and emergency rates



Water Demand Management & Conservation Timeline

- Retrofits of city-owned properties—saving up to nine million gallons per day
- Collaborations with private sector organizations like businesses, hospitals, universities, and theatres – and new initiatives such as the Mayor's Water Challenge, a partnership with the Hotel Association of NYC
- Water supply system repairs and upgrades, managing water pressure, and refining water meter accuracy and leak detection
- Reviewing and revising plans to prepare for drought and planned shortages



Program Welcome – Water Challenge Program

Program Vision:

To help Non-Residential water users achieve and sustain long-term water savings.

Past Success:

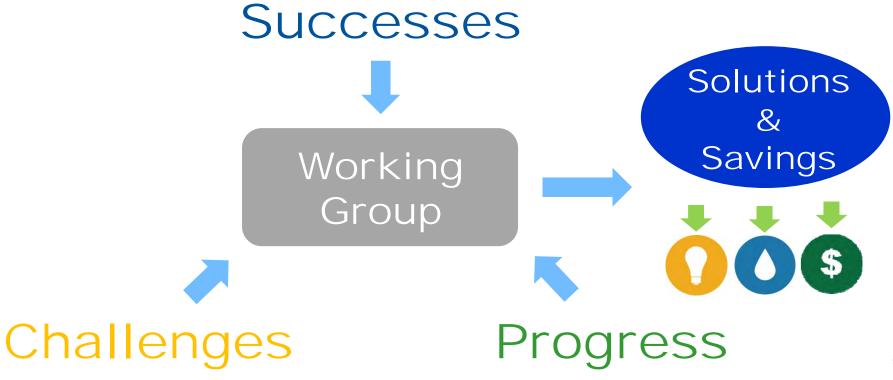
- New York City Water Challenge to Hotels
 - 12 hotels participated between 2013-2014
 - Overall reduction of 0.3 MGD achieved by end of Challenge
 - 4 of the 10 hotels reduced water usage by greater than 10%



Program Welcome – Goals of Workshop 01



- 1. Make a commitment to the program
 - Goals
 - Schedule
- 2. Assessing Facility Water Usage





Making a Commitment

Kara Pho

Project Manager at NYC DEP



The approach of the New York City Water Challenge to Restaurants will loosely follow the seven step Water Management framework that the US EPA endorses on their WaterSense® website:

- Step 1: Making a Commitment
- Step 2: Assessing Facility Water Use
- Step 3: Setting and Communicating Goals
- Step 4: Creating a Water Conservation Plan
- Step 5: Implementing the Water Conservation Plan
- Step 6: Evaluating Progress
- Step 7: Recognizing Achievement

The goal of the New York City Water Challenge Program is to help Non-Residential water users achieve and sustain long-term water savings.



Structure

The New York City Water Challenge to Restaurants will be focus on four main deliverables to Challenge participants:

- Guidance on Developing and Maintaining a Water Conservation Plan.
- Workshops with Conservation Experts
 - Four in total
- Monthly Reports on Water Usage
 - For those participants with AMR devices
 - Compare usage to previous years
- Press Releases
 - Kick-off Press Event
 - Recognition Ceremony Press Event







Measuring Success

There are two types of participants in the NYC Water Challenge to Restaurants:

- Restaurants with AMR Devices and one year of water usage data
 - Reduce their water usage by 5% when compared to the previous years
- Restaurants without an AMR Device or one year of water usage data
 - Performance against Water Conservation Plan
 - Hard measurements made during Water Use Assessment



Schedule

- Key Program Dates:
 - November 12, 2014 Workshop 01
 - Restaurants to work towards completing an audit
 - December 1, 2014 Begin tracking water usage for those with AMR
 - February 11, 2015 Workshop 02
 - NYC DEP to assist with development of Conservation Plans
 - April 16, 2015 Workshop 03
 - October 23, 2015 Workshop 04
 - November 30, 2015 Last day of water usage tracking
- Press Release Targets
 - Kick-off Press Event- November 2014 to December 2014
 - Recognition Ceremony December 2015 to January 2016



Assessing Facility Water Usage

Kara Pho

Project Manager at NYC DEP

NYC DEP Automatic Meter Reading Program



- New AMR technology sends accurate readings to a computerized billing system up to four times a day
 - Eliminates the need for estimated bills
 - o Eliminates the need for meter readers to visit customer properties
- DEP contractors providing door-to-door free installations must carry and show photo ID cards and badges, and are in uniform.



The Benefits of My DEP Account



My DEP Account and Online Bill Pay

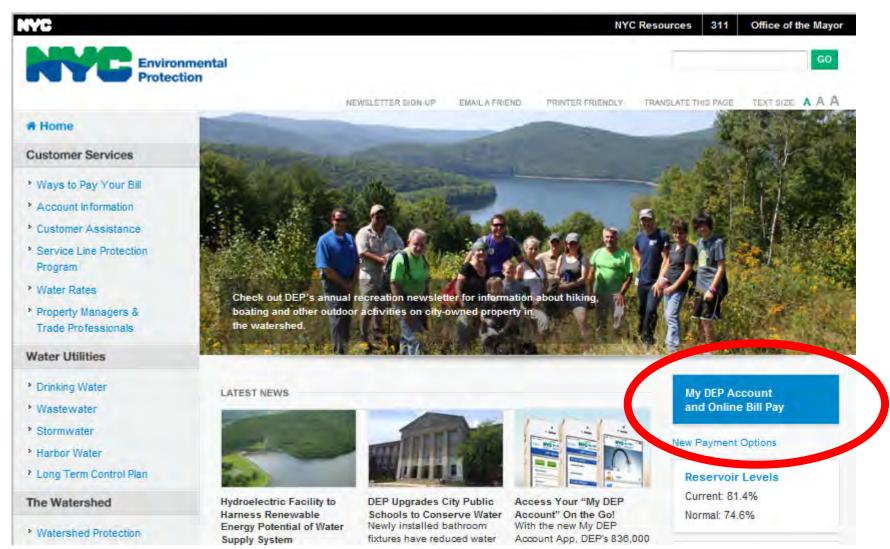
Did you know that My DEP Account allows you to:

- Save money by monitoring and managing your daily water use
- Quickly detect costly leaks
- View and pay your bill online
- Go green and sign up for paperless billing
- Track the status of a billing dispute
- View your payment history

Logging on to My DEP Account



www.nyc.gov/dep

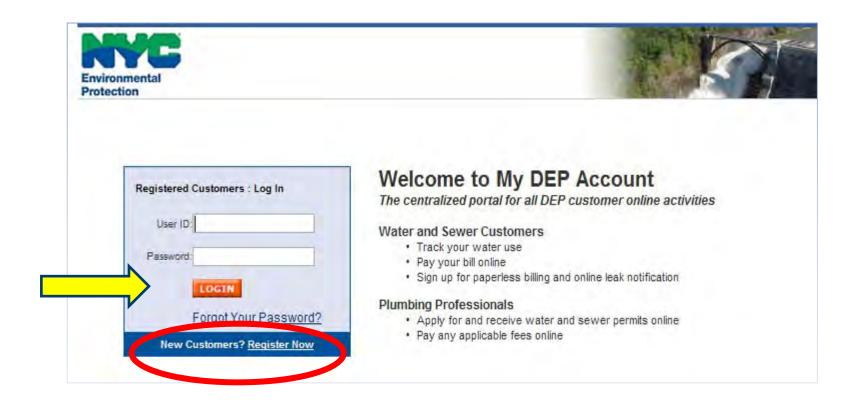


How to Create your My DEP Account



Log in to your My DEP Account by entering your User ID and Password

New to **My DEP Account**? Just click the "Register Now" link and follow the instructions



Manage your My DEP Account



Manage your **My DEP Account** by clicking on one of the tools located at the top of your screen



Enroll for Services



- Two services offered through My DEP
 - o Paperless Billing
 - Leak Notification





Leak Notification Options



Edit your Leak Notification Settings

Leak Notification Email Alerts

DEP's leak notification program is a unique customer service tool that allows you to sign up online to receive email alerts when your water use increases significantly over a period of several days. This will enable you to quickly respond to potential water leaks and fix them before they become a billing problem.

Enrolled customers will receive an email from DEP when their property uses water at a rate significantly higher than their normal consumption pattern. DEP will send a follow up email if the potential leak continues. Please note that receiving an email alert does not guarantee the presence of a leak. There could be other reasons for the sudden increase in water use such as lawn watering or the presence of house quests.

To learn more about saving water and preventing leaks, please click here

Edit your Leak Notifications Settings

Tax Class 1: Customers can enroll or unenroll an individual account by checking or unchecking the box in the "Enrolled" (1-3 Family) column below. Please note that the leak parameters for these accounts cannot be adjusted.

Tax Class 2: Customers can enroll or unenroll an individual account by checking or unchecking the box in the "Enrolled" column below. Customers can adjust their default leak parameters by editing the values in each column and clicking the "Update" button at the bottom of their screen.

Tax Class 3 and 4: These properties are not eligible for leak notification alerts.

| □ Enroll | Account | Percentage Increase over Average Consumption* | Leak Duration (Days)** | ^ |
|----------|---------------|--------------------------------------------------|---------------------------|---|
| V | 107133001 | 200 % | 5 | Ξ |
| | 111892001 | 200 % | 5 | |
| V | 1000209189001 | 100 % | 5 | |
| | 1000630988001 | 100 % | 5 | |
| | 2000142443001 | 200 % | 5 | + |

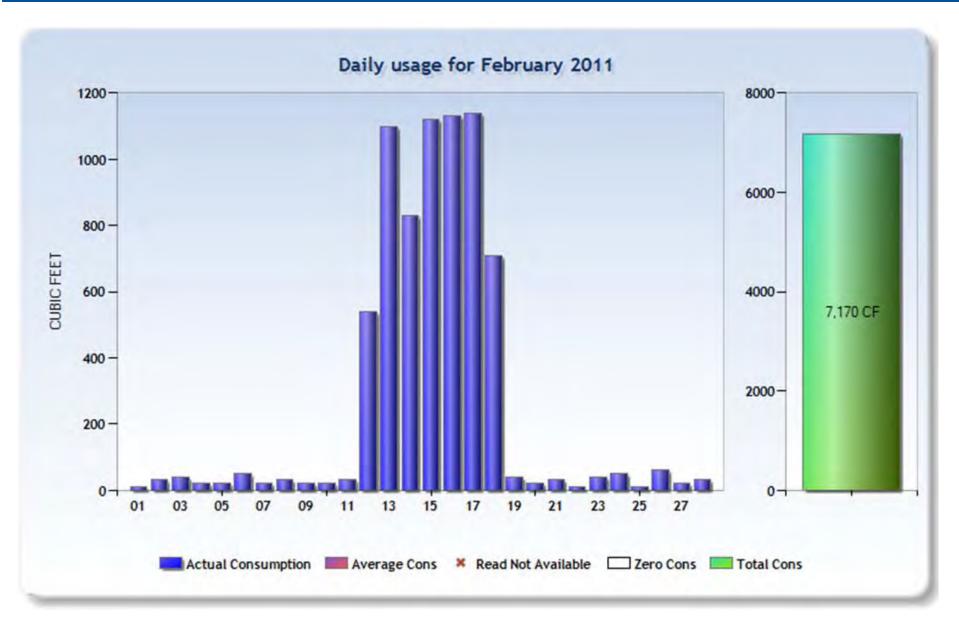


Percentage Increase Over Average Consumption*

Example: 200% means that DEP will send a leak notification after your consumption has tripled for the established leak duration.

Detect Costly Leaks





Leaks and Their Costs



My DEP Account can help you catch and fix expensive leaks. Read below to find out how much you can save:

| In 24 Hours A Leak Will Waste (in | Cost Per Day | Cost Per Year | | | | | |
|--------------------------------------|-----------------|------------------|-------------|--|--|--|--|
| FAUCETS | | | | | | | |
| Slow Drip | 36 | \$0.42 | \$154.24 | | | | |
| Steady Drip | 180 | \$2.11 | \$771.18 | | | | |
| One Quarter Open | 684 | \$8.03 | \$2,930.50 | | | | |
| One Half Open | 1620 | \$19.02 | \$6,940.66 | | | | |
| Full Open | 3600 | \$42.26 | \$15,423.69 | | | | |
| Toilets | | | | | | | |
| Seeping | 30 | \$0.35 | \$128.53 | | | | |
| Leaking | 250 | \$2.93 | \$1,071.09 | | | | |
| Constantly Running | 6000 | \$70.43 | \$25,706.15 | | | | |

Current Water and Sewer Rates

Cost per 100 cubic feet (748 gallons):

Water and Sewer: \$9.58

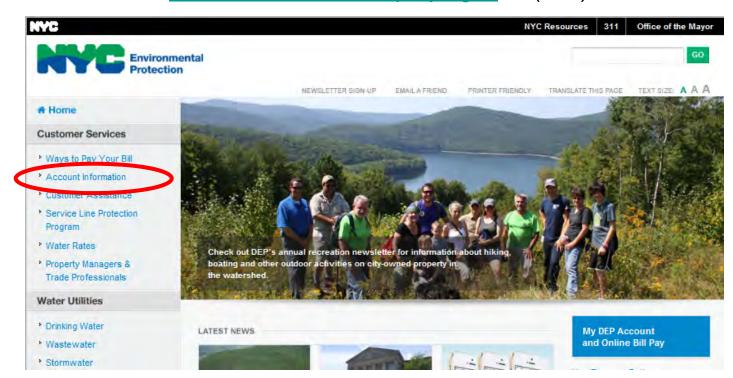
Cost per gallon:

Water and Sewer: \$.012

Questions on how to use My DEP?



- To learn more, visit nyc.gov/dep and click the "Account Information" link for:
 - How to get started video tutorials
 - How you are billed
 - o And more!
- Still have questions?
 - o Please contact: customerservice@dep.nyc.gov or (718)595-7000







Alan Someck

Director of Green Hospitality Initiative at NYSRA



• What is a water assessment?

What do we cover?



Water Measurement





Leaks





Equipment









Assessment Survey



Free Water Conservation Survey For: Bond Street Chocolate

Restaurant Address: City, State, Zip:

63 East 4th Street New York, NY 10003

Lynda Stern Contact Name: Contact Phone/Email:

(212) 677-5103

Thank you for your interest greening your restaurant operations! Below is a customized summary of your water conservation report. Below you will find a detailed breakdown of how these savings can be achieved.

For questions, please contact Steve Hruby. Cell: 440.308.5202 or Email: shruby2@gmail.com

| Statistical Overview | | | | |
|----------------------|------|----------|--|--|
| Sayings | Cost | Pay Back | | |
| \$436 | \$88 | 0.19 | | |

| Fixture Location | | Proposed Fixture | Water Savings in Gallons/Year* | Total Savings in \$/Year** | | Cost of Total | Payback in Years (Total |
|-----------------------|------|---------------------|-----------------------------------|-------------------------------|--------|-----------------|----------------------------|
| | | GPM | | Water | Energy | Installation*** | Installation) |
| Faucets | - | | | | | | |
| Dish Wash | 2,5 | 1.5 | 10,950 | 112 | 6 | 0 | 0.00 |
| Hand Wash (Kitchen) | 1.75 | 0.5 | 13,688 | 140 | 8 | 0 | 0.00 |
| Hand Wash (Restroom) | 1.75 | 0.5 | 6,844 | 70 | 4 | 0 | 0,00 |
| Pre-Rinse Spray Valve | | | | | | | |
| Kitchen Spray Valve | 1.5 | 0.65 | 9,308 | 95 | 11 | 88 | 0,83 |
| Toilets | | | | | | | |
| Restroom | 2.5 | 1.5 | 1,825 | 19 | 0 | 0 | 0.00 |
| | | | 42,615 | 436 | 29 | 88 | |

[&]quot;Water savings estimates based on faucets and pre-rinse spray valve flowing for 30 minutes per day.

Disclaimer: The contents of this report are for guidance and information only. The Green Hospitality Initiative does not make any guarantee of the accuracy of this report. All figures are based on estimations of water usage which changes from month to month. Furthermore, the Green Hospitality Initiative does not assume any liability of damages that may result from the use of this information. All mentions of individual companies by the Green Hospitality Initiative do not constitute an endorsement.

^{**} Money savings estimates based on \$2.94 per 100 Cubic Feet of water saved, sewer cost of \$4.69 per 100 Cubic Feet of water saved, and \$0.50 per the motivater saved.

^{***} Installation cost figures are based on American Standard average prices per new fixture and an additional 10% for installation. Aerators are based on market price and self



Auditing Alternatives:

Self-Assessment Tool

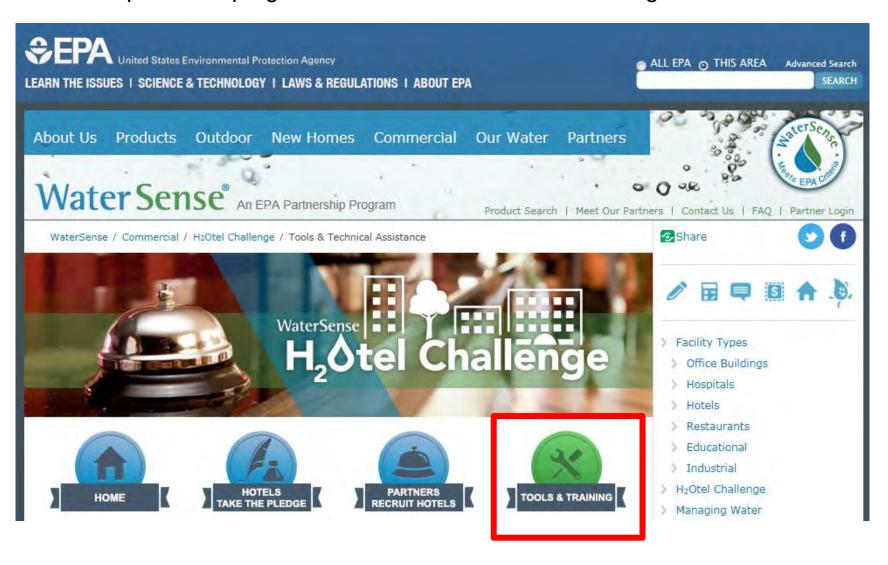
Kara Pho

Project Manager at NYC DEP

EPA WaterSense® Water USE™ Tool



http://www.epa.gov/watersense/commercial/challenge_tools.html



EPA WaterSense® Water USETM Tool



WaterUSE Tool:

Hotel operators and facility managers can use WaterSense's Water Use and Savings Evaluation Tool (WaterUSE Tool) and associated Water Assessment Worksheets to identify and prioritize cost-effective water efficiency projects and best management practices to reduce water and energy use and save money. The WaterUSE Tool provides recommended best management practices specific to each hotel's facility-specific inputs and calculates potential water and cost savings for water-savings projects. Prior to using the WaterUSE Tool, users should print and use the worksheets to guide them through a water assessment (e.g., tour or walk-through) of their hotel. The worksheets will help capture information about water-using fixtures and equipment needed to populate the WaterUSE Tool and provide instructions and guidance about the fields in the tool. Download and use the WaterUSE Tool and Water Assessment Worksheets, and view our recorded webinar which demonstrates the tool for new users:

- WaterSense's WaterUSE Tool Version 1.0 (1 pg, 969K)
- WaterUSE Tool Water Assessment Worksheets (35 pg, 447.68K, About PDF)
- View "Demonstrating WaterSense's WaterUSE Tool" webinar

WaterUSETM Tool

- MS Excel Workbook navigate to the WaterUSE Tool tabs relevant to your facility.
- After entering all applicable information, click the "Show Me Results" button at the bottom of each tab.
- Based on inputs, the tool with identify potential projects, best management practices and savings potential for that specific water use area.
- EPA also provides a guide (WaterUSE Tool Water Assessment Worksheets) and even a video demonstrating how to use the tool.





Auditing Alternatives: Grant Supported Assessments

Alan Someck

Director of Green Hospitality Initiative at NYSRA



Auditing Alternatives: Assessments by Water Utility Managers

Hershel Weiss

Chief Engineer Water Conservation Specialist at Ashokan

ASHOKAN'S 5 STEPS



- Survey and Report
- 2. Sub-metering
- 3. Monitoring
- 4. Conservation Implementation
- 5. Verify Savings

SURVEY AND REPORT



- 1. Survey site
- 2. Tabulate fixtures
- 3. Review operations
- 4. Detect leaks
- 5. Analyze water bills to determine consumption patterns
- 6. Allocate consumption to fixtures
- 7. Propose equipment repairs or replacement
- 8. Determine ROI



CONSERVATION OPPORTUNITIES





Leak Detection

Refrigeration Optimization

Ice Maker Replacement

Monitor operations,

- Food Preparation
- Sanitary

Ultra Low Flow Fixture Replacement

Water Filter (R/O & Backwash)



GREEN CODES TASK FORCE - PLUMBING UPDATE

| Int. No. | Amendment To | Summary | Status |
|----------|-------------------------------------------------|-----------------------------------------------------------------------------------------|---------|
| 263-A | (NYC Plumbing Code) Sections PC 202 & PC 428 | Reduce Domestic Water Consumption by Prohibiting Once-Through Cooling | Enacted |
| 268-A | (NYC Plumbing Code) Sections PC 202 & 606 | Prevent water waste by overflow alarms & sub-metering | Enacted |
| 271-A | (NYC Plumbing Code) Sections PC 202 & PC 604 | Reduce Water Consumption by Requiring WaterSense Program Listed Plumbing Fixtures | Enacted |



SUB-METER ANALYTICS (Buildings with sub-meters)



Email Alarms:

- Leak detection
- High consumption
- Backflow



ADDITIONAL BENEFITS OF SUSTAINABLE WATER MANAGEMENT



Reduced operational cost

Enhanced Public Perception & Green Branding

Ethics, Responsibility... It's the right thing to do



Who we work with:

RESIDENTIAL

Akam Associates, Inc. **Amistad Management Beach Lane Management C&C Affordable Management Charles H. Greenthal Management** Citi Urban Management **Douglas Elliman Properties Goodman Management Gumley Haft RE Management Halstead Management JASA Housing Just Management Kaled Management Katz Realty L&M Development Partners LLC Marion Scott Metropolitan Realty Group Ogden Cap Properties LLC PRC Management Rochdale Village Samson Management SDG Management Corporation Shinda Management Stellar Management Stonehedge Management Tudor Realty Urban Home**

Weber Farhat Realty Management Inc.

COMMERCIAL

Cassidy Turley CB Richard Ellis CRG Management Cushman & Wakefield The Durst Organization Jones Lang LaSalle **Muss Development Moinian Group Newmark Knight Frank Related Management Rockefeller Group** SL Green **Tishman Speyer**



















EDUCATION

Columbia University New York University United Talmudic Academy

INDUSTRIAL

Greiner Maltz Schuman Properties

MEDICAL

Continuum Health Partners

RELIGIOUS INSTITUTIONS

Interchurch Center **Riverside Church Union Theological Seminary**

THEME PARKS

Deno's Wonder Wheel

AquaAudit

Auditing Alternatives: Assessments by Water Utility Managers

Michael Topper

Owner and President of AquaAudit

AquaAudit

SERVICES THAT BENEFIT THE RESTAURANT INDUSTRY

Services Include:

- DEP Water Bill Auditing
- Sub-Metering Installations
- ♦ Water Meter Reading & Billing
- ♦ Frontage vs. Metered Billing Analysis
- Final Readings for Real Estate Closings
- ♦ Restaurants & Water-Cooled Equipment
- Backflow Prevention Device testing, installation and repair

AquaAudit

MY RESTAURANT INDUSTRY EXPERIENCE













David Pospisil C&I Program Manager, Con Edison



Green Team Objectives

Con Edison's Energy Efficiency & Demand Management programs are designed to help our customers:

- Reduce replacement costs
- Identify energy efficiency opportunities
- Reduce operating costs
- Enhance infrastructure/value
- Reduce carbon footprint

Small Business Program Process

- Customer receives a FREE energy efficiency survey that identifies opportunities and FREE energy saving upgrades
- Customer reviews survey and approves upgrades
- Contractor installs energy efficiency upgrades
 - Con Edison pays 70% or up to 100% in specific areas of Brooklyn and Queens of the equipment and installation cost
 - No waiting for rebates

Small Business Direct Install Program

- Electric customers, average peak monthly demand less than 110 kW
- Receive free energy survey
- Free measures up to \$100
 - Compact fluorescent lamps (CFLs)
 - Fluorescent T12 to Fluorescent T8 or T5 bulbs
 - Light Emitting Diodes (LEDS)
 - Refrigeration Night Covers
 - Programmable Thermostats

Commercial & Industrial (C&I) Programs

- Rebates for Equipment Upgrades
 - Electric: High Efficiency Lighting, HVAC, Heat Pumps, De-lamping, Controls, Motors, and more
 - Gas: Furnaces, Boilers, Infrared Heaters, Rinse Valves, Controls, Process Heating, and more
- Performance-based Custom Incentives
 - Electric: \$0.16/kWh
 - Gas: \$1/therm or \$2/therm

Commercial & Industrial (C&I) Programs

- Energy efficiency studies can be co-funded
 - Electric or Gas only: 50% up to \$50,000
 - Electric and Gas: 50% up to \$67,000
- C&I Custom Incentives are enhanced by the new Demand Management Program (DMP)
 - C&I pays for kWh savings and DMP pays for kWh
 - DMP incentives available until June 1, 2016

DMP Key Projects & Incentives

| Project | Current C&I Incentives/kW | DMP Incentive/kW | Total Customer Benefit/kW |
|-----------------------|--------------------------------------------------------------------------|---------------------|------------------------------|
| Thermal Storage | \$600 | \$2,000 | \$2,600 |
| Battery Storage | \$600 | \$1,500 | \$2,100 |
| HVAC/Controls/Process | \$0.16/kWh | \$1,250 | \$0.16/kWh + \$1,250/kW |
| Lighting/LED | \$0.16/kWh | \$800 | \$0.16/kWh + \$800/kW |
| DR Enablement | \$200 | \$600 | \$800 |
| Non-Electric AC | Steam AC Program \$500-\$1,000 | | |
| CHP | Incentives have not changed from original program. See: NYSERDA PON 2568 | | |

| Load Reduction | Additional Bonus |
|---------------------|--------------------------------|
| Projects over 500kW | Additional 10% of kW incentive |
| Projects over 1MW | Additional 15% of kW incentive |

Bonus first installed, first paid



Know Your Circuits (KYC) Closing the Gaps

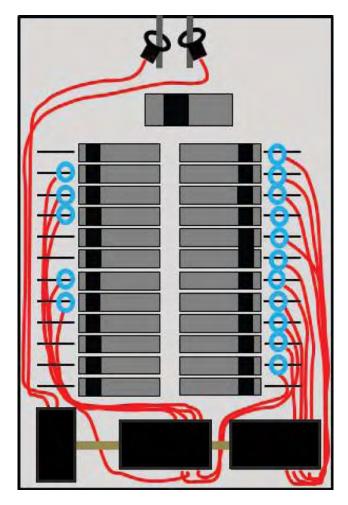
Small Commercial Customers

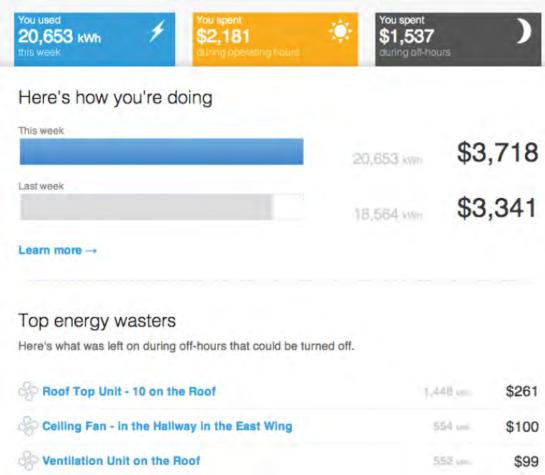
- Lack real time data and have limited information on consumption behavior
- Lack engineering support and continued system maintenance on staff

KYC pilot for small business owners

- Con Edison will pay for installation of circuit meters and collect data for one year
- Con Edison will provide upgrade recommendations to save energy
- Customers have the option to keep the circuit meters

KYC Pilot





Thank You!



877-870-6118 conEd.com/greenteam



Acknowledgements



| Thank You. For more information contact the NYC Water Challenge to Restaurants here. |
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