

2015 Key Findings

Total Water Use (gallons)	
Total Water Cost	
Total Unaccounted for Use (gallons)	
Unaccounted for Use as % of Total	24%
Cost of Unaccounted for Use	

Project Details

- ✓ Inventoried current water meter configuration for all properties
- ✓ Identified additional meter needs by property
- ✓ Reconfigured metering in new Portfolio Manager “Water Tab”
- ✓ Prepared a tracking tool for chiefs to log water meter readings
- ✓ Updated management standards and procedures
- ✓ Created the Shorenstein Water Analysis Tool
- ✓ Analyzed property and portfolio consumption
- ✓ Identified high opportunity properties



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Example Portfolio Manager Dashboard

Water Meters - Used to Compute Metrics (1) [Add A Meter](#)

[Change Meter Selections](#)

[View as a Diagram](#)

Name Meter ID	Water Meter Type	Most Recent Bill Date	In Use? (Inactive Date)
Whole Building Water Use 5980360	Potable Indoor	02/18/2016	Yes

[Download Annual Totals by Meter](#)

Additional Water Meters - Not Used in Metrics (6)

[Change Meter Selections](#)



Name Meter ID	Water Meter Type	Most Recent Bill Date	In Use? (Inactive Date)
Cooling Tower Make-Up Process 19622106	Potable Indoor		Yes
Fining 19670707	Potable Indoor		Yes
Hot Water Loop Process 19670704	Potable Indoor		Yes
Irrigation 19622107	Potable Outdoor		Yes
Other Fountain 19670706	Potable Indoor		Yes
Retail 19670705	Potable Indoor		Yes

Water Analysis Tool



Shorenstein Realty Services, L.P.			
<p>Directions:</p> <p>1) On your property's summary tab in ENERGY STAR Portfolio Manager, click "Download Property to Excel" in the bottom right corner of the page. Save this workbook to your computer.</p> <p>2) Right click the "Water Analysis Tool" tab in this workbook -> Move or Copy</p> <p>3) Choose your property's workbook -> Click OK</p> <p>4) File -> Edit Links -> Change Source -> Choose your property's workbook</p> <p>5) Input yellow cells</p>			
Enter Start Date here:		1/1/15	
Enter End Date here:		1/1/16	
Enter Number of Occupants here:		1500	
Enter Landscape Area (Sq. Ft.) here (optional):		500	
Property Name		Example	
Property Address			
Gross Floor Area		500,000	Sq. Ft.
Meter Type	Included in Property	Consumption	Units
Whole Building	Yes	11,035	ccf (hundred cubic feet)
Domestic (whole building - submeters)	No	5,273	ccf (hundred cubic feet)
Process	No	4,952	ccf (hundred cubic feet)
Irrigation	No	133	ccf (hundred cubic feet)
Retail	No	500	ccf (hundred cubic feet)
Fire	No	-	
Other	No	177	ccf (hundred cubic feet)
Total Water Cost (over specified time period)		\$44,490.08	
Cost/Gallon		\$0.01	
Total Water Intensity		16.51	Gallon/Sq. Ft./Year
Domestic Water Intensity		7.89	Gallon/Sq. Ft./Year
Use per Occupant		15.1	Gallon/Occupant/Day
Domestic Use per Occupant		7.2	Gallon/Occupant/Day
Irrigation Intensity		199.0	Gallon/Sq. Ft./Year
Irrigation Cost (over specified time period)		\$536.22	

Utility Management Program Update



Utility Management Program

Water

Step One: Water Use Analysis

A water use analysis involves the use of the Shorenstein Water Analysis Tool. The tool will be used during data collection for the quarterly Environmental Performance Report and will assess how a facility's water use compares to the industry standard.

Frequency: Quarterly

Responsible Party: Chief Engineer

Step Two: Water Walk-through Survey

A walk-through survey involves the analysis of water bills, a brief visual survey of the facility, and a review of preventative maintenance records, test records and building operations. The goals of the assessment are:

- Update the building's *Water Efficiency Survey*
- Identify and recommend no-cost and low-cost opportunities
- Identify capital-intensive measures for consideration as part of the annual capital planning process.

Frequency: Annual

Responsible Party: Chief Engineer

ENERGY STAR Policy Update

(3) Water Data – Monthly water use for each of the following water end uses must be separately metered and each meter separately recorded in ENERGY STAR Portfolio Manager, including main supply meters that count toward the whole-building total use and submeters that do not count toward total use. Each meter must be labeled with its respective end use category. Water cost must be recorded for main building utility meters that contribute to whole-building water use (submeters only need water use, not water cost). Water cost must be recorded as the total billed amount including water charges, sewer charges, stormwater charges, taxes, surcharges, etc. (i.e., the total amount that is payable to the utility company).

- (a)** Whole Building Water Use
- (b)** Domestic: restrooms, kitchens, breakrooms, janitorial closets, etc (Domestic use can be calculated by subtracting all submeters from Whole Building Water Use)
- (c)** Process: cooling tower make-up, chilled water loop make-up, heating water loop make-up
- (d)** Irrigation: all outdoor water use for landscaping, hardscape washing, and/or water features
- (e)** Retail: all retail tenant uses
- (f)** Fire: all dedicated fire service meters
- (g)** Other

What's Next for Water at Shorenstein?

- Presenting new tracking program and analysis tool to chief engineers
- Installing additional submeters at each property
- Update ENERGY STAR Portfolio Manager meter readings monthly
- Analyze property consumption using Shorenstein Water Analysis Tool
- Implement water efficiency projects
- Hiring summer fellow to continue project



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Thank You

