



# STORIES OF PROGRESS IN ACHIEVING HEALTHY WATERS

## EPA Region 3 Water Protection Division

### Protecting the Planet and Pocketbook

Wilmington, Delaware · April 28, 2016

Two EPA-funded projects at a Wilmington, Delaware water filtration plant are reducing the equivalent of 71 cars worth of greenhouse gases, generating nearly 500,000 kWh in annual energy savings and cutting costs by \$876,000 a year.

The projects were funded through the Delaware Department of Health and Social Services with nearly \$9 million in low-interest loans from EPA's Drinking Water State Revolving Fund, half of which did not require repayment.

The improvements at the Porter Street Water Filtration Plant include the installation of rows of solar panels and the placement of a new pump station to reduce costs associated with drawing raw water for processing.

The solar panels, or photovoltaic arrays, provide power through the plant's electrical distribution network. The green energy cuts greenhouse gases by almost 400 metric tons each year and generates an average of \$116,368 in annual savings through reduced electric costs and the sale of solar credits.

The new "low head" pump station allows the plant to draw a full complement of water – not just the top 4 million gallons – from its onsite 36 million gallon raw water reservoir. When it could only skim the top layer, the plant was forced to continually pump water to the reservoir from the Brandywine River during the day – when electric rates are the highest – to keep up with drinking water demand.

The projects demonstrate how a community can make a difference with both offsetting its greenhouse gas emissions and reducing ratepayer costs. In a March 2016 analysis of the two projects, the Kash Srinivasan Group reported that, "the results to date have met the operational and financial performance expectations."



#### AT A GLANCE

- *Projects fighting climate change and saving money at a Wilmington water filtration plant.*



Solar panels at plant. Photo credit: Honeywell.

|                          | <b>Solar Panels</b> | <b>Low Head PS</b> | <b>Combined</b> |
|--------------------------|---------------------|--------------------|-----------------|
| Cost                     | \$5,910,000         | \$2,990,000        | \$8,900,000     |
| KWh Saved/Year           | 575,900             | (84,686)           | 491,214         |
| GHG Reduced, Metric Tons | 397                 | (58.4)             | 338.6           |
| Annual Savings           | \$116,368           | \$759,853          | \$876,221       |

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