2007 – Forest Park Water Treatment Plant is expanded to 40 MGD capacity. Treatment process is completely upgraded from standard sand filters to new membrane technology to meet more stringent water quality regulations. Security is enhanced.
Forest Park Water (FPW) Treatment Plant is an advanced drinking water treatment facility that treats water taken from the North Branch Neshaminy Creek and supplies approximately 85% of the water delivered to Authority customers. Depicted below is the treatment process the water undergoes before entering the Authority’s distribution system.

**Raw Water Intakes**
Raw water is pumped when needed from the Delaware River through the Point Pleasant Pump Station, and is discharged into the North Branch of the Neshaminy Creek (NBNC). The intake system, comprised of an inflatable rubber dam, a bar rack intake, and traveling screens, conveys debris-free water to the Raw Water Sump Pumps. The pumps then transfer the water to the treatment plant and maintain flows through all stages prior to filtration.

**Pre-treatment**
Pre-treatment is used to describe treatment that occurs prior to filtration, including Pre-Ozone, Coagulation, Flocculation and Sedimentation Basins. Water exiting the Sedimentation Basin is called clarified water.

**Membrane Filtration**
The clarified water flows to an advanced microfiltration stage where microscopic particulates are filtered out by submerged membranes. Membranes provide a more effective barrier against the passage of potentially harmful substances. The membranes, consisting of about 45 million hollow tube fibers, trap particulates before water flows to the next stage.

**Ozonation**
Ozone is dosed to the filtered water to achieve powerful disinfection. Residual ozone is then quenched by a reducing agent.

**Granular Activated Carbon**
The ozonated water gets pumped to Granular Activated Carbon (GAC) contactors where a variety of organic and chemical compounds are removed. The water is dosed with chlorine to ensure a residual concentration remains throughout the entire distribution system.

**Finished Water**
Finished water is collected in the 2-million gallon Clearwell reservoir. Massive pumps deliver water to the Authority’s distribution system where a network of pipes, pump stations, and storage tanks deliver high quality water to the customers, while also providing fire protection for the surrounding communities. Dual transmission mains and a generator at the treatment plant, along with generators at the well houses and booster stations, provide further assurance to customers of a constant water supply.

www.npwa.org/fpwttreatmentplant
2012 – Massive Hurricane Sandy shuts down power from redundant electric grid sources for the first time in Forest Park’s 18-year history of operations. Fortunately, the on-site full-capacity diesel engine generator powers the plant around the clock for 4 full days. No interruption in customer water service to 150,000 people throughout the extended power failure.
2007 AWOP Award

is hereby awarded to

Forest Park Water

for outstanding efforts toward optimizing filter plant performance
BUCKS COUNTY WATER & SEWER AUTHORITY
Bucks County Water & Sewer Authority (BCWSA)

- BCWSA had been buying most of their water from City of Philadelphia
- BCWSA wanted greater reliability of water service, better water quality, and long-term rate stability for its 16,000 customers
- BCWSA asked NPWA and NWWA to buy large volumes of water from our Forest Park Water (FPW) Treatment Plant
- Agreement signed in Dec., 2010
Bucks County Water & Sewer Authority (BCWSA)

- A new transmission pipeline about 17 miles long was constructed from FPW in Chalfont to their service area in Feasterville in lower Bucks County (about a 2-year project). Completed July 1, 2014.
Bucks County Water & Sewer Authority (BCWSA)

- Now that pipeline is completed, BCWSA is temporarily leasing 10 million gal. per day (mgd) of currently unused capacity from Forest Park, instead of buying water from Philadelphia.
- In the future, Forest Park can be expanded again, if necessary, for BCWSA’s permanent use.
- When plant expansion is completed, NPWA and NWWA will take back our leased capacity of 10 mgd for our own future use.
- This becomes a new large revenue source for NPWA and NWWA, fully utilizing the capability of the Forest Park plant.
- Expenses can now be split among 3 Authorities instead of 2, making it a “win-win-win” deal for all parties.
Fulfilling the Original Mission of Forest Park and Point Pleasant Pumping Station as a regional water supply source meeting new needs as they arise through amicable partnerships
Today – 30 years later after the fight for the Pump

- Water Demands are met (average day, peak day, fire emergencies)
Total Number of Customers
North Penn Water Authority

Total 367% growth in 50 years = 7.3% growth per year
Average Daily Water Demand - (MGD)
North Penn Water Authority

Total 403% growth in 50 years = 8.1% growth per year
Today over 200,000 people receive water from the project with an average daily usage of 30 MGD
Today – 30 years later after the fight for the Pump

- Water Demands are met
- Community quality of life – homes, schools, and businesses
- Environmental Impact to Delaware River and the North Branch Neshaminy Creek
- Limerick Nuclear Power Plant
Regional Collaboration