

Aqua Pennsylvania: Environmental Impact

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Aqua takes seriously our mission of protecting and providing Earth's most essential resource. Building on the first two blogs of this series, which addressed the growth of the drinking water industry over the past 100 years and the incredible responsibility that comes with providing drinking water, we now want to focus on the importance of our environmental sustainability practices, which enable us to ensure that our finite natural resources are carefully protected for generations to come.

Our commitment to environmental stewardship has been engrained in Aqua since our company was founded 134 years ago, with one of the most significant elements of our sustainability program focused on rebuilding our company's infrastructure, which will enhance customer service and protect the environment. Our sustainability initiatives include developing and participating in environmental partnerships with other community leaders and universities, reducing the environmental footprint of our operations, and expanding our use of renewable energy throughout our company.

Aqua's environmental experts and many community partners collaborate on environmental initiatives that include preserving and protecting sensitive lands; reforesting critical areas; and stewarding natural habitats. These activities go hand-in-hand with protecting our water supplies.

For more than a decade, Aqua Pennsylvania has been a part of the Schuylkill Action Network, a collaboration of more than 150 partner organizations working to implement clean water projects and promote stewardship in the 2000-square-mile Schuylkill River Watershed. Each year, Aqua Pennsylvania and its partners work to improve agricultural lands, install stormwater best management practices, preserve priority lands, host stream cleanups, treat abandoned coal mine discharges, and educate citizens on how they can reduce their impact. Aqua has also contributed crucial funding for these efforts through the Schuylkill River Restoration Fund grant program. We take pride in our source water protection efforts and look forward to continuing our work with the Schuylkill Action Network and others to achieve our common goals of clean water, healthy habitats, and strong communities.

We have also partnered with the Pennsylvania Horticultural Society, the Pennsylvania Department of Environmental Protection and local conservation districts in our watershed, including a restoration grant program called TreeVitalize Watersheds in southeastern Pennsylvania. Aqua has allocated more than \$1.5 million to this initiative, which seeks to reforest stream corridors and other areas in which trees will help improve water quality. Since its inception in 2005, program volunteers, including Aqua Pennsylvania employees, have planted 170,000 trees and shrubs planted to restore upwards of 1,000 acres with native species.

An integral part of our sustainability program is minimizing our company's greenhouse gas emissions. Aqua Pennsylvania is a leader in researching innovative technologies and implementing processes that contribute to efficient water and wastewater treatment.

One example of these efforts is the adjustments we've made to our water treatment process which had an added benefit of reducing our company's landfilled waste and carbon footprint. Aqua uses chlorine for water treatment, as it is globally the most widely used disinfectant in both a gas and liquid form. Aqua continues to evolve its use of chlorine following our move years ago from chlorine gas at wells and tanks to creating on-site liquid chlorine from electricity applied to a brine solution. This evolution reduced hazards from handling chlorine gas. Today, we continue to use on-site creation of liquid chlorine derived from salt but have changed from salt crystals to salt brine delivered by trucks. This move eliminated over 4,200 bags and their associated pallets annually as waste avoided and decreased our indirect carbon footprint.

Another example of enhancements in our processes is at our wastewater treatment plant in Media, Pennsylvania where ultraviolet light was implemented for the final wastewater disinfection process, instead of chemical treatment. While it resulted in the plant using 10 percent more energy, it eliminated the need for nearly 24,000 gallons of chemicals annually, as well as the energy required to manufacture the chemicals and fuel to deliver the product. Overall, we are using 50 percent less carbon versus historical use by avoiding these chemicals in our treatment processes.

We're also actively engaged in the use of alternative energy that serves our operations, including solar farms, wind farms and natural gas. Aqua Pennsylvania owns and operates two solar fields covering more than eight acres at both our Ingram's Mill and Pickering water treatment plants. The Ingram's solar field is a 1-megawatt (MW) facility and began operation in early 2010, and the Pickering solar field is a 1.7 MW facility and started operation in early 2012. In 2019, the solar fields generated nearly 3.3 million kilowatt-hours of renewable energy, which is enough energy to power 300 homes for a year. We're also currently offsetting our grid electric purchases with 10 percent wind energy through Green-e Renewable Energy Certificates. In 2022, Aqua will offset 99 percent of its contracted retail power supplier with wind energy.

We also transitioned a portion of our vehicle fleet to be exclusively powered by compressed natural gas (CNG), a clean-burning fuel that reduces carbon emissions. In 2019, these vehicles traveled nearly 333,000 miles, eliminating the equivalent of more than 41,000 gallons of diesel fuel over the same time period.

In 2022, our company will offset 100 percent of its contracted retail power supplier with wind energy. With the future offset of 100 percent renewable energy, it is the equivalent of displacing over 57 million pounds of burning dirty coal.

To learn more about our company's environmental efforts, please read the [Essential Sustainability Report 2019](#).

Aqua Pennsylvania serves approximately 1.4 million people in 32 counties throughout the Commonwealth of Pennsylvania. Visit AquaAmerica.com for more information, or follow Aqua on Facebook at facebook.com/MyAquaAmerica and on Twitter at [@MyAquaAmerica](https://twitter.com/MyAquaAmerica).