What's Flowing on in our Streams

How we can keep our waterways healthy for all

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In the Delaware River watershed where we live, human life and the life of the waterways have always been closely connected. In what is now greater Philadelphia, the Lenni Lenape people once lived adjacent to the tributary streams of the then-heavily-wooded region, relocating frequently along waterways in pursuit of fertile soils. Early Western European settlers used the Delaware River and its tributaries to ferry goods and agricultural products among settlements, and energy generated by the streams powered mills and tanneries.

Today, reservoirs like Springton Lake are fed by these streams and in turn serve as a water source for many people. Weekend anglers flock to Ridley Creek State Park and local favorite fishing holes along streams and creeks, and the beauty of the waterways defines the vernacular of the local landscape, with towns, streets, and communities named for the picturesque streams that flow through them.

Critically valuable headwater streams originate in the far northern and western regions of Chester and Delaware counties, areas with strong legacies of protecting open space. As these streams fragment and branch in their reach toward the Delaware River, they traverse increasingly developed municipalities.

Humans depend on these waterways, and yet human development and activity threaten the health and very existence of many of these streams and tributaries, with negative consequences for the Delaware River basin as a whole. Degraded water quality, impaired water flow, and regional flooding threaten the health of many plant and animal species.

Closer to home, the Willistown Conservation Trust Watershed Protection Program has been monitoring portions of Ridley, Crum, and Darby Creeks to better understand the human impact on our water sources. Following three years of water chemistry analysis, they have found that one of the biggest contributors to stream pollution in our area is stormwater runoff.

Runoff is rainwater that falls on impervious surfaces like rooftops, blacktop, sidewalks, and other developed land, before draining into our waterways, carrying all sorts of harmful chemicals with it. Nitrogen and phosphorus from the fertilizer we put on our lawns, leaky septic and sewer systems, and animal waste have wound up in our streams at disconcerting levels. The salt we spread on our roads in the winter months contributes to a higher concentration of chlorides in our waters. When these chemicals make their way into our waterways, they can cause harm to sensitive species like native brook trout, freshwater mussels, and stream insects.

One of the best ways to combat pollution from runoff is to conserve land and protect it from development, which reduces human activity and impervious surfaces. But the reality is that many of us live in suburban neighborhoods where we are surrounded by impervious surfaces. So what can we as individuals do to improve our stream health?
For starters, we can stop using or begin reducing our fertilizer use. Shifting from chemical fertilizers that feed the plants to an organic compost that feeds the soil will also benefit water quality. If chemical fertilizers or pesticides must be used, the Willistown Conservation Trust

Watershed Protection Program recommends avoiding applying fertilizers right before a rainstorm. Pay attention to your weather app and plan accordingly!

Furthermore, we can work on bagging up and properly disposing of our dog waste. Homeowners are also advised to regularly maintain and complete annual inspections of septic tanks to ensure that waste is not leaking and polluting waterways.

In the winter months, the Watershed Protection Program advises residents to limit the amount of road salt used in the winter. When a storm is coming, and using road salt is unavoidable, practice sweeping up road salt after the winter storm passes. Not only is this a great way to reduce the amount of salt entering our streams, but you can actually reuse that salt before the next snowfall. Road salt is a natural preservative, so if stored properly (in a dry, cool, and sealed container, preferably with some charcoal in it to prevent clumping), your road salt can last indefinitely, saving you money.

A final solution is one that helps the environment in multiple ways, and that's to plant native plants. Planting rain gardens alongside roads and driveways can help collect and filter stormwater, thanks to the long roots that help rain soak into the soil. The turf grasses that are often planted in yards have a shallow and dense root system, which can actually act as an impervious surface, adding to runoff woes. Native flowers, shrubs, and trees are great at absorbing excess nutrients and filtering out salts before they enter streams, and planting more of these plants will go a long way towards improving water quality. If every resident of the Willistown planted one native species in their backyard, we would likely see improvement in our water quality. Our pollinators and bird species would also thank you for creating important habitat!

By working together as a community, we can make a difference in our stream health. Life depends on it.

A portion of this text comes from "State of Our Streams Report: Understanding Water Quality in the Headwaters of Darby, Crum, and Ridley Creeks (2018 - 2021)." To read the report in full and learn more about our local waterways, visit www.wctrust.org/watershed.

About Willistown Conservation Trust: Found 20 miles west of Philadelphia, Willistown Conservation Trust focuses on 28,000 acres within the watersheds of Ridley, Crum and Darby Creeks of Chester and Delaware Counties. Since 1996, the Trust has helped permanently conserve over 7,500 acres, including three nature preserves open to the public: Ashbridge Preserve, Kirkwood Preserve, and Rushton Woods Preserve, which is home to Rushton Conservation Center and Rushton Farm. The Trust offers six renowned programs for public engagement and research: the Bird Conservation, Community Farm, Education and Outreach, Land Protection, Stewardship, and Watershed Protection Programs.