

## Western Pennsylvania Conservancy



### **Girty's Run Watershed Conservation & Management Plan Project Summary August 2021**

#### **Project Goals**

The primary output from this proposed analysis phase of the Girtys Run Watershed Conservation & Management Plan will be a detailed report that makes specific recommendations for implementing projects that help restore and protect the Girty's Run Watershed. Potential projects include tree plantings, engineered green infrastructure, riparian buffer improvements, stream bank and channel improvements, invasive species management, forest restoration, and resource protection efforts. These project recommendations will be based on hydrologic, forestry, ecological, and land use analyses as well as on community priorities identified through community outreach and engagement. This work will build upon significant project and planning work already undertaken within the watershed by Western Pennsylvania Conservancy (WPC), the Borough of Millvale, the non-profit New Sun Rising, the Girty's Run Watershed Association, and other partners.

The analysis will focus on the lower portion of Girty's Run Watershed, specifically within the 4.5 square miles of the watershed contained within the municipalities of Shaler Township, Reserve Township, and the Borough of Millvale in Allegheny County (see attached map). The primary goal of the analysis is to identify locations for high impact projects that will help further protect and restore the ecological health of the watershed and reduce flooding. WPC staff will lead the project in close collaboration with the Borough of Millvale, New Sun Rising, and the Girty's Run Watershed Association. The partners will seek to engage Shaler and Reserve Townships in the analysis and project recommendation work and will actively engage residents throughout the entire watershed in outreach and volunteer events centered on watershed education and protection.

WPC will undertake the background research and fieldwork analyses with a multi-disciplinary team including WPC's forestry, ecology, and watershed staff members to identify locations for project implementation. WPC will also manage the hydrologic analysis through a contract with a qualified engineer.

## **The Need**

The Pennsylvania Department of Environmental Protection's *Integrated Water Quality Monitoring and Assessment Report* identified several segments of streams within the Girty's Run watershed that are impaired for one or more designated uses. The report lists nutrients, urban runoff, oil and grease, road runoff, low Dissolved Oxygen, organic enrichment and storm sewer runoff, as the types of pollutants affecting this highly urbanized waterway. These pollutants are primarily from urban runoff and storm sewers, but other sources include land development, on site wastewater, small residential runoff, and unknown sources. Total Maximum Daily Loads have not been developed for any areas within the watershed.

In addition to the significant non-point source pollution impairments, a major issue within the Girty's Run Watershed is flooding during heavy wet weather events. The highly developed urban nature of the watershed results in serious flooding in the lower parts of the watershed (mostly Shaler Township and Millvale Borough) that can imperil residents and cause severe damage to public and private property. Western Pennsylvania Conservancy (WPC) has undertaken significant community-based greening projects within the watershed since 2011. This work included constructing and monitoring engineered green infrastructure facilities and undertaking large-scale, volunteer-based tree plantings within the Borough of Millvale. WPC collaborated closely with Millvale Borough's leadership and residents to undertake this community greening work and seek to build on these past successes and further improve the health and safety of the lower watershed through more high-impact community greening projects.

As a reference, Girty's Run main reach is an 8.2 mile long tributary to the Allegheny River. Its watershed is 13.4 square miles in area and contains approximately 28 stream miles. The watershed is located just north of the City of Pittsburgh and the land use varies from highly urban areas in the lower part of the watershed to typical suburban commercial and residential developments. The population within the watershed is estimated to be 27,000 persons. The estimated impervious cover in the watershed is 20.3%. The "Lower Girtys Run" project area proposed for this project includes 4.5 square miles of the lower watershed.

## **The Process**

WPC has developed a successful and replicable model for implementing effective and affordable community-based forestry and green infrastructure (GI) projects. Through a combination of community engagement and education, staff expertise, professional consultation from designers and engineers, maintenance efforts and monitoring protocols, WPC's greening projects succeed by demonstrating measurable benefits to the towns and cities they serve.

WPC's regional forestry and green infrastructure work largely stemmed from the organization's role as the managing partner of the TreeVitalize Pittsburgh project. Launched in 2008, TreeVitalize Pittsburgh is a partnership among the Pennsylvania

Department of Conservation and Natural Resources (DCNR), the City of Pittsburgh, Allegheny County Parks, Tree Pittsburgh and WPC. From the outset, these trees were framed as accessible public green infrastructure because of the natural opportunity for community engagement through tree plantings and tree care, and the many services they provide to local residents as a whole. Healthy trees provide measurable environmental, economic, health, social and aesthetic benefits in metropolitan areas. They specifically contribute to cleaner air, stormwater runoff control, opportunities for community engagement, increased business in shopping districts and higher residential property values. WPC has led the planting of over 34,000 trees in Allegheny County to help achieve these outcomes, and has involved more than 13,000 volunteers in the process.

Relatedly, In 2012 WPC began leading substantial engineered green infrastructure projects in Allegheny County, including the large bioswales in the Borough of Millvale mentioned above and in Point State Park, green parking lots in Carnegie Borough, a stormwater tree trench in Homestead Borough, and rain gardens and green parking lots in The City of Clairton and Harrison Township. Similar to the community forestry tree planting model, WPC's green infrastructure work closely engages local residents, municipal staff and officials in related work. This collaborative process focuses on prioritizing the types and locations for green infrastructure projects based on community needs and interests.

Other relevant work that will inform WPC's process in the Girty's Run Watershed is the ecological analysis projects that WPC has undertaken within the Allegheny County Parks system. Under contract with the Allegheny County Parks Foundation (ACPF) and in partnership with the Allegheny County Parks Department, WPC has developed an ecological analysis model for the parks that is strongly focused on actual project implementation. Analyses within the parks are comprehensive and include background research on land use and history, extensive mapping, identifying forest, soil, and land use types, identifying issues such as invasive species, erosion, and dumping, as well as identifying areas of ecological value that should be protected. WPC uses this data to develop specific project recommendations (tree plantings, green infrastructure, invasive species management, etc) that include GIS mapped project locations, budget estimates, planting plans, equipment, timelines, and other specific details to make the projects shovel-ready. ACPF has successfully raised significant funding to implement many of these project recommendations within the County Parks. The process and intent for the Girty's Run Watershed project would be the same.

# Map

## Lower Girty's Run Watershed Project Area

