

Genetta Park Stream Restoration Project

Montgomery, Alabama

When the 50th anniversary of the 1965 Voting Rights March is celebrated in March 2015, residents of Montgomery, Alabama, will be able to mark the occasion with a new park at the city's gateway to the Selma to Montgomery National Historic Trail. The 54-mile trail commemorates events, people, and the march route of the Historic Civil Rights March. It begins in Selma and continues along U.S. Highway 80 to the State Capitol in Montgomery. Montgomery's new Genetta Park not only provides an attractive gateway to the trail, it is a neighborhood amenity with greenspace, trails, lighting, and important green infrastructure features designed to address stormwater management issues.

EPA Region 4, along with the City of Montgomery; Alabama Department of Environmental Management (ADEM); U.S. Army Corps of Engineers; U.S. Department of Housing and Urban Development (HUD); National Park Service; Department of Agriculture; Federal Highway Administration (FHWA); U.S. Geological Survey; and Maxwell Air Force Base were partners in the \$3.5 million project, which transformed a formerly contaminated site into greenspace, restored an urban stream, and is expected to spur continued revitalization of the surrounding community.

Genetta Park is located on a four-acre former brown-field site at the intersection of Fairview Avenue and Interstate 65. Flowing through the site is Genetta Stream, an urban waterway that is a major tributary of Catoma Creek, a previously listed Clean Water Act Section 303(d) impaired water body. Beginning in the 1960s, the stream was channelized underground using concrete pipes to facilitate urban development. This channelization led to an increase in impermeable surfaces, eliminated the stream and riparian habitat in the watershed, and increased pollutant loading.

The Genetta Stream Restoration Project began in 2009 and will be completed in three phases. Phase One created a constructed wetland, which included "daylighting" of Genetta Stream to bring it back to the surface and return it to its open, natural state. The constructed wetland and stream daylighting will help prevent sewage overflow into the stream and filter bacterial and stormwater runoff before it discharges to the Catoma Creek. The concrete pipelines were removed, a new channel alignment and floodplain were created, and the site was remediated due to brownfield contamination. 2D Studio LLC, the design firm Montgomery hired to create the master plan, proposed planting native shrubs, trees, and grasses to help naturally remediate contaminants in the stormwater. The \$1.5 million cost for Phase One was funded through an ADEM Section 319 grant, a loan from Alabama's EPA-funded Brownfields Revolving Loan Fund, and a HUD Community Development Block Grant. The city financed the design, acquired the land for the park, and contributed matching-share funds for federal program dollars.



Before Image of the Genetta Park area. Source: 2D Studio LLC



Phase Two of the project added green infrastructure to the park. EPA, FHWA, the National Park Service, and the City of Montgomery worked with the state on the green infrastructure design. The design added a permeable surface so that runoff can infiltrate the ground naturally and added walking paths, seating, and lighting to make the park safe and convenient. The goal of this phase was to use highly visible features to demonstrate how green infrastructure can be used as educational elements in an urban environment. Phase Two cost \$1.3 million and was funded through EPA's Clean Water State Revolving Loan Fund and HUD CDBG funds.

The third and final phase of the project is proposed and awaiting funding. Phase Three includes restoration of the half-mile of culverted stream that runs south from the park and lessens the impact of the modified stream on the unmodified, concrete channel. The proposed design incorporates abandoned water treatment lagoons along the unmodified portion of the channel and diverts water through a series of cross-veins that creates a flow similar to a meander system. This design connects the stream with the floodplain and allows for a natural hydrological function that reduces flood risk. This design also creates a sustainable habitat for species in the stream.

The Genetta Park Stream Restoration Project is part of a larger brownfields cleanup and community revitalization effort along the Selma to Montgomery National Historic Voting Rights Trail. The effort began as



Genetta Stream today prior to the third and final phase.
Source: 2D Studio LLC

a partnership between EPA and ADEM, along with the DOT and HUD, through the Partnership for Sustainable Communities. The goal of the project was to preserve the history of the trail while revitalizing the underserved neighborhoods it traverses.

Work began with EPA conducting 18 brownfields site assessments along the trail to determine the sites in most need of revitalization. EPA, the U.S. Army Corps of Engineers, and the National Park Service supported nine community visioning sessions, which allowed the communities to share their improvement and development ideas. The City of Montgomery also conducted community outreach sessions with HUD Community Development Block Grant funds.

