

Green Corridor Revitalization Project

Ranson, West Virginia

The City of Ranson, West Virginia, used a 2010 EPA Brownfields Area-Wide Planning grant and EPA technical assistance to evaluate, design and deploy a variety of green infrastructure approaches to handle stormwater pollution in the downtown area as part of its "Green Corridor" revitalization project. Ranson's use of green infrastructure technologies on roadways, in public parks, and on brownfields redevelopment projects will help meet key water quality goals in this Chesapeake Bay watershed community, save costs on grey infrastructure, and make the community more livable and beautiful.

Ranson's area-wide planning was conducted together with planning for the transformation of the city's central commercial roadway into a "complete street." The city also used DOT TIGER planning funds and a HUD Sustainable Community Challenge Grant that focused on creating a new comprehensive land use plan and form-based "Ranson Smart Code" for redevelopment.

The area-wide planning process identified key brownfields sites for redevelopment and involved extensive research, charrettes, public visioning, and community engagement. Key brownfield sites included the closed Kidde Brass Foundry and Manufacturing Facility, the closed Dixie-Narco manufacturing site, and the Charles Town Public Works Yard, a former municipal dump. All of these sites are located along the Evitts Run Creek, the only waterway in Ranson and the adjacent city of Charles Town. Evitts Run Creek empties into the Shenandoah River, which joins the Potomac River and eventually flows into the Chesapeake Bay. These cities have little or no stormwater management systems in place, which will now be essential to reach Chesapeake Bay water quality goals.

The community's area-wide plan created exciting initiatives for the cleanup and redevelopment of the targeted brownfield sites. The 8-acre Kidde



*Stormwater runoff at the Powhattan Place site.
Source: U.S. EPA Region 3.*

Brass Foundry is now slated to become a mixed-use, downtown center called "Powhatan Place," with 100,000 square feet of new development planned, including 14 new retail stores, commercial offices, and a mix of multi-family housing units centered around a public square and plaza that incorporates green infrastructure. The city is using an EPA Brownfields Cleanup grant and local resources to remove inorganic contaminants from the foundry facility and demolish the dilapidated buildings to clear the way for reuse.

Before developing specific plans for the Powhatan Place redevelopment project, Ranson requested EPA's assistance integrating green infrastructure into the design. EPA provided several recommendations, including improvements to the streets circumscribing Powhatan Place.

The proposed street redesign integrates bioswales within the rights-of-way and along several roadways, parking lots, and sidewalks. The right-of-way bioswales

are designed to provide effective stormwater runoff capture, treatment, and infiltration through biologically active plants and soils. Due to karst conditions in the region, the systems will be designed to promote infiltration in limited quantities and will operate independently, without channeling stormwater to points down gradient. This infiltration will help reduce the acidity of stormwater, which can slowly dissolve the limestone below and lead to sinkholes.

EPA recommended plant species tolerant of wet and dry conditions for use in the swales. A greater variety of plants will be added to the palette by regulating the moisture in the swales. These green infrastructure elements are expected to improve the existing drainage while encouraging creation of habitats, promoting community stewardship, and increasing public awareness of stormwater issues and solutions.

Green infrastructure innovations will go beyond the planned Powhatan Place development. Ranson is constructing a “complete street” upgrade of Fairfax Boulevard into a grand central roadway that accommodates wide sidewalks, dedicated bike lanes, traffic calming, and access to transit. It also includes a green infrastructure system with extensive bioswales, silva-cell forestry units, and more than 2,000 trees and shrubs planted for stormwater management and aesthetic benefits. This Green Corridor Revitalization project will transform Fairfax Boulevard into a mixed-use corridor that provides affordable housing, retail and entertainment amenities, parks and recreational areas, and allows for easy walking and biking access between Ranson and Charles Town.

The Charles Town Public Works and Dixie-Narco brownfield sites are slated for a major green infrastructure facility that will put the tools developed through the area-wide planning process into action. EPA and the National Fish and Wildlife Foundation provided resources for a team of water quality and green infrastructure experts to design a new community lake on the Public Works site to handle stormwater from the broader two-city area in a setting that will serve as a community park and gathering space. Charles Town will use resources from two EPA Brownfields Cleanup Revolving Loan Fund grants to address brownfields cleanup issues in these new stormwater park areas.

The area-wide planning partnership between Ranson and Charles Town was aided by the interagency Partnership for Sustainable Communities, an effort between the EPA, HUD, and DOT to promote sustainable redevelopment of brownfields by improving access to affordable housing and public transportation while also protecting the environment. With close interagency coordination and access to the combined resources of EPA, DOT, and HUD, Ranson and Charles Town conducted extensive community visioning and design charrettes that led to the development of a new master plan. The updated plan focuses on smart growth strategies for a compact, walkable, sustainable development that is expected to spur job growth and economic revitalization while addressing environmental issues in Ranson and Charles Town.

