

## Planning for Sustainable Brownfield Redevelopment

### IMPROVING NEIGHBORHOOD SAFETY AND STORMWATER OVERFLOW THROUGH OPEN SPACE DESIGN

#### ST. LOUIS, MISSOURI, EPA REGION 7



The Metropolitan Sewer District (MSD) green infrastructure plan was developed to alleviate stormwater backup and overflow issues throughout the Bissel Point Watershed. In support of the plan, the Green City Coalition (GCC) developed a GIS-based Vacancy Demolition Prioritization Model (VDPM) to prioritize investments made by the city of St. Louis to remove impervious surfaces, with an emphasis on removing abandoned structures. The Wells Goodfellow neighborhood has the highest concentration of vacant properties in the city, and is the focus of this project. neighborhood has experienced significant economic decline, resulting in high vacancy of residential parcels and building disrepair, as well as illegal dumping and other criminal activity.

In August 2017, the U.S. Environmental Protection Agency (EPA) Land Revitalization Team worked with the city and local partners to develop a design for approximately 9 acres of semi-contiguous vacant parcels in the Wells Goodfellow neighborhood. The Wells Goodfellow Neighborhood Green Space project plan seeks to convert vacant and abandoned properties (both vacant lots and buildings) into community open space that incorporates native vegetation and green infrastructure features. The ecologically rich open space created by the project will increase the community's capacity to manage stormwater overflow, and tackle extensive vacancy. The new community greenspaces are intended to help catalyze local redevelopment opportunities and create healthy community gathering places.

In November 2017, the EPA Land Revitalization Team conducted a series of stakeholder visioning workshops over three days to gather community input and feedback on initial design concepts. Community members helped create a final design that incorporates the community's desire to improve safety, increase sight lines through the neighborhood, decrease dark areas, and maintain access for residents and municipal services. Specific design concepts throughout the 9-acre area include outdoor art spaces, a natural playground, a green amphitheater, native plantings, low-growing trees, and stormwater retention basins.

With a complete schematic design of the area, GCC and its partners will be able to better communicate the vision for this greenspace. Once decisions are made on which elements, key features, and design details will be part of the project, GCC will advance the design for specific nodes within the nine-acre area (based on funding).

The EPA Land Revitalization Team also developed three design templates to support green infrastructure development on standard-size St. Louis residential lots where the structures have been demolished. The templates were designed for a single stand-alone lot, two contiguous lots, and three contiguous lots. They outline greenspace improvements and green infrastructure features that are low-cost to install and maintain, and can provide a visual aid demonstrating how greenspace can be developed on vacant lots across St. Louis.

These templates can help neighborhoods with significant vacancy improve aesthetics, reduce stormwater runoff, improve stormwater quality, reduce illegal dumping, and address public safety concerns, while waiting for future capital investment. GCC and its partners will be able to share these templates with city departments and other project partners to demonstrate how initial investment in landscaping could be an interim step to transforming these vacant lots over time.

For more information, please contact David Doyle, EPA Region 7 at [doyle.david@epa.gov](mailto:doyle.david@epa.gov).



Figure 1. Final design concept for the 9-acre proposed open space area within the Wells Goodfellow neighborhood.

#### LESSONS LEARNED

- Open communication with adjacent project partners helps create continuity in designs and site planning.
- Early community engagement helps identify key project goals early in the planning process.
- Simple, cost-effective design concepts can best utilize resources across a large area.
- Design plans help visually demonstrate investment opportunities and long term transformations.

#### PLANNED POST-TECHNICAL ASSISTANCE ACTIVITIES

- A partnership with Washington University will help inform decisions about native planting elements.
- Additional demolition within the nine-acre area will occur with MSD funding.
- Continue identifying possible partners and funders for the project, including local foundations.
- Continue dialogue and outreach with community residents to develop further support for the design concept and future implementation of design elements.