

RECOMMENDATIONS

COMMUNITY RESILIENCE TOOLKIT FOR LOCAL PROJECTS



GREEN STORMWATER INFRASTRUCTURE (GSI)

Continue to build on the framework laid out in the City's Green Stormwater Infrastructure Plan and work with the Stormwater Authority when identifying GSI interventions.

The plan outlines several green stormwater infrastructure (GSI) projects implementable in different areas of the city; notably, Memorial Park was identified as a significant opportunity for a demonstration project with rain gardens and stormwater bump outs. Other projects include enhancing PA 291 with GSI such as a vegetated center median, which can mitigate stormwater runoff and provide visual quality and safety. Potential sites were identified with appropriate GSI interventions and future GSI projects should consult the plan. In general, facilities should be located on publicly owned open space or rights-of-ways in upland locations, outside of flood and storm surge inundation areas or contaminated soils, and where they will be most effective.

» See: *City of Chester Green Stormwater Infrastructure Plan (2017)*



COOLING CENTERS

Expand existing cooling centers to be broader community resiliency centers.

There are several existing cooling centers within Chester: The Salvation Army, J. Lewis Crozer Library, Booker T. Washington Community Center, Chester Senior Center, and Access Chester Community Center. These centers serve an important function during extreme heat events; however, their purpose can broaden to become community resiliency centers that can act as the home base for any future disaster recovery efforts.



WATERFRONT ACCESS & AMENITIES

Prioritize access from inland areas to the waterfront and expand trail connections with careful study relative to increased risk from sea level rise and flooding.

Improving connectivity and access should be prioritized to ensure everyone has safe, easy access to this open space amenity. Turn existing street connections, like Engle Street, into an extension of the open space network by making these streets into shade-way corridors with ample planting and GSI as possible. This also includes identifying further public access points, including the waterfront scrapyard site located between the Trainer Refinery and DELCORA Wastewater Treatment plant, which requires a further feasibility study. The Chester Waterfront Master Plan further outlines future development at the waterfront, including a renovated public waterfront park that expands on the green space provision adjacent to the stadium. Any development and design considerations should be overlaid with future flooding models and sea level rise to accommodate and plan for future risks.

» See: *Chester Waterfront Master Plan (2020)*, *Resilience through Recreation (2018)*, *Delaware County 2035 Open Space, Recreation, and Greenway Plan (2015)*



TREE PLANTING

Work with the Chester City Shade Tree Commission to identify priority areas and streets for street tree planting.

While parks and creek corridors in Chester have decent tree canopy coverage, additional tree planting should be prioritized in local streets and in connector streets to key assets like the waterfront for both thermal comfort and air quality benefits. These plantings should be done in partnership with the city's Shade Tree Commission, which works to educate and inform residents about the benefits of trees and holds volunteer tree planting events. Additional community organizations have also worked to plant trees. New street tree plantings should also consider implementing as much green stormwater infrastructure, like stormwater tree trenches, as outlined in the Chester Stormwater Plan.

» See: *City of Chester Green Stormwater Infrastructure Plan (2017)*



SHADE-WAY CORRIDORS

Identify and transform key corridors with appropriate shade trees and shade structures.

Past plans identify several key corridors for corridor improvements: PA 291 (also known as the Industrial Heritage Corridor), the East Coast Greenway, Highland Avenue, Edgemont Avenue, Engle Street, 22nd Street, 9th Street, and 3rd Street. These should be prioritized as shade-way corridors as they are major connections within Chester and link to community assets. Other connections should be considered as secondary priorities, like the Chester Creek Trail, which is already vegetated to some degree.

» See: *Resilience through Recreation (2018)*, *Chester Vision 2035 (2023)*



SPRAY FOUNTAINS & SPLASH PADS

Integrate water features into existing and well-used recreation areas.

While no active spray fountains or splash pads exist in Chester, there are several existing parks and recreation areas that would be well-suited for a water feature. These include Sun Village Park, Memorial Park, Barry Bridge Park, and Chester Park. Other open spaces without existing playgrounds, like Deshong Park, or planned park spaces could also be well-suited for a water feature but would first require a more comprehensive park or recreation space design.

» See: *Resilience through Recreation (2018)*



BUILDING RETROFITS

Implement building retrofit programs and zoning ordinances that address flood risks in areas vulnerable to current and future flooding.

There are no general municipal or county building and/or infrastructure retrofitting programs in Chester that address building vulnerability in the face of climate change. Initial actions to implement a retrofit program should work in tandem with Chester's Community Construction and Public Works Department, which are supported with Community Development Block Grant Funds from the U.S. Department of Housing and Urban Development. Vulnerable residential, industrial, and cultural buildings should be shored up against current and future sea level rise and storm impacts. These include but are not limited to any buildings along Chester Creek and the Chester Water Authority Distribution Center.



DEPLOYABLE/TEMPORARY BARRIERS

Evaluate the feasibility of deployable or temporary barriers in locations susceptible to flooding.

There are no current known plans for deployable or temporary barrier systems in Chester. These systems are appropriate at critical infrastructure and community facilities and/or in narrow pathways of localized flooding.



ENVIRONMENTAL MONITORING & MODELING

Create a city-wide database that has real-time information on environmental and climate factors.

Chester does not currently host its own environmental information. Municipal departments should work to implement a city-wide database that provides current data on environmental and climatic factors. This can also include emergency management guides for residents and businesses on how to respond and react in the event of a natural disaster.

» See: *Delaware County: 2016 Hazard Mitigation Plan*



PAVEMENT REDUCTION

Study potential underutilized paved spaces for depaving and green stormwater infrastructure installations.

Underutilized paved spaces, like the asphalt parking lot at Chester Recreation Facility, should be considered for depaving and installing green stormwater infrastructure and/or vegetation. Reduction of impervious surfaces can aid stormwater management and local flooding issues.

RECOMMENDATIONS

EARLY ACTION PROJECT



SUN VILLAGE PARK

SITE CONTEXT

Located along the western banks of Ridley Creek, Sun Village Park is a large neighborhood park that offers a mix of recreational and community-supporting facilities, access to nature, and ease of access for residents on the East side of Chester as well as across Ridley Creek in Eddystone. Most of the park is in the Ridley Creek floodplain and is vulnerable to creek and tidal surge flooding from the nearby Delaware River.

The early action project focuses on improving the upper terrace of the site adjacent to Curry Street. And Thomas Street which is out of the floodplain, most adjacent to the neighborhood, and underneath the extensive existing mature tree. The goal of this project was to better connect it to the recently constructed playground to the south along 9th Street with a nature storybook walk and other art installations.

DESIGN CONCEPT

The storybook walk begins at the upper terrace near Thomas Street, here and throughout southeast along an existing sidewalk that leads to 9th Street. Just past the existing tennis courts, the trail turns south, meandering through existing trees to create an accessible pathway to the playground. An additional ADA sidewalk constructed by the City of Chester then connects that playground directly to 9th Street.





Figure 146. Sun Village Park celebrations. Source: CAC.

PROJECT COMPONENTS

Nature Storybook Walk

- Storybook stands
- ADA stone fines path
- Site furnishings

Management of Existing Trees

Planting

- Trees
- Shrubs/groundcover

LONG-TERM RECOMMENDATIONS:

A larger storybook walk loop could be created by adding an alternative trail alignment west of the tennis court that was studied (see plan below).

The lower portion of the site (field) could be managed to process and clean stormwater as well as store and slow flood waters coming down Ridley Creek or small surges up from the Delaware River.