

# EASTWICK COMMUNITY FLOOD RESILIENCE STRATEGIES: NATURE-BASED SOLUTIONS

For Eastwick, Nature-Based Solutions (NBS) means using natural systems and features to lower flood risk.

NBS projects are also known as green infrastructure, natural or nature-based infrastructure, and Engineering With Nature®. They restore, mimic, and enhance natural systems. They help to lower flood risk and provide economic, environmental, and social benefits. These projects can take different shapes and sizes; this makes them great options for pairing with other resilience measures. NBS projects that could help to manage Eastwick floodwaters include the examples to the right:

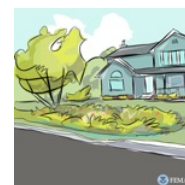
The John Heinz National Wildlife Refuge currently leads efforts on NBS. Some projects are underway, like the 55-acre Henderson restoration. This will increase flood storage. The Lower Darby Creek Feasibility Study is looking at additional flood storage opportunities in Eastwick and Delaware County. This study is underway.



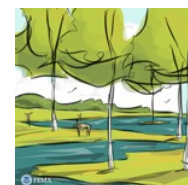
**Stormwater Parks**



**Reforestation**



**Rain Gardens**



**Wetland Restoration**

*For illustrative purposes only*

## Benefits and Challenges of Nature-Based Solutions

Benefits	Challenges
<ul style="list-style-type: none"> <li>Environmental and social:                             <ul style="list-style-type: none"> <li>Improved air and water quality.</li> <li>Habitat creation.</li> <li>Cooler in the summer; reduced urban heat.</li> <li>New community spaces.</li> </ul> </li> <li>NBS projects can adapt to changing conditions over time.</li> <li>Flood storage benefits may be seen within the first growing season and will improve over time as plants grow.</li> <li>They have easier long-term maintenance than levees.</li> <li>There is potential to partner with the John Heinz National Wildlife Refuge and other partners on these projects.</li> <li>There are significant funding resources.</li> </ul>	<ul style="list-style-type: none"> <li>To eliminate flooding in Eastwick <u>only</u> with NBS requires a large, watershed-wide approach. This would require significant coordination across many municipalities.</li> <li>Due to space constraints within Eastwick, NBS will more successfully mitigate flooding if it is a part of a holistic solution with other projects (for example, a levee, gray infrastructure, buyouts or relocation).</li> <li>NBS takes time and initial upkeep to provide full ecosystem benefits.</li> </ul>



**Realization Timeline:**  
~2–10 years



### Potential Funding:

- FEMA
  - Building Resilient Infrastructure and Communities (BRIC)
- U.S. Fish and Wildlife Service (USFWS)
- National Fish and Wildlife Federation (NFWF)
- National Oceanic and Atmospheric Administration (NOAA)
- City Funding
- U.S. Army Corps of Engineers (USACE)
- Private Philanthropy



**Lifespan:**  
Permanent

NOTE: This is a draft document. We are learning more about this measure all the time. Is information missing? Let us know at [eastwick@phila.gov](mailto:eastwick@phila.gov).

