

Considering Climate Change for Riverfront Redevelopment

Understanding flood risks for the Delaware Avenue Extension in Philadelphia



Project Summary

Community: Philadelphia, Pennsylvania

Technical Assistance: Reuse Assessment

Former Use: Industrial Manufacturing

Future Use: Highway Extension and Riverfront Park

Historic industrial activity had negative impacts on the Frankford Creek and the surrounding area near the Delaware River in Philadelphia, Pennsylvania. Two waterfront catalyst brownfield sites near the creek are the former Rohm and Haas chemical production site and the Philadelphia Coke Co. site, a former gas and coke production facility. The community would like to see these two sites restored to reconnect the community with nearby Frankford Creek and the Delaware River.

In 2015, the City completed the Lower Frankford Creek Watershed Brownfields Area-Wide Plan, which laid out a vision to spur economically and environmentally beneficial redevelopment of the catalyst sites. One priority of the plan is an extension to Delaware Avenue—from Orthodox to Tacony streets—to increase public access to the waterfront, while reducing vehicular traffic in residential neighborhoods.

The Community's Challenge

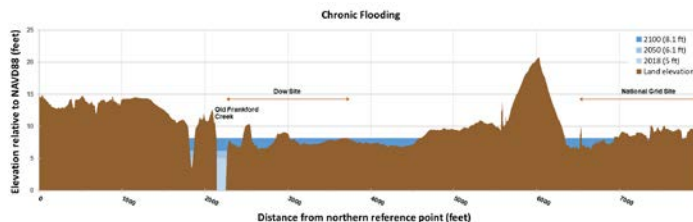
Implementation of key recommendations for the Rohm and Haas and Philadelphia Coke sites has rested upon the decision to proceed with the next phase of the Delaware Avenue Extension. Before proceeding with the project, the City and the Pennsylvania Department of Transportation (PennDOT) need to understand potential sea level rise impacts and climate adaptation strategies for the road extension because of the project's location adjacent to the tidally influenced Delaware River. This sea

level and climate change information will help determine the location and design of the roadway extension.

EPA's Land Revitalization Technical Assistance

In 2020, the U.S. Environmental Protection Agency (EPA) Land Revitalization Program provided contractor technical assistance to prepare a report on sea level rise adaptation recommendations. The report summarizes findings on potential flooding scenarios and the associated consequences for the catalyst sites. It then provides recommendations for adaptation strategies to address those impacts. The sea level rise scenarios and adaptation strategies are supported by inundation maps and profiles. By outlining the predictive analyses, the adaptation report resolves the City's outstanding questions about viable reuse options for both the Rohm and Haas site and the Philadelphia Coke site, and for the road networks that serve them.

Despite the blighted industrial land, the two sites offer locational and historical resources for redevelopment that can honor Philadelphia's past and enhance the community's connection to Frankford Creek. With EPA's technical assistance, the City can now ensure that potential sea level rise is accounted for in the area's redevelopment plan.



Old Frankford Creek elevation in a chronic flooding scenario

For more information, contact Patricia Corbett, EPA Region 3 Brownfields Program, at corbett.patricia@epa.gov.