

WELLINGTON PARK AND MILL BROOK CORRIDOR RESTORATION

WELLINGTON PARK FLOOD RESILIENCE

Centuries of development have stripped Mill Brook of much of its natural water storage capabilities. More recently, bank erosion and the proliferation of invasive species have compromised the brook's function as a natural flood-control resource and thriving riparian ecosystem.

The Wellington Park and Mill Brook Corridor Revitalization project uses nature-based solutions to mitigate flooding threats due to development and climate change. New resilient infrastructure will increase flood storage capacity with constructed wetlands, open up the waterway with a new boardwalk, and restore the natural habitat. Funding sources for this project include a Municipal Vulnerability Preparedness (MVP) Action Grant from the Massachusetts Executive Office of Energy and Environmental Affairs and support from the Arlington Community Preservation Act.

NATIVE PLANTS

Several native species have been planted in an area previously overgrown with six types of invasive plants, primarily Japanese knotweed (*Fallopia japonica*) and Asian bittersweet (*Celastrus orbiculatus*). Invasive plants are species that are not native to a specific location and tend to spread to such a degree that causes damage to the environment. Native plants have many benefits including managing stormwater and providing habitat for wildlife.



Schizachyrium capense - Little Bluestem



Lupinus perenne - Wild Lupine



Achillea millefolium - Yarrow



Weston and Sampson

PHASE I PLAN FOR WELLINGTON PARK

GREEN INFRASTRUCTURE

Like many urban streams, Mill Brook has a history of pollution and impaired water quality. Strategies to increase flood storage can have the additional benefit of improving water quality.

Rain water enters Mill Brook directly from streets, parking lots, and rooftops through the stormwater pipe network. In towns with old systems, like Arlington, bacterial contamination of stormwater from broken and illicitly connected wastewater pipes is common. The Mystic River Watershed Association (MyRWA) and the U.S. Environmental Protection Agency (EPA) issue annual water quality grades to rivers and streams based on how often they comply with state swimming and boating standards for bacteria. Mill Brook has had challenges

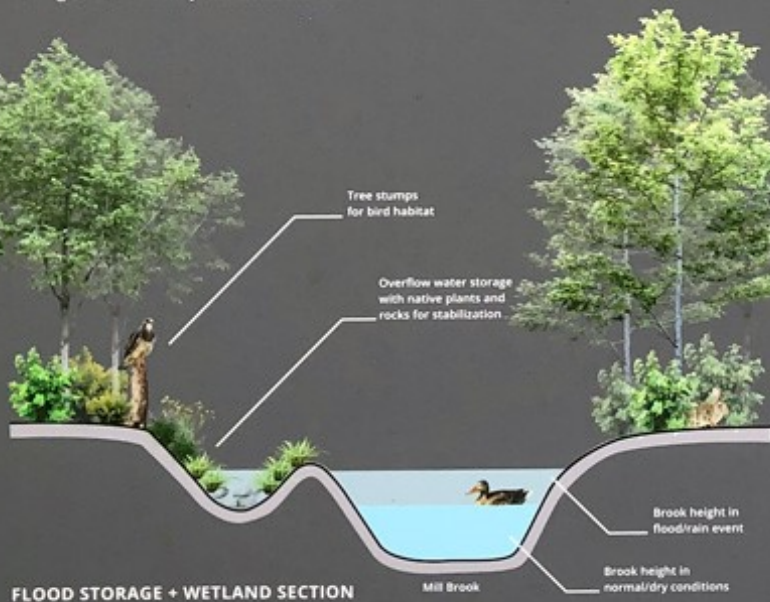
In the past. Efforts in Arlington to improve underground infrastructure are now underway to repair these problems.

Streams in urbanized areas also suffer from nutrient pollution, especially phosphorus. When released into stormwater, phosphorus can lead to invasive plant infestations and harmful cyanobacterial blooms, posing ecological and public health risks.

Practical solutions for reducing phosphorus involve filtering water through nature-based "green infrastructure," such as constructed wetlands, which also increase resilience during storm and flooding events. They can also slow the movement of water across the landscape, and allow plants and soils to absorb nutrients before they move downstream.



Mill Brook Watershed: all water within the watershed flows into Mill Brook.



FLOOD STORAGE + WETLAND SECTION

Mill Brook

Brook height in flood/rain event

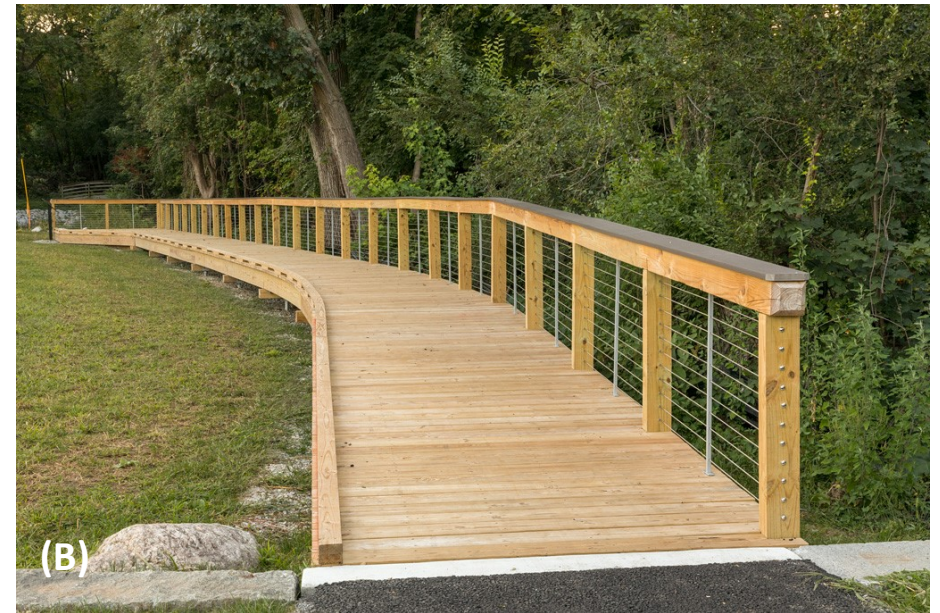
Brook height in normal/dry conditions

MILL BROOK CORRIDOR



Town of Arlington: FY2018 MVP Action Grant Project

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WELLINGTON PARK AND MILL BROOK CORRIDOR RESTORATION

- Porous asphalt pathway (A) with educational sign leading to elevated boardwalk (B), which increases and improves access to Wellington Park and to Mill Brook
- Overflow channel designed to capture stormwater (C & D), thereby reducing downstream flooding