



Successfully Overcoming Challenges of Green Infrastructure to Transform Public Spaces

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Building better communities with you



Leveraging Grant Funding for Stormwater

2015-17 CZM Coastal Pollutant Remediation Grant for 25% Design of Unquity Brook Watershed Assessment and Stormwater Improvements

2018-19 CZM Coastal Pollutant Remediation Grant for Construction of Police Station Site

2020 CZM Coastal Pollutant Remediation Grant for Design of Algerine Corner in 2020

2021 CZM Coastal Pollutant Remediation Grant for Design of Cunningham School in 2021

2021 MassDEP Section 319 Nonpoint Source Competitive Grant for Construction of Algerine Corner

Sustainable Stormwater Management Goals

- To advance design & construction of structural stormwater best management practice to reduce non-point source pollution to Unquity Brook
- Harness the multiple benefits of green infrastructure and implement in public spaces across the watershed
- To integrate stormwater into the overall operations of the Milton DPW



Green Infrastructure & Low Impact Development



A cost-effective, resilient approach to managing wet weather impacts that provides many community benefits. (USEPA)

Benefits of Green Infrastructure



Unquity Brook Watershed Study

- Performed in 2016
- Water samples collected ay 18 different site along Unquity Brook (wet and dry weather)
- 15 potential sites were surveyed, narrowed down to top 4







Unquity Brook Watershed

Milton Police Station

- Total area treated: 1.7 acres, 19% impervious
- Water quality volume treats the 1inch storm



- Total area treated: 5.8 acres, 58% impervious
- Water quality volume treats the 1inch storm



Total construction cost: \$69,000 grant + \$25,000 match



Algerine Corner

- 58-acre residential watershed
- Diadromous fish habitat (rainbow smelt)
- High levels of bacteria, nutrients, TSS
- Opportunity to provide cobenefits to the neighborhood







Challenges

Site constraints
Public education
Misinformation
Public support
Abutter concerns

Concerns

- Mosquito/tick population
- Build up of contaminants
- Site maintenance
- Funding for project
- Flooding
- Functionality of space
- Current trees

As identified by many of my neighbors and friends, I am very concerned about how that influx of water will compound an already bloated water table in the neighborhood, as well as the potential hazard related to chemicals that aren't entirely contained in that spot.

What will be done to prevent a significant amount of mosquitos and possible other undesirable wild life one this land is turned from its present open park layout to an collection point/water basin?

Public Outreach

- Informational Website
- Google Form Survey abutter/resident questions and concerns
 - All responses posted to website
- Public Informational Meeting
 - Supported by technical experts
 - Posted to website
- Frequently asked questions and answers
- Arborist/entomologist reviews

Algerine Corner - Public Information Forum

A public informational meeting will be held Thursday April 15th. During this meeting, the proposed project design for a storm water BMP, located at Algerine Corner, will be discussed. Please fill out this form prior to the meeting and public feedback will be discussed. Thank you.



Contact Inio Phone: (617) 898-4988 Addrese: 525 Canton Avenue Milton, MA 02188 United States See map: Google Maps The Milton Department of Public Works was awarded a Coastal Pollution Remediation Grant by the Massachusetts Office of Coastal Zone Management (CZM) in 2020. The grant was awarded to advance the design of a structural stormwater best management practice (BMP) to reduce non-point source pollution to Unquity Brook. Based on previous assessments of Unquity Brook's water quality performed by Milton DPW and the Neponset River Watershed Association (NepRWA), the Algenine Corner location was prioritized due to its location on public land and high potential for pollutant load removal. The Uniquity Brook flaws to Gulliver's Creek; both of which are important habitats for diadromous fish including rainbow smelt (please see photos below in figure 2). Guliver's Creek then flows to the Neponset river which drains into the Boston harbor. The drive of this project comes from the long-term monitoring of Unquity Brook and results that showed a significant wet weather pollution issue.



Figure 2. Ratitbow Small apps found in Gulliver's Creek in 202



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Water that discharges to Unquity Brook from the site is much cleaner than previous conditions, helping to improve water quality downstream in the watershed.

During heavier rainfalls, the channel may fill up to a depth of 18" and overflow to Unquity Brook. Even when it overflows, the park would provide critical stormwater treatment by capturing the first half inch of rainfall, which tends to pick up the most sediment and nutrients from the watershed.

Water soaks into the ground, providing necessary recharge to the neighborhood groundwater supply. While the water is onsite, it feeds native vegetation that beautifies the space and supoorts the neighborhood ecosystem. Improvements to the site invite neighbors and visitors to walk through the site when it is wet or dry and observe the different states of vegetation throughout the year. Stormwater that falls over the watershed is conveyed downstream through an existing pipe to a manhole in Centre Street

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Treated stormwater flows into the channel. In some rainfall events, the channel could fill up to a depth of 18" and overflow to the brook. Most of the time, the water that enters the site will soak into the ground faster than it fills up to the overflow. The wet area will drain down within about two days. A treatment structure removes trash and pollutants from the runoff before water enters the public space.



What's next?

2016-17 CZM Coastal Pollutant Remediation Grant for 25% Design of Unquity Brook Stormwater Improvements

2019 CZM Coastal Pollutant Remediation Grant for Construction of Police Station Site

2020 CZM Coastal Pollutant Remediation Grant for Design of Algerine Corner in 2020

2021 CZM Coastal Pollutant Remediation Grant for Design of Cunningham School in 2021

2021 MassDEP Section 319 Nonpoint Source Competitive Grant for Construction of Algerine Corner

Woodland Infiltration, Cunningham School



Questions?

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*Accepting applications for co-op positions

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