Buckeye Brook Coalition

Media Release

RIDOT and Buckeye Brook Watershed Stormwater Management Improvement Project Construction Started

Media Contacts: Michael Zarum, e-mail: located@rcn.com, 401-742-5769, 617-767-2440

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State and local roadways collect contaminants which flow into watersheds, rivers, streams, lakes via stormwater collection systems. Green Infrastructure pollution reduction programs are moving forward.

The Rhode Island Department of Transportation (RIDOT) has begun construction of a Stormwater Improvement Project in the Buckeye Brook Watershed in Warwick, RI.

The Project Site is where Buckeye Brook flows east between Warwick Avenue and Old Warwick Avenue. People in the community may see changes to the landscape as they pass by the construction site, which is immediately north of the Knights of Columbus Hall on Sandy Lane and Warwick Avenue in the Meadowbrook Village area of Warwick.

The project crew will initially clear the area’s overgrown vegetation to gain access to, and then remove, two existing stormwater management holding basins. Both basins will then be replaced with two new and improved holding basins which will improve the current stormwater management system by capturing more roadway contamination and pollutants (sediments of sand and other solids). The new stormwater holding basins will have a larger and improved stormwater runoff holding capacity, will provide increased water quality treatment, pollutant removal, and will improve the water quality in Buckeye Brook.

This improved stormwater management system will divert the initial stormwater flows from roadways (initial stormwater runoff flows typically contain the highest levels of pollutants) from directly entering Buckeye Brook, by increasing the holding capacities of the two existing stormwater management system retention basins (small wet ponds) that are on the north and south sides of Buckeye Brook between Warwick Avenue and Old Warwick Avenue. The existing water quality retention basins have diminished
capacity due to sediments and debris which have accumulated over time from stormwater collected from the surrounding Warwick Avenue stormwater catchment areas.

The project includes New Green Infrastructure components which will capture stormwater from a 31 Acre watershed catchment area (paved and unpaved surfaces) and will treat the collected stormwater prior to its entering Buckeye Brook. This will reduce stormwater pollutants to an equivalent catchment area of approximately 9.9 acres.

The existing stormwater management retention basins, located to the east of Warwick Avenue and to the West of Old Warwick Avenue, were installed by RIDOT in the 1990’s. These basins, also called wet ponds, currently receive stormwater flow through existing diversion manholes located on Warwick Avenue, which are designed to convey stormwater from lower intensity storms to the holding basins, and divert flow from higher intensity storms to the closed drain system now along Warwick Avenue, which flows directly into Buckeye Brook. The existing stormwater management retention basins currently discharge directly to the Buckeye Brook via separate 18” Reinforced Concrete Pipe Outfalls (RCP Outfalls).

The proposed project is a Restoration Project aimed to address the 2015 Consent Decree filed by the US EPA. The purpose of the project is to increase water quality treatment of stormwater runoff, mitigate and reduce flooding, and address trace metal and bacterial pollutions listed in the 2008 and 2015 TMDLs (The Buckeye Brook Coalition provided comments to RIDEM during TMDL development and those comments resulted in an improved TMDL Analysis.) TMDL is the Total Daily Maximum Load for a specific pollutant and the total amount of that pollutant which can be discharged into a water body and still maintain and comply with EPA water quality standards.

https://www.epa.gov/tmdl/overview-total-maximum-daily-loads-tmdls

With this Stormwater Improvement Project, the following improvements will be made:

- Expansion of northern retention basin capacity from 15,000 CF (cubic feet) to 23,185 CF
- Expansion of the southern retention basin capacity from 16,800 CF to 24,360 CF
- Conversion of the southern retention basin into a bio-retention basin with an under drain to provide higher levels of stormwater treatment which will improve the filtering out of pollutants transported in the collected stormwater, by a process where the collected stormwaters will be filtered through natural soils, natural plants and organic materials, and geo-textile materials which filter out and remove pollutants before the stormwaters flow into Buckeye Brook, thereby reaching goals to discharge cleaner stormwater into Buckeye Brook.
- Installation of two (2) pretreatment units will include hydrodynamic separators upstream of the stormwater bio-retention basin and will further increase water quality treatment by including these Best Management Practices (BMP’s) to extend the viability of the reconstructed stormwater basins (there is currently no pretreatment for the existing wet ponds).
- Removal and replacement of the existing chain link fence and guardrail next to the basins.
• Installation of new corrugated plastic pipe outfalls to Buckeye Brook with rip-rap scour and erosion control protection pads at the reinforced concrete pipe’s flared ends (RCP’s flared ends).

The existing wetlands on site will not be altered as part of the proposed project. However, there will be work that falls within the 100-foot riverbank wetland for Buckeye Brook, the 50-foot perimeter wetland for the wooded swamp and the two Areas Subject to Storm Flowage (ASSF). Sediment and erosion controls have already been put in place at the construction site.

The project will also lower the risk of flooding in the area by providing additional watershed storage volume and will reduce peak rates of flow to Buckeye Brook.

There is currently a water quality monitoring sampling site downstream from the construction work site. Water samples are regularly collected where Buckeye Brook passes by the end of Novelty Road as part of URI’s Watershed Watch Program, which is currently recording and tracking water quality at that site. Buckeye Brook Coalition plans on providing volunteers and funding to continue that water quality monitoring in 2022 to provide evidence of improved water quality expected to result from this stormwater improvement project.

The public will initially see the clearing of the over vegetated holding basin area and will also experience a three (3) month motor vehicle detour around the construction restricting vehicular traffic on Old Warwick Avenue from 8/30/21 to 11/15/2021. Pedestrians and Bicyclists will be allowed on the east side of Old Warwick Avenue, where there is an orange barrier and “Walkway” sign.

This project is separate from the Old Warwick Avenue bridge project (orange and white barriers) as that bridge project is scheduled for a later date.

The stormwater improvement project is expected to cost $598,500, is fully funded, and should be completed by 11/15/21. Cardi Corporation is the prime contractor for this scope of work. Cardi Corporation has extensive and superior experience performing watershed based environmental infrastructure improvement programs.

The Buckeye Brook Coalition, which is the RI Rivers Council’s official State Designated Local Watershed Council for the Buckeye Brook and its Watershed, fully supports this project, said its president Michael D. Zarum. Zarum also added that “This is the type of watershed restoration and stormwater improvement project which we advocate for. This stormwater improvement project, specifically for stormwaters flowing into Buckeye Brook, absolutely meets goals to provide new Green Infrastructure, exceeds the design requirements in the latest edition of the RI State Stormwater Design Manual, and current Stormwater Best Management Practices (BMP’s). Mr. Zarum also thanks all at RIDOT, EPA, and the USDOJ for ensuring that this project is finally moving forward.

Best Regards.
Michael D. Zarum, President and Chair
Buckeye Brook Coalition
A RI State Designated Local Watershed Council and
RI Rivers Council Affiliate
Buckeye Brook Coalition

Please Support the Buckeye Brook Coalition to Protect, Preserve, and Restore the Buckeye Brook Watershed and the River Herring (Buckeyes) who live there, by clicking the following link to become a member or make a small donation.

https://www.buckeyebrook.org/bbc_files/membership.html

RIDOT and Buckeye Brook Watershed Stormwater Management Improvement Project:

Buckeye Brook at Old Warwick Avenue
Old Warwick Avenue Road Closed to Vehicular Traffic 8/30/21 to 11/15/21

Old Warwick Avenue Temporary Pedestrian Walkway