

General recommendations regarding stream restoration projects in Gwynns Falls Leakin Park

- DPW should carefully consider whether long-term stabilization of these tributaries will be successful and should instead consider less destructive methods than are currently being planned. There is a sizeable body of knowledge from resource management professionals that suggests that current stream restoration methods are ineffective and extremely destructive when applied to small order, interior forested streams (e.g., ["The Limits of Restoration" by Rod Simmons, 2017](#)). Even when using the strongest armoring techniques, these projects should be viewed as temporary. Streams are dynamic and will eventually work around the structures installed to hold grade and form. Reducing the volume of stormwater run-off upstream of these planned projects is a less expensive, less destructive long-term approach to the problem.
- A review of DPW's MS4 permit shows a distinct preference for stream restoration projects that require major construction, are expensive, and are highly disruptive to small order, interior forested streams and tributaries. 65% of DPW's projects are stream restoration projects ("Alternative Best Management Practices") that are not only destructive to existing ecosystems but have a history of failure. Because of these planned large construction projects, adjacent riparian areas will likely suffer for decades due to clear cutting of large trees, destruction of topsoil, and the introduction of invasive species.
- The creation of new access points in the forested interior of the park should be avoided. Access roads will inevitably lead to the introduction of invasive species which will be difficult, if not impossible, to eradicate. Compaction of the forest soil with heavy machinery will permanently impact the ability of native vegetation to re-grow in this area. Access points will then become dumping sites, resulting in more debris entering the Dead Run.
- Only 5.1% of DPW's Watershed Implementation Plan utilizes "Environmental Site Design" techniques. These techniques address stormwater issues upstream at much less cost and are used within the existing built environment, thus avoiding construction damage to forested areas in the park.
- As an alternative to attempting to stabilize the tributaries, we recommend reducing the flow of stormwater by installing rain gardens, bioswales, and bump outs in the upstream neighborhoods. Potential locations for these types of projects would include along Edmondson Village shopping center, Thomas Jefferson Elementary school, and at private residences. In the case of privately owned property, grants and tax incentives should be used to encourage installation of these features.
- Rather than focus on small, interior tributaries, we propose that DPW focus instead on the Dead Run itself, which is easily accessible and already quite degraded with debris and invasive vegetation. Major sedimentation comes from the main stem of Dead Run itself, which is extremely eroded at several points in the park. This erosion has resulted in impingement upon Franklinton Road, which is closed at the time of this document.

- In order to have any planned stabilization of the Dead Run be effective over time, it is critical to reduce the overall volume of stormwater run-off entering the Dead Run. DPW and Baltimore City needs to work with property owners and government entities outside the city to remove or modify large areas of little-used impervious parking surface in the Dead Run sub-watershed, such as those at Westview Mall, Security Square Mall and many other properties along Security Boulevard, Dogwood Road and US Route 40. The Social Security Administration should be urged to consider replacing surface lots with multi-level parking structures.
- All sanitary sewer problems adjacent to these projects need to be addressed first as part of successful project completion so that these areas do not need to be disturbed again.
- Removal of any tree >8" dbh (diameter at breast height) must be field approved by the Baltimore City Forestry Division before cutting begins.
- Perform native flora and fauna audits at each site before initiation of any project in the park.
- Commit to performing native flora and fauna audits at 1 year and 5 year intervals before final project close-out.

ER4050 - Dead Run Main Stem

- Apparently the section of ER4050 that included the Dead Run main stem has been removed from ER4050. We would like an explanation of why this section of the project has been removed.

DPW Project 4031/A07 (Briarcliff Road to Franklinton Road to Dead Run, near Thomas Jefferson Trail) -- Start date: late 2019

FOGFLP status: OPPOSED to portions of the plan, with exceptions noted below.

Trees larger than 8" dbh (diameter at breast height) estimated for removed = ~90

Concerns:

- This section of park notably free of non-native plant species according to the 2017 Forest Management Plan for the park. Bio-Blitz cataloged over 40 native plant species near the area of disturbance for this project on iNaturalist.org. The area abounds in large native trees and provides habitat for a wide variety of bird species, including barred owls.
- Major construction in this stream valley will disturb and fragment the valuable forest that surrounds it, by introducing a corridor of invasive grasses and vines
- Erosion on the interior portions of this stream is not severe enough to warrant major construction. The damage caused by construction would far outweigh any positive benefits. Greater sources of silt can be seen nearby, on the eroding banks of the Dead Run main stem, which are far more easily accessible for construction without major tree loss and habitat destruction.
- Removal of 90 large trees is likely to worsen flooding on the Dead Run main stem downstream from the tributary.

Recommendations:

- Replace inadequate culvert system beneath Franklinton Road and create wetland cells in the degraded area between Franklinton road and the Dead Run, as planned.
- Proceed with stabilization of Briarcliff Road at the top of the tributary. Installation of a fence near the road would provide safety and should be immediately undertaken.
- Avoid any portion of the project that involves creating access roads and felling trees or removing topsoil within the forest interior.

DPW Project ER 4050 (Winans Way & Briarcliff Road to Dead Run, near Hunting Ridge Trail) -- Start date: late 2020

FOGFLP status: OPPOSED (at least until additional details and plans are released)

Trees larger than 8" dbh (diameter at breast height) estimated for removed = unknown at this time, however, 59 trees in the area >20" dbh have been tagged

Concerns:

- A sudden, drastic increase in the amount of stormwater directed into this stream has occurred since 2015, causing massive erosion and flooding damage to the riparian area.
- Despite the recent flood damage, the surrounding area is still healthy native forest habitat, abounding in mature specimens of various oak species and relatively free of invasive plants. It should not be disturbed or fragmented any more than is absolutely necessary.

Recommendations:

- The cause of the sudden increase in stormwater flow directed into this stream since 2015 should be investigated, disclosed in writing, and mitigated to the extent that is feasible.
- The LOD (limit of disturbance) on the west side of the stream should be kept to a minimum, in order to avoid damage to the unspoiled, high-quality mature oak forest habitat there.

DPW Project ER 4050 – Dead Run main stem portion

FOGFLP status: UNOPPOSED to this portion of the plan.

Considerations:

- This is an area where high stream banks are collapsing into Dead Run, probably the source of a far greater volume of sediment than the small tributary streams that DPW has proposed restoring.
- These areas are relatively easy to access for construction from Franklinton Road on the south and from the old gas main corridor on the north.
- As of July 2018, this portion of the project appears to have been dropped.

Recommendations:

- Restore this portion of ER4050 and consider additional stabilization work on the main stem of Dead Run.

DPW Project 4053/A20 (Seminole Avenue to Franklinton Road to Dead Run, near old Lazear Road) -- Start date: early 2019

FOGFLP status: UNOPPOSED (with recommendations noted below)

Trees larger than 8" dbh (diameter at breast height) estimated for removed = 25

Considerations: “

- There is general agreement that this area urgently needs to be addressed due to sanitary sewer involvement with this severely eroded stream. The area is already in a degraded state due to large-scale dumping, motor vehicle traffic, invasive vines, and extensive erosion. It also appears to be relatively easy to access for construction via the old Lazear Road.

Recommendations:

- Contractor **MUST** stay within the LOD (limit of disturbance) identified on the plans.
- FOGFLP recommends an assessment of invasive non-native plant species present within the LOD before the project begins and 2 years after the project is completed.
- All tree cutting must be approved in the field by the Baltimore City Forestry Division before cutting begins.
- DPW should provide information on when the sanitary sewer was last encased in concrete and ensure that any potential leaks are addressed during this project.