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County of Fairfax, Virginia

MEMORANDUM

DATE: 03/10/2025

TO: Gregg Steverson, Director
Fairfax County Department of Transportation (DOT)

FROM: Christopher Herrington, Director
Department of Public Works and Environmental Services (DPWES) DS

Jai Cole, Executive Director
Fairfax County Park Authority (FCPA) Initial

SUBJECT: Trails in Resource Protection Areas

DPWES has been working collaboratively with DOT and other agencies over the last several years to review and comment on proposed transportation improvements being considered as part of the Active Transportation and Trail Network program. In addition, DPWES has been working with DOT to review and comment on proposed hard surface trails in Resource Protection Areas (RPAs).

Hard surface trails/Shared Use Paths (SUPs) are defined here as trails that are wider than 8 feet and designed according to AASHTO guidelines for SUPs. Natural surface trails are defined here as trails that include natural surface materials with a width no greater than 8 feet and are designed according to Fairfax County Public Facilities Manual or Fairfax County Park Authority guidelines.

Some of the proposed hard surface trails/SUPs improvements would be assigned to DPWES for maintenance after they are constructed. DPWES fully supports the County's strategic objectives of increasing multi-modal transportation options including trails, prioritizing safety and equitable accessibility, and ensuring high quality of life for County residents. DPWES also fully supports the County's strategic objectives of promoting sound environmental policies that protect, conserve, and rehabilitate our shared natural resources that provide essential ecological and human health benefits.

DPWES staff play a lead role in managing RPAs in coordination with the departments of Planning and Development and Land Development Services to protect environmentally sensitive land that lies alongside or near the shorelines of waterways which drain into the Potomac River and eventually the Chesapeake Bay. DPWES also works closely with FCPA who owns a substantial amount of the land abutting Fairfax County streams and constructs trails on parkland. Together, we strategize on land management, stream restoration, and plant management to maximize RPA function. RPAs protect water quality, filter pollutants from stormwater runoff, reduce the volume of stormwater runoff, prevent erosion, improve air quality, reduce wildfire risk, provide wildlife habitat, and provide other important biological and ecological functions supporting biodiversity.

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For more than 30 years, DPWES has served as the County subject matter expert for RPA management. We monitor stream and RPA health continuously and respond to requests from state and local authorities including the Virginia Department of Environmental Quality and the Northern Virginia Regional Commission, environmental groups including the Center for Watershed Protection, and other County agencies regarding best practices for RPA management and land development. Based on 30 years of monitoring streams and water quality, DPWES concludes that development of hard surface trails should only be located in RPAs as a measure of last resort. From a "right trails, right place" perspective, hard surface trails designed to accommodate both transportation and recreational trail users are best located outside of RPAs because:

- Hard surface trails/SUPs in RPAs degrade the environment through extensive vegetation clearing and grading for trail construction and laydown areas for bridge installation, cause direct impacts to wetlands and sensitive vegetative communities, allow for invasive species encroachment, exacerbate erosion, alter floodplain function, , and contribute to light pollution from trail lighting.
- Hard surface trails/SUPs in RPAs are typically more expensive to construct due to regulatory requirements, more extensive tree removal, required mitigation of impacts to wetlands and stream channels, and required special construction methods and infrastructure to compensate for floodplain soils and stream flows.
- Hard surface trails/SUPs in RPAs are more expensive to maintain due to erosion from drainage and flooding, deposition of debris, ponding issues which limit use days and can cause hazards due to ice formation in cold weather and pavement degradation from increased moisture.

For these reasons, DPWES and FCPA conclude that hard surface trails/SUPs should not be shown in RPAs on the countywide plan to include the Active Transportation and Trail Network program unless environmental assessments are completed beforehand and show *de minimus* impact to water quality and sensitive resources.

Conversion of existing natural surface trails to hard surface trails in RPAs should be avoided unless essential for completing network connections that cannot be made otherwise due to the potential for adverse impacts to wetlands, floodplains and stream buffers from clearing, grading, soil compaction and the introduction of invasive species. Efforts to reduce impacts to sensitive areas should be a priority when designing or renovating trails along RPAs.

If you have any questions regarding the contents of this memorandum, please contact Joni Calmbacher, Director, DPWES Stormwater Planning Division, at 703-324-5500.

cc: Jennifer Miller, Deputy County Executive
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