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March 21, 2022

Ms. Rebecca Horner
Deputy County Executive
Prince William County Planning Office
5 County Complex Court
Prince William County, Virginia 22192-9201

Re: **Comments on Prince William County Comprehensive Plan Update, Digital Gateway Corridor and Data Center Opportunity Overlay District**

Dear Ms. Horner:

The Fairfax County Water Authority ("Fairfax Water") has been following development of the subject Comprehensive Plan Amendments, related land use classifications and rezoning, and proposed modifications to the Data Center Opportunity Overlay District ("Planning initiatives"). Fairfax Water has comments on these collective Planning initiatives given their potential impact on water quality in the Occoquan Reservoir (Reservoir), a vital supply for drinking water for 800,000 residents of Northern Virginia. We strongly urge that the review of these Planning initiatives incorporate a rigorous evaluation of the potential impacts to water quality in the Occoquan watershed utilizing the frameworks and tools already established through regional mechanisms to protect the Reservoir as a drinking water supply.

Request for a Holistic Planning Approach

It is our understanding that the Prince William County Planning Office has simultaneous efforts underway that may shape the future of the County for decades to come:

Prince William Digital Gateway Corridor: The Comprehensive Plan Amendment proposes to amend both the Comprehensive Plan text and the Long-Range Land Use Map classifications on approximately 2,133 acres of land located in western Prince William County along Pageland Lane from Agricultural or Estate (AE) and Environmental Resource (ER) to Technology/Flex (T/F) and Environmental Resource. Additionally, this land would be removed from the Rural Area boundary related to public sewer service.

Data Center Overlay District: The Data Center Opportunity Zone Overlay District (DCOZOD) was created to promote the development of data centers within areas of Prince William County. Expansion of the DCOZOD is being considered, up to a total area of about 10,000 acres designated to reduce regulatory burdens associated with the development of data centers. Data centers are on the Prince William County Board of Supervisors adopted list of targeted industries for new and expanding companies.

Comprehensive Plan Update: Pathway to 2040: An update of the Prince William County Comprehensive Plan, "Pathway to 2040", which guides future growth, is being considered. The comprehensive plan articulates the goals and policies that the Prince William County Board of Supervisors relies on to make informed land use development decisions and investments in public infrastructure. The draft plan includes actions related to the Prince William Digital Gateway Corridor, the DCOZOD, and includes changes in land use designation. The draft Comprehensive Plan update, dated February 10, 2022, eliminates designation of the "Rural Area" to be replaced with an "Agricultural Estate" designation covering 55,310 acres and with an "Agricultural and Forestal" designation covering 75,647 acres.

While each of these Planning initiatives have individual timelines for development and consideration before the Planning Commission and Board of Supervisors, we encourage Prince William County to embrace a **holistic** and **comprehensive approach** to land use analysis that uses available computer simulation models and expertise of the Occoquan Watershed Monitoring Laboratory to evaluate their individual and cumulative impacts and identify opportunities to prevent water quality degradation in the Occoquan Reservoir.

Occoquan Reservoir and Watershed

Fairfax Water produces treated drinking water for over 2 million residents of Northern Virginia, including 350,000 in Prince William County. The Occoquan's importance as a source of supply and the critical need to protect it has grown over time, particularly in light of urbanization and emerging threats to water quality, such as sodium. While the Occoquan Reservoir is an important supply to many across Northern Virginia, communities in most areas of Eastern Prince William County rely on the Occoquan Reservoir as their **primary** supply of drinking water, as do the City of Alexandria, Fort Belvoir, and portions of Fairfax County.

The Occoquan watershed is unique as a water supply - it is less than 600 square miles in size and is highly urbanized. Prince William County has the largest portion of land area within the Occoquan Watershed in its jurisdiction (40%). Other jurisdictions comprising the watershed include Fauquier County (36%), Fairfax County (17%), and Loudoun County (5%). The City of Manassas and the City of Manassas Park comprise a total of about 2%. As of the 2020 Census, there were approximately 574,000 people residing within the watershed

(NVRC, 2021). This compares to a watershed population of 138,000 in 1980 (NVRC, 2002).

About 43% of the population in the Occoquan Watershed resides in Prince William County. As the most populous jurisdiction in the Occoquan watershed and the one with the largest land area, substantial changes in land use patterns in areas of Prince William County will impact water quality in the watershed and Reservoir.

The Occoquan Policy and Occoquan Watershed Monitoring Program

The Occoquan Policy (9 VAC 25-410) was adopted as a special water quality standard for the Occoquan watershed by the Virginia State Water Control Board in 1970 to improve the water quality conditions in the Reservoir and preserve it as a drinking water supply for Northern Virginia. The Policy was successful in reversing the degradation of water quality in the Reservoir due to point source pollution through the replacement of multiple, poor-performing sewage treatment plants with requirements for a high-performance, advanced wastewater treatment plant (the Upper Occoquan Service Authority).

The Occoquan Watershed Monitoring Program (OWMP), created under the Occoquan Policy and established by Virginia Tech, was tasked with providing scientific expertise on water quality issues in the Reservoir. The Occoquan Watershed Monitoring Laboratory (OWML) found that the water quality problems in the Occoquan watershed were related directly to both point source (sewage discharges) and non-point source pollution (runoff). Since 1972, the OWML has maintained and monitored stream and reservoir stations, as well as rain gauges located throughout the Occoquan Watershed. Water quality data obtained from the stations have been key in assisting the watershed management decision-making process.

The OWMP collects water quality constituents for stream and reservoir stations for traditional water quality parameters such as nutrients, sediments, organic carbon, metals, and synthetic chemicals. In addition to potential impacts on aquatic life, these constituents impact the drinking water treatment process, particularly the amount and types of chemicals that are utilized to meet drinking water regulations. The Occoquan Reservoir also faces challenges from threats such as increasing trends in concentrations of sodium and other salt-related constituents, which are related to the impervious area, and cooling blowdown from industrial uses such as water-cooled data centers. The OWMP has information on these and other constituents that can be evaluated to provide baseline and historical comparisons of water quality. This information is used and serves as an invaluable resource, to maintain a calibrated Occoquan Watershed Model.

The Occoquan Nonpoint Source Program

The Occoquan Basin Policy Board was created by member jurisdictions of the Northern Virginia Regional Commission in 1978 as an advisory group to supplement the benefits of the advanced wastewater treatment plant required by the Occoquan Policy. Membership of the Policy Board is made up of the Chief Administrative Officers (CAOs) of the member jurisdictions and Executive Directors of the member authorities. Under this framework, the Occoquan Basin Nonpoint Pollution Program (Nonpoint Program) was created in 1982, with a purpose of "maintenance of acceptable levels of water quality within the Occoquan Basin's free- flowing stream and impoundments through the management of nonpoint pollution loadings". Through the Nonpoint Program, an Occoquan Watershed Model (the "Model") - a computer modeling simulation program - has been maintained to provide a decision-making support for assuring the long-term integrity of the Occoquan watershed as a drinking water supply tool. For over four decades, this Model has been funded by the member jurisdictions, including Prince William County. The Model and Nonpoint Program are managed by the Northern Virginia Regional Commission, with development of the Model performed by the Occoquan Watershed Monitoring Laboratory of Virginia Tech.

Use of the Occoquan Watershed Model

The Model was developed as a standardized tool to allow for the analysis of major basin changes, site impact analysis, and the evaluation of various control techniques. The Model was used to evaluate land use decisions in the Occoquan basin in the late 1970s and early 1980s to help compare potential land use scenarios and their impact on Reservoir water quality. The Model should similarly be used as part of Prince William County's evaluation of the aforementioned Planning initiatives. Accurate simulation of future conditions in the Model is essential to the region's understanding of the impacts of land use plans on the Reservoir and its sustainability as a drinking water supply.

Recommendation

To ensure continued protection of the Occoquan Reservoir, we ask that **Prince William County request that the Occoquan Basin Policy Board convene and oversee a Comprehensive Study** of the proposed Planning initiatives - the Comprehensive Plan Update, Digital Gateway Corridor, and Data Center Opportunity Overlay District - to evaluate their impact on water quality in the Occoquan Reservoir. The Model, already developed and available to the NVRC member jurisdictions, is a valuable tool that should be leveraged for these planning efforts, along with the expertise and data resources of the Occoquan Watershed Monitoring Laboratory.

Given the historic investment and achievements already made by the watershed communities over the preceding five decades to improve and protect the Reservoir as a vital

drinking water resource, and the magnitude of the Planning initiatives under consideration by Prince William County, a study through the Occoquan Basin Policy Board utilizing the Model is an essential input to the land use decision process.

We appreciate your consideration of our comments. Protection of the Reservoir is vital to ensuring a sustainable and affordable water supply for Northern Virginia communities.

Please contact Greg Prelewicz, Manager, Planning, at (703) 289-6318 if you have any additional questions or need additional information.

Sincerely,

Jamie Bain Hedges, P.E.
General Manager

cc: Elijah Johnson, Acting County Executive, Prince William County
Bryan Hill, County Executive, Fairfax County
Robert Lazaro, Executive Director, Northern Virginia Regional Commission
Calvin Farr, Jr. General Manager, Prince William County Service Authority
Robert Angelotti, Executive Director, Upper Occoquan Service Authority
Adil Godrej, Ph.D., P.E., Co-Director, Occoquan Watershed Monitoring Laboratory
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