



County of Fairfax, Virginia

MEMORANDUM

DATE: November X, 2023

TO: Fairfax County Board of Supervisors

FROM: Larry Zaragoza, DEnv, Chair *Larry Zaragoza*
Environmental Quality Advisory Council (EQAC)

SUBJECT: Follow-up on Data Center Siting

EQAC appreciates the focus that the Board has placed on data centers through the introduction and approval of the May 9, 2023 Board Matter, which directed staff to provide recommendations to the Board by the end of this year. As highlighted in our June 14, 2023 Memorandum¹, EQAC recommends that the County carefully plan for the siting of data centers, especially the large hyperscale data centers. This memorandum highlights issues that have that have been raised during recent meetings.

EQAC recommends that a mapping application with data center information be made available to the public. The failure to plan for the infrastructure to support data centers can be inefficient and impose unnecessary and avoidable impacts on populations, Environmental Quality Corridors (EQCs)², and even on data centers through unnecessary costs. In the June 14, 2023 Memorandum, EQAC recommended that the County plan for and cluster data centers, which should help to reduce infrastructure needs and reduce the need to place a large data center that towers over adjacent residential neighborhoods. With appropriate noise controls and exterior designs, a data center could also blend into areas that are developed with adjacent buildings of 100 feet in height or more.

Recommendations:

1. An interactive mapping application should show existing data centers and data centers that have submitted an application to be built, areas appropriate for data centers

¹ See: https://www.fairfaxcounty.gov/environment-energy-coordination/sites/environment-energy-coordination/files/assets/eqac%202023%20data%20centers%206%2015%2023%20final%20ada_a-1a.pdf (Reference verified on 11/1/23).

² The core of the County's EQC system is in its stream valleys. Stream provided habitat for aquatic species and are in integral component of stream valley habitat systems. See: <https://www.fairfaxcounty.gov/planning-development/sites/planning-development/files/assets/compplan/policy/environment.pdf> (Reference verified on 11/1/23).

- (presumably based on zoning and including the size), electric transmission lines³, fiber cables for data transmission⁴, natural resource areas (especially Environmental Quality Corridors (EQCs)⁵, Resource Protection Areas (RPAs), floodplains, and other natural resource areas) to help inform future siting decisions. While the County's JADE system has some of this information, it should either be designed to allow for the user to turn on the layers listed above with existing data centers and those with applications in process or some other application should make this information publicly available.
2. As outlined in the Comprehensive Plan⁶, infrastructure projects like electric transmission and data transmission lines should avoid environmentally sensitive areas like EQCs and RPAs. The use of environmentally sensitive natural resource areas for infrastructure should be the option of last resort. The County should plan for future stream restoration work so that infrastructure projects should do not conflict with the ability to undertake stream restoration work in the future. In the absence of planning sensitive natural resource areas may be disturbed multiple times.
 3. The County should incentivize data centers to upgrade technology to reduce water use. Similarly, facilities should pretreat water if the water leaving the facility can impact drinking water supplies. EQAC has previously cautioned that the high use of water by data centers that use wet/evaporative cooling because their operations could have serious impacts on water supplies and potentially impact water quality.
 4. Given that data centers currently consume over 20 percent of the state's energy, the county should work with other parts of the state to incentivize energy efficiency and promote efforts to meet carbon neutrality goals. Data centers that acquire green energy, either within or outside of Virginia, should be credited for their efforts to help reach carbon neutrality goals. Moreover, companies, should be recognized for their environmental contributions when they employ green energy from either within or outside Virginia.
 5. While there is a County Noise Ordinance⁷, it does not address concerns that have been raised by citizens. For example, the Ordinance does not address generator noise created as a result of operating data center generators to avoid brownouts, as the Virginia Department of Environmental Quality had proposed last year, or other noise concerns. EQAC agrees with staff comments offered in the October 26 meeting of the Planning Commission's Land Use Process Review Committee that the County could establish a noise performance standard for data centers that controls noise levels. EQAC has previously stated that it appears that 30 decibels (dB), would be a reasonable standard to avoid imposing excessive noise to populations from data center operations.

EQAC thanks the Board for your attention to this important issue and welcomes questions.

³ Electric transmission line information should also show if the lines have the capacity to support the addition of hyperscale data centers.

⁴ Cables for data transmission should also show if they have the capacity to add hyperscale data centers.

⁵ EQAC understands that the county does not have a map of EQCs throughout the county and recommends that EQCs be mapped.

⁶ Fairfax County Comprehensive Plan. Public Facilities. Objective 41. See: <https://www.fairfaxcounty.gov/planning-development/sites/planning-development/files/assets/compplan/policy/pubfacilities.pdf> (Reference Verified on 11/4/23).

⁷ See: <https://www.fairfaxcounty.gov/planning-development/zoning/noise-ordinance> (Reference verified on 11/1/23).

cc: Rachel Flynn, Deputy County Executive
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