

What Are Hyperscale Data Centers?

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THE BASICS

What is a Data Center?

A data center is a large industrial facility that houses thousands of computer servers. Companies like Amazon, Microsoft, Google, and Meta build them to run cloud computing, streaming services, and AI systems. They look like warehouses, but their demands on land, water, and electricity are far beyond anything a typical warehouse requires. Frederick County has become a target for exactly this kind of development.

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THE DEMANDS

What Do They Actually Require?

WATER

1-5M
GALLONS PER DAY

Consumed daily for server cooling. Frederick County's karst limestone geology makes groundwater uniquely vulnerable to contamination from industrial discharge.

POWER

50-150 MW
PER FACILITY

Equal to a small city's full electrical load. Grid upgrade costs are passed directly to REC ratepayers across the Northern Shenandoah Valley.

LAND

100+ Acres
TYPICAL CAMPUS

Requires flat land near power lines and fiber routes. The I-81 corridor meets every one of these criteria, putting farmland directly at risk.

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THE PROBLEM

Why Data Centers Are Not a Good Fit for Frederick County

KARST GEOLOGY AND DRINKING WATER

Frederick County sits on karst limestone. Contaminants travel rapidly through underground channels into the drinking water supply. Standard industrial impact assessments do not fully capture this risk.

PERMANENT LOSS OF FARMLAND

Data center campuses permanently remove agricultural land from production and fragment farming districts in ways that cannot be undone once approved.

FEWER JOBS THAN PROMISED

Construction brings temporary work. A fully operational data center typically employs only 20 to 50 permanent staff. This represents a poor return on the land and resources consumed.

RATEPAYERS BEAR THE GRID COSTS

A single facility can demand 50 to 150 MW of new grid capacity. Rappahannock Electric members across the region absorb those upgrade costs through higher rates.

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THE TRADE-OFF

What You Should Know Before the Board Decides

WHAT PROponents SAY

- Tax revenue for the county
- Jobs during construction
- Low impact on schools and services
- Economic development signal to other businesses

WHAT RESIDENTS SHOULD ASK

- How many permanent local jobs, actually?
- Who pays for grid and water infrastructure upgrades?
- Has a karst geology water risk assessment been done?
- What farmland is permanently lost?

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ACT NOW

The Window to Act Is Open Right Now

THE COMPREHENSIVE PLAN

Frederick County is rewriting its land use plan through 2050. If data centers are embedded as a "targeted industry" during Phase II community meetings, 25 years of easy approvals follow. The draft plan is expected mid-2026. Public input closes before that.

WHAT YOU CAN DO TODAY

Sign the petition at protectfrederick.org. Attend Planning Commission and Board of Supervisors meetings. Submit written comments to the Planning Department. Share this flyer with neighbors in your district.

TAKE ACTION

Your voice shapes the next 25 years.

Sign the petition. Attend public meetings. Make it on the record.

SIGN THE PETITION AT

protectfrederick.org



SCAN TO SIGN